Pulse Secure Services Director Command Reference

Supporting Pulse Secure Services Director 20.1

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Pulse Secure, LLC
2700 Zanker Road,
Suite 200 San Jose
CA 95134

https://www.pulsesecure.net

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Pulse Secure Services Director Command Reference

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Preface

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Document Conventions

The document conventions describe text formatting conventions, command syntax conventions, and important notice formats used in Pulse Secure technical documentation.

Text Formatting Conventions

Text formatting conventions such as boldface, italic, or Courier font may be used in the flow of the text to highlight specific words or phrases.

Format	Description
bold text	Identifies command names
	Identifies keywords and operands
	Identifies the names of user-manipulated GUI elements
	Identifies text to enter at the GUI
italic text	Identifies emphasis
	Identifies variables
	Identifies document titles
`Courier Font`	Identifies command output
	Identifies command syntax examples

Command Syntax Conventions

Bold and italic text identify command syntax components. Delimiters and operators define groupings of parameters and their logical relationships.

Convention	Description
bold text	Identifies command names, keywords, and command options.
italic text	Identifies a variable.
[ ]	Syntax components displayed within square brackets are optional. Default responses to system prompts are enclosed in square brackets.

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Convention	Description
{ **x** | **y** | **z** }	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
x | **y**	A vertical bar separates mutually exclusive elements.
< >	Non-printing characters, for example, passwords, are enclosed in angle brackets.
...	Repeat the previous element, for example, member[member...].
\	Indicates a "soft" line break in command examples. If a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash.
bold text	Identifies command names, keywords, and command options.

Notes and Warnings

Note, Attention, and Caution statements might be used in this document.

Note: A Note provides a tip, guidance, or advice, emphasizes important information, or provides a reference to related information.

ATTENTION
An Attention statement indicates a stronger note, for example, to alert you when traffic might be interrupted or the device might reboot.

CAUTION
A Caution statement alerts you to situations that can be potentially hazardous to you or cause damage to hardware, firmware, software, or data.

Requesting Technical Support

Technical product support is available through the Pulse Secure Global Support Center (PSGSC). If you have a support contract, file a ticket with PSGSC.

- Product warranties—For product warranty information, visit https://support.pulsesecure.net/product-service-policies/

Self-Help Online Tools and Resources

For quick and easy problem resolution, Pulse Secure provides an online self-service portal called the Customer Support Center (CSC) that provides you with the following features:

- Find CSC offerings: https://support.pulsesecure.net
- Search for known bugs: https://support.pulsesecure.net
- Find product documentation: https://www.pulsesecure.net/techpubs
- Download the latest versions of software and review release notes: https://support.pulsesecure.net

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- Open a case online in the CSC Case Management tool: https://support.pulsesecure.net
- To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool: https://support.pulsesecure.net

For important product notices, technical articles, and to ask advice:

- Search the Pulse Secure Knowledge Center for technical bulletins and security advisories: https://kb.pulsesecure.net
- Ask questions and find solutions at the Pulse Community online forum: http://kb.pulsesecure.net

Opening a Case with PSGSC

You can open a case with PSGSC on the Web or by telephone.

- Use the Case Management tool in the PSGSC at https://support.pulsesecure.net.
- Call 1-844 751 7629 (Toll Free, US).

For international or direct-dial options in countries without toll-free numbers, see https://support.pulsesecure.net/support/support-contacts/

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Using the Command-Line Interface

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Connecting to the CLI

This section assumes you have already performed the initial setup of the appliance using the configuration wizard. For detailed information, see the *Pulse Secure Services Director Getting Started Guide*.

To connect the CLI:

1. You can connect to the CLI using one of the following options:
   - An ASCII terminal or emulator that can connect to the serial console. It must have the following settings: 9600 baud, 8 bits, no parity, 1 stop bit, and no flow control.
   - A computer with an SSH client that is connected to the appliance Primary port (in rare cases, you might connect through the Auxiliary port).
2. At the system prompt enter the following command if the appliance resolves to your local DNS:

   ```
   ssh admin@host.domain
   ```

   Otherwise, at the system prompt enter the following command:

   ```
   ssh admin@ipaddress
   ```

3. When prompted, enter the administrator password. This is the password you set during the initial configuration process. The default password is password. For example:

   ```
   login as: admin
   Brocade Services Director
   Last login: Wed Jan 20 13:02:09 2010 from 10.0.1.1
   amnesiac >
   ```

   You can also log in as a monitor user (monitor). Monitor users cannot make configuration changes to the system. Monitor users can view statistics and system logs.

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Overview of the CLI

The CLI has the following modes:

- **User** - When you start a CLI session, you begin in the default, user-mode. From user-mode you can run common network tests such as ping and view network configuration settings and statistics. You do not enter a command to enter user-mode. To exit this mode, enter exit at the command line.
- **Enable** - To access system monitoring commands, you must enter enable-mode. From enable-mode, you can enter any enable-mode command or enter configuration-mode. You must be an administrator user to enter enable-mode. In enable-mode you can perform basic system administration tasks, such as restarting and rebooting the system. To exit this mode, enter disable at the command line. You cannot enter enable-mode if you are a monitor user.
- **Configuration** - To make changes to the running configuration, you must enter configuration-mode. To save configuration changes to memory, you must enter the write memory command. To enter configuration-mode, you must first be in enable-mode. To exit this mode, enter exit at the command line.

The commands available to you depend on which mode you are in. Entering a question mark (?) at the system prompt provides a list of commands for each command mode.

Mode	Access Method	System Prompt	Exit Method	Purpose
user	Each CLI session begins in user-mode.	host >	exit	• Perform common network tests, such as ping. • Display system settings and statistics.
enable	Enter the **enable** command at the system prompt while in user-mode.	host #	disable	• Perform basic system administration tasks, such as restarting and rebooting the system. • Display system data and statistics. • Perform all user-mode commands.
configuration	Enter the **configure** terminal command at the system prompt while in enable-mode.	host (config) #	exit	• Configure system parameters. • Perform all user and enable-mode commands.

If you have questions about the usage of a command, contact Technical Support.

Entering Commands

The CLI accepts abbreviations for commands. The following example is the abbreviation for the configure terminal command:

```
amnesiac # configure t
```

You can press the tab key to complete a CLI command automatically.

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Accessing Online Help

At the system prompt, type the full or partial command string followed by a question mark (?). The CLI displays the command keywords or parameters for the command and a short description. You can display help information for each parameter by typing the command, followed by the parameter, followed by a question mark.

To access online help:

- At the system prompt enter the following command:

  ```
  amnesiac (config) # show ?
  ```

- To display help for additional parameters, enter the command and parameter:

  ```
  amnesiac (config) # access ?
  enable           Enable secure network access
  inbound          Secure access inbound configuration
  amnesiac (config) # access inbound ?
  rule             Secure access inbound rule configuration
  amnesiac (config) # access inbound rule ?
  add              Add a secure network access rule
  edit             Edit a secure network access rule
  move             Move a secure network access rule
  ```

Error Messages

If at any time the system does not recognize the command or parameter, it displays the following message:

```
amnesiac (config) # logging files enable
% Unrecognized command "enable".
Type "logging files?" for help.
```

If a command is incomplete, the following message is displayed:

```
amnesiac (config) # logging
% Incomplete command.
Type "logging ?" for help.
```

Command Negation

You can type **no** before many of the commands to negate the syntax. Depending on the command or the parameters, command negation disables the feature or returns the parameter to the default value.

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Running the Configuration Wizard

You can restart the configuration wizard so that you can change your initial configuration parameters.

To restart the configuration wizard:

Enter the following set of commands at the system prompt:

```
enable
configure terminal
configuration jump-start
```

Saving Configuration Changes

The show configuration running command displays the current configuration of the system. When you make a configuration change to the system, the change becomes part of the running configuration.

The change does not automatically become part of the configuration file in memory until you write the file to memory. If you do not save your changes to memory, they are lost when the system restarts.

To save all configuration changes to memory, you must enter the write memory command while in configuration-mode.

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User-Mode Commands

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Entering User-mode

User-mode allows you to enter enable-mode, display system data, and perform standard networking tasks. Monitor users can perform user-mode commands. All commands available in user-mode are also available to administrator users.

To enter user-mode:

- Connect to the CLI and enter the following command:

```
login as: admin
Brocade Services Director
Last login: Wed Jan 20 13:02:09 2010 from 10.0.1.1
amnesiac >
```

User-Mode Commands

The following section contains the Services Director commands.

For an alphabetical list of User-Mode commands, see the Table of Contents for this guide.

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enable

Enters enable mode.

Syntax

enable

Usage Guidelines

You must enter enable mode before you can perform standard network monitoring tasks.

Examples

```
amnesiac > enable
```


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exit

Exits the CLI when in user mode; exits configuration mode when in configuration mode.

Syntax

exit

Examples

```
amnesiac > exit
```

ping

Executes the ping utility to send ICMP ECHO_REQUEST packets to network hosts using IPv4 addresses, for troubleshooting.

Syntax

ping [options]

Parameters

options

The **ping** command takes the standard Linux options. For detailed information, see the Linux manual (man) page.

Usage Guidelines

The **ping** command without any options pings from the primary or the auxiliary (aux) interface and not the in-path interfaces.

If the primary and auxiliary interfaces are not on the same network as the in-path interfaces, you will not be able to ping an IP address on the in-path interface network unless you have a gateway between the two networks.

To ping from an in-path interface, use the following syntax:

```
ping -I <in-path interface IP address> <destination IP address>
```

Examples

```
amnesiac > ping -I 10.1.1.1 10.11.22.15
PING 10.11.22.15 (10.11.22.15) from 10.1.1.1: 56(84) bytes of data.
64 bytes from 10.11.22.15: icmp_seq=0 ttl=64 time=0.044 ms
64 bytes from 10.11.22.15: icmp_seq=1 ttl=64 time=0.038 ms
64 bytes from 10.11.22.15: icmp_seq=2 ttl=64 time=0.040 ms
```


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ping6

Sends ICMP6_ECHO_REQUEST packets to a network host or gateway using IPv6 addresses, for troubleshooting.

Syntax

ping6 [options]

Parameters

options

The **ping6** command takes the standard Linux options. For detailed information, see the Linux manual (man) page.

Usage Guidelines

The **ping6** command without any options pings from the primary or the auxiliary (aux) interface.

Examples

```
amnesiac > ping6 fe80::20e:b6ff:fe04:2788 fe80::20e:b6ff:fe02:b5b0
PING fe80::20e:b6ff:fe04:2788(fe80::20e:b6ff:fe04:2788) from
fe80::20e:b6ff:fe02:b5b0 primary: 56 data bytes
64 bytes from fe80::20e:b6ff:fe04:2788: icmp_seq=0 ttl=64 time=1.14 ms
64 bytes from fe80::20e:b6ff:fe04:2788: icmp_seq=1 ttl=64 time=0.186 ms
--- fe80::20e:b6ff:fe04:2788 ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1001ms
rtt min/avg/max/mdev = 0.186/0.667/1.148/0.481 ms, pipe 2::0101:B3FF:FE1E:8937
2001:38dc:52::e9a4:c5:1001
```

Related Commands

ipv6 in-path-gateway

show access inbound rules

Displays secure network access inbound configuration.

Syntax

show access inbound rules

Examples

```
amnesiac > show access inbound rules
Secure network access enabled: no

Rule  A Prot Service/ports Src network        iface
----- - ---- ------------- ------------------ --------- ------------------------
      A tcp  7800          0.0.0.0/0
      A tcp  7801          0.0.0.0/0
      A tcp  7810          0.0.0.0/0
      A tcp  7820          0.0.0.0/0
      A tcp  7850          0.0.0.0/0
      A tcp  ssh           10.0.24.7/32
1     A udp  all           0.0.0.0/0                    Allow DNS lookups
2     A udp  53            0.0.0.0/0                    DNS Caching
```

Related Commands

ssh client generate identity user

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show access status

Displays secure network access status.

Syntax

show access status

Examples

```
amnesiac > show access status
```

Related Commands

ssh client generate identity user

show alarm

Displays the status of the specified alarm.

Syntax

show alarm *type*

Parameters

type

See "alarm enable" on page 128 for a complete listing and description of alarm types.

Examples

```
amnesiac # show alarm warning_temp
Alarm Id: Warning Temperature
Alarm : The temperature of the appliance is above normal
Enabled: yes
Alarm State: ok
Error threshold: 70
Clear threshold: 67
Last error at: None
Last clear at: None
```

Related Commands

alarm clear, alarm enable, show alarms

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show alarms

Displays the status of all alarms.

Syntax

show alarms [triggered]

Parameters

`triggered`

Displays status and configuration of triggered alarms.

Examples

```
amnesiac > show alarms
Alarm Id: admission_conn
Alarm :   Connection Limit Pressure
Status:   ok
----------------------------------------
Alarm Id: admission_control
Alarm :   Admission Control Pressures
Status:   ok
----------------------------------------
Alarm Id: admission_cpu
Alarm :   CPU Pressure
Status:   ok
----------------------------------------
Alarm Id: admission_mapi
Alarm :   MAPI Pressure
Status:   ok
----------------------------------------
Alarm Id: admission_mem
Alarm :   Memory Pressure
Status:   ok
----------------------------------------
Alarm Id: admission_tcp
Alarm :   TCP Pressure
Status:   ok
----------------------------------------
Alarm Id: arcount
Alarm :   Asymmetric Routing
Status:   ok
----------------------------------------

*** this is a partial listing ***
```

Related Commands

alarm clear, alarm enable, show alarm

show authentication policy

Displays the status of the authentication policy.

Syntax

show authentication policy

Examples

```
amnesiac > show authentication policy
Authentication policy enabled:                        yes
Maximum unsuccessful logins before account lockout:   none
 Wait before account unlock:                          300 Seconds
Minimum password length:                              6
Minimum upper case characters in password:            1
Minimum lower case characters in password:            1
Minimum numerical characters in password:             1
Minimum special characters in password:               1
Minimum interval for password reuse:                  5
Minimum characters diff for password change:          4
Prevent dictionary words in password:                 yes
User passwords expire:                                60 days
Warn user of an expiring password:                    7 days before
User accounts with expired passwords lock:            305 days
```

Related Commands

authentication policy enable

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show bootvar

Displays the software image that is booted upon the next reboot.

Syntax

show bootvar

Examples

```
amnesiac > show bootvar
Installed images:
Partition 1:
rbtsh/linux columbia #1 2004-02-07 19:24:24 root@test:repository
Partition 2:
rbtsh/linux Columbia #2 2004-02-13 17:30:17 root@test:repository
Last boot partition: 1
Next boot partition: 1
```

Related Commands

host-label

show cli

Displays current CLI settings.

Syntax

show cli

Examples

```
amnesiac > show cli
CLI current session settings
Maximum line size: 8192
Terminal width:    157 columns
Terminal length:   15 rows
Terminal type:     xterm
Auto-logout:       30 minutes
Paging:            enabled
CLI defaults for future sessions
Auto-logout:   30 minutes
Paging:        enabled
```

Related Commands

cli default paging enable

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show clock

Displays current date and time.

Syntax

show clock [all]

Parameters

`all`

Displays the system time, date, and ntp peers.

Examples

```
amnesiac > show clock
Time: 15:11:13
Date: 2008/10/18
Zone: America North United_States Pacific
```

show email

Displays the current email settings.

Syntax

show email

Examples

```
amnesiac > show email
Mail hub:       exchange
Mail hub port:  30
Domain:         example.com

Event emails
 Enabled: yes
 Recipients:
 example@xxxxxxxx.com

Failure emails
 Enabled: yes
 Recipients:
    example@xxxxxxxx.com

Autosupport emails
  Enabled: no
  Recipient:
    sdauto@brocade.com
  Mail hub:
    eng.xxxxxxxx.com
```

Related Commands

email autosupport enable

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show hardware error-log

Displays IPMI system event log entries.

Syntax

show hardware error-log { all | new }

Parameters

`all`

Displays all IPMI SEL entries

`new`

Display IPMI SEL entries since the last **show hardware error-log** command was issued.

`licensing info`

Display current licenses.

Examples

```
amnesiac > show hardware error-log all
1 | 11/28/2006 11:55:10 | Event Logging Disabled SEL | Log area reset/cleared |
Asserted = yes.
2 | 01/04/2007 21:09:07 | Slot/Connector Drive | Fault Status | Asserted = yes.
3 | 01/07/2007 03:24:07 | Slot/Connector Drive | Fault Status | Asserted = yes.
```

Related Commands

clear hardware error-log

show history

Displays event history.

Syntax

show history [category *category*] [severity *level*]

Parameters

`category` *`category`*

Displays event history for the specified event category:

- `alarm`
- `cli`
- `config`
- `mgmt`
- `web`

`severity` *`level`*

Displays the minimum syslog severity threshold for the event category:

- `emer:` System unusable
- `alert:` Immediate action
- `crit:` Critical conditions
- `err:` Error conditions
- `warning:` Warning conditions
- `notice:` Normal but significant condition
- `info:` Informational messages
- `debug:` Debug-level messages

Usage Guidelines

Alarms leave no record other than the message log, which is unstructured and not always helpful. Use the **show history** command to help diagnose problems by viewing the event history (an alarm is an example of an event). Other examples of events include a login or a configuration change. An event history displays all events at a glance, allows for the search description of alarms according to several criteria, and puts the alarms in the context of other time-based statistical information.

Examples

```
amnesiac > show history
Enable: yes
Last Ping: 2013-02-12 14:31:49.412973153 -0700
Saved Ping: 2013-03-21 07:25:51.000000000 -0700
```


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Related Commands

alarm enable

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show hardware watchdog

Displays hardware watchdog information.

Syntax

show hardware watchdog

Examples

```
amnesiac > show hardware watchdog
Enable: yes
Last Ping: 2006-05-12 14:31:49.412973153 -0700
Saved Ping: 2006-04-21 07:25:51.000000000 -0700
```

Related Commands

host-label

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show hosts

Displays system hosts.

Syntax

show hosts

Examples

```
amnesiac > show hosts
Hostname: amnesiac
Name server: 10.0.0.2 (configured)
Domain name: domain.com (configured)
Domain name: domain.com (configured)
IP 107.0.0.1 maps to hostname localhost
```

Related Commands

hostname

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show host-label

Displays information about the specified host label.

Syntax

show host-label *name* [detailed]

Parameters

name

Specify the name of the host label.

detailed

Displays detailed hostname and subnet status information.

Examples

```
amnesiac # show host-label test
10.0.0.0/8, 192.168.0.1/32, 192.168.0.2/32, example.com, xxxxxxxx.com

amnesiac # show host-label test detailed

Subnets:
10.0.0.0/8, 192.168.0.1/32, 192.168.0.2/32

Host example.com:
192.0.43.10/32
Resolved: 2013/03/12 18:54:14

Host xxxxxxxx.com:
192.0.43.10/32
Resolved: 2013/03/12 18:54:14

Next scheduled resolve: 2013/03/13 18:54:09
```

Related Commands

host-label

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show images

Displays the available software images and which partition the appliance boots the next time the appliance is restarted.

Syntax

show images [checksum]

Parameters

`checksum`

Displays the Message-Digest 5 algorithm (MD5) checksum of the system images.

Examples

```
amnesiac > show images
Images available to be installed:
webimage.tbz
rbtsh/linux 4.0 #12 2007-05-15 11:54:52 root@test:CVS_TMS/HEAD
image.img
rbtsh/linux 4.0 #17 2007-05-22 16:39:32 root@test:CVS_TMS/HEAD
Installed images:
Partition 1:
rbtsh/linux 4.0-HEAD-2007-06-15-07:19:19 #0 2007-06-15 07:19:19 root@test:CVS_TMS/
HEAD
Partition 2:
rbtsh/linux 4.0 2007-05-15 11:54:52 root@test:CVS_TMS/HEAD
Last boot partition: 2
Next boot partition: 2
```

Related Commands

image install

show info

Displays the system information, including the current state of the system.

Syntax

show info

Examples

```
amnesiac > show info
Current User:      admin
Status:            Healthy
Config:            initial
Appliance Up Time: 4h 4m 13s
Number of CPUs:    4
CPU load averages: 0.08 / 0.02 / 0.01
Temperature (C):   0
Serial:            Unknown
Model:             V1000
Revision:          A
Version:           2.3.0-mainline
```

Related Commands

configuration new

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show logging

Displays logging and logging filter settings.

Syntax

show logging [filter]

Parameters

`filter`

Displays per-process logging configuration information.

Examples

```
amnesiac > show logging filter
Local logging level: info
amnesiac > show logging
Local logging level: info
Default remote logging level: notice
Remote syslog receiver: 10.10.10.2 (logging level: info)
Number of archived log files to keep: 10
Log rotation frequency: daily
```

Related Commands

logging

show ntp

Displays NTP settings.

Syntax

show ntp [all]

Parameters

`all`

Display NTP settings and active peers.

Examples

```
amnesiac > show ntp
NTP enabled: yes

No NTP peers configured.

NTP servers:
0.vyatta.pool.ntp.org (version 4)    Enabled: yes
1.vyatta.pool.ntp.org (version 4)    Enabled: yes
2.vyatta.pool.ntp.org (version 4)    Enabled: yes
3.vyatta.pool.ntp.org (version 4)    Enabled: yes

No active ntp peers
```

Related Commands

ntp server enable

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show ntp active-peers

Displays active NTP peers.

Syntax

show ntp active-peers

Examples

```
amnesiac > show ntp active-peers
No active ntp peers
 remote               refid      st t when poll reach   delay   offset  jitter
==============================================================================
 propjet.latt.ne .XFAC.          16 u    - 1024    0    0.000   0.000    0.000
 mail.coldnortha .XFAC.          16 u    - 1024    0    0.000   0.000    0.000
 services.quadra .XFAC.          16 u    - 1024    0    0.000   0.000    0.000
 yurizoku.tk     .XFAC.          16 u    - 1024    0    0.000   0.000    0.000

     remote       conf  auth  key
===================================
 propjet.latt.ne  yes   none  none
 mail.coldnortha  yes   none  none
 services.quadra  yes   none  none
 yurizoku.tk      yes   none  none
```

Related Commands

ntp server enable

show ntp authentication

Displays NTP authentication settings.

Syntax

show ntp authentication

Examples

```
amnesiac > show ntp authentication
Trusted Keys: 5, 10

KeyID KeyType Encrypted Secret
--------------------------------------------------
5     MD5     rP1LTiIVk7QlMyFiLSpAKA==
65534 MD5     2Ovzk2RGghrBJLp6BX+BpSxo1pvz+5CM
```

Related Commands

ntp server enable

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show snmp

Displays SNMP server settings.

Syntax

show snmp

Examples

```
amnesiac > show snmp
SNMP enabled: yes
System location:
System contact:
Read-only community: public
Traps enabled: yes
No trap sinks configured.
```

Related Commands

write memory

show snmp acl-info

Displays SNMP access control list settings.

Syntax

show snmp acl-info

Examples

```
amnesiac > show snmp acl-info
Security Names
--------------
Security name                    Community string    Source address
-------------                    ----------------    --------------
There are no configured security names
Groups
------
Group name                       Security model      Security name
----------                       --------------      -------------
There are no configured groups
Views
-----
There are no configured views
Access control lists
---------------------
Group name                       Security level Read view
----------                       -------------- -------------
```

Related Commands

snmp-server enable

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show snmp ifindex

Displays the ifindex values for all interfaces.

Syntax

show snmp ifindex

Examples

```
amnesiac > show snmp ifindex
Interface    Ifindex
-----------------------
     aux     1
     eth0    6
     eth1    7
     eth2    8
     eth3    9
     eth4    10
     eth5    11
     eth6    12
     eth7    13
       lo    5
  primary    2
```

Related Commands

snmp-server enable

show snmp usernames

Displays SNMP user settings.

Syntax

show snmp usernames

Examples

```
amnesiac > show snmp usernames

Username                 Authentication Protocol Authentication Key
There are no configured users
```

Related Commands

snmp-server enable

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show ssh client

Displays the client settings.

Syntax

show ssh client [private]

Parameters

`private`

Display SSH client public and private keys.

Examples

```
amnesiac > show ssh client
SSH server enabled: yes
```

Related Commands

ssh client generate identity user

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show ssh server

Displays the ssh server.

Syntax

show ssh server [allowed-ciphers | publickey]

Parameters

`allowed-ciphers`

Display SSH server allowed ciphers.

`publickey`

Display SSH server-public host key.

Examples

```
amnesiac > show ssh server publickey
SSH server public key: ssh-rsa AAAAB3NzaC1yc2XXXXXXXwAAAQEAwz7zKAc1NbTKSp40mRg7J
9YV5CeoGRQoCEPS17ValtEQbepaQygdifueiejht39837482y74982u7ridejbvgiIYZs/E23zmn212kj
dXFda8zJxJm07RIKOxNDEBUbAUp8h8dkeiejgfoeoriu39438598439gfjeNLfhjWgh1dzeGYycaAoEA
K21Igg+Sg0ELGq2cJ8mMzsSsCq5PnOmj63RAMuRgBdrtBdIAd32fy642PQJveqtfl7MBN6IwTDECRpex
F3Ku98pRefc2h0u44VZNT9h4tXCe8qHpuO5k98oA

amnesiac > show ssh server allowed-ciphers
SSH server allowed ciphers:
---------------------------
aes128-ctr
aes192-ctr
aes256-ctr
```

Related Commands

ssh client generate identity user

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show stats cpu

Displays CPU statistics.

Syntax

show stats cpu [1min | 5min | hour | day | week | month]

Parameters

`1min | 5min | hour | day | week | month`

Specify a time interval to display CPU statistics.

Examples

```
amnesiac > show stats cpu
CPU 1
  Utilization:                3%
  Peak Utilization Last Hour: 10% at 2008/10/17 18:10:03
  Avg. Utilization Last Hour: 4%
```

Related Commands

show stats memory

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show stats ecc-ram

Displays the ECC error counts.

Syntax

show stats ecc-ram

Examples

```
amnesiac > show stats ecc-ram
No ECC memory errors have been detected
```

Related Commands

show stats memory

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show stats fan

Displays the fan statistics.

Syntax

show stats fan

Examples

```
amnesiac > show stats fan
FanId  RPM    Min RPM Status
1      3825   750     ok
2      3750   750     ok
```

Related Commands

show hardware error-log

show stats memory

Displays memory statistics.

Syntax

show stats memory [1min | 5min | hour | day | week | month]

Parameters

`1min | 5min | hour | day | week | month`

Specify a time interval to display CPU statistics.

Examples

```
amnesiac > show stats memory
Total Swapped Over Last Hour:    0 pages
Average Swapped Over Last Hour:  0 pages
Peak Swapped Over Last Hour:     0 pages
Peak Swapped Time:               2008/10/17 17:37:41
```

Related Commands

show stats ecc-ram

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show tcpdump stop-trigger

Displays the configuration settings that trigger the stop of a TCP dump.

Syntax

show tcpdump stop-trigger

Examples

```
amnesiac > show tcpdump stop-trigger
Tcpdump trigger enabled: no
Regex: ntp
Delay: 10
Last triggered on: 2013/01/12 17:33:52
Last triggered by: ntp
```

Related Commands

tcpdump stop-trigger delay, tcpdump stop-trigger enable, tcpdump stop-trigger regex, tcpdump stop-trigger restart

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show tcpdump-x

Displays currently running tcpdumps.

Syntax

show tcpdump-x

Examples

```
amnesiac > show tcpdump-x
No running capture
```

Related Commands

tcpdump stop-trigger enable

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show terminal

Displays terminal settings.

Syntax

show terminal

Examples

```
amnesiac > show terminal
CLI current session settings
 Terminal width:     80 columns
 Terminal length:    24 rows
 Terminal type:      xterm
```

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show uploads

Displays system dump files uploaded to Technical Support.

Syntax

show uploads

Usage Guidelines

The **show uploads** command shows the system dump files that have been uploaded to Pulse Secure Technical Support or are in progress. The display shows up to 100 upload statistics, includes whether the upload is completed or in progress, and shows whether or not an error occurred during the upload process. You can clear the upload statistics using the **file upload clear-stats** command.

Examples

```
amnesiac > show uploads

Upload 0:
file: /var/opt/tms/tcpdumps/bravo-sh236_aux_new.cap0
url: ftp://ftp.xxxxxxxx.com/incoming/case_194170_F82JY00002BE4_bravo-
sh236_aux_new.cap0
status: finished
percent complete: 100%
start time: 2013/03/25 12:16:40 -0700
finish time: 2013/03/25 12:16:41 -0700
```

Related Commands

file upload clear-stats

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show version

Displays the installed software version, including build number.

Syntax

show version [all | concise | history]

Parameters

`all`

Displays version information for the current system image. This option displays the product release and the software version.

`concise`

Displays the installed software version without build information.

`history`

Displays upgrade version history.

Examples

```
amnesiac > show version
Product name:      rbt_sh
Product release:   7.0.2
Build ID:          #0
Build date:        2012-02-15 16:36:45
Build arch:        x86_64
Built by:          root@moscow.nbttech.com
Uptime:            15d 19h 40m 38s
Product model:
System memory:     208 MB used / 3681 MB free / 3890 MB total
Number of CPUs:    4
CPU load averages: 0.02 / 0.03 / 0.00

amnesiac >  show version all
Product release:   1.0.1
RiOS release:      rbt_sh 7.0.2 #202_101 2012-02-15 10:16:14 x86_64 root@basel:s
vn:                //svn/mgmt/branches/release_branch
Build ID:          #202_101
Build date:        2012-02-15 14:22:27
Build arch:        x86_64
Built by:          root@basel

Uptime:            14h 13m 5s

Product model:     EX760
System memory:     5329 MB used / 10681 MB free / 16010 MB total
Number of CPUs:    4
CPU load averages: 0.36 / 0.40 / 0.32
```

Related Commands

image fetch, image install

show web

Displays current Web settings.

Syntax

show web

Examples

```
amnesiac > show web
web-based management console enabled:
 HTTP enabled: yes
 HTTP port: 80
 HTTPS enabled: yes
 HTTPS port: 443
 Inactivity timeout: 15 minutes
 Session timeout: 60 minutes
 Session renewal threshold: 30 minutes
```


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show web prefs

Displays the current Web preferences.

Syntax

show web prefs

Examples

```
amnesiac > show web prefs
Log:
Lines Per Page: 100
```

show web ssl cert

Displays certificate details.

Syntax

show web ssl cert

Examples

```
amnesiac > show web ssl cert
Issued To:
  Common Name:       gen-sh226
  Email:             admin@gen-sh226
  Organization:      Brocade
  Organization Unit:
Locality:            San Francisco
  State:             California
  Country:           --
Issued By:
  Common Name:       gen-sh226
  Email:             admin@gen-sh226
  Organization:      Brocade
  Organization Unit:
  Locality:          San Francisco
  State:             California
  Country:           --
Validity:
  Issued On:         May  4 22:18:55 2011 GMT
  Expires On:        May  3 22:18:55 2012 GMT
Fingerprint:
  SHA1:
```


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slogin

Enables log in to another system securely using SSH.

Syntax

slogin [options]

Parameters

`options`

Specify slogin options. To view options, enter slogin at the system prompt.

Examples

```
amnesiac > slogin -l usertest
```

Related Commands

show ssh client, show ssh server

stats export

Enables the export of statistics.

Syntax

stats export csv *report-name* after *yyyy/ mm/ dd* before *yyyy/ mm/ dd* email *email-addr* filename *filename*

Parameters

`csv`

Specify the file format for export: **csv**

`report-name`

Specify one of the following reports:

- `cpu_util:` CPU utilization
- `memory:` Memory utilization
- `paging:` Paging I/O
- `appvissummary:` Application visibility summary report
- `appvishistory:` Application visibility history report
- `bw:` Aggregate bandwidth
- `th_peak:` Peak throughput
- `th_p95:` P95 throughput
- `pass:` Aggregate pass-through traffic
- `cpool:` Aggregate connection pooling
- `nfs:` Aggregate NFS report
- `pfs:` Aggregate PFS report
- `conn_history:` connection history
- `dstore:` Data store hit
- `ssl:` SSL statistics
- `ssl_peak:` SSL peak statistics
- `http:` HTTP statistics
- `qos:` QoS statistics
- `qos_inbound:` Inbound QoS statistics
- `snapmirror:` Snapmirror statistics
- `snapmirror_peak:` Snapmirror peak statistics
- `topconversations:` Top conversations report
- `topsenders:` Top senders report

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- `topreceivers:` Top receivers report
- `topapplications:` Top applications report

`after` *`yyyy/ mm/ dd`*

Includes statistics collected after a specific time.

`before` *`yyyy/ mm/ dd`*

Includes statistics collected before a specific time.

`email` *`email-addr`*

Specify the address where the report is to be emailed.

`filename` *`filename`*

Specify a filename for the new report.

Examples

```
amnesiac > stats export csv ssl after 2008/09/01 filename ssltest
```

Related Commands

show stats cpu

support show disk

Displays disk statistics for the drive containing the Services Director.

Syntax

support show disk

Examples

```
amnesiac > support show disk
Filesystem           1K-blocks      Used Available Use% Mounted on
rootfs                 2071416   1102520    863672  57% /
udev                   4053260       160   4053100   1% /dev
tmpfs                  4062768         0   4062768   0% /dev/shm
/dev/sda5              2071416   1102520    863672  57% /
tmpfs                  1048576      9576   1039000   1% /lib/modules
tmpfs                  1048576      6348   1042228   1% /lib/firmware
none                     16384       164     16220   2% /tmp
/dev/sda2               132221     67116     58278  54% /boot
/dev/sda1               256665      8504    234908   4% /bootmgr
/dev/sda8             16516084   1496416  14180676  10% /var
/dev/sda9              1035692     33824    949256   4% /config
/dev/sda10             8262068    319380   7522992   5% /data
none                   4062768         0   4062768   0% /dev/shm
encfs                 16516084   1496416  14180676  10% /var/opt/rbt/decrypted
```

Related Commands

show stats memory

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terminal

Sets terminal settings.

Syntax

terminal { length *lines* | type *terminal_type* | terminal width *number-of-characters* }

Parameters

`[no] terminal length lines`

Sets the number of lines 0-1024; 0 to disable paging.

The **no** command option disables the terminal length.

`[no] terminal type terminal_type`

Sets the terminal type.

The **no** command option disables the terminal type.

`[no] terminal width number-of-characters`

Sets the width number of characters.

The **no** command option disables the terminal width.

Usage Guidelines

The **no** command option disables terminal settings.

Examples

```
amnesiac > terminal width 1024
```

Related Commands

ssh client generate identity user

traceroute

Executes the traceroute utility for IPv4 addresses. The traceroute command takes the standard Linux options.

Syntax

traceroute [options]

Parameters

`options`

The **traceroute** command takes the standard Linux options. For detailed information, see the Linux manual (man) page.

Examples

```
amnesiac > traceroute amnesiac
traceroute to amnesiac.domain.com (10.0.0.3), 30 hops max, 38 byte packets
1 amnesiac (10.0.0.3) 0.035 ms 0.021 ms 0.013 ms
```


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traceroute6

Executes the traceroute utility for IPv6 addresses. The traceroute6 command takes the standard Linux options.

Syntax

traceroute6 [options]

Parameters

`options`

The **traceroute6** command takes the standard Linux options. For detailed information, see the Linux manual (man) page.

Examples

```
amnesiac > traceroute6 amnesiac
traceroute6 to amnesiac.domain.com (2001:38dc:52::e9a4:c5:6282/64), 30 hops max, 38
byte packets
1 amnesiac (2001:38dc:52::e9a4:c5:6282/64) 0.035 ms 0.021 ms 0.013 ms
```

Related Commands

ipv6 in-path-gateway

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Enable-Mode Commands

- Entering enable-mode 61
- Enable-Mode Commands. 61

Entering enable-mode

You can perform basic system administration tasks in enable mode. Only administrator users can perform enable-mode commands. All commands available in user mode are also available in enable mode.

"Configuration-Mode Commands" on page 119 describes some enable commands because they are more easily understood in relationship to the feature set of which they are a part.

To enter enable mode:

1. Connect to the CLI and enter the following command:

   ```
   login as: admin
   Brocade Services Director
   Last login: Wed Jan 20 13:02:09 2012 from 10.0.1.1
   gen1-sh139 > enable
   gen1-sh139 #
   ```

2. To exit enable mode, enter exit. For information about the exit command, see "ping" on page 12.

   All the commands available in user mode are also available in enable mode.

   Note: For an alphabetical list of Enable-Mode commands, see the Contents page of this book.

Enable-Mode Commands

The following section contains the Services Director commands.

clear arp-cache

Clears dynamic entries from the ARP cache. This command does not clear static entries.

Syntax

clear arp-cache

Examples

```
amnesiac # clear arp-cache
```

Related Commands

show arp

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clear hardware edac-ue-alarm

Clears Acknowledge EDAC UE (uncorrectable errors) Alarm.

Syntax

clear hardware edac-ue-alarm

Usage Guidelines

The amber LED light stops blinking on the system.

Examples

```
amnesiac # clear hardware edac-ue-alarm
```

Related Commands

show hardware error-log

clear hardware error-log

Clears IPMI System Event Log (SEL).

Syntax

clear hardware error-log

Usage Guidelines

The amber LED light stops blinking on the system.

Examples

```
amnesiac # clear hardware error-log
```

Related Commands

show hardware error-log

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clock set

Sets the system date and time.

Syntax

clock set { *yyyy/mm/dd/ hh:mm:ss* }

Parameters

yyyy/mm/dd/ hh:mm:ss

Specify the date and time (year, month, day, hour, minutes, and seconds).

Examples

```
amnesiac # clock set 2003/12/31 23:59:59
```

Related Commands

show log

configure terminal

Enables configuration from the terminal by entering the configuration subsystem. You must execute the Services Director command first to enter configuration mode.

Syntax

[no] configure terminal

Usage Guidelines

To exit the configuration subsystem, type **exit**.

The **no** command option disables the terminal configuration.

Examples

```
amnesiac # configure terminal
```

Related Commands

show terminal

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disable

Exits enable mode.

Syntax

disable

Examples

```
amnesiac # disable
```

Related Commands

exit

file stats delete

Deletes the statistics file.

Syntax

file stats delete *filename*

Parameters

filename

Specify the name of the file to delete.

Examples

```
amnesiac # file stats delete throughput
```

Related Commands

show clock

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file stats move

Renames the statistics file.

Syntax

file stats move ***source-filename destination-filename***

Parameters

`source-filename`

Specify the source file to rename.

`destination-filename`

Specify the new filename.

Examples

```
amnesiac # file stats move throughput throughput2
```

Related Commands

show files stats

file stats upload

Uploads a specified statistics report file to a remote host.

Syntax

file stats upload *filename* { *destination* | *case-number* }

Parameters

filename

Mandatory. Specify the source filename to upload.

destination

Mandatory. Specify the upload protocol, authentication credentials, remote host, and host filepath for the remote file. Supported protocols are HTTP, FTP and SCP.

Note: There is no default setting for this property.

case-number

Mandatory. Specify the customer case number.

Examples

```
amnesiac # file stats upload throughput ftp://admin:password@ftp.test.com/stats
194170
```

Related Commands

show files stats

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file tcpdump delete

Deletes a TCP dump output file.

Syntax

file tcpdump delete *filename*

Parameters

filename

Specify the **tcpdump** file to delete.

Examples

```
amnesiac # file tcpdump delete dumpfile
```

Related Commands

file tcpdump upload

file tcpdump upload

Uploads a specific TCP dump output file to a remote host.

Syntax

file tcpdump upload *filename* { *destination* | *case-number* }

Parameters

filename

Mandatory. Specify the source filename to upload.

destination

Mandatory. Specify the upload protocol, authentication credentials, remote host, and host filepath for the remote file. Supported protocols are HTTP, FTP and SCP.

Note: There is no default setting for this property.

case-number

Mandatory. Specify the customer case number.

Examples

```
amnesiac # file tcpdump upload dumpfile http://www.test.com/stats 194171
```

Related Commands

file tcpdump delete

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file upload clear-stats

Clears the file upload statistics.

Syntax

file upload clear-stats

Usage Guidelines

The file **upload clear-stats** command clears the statistics displayed by the **show uploads** command.

Examples

```
amnesiac > file upload clear-stats
```

Related Commands

show uploads

file upload stop

Stops an upload.

Syntax

file upload stop

Usage Guidelines

The **file upload stop** command stops an upload of a resource.

Examples

```
amnesiac > file upload stop
```

Related Commands

show uploads

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image delete

Deletes the specified software image.

Syntax

image delete *image-filename*

Parameters

`image-filename`

Specify the name of the software image to delete.

Examples

```
amnesiac # image delete snkv1.0
```

Related Commands

show images

image delete-all

Deletes all software image files on the disk.

Syntax

```
image delete-all
```

Examples

```
amnesiac # image delete-all
```

Related Commands

show uploads

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image fetch

Downloads a software image from a remote host.

Syntax

image fetch ***URL, -scp://, or -ftp://username:password@hostname/path/filename image-filename***

Parameters

`URL,-scp://, or -ftp://username:password@hostname/path/filename`

Specify the upload protocol, the location, and authentication credentials for the remote image file.

Press the Enter key to download the image. The image retains the same name it had on the server.

`image-filename`

Specify a local filename for the image.

Examples

```
amnesiac # image fetch http://www.domain.com/v.1.0 version1.0
```

Related Commands

show images

image install

Installs the software image onto a system partition.

Syntax

image install ***image-filename partition***

Parameters

`image-filename`

Specify the software image filename to install.

`partition`

Specify the partition number: **1**, **2**.

Examples

```
amnesiac # image install version1.0 2
```

Related Commands

show images

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image move

Moves or renames an inactive system image on the hard disk.

Syntax

image move ***source-image-name new-image-name***

Parameters

`source-image-name`

Specify the name of the software image to move or rename.

`new-image-name`

Specify the new name of the software image.

Examples

```
amnesiac # image move www.domain.com/v.1.0 version1.0
```

Related Commands

show images

image upgrade

Installs a system image on the backup boot partition.

Syntax

image upgrade *image-name*

Parameters

image-name

Specify the software image filename to install.

Usage Guidelines

The **image upgrade** command only installs the image on the backup boot partition.

Examples

```
amnesiac # image upgrade image187.img
```

Related Commands

show images

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ntpdate

Conducts a one-time synchronization with a specified NTP server.

Syntax

ntpdate *ip-addr*

Parameters

ip-addr

Specify the NTP server with which to synchronize.

Examples

```
amnesiac # ntpdate 10.10.10.1
```

Related Commands

show ntp

reload

Reboots the system.

Syntax

reload [halt]|[force]

Parameters

`halt`

Shuts down the system.

`force`

Forces an immediate reboot of the system even if it is busy.

Usage Guidelines

After this command is used, the master password is required.

- If you chose to store the master password in the Services Director when it was installed, the master password is used automatically, and the Services Director service restarts automatically.
- If you DID NOT choose to store the master password in the Services Director when it was installed, the Services Director service is initially unavailable. To resolve this, you must re-enter the master password using the VA GUI. This is not possible using the CLI. After this is done, the Services Director service restarts.

Examples

```
amnesiac # reload
The session will close. It takes about 2-3 minutes to reboot the appliance.
```

Related Commands

disable, ssc kpti, show ssc kpti

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show arp

Displays the contents of the ARP cache. The ARP cache includes all statically configured ARP entries, as well as any that the system has acquired dynamically.

Syntax

show arp [static]

Parameters

`static`

Displays static ARP addresses.

Examples

```
amnesiac # show arp
ARP cache contents
IP 10.0.0.1 maps to MAC 00:07:E9:70:20:15
IP 10.0.0.2 maps to MAC 00:05:5D:36:CB:29
IP 10.0.100.22 maps to MAC 00:07:E9:55:10:09
```

Related Commands

clear arp-cache

show banner

Displays the banner settings.

Syntax

show banner

Examples

```
amnesiac # show banner
Banners:
    MOTD:
    Issue: Pulse Services Director
    Net Issue: Brocade Services Director
```

Related Commands

banner motd

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show configuration

Displays the current and saved configuration settings that differ from the default settings.

Syntax

show configuration [full]

Parameters

`full`

Displays all CLI commands and does not exclude commands that set default values.

Examples

```
amnesiac # show configuration
##
## Network interface configuration
##
no interface aux dhcp
interface aux duplex "auto"
no interface aux shutdown
interface aux speed "auto"
interface primary ip address 10.0.0.3 /16
##
## Routing configuration
##
ip default-gateway "10.0.0.1"
##
## Other IP configuration
##
hostname "amnesiac"
ip domain-list domain.com
ip domain-list domain.com
ip name-server 10.0.0.2
##
## Logging configuration
##
logging local "info"
##
## Process Manager configuration
##
pm process mgmtd launch timeout "4000"
pm process sport shutdown order "0"
pm process statsd shutdown order "0"
##
## Network management configuration
##
## Miscellaneous other settings (this is a partial list of settings)
```

Related Commands

configuration new

show configuration files

Displays the list of active and backup configuration files or the contents of a specified file.

Syntax

show configuration [*filename*]

Parameters

filename

Specify the filename. The default filenames are:

- `initial:` Specify the initial configuration.
- `initial.bak:` Specify the initial backup configuration.
- `cold:` Specify the configuration file before SDR has occurred.
- `working (active):` Specify the current configuration.
- `working.bak:` Specify the current backup configuration.

Examples

```
amnesiac # show configuration files initial
##
## Network interface configuration
##
no interface aux dhcp
 interface aux duplex "auto"
 interface aux ip address 10.0.62.75 /16
   interface aux mtu "1500"
no interface aux shutdown
   interface aux speed "auto"
   interface aux txqueuelen "100"
no interface primary dhcp

##
## Routing configuration
##
   ip default-gateway "10.0.0.1"

##
## Logging configuration
##
   logging 10.1.10.200
   logging 10.1.10.200 trap "info"

*** this is a partial display ***
```

Related Commands

configuration new

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show configuration

Displays running configuration settings that are different from the defaults.

Syntax

show configuration running [full]

Parameters

`running`

Displays system CLI commands to recreate current running configuration.

`full`

Displays all system CLI commands and does not exclude commands that set default values.

Examples

```
amnesiac # show configuration running
##
## Network interface configuration
##
no interface aux dhcp
 interface aux duplex "auto"
 interface aux ip address 10.0.62.75 /16
   interface aux mtu "1500"
no interface aux shutdown
   interface aux speed "auto"
   interface aux txqueuelen "100"
no interface inpath0_0 dhcp
   interface inpath0_0 duplex "auto"
   interface inpath0_0 ip address 10.11.62.75 /16
   interface inpath0_0 mtu "1500"
no interface inpath0_0 shutdown
   interface inpath0_0 speed "auto"
   interface inpath0_0 txqueuelen "100"
no interface lan0_0 dhcp
   interface lan0_0 duplex "auto"
   interface lan0_0 mtu "0"
no interface lan0_0 shutdown
   interface lan0_0 speed "auto"
   interface lan0_0 txqueuelen "100"
lines 1-23

##(displays running configuration; this is a partial list of settings.)
```

Related Commands

configuration new

show files events config

Displays events configuration.

Syntax

show files events config

Examples

```
amnesiac # show files events config
```

Related Commands

debug generate dump

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show files process-dump

Displays a list of crash dump files.

Syntax

show files process-dump

Examples

```
amnesiac # show files process-dump
```

Related Commands

debug generate dump

show files stats

Displays performance statistics files.

Syntax

show files stats

Usage Guidelines

You export performance statistics to files using the **stats export** command.

Examples

```
amnesiac # show files stats
```

Related Commands

show stats cpu, stats export

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show files tcpdump

Displays files saved by the tcpdump utility.

Syntax

show files tcpdump

Examples

```
amnesiac # show files tcpdump
unopt.cap
big-noopt.cap
big-opt.cap
big.tgz
big-opt2.cap
```

Related Commands

tcpdump

show fips status

Displays FIPS status information by feature.

Syntax

show fips status

Examples

```
amnesiac > show fips status
CMC Autoregistration: Should not be configured in FIPS mode.
Citrix Basic Encryption: Should not be configured in FIPS mode.FIPS Mode: Disabled.
You must save the configuration and reload the system to enable FIPS mode.
```

Related Commands

fips enable

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show hardware all

Displays hardware information such as the current slot configuration.

Syntax

show hardware all

Examples

```
amnesiac # show hardware all
Hardware Revision: B
Mainboard: Series 3000/5000 motherboard, ................. CMP-00072
Slot 0:    4 Port Copper GigE Network Bypass Card, ....... CMP-00074
Slot 1:    (Empty)
Slot 2:    (Empty)
Slot 3:    (Empty)
Slot 4:    6 Port SATA RAID I/O Card, .................... CMP-00014
Slot 5:    (Empty)
```

Related Commands

hardware watchdog enable

show interfaces

Displays the running state settings and statistics for specific interfaces.

Syntax

show interfaces *interface_name* [arp | arp static | brief | configured | dhcp-lease]

Parameters

`interface_name`

Specify the interface name. For example, **aux**, **lan0_0**, **wan0_0**, **primary**, **in-path0_0**, **lo**.

`arp`

Displays static and dynamic ARP entries for this interface.

`arp static`

Displays statically-configured ARP entries for this interface.

`brief`

Displays the running state settings without statistics.

`configured`

Displays configured settings for the interface.

`dhcp-lease`

Displays DHCP lease for this interface.

Usage Guidelines

The settings and statistics displayed varies when using DHCP.

Note: See also show interfaces brief and show interfaces configured.

Examples

```
*** show brief details loopback interface ***
amnesiac # show interfaces lo brief
Interface lo state
   Up:                 yes
   Interface type:     loopback
   IP address:         127.0.0.1
   Netmask:            255.0.0.0
   IPv6 address:       ::1/128
   Speed:              N/A
   Duplex:             N/A
   MTU:                16436
   HW address:         N/A
   Link:               yes
   Counters cleared date:  2017/10/26 07:18:57
```


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```
*** show full details for loopback interface ***
amnesiac # show interfaces lo configured
Interface lo configuration
   Enabled:            yes
   DHCP:               no
   Dynamic DNS DHCP:   no
   DHCPv6:             no
   Dynamic DNS DHCPv6: no
   IP address:         127.0.0.1
   Netmask:            255.0.0.0
   Speed:              auto
   Duplex:             auto
   MTU:                16436
   Counters cleared date:  2017/10/26 07:18:57
amnesiac # show interfaces lo
Interface lo state
   Up:                 yes
   Interface type:     loopback
   IP address:         127.0.0.1
   Netmask:            255.0.0.0
   IPv6 address:       ::1/128
   Speed:              N/A
   Duplex:             N/A
   MTU:                16436
   HW address:         N/A
   Link:               yes
   Counters cleared date:  2017/10/26 07:18:57

   RX bytes:           82972572
   RX packets:         342912
   RX mcast packets:   0
   RX discards:        0
   RX errors:          0
   RX overruns:        0
   RX frame:           0

   TX bytes:           82972572
   TX packets:         342912
   TX discards:        0
   TX errors:          0
   TX overruns:        0
   TX carrier:         0
   TX collisions:      0

*** show primary interface ***
amnesiac # show interfaces primary arp
ARP cache contents
  IP 10.62.132.37 maps to MAC 44:31:92:5D:90:42
  IP 10.62.128.30 maps to MAC 00:0C:29:41:DD:6C
  IP 10.62.128.1 maps to MAC 00:10:DB:FF:10:04
  IP 10.62.167.197 maps to MAC 00:50:56:A6:64:F4
  IP 10.62.169.163 maps to MAC 00:50:56:A6:6F:93
```

```
*** show aux interface ***
amnesiac # show interfaces aux
Interface aux state
   Up:                 yes
   Interface type:     ethernet
   IP address:
   Netmask:
   IPv6 link-local address: fe80::250:56ff:fea6:195c/64
   Speed:              1000Mb/s (auto)
   Duplex:             full (auto)
   MTU:                1500
   HW address:         00:50:56:A6:19:5C
   Link:               yes
   Counters cleared date:  2017/10/26 07:18:57

   RX bytes:           39112481
   RX packets:         625959
   RX mcast packets:   0
   RX discards:        0
   RX errors:          0
   RX overruns:        0
   RX frame:           0

   TX bytes:           4338
   TX packets:         51
   TX discards:        0
   TX errors:          0
   TX overruns:        0
   TX carrier:         0
   TX collisions:      0
```

Related Commands

interface

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show interfaces brief

Displays brief running state for all interfaces

Syntax

show interfaces brief

Usage Guidelines

The settings and statistics displayed varies when using DHCP.

Note: See also show interfaces and show interfaces configured.

Examples

```
amnesiac # show interfaces brief
Interface primary state
   Up:                 yes
   Interface type:     ethernet
   IP address:         10.62.169.160
   Netmask:            255.255.192.0
   IPv6 link-local address: fe80::250:56ff:fea6:539/64
   Speed:              1000Mb/s (auto)
   Duplex:             full (auto)
   MTU:                1500
   HW address:         00:50:56:A6:05:39
   Link:               yes
   Counters cleared date:  2017/10/26 07:18:57


Interface aux state
   Up:                 yes
   Interface type:     ethernet
   IP address:
   Netmask:
   IPv6 link-local address: fe80::250:56ff:fea6:195c/64
   Speed:              1000Mb/s (auto)
   Duplex:             full (auto)
   MTU:                1500
   HW address:         00:50:56:A6:19:5C
   Link:               yes
   Counters cleared date:  2017/10/26 07:18:57
```

Related Commands

interface

show interfaces configured

Displays configuration for all interfaces.

Syntax

show interfaces configured

Usage Guidelines

The settings and statistics displayed varies when using DHCP.

Note: See also show interfaces and show interfaces brief.

Examples

```
amnesiac # show interfaces configured
Interface aux configuration
 Enabled: yes
   DHCP:                yes
   Dynamic DNS DHCP:    no
   DHCPv6:              no
   Dynamic DNS DHCPv6:  no
   IP address:          169.254.1.1
   Netmask:             255.255.0.0
   IPv6 address:
   Speed:               auto
   Duplex:              auto
   MTU:                 1500
   Counters cleared date:  2013/11/02 01:06:10

Interface lo configuration
   Enabled:             yes
   DHCP:                no
   Dynamic DNS DHCP:    no
   DHCPv6:              no
   Dynamic DNS DHCPv6:  no
   IP address:          127.0.0.1
   Netmask:             255.0.0.0
   Speed:               auto
   Duplex:              auto
   MTU:                 16436
   Counters cleared date:  2013/11/02 01:06:10
```


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```
Interface primary configuration
   Enabled:            yes
   DHCP:               no
   Dynamic DNS DHCP:   no
   DHCPv6:             no
   Dynamic DNS DHCPv6: no
   IP address:
   Netmask:
   IPv6 address:
   Speed:              auto
   Duplex:             auto
   MTU:                1500
   Counters cleared date:  2013/11/02 01:06:10
```

Related Commands

interface

show ip default-gateway

Displays the IP default gateway.

Syntax

show ip default-gateway [static]

Parameters

`static`

Displays the static default gateway.

Examples

```
amnesiac # show ip default-gateway static
Configured default gateway: 10.0.0.1
```

Related Commands

show ip route

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show ipv6 default-gateway

Displays the IPv6 default gateway.

Syntax

show ipv6 default-gateway [static]

Parameters

`static`

Displays the static default gateway.

Examples

```
amnesiac # show ipv6 default-gateway static
Configured default gateway: 2001:38dc:52::e9a4:c5:6282/64
```

Related Commands

ipv6 default-gateway

show ipv6 route

Displays active IPv6 routes, both dynamic and static.

Syntax

show ipv6 route [static]

Parameters

`static`

Displays the static default gateway.

Examples

```
amnesiac # show ipv6 route
Destination Network Gateway Interface
::1/128                          ::                          lo
2000::/64                        ::                          primary
2001::20e:b6ff:fe01:58f1/128     ::                          lo
2001::/60                        ::                          aux
2001::/60                        ::                          primary
fe80::200:ff:fe00:0/128          ::                          lo
fe80::200:ff:fe00:0/128          ::                          lo
[partial example]
```

Related Commands

ipv6 route

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show ip route

Displays active routes both dynamic and static.

Syntax

show ip route [static]

Parameters

`static`

Displays configured static routes.

Examples

```
amnesiac # show ip route static
Destination       Mask              Gateway
default           0.0.0.0           10.0.0.4
```

Related Commands

ip route

show job

Displays the status of a scheduled job.

Syntax

show job *job-id*

Parameters

job-id

Specify the job identification number.

Examples

```
amnesiac # show job 10
job {job_id}: 10
Status: pending
Name: myjob
Comment: this is a text
Absolute range:
Commands:
show info.
show connections.
show version.
```

Related Commands

job command

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show jobs

Displays a list of all jobs.

Syntax

show jobs

Examples

```
amnesiac # show jobs
% No jobs configured.
```

Related Commands

job command

show licenses

Displays VLAB licenses, used for "root" access to the SSC host. Customers do not typically have access to VLAB licenses.

Syntax

show licenses

Examples

```
amnesiac # show licenses
Local: LK1-VLAB-0000-0000-1-3E83-2754-8910
 Index:         1
   Feature:     VLAB
   Valid:       yes
   Active:      yes
   Start date:
   End date:
```


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show log

Displays the system logs.

Syntax

show log [continuous | files *log-number* | reverse | matching]

Parameters

`continuous`

Displays the log continuously, similar to the Linux **tail -f** command.

`files` *`log-number`*

Displays a list of log files or a specific log file.

`reverse`

Displays the log information, in reverse order, with the latest entry at the top.

`matching`

Displays a list of matching log files.

Examples

```
amnesiac # show log
May 22 20:00:00 localhost /usr/sbin/crond[784]: (root) CMD (/usr/sbin/logrotate /
etc/logrotate.conf)
May 22 20:00:00 localhost cli[555]: [cli.INFO]: user admin: CLI got signal 2 (SIGINT)
May 22 20:02:31 localhost cli[555]: [cli.INFO]: user admin: Executing command: show
ip route
May 22 20:02:38 localhost cli[555]: [cli.INFO]: user admin: CLI got signal 2 (SIGINT)
Dec 22 20:03:16 localhost cli[555]: [cli.INFO]: user admin: CLI got signal 2 (SIGINT)
May 22 20:04:00 localhost cli[555]: [cli.INFO]: user admin: Executing command: show
ip route static
Dec 22 20:05:09 localhost cli[555]: [cli.INFO]: user admin: CLI got signal 2 (SIGINT)
May 22 20:06:44 localhost cli[555]: [cli.INFO]: user admin: Executing command: show
limit bandwidth
May 22 20:06:49 localhost cli[555]: [cli.INFO]: user admin: CLI got signal 2 (SIGINT)
```

Related Commands

logging

show papi rest access_codes

Displays the REST API settings.

Syntax

show papi rest access_codes

Usage Guidelines

Use this command to display the access code settings used to gain access to REST APIs.

Examples

```
amnesiac # show papi rest access_codes
 ID: b6c1efd5-a20b-4784-b2f2-44bedc9bc107
 Desc: example
 Creator: admin

Code:eyJhdWQiOiAiaHR0cHM6Ly9wZXJmNC1zaDQubGFiLm5idHRlY2guY29tL2FwaS9jb21tb24vMS4wL3R
va2VuIiwgImlzcyI6ICJodHRwczovL3BlcmY0LXNoNC5sYWIubmJ0dGVjaC5jb20iLCAicHJuIjogImFkbWl
uIiwgImp0aSI6ICJiNmMxZTQ3ODQtYjJmMi00NGJlZGM5YmMxMDciLCAiZXhwIjogIjAiLCAiaWF0IjogIjE
zNjM5Nzk4OTIifQ==
```

Related Commands

papi rest access_code import

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show remote ip

Displays the current IP network settings for the remote management port.

Syntax

show remote ip

Examples

```
amnesiac # show remote ip
```

show running-config

Displays the running configuration settings that differ from the defaults.

Syntax

show running-config [full]

Parameters

`full`

Displays all settings, including those set to the default value.

Examples

```
amnesiac # show running-config
(displays running configuration)
```

Related Commands

configuration new

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show telnet-server

Displays Telnet server settings.

Syntax

show telnet-server

Examples

```
amnesiac # show telnet-server
TCP reordering enabled:   no
TCP reordering threshold: 3
```

Related Commands

telnet-server enable

show userlog

Displays current user log file in a scrollable pager.

Syntax

show userlog [continuous | files *file-number*]

Parameters

`continuous`

Displays new user log messages as they occur.

`files` *`file-number`*

Displays archived user log files.

Examples

```
amnesiac # show userlog
Oct 17 15:38:54 amnesiac-sh75 cli[26992]: [cli.NOTICE]: user admin: CLI launched
Oct 17 15:39:00 amnesiac-sh75 cli[26992]: [cli.INFO]: user admin: Executing command:
enable
Oct 17 17:18:03 amnesiac-sh75 cli[26992]: [cli.INFO]: user admin: Executing command:
show version
Oct 17 18:00:00 amnesiac-sh75 cli[26992]: [cli.INFO]: user admin: Executing command
matching: show rsp slots
Oct 17 18:00:36 amnesiac-sh75 cli[26992]: [cli.INFO]: user admin: Executing command
matching: show rsp dataflow RiO
Oct 17 18:00:46 amnesiac-sh75 cli[26992]: [cli.INFO]: user admin: Executing command
matching: show rsp dataflow RiOS
Oct 17 18:00:57 amnesiac-sh75 cli[26992]: [cli.INFO]: user admin: Executing command
matching: show rsp dataflow inpath0_0
Oct 17 18:01:10 amnesiac-sh75 cli[26992]: [cli.INFO]: user admin: Executing command
matching: show rsp images
Oct 17 18:08:22 amnesiac-sh75 cli[26992]: [cli.INFO]: user admin: Executing command:
show service
Oct 17 18:11:18 amnesiac-sh75 cli[26992]: [cli.INFO]: user admin: Executing command:
show smb signing delegation domains

*** this is partial display ***
```

Related Commands

logging

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show usernames

Displays a list of user accounts.

Syntax

show usernames username [detailed]

Parameters

`detailed`

Displays specified user details.

Examples

```
*** show list of user names ***
amnesiac # show usernames
User                Expire       Lock         Failures     Comment
-------------------------------------------------------------------------------
@admin              Never        Never        0
 john               Never        Never        0
 david              Never        Never        0
*james              Never        Never        0
-monitor            N/A          N/A          N/A
-------------------------------------------------------------------------------
@ = current user, * = also logged in, - = disabled,
! = locked out due to failed logins

*** show details for a listed user ***
amnesiac # show usernames monitor detailed
User monitor details
   Current User:            No
   Logged In:               No
   Disabled:                Yes
   Password Change:         N/A
   Password Expired:        N/A
   Account Locked:          N/A
   Login Failure Lock Out:  N/A
   Login Failure Count:     N/A
   Last Login Failure:      N/A
   Comment:
```

Related Commands

username password

stats clear-all

Clears data for all samples, computed history data points (CHDs), and status for all alarms.

Syntax

stats clear-all

Examples

```
amnesiac # stats clear-all
```

Related Commands

show alarm, show running-config

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tcpdump

Executes the tcpdump utility. You can quickly diagnose problems and take traces for Brocade Technical Support. The tcpdump command takes the standard Linux options. For detailed information, see the Linux man page.

Syntax

tcpdump [options] [*filter-string*]

Parameters

`options`

The tcpdump command takes the standard Linux options:

- `a:` Attempt to convert network and broadcast addresses to names.
- `c:` Exit after receiving count packets.
- `d:` Dump the compiled packet matching code in a human readable form to standard output and stop.
- `dd:` Dump packet matching code as a C program fragment.
- `ddd:` Dump packet matching code as decimal numbers preceded with a count).
- `e:` Print the linklevel header on each dump line.
- `E:` Use secret algorithm for decrypting IPsec ESP packets.
- `f:` Print foreign Internet addresses numerically rather than symbolically.
- `F:` Use file as input for the filter expression. An additional expression given on the command line is ignored.
- `i:` Listen on interface. If unspecified, tcpdump searches the system interface list for the lowest numbered, configured up interface.
- `n:` Do not convert addresses, such as host addresses and port numbers to names.
- `N:` Do not print domain name qualification of hostnames. For example, if you specify this flag, then tcpdump will print nic instead of nic.ddn.mil.
- `m:` Load SMI MIB module definitions from file module. This option can be used several times to load several MIB modules into tcpdump.
- `q:` Quiet output. Print less protocol information so output lines are shorter.
- `r:` Read packets from created with the -w option.
- `S:` Print absolute, not relative, TCP sequence numbers.
- `v:` (Slightly more) verbose output. For example, the time to live, identification, total length and options in an IP packet are printed. Also enables additional packet integrity checks such as verifying the IP and ICMP header checksum.
- `w:` Write the raw packets to a file rather than parsing and printing them out. They ca later be printed with the -r option. Standard output is used if file is **-**.

- `x:` Print each packet without its link level header in hexadecimal format. The smaller of the entire packet or bytes will be printed.
- `X:` When printing hex, print ASCII too. Thus if -x is also set, the packet is printed in hex/ASCII. This option enables you to analyze new protocols.

Note: For detailed information, see the Linux **man** page.

Usage Guidelines

Make sure you take separate tcpdumps for the LAN and WAN to submit to Pulse Secure Support. Make sure you take the tcpdump on the in-path interface.

The most common options are:

- **-n** Do not resolve addresses via DNS
- **-i** <interface> capture on <interface>
- To take traces on lanX_Y and wanX_Y, not inpathX_Y:
- **-e** display layer 2 headers, MAC addresses, and VLAN tags
- **-s** <bytes> capture up to <bytes> bytes per packet
- The default is 96 bytes; not enough for deep packet inspection for Pulse Secure Support, instead use:
- **-s** 0 to capture full frames
- **-w** <file> store the trace in <file> (needed when taking traces for offline analysis)

Common packet filters:

- **src host <ip>** - source IP address is <ip>
- **dst host <ip>** - destination IP address is <ip>
- **host <ip>** - either source or destination is <ip>
- Same for src port, dst port, and port
- Can connect multiple filters together with logical operators: and, or, and not. Use parentheses to override operator precedence.

For example:

```
tcpdump -i lan0_0 not port 22
tcpdump -i lan0_0 host 1.1.1.1 and port 2222
tcpdump -i wan0_0 host 3.3.3.3 and (port 4444 or port 5555)
```

Suppose two appliances are having a problem optimizing a connection:

```
Client IP = 10.10.10.10
Client SH IP = 10.10.10.20
Server IP = 11.11.11.11
Server SH IP = 11.11.11.21
```


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Take traces on all LAN/WAN interfaces on both appliances to diagnose:

```
C-SH# tcpdump -n -i lan0 host 10.10.10.10 and host 11.11.11.11
C-SH# tcpdump -n -i wan0_0 (host 10.10.10.10 and host 11.11.11.11) or
  (host 10.10.10.20 and host 11.11.11.21)
S-SH# tcpdump -n -i lan0 host 10.10.10.10 and host 11.11.11.11
S-SH# tcpdump -n -i wan0_0 (host 10.10.10.10 and host 11.11.11.11) or
  (host 10.10.10.20 and host 11.11.11.21)
```

Keep the tcpdump running and establish a connection.

If the problem is not obvious, use -w to capture to files, and examine in a tool like Wireshark. Sometimes you can capture very large traces of data and traffic you are interested in is a small subset of the entire trace. To work around this problem, run tcpdump through its own trace to cut down on the number of packets. Use the -r <file> option, to read from a file instead of capture on an interface

```
tcpdump -n -r my_trace.cap -w my_filtered_trace.cap host 5.5.5.5 and port 2323
```

The following example captures both VLAN tagged and untagged traffic on destination port 7850 and ARP packets:

```
tcp -i lan0_0 ((port 7850 or arp) or (vlan and (port 7850 or arp)))
```

Examples

```
amnesiac # tcpdump
tcpdump: listening on primary
18:59:13.682568 amnesiac.domain.com.ssh > dhcp-22.domain.com.3277: P
3290808290:3290808342(52) ack 3412262693 win 5840 (DF) [dscp 0x10]
18:59:13.692513 amnesiac.domain.com.ssh > dhcp-22.domain.com.3277: P 0:52(52) ack
1 win 5840 (DF) [dscp 0x10]
18:59:13.702482 amnesiac.domain.com.ssh > dhcp-22.domain.com.3277: P 0:52(52) ack
1 win 5840 (DF) [dscp 0x10]
```

Related Commands

tcpdump-x all-interfaces

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Configuration-Mode Commands

- Entering configuration mode 119
- Configuration-Mode Commands 119

Entering configuration mode

You can perform configuration tasks while in configuration mode. Only administrator users can perform configuration mode and enable mode commands. All commands available in user mode and enable mode are also available in configuration mode. Monitor users cannot perform configuration tasks.

To enter configuration-mode:

1. Connect to the CLI and enter the following commands:

   ```
   login as: admin
   Pulse Services Director
   Last login: Wed Jan 20 13:02:09 2010 from 10.0.1.1
   amnesiac > enable
   amnesiac # configure terminal
   amnesiac (config) #
   ```

   You are now in configuration mode.

2. To exit configuration mode, enter exit. For information about the exit command, see "ping" on page 12

   Note: For an alphabetical list of Configuration-Mode commands, see the Contents page of this book.

Configuration-Mode Commands

The following section contains the Services Director commands.

For an alphabetical list of Configuration-Mode commands, see the Table of Contents for this guide.

access enable

Enables secure access to an appliance using an internal management Access Control List (ACL).

Syntax

[no] access enable

Usage Guidelines

Appliances are subject to the network policies defined by corporate security policy, particularly in large networks. Using an internal management ACL you can:

- restrict access to certain interfaces or protocols of an appliance.
- restrict inbound IP access to an appliance, protecting it from access by hosts that do not have permission without using a separate device (such as a router or firewall).
- specify which hosts or groups of hosts can access and manage an appliance by IP address, simplifying the integration of appliances into your network. You can also restrict access to certain interfaces or protocols.

This feature provides the following safeguards to prevent accidental disconnection from the appliance.

- It detects the IP address you are connecting from and displays a warning if you add a rule that denies connections to that address.
- It always allows the default appliance ports 7800, 7801, 7810, 7820, and 7850.
- It always allows a previously-connected appliance to connect and tracks any changes to the IP address of the CMC to prevent disconnection.
- It converts well-known port and protocol combinations such as SSH, Telnet, HTTP, HTTPS, SNMP, and SOAP into their default management service and protects these services from disconnection. For example, if you specify protocol 6 (TCP) and port 22, the management ACL converts this port and protocol combination into SSH and protects it from denial.
- It tracks changes to default service ports and automatically updates any references to changed ports in the access rules.
- You can also change the standard port for HTTPS (443) to match your management standards using "web prefs log lines" on page 675 and "web httpd listen enable" on page 668.

Examples

```
amnesiac (config) # access enable
```

Related Commands

show access status, show access inbound rules

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access inbound rule add

Adds a secure access inbound rule.

Syntax

[no] access inbound rule add [allow | deny] protocol *protocol-number* service *service* dstport *port* srcaddr *ip-addr* interface *interface* rulenum *rulenum* | [log [on | off]] | [override]

Parameters

`allow | deny`

Specify the action on the rule:

- `allow:` Allows a matching packet access to the appliance. This is the default action.
- `deny:` Denies access to any matching packets.

`protocol` *`protocol-number`*

Specify **all**, **icmp**, **tcp**, **udp**, or protocol number (**1**, **6**, **17**) in IP packet header. The default setting is all.

`service` *`service`*

Optionally, specify the service name: **http**, **https**, **snmp**, **ssh**, **soap**, **telnet**

`dstport` *`port`*

Optionally, specify the destination port of the inbound packet.

You can also specify port ranges: 1000-30000

`srcaddr` *`ip-addr`*

Optionally, specify the source subnet of the inbound packet; for example, 1.2.3.0/24

`interface` *`interface`*

Optionally, specify an interface name: **primary**, **aux**, **inpath0_0**.

`rulenum` *`rulenum`*

Optionally, specify a rule number from **1** to **N**, **start**, or **end**.

The appliances evaluate rules in numerical order starting with rule **1**. If the conditions set in the rule match, then the rule is applied, and the system moves on to the next packet. If the conditions set in the rule do not match, the system consults the next rule. For example, if the conditions of rule **1** do not match, rule **2** is consulted. If rule **2** matches the conditions, it is applied, and no further rules are consulted.

`description`

Optionally, specify a description to facilitate communication about network administration.

`log [on | off]`

Optionally, specify to track denied packets in the log. By default, packet logging is enabled.

`override`

Specify to ignore the warning and force the rule modification. If you add, delete, edit, or move a rule that could disconnect you from the appliance, a warning message appears. You can specify **override** to ignore the warning and force the rule modification. Use caution when you override a disconnect warning.

Usage Guidelines

The management ACL contains rules that define a match condition for an inbound IP packet. You set a rule to allow or deny access to a matching inbound IP packet. When you add a rule on the appliance, the destination specifies the appliance itself, and the source specifies a remote host.

The ACL rules list contains default rules that allow you to use the management ACL with the RiOS features PFS, DNS caching, and RSP. These default rules allow access to certain ports required by these features. The list also includes a default rule that allows access to the CMC. If you delete the default ACL rules for one of these features and need to restore it.

Examples

```
amnesiac (config) # access inbound rule add allow protocol tcp/udp
dstport 1234 srcaddr 10.0.0.1/16 interface primary rulenum 2
```

Related Commands

show access inbound rules, show access status

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access inbound rule edit rulenum

Modifies a secure access inbound rule.

Syntax

[no] access inbound rule edit rulenum *rulenum* action [allow | deny] [protocol *protocol-number* service *service* dstport *port* | srcaddr *subnet* | interface *interface* |] | log [on | off] | [override]

Parameters

`rulenum` *`rulenum`*

Optionally, specify a rule number from **1** to **N**, **start**, or **end**.

appliances evaluate rules in numerical order starting with rule **1**. If the conditions set in the rule match, then the rule is applied, and the system moves on to the next packet. If the conditions set in the rule do not match, the system consults the next rule. For example, if the conditions of rule **1** do not match, rule **2** is consulted. If rule **2** matches the conditions, it is applied, and no further rules are consulted.

`action [allow | deny]`

Specify the action on the rule:

`allow`

Allows a matching packet access to the appliance. This is the default action.

`deny`

Denies access to and logs any matching packets.

`protocol` *`protocol-number`*

Specify **all**, **icmp**, **tcp**, **udp**, or protocol number (**1**, **6**, **17**) in IP packet header. The default setting is **all**.

`service` *`service`*

Optionally, specify the service name: **http**, **https**, **snmp**, **ssh**, **telnet**

`dstport` *`port`*

Specify the destination port.

You can also specify port ranges: 1000-30000

`srcaddr` *`subnet`*

Specify the source subnet.

For the subnet address, use the format XXX.XXX.XXX.XXX/XX.

`interface` *`interface`*

Specify the interface: **primary**, **aux**, **inpath0_0**

`description`

Optionally, specify a description to facilitate communication about network administration.

`log [on | off]`

Optionally, specify to enable or disable log in on this command.

`override`

Specify to ignore the warning and force the rule modification. If you add, delete, edit, or move a rule that could disconnect you from the appliance, a warning message appears. You can specify **override** to ignore the warning and force the rule modification. Use caution when overriding a disconnect warning.

Examples

```
amnesiac (config) # access inbound rule edit action allow dstport 1234 srcaddr
10.0.0.1/16 service http interface primary rulenum 2
```

Related Commands

ssh client generate identity user, show access inbound rules, show access status

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access inbound rule move

Moves a secure access inbound rule.

Syntax

[no] access inbound rule move *rulenum* to *rulenum* [override]

Parameters

`rulenum` *`rulenum`*

Specify a rule number from **1** to **N**, **start**, or **end**.

Appliances evaluate rules in numerical order starting with rule **1**. If the conditions set in the rule match, then the rule is applied, and the system moves on to the next packet. If the conditions set in the rule do not match, the system consults the next rule. For example, if the conditions of rule **1** do not match, rule **2** is consulted. If rule **2** matches the conditions, it is applied, and no further rules are consulted.

`override`

Specify to ignore the warning and force the rule modification. If you add, delete, edit, or move a rule that could disconnect you from the appliance, a warning message appears. You can specify **override** to ignore the warning and force the rule modification. Use caution when overriding a disconnect warning.

Examples

```
amnesiac (config) # access inbound rule move 2 to 4
```

Related Commands

ssh client generate identity user, show access inbound rules, show access status

alarm clear

Clears the specified alarm type.

Syntax

alarm *type* clear

Parameters

type

See "alarm enable" on page 128 for a complete listing and description of alarm types.

Usage Guidelines

Use this command to clear the status of the specified alarm type. If you clear an alarm and the error condition still exists, the alarm might be triggered again immediately. If you need to clear an alarm permanently, use the **no alarm enable** command.

Examples

```
amnesiac (config) # alarm secure_vault_unlocked clear
```

Related Commands

show alarm, show alarms

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alarm clear-threshold

Sets the threshold to clear the specified alarm type.

Syntax

[no] alarm *type* clear-threshold *threshold-level*

Parameters

type

See "alarm enable" on page 128 for a complete listing and description of alarm types.

threshold-level

Specify the threshold level. The threshold level depends on the alarm type, as do the possible values.

Usage Guidelines

Use this command to set the threshold at which the alarm is cleared.

Examples

```
amnesiac (config) # alarm cpu_util_indiv clear-threshold 70
```

Related Commands

show alarm, show alarms

alarm enable

Enables the specified alarm.

Syntax

[no] alarm *type* enable

Parameters

type

The alarm type:

- `autolicense_error:` This alarm triggers on a virtual appliance when the Pulse Secure Licensing Portal cannot respond to a license request with valid licenses.
- `autolicense_info:` This alarm triggers if the Pulse Secure Licensing Portal has information regarding licenses for a virtual appliance.
- `backup_generate_fail:` This alarm triggers when the generation of a Services Director backup fails.
- `backup_transfer_fail:` This alarm triggers when the transfer of a generated Services Director backup fails.
- `cpu_util_indiv:` This alarm indicates whether the system has reached the CPU threshold for any of the CPUs in the system. If the system has reached the CPU threshold, check your settings. If your alarm thresholds are correct, reboot the appliance.
- `flash_error:` This alarm indicates that the system has detected an error with the flash drive hardware. At times, the USB flash drive that holds the system images might become unresponsive; the appliance continues to function normally. When this error triggers you cannot perform a software upgrade, as the appliance is unable to write a new upgrade image to the flash drive without first power cycling the system. To reboot the appliance, enter the reload command to automatically power cycle the appliance and restore the flash drive to its proper function.
- `fs_mnt:` This alarm indicates that one of the mounted partitions is full or almost full. The alarm is triggered when only 7% of free space is remaining.
- `hardware:` This alarm indicates the overall health of the hardware.
- `ipmi:` This alarm indicates that the system has detected an Intelligent Platform Management (IPMI) event. This alarm is not supported on all appliance models.
- `license_expired:` This alarm triggers if any feature has at least one license installed, but all of them are expired.
- `license_expiring:` This alarm triggers if one or more features is going to expire within two weeks. The license expiring and license expired alarms are triggered per feature; for example, if you install two license keys for a feature, LK1-FOOxxx (expired) and LK1-FOO-yyy (not expired), the alarms do not trigger, because the feature has one valid license.
- `licensing:` This alarm is the parent licensing alarm and triggers if any of the appliance_unlicensed alarms are active.

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- `link_duplex:` This alarm is triggered when an interface was not configured for half-duplex negotiation but has negotiated half-duplex mode. Half-duplex significantly limits the optimization service results. This alarm is enabled by default.
- `link_io_errors:` This alarm is triggered when the link error rate exceeds 0.1% while either sending or receiving packets. This threshold is based on the observation that even a small link error rate reduces TCP throughput significantly. A properly configured LAN connection should experience very few errors. The alarm clears when the rate drops below 0.05%. This alarm is enabled by default.
- `link_state:aux:half_duplex:` Interface aux Half-Duplex.
- `link_state:aux:io_errors:` Interface aux Errors.
- `link_state:aux:link_error:` Interface aux Down.
- `link_state:primary:half_duplex:` Interface primary Half-Duplex.
- `link_state:primary:io_errors:` Interface primary Errors.
- `link_state:primary:link_error:` Interface primary Down.
- `linkstate:` This alarm indicates that the system has detected a link that is down. The system notifies you through SNMP traps, email, and alarm status. By default, this alarm is not enabled. The no alarm linkstate enable command disables the link state alarm.
- `local_db_fail:` Local Database Failure.
- `local_ssc_fail:` Local SSC Failure.
- `master_password_fail:` This alarm triggers when the Services Director is not running because the master password is corrupt/unavailable/waiting for user input.
- `paging:` This alarm indicates whether the system has reached the memory paging threshold. If 100 pages are swapped approximately every two hours the appliance is functioning properly. If thousands of pages are swapped every few minutes, then reboot the system. If rebooting does not solve the problem, contact Pulse Secure Support.
- `peer_ssc_fail:` Peer SSC Connectivity Failure.
- `secure_vault:` This alarm indicates a general secure vault error.
- `secure_vault_unlocked:` This alarm indicates whether the secure vault is unlocked. When the vault is unlocked, SSL traffic is not optimized and you cannot encrypt a data store.
- `ssc_ha_event:` hwCluster errors.
- `ssl:` This alarm indicates whether the system has detected an SSL error.
- `sticky_staging_dir:` This alarm indicates that the system has detected an error while trying to create a process dump.
- `upgrade:` This alarm indicates the status of an upgrade.

Usage Guidelines

Enabling alarms is optional.

The **no** command option disables all statistical alarms. The **no alarm <type>enable** command disables specific statistical alarms.

Examples

```
amnesiac # alarm hardware enable
```

Related Commands

show alarm, show alarms

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alarm error-threshold

Sets a threshold to trigger an alarm.

Syntax

[no] alarm *type* error-threshold *threshold-level*

Parameters

`type`

See "alarm enable" on page 128 for a complete listing and description of alarm types.

`threshold-level`

Specify the threshold level. The threshold level and possible values depend on the alarm type.

Usage Guidelines

The **no** version of the command resets the threshold to the default level.

Examples

```
amnesiac (config) # alarm cpu_util_indiv error-threshold 80
```

Related Commands

show alarm, show alarms

alarm rate-limit

Sets the alarm rate-limit values.

Syntax

alarm *type* rate-limit [email | snmp] term {long | medium | short} {count *value* | window *duration-seconds*}

Parameters

type

See "alarm enable" on page 128 for a complete listing and description of alarm types.

email

Sets rules for email.

snmp

Sets rules for SNMP.

term

Sets the alarm event rate-limit term value. Valid choices are:

- long
- medium
- short

count *value*

Sets the count value. The default values are 50 (long), 20 (medium), and 5 (short).

window *duration-seconds*

Sets the duration of time, in seconds, that the window remains open. The default values are 604,800 (long), 86,400 (medium), and 3600 (short).

Usage Guidelines

There are three term values--long, medium, and short. Each has a window, which is a number of seconds, and a maximum count. If, for any term value, the number of alarm events exceeds the maximum count during the window, the corresponding email/SNMP notifications are not sent.

Examples

```
amnesiac (config) # alarm cpu_util_indiv rate-limit email term short window 30
```

Related Commands

show alarm, show alarms

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alarms reset-all

Globally sets all alarms to their default settings.

Syntax

alarms reset-all

Usage Guidelines

Use this command to reset all the alarms to their default settings.

Examples

```
amnesiac (config) # alarms reset-all
All alarms reset to default settings
```

Related Commands

show alarm, show alarms

arp

Creates static ARP entries in the ARP table.

Syntax

[no] arp *ip-addr MAC-addr*

Parameters

ip-addr

Specify the IP address of the appliance.

MAC-addr

Specify the MAC address.

Usage Guidelines

The **no** command option disables ARP static entries.

Examples

```
amnesiac (config) # arp 10.0.0.1 00:07:E9:55:10:09
```

Related Commands

show arp

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authentication policy enable

Enables the authentication policy for account control.

Syntax

[no] authentication policy enable

Usage Guidelines

An authentication policy enables you to define a set of policies to enforce user login behavior and password strength. Passwords are mandatory when account control is enabled.

After you enable the authentication policy, the current passwords for all users expire. At the next login, each user is prompted to change their password, placing the new password under the account control authentication policy.

When account control is enabled and an administrator uses the **username password 7** command, the password automatically expires. Because the encrypted password cannot be checked against the configured password policy, the user is prompted to change their password at login.

Examples

```
amnesiac (config) # authentication policy enable
```

Related Commands

show alarmusername password 7

authentication policy login max-failures

Sets the maximum number of unsuccessful login attempts before temporarily locking the user's access to the appliance.

Syntax

[no] authentication policy login max-failures *count* [unlock-time *seconds*]

Parameters

count

Specify the maximum number of unsuccessful login attempts before a temporary account lockout.

unlock-time *seconds*

Specify the number of seconds the system waits before the user can log in again after an account lockout. If this optional parameter is not specified, the unlock time defaults to 300 seconds.

Usage Guidelines

The **no authentication policy login max-failures** command resets the maximum number of unsuccessful login attempts allowed to the default value, which is zero, indicating that the account lockout is disabled. This command takes no parameters.

Examples

```
amnesiac (config) # authentication policy login max-failures 3
```

Related Commands

show alarm

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authentication policy password

Configures the authentication policy password settings for account control.

Syntax

[no] authentication policy password {change-days *days* | dictionary enable | difference *count* | expire *days* [warn] | length *length* | lock *days* | lower-case *count* | numeric *count* | repeat *count* | reuse-interval *count* | special *count* | upper-case *count*}

Parameters

`change-days` *`days`*

Specify the minimum number of days before which passwords cannot be changed.

`dictionary enable`

Prevents the use of any word found in the dictionary as a password.

`difference` *`count`*

Specify the minimum number of characters that must change between an old and new password. The default for the strong security template is 4.

If the **authentication policy password difference <count>** value is set to a value greater than zero, a non-administrator must specify the new and old passwords by entering the **username password [old-password]** command. Administrators are never required to enter an old password when changing an account password.

`expire` *`days`*

Specify the number of days the current password stays in effect. To set the password expiration to 24 hours, specify 0. To set the password expiration to 48 hours, specify 1. Specify a negative number to turn off password expiration.

`length` *`length`*

Specify the minimum password length. The default setting for the strong security template is 14 alphanumeric characters.

`lock` *`days`*

Specify the number of days before an account with an expired password locks.

`lower-case` *`count`*

Specify the minimum number of lowercase letters required in the password. The default for the strong security template is 1.

`numeric` *`count`*

Specify the minimum number of numeric characters required in the password. The default for the strong security template is 1.

`repeat` *`count`*

Specify the maximum number of times a character can occur consecutively.

`reuse-interval` *`count`*

Specify the number of password changes allowed before a password can be reused. The default for the strong security template is 5.

`special` *`count`*

Specify the minimum number of special characters required in the password. The default for the strong security template is 1.

`upper-case` *`count`*

Specify the minimum number of uppercase letters required in the password. The default for the strong security template is 1.

Usage Guidelines

Passwords are mandatory when account control is enabled. Passwords for all users expire as soon as account control is enabled. This behavior forces the user to create a new password that follows the password characteristics defined in the password policy.

When account control is enabled and an administrator uses the **username password 7** command, the password automatically expires. Because the encrypted password cannot be checked against the configured password policy, the user is prompted to change their password at log in.

Empty passwords are not allowed when account control is enabled.

Examples

```
amnesiac (config) # authentication policy password expire 60 warn 3
```

Related Commands

authentication policy template, username password, username password 7, show alarm

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authentication policy template

Specify the authentication policy template for password policy configuration.

Syntax

authentication policy template {strong | basic}

Parameters

`strong`

Specifies the strong security policy template.

`basic`

Specifies the basic security policy template.

Usage Guidelines

The **authentication policy template strong** command sets the password policy to more stringent enforcement settings. Selecting this template automatically pre-populates the password policy with stricter settings commonly required by higher security standards, such as for the Department of Defense.

To remove the strong security template and return to the basic password policy, use the **authentication policy template basic** command.

When account control is enabled for the first time, the password policy is set to the basic template.

Examples

```
amnesiac (config) # authentication policy template strong

amnesiac # show authentication policy
Authentication policy enabled:                        yes
Maximum unsuccessful logins before account lockout:   3
 Wait before account unlock:                          300 Seconds
Minimum password length:                              14
Minimum upper case characters in password:            1
Minimum lower case characters in password:            1
Minimum numerical characters in password:             1
Minimum special characters in password:               1
Minimum interval for password reuse:                  5
Minimum characters diff for password change:          4
Prevent dictionary words in password:                 yes
User passwords expire:                                60 days
Warn user of an expiring password:                    7 days before
User accounts with expired passwords lock:            305 days

amnesiac (config) # authentication policy template basic
```

```
amnesiac #  show authentication policy
Authentication policy enabled:                        yes
Maximum unsuccessful logins before account lockout:   none
      Wait before account unlock:                     300 Seconds
Minimum password length:                              6
Minimum upper case characters in password:            0
Minimum lower case characters in password:            0
Minimum numerical characters in password:             0
Minimum special characters in password:               0
Minimum interval for password reuse:                  0
Minimum characters diff for password change:          0
Prevent dictionary words in password:                 yes
User passwords expire:                                never
Warn user of an expiring password:                    7 days before
User accounts with expired passwords lock:            never
```

Related Commands

show alarm

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authentication policy user lock never

Configures the user account lock settings for account control management.

Syntax

[no] authentication policy user *username* lock never

Parameters

`username`

Specify the user login: **admin**, **monitor**, or **shark**.

Usage Guidelines

The **authentication policy user lock never** command prevents the user's account from being locked after the password expires. This command is available only when account control is enabled.

The **no authentication policy user lock never** command allows the user account to be locked after the password expires.

Examples

```
amnesiac (config) # authentication policy user admin lock never
```

Related Commands

show alarm

authentication policy user login-failures reset

Resets a user account so the user can log in again.

Syntax

[no] authentication policy user *username* login-failures reset

Parameters

`username`

Specify the user login: **admin**, **monitor**, or **shark**.

Usage Guidelines

If a user account is locked because of a failed login count exceeding the configured value, the **authentication policy user login-failures reset** command resets the account so the user can log in again. This command resets the login count to zero, which is the default value.

Examples

```
amnesiac (config) # authentication policy user admin login-failures reset
Login failures cleared for user admin
```

Related Commands

show alarm

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banner login

Creates the system log in banner.

Syntax

[no] banner login *message-string*

Parameters

`message-string`

Specify the login banner message. Enclose the message in quotation marks.

Usage Guidelines

The **no** command option disables the login banner.

Examples

```
amnesiac (config) # banner login "reminder: meeting today"
```

Related Commands

show bootvar

banner motd

Creates the system Message of the Day banner.

Syntax

[no] banner motd *message-string*

Parameters

message-string

Specify the login Message of the Day. Enclose the message in quotation marks.

Usage Guidelines

The **no** command option disables the system Message of the Day banner.

Examples

```
amnesiac (config) # banner motd "customer visit today"
```

Related Commands

show bootvar

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boot bootloader password

Sets the password for the bootloader.

Syntax

boot bootloader password { ***password*** **|** **0** ***password*** **|** **7** ***password*** **}**

Parameters

password

Specify a bootloader password in clear text. The password must be at least 6 characters. This option functions the same as the **0 <password>** parameter and is provided for backward compatibility.

0 *password*

Specify a bootloader password in clear text.

7 *password*

Specify a bootloader password with an encrypted string. The encrypted string is the hash of the clear text password and is 35 bytes long. The first 3 bytes indicate the hash algorithm and the next 32 bytes are the hash values.

Examples

```
amnesiac (config) # boot bootloader password 0 182roy
amnesiac (config) # boot bootloader password 7 $1$qyP/PKii$2v9FOFcXB5a3emuvLKO3M
```

Related Commands

show images

boot system

Boots the specified partition the next time the system is rebooted.

Syntax

boot system *partition*

Parameters

partition

Specify the partition to boot: **1** or **2**

Examples

```
amnesiac (config) # boot system 1
```

Related Commands

show images

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cli clear-history

Clears the command history for the current user.

Syntax

cli clear-history

Examples

```
amnesiac (config) # cli clear-history
```

Related Commands

show cli

cli default auto-logout

Sets the keyboard inactivity time for automatic log out.

Syntax

[no] cli default auto-logout *minutes*

Parameters

minutes

Specify the number of minutes before log out occurs.

Usage Guidelines

To disable timeout:

```
cli default auto-logout 0
```

The **no** command option disables the automatic logout feature.

Examples

```
amnesiac (config) # cli default auto-logout 25
```

Related Commands

show cli

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cli default paging enable

Sets the ability to view text one screen at a time.

Syntax

[no] cli default paging enable

Usage Guidelines

The **no** command option disables paging.

Examples

```
amnesiac (config) # cli default paging enable
```

Related Commands

show cli

cli session

Sets CLI options for the current session only.

Syntax

[no] cli session {auto-logout *minutes* | paging enable | terminal length *lines* | terminal type *terminal_type* | terminal width *number-of-characters*}

Parameters

`auto-logout` *`minutes`*

Sets the number of minutes before the CLI automatically logs out the user. The default value is 15 minutes. The **no** command option disables the automatic logout feature.

`paging enable`

Sets paging. With paging enabled, if there is too much text to fit on the page, the CLI prompts you for the next page of text. The **no** command option disables paging.

`terminal length` *`lines`*

Sets the terminal length. The **no** command option disables the terminal length.

`terminal type` *`terminal_type`*

Sets the terminal type. The **no** command option disables the terminal type.

`terminal width` *`number-of-characters`*

Sets the terminal width. The **no** command option disables the terminal width.

Usage Guidelines

The **no** command option disables CLI option settings.

Examples

```
amnesiac (config) # cli session auto-logout 20
```

Related Commands

show cli

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clock timezone

Sets the current time zone.

Syntax

clock timezone *zone*

Parameters

zone

Specify the time zone name: **Africa**, **America**, **Antarctica**, **Arctic**, **Asia**, **Atlantic_Ocean**, **Australia**, **Europe**, **GMT-offset**, **Indian_Ocean**, **Pacific_Ocean**, **UTC**.

Usage Guidelines

The default value is GMT-offset.

Examples

```
amnesiac (config) # clock timezone Africa
```

Related Commands

show clock

configuration copy

Copies a configuration file.

Syntax

configuration copy ***sourcename new-filename***

Parameters

sourcename

Specify the name of the source file.

new-filename

Specify the name of the destination file.

Examples

```
amnesiac (config) # configuration copy westcoast eastcoast
```

Related Commands

show info

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configuration delete

Deletes a configuration file.

Syntax

configuration delete *filename*

Parameters

`filename`

Specify the name of the configuration file to delete.

Examples

```
amnesiac (config) # configuration delete westcoast
```

Related Commands

show info

configuration factory

Creates a new configuration file.

Syntax

configuration factory *filename*

Parameters

filename

Specify the name of the destination file.

Examples

```
amnesiac (config) # configuration factory eastcoast
```

Related Commands

show info

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configuration fetch

Downloads a configuration file over the network.

Syntax

configuration fetch ***URL,-scp://, or -ftp://username:password@hostname/path/filename | filename***

Parameters

URL,-scp://, or -ftp://username:password@hostname/path/filename

Specify the location of the configuration file to download in URL, scp://, or ftp:// format.

filename

Create a new name for the configuration file.

Usage Guidelines

To copy one configuration file to another appliance:

- Fetch the configuration time from the remote:

  ```
  configuration fetch <url-to-remote-config> <new-config-name>
  ```

- Activate the newly-fetched configuration

  ```
  configuration switch-to <new-config-name>
  ```

Examples

```
amnesiac (config) # configuration fetch http://domain.com/westcoast newconfig
amnesiac (config) # configuration switch-to newconfig
```

Related Commands

show info

configuration jump-start

Restarts a simple configuration wizard.

Syntax

configuration jump-start

Usage Guidelines

The configuration wizard lets you set five basic configuration parameters with a single command. Press Enter to accept the value displayed or enter a new value.

For a Services Director on the AWS platform, you can only set the hostname using the wizard.

Examples

```
*** Services Director on VMware and KVM ***
amnesiac (config) # configuration jump-start
Pulse Services Director configuration wizard.

Step 1: Hostname? [host-1234]
Step 2: Use DHCP on primary interface? [no]
Step 3: Primary IP address? [10.62.165.135]
Step 4: Netmask? [255.255.192.0]
Step 5: Default gateway? [10.62.128.1]

You have entered the following information:
 1. Hostname: host-1234
 2. Use DHCP on primary interface: no
 3. Primary IP address: 10.62.165.135
 4. Netmask: 255.255.192.0
 5. Default gateway: 10.62.128.1

To change an answer, enter the step number to return to.
Otherwise hit <enter> to save changes and exit.
To continue setup, navigate your web browser to the address configured above

*** Services Director on AWS ***
amnesiac (config) # configuration jump-start
Pulse Services Director configuration wizard.

Step 1: Hostname? [host-5678]

You have entered the following information:
 1. Hostname: host-5678

To change an answer, enter the step number to return to.
Otherwise hit <enter> to save changes and exit.
To continue setup, navigate your web browser to the address configured above
```

Related Commands

show info

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configuration merge

Merges common configuration settings from one system to another.

Syntax

configuration merge *filename new-config-name*

Parameters

filename

Name of file from which to merge settings.

new-config-name

Specify the new configuration name.

Usage Guidelines

Use the **configuration merge** command to deploy a network of appliances. Set up a template for your appliance and merge the template with each appliance in the network.

The following configuration settings are not merged when you run the **configuration merge** command: failover settings, SNMP SysContact and SysLocation, alarm settings, CLI settings, and all network settings (for example, hostname, auxiliary interface, DNS settings, defined hosts, static routing, and in-path routing).

The following configuration settings are merged when you run the **configuration merge** command: in-path, out-of-path, log settings, protocols, statistics, email, NTP and time, Web, and SNMP.

To merge a configuration file, run the following set of commands:

```
configuration write to <new-config-name>
    ;; this saves the current config to the new name and activates
        ;; the new configuration
configuration fetch <url-to-remote-config> <temp-config-name>
    ;; this fetches the configuration from the remote
configuration merge <temp-config-name>
    ;; this merges the fetched config into the active configuration
        ;; which is the newly named/created one in step 1 above
configuration delete <temp-config-name>
    ;; this deletes the fetched configuration as it is no longer
        ;; needed since you merged it into the active configuration
```

Examples

```
amnesiac (config) # configuration merge tempconfig
```

Related Commands

show info

configuration move

Moves and renames a configuration file.

Syntax

configuration move *sourcename destname*

Parameters

sourcename

Specify the name of the source configuration file.

destname

Specify the name of the new configuration file.

Examples

```
amnesiac (config) # configuration move westcoast eastcoast
```

Related Commands

show info

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configuration new

Creates a new, blank configuration file.

Syntax

configuration new *new-filename* | [keep *licenses*]

Parameters

new-filename

Specify the name of the new configuration file.

keep licenses

Creates a new configuration file with default settings and active licenses.

Usage Guidelines

Pulse Secure recommends that you use the **keep licenses** command option. If you do not keep licenses, your new configuration will not have a valid license key.

Examples

```
amnesiac (config) # configuration new westcoast keep licenses
```

Related Commands

show info

configuration revert keep-local

Reverts to the initial configuration but maintains some appliance-specific settings.

Syntax

configuration revert keep-local

Examples

```
amnesiac (config) # configuration revert keep-local
```

Related Commands

show info

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configuration revert saved

Reverts the active configuration to the last saved configuration.

Syntax

configuration revert saved

Examples

```
amnesiac (config) # configuration revert saved
```

Related Commands

show info

configuration switch-to

Loads a new configuration file and makes it the active configuration.

Syntax

configuration switch-to *filename*

Parameters

`filename`

Specify the filename. The default filenames are:

- `initial:` Specify the initial configuration.
- `initial.bak:` Specify the initial backup configuration.
- `cold:` Specify the configuration file before SDR has occurred.
- `working:` Specify the current configuration.

Examples

```
amnesiac (config) # configuration switch-to westcoast
```

Related Commands

show info

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configuration upload

Uploads the configuration file.

Syntax

configuration upload *filename http,-ftp,-or-scp-URL-(e.g.-scp://username:password@host/path*) | [active]

Parameters

`filename`

Specify the configuration filename.

`http,-ftp,-or-scp-URL-(e.g.-scp://username:password@host/path)`

Specify the HTTP, FTP, or scp URL.

`active`

Sets the uploaded file to the active configuration file.

Examples

```
amnesiac (config) # configuration upload initial scp://test:MyPassword@example/tmp/
```

Related Commands

show info

configuration write

Writes the current, active configuration file to memory.

Syntax

configuration write [to *filename*]

Parameters

`to filename`

Save the running configuration to a file.

Examples

```
amnesiac (config) # configuration write
```

Related Commands

show info

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debug generate dump

Generates a report you can use to diagnose misconfiguration in deployments.

Syntax

debug generate dump [full | brief | rsp | stats | all-logs | blockstore | blockstore-fifo] [upload *url*]]

Parameters

`full`

Generate a full system dump.

`brief`

Generates a brief system dump.

`rsp`

Generate a full system dump, including VMware Server data.

`stats`

Generates a full system dump including .dat files.

`all-logs`

Generate a full system dump with .dat files and all logs.

`blockstore`

Generate a full system dump with .dat files, all logs, and blockstore phash.

`blockstore-fifo`

Generate a full system dump with .dat files, all logs, blockstore phash, and fifo.

`upload` *`url`*

Generate a full system dump upload to the specified URL.

Usage Guidelines

If the upload URL points to a directory on the upload server, you must specify the trailing slash "/". For example, *"ftp://ftp.xxxxxxxx.com/incoming/"* rather than *"ftp://ftp.xxxxxxxx.com/incoming"*. The file name as it exists on the appliance is renamed to the file name specified in the URL.

After the dump generation, the upload is done in the background so you can exit the command-line interface without interrupting the upload process.

Examples

```
amnesiac (config) # debug generate dump brief
amnesiac (config) # debug generate dump upload ftp://ftp.xxxxxxxxx.com/incoming/
```

email autosupport enable

Enables automatic email notification of significant alarms and events to Pulse Secure Support.

Syntax

[no] email autosupport enable

Usage Guidelines

The **no** command option disables automatic email notification.

Examples

```
amnesiac (config) # email autosupport enable
```

Related Commands

show email

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email domain

Sets the domain for email notifications.

Syntax

[no] email domain *hostname-or-ip-addr*

Parameters

`hostname-or-ip-addr`

Specify the domain for email notifications (only if the email address does not contain it).

Usage Guidelines

Use the email domain command only if the email address does not contain the domain.

The **no** command option disables the email domain.

Examples

```
amnesiac (config) # email domain example.com
```

Related Commands

show email

email from-address

Sets the address from which email messages appear to come.

Syntax

[no] email from-address *email-addr*

Parameters

email-addr

Specify the full user name and domain to appear in the email "From:" address.

Usage Guidelines

Use the **email from-address** command to override the default email address used in outgoing email messages, do-not-reply@[hostname].[domainname].

The **no** command option disables the email address configured and returns to the default email address.

Examples

```
amnesiac (config) # email from-address bean@caffeitaly.com
```

Related Commands

show email

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email mailhub

Sets the SMTP server for email notifications.

Syntax

[no] email mailhub *hostname-or-ip-addr*

Parameters

`hostname-or-ip-addr`

Specify the SMTP server for email notifications.

Usage Guidelines

The **no** command option disables the SMTP server.

Examples

```
amnesiac (config) # email mailhub mail-server.example.com
```

Related Commands

show email

email mailhub-port

Sets the email port for email notifications.

Syntax

[no] email mailhub-port *port*

Parameters

port

Specify the email port for email notifications.

Usage Guidelines

The **no** command option disables the email port.

Examples

```
amnesiac (config) # email mailhub-port 135
```

Related Commands

show email

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email notify events enable

Enables email notification for events.

Syntax

[no] email notify events enable

Usage Guidelines

The **no** command option disables email notification.

Examples

```
amnesiac (config) # email notify events enable
```

Related Commands

show email

email notify events recipient

Sets the email address for notification of events.

Syntax

[no] email notify events recipient *email-addr*

Parameters

email-addr

Specify the email address of the user to receive notification of events.

Usage Guidelines

The **no** command option disables email address for notification.

Examples

```
amnesiac (config) # email notify events recipient johndoe@example.com
amnesiac (config) # email notify events recipient janedoe@example.com
```

Related Commands

show info

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email notify failures enable

Enables email notification of system failures, such as core dumps.

Syntax

[no] email notify failures enable

Usage Guidelines

The **no** command option disables email notification.

Examples

```
amnesiac (config) # email notify failures enable
```

Related Commands

show email

email notify failures recipient

Enables email notification of system failures, such as core dumps.

Syntax

[no] email notify failures recipient *email-addr*

Parameters

`recipient email-addr`

Specify the email address of the user to receive notification of failures.

Usage Guidelines

The **no** command option disables email notification.

You must enter separate commands for each email address. Each command line accepts only one email address.

Examples

```
amnesiac (config) # email notify failures recipient johndoe@example.com
```

Related Commands

show email

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email send-test

Sends a test email to all configured event and failure recipients.

Syntax

email send-test

Usage Guidelines

You can also access this command from enable mode.

Examples

```
amnesiac (config) # email send-test
```

Related Commands

show email

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events max-age

Sets the maximum age for keeping history events.

Syntax

events max-age *period*

Parameters

period

Specify the time period to keep events:

- `minute:` Specifies one minute.
- `hour:` Specifies one hour.
- `day:` Specifies one day.
- `week:` Specifies one week.
- `month:` Specifies one month.
- `year:` Specifies one year.
- `decade:` Specifies ten years.

Examples

```
amnesiac (config) # events max-age month
```

Related Commands

show files events config

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events reset

Resets the history daemon and drop-event history tables.

Syntax

events reset

Examples

```
amnesiac (config) # events reset
```

Related Commands

show files events config

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file debug-dump delete

Deletes the specified debug dump file.

Syntax

file debug-dump delete *filename*

Parameters

filename

Specify the filename.

Examples

```
amnesiac (config) # file debug-dump delete mydumpfile.txt
```

Related Commands

show files events config

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file debug-dump email

Sends a debug dump file in email to pre-configured recipients.

Syntax

file debug-dump email *filename*

Parameters

filename

Specify the filename.

Examples

```
amnesiac (config) # file debug-dump email mydumpfile.txt
```

Related Commands

show files events config

file debug-dump upload

Uploads the specified debug dump file.

Syntax

file debug-dump upload ***filename {ftp,-or-scp://username:password@host/path}***

Parameters

`filename`

Specify the filename.

`ftp, or scp URL (e.g.scp://username:password@host/path)`

Specify the FTP or scp URL.

Examples

```
amnesiac (config) # file debug-dump upload mydebug.txt
    scp://me:test@example.com/mypath
```

Related Commands

show files events config

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file process-dump delete

Deletes the specified crash dump file.

Syntax

file process-dump delete *filename*

Parameters

filename

Specify the filename.

Examples

```
amnesiac (config) # file process-dump delete mycrash.txt
```

Related Commands

show files events config

file process-dump upload

Uploads the specified crash dump file.

Syntax

file process-dump upload ***filename {https,-http,-ftp,-or-scp-URL:-scp://username:password@hostname/path/filename | case-number}***

Parameters

filename

Specify the filename.

https,-http,-ftp, or -scp URL: scp://username:password@hostname/path/filename

Specify the URL.

case-number

Specify the customer case number. The case number is a convenient and intuitive method to upload a crash dump file to Pulse Secure Technical Support without using a URL. Pulse Secure Technical Support recommends using a case number. The case number is a numeric string.

Examples

```
amnesiac (config) # file process-dump
    upload mycrash.txt scp://mylogin:mypassword@myhostname/path/filename
amnesiac (config) # file process-dump upload mycrash.txt 194170
```

Related Commands

show files events config

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fips enable

Enables FIPS mode.

Syntax

[no] fips enable

Usage Guidelines

FIPS is a publicly announced set of validation standards developed by the United States National Institute of Standards and Technology (NIST) for use by government agencies and by government contractors.

FIPS 140-2 is a technical and worldwide standard for the implementation of cryptographic modules. FIPS validation makes the appliance more suitable for use with government agencies that have formal policies requiring use of FIPS 140-2 validated cryptographic software.

To achieve FIPS compliance on a Pulse Secure appliance, you must run a software version that includes the Riverbed Cryptographic Security Module (RCSM) v1.0, configure the system to run in FIPS operation mode, and adjust the configuration of any features that are not FIPS compliant.

The RCSM is validated to meet FIPS 140-2 Level 1 requirements. Unlike FIPS 140-2 Level 2 validation, which requires physical security mechanisms, Level 1 validates the software only.

For more information on the FIPS implementation, see the *FIPS Administrator's Guide*.

Examples

```
amnesiac (config) # fips enable
amnesiac (config) # service restart
```

Related Commands

show fips status

hardware watchdog enable

Enables the hardware watchdog, which monitors the system for hardware errors.

Syntax

[no] hardware watchdog enable

Examples

```
amnesiac (config) # hardware watchdog enable
```

Related Commands

show hardware error-log

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hardware watchdog shutdown

Shuts down the hardware watchdog.

Syntax

hardware watchdog shutdown

Examples

```
amnesiac (config) # hardware watchdog shutdown
```

Related Commands

show hardware error-log

host-label

Configures host label settings.

Syntax

[no] host-label *name* {hostname *hostname* [subnet *X.X.X.X/XX*] | subnet *X.X.X.X/XX* [hostname *hostname*]}

Parameters

name

Specify the name of the host label.

- Host labels are case sensitive and can be any string consisting of letters, the underscore (_), or the hyphen (-). There cannot be spaces in host labels. There is no limit on the number of host labels you can configure.
- To avoid confusion, do not use a number for a host label.
- Host labels that are used in QoS rules cannot be deleted.
- Host label changes (that is, adding and removing hostnames inside a label) are applied immediately by the rules that use the host labels that you have modified.

hostname *hostname*,-.-.-.

Specify a hostname or a comma-separated list of hostnames.

- Hostnames are case insensitive.
- You can configure a maximum of 100 unique hostnames across all host labels.
- A maximum of 64 subnets and hostnames per host label is allowed.

subnet *X.X.X.X/XX*,. . .

Specify an IPv4 subnet for the specified host label or a comma-separated list of IPv4 subnets. Use the format X.X.X.X/XX.

Usage Guidelines

Host labels are names given to lists of hosts (IP addresses, IP subnets, and hostnames) that you can specify to match the source and destination network when configuring QoS rules. For example, you can specify host labels to define a set of hosts for which QoS classification and QoS marking rules apply. You can configure a mixture of subnets and hostnames for each label. A maximum of 64 subnets and hostnames per host label is allowed. You can configure a maximum of 100 unique hostnames across all host labels.

Hostnames referenced in a host label are automatically resolved through a DNS. The system resolves them immediately after you add a new host label or after you edit an existing host label. The system also automatically re-resolves hostnames daily. If you want to resolve a hostname immediately, use the **resolve host-labels** command.

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Examples

```
amnesiac (config) # host-label test hostname xxxxxxxx.com,example.com subnet
192.168.0.1/32, 192.168.0.2/32,10.0.0.0/8
amnesiac (config) # qos basic classification global-app add global-app-name
MyGlobalApp class-name Realtime vlan 1 traffic all srcport 123 srcnet test
```

Related Commands

show images, show host-label

hostname

Sets the hostname for this system.

Syntax

[no] hostname hostname

Parameters

hostname

Specify the hostname. Do not include the domain name.

Usage Guidelines

You cannot change the IP address of a Services Director when:

- the Services Director VA is running the Setup Wizard.
- the Services Director is already part of an HA pair.

The **no** command option removes the hostname for this appliance.

Examples

```
amnesiac (config) # hostname park
```

Related Commands

show hosts

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image boot

Boots the specified system image by default.

Syntax

image boot *partition*

Parameters

partition

Specify the partition to boot: **1** or **2**.

Examples

```
amnesiac (config) # image boot 1
```

Related Commands

show version

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interface

Configures system interfaces.

Syntax

[no] interface *interfacename options*

Parameters

`interfacename`

Specify the interface name: **lo**, **aux**, **lan0_0**, **wan0_0**, **primary**, **in-path0_0**. The interface name varies according to the Pulse Secure product your are configuring. For example: **primary**, **aux**. For details, see the CLI online help.

`options`

Each interface has the following configuration options:

- `arp:` Adds static entries to the ARP cache - Configure the string of this interface.
- `dhcp renew:` Enables DHCP on the interface or renews DHCP. Setting DHCP on the auxiliary interface only provides an IP lease, and does not update the gateway, routes, and DNS settings.
- `dhcp dynamicdns:` Enables DHCP hostname registration with dynamic DNS.
- `duplex` *speed:* Specify the duplex speed: **auto**, **full**, **half**. The default value is **auto**.
- `ip address` *ipaddr netmask:* Specify the IP address and netmask for the interface.
- `ipv6 address` *ipv6addr prefix-length:* Specify the IPv6 address and prefix length for the interface. Your appliance can have both an IPv4 address and an IPv6 address. You can only configure one IPv6 address per in-path interface. For example:

  ```
  amnesiac (config) # interface primary ipv6 address
  2001:38dc:52::e9a4:c5:6282 64
  ```

- `mtu` *speed:* Specify the MTU. The MTU is set on the in-path interface; it propagates automatically to the LAN and the WAN. The **no** command option disables the MTU setting. The default value is 1500.
- `shutdown:` Shuts down the interface.
- `speed` *speed:* Specify the speed for the interface: **auto**, **10**, **100**, **1000**. The default value is 100.

Usage Guidelines

You cannot change the IP address of a Services Director when:

- the Services Director VA is running the Setup Wizard.
- the Services Director is already part of an HA pair.

The **no** command option disables the interface settings.

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Examples

```
amnesiac (config) # no interface inpath0_0 fail-to-bypass enable
```

Related Commands

show interfaces

ip default-gateway

Sets the default gateway for the appliance.

Syntax

[no] ip default-gateway *ip-addr*

Parameters

ip-addr

Specify the IP address of the management interface.

Usage Guidelines

This command is used to set the default gateway for the entire appliance. It is primarily used for the primary or auxiliary (**aux**) interfaces for management, but can also be used for out-of-path optimization configurations as well as PFS.

The **no** command option disables the default gateway IP address.

Examples

```
amnesiac (config) # ip default-gateway 10.0.0.12
```

Related Commands

show interfaces, ipv6 default-gateway

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ip domain-list

Adds a domain name to the domain list for resolving hostnames.

Syntax

[no] ip domain list *domain*

Parameters

domain

Specify the domain name.

Usage Guidelines

The **no** command option removes a domain from the domain list.

Examples

```
amnesiac (config) # ip domain-list example.com
```

Related Commands

show hosts

ip host

Adds an entry to the static host table.

Syntax

[no] ip host *hostname ip-addr*

Parameters

hostname

Specify the hostname.

ip-addr

Specify the IP address.

Usage Guidelines

The **no** command option removes an entry from the static host table.

Examples

```
amnesiac (config) # ip host park 10.10.10.1
```

Related Commands

show hosts

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ipv6 default-gateway

Configures a default IPv6 route.

Syntax

[no] ipv6 default-gateway *ipv6-address*

Parameters

ipv6-address

Specify the IPv6 address.

Usage Guidelines

Support for IPv6 is enabled by default. The **no** command option removes the default gateway for IPv6 routing.

Examples

```
amnesiac (config) # ipv6 default-gateway 2001:38dc:52::e9a4:c5:6282
```

Related Commands

show email, ipv6 route

ipv6 in-path-gateway

Configures an in-path IPv6 default gateway.

Syntax

[no] ipv6 in-path-gateway *interface ipv6-address*

Parameters

`interface`

Specify the interface.

`ipv6-address`

Specify the IPv6 address of the in-path gateway.

Usage Guidelines

Support for IPv6 is enabled by default. The **no** command option deletes the in-path default gateway for IPv6 routing.

Examples

```
amnesiac (config) # ipv6 in-path-gateway inpath0_0 2001:38dc:52::e9a4:c5:6282
```

Related Commands

ipv6 route, ipv6 default-gateway

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ipv6 route

Adds IPv6 routes in addition to the default gateway, if needed.

Syntax

[no] ipv6 route *IPv6-destination prefix-length gateway*

Parameters

`IPv6-destination`

Specify the IPv6 address.

`prefix-length`

Specify the IPv6 prefix length.

`gateway`

Specify the IPv6 address of the gateway.

Usage Guidelines

Support for IPv6 is enabled by default. The **no** command option removes the specified IPv6 route.

Examples

```
amnesiac (config) # ipv6 route 2001:38dc:52::e9a4:c5:6282 64 2001:38dc:52::1
```

Related Commands

show email, ipv6 default-gateway

ip name-server

Adds a DNS name server.

Syntax

[no] ip name-server *ip-addr*

Parameters

ip-addr

Specify the name server IP address.

Usage Guidelines

The **no** command option removes a DNS name server.

Examples

```
amnesiac (config) # ip name-server 10.10.10.1
```

Related Commands

show hosts

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ip route

Adds a static route.

Syntax

[no] ip route ***network-prefix netmask netmask-length next-hop-ip-addr***

Parameters

`network-prefix`

Specify the network prefix.

`netmask`

Specify the netmask. For example: *255.255.255.0*

`netmask-length`

Specify the netmask length. For example: */24*

`next-hop-ip-addr`

Specify the next hop IP address.

Usage Guidelines

The **no** command option disables the static route. If **no ip route** is run with only a network prefix and mask, it deletes all routes for that prefix.

Examples

```
amnesiac (config) # ip route 192 193.166.0/24 10.10.10.1
```

Related Commands

show logging

job command

Schedules CLI command execution for a specified time in the future.

Syntax

[no] job *job-id* command *sequence-# "cli-command"*

Parameters

job-id

Specify the job identification number.

sequence-#

Specify the sequence number for job execution. The sequence number is an integer that controls the order in which a CLI command is executed. CLI commands are executed from the smallest to the largest sequence number.

"cli-command"

Specify the CLI command. Enclose the command in double-quotes.

Usage Guidelines

A job includes a set of CLI commands and a time when the job runs. Jobs are run one time only, but they can be reused.

Any number of CLI commands can be specified with a job and are executed in an order specified by sequence numbers. If a CLI command in the sequence fails, no further commands in the job are executed. A job can have an empty set of CLI commands.

The output of all commands executed are viewable after job execution by running the **show job <job-id>** command. The output of each job is only available for the last run; it is re-written upon each execution.

The job output and any error messages are saved. Jobs can be canceled and rescheduled.

The **no job <job-id> command <sequence #>** command option deletes the CLI command from the job.

The **no job <job-id>** command option removes all statistics associated with the specified job. If the job has not executed, the timer event is canceled. If the job was executed, the results are deleted along with the job statistics.

Examples

```
amnesiac (config) # job 10 command 1 "show info"
amnesiac (config) # job 10 command 2 "show connections"
amnesiac (config) # job 10 command 3 "show version"
```

Related Commands

show job, show jobs

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job comment

Adds a comment to the job for display when show jobs is run.

Syntax

[no] job *job-id* comment "<comment>"

Parameters

job-id

Specify the job identification number.

comment *"<comment>"*

Specify the comment for the job. Enclose the description in double-quotes.

Usage Guidelines

The **no** command option deletes the comment.

Examples

```
amnesiac (config) # job 10 "comment this is a test"
```

Related Commands

show job, show jobs

job date-time

Sets the date and time for the job to execute.

Syntax

[no] job *job-id* date-time *hh: mm: ss | yyyy/ mm/ dd*

Parameters

job-id

Specify the job identification number.

hh: *mm*: *ss*

Specify the time for the job to execute.

yyyy/ mm/ dd

Specify the date for the job to execute.

Usage Guidelines

If the time specified is in the past, the job does not execute and is in the inactive state.

The **no** command option disables the date and time settings.

Examples

```
amnesiac (config) # job 10 date-time 04:30:23
```

Related Commands

show job, show jobs

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job enable

Enables a CLI command job to execute at the date and time specified in the job.

Syntax

[no] job *job-id* enable

Parameters

job-id

Specify the job identification number.

Usage Guidelines

The **no** command option disables jobs.

Examples

```
amnesiac (config) # job 10 enable
```

Related Commands

show job, show jobs

job execute

Forces an immediate execution of a job. The timer (if set) is canceled, and the job is moved to the completed state.

Syntax

job *job-id* execute

Parameters

job-id

Specify the job identification number.

Usage Guidelines

You can also access this command from enable mode.

Examples

```
amnesiac (config) # job 10 execute
```

Related Commands

show job, show jobs

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job fail-continue

Executes all commands in a job even if a command in the sequence fails.

Syntax

[no] job *job-id* fail-continue

Parameters

job-id

Specify the job identification number.

Usage Guidelines

The **no** command option disables this command.

Examples

```
amnesiac (config) # job 10 fail-continue
```

Related Commands

show job, show jobs

job name

Sets the name for the job.

Syntax

[no] job *job-id* name *friendly-name*

Parameters

job-id

Specify the job identification number.

friendly-name

Specify a name for the job.

Usage Guidelines

The **no** command option deletes the job name.

Examples

```
amnesiac (config) # job 10 name myjob
```

Related Commands

show job, show jobs

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job recurring

Sets the frequency with which to recurrently execute this job.

Syntax

[no] job *job-id* recurring *seconds*

Parameters

job-id

Specify the job identification number.

seconds

Specify how frequently the recurring job should execute.

Examples

```
amnesiac (config) # job 10 recurring 36000
```

Related Commands

show job, show jobs

license client fetch

Forces the license client to update immediately.

Syntax

license client fetch

Usage Guidelines

If there is a change in your account (such as if Pulse Secure has given you an extra license), and the change will be updated whenever the license client runs next, but you want to force it to run immediately, then you can use the **license client fetch** command.

Examples

```
amnesiac # license client fetch
```


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license client init

Initializes the license client.

Syntax

license client init *license-number*

Parameters

license-number

Specify the license number.

Usage Guidelines

The license client communicates with the license server. It has two main functions:

- It periodically contacts the license server and checks out and renews the license or lease.
- It enables you to query available features, licenses and other metadata such as serial number.

You can configure the license client to communicate with the license server at the company headquarters or the local license server.

The **no** command option deletes the one-time token or license.

Examples

```
amnesiac (config) # license client init 4
```

Related Commands

show licenses

license delete

Deletes the specified license key.

Syntax

license delete *license-number*

Parameters

`license-number`

Specify the license number.

Examples

```
amnesiac (config) # license delete 4
```

Related Commands

show licenses

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license install

Installs a new software license key.

Syntax

[no] license install *license-key*

Parameters

license-key

Specify the license key.

Usage Guidelines

The **no** command option disables this command.

Examples

```
amnesiac (config) # license install SH10_B-0000-1-7F14-FC1F
```

Related Commands

show licenses

license server

Adds a license server.

Syntax

[no] license server *hostname* [port *number*] [priority *number*]

Parameters

hostname

Specify the hostname of the computer that contains the license server.

port *number*

Optionally, specify the port number on which the license server is listening. The default is port 80.

priority *number*

Specify the order in which the license server is added. 0 is the highest priority and 9 is the lowest priority. The default priority is 9.

Usage Guidelines

The license server provides licenses to Services Director.

The **no** command option deletes the license server specified.

The default license server is the server hosted at Pulse Secure headquarters.

The **no license server <hostname> priority** command resets the priority in which the specified license server is added to the default value (9 is the lowest priority).

The **no license server <hostname> port** command resets the license server port to the default port.

Examples

```
*** create license server, no feedback ***
amnesiac (config) # license server MyLicenseServer port 88 priority 1

*** list license servers to confirm creation***
amnesiac (config) # show license-servers
Server Name           Port                Priority
---------------       ---------------     ---------------
MyLicenseServer       88                  1
```

Related Commands

show licenses

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logging

Adds a remote system log (syslog) server to the system.

Syntax

[no] logging *ip-addr* | [trap *log-level*]

Parameters

ip-addr

Specify the IP address for the syslog server.

trap *log-level*

Specify the trap log level of the syslog server:

- `emerg:` Emergency, the system is unusable.
- `alert:` Action must be taken immediately.
- `critical:` Critical conditions.
- `err:` Error conditions.
- `warning:` Warning conditions.
- `notice:` Normal but significant conditions, such as a configuration change. This is the default setting.
- `info:` Informational messages.

Usage Guidelines

If you have set different log levels for each remote syslog server, this option changes all remote syslog servers to have a single log level.

The **no** command option removes a remote **syslog** server from the system.

Examples

```
amnesiac (config) # logging 10.0.0.2
```

Related Commands

show logging

logging files delete

Deletes the oldest log file or a specified number of the oldest log files.

Syntax

logging files delete oldest *number*

Parameters

`oldest` *`number`*

Specify the number of old log files to delete. The range is *1-10*.

Usage Guidelines

You can also access this command from enable mode.

Examples

```
amnesiac (config) # logging files delete oldest 10
```

Related Commands

show logging

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logging files rotation criteria frequency

Sets the frequency of log rotation.

Syntax

logging files rotation criteria frequency *rotation-frequency*

Parameters

rotation-frequency

Specify how often log rotation occurs: *monthly*, *weekly* or *daily*. The size of the log file is checked every 10 minutes.

Usage Guidelines

The size of the log file is checked every 10 minutes. If there is an unusually large amount of logging activity, it is possible for a log file to grow larger than the set limit in that period of time.

Examples

```
amnesiac (config) # logging files rotation criteria frequency weekly
```

Related Commands

show logging

logging files rotation criteria size

Sets the size, in MB, of the log file before rotation occurs.

Syntax

logging files rotation criteria size *size*

Parameters

size

Specify the size of the log file to save in MB. The default value is 0 (unlimited).

Usage Guidelines

The size of the log file is checked every 10 minutes. If there is an unusually large amount of logging activity, it is possible for a log file to grow larger than the set limit in that period of time.

Examples

```
amnesiac (config) # logging files rotation criteria size 100
```

Related Commands

show logging

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logging files rotation force

Rotates logs immediately.

Syntax

logging files rotation force

Usage Guidelines

The size of the log file is checked every 10 minutes. If there is an unusually large amount of logging activity, it is possible for a log file to grow larger than the set limit in that period of time.

Examples

```
amnesiac (config) # logging files rotation force
```

Related Commands

show logging

logging files rotation max-num

Sets the maximum number of log files to keep locally.

Syntax

logging files rotation max-num *number*

Parameters

number

Specify the number of log files to keep locally. The range is *1-100*. The default value is *10*.

Usage Guidelines

The size of the log file is checked every 10 minutes. If there is an unusually large amount of logging activity, it is possible for a log file to grow larger than the set limit in that period of time.

Examples

```
amnesiac (config) # logging files rotation max-num 10
```

Related Commands

show logging

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logging filter

Sets the minimal level of messages arriving from the specified process to the local subsystem.

Syntax

logging filter *process level*

Parameters

`process`

Specify the application process:

- `alarmd:` Alarm control and management.
- `cli:` Command-Line Interface.
- `mgmtd:` Device control and management, which directs the entire device management system. It handles message passing between various management daemons, managing system configuration and general application of system configuration on the hardware underneath through the **hald**.
- `hald:` Hardware Abstraction Daemon, which handles access to the hardware.
- `pm:` Process Manager, which handles launching of internal system daemons and keeps them up and running.
- `sched:` Process Scheduler, which handles one-time scheduled events.
- `rscored:` REST Core Services.
- `rstild:` REST Translation Interface.
- `ssc:` Stingray Services Director.
- `statsd:` Statistics Collector, which handles queries and storage of system statistics.
- `wdt:` Watchdog Timer, the motherboard watchdog daemon.
- `webasd:` Web Application Process, which handles the Web user interface.

`level`

Specify the trap log level:

- `emerg:` Emergency, the system is unusable.
- `alert:` Action must be taken immediately.
- `critical:` Critical conditions.
- `err:` Error conditions.
- `warning:` Warning conditions.
- `notice:` (Default) Normal but significant conditions, such as a configuration change.
- `info:` Informational messages.

If you have set different log levels for each remote **syslog** server, this option changes all remote **syslog** servers to have a single log level.

Usage Guidelines

Use this command to capture data when a appliance is not able to sustain the flow of logging data that is being committed to disk.

This command overrides the **logging local** command. This command creates a global setting that controls all output, including remote hosts.

All CIFS protocol related messages are logged at level **debug**, and the remainder at the level **notice**.

All remote logging hosts (if defined) also log at **logging trap** setting and at the logging filter process.

The **no logging filter all** command deletes all filters.

Examples

```
amnesiac (config) # logging filter cli alert
```

Related Commands

show logging

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logging local

Sets the minimum severity of log messages saved on the local syslog servers.

Syntax

[no] logging local *log-level*

Parameters

`log-level`

Specify the logging severity level. The follow severity levels are supported:

- `emerg:` Emergency, the system is unusable.
- `alert:` Action must be taken immediately.
- `crit:` Critical conditions.
- `err:` Error conditions.
- `warning:` Warning conditions.
- `notice:` (Default) Normal but significant conditions, such as a configuration change.
- `info:` Informational messages.

The default value is *notice*.

Usage Guidelines

The **no** command option sets the severity level for logging to none (no logs are sent).

Examples

```
amnesiac (config) # logging local notice
```

Related Commands

show logging

logging trap

Sets the minimum severity for messages sent to the remote syslog servers.

Syntax

[no] logging trap *log-level*

Parameters

`log-level`

Specify the logging severity level. The follow severity levels are supported:

- `emerg:` Emergency, the system is unusable.
- `alert:` Action must be taken immediately.
- `crit:` Critical conditions.
- `err:` Error conditions.
- `warning:` Warning conditions.
- `notice:` (Default) Normal but significant conditions, such as a configuration change.
- `info:` Informational messages.

Usage Guidelines

The **no** command option sets the severity level for logging to none.

Examples

```
amnesiac (config) # logging trap notice
```

Related Commands

show logging

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ntp authentication

Configures the Network Time Protocol (NTP) authentication settings to authenticate NTP servers and peers.

Syntax

[no] ntp authentication key *key-id* secret {*plaintext* | 0 *plaintext* | 7 *encrypted-string*}

Parameters

`key key-id`

Specify the key identifier. The key ID values must be in the range 1 - 65534.

`secret {plaintext | 0 plaintext | 7 encrypted-string}`

Specify the shared secret parameter. Choose one of the following:

- *plaintext:* Specify a shared secret in plain text. This option is the same as the 0 <plaintext> option and is provided for backward compatibility.
- `0` *plaintext:* Specify a shared secret in plain text.
- `7` *encryptedstring:* Specify a shared secret with an encrypted string.

Usage Guidelines

The **no** version of the command removes NTP authentication settings.

NTP authentication involves three steps that you can perform in any order:

- Configure a key ID using the **ntp authentication** command.
- Add the configured key ID to the trusted keys list using the **ntp authentication trusted-keys** command.
- Configure the NTP server or peer with the key ID using the **ntp server key** or **ntp peer key** command.

Examples

```
amnesiac (config) # ntp authentication key 56732 secret zza419
```

Related Commands

ntp authentication trusted keys, ntp peer key, ntp server key, show ntp, show ntp authentication

ntp authentication trusted keys

Adds a configured key ID to the trusted keys list.

Syntax

[no] ntp authentication trustedkeys *key-id* [*key id, ...*]

Parameters

`key key-id [key id, ...]`

Specify the key identifier. The key ID values must be in the range 1 - 65534. You can specify multiple key IDs in the same list, separated by commas. When specifying multiple key IDs separated by commas, you must enclose them in quotes.

Usage Guidelines

Use this command to add the configured key ID to the trusted keys list.

The **no** command removes a key from the trusted key list.

- NTP authentication involves three steps that you can perform in any order:
- Configure a key ID using the **ntp authentication** command.
- Add the configured key ID to the trusted keys list using the **ntp authentication trusted-keys** command.
- Configure the NTP server or peer with the key ID using the **ntp server key** or **ntp peer key** command.

Examples

```
amnesiac (config) # ntp authenticatication trustedkeys 56732
```

Related Commands

ntp authentication, ntp peer key, ntp server key, show ntp, show ntp authentication

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ntp disable

Disables NTP support.

Syntax

[no] ntp disable

Usage Guidelines

The **no** command option enables NTP support.

Examples

```
amnesiac (config) # ntp disable
```

Related Commands

show ntp

ntp enable

Enables NTP support.

Syntax

[no] ntp enable

Usage Guidelines

The **no** command option disables NTP support.

Examples

```
amnesiac (config) # ntp enable
```

Related Commands

show ntp

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ntp peer

Enables an NTP peer.

Syntax

[no] ntp peer *hostname* | *ip-addr* [version *number*]

Parameters

hostname | *ip-addr*

Specify the NTP peer hostname or IP address.

version *number*

Specify the NTP version number. You do not need to specify the version number for the **no ntp server** command.

Usage Guidelines

The **no** command option disables an NTP peer.

Examples

```
amnesiac (config) # ntp peer 10.10.10.1
```

Related Commands

show ntp, show ntp active-peers

ntp peer key

Configures an NTP peer with an authentication key ID.

Syntax

[no] ntp peer *host-name* | *ip-addr* key *key-id*

Parameters

hostname | *ip-addr*

Specify the NTP peer hostname or IP address.

key *key-id* [key id, ...]

Specify the key identifier. The key ID values must be in the range 1 - 65534. You can specify multiple key IDs in the same list, separated by commas. When specifying multiple key IDs separated by commas, you must enclose them in quotes.

Usage Guidelines

The **no** command option removes the authentication key from the NTP peer configuration.

NTP authentication involves three steps that you can perform in any order:

- Configure a key ID using the **ntp authentication** command.
- Add the configured key ID to the trusted keys list using the **ntp authentication trusted-keys** command.
- Configure the NTP server or peer with the key ID using the **ntp server key** or **ntp peer key** command.

Examples

```
amnesiac (config) # ntp peer 10.10.10.1 key 56732
```

Related Commands

show ntp, show ntp active-peers

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ntp server

Configures an NTP server with the default NTP version number or with a specified version number.

Syntax

[no] ntp server *hostname* | *ip-addr* | [version *number*]

Parameters

hostname | *ip-addr*

Specify the hostname or IP address of the NTP server to synchronize with.

version *number*

Specify the NTP version number of this server. You do not need to specify the version number for the **no ntp server** command.

Usage Guidelines

The **no** command option removes an NTP server.

Examples

```
amnesiac (config) # ntp server 10.10.10.1
```

Related Commands

show ntp, show ntp active-peers

ntp server enable

Enables an NTP server.

Syntax

[no] ntp server [*hostname* | *ip-addr*] enable

Parameters

hostname | *ip-addr*

Specify the hostname or IP address of the NTP server.

Usage Guidelines

The **no** command option removes an NTP server.

Examples

```
amnesiac (config) # ntp server companyserver enable
```

Related Commands

show ntp

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ntp server key

Configures an NTP server with an authentication key ID.

Syntax

[no] ntp server *hostname* | *ip-addr* key *key-id*

Parameters

hostname | *ip-addr*

Specify the hostname or IP address of the NTP server to authenticate.

key *key-id*

Specify the key identifier. The key ID values must be in the range 1 - 65534.

Usage Guidelines

The **no** version of the command removes the authentication key from the NTP server.

NTP authentication involves three steps that you can perform in any order:

- Configure a key ID using the **ntp authentication** command.
- Add the configured key ID to the trusted keys list using the **ntp authentication trusted-keys** command.
- Configure the NTP server or peer with the key ID using the **ntp server key** or **ntp peer key** command.

Examples

```
amnesiac (config) # ntp server companyserver key 56732
```

Related Commands

ntp authentication, ntp authentication trusted keys, ntp peer key, show ntp authentication

papi rest access_code import

Imports an existing REST access code.

Syntax

[no] papi rest access_code import desc *description* data *data*

Parameters

`desc` *`description`*

Describe how the access code will be used.

`data` *`data`*

Copy and enter the raw data output generated by the **papi rest access_code generate** command on a peer appliance.

Usage Guidelines

Use the **papi rest access_code import** command to import access codes generated by another appliance so that a client can use the same access code to communicate through the REST API to multiple appliances.

Examples

```
amnesiac (config) # papi rest access_code import desc cascadeflow data <data>
```

Related Commands

show papi rest access_codes

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remote dhcp

Enables DHCP on the remote management port.

Syntax

remote dhcp

Examples

```
amnesiac (config) # remote dhcp
```

Related Commands

show remote ip

remote ip address

Manually sets the IP address of the remote management port.

Syntax

remote ip address *ip-addr*

Parameters

ip-addr

Specify the IP address to assign to the remote management port.

Usage Guidelines

Access to the appliance through the remote port requires the use of the IPMI tool utility. You can download a Linux version at http://sourceforge.net/projects/ipmitool/files/. You can obtain a Windows version of the IPMI tool on the Document CD that ships with your system or from Pulse Secure Support.

This utility must to be run on an administrator's system outside of the appliance to access the remote port functions. Check the man page for IPMItool for a full list of capabilities (although not all the commands are supported on RiOS hardware platforms).

To configure the remote management port:

- Physically connect the REMOTE port to the network. You cable the remote management port to the Ethernet network in the same manner as the Primary interface.
- Install the IPMItool on the client machine.
- Assuming the IP address is 192.168.100.100, the netmask is 255.255.255.0, and the default gateway is 192.168.100.1, assign an IP address to the remote management port:

```
amnesiac (config) # remote dhcp
 - or -
amnesiac (config) # remote ip address 192.168.100.100
amnesiac (config) # remote ip netmask 255.255.255.0
amnesiac (config) # remote ip default-gateway 192.168.100.1
```

- Verify the IP address is set properly.

```
amnesiac (config) # show remote ip
```

Note: Ping the new management IP address from a remote computer, and verify it replies.

To secure the remote port, assign a password to the port:

```
amnesiac (config) # remote password <newpassword>
```

Set the remote port bit-rate to match the current serial port bitrate. Typically, this value is 9.6.

```
amnesiac (config) # remote bitrate 9.6
```

To activate the serial connection:

```
ipmitool -I lanplus -H 192.168.100.100  -P "<password>" sol activate
```


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Press the Tilde character (~) to end the serial connection.

Note: While your serial connection is established, the actual serial console is disabled. Ending the remote serial connection cleanly with Tilde (~) re-enables the real serial port. If you fail to exit cleanly your actual serial port might not reactivate. If your serial port fails to reactivate, reconnect remotely and exit cleanly using Tilde (~).

Examples

```
amnesiac (config) # remote ip address 192.168.100.100
```

Related Commands

show remote ip

remote ip default-gateway

Manually sets the default gateway of the remote management port.

Syntax

remote ip default-gateway *ip-addr*

Parameters

ip-addr

Specify the IP address of default gateway to assign to remote management port.

Examples

```
amnesiac (config) # remote ip default-gateway 10.0.0.2
```

Related Commands

show remote ip

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remote ip netmask

Manually sets the subnet mask of the remote management port.

Syntax

remote ip netmask *netmask*

Parameters

netmask

Specify the subnet mask to assign to the remote management port.

Examples

```
amnesiac (config) # remote ip netmask 255.255.255.0
```

Related Commands

show remote ip

remote password

Sets the password to remotely connect to the remote management port.

Syntax

[no] remote password *password*

Parameters

password

Specify the password to connect to the remote management port.

Usage Guidelines

To set a remote management port password:

- On the appliance, assign a password to the remote management port:

  ```
  amnesiac (config) # remote password TestPassword
  ```

- Using the IPMItool on a remote computer, view the power status of the appliance. If you are using the Windows version of IPMItool, replace all references to **ipmitool** with ipmitool.exe.

  ```
  ipmitool -H <remote port ip address> -P "testpassword" chassis power status
  ```

The displayed output should state **Chassis Power is on**.

Note: You can download a Linux version at http://sourceforge.net/projects/ipmitool/files/. You can obtain a Windows version of the IPMI tool on the Document CD that ships with your system or from Pulse Secure Support.

Examples

```
amnesiac (config) # remote password TestPassword
```

Related Commands

show remote ip

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resolve host-labels

Forces the system to resolve host labels immediately.

Syntax

resolve host-labels

Usage Guidelines

You can use the **resolve host-labels** command to force a resolve operation instead of waiting for the daily automatic resolve instance. Every time this command is executed, the next automatic resolve instance is reset to occur 24 hours later.

Examples

```
amnesiac # resolve host-labels
```

Related Commands

host-label, show host-label

secure-vault

Manages the secure vault password and unlocks the secure vault.

Syntax

secure vault new-password *password* | reset-password *old-password* | unlock *password*

Parameters

`new-password` *`password`*

Specify an initial or new password for the secure vault.

`reset-password` *`old-password`*

Specify the old secure vault password to reset it.

`unlock` *`password`*

Specify the current password to unlock the secure vault.

Usage Guidelines

The *secure vault* is an encrypted file system on the appliance where all SSL server settings, other certificates (the CA, peering trusts, and peering certificates) and the peering private key are stored. The secure vault protects your SSL private keys and certificates when the appliance is not powered on.

You can set a password for the secure vault. The password is used to unlock the secure vault when the appliance is powered on. After rebooting the appliance, SSL traffic is not optimized until the secure vault is unlocked with the **unlock <password>** parameter.

Data in the secure vault is always encrypted, whether or not you choose to set a password. The password is used only to unlock the secure vault.

To change the secure vault password:

1. Reset the password with the **reset-password <password>** parameter.
2. Specify a new password with the **new-password <password>** parameter.

Examples

```
amnesiac (config) # secure-vault unlock mypassword
```


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show ssc access-profile

Displays details for a specified access profile. An access profile is used for vTM user authentication only.

Syntax

show ssc access-profile access-profile-name *access-profile-name*

Parameters

access-profile-name

Specify the name of the required access profile.

Examples

```
amnesiac (config) # show ssc access-profile access-profile-name "LDAP All"
+-------------------+-----------------------------------+
| Description       | Value                             |
+-------------------+-----------------------------------+
| Name              | LDAP All                          |
| Unique ID         | Access-Profile-ZRVA-MXIE-MI92-U787 |
| Authenticator     | LDAP Server                       |
| Permission Groups | admin                             |
+-------------------+-----------------------------------+
```

Related Commands

ssc access-profile add-perm-group, ssc access-profile create access-profile-name, ssc access-profile list, ssc access-profile remove-perm-group, ssc access-profile update access-profile-name

show ssc analytics-profile

Displays details for a specified analytics profile. This is used for vTM analytics purposes.

Syntax

show ssc analytics-profile *id*

Parameters

`id`

Specify a unique identifier for the analytics profile, either its tag or UUID.

Examples

```
*** list all analytics profiles ***
amnesiac (config) # ssc analytics-profile list
+---------------------------------------+----------------+
| ID                                    | Tag            |
+---------------------------------------+----------------+
| Analytics-Profile-6IQG-F6UQ-8C11-7G8F | Audit + System |
| Analytics-Profile-F5V3-S912-G3UP-HPNR | Event          |
| Analytics-Profile-XNAH-H9J1-0MQM-BK59 | Audit          |
| Analytics-Profile-I6DJ-RRQV-KQ5Z-HY7J | Event + System |
| Analytics-Profile-SXSR-UCDA-JJDS-1Q3K | Audit + Event  |
| Analytics-Profile-CHM8-D0PC-58BW-I8GI | System         |
+---------------------------------------+----------------+

*** show details for a specific analytics profile ***
amnesiac (config) # show ssc analytics-profile id "Event + System"
+---------------------------+----------------------------------------+
| Field                     | Value                                  |
+---------------------------+----------------------------------------+
| tag                       | Event + System                         |
| enable_transaction_export | True                                   |
| vtm_logs_to_export        | Event Log, System - authentication log |
| analytics_profile_id      | Analytics-Profile-I6DJ-RRQV-KQ5Z-HY7J  |
+---------------------------+----------------------------------------+
```

Related Commands

ssc analytics-profile create, ssc analytics-profile delete, ssc analytics-profile list, ssc analytics-profile update

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show ssc app-template

Displays details for a specified application template.

Syntax

show ssc app-template template-name *template-id*

Parameters

template-id

Specify a unique identifier for the application template, either its tag or UUID.

Examples

```
*** list all application templates ***
amnesiac (config) # ssc app-template list
+----------------------------+
| Templates                  |
+----------------------------+
| Http Service Template__1.0 |
+----------------------------+

*** show details for a specific application template ***
amnesiac (config) # show ssc app-template template-name "Http Service Template__1.0"
+-------------------+-------------------------------------------------------------...
| Field             | Value
+-------------------+-------------------------------------------------------------...
| description       | Load balance a http service
| required_features | [u'']
| children          | None
| name              | Http Service Template
| parameters        | [
|                   |   {
|                   |     "name": "Specify the back-end nodes",
|                   |     "parameters": [
|                   |       {
|                   |         "default": [
|                   |           "127.0.0.1:80",
|                   |           "127.0.0.2:80"
|                   |         ],
|                   |         "description": "Please enter the hostname and ...
|                   |         "name": "pool_nodes",
|                   |         "type": "array"
|                   |       }
|                   |     ]
|                   |   },
|                   |   {
|                   |     "name": "Specify the service",
```

```
|                    |     "parameters": [
|                    |       {
|                    |         "default": "Service Name",
|                    |         "description": "A brief name to identify the ...
|                    |         "name": "instance_name",
|                    |         "type": "string"
|                    |       },
|                    |       {
|                    |         "default": 80,
|                    |         "description": "Please specify a port for the ...
|                    |         "name": "public_port",
|                    |         "type": "number"
|                    |       }
|                    |     ]
|                    |   }
|                    | ]
| author             | Nick Davidson and Paul Carroll
| min_vtm_version    | 18.2
| version            | 1.0
| date_created       | 2019-03-13 14:13:04
| template_id        | Http Service Template__1.0
+--------------------+-------------------------------------------------------...
```

Related Commands

show ssc app-template-instance, ssc app-template import, ssc app-template list, ssc app-template-instance create, ssc app-template-instance list, ssc app-template-instance update

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show ssc app-template-instance

Displays details for a specified application template instance.

Syntax

show ssc app-template-instance template-instance-name *template_instance-id*

Parameters

template_instance-id

Specify a unique identifier for the application template instance, either its tag or UUID.

Examples

```
*** list all application templates ***
amnesiac (config) # ssc app-template-instance list
+-------------------------------+---------------------+----------------------------+
| Template Instance             | Cluster ID          | Template ID                +
--------------------------------+---------------------+----------------------------+
| Template-Instance-EGSR...GS45 | Cluster-CRCF...Z5WS | Http Service Template__1.0 |
+-------------------------------+---------------------+----------------------------+

*** show details for a specific application template instance ***
amnesiac (config) # show ssc app-template-instance template-instance-name
   Template-Instance-EGSR-J5D2-UKIE-GS45
+----------------------+---------------------------------------+
| Field                | Value                                 |
+----------------------+---------------------------------------+
| template_instance_id | Template-Instance-EGSR-J5D2-UKIE-GS45 |
| tag                  |                                       |
| cluster_id           | Cluster-CRCF-9WDA-T1HE-Z5WS           |
| result               | None                                  |
| children             | None                                  |
| parameters           | {                                     |
|                      |   "instance_name": "Web Server",      |
|                      |   "pool_nodes": [                     |
|                      |     "127.0.0.1:80",                   |
|                      |     "127.0.0.2:80"                    |
|                      |   ],                                  |
|                      |   "public_port": 80                   |
|                      | }                                     |
| pending_action       | None                                  |
| template_id          | Http Service Template__1.0            |
+----------------------+---------------------------------------+
```

Related Commands

show ssc app-template, ssc app-template import, ssc app-template list, ssc app-template-instance create, ssc app-template-instance list, ssc app-template-instance update

show ssc backup sd-va config

Displays the configured settings for the Services Director VA backup service.

Syntax

show ssc backup sd-va config

Usage Guidelines

The command returns the following values:

- `remote-sys:` IP address of the remote system.
- `remote-sync-freq:` The synchronization frequency (local to remote), expressed as a number of units. Units are days (d), hours (h) and minutes (m). For example, "2d" represents two days.
- `backup-data-trans:` The protocol to perform the remote transfer ("scp" or "ftp"). 2
- `remote-sys-user:` Remote username.
- `backup-retain:` The number of local backup files to be retained. For example, 3.
- `remote-sys-path:` Remote directory for backup files. For example, "/var/home/root".
- `backup-freq:` The backup frequency (to local), expressed as a number of units. Units are days (d), hours (h) and minutes (m). For example, "6h" represents six hours.
- `remote-sys-pass:` Password for the remote user.

This command is also available in user and enable mode.

Examples

```
amnesiac (config) # show ssc backup sd-va sd-va config
+-------------------+-------------------------------------------------------+
| Field             | Value                                                 |
+-------------------+-------------------------------------------------------+
| remote-sys        | 10.62.166.206                                         |
| remote-sync-freq  | 5m                                                    |
| backup-data-trans | scp                                                   |
| remote-sys-user   | sd-backup                                             |
| backup-retain     | 10                                                    |
| remote-sys-path   | /space/sd-backup/sd-backup-test/gold-silver-backups |
| backup-freq       | 1m                                                    |
| remote-sys-pass   | ******                                                |
+-------------------+-------------------------------------------------------+
```

Related Commands

ssc backup sd-va config clear, ssc backup sd-va config create, ssc backup sd-va config update, ssc backup sd-va restore local, ssc backup sd-va restore remote, ssc backup sd-va restore remotecfg clear, ssc backup sd-va restore remotecfg create, ssc backup sd-va restore remotecfg update, ssc backup sd-va service status, ssc backup sd-va service enable

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show ssc backup sd-va local

Lists local backups produced by the Services Director VA backup service.

Syntax

show ssc backup sd-va local

Usage Guidelines

This command is also available in user and enable mode.

Examples

```
amnesiac (config) # show ssc backup sd-va local
+-----------------------------------------------+---------------------+
| Local Backup files                            | Creation time       |
+-----------------------------------------------+---------------------+
| backup_10.62.167.199_2015-09-08_16-53-02.zip | 2015-09-08 16:53:03 |
| backup_10.62.167.199_2015-09-08_16-54-01.zip | 2015-09-08 16:54:03 |
| backup_10.62.167.199_2015-09-08_16-55-01.zip | 2015-09-08 16:55:02 |
| backup_10.62.167.199_2015-09-08_16-56-01.zip | 2015-09-08 16:56:03 |
+-----------------------------------------------+---------------------+
```

Related Commands

show ssc backup sd-va config, show ssc backup sd-va restore remotecfg, ssc backup sd-va config create

show ssc backup sd-va restore remotecfg

Lists remote backups produced by the Services Director VA backup service.

Syntax

show ssc backup sd-va restore remotecfg

Usage Guidelines

This command is also available in user and enable mode.

Examples

```
amnesiac (config) # show ssc backup sd-va restore remotecfg
+-------------------+-------------------------------------------------------+
| Field             | Value                                                 |
+-------------------+-------------------------------------------------------+
| remote-sys-user   | sd-backup                                             |
| backup-data-trans | scp                                                   |
| remote-sys-path   | /space/sd-backup/sd-backup-test/gold-silver-backups |
| remote-sys-pass   | ******                                                |
| remote-sys        | 10.62.166.206                                         |
+-------------------+-------------------------------------------------------+
```

Related Commands

show ssc backup sd-va local, show ssc backup sd-va config, ssc backup sd-va config create

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show ssc backup vtm-cluster cluster-name backup-name

Displays full details for the specified backup.

Syntax

show ssc backup vtm-cluster cluster-name *cluster-id* backup-name *backup_id*

Parameters

cluster-id

Specify the required cluster.

backup_id

Specify the required backup schedule.

Usage Guidelines

Use the **show ssc backup vtm-cluster cluster-name <cluster_id>** backups command to view all backups for a specified cluster.

Use the **no ssc backup vtm-cluster cluster-name <cluster_id> backup-name <backup_id>** command to delete the specified backup.

Examples

```
*** display all backups ***
amnesiac (config) # show ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-
9F4O backups
+----------------------------+-------------------------------+
| Backups                    | Description                   |
+----------------------------+-------------------------------+
| Backup-2JXH-D3BT-PK72-0SLH | Cluster-AQJE-R4HV-QYR1-9F4O#2 |
| Backup-Y33H-XR2Z-128P-2M0T | Cluster-AQJE-R4HV-QYR1-9F4O#1 |
+----------------------------+-------------------------------+

*** display details for a backup ***
amnesiac (config) # show ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-
9F4O backup-name Backup-2JXH-D3BT-PK72-0SLH
+--------------+-------------------------------+
| Field        | Value                         |
+--------------+-------------------------------+
| backup_id    | Backup-2JXH-D3BT-PK72-0SLH    |
| description  | Cluster-AQJE-R4HV-QYR1-9F4O#2 |
| date         | 2016-06-29 15:05              |
| tag          | Backup-2JXH-D3BT-PK72-0SLH    |
| cluster_id   | Cluster-AQJE-R4HV-QYR1-9F4O   |
| size         | 133120                        |
| sequence_num | 2                             |
| retain       | False                         |
+--------------+-------------------------------+
```

```
*** delete a backup ***
amnesiac (config) # no ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-
9F4O backup-name Backup-2JXH-D3BT-PK72-0SLH
+--------+----------------+
| Field  | Value          |
+--------+----------------+
| Action | Deleted backup |
+--------+----------------+
```

Related Commands

show ssc backup vtm-cluster cluster-name backups, show ssc backup vtm-cluster cluster-name task, show ssc backup vtm-cluster cluster-name tasks, show ssc backup vtm-cluster schedule, show ssc backup vtm-cluster schedules

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show ssc backup vtm-cluster cluster-name backups

Displays all backups for a specified cluster.

Syntax

[no] show ssc backup vtm-cluster cluster-name *cluster-id* backups

Parameters

cluster-id

Specify the ID of the required cluster.

Usage Guidelines

Use the **show backup vtm-cluster cluster-name <cluster_id> backup <backup_id>** command to view all backups for a specified cluster.

Use the **no ssc backup vtm-cluster cluster-name <cluster_id> backup-name <backup_id>** command to delete the specified backup.

Examples

```
*** display all backups ***
amnesiac (config) # show ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-
9F4O backups
+----------------------------+-------------------------------+
| Backups                    | Description                   |
+----------------------------+-------------------------------+
| Backup-2JXH-D3BT-PK72-0SLH | Cluster-AQJE-R4HV-QYR1-9F4O#2 |
| Backup-Y33H-XR2Z-128P-2M0T | Cluster-AQJE-R4HV-QYR1-9F4O#1 |
+----------------------------+-------------------------------+

*** display details for a backup ***
amnesiac (config) # show ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-
9F4O backup-name Backup-2JXH-D3BT-PK72-0SLH
+--------------+-------------------------------+
| Field        | Value                         |
+--------------+-------------------------------+
| backup_id    | Backup-2JXH-D3BT-PK72-0SLH    |
| description  | Cluster-AQJE-R4HV-QYR1-9F4O#2 |
| date         | 2016-06-29 15:05              |
| tag          | Backup-2JXH-D3BT-PK72-0SLH    |
| cluster_id   | Cluster-AQJE-R4HV-QYR1-9F4O   |
| size         | 133120                        |
| sequence_num | 2                             |
| retain       | False                         |
+--------------+-------------------------------+
```

```
*** delete a backup ***
amnesiac (config) # no ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-
9F4O backup-name Backup-2JXH-D3BT-PK72-0SLH
+--------+----------------+
| Field  | Value          |
+--------+----------------+
| Action | Deleted backup |
+--------+----------------+
```

Related Commands

show ssc backup vtm-cluster cluster-name backup-name, show ssc backup vtm-cluster cluster-name task, show ssc backup vtm-cluster cluster-name tasks, show ssc backup vtm-cluster schedule, show ssc backup vtm-cluster schedules

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show ssc backup vtm-cluster cluster-name task

Displays full details for the specified backup task.

Syntax

show ssc backup vtm-cluster cluster-name *cluster-id* task *task_id*

Parameters

cluster-id

Specify the required cluster.

task_id

Specify the required backup task.

Usage Guidelines

Use the **show ssc backup vtm-cluster cluster-name <cluster_id> tasks** command to view all tasks for a specified cluster.

Use the **no ssc backup vtm-cluster cluster-name <cluster_id> task <task_id>** command to delete the specified task.

Examples

```
*** display all tasks ***
amnesiac (config) # show ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-
9F4O tasks
+----------------------------------------+
| Backup Tasks                           |
+----------------------------------------+
| BackupRestoreTask-PQ6B-H5PY-JHVM-ZTYI |
| BackupRestoreTask-BAWB-6JKQ-CPB3-R56B |
+----------------------------------------+

*** display a specified task ***
amnesiac (config) # show ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-
9F4O task BackupRestoreTask-BAWB-6JKQ-CPB3-R56B
+---------------+----------------------------------------+
| Field         | Value                                  |
+---------------+----------------------------------------+
| status        | complete                               |
| backup_id     |                                        |
| creation_date | 2016-06-29 15:01:26                    |
| task_subtype  | backup now                             |
| manager       | 10.62.169.160                          |
| cluster_id    | Cluster-AQJE-R4HV-QYR1-9F4O            |
| error_info    | None                                   |
| task_type     | backup restore                         |
| task_id       | BackupRestoreTask-BAWB-6JKQ-CPB3-R56B |
| instance_id   |                                        |
| cluster_tag   |                                        |
+---------------+----------------------------------------+
```

```
*** delete a specified task from a specified cluster ***
amnesiac (config) # no ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-
9F4O task BackupRestoreTask-PQ6B-H5PY-JHVM-ZTYI
+-------+--------------+
| Field | Value        |
+-------+--------------+
| Task  | Deleted task |
+-------+--------------+
```

Related Commands

show ssc backup vtm-cluster cluster-name backup-name, show ssc backup vtm-cluster cluster-name backups, show ssc backup vtm-cluster cluster-name tasks, show ssc backup vtm-cluster schedule, show ssc backup vtm-cluster schedules

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show ssc backup vtm-cluster cluster-name tasks

Displays all tasks for a specified cluster.

Syntax

show ssc backup vtm-cluster cluster-name *cluster-id* tasks

Parameters

cluster-id

Specify the name of required cluster.

Usage Guidelines

Use the **show ssc backup vtm-cluster cluster-name <cluster_id> task <task_id>** command to view all tasks for a specified cluster.

Use the **no ssc backup vtm-cluster cluster-name <cluster_id> task <task_id>** command to delete the specified task.

Examples

```
*** display all tasks ***
amnesiac (config) # show ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-
9F4O tasks
+----------------------------------------+
| Backup Tasks                           |
+----------------------------------------+
| BackupRestoreTask-PQ6B-H5PY-JHVM-ZTYI |
| BackupRestoreTask-BAWB-6JKQ-CPB3-R56B |
+----------------------------------------+

*** display a specified task ***
amnesiac (config) # show ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-
9F4O task BackupRestoreTask-BAWB-6JKQ-CPB3-R56B
+---------------+---------------------------------------+
| Field         | Value                                 |
+---------------+---------------------------------------+
| status        | complete                              |
| backup_id     |                                       |
| creation_date | 2016-06-29 15:01:26                   |
| task_subtype  | backup now                            |
| manager       | 10.62.169.160                         |
| cluster_id    | Cluster-AQJE-R4HV-QYR1-9F4O           |
| error_info    | None                                  |
| task_type     | backup restore                        |
| task_id       | BackupRestoreTask-BAWB-6JKQ-CPB3-R56B |
| instance_id   |                                       |
| cluster_tag   |                                       |
+---------------+---------------------------------------+
```

```
*** delete a specified task from a specified cluster ***
amnesiac (config) # no ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-
9F4O task BackupRestoreTask-PQ6B-H5PY-JHVM-ZTYI
+-------+--------------+
| Field | Value        |
+-------+--------------+
| Task  | Deleted task |
+-------+--------------+
```

Related Commands

show ssc backup vtm-cluster cluster-name backup-name, show ssc backup vtm-cluster cluster-name backups, show ssc backup vtm-cluster cluster-name task, show ssc backup vtm-cluster schedule, show ssc backup vtm-cluster schedules

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show ssc backup vtm-cluster schedule

Display full details for a specified backup schedule.

Syntax

show ssc backup vtm-cluster schedule ***schedule-id***

Parameters

schedule-id

Specify the required backup schedule.

Usage Guidelines

Use the **no ssc backup vtm-cluster schedule** command to delete the specified schedule.

Examples

```
amnesiac (config) # show ssc backup vtm-cluster schedule sched-monthly-02
+-------------+-----------------------------------+
| Field       | Value                             |
+-------------+-----------------------------------+
| info        | Monthly (26th) backup schedule    |
| schedule_id | BackupSchedule-HA16-ROZQ-T2PT-B3HG |
| tag         | sched-monthly-02                  |
| frequency   | monthly                           |
| backup_time | 11:30                             |
| offset      | 26                                |
+-------------+-----------------------------------+

amnesiac (config) # show ssc backup vtm-cluster schedule sched-daily-01
+-------------+-----------------------------------+
| Field       | Value                             |
+-------------+-----------------------------------+
| info        | Daily backup schedule             |
| schedule_id | BackupSchedule-MF06-31XX-0JWF-55R1 |
| tag         | sched-daily-01                    |
| frequency   | daily                             |
| backup_time | 10:10                             |
| offset      | 100                               |
+-------------+-----------------------------------+
```

Related Commands

show ssc backup vtm-cluster cluster-name backup-name, show ssc backup vtm-cluster cluster-name backups, show ssc backup vtm-cluster cluster-name task, show ssc backup vtm-cluster cluster-name tasks, show ssc backup vtm-cluster schedules

show ssc backup vtm-cluster schedules

Displays a list of all defined backup schedules.

Syntax

show ssc backup vtm-cluster schedules

Examples

```
amnesiac (config) # show ssc backup vtm-cluster schedules
+---------------------+
| Backup Schedules    |
+---------------------+
| schedule-hourly-01  |
| schedule-monthly-02 |
| schedule-weekly-01  |
| schedule-monthly-01 |
| schedule-daily-01   |
+---------------------+
```

Related Commands

show ssc backup vtm-cluster cluster-name backup-name, show ssc backup vtm-cluster cluster-name backups, show ssc backup vtm-cluster cluster-name task, show ssc backup vtm-cluster cluster-name tasks, show ssc backup vtm-cluster schedule

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show ssc certificate

Displays Services Director SSL certificate in text format.

Syntax

show ssc certificate

Usage Guidelines

This command is also available in user and enable mode.

Examples

```
amnesiac (config) # show ssc certificate
Certificate:
 Data:
 Version: 3 (0x2)
 Serial Number:
Signature Algorithm:
Issuer:
Validity
 Not Before: May 29 13:56:14 2013 GMT
 Not After : May 29 13:56:14 2015 GMT
 Subject:
        Subject Public Key Info:
            Public Key Algorithm: rsaEncryption
                Public-Key: (1024 bit)
                Modulus:

*** a partial listing ***
```

show ssc cloud-reg

Displays details for a specified cloud registration resource.

Syntax

show ssc cloud-reg id *name*

Parameters

name

Specify a unique identifier for the cloud registration, either its tag or UUID.

Usage Guidelines

This command does not display the user data required for cloud registration. The **show ssc cloud-reg user-data** command displays this user data.

Examples

```
amnesiac (config) # show ssc cloud-reg id jk-cloud-reg-01
+---------------------+-----------------------------+
| Field               | Value                       |
+---------------------+-----------------------------+
| tag                 | jk-cloud-reg-01             |
| owner               | Owner-S5HZ-52G9-HZS2-KIAO   |
| email_address       |                             |
| children            | None                        |
| registration_policy | Policy-SH1M-L5BD-5L9L-YFKK  |
| date_created        | 2016-09-07 13:34:32         |
| user_data_id        | UserData-Z28S-AXW9-PAVA-3YE3 |
+---------------------+-----------------------------+
```

Related Commands

show ssc cloud-reg user-data id, ssc cloud-reg create, ssc cloud-reg delete, ssc cloud-reg list

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show ssc cloud-reg user-data id

Displays the user-data for a specified cloud registration resource.

Syntax

show ssc cloud-reg user-data id *name*

Parameters

name

Specify a unique identifier for the cloud registration resource, either its tag or UUID.

Usage Guidelines

This command does not display the general properties for the cloud registration. The show ssc cloud-reg id command displays this information.

It is intended that you copy the output of this command to the clipboard, and then paste it into the Amazon Web Services (AWS) EC2 instance creation wizard when you create the first cloud-based vTM in a cluster. See the *Pulse Secure Services Director Getting Started Guide* for full details of this process.

This text is always displayed in base64 format.

Examples

```
amnesiac (config) # show ssc cloud-reg user-data id jk-cloud-reg-01
dGltZXpvbmU9RXVyb3BlL0xvbmRvbgphY2NlcHRfbGljZW5zZT1ZZXMKYWNjZXNzX2tleV9pZD08aW
5zZXJ0IGtleSBoZXJlPgpzZWNyZXRfYWNjZXNzX2tleV9pZD08aW5zZXJ0IGtleSBoZXJlPgpwYXNz
d29yZD1LMnY0OU5GUkoKb3duZXI9T3duZXItUzVIWi01Mkc5LUhaUzItS0lBTwpvd25lcl9zZWNyZX
Q9cGFzc3dvcmQKc2RfYWRkcmVzcz0xMC42Mi4xNjkuMTYyOjgxMDAKc2RfY2VydD1NSUlDV0RDQ0Fj
R2dBd0lCQWdJSkFPbUt1L0pRUXB3bk1BMEdDU3FHU0liM0RRRUJDd1VBTUVVeEN6QUpCZ05WQkFZVE
FrRlZNUk13RVFZRFZRUUlEQXBUYjIxbExWTjBZWFJsTVNFd0h3WURWUVFLREJoSmJuUmxjbTVsZENC
WGFXUm5hWFJ6SUZCMGVTQk1kR1F3SGhjTk1UVXdOVEk1TVRVek9EVXlXaGNOTVRjd05USTRNVFV6T0
RVeVdqQkZNUXN3Q1FZRFZRUUdFd0pCVlRFVE1CRUdBMVVFQ0F3S1UyOXRaUzFUZEdGMFpURWhNQjhH
VCQVFVQUE0R05BRENCaVFLQmdRRGw5S25CRjVYR2pqeWZOaTdKUnpxb1JlRjZGKzJydVJYdUFVdG9l
QTFVRUNnd1lTVzUwWlhKdVpYUWdWMmxrWjJsMGN5QlFkSGtnVEhSa01JR2ZNQTBHQ1NxR1NJYjNEUU
eVdwdFJlYnZCdmtOS1NXdXlGc1IvdTR0ekJlWUVzTU5aeXZLTGhodFVxcnRhc0dNam90MnRoaXlITG
9KdUlyZjR4NUZNbTNsbHFNK1c1WGlmUnhJU0F0dW5TMjJnYWI4Ri9QSW5SV01QUVlyeGZ2K3JUQW9S
VHAwK0VSeWNScTMxZ2ZMd0lEQVFBQm8xQXdUakFkQmdOVkhRNEVGZ1FVL2pHVzFnRVVmamd5Rk1uU1
RFZSMFRCQVV3QXdFQi96QU5CZ2txaGtpRzl3MEJBUXNGQUFPQmdRQnB4Y1k5UURRN05tQnlDR2RDVW
VFclZ4T29YdGxzd0h3WURWUjBqQkJnd0ZvQVUvakdXMWdFVWZqZ3lGTW5TVUVyVnhPb1h0bHN3REFZ
hTTHBsS0hpS3A2TktaS2V3TENKeU9WU1FCUXk4eEdSQnhkTUpJaTMxbkRud3lhOUVTVVhGOW9STFNp
c3NaQStwWEplNGtVVDdSMDFqcENXV2QwRzR2NURsK1Vhb2VzYmJmc241cUtnbkpvTUZVUTJ3YmtPdH
E2OWlYcG5hc0ZwNWZsSWloQUFkNFZMR1R3QzRjTm83YXgrUT09CnJlZ2lzdHJhdGlvbl9wb2xpY3k9
UG9saWN5LVNIMU0tTDVCRC01TDlMLVlGS0s=
```

Related Commands

show ssc cloud-reg, ssc cloud-reg create, ssc cloud-reg delete, ssc cloud-reg list

show ssc cluster cluster-name

Displays Services Director cluster details.

Syntax

show ssc cluster cluster-name *cluster_id*

Parameters

cluster_id

Specify the name of the cluster.

Usage Guidelines

The **user_data** property is only populated when a cluster is used for cloud-based vTMs, such as those deployed using Amazon Web Services (AWS) EC2 platform. This property is required when deploying the second cloud-based vTM in a cluster, replacing the AWS user data from the cloud registration. See the *Pulse Secure Services Director Getting Started Guide* for full details of this process.

Examples

```
*** show details for a cluster containing an externally-deployed vTM ***
show ssc cluster cluster-name Cerulean
+----------------------+-----------------------------------+
| Field                | Value                             |
+----------------------+-----------------------------------+
| status               | Active                            |
| next_backup_time     | None                              |
| share_tips           | True                              |
| cluster_port_offset  | None                              |
| in_use               | True                              |
| cluster_type         | Discovered                        |
| user_data            | None                              |
| task                 | None                              |
| number_backups       | 5                                 |
| schedule_id          | None                              |
| tag                  | Cerulean                          |
| members              | [u'Instance-92Y7-JVCE-00TW-UY1N'] |
| owner                | Owner-F4MQ-6X5X-S07W-B0RI         |
| children             | None                              |
| analytics_profile_id | None                              |
+----------------------+-----------------------------------+
```


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```
*** show details for a cluster containing a cloud-based vTM ***
platinum-01 (config) # show ssc cluster cluster-name AWS-cluster-01
+-----------------------------+-------------------------------------------------
| Field                       | Value
+-----------------------------+-------------------------------------------------
| backup_success_sequence_num | None
| backup_failure_count        | None
| schedule_id                 | None
| tag                         | AWS-cluster-01
| owner                       | Owner-F95M-3Y0R-FGQA-1DIK
| backup_next_sequence_num    | None
| children                    | None
| analytics_profile_id        | None
| share_tips                  | True
| restore_backup_name         | None
| cluster_port_offset         | None
| last_success_backup         | None
| cluster_type                | Discovered
| last_backup_time            | None
| status                      | Active
| in_use                      | True
| user_data                   | Y2x1c3Rlcl9ob3N0PTEwLjguMi4xMDgKY2x1c3Rlcl...
| number_backups              | 5
| members                     | [u'Instance-CIOL-A2FM-3C7O-N9A1']
| last_failed_backup          | None
| restore_backup_status       | None
| next_backup_time            | None
| task                        | None
| restore_backup_time         | None
| last_backup_status          | None
+-----------------------------+-------------------------------------------------
```

Related Commands

show ssc backup vtm-cluster schedules, ssc cluster create cluster-name

show ssc collection-endpoint

Displays details for a specified Collection Endpoint resource. This endpoint is used as a destination for analytics data on your chosen Analytics System.

Syntax

show ssc collection-endpoint name *endpoint-id*

Parameters

`name` *`endpoint-id`*

Specify a unique identifier for the collection endpoint, either its tag or UUID.

Usage Guidelines

This command is only used for Collection Endpoint resources. Search Endpoint resources are handled separately, by an equivalent "search-endpoint" command.

Examples

```
*** list all collection endpoints ***
amnesiac (config) # ssc collection-endpoint list
+-----------------------------------------+------------------+
| ID                                      | Tag              |
+-----------------------------------------+------------------+
| Collection-Endpoint-4N4H-0NL1-T02T-PZZ7 | JK-Collection-04 |
| Collection-Endpoint-9D37-B16X-75XG-3K8W | JK-Collection-01 |
| Collection-Endpoint-1EGK-KLKN-R6RB-JDLK | JK-Collection-02 |
| Collection-Endpoint-U3FX-MTKU-WSY6-WZ99 | JK-Collection-03 |
+-----------------------------------------+------------------+

*** show details for a specific collection endpoint ***
amnesiac (config) # show ssc collection-endpoint name JK-Collection-01
+----------------------------------+-----------------------------------------+
| Field                            | Value                                   |
+----------------------------------+-----------------------------------------+
| transaction_tls_verify           | False                                   |
| auth_type                        | none                                    |
| transaction_export_address       | demo.com:9999                           |
| log_export_address               | https://demo.com:8080/logs/collector    |
| auth_token                       |                                         |
| collection_endpoint_id           | Collection-Endpoint-9D37-B16X-75XG-3K8W |
| transaction_endpoint_certificate |                                         |
| transaction_export_tls           | False                                   |
| log_endpoint_certificate         |                                         |
| tag                              | JK-Collection-01                        |
| log_tls_verify                   | False                                   |
| auth_password                    |                                         |
| auth_username                    |                                         |
+----------------------------------+-----------------------------------------+
```


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Related Commands

ssc collection-endpoint create, ssc collection-endpoint delete, ssc collection-endpoint list, ssc collection-endpoint update

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show ssc dashboard

Displays the dashboard resource for the Services Director. This is a summary of certain Services Director functions.

Syntax

show ssc dashboard

Usage Guidelines

Currently, the dashboard only includes a summary of the state of metering on the Services Director.

To investigate this summary information, see "ssc owner create" on page 527 and "show ssc owner" on page 287.

Examples

```
amnesiac (config) # show ssc dashboard
+-------------------------------------+--------------------------------------------
| Property                            | Value
+-------------------------------------+--------------------------------------------
| metering_health > alert_reason      | Possible under-accounting or over-accounting
| metering_health > alert_level       | 3
| metering_health > alert_..._short   | Warning
+-------------------------------------+--------------------------------------------
```

Related Commands

show ssc metering warning instance-name, show ssc settings metering, ssc metering warning list, ssc settings metering update

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show ssc database local

Displays settings for local MySQL database.

Syntax

show ssc database local

Usage Guidelines

This command is also available in user and enable mode.

Examples

```
amnesiac (config) # show ssc database local
Use Local Database: yes
MySQL Port Number:  3306
MySQL Bind Address: 127.0.0.1
```

Related Commands

ssc database use-local

show ssc database local credentials

Displays local MySQL database credentials.

Syntax

show ssc database local db-file credentials

Usage Guidelines

This command is also available in user and enable mode.

Examples

```
amnesiac (config) # show ssc database local credentials
+-------------+-------------+
| DB Username | DB Password |
+-------------+-------------+
| ssc         | my_db_pass  |
+-------------+-------------+
```

Related Commands

ssc database use-local

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show ssc database local db-file

Displays available backups for local MySQL database.

Syntax

show ssc database local db-file

Usage Guidelines

This command is also available in user and enable mode.

Examples

```
amnesiac (config) # show ssc database local db-file
```

Related Commands

ssc database use-local

show ssc database local max-connections

Displays local MySQL database maximum connections.

Syntax

show ssc database local max-connections

Usage Guidelines

This command is also available in user and enable mode.

Examples

```
amnesiac (config) # show ssc database local max-connections
Maximum number of connections to local MySQL DB: 151
```

Related Commands

ssc database use-local

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show ssc database remote

Displays settings for remote database used by the Services Director.

Syntax

show ssc database remote [db-user-name *name*] | [ip-address *ip-addr*] | [port *port*]

Parameters

`db-user-name` *`name`*

Displays the user for the remote database used by the Services Director.

`ip-address` *`ip-addr`*

Displays the IP address for remote database used by Services Director.

`port` *`port`*

Displays the port number for remote database used by Services Director.

Usage Guidelines

This command is also available in user and enable mode.

Examples

```
amnesiac (config) # show ssc database remote db-user-name test
Remote Database Port: ssc
```

Related Commands

ssc database remote address

show ssc database use-local

Displays whether to use local MySQL database for Services Director.

Syntax

show ssc database use-local

Usage Guidelines

This command is also available in user and enable mode.

Examples

```
amnesiac (config) # show ssc database use-local
Use local MySQL database: yes
```

Related Commands

show ssc database use-local

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show ssc feature-pack fpname

Displays feature pack details.

Syntax

show ssc feature-pack fpname *name*

Parameters

name

Specify the name of the feature pack.

Examples

```
amnesiac (config) # show ssc feature-pack fpname ENT-ENTERPRISE_full
+-------------+----------------+
| Field       | Value          |
+-------------+----------------+
| info        |                |
| status      | Active         |
| stm_sku     | ENT-ENTERPRISE |
| add_on_skus | []             |
| excluded    |                |
| skus        | ENT-ENTERPRISE |
+-------------+----------------+
```

Related Commands

show ssc feature-pack fpname, ssc feature-pack create fpname, ssc feature-pack list, ssc feature-pack update fpname

show ssc high-avail certificate

Displays the high availability certificate for a high availability node.

Usage Guidelines

This command is identical to "ssc high-avail file-replication reset" on page 442.

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show ssc high-avail list

Displays a list of nodes in the current HA pair.

This command is identical to "ssc high-avail reset" on page 459.

show ssc host host-name

Displays vTM instance host details.

Syntax

show ssc host host-name *name* dns [status-check [true | false]]

Parameters

name

Specify the name of the host.

status-check [true | false]

Specify *true* or *false* to display host status check information.

Examples

```
amnesiac (config) # show ssc host host-name demo-01.cam.demo.com status-check true
+------------------------+----------------------+
| Field                  | Value                |
+------------------------+----------------------+
| install_root           | /root/install        |
| username               | root                 |
| retained_info_dir      | None                 |
| va_management_user     |                      |
| hw_cluster_node        | None                 |
| work_location          | /var/cache/ssc       |
| cpu_cores              | None                 |
| status_check           | {}                   |
| info                   | demo                 |
| status                 | Active               |
| va_management_password |                      |
| usage_info             |                      |
| host_id                | demo-01.cam.demo.com |
| hw_slot_number         | None                 |
| size                   | None                 |
+------------------------+----------------------+
```

Related Commands

ssc host add host-name

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show ssc instance instance-name

Displays vTM instance details.

Syntax

show ssc instance instance-name *name* [status-check [true | false]] [show-passwords [true | false]]

Parameters

name

Specify the name of the Traffic Manager instance.

status-check

Specify **true** or **false** to display a status check of the (deployed) instance.

show-passwords

Specify **true** or **false** to display the administration password.

Examples

```
amnesiac (config) # show ssc instance instance-name violet-01 show-passwords true
+------------------------------+------------------------------+
| Field                        | Value                        |
+------------------------------+------------------------------+
| status                       | Active                       |
| metrics_date                 | None                         |
| cpu_usage                    |                              |
| managed                      | False                        |
| metrics_peak_RPS             | None                         |
| license_name                 | universal_v3                 |
| rest_address                 | 10.62.169.165:9070           |
| tag                          | violet-01                    |
| snmp_address                 | 10.62.169.165:161            |
| creation_date                | 2015-12-29 10:08:34          |
  .
  .
  .
| admin_password               | password                     |
| management_address           | 10.62.169.165                |
| container_configuration      |                              |
| rest_enabled                 | True                         |
| ui_address                   | 10.62.169.165:9090           |
| metrics_peak_SSL_TPS         | None                         |
| host_name                    |                              |
+------------------------------+------------------------------+
```

Related Commands

ssc instance create instance-name

show ssc kpti

Displays Kernel Page-Table Isolation (KPTI) settings for the Services Director.

Syntax

show ssc kpti

Examples

```
*** KPTI is enabled ***
amnesiac (config) # show ssc kpti
KPTI is currently enabled, and will remain enabled after a reboot.

*** KPTI is enabled now but will change state at the next reboot ***
amnesiac (config) # show ssc kpti
KPTI is currently enabled, but will be disabled after a reboot.

*** KPTI is disabled now but will change state at the next reboot ***
amnesiac (config) # show ssc kpti
KPTI is currently disabled, but will be enabled after a reboot.

*** KPTI is disabled ***
amnesiac (config) # show ssc kpti
KPTI is currently disabled, and will remain disabled after a reboot.
```

Related Commands

ssc kpti

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show ssc license enterprise

Displays Services Director enterprise license details.

Syntax

show ssc license enterprise [add-on *key* | bandwidth *key* | controller *key* | resource-pack *key*]

Parameters

`add-on key`

Specify the (older) add-on license key.

`bandwidth key`

Specify the bandwidth license key.

`controller key`

Specify the name of the controller license key.

`resource-pack key`

Specify the name of the (newer) resource pack key.

Usage Guidelines

Add-on licenses are used with older controller licenses. Resource pack licenses are used with newer controller licenses.

Examples

```
amnesiac (config) # show ssc license enterprise bandwidth 3420186a93f3c58857e21f1cf
+---------------------------+-------------------------------------------------------
| Field                     | Value
+---------------------------+-------------------------------------------------------
| status                    | Active
| valid_until               | 2016-10-07
| timestamp                 | 2016-09-27T21:37:13.1475037433
| controller_license        | ERSSC381243-0000-42B9
| bandwidth                 | 5000.0
| valid_from                | Perpetual
| serial                    | 342005
| license_key               | LK1-ERSSCTPSTM_B_400:5:342015:20160927T2137131475...
| controller_license_serial | 381243
| stm_sku                   | STM-400
| valid                     | True
+---------------------------+-------------------------------------------------------
```

Related Commands

show ssc license license-name, show ssc license-file

show ssc license license-name

Displays the details for the named license.

Syntax

show ssc license license-name *unique-name*

Parameters

unique-name

Specify the unique name of the license.

Usage Guidelines

This command is also available in user and enable mode.

Examples

```
*** check available licenses ***
amnesiac (config) # ssc license list
+--------------+
| License      |
+--------------+
| universal_v4 |
| legacy_9.3   |
+--------------+

*** show the legacy license ***
amnesiac (config) # show ssc license license-name legacy_9.3
+------------------------+-------------+
| Field                  | Value       |
+------------------------+-------------+
| status                 | Active      |
| health_check_results   | []          |
| info                   |             |
| last_health_check_time | None        |
| default                | True        |
| health_check_status    | Not yet run |
| generic_errors         | None        |
| type                   | legacy      |
+------------------------+-------------+
```


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```
*** show the universal license ***
amnesiac (config) # show ssc license license-name universal_v4
+------------------------+-------------------------------------------------------------
| Field                  | Value
+------------------------+-------------------------------------------------------------
| status                 | Active
| health_check_results   | []
| info                   | Universal license, installed with vX.X of Services Dir...
| last_health_check_time | None
| default                | True
| health_check_status    | Not yet run
| generic_errors         | None
| type                   | universal
+------------------------+-------------------------------------------------------------
```

Related Commands

show ssc license enterprise, show ssc license-file

show ssc license-file

Displays the Services Director license key.

Syntax

show ssc license-file

Usage Guidelines

This command is also available in user and enable mode.

Examples

```
amnesiac (config) # show ssc license-file
LK1-ERSSC563111-0000-41FD-5-954B-E6F7-85B1
```

Related Commands

show ssc license enterprise, show ssc license license-name

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show ssc log-export

Displays details for a specified log-export resource. This is used for vTM analytics purposes.

Syntax

show ssc log-export id profile-id

Parameters

`id` *`profile-id`*

Specify a unique identifier for the log-export resource, either its tag or UUID.

Examples

```
*** list all log-export resources ***
amnesiac (config) # ssc log-export list
+-----------------------------+-----------------------------+
| ID                          | Tag                         |
+-----------------------------+-----------------------------+
| Audit Log                   | Audit Log                   |
| Application Firewall        | Application Firewall        |
| Process Monitor             | Process Monitor             |
| Admin Server Access         | Admin Server Access         |
| System - syslog             | System - syslog             |
| Event Log                   | Event Log                   |
| Routing Software            | Routing Software            |
| Data Plane Acceleration     | Data Plane Acceleration     |
| System - authentication log | System - authentication log |
+-----------------------------+-----------------------------+

*** show details for a specific log-export resource ***
amnesiac (config) # show ssc log-export id "Audit Log"
+----------------+----------------------------+
| Field          | Value                      |
+----------------+----------------------------+
| files          | %ZEUSHOME%/zxtm/log/audit* |
| tag            | Audit Log                  |
| appliance_only | False                      |
| built_in       | True                       |
| log_export_id  | Audit Log                  |
| children       | None                       |
| history        | none                       |
+----------------+----------------------------+
```

Related Commands

ssc log-export create, ssc log-export delete, ssc log-export list, ssc log-export update

show ssc manager manager-name

Displays Services Director manager details.

Syntax

show ssc manager manager-name *name*

Parameters

name

Specify the name of the Services Director manager.

Examples

```
amnesiac (config) # show ssc manager manager-name amnesiac
+------------+---------+
| Field      | Value   |
+------------+---------+
| management | enabled |
| monitoring | shared  |
| metering   | all     |
| licensing  | enabled |
+------------+---------+
```

Related Commands

ssc manager list, ssc manager update manager-name

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show ssc metering warning instance-name

Displays metering warning information for a specified Traffic Manager instance.

Syntax

show ssc metering warning instance-name *name*

Parameters

`instance-name` *`name`*

Specify the name of the required Traffic Manager instance.

Usage Guidelines

Any current instance can be specified. Where no warning exists, this is indicated.

To identify all instances with a warning, see "ssc owner create" on page 527.

Examples

```
*** list all instances with a warning raised ***
amnesiac (config) # ssc metering warning list
+-----------+
| Instance  |
+-----------+
| cerise-02 |
| sienna-01 |
+-----------+

*** show warning details for first failed instance (over-accounting example) ***
amnesiac (config) # show ssc metering warning instance-name cerise-02
+------------------------+----------------------------------------------+
| Field                  | Value                                        |
+------------------------+----------------------------------------------+
| alert_reason           | Possible uptime over-accounting              |
| alert_level            | 3                                            |
| alert_level_short_text | Warning                                      |
| alert_resolution_text  | Mark instance as deleted if no longer in use |
| name                   | Instance-3ZXD-61IX-KZEC-6IO6                 |
| tag                    | cerise-02                                    |
| monitor_date           | 2016-06-22 14:33:11                          |
| licensed_date          | 2016-06-20 14:27:09                          |
| metrics_date           | None                                         |
+------------------------+----------------------------------------------+
```

```
*** show warning details for second failed instance (under-accounting example) ***
amnesiac (config) # show ssc metering warning instance-name sienna-01
+------------------------+-----------------------------------------------------+
| Field                  | Value                                               |
+------------------------+-----------------------------------------------------+
| alert_reason           | Possible under-accounting                           |
| alert_level            | 3                                                   |
| alert_level_short_text | Warning                                             |
| alert_resolution_text  | Enable REST or SNMP connectivity for this instance |
| name                   | Instance-NPIS-A6ZB-MSA3-680Q                        |
| tag                    | sienna-01                                           |
| monitor_date           | 2016-06-22 14:33:10                                 |
| licensed_date          | 2016-06-20 14:27:48                                 |
| metrics_date           | None                                                |
+------------------------+-----------------------------------------------------+

*** show instance with no warning raised
amnesiac (config) # show ssc metering warning instance-name violet-01
+------------------------+------------------------------+
| Field                  | Value                        |
+------------------------+------------------------------+
| alert_level            | 1                            |
| alert_level_short_text | OK                           |
| name                   | Instance-6BT2-ALAX-KN14-32RA |
| tag                    | violet-01                    |
| monitor_date           | 2016-06-22 14:59:11          |
| licensed_date          | None                         |
| metrics_date           | None                         |
+------------------------+------------------------------+
```

Related Commands

show ssc dashboard, show ssc settings metering, ssc metering warning list, ssc settings metering update

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show ssc owner

Displays a specified owner.

Syntax

show ssc owner *name*

Parameters

name

Specify the name of the owner.

Examples

```
*** list all owners ***
amnesiac (config) # ssc owner list
+---------------------------+------+
| Owner ID                  | Tag  |
+---------------------------+------+
| Owner-HSC1-T4QV-BXPB-Z4CZ | HC   |
| Owner-WUPO-RLBZ-SAPQ-RAM3 | JK   |
| Owner-58I2-2N4F-IXG0-8084 | TK   |
| Owner-JJM6-0UII-JUAH-R979 | JRRT |
+---------------------------+------+

*** list details for listed owner 'HC' ***
amnesiac (config) # show ssc owner owner-id JK
+---------------+-----------------------------------+
| Field         | Value                             |
+---------------+-----------------------------------+
| instances     | [u'cerulean-01'], [u'cerulean-02'] |
| tag           | JK                                |
| timezone      | Etc/GMT                           |
| email_address |                                   |
| children      | None                              |
| secret        | banana                            |
| clusters      | [u'Cerulean-Cluster']             |
| owner_id      | Owner-WUPO-RLBZ-SAPQ-RAM3         |
+---------------+-----------------------------------+
```

Related Commands

ssc owner create, ssc owner delete, ssc owner list, ssc owner update

show ssc registration

Displays details for a specified self-registration request.

Syntax

show ssc registration *registration-id*

Parameters

registration-id

Specify the ID for the self-registration request.

Usage Guidelines

Some fields will only be populated once the request is Accepted:

- instance_name
- feature_pack
- bandwidth
- owner
- access_profile (optional).

Examples

```
*** show registration request for Pending request ***
amnesiac (config) # show ssc registrations registration-id Reg-QG91-KJMS-DK4T-2FWY
+----------------------+---------------------------------------+
| Field                | Value                                 |
+----------------------+---------------------------------------+
| snmp_address         | 10.62.169.167:161                     |
| registration_message | Cerise 10.4 registration              |
| bandwidth            | None                                  |
| owner                | None                                  |
| email_address        | jkilby@demo.com                       |
| instance_name        | None                                  |
| uuid                 | 1013592c-a9bb-3301-9675-005056a643af |
| hostname             | 10.62.169.167                         |
| declined_reason      | None                                  |
| instance_version     | 10.4a1                                |
| status               | Pending                               |
| snmp_community       | public                                |
| admin_address        | 10.62.169.167:9090                    |
| rest_address         | 10.62.169.167:9070                    |
| feature_pack         | None                                  |
| cluster_identifier   | Cluster-C21U-O3MQ-EE3G-BUIZ           |
| registration_time    | 2016-03-20 15:36:14                   |
| instance_id          | None                                  |
| management_ip        | 10.62.169.167                         |
| pending_time         | 2016-03-20 15:36:14                   |
| access_profile       | None                                  |
+----------------------+---------------------------------------+
```


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```
*** show registration request for Accepted request ***
amnesiac (config) # show ssc registrations registration-id Reg-QG91-KJMS-DK4T-2FWY
+----------------------+---------------------------------------+
| Field                | Value                                 |
+----------------------+---------------------------------------+
| snmp_address         | 10.62.169.167:161                     |
| registration_message | Cerise 10.4 registration              |
| bandwidth            | 100                                   |
| owner                | JK                                    |
| email_address        | jkilby@demo.com                       |
| instance_name        | cerise-01                             |
| uuid                 | 1013592c-a9bb-3301-9675-005056a643af  |
| hostname             | 10.62.169.167                         |
| declined_reason      | None                                  |
| instance_version     | 10.4a1                                |
| status               | Accepted                              |
| snmp_community       | public                                |
| admin_address        | 10.62.169.167:9090                    |
| rest_address         | 10.62.169.167:9070                    |
| feature_pack         | STM-400_full                          |
| cluster_identifier   | Cluster-C21U-O3MQ-EE3G-BUIZ           |
| registration_time    | 2016-03-20 15:36:14                   |
| instance_id          | None                                  |
| management_ip        | 10.62.169.167                         |
| pending_time         | 2016-03-20 15:36:14                   |
| access_profile       | TAC                                   |
+----------------------+---------------------------------------+
```

Related Commands

ssc registration delete, ssc registration list, ssc registration update

show ssc reg-policy

Displays a specified registration policy.

Syntax

show ssc reg-policy *name*

Parameters

name

Specify the name of the registration policy.

Examples

```
*** list all self-reg policies ***
amnesiac (config) # ssc reg-policy list
+----------------------------+----------------+
| Policy ID                  | Tag            |
+----------------------------+----------------+
| Policy-MHM8-AB62-SI2J-DNUX | jk-self-reg-01 |
| Policy-I7A7-3DN2-6IEB-QF96 | jk-self-reg-02 |
| Policy-8QU3-ZERY-8IW6-3W6J | self-reg-01    |
+----------------------------+----------------+

*** display all details for a listed self-reg policy ***
amnesiac (config) # show ssc reg-policy policy-id tk-reg-policy-01
+----------------------------+----------------------------+
| Field                      | Value                      |
+----------------------------+----------------------------+
| instance_version_range_low | 10.0                       |
| bandwidth                  | 100                        |
| tag                        | tk-reg-policy-01           |
| children                   | None                       |
| management_ip_subnet       | 10.62.128.0/18             |
| feature_pack               | STM-400_full               |
| access_profile             | None                       |
| instance_version_range_high | 11.0                       |
| policy_id                  | Policy-XI6P-5JLU-QQUL-9BR7 |
+----------------------------+----------------------------+
```

Related Commands

ssc reg-policy create, ssc reg-policy delete, ssc reg-policy list, ssc reg-policy update

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show ssc sd-admin-ca

Displays full details of a specified Services Director CA certificate. This certificate is required to enable communications with a secure LDAP authentication server.

Syntax

show ssc sd-admin-ca admin-ca-name *ca-certificate-name*

Parameters

`admin-ca-name` *`ca-ertificate-name`*

Specify the name or ID of a CA certificate present on Services Director.

Examples

```
*** List all CA certificates on Services Director ***
amnesiac (config) #  ssc sd-admin-ca list
+------+------------------------------+
| Name | Unique ID                    |
+------+------------------------------+
| CA-1 | Admin-CA-5XJ0-HP0Y-YQAX-69O2 |
| CA-2 | Admin-CA-6J21-KKH3-VSAJ-3209 |
+------+------------------------------+

*** Display details for a CA certificate ***
amnesiac (config) #  show ssc sd-admin-ca admin-ca-name CA-1
+-----------------------+-------------------------------------------------------...
| Field                 | Value
+-----------------------+-------------------------------------------------------...
| admin_ca_id           | Admin-CA-5XJ0-HP0Y-YQAX-69O2
| tag                   | CA-1
| certificate_authority | -----BEGIN CERTIFICATE-----
|                       | MIIDSzCCAjOgAwIBAgIQciGh+iQigI5d1LTxq9pEEG9w0BAQsFADAl...
   .
   .
   .
|                       | TC+Rno87nWeTLHXwRVWOJhwlspgaN66dPyOw43bkzh7JTALTWBXKJs...
|                       | PCuhDlHZSui0p1auJnIIg3pmqyANx/bw==
|                       | -----END CERTIFICATE-----
| children              | None
+-----------------------+-------------------------------------------------------...
```

Related Commands

ssc sd-admin-ca create, ssc sd-admin-ca list, ssc sd-admin-ca update, ssc sd-authenticator add ldap auth-name, ssc sd-authenticator test auth-name, ssc sd-authenticator update ldap auth-name

show ssc sd-authenticator

Displays full details of a specified Services Director authenticator. This can be for an LDAP, RADIUS or TACACS+ server.

Syntax

show ssc sd-authenticator auth-name *authenticator-name*

Parameters

`auth-name` *`authenticator-name`*

Specify the name of the Services Director authenticator.

Examples

```
*** List Services Director authenticators ***
amnesiac (config) # ssc sd-authenticator list
+--------------+-----------------------------------+
| Name         | Unique ID                         |
+--------------+-----------------------------------+
| bbotservices | Authenticator-Y4RC-M3OI-J1BE-5N96 |
| SecureLDAP   | Authenticator-V3JW-M4GT-B1NG-43FT |
+--------------+-----------------------------------+

*** Display details for a secure LDAP authenticator ***
amnesiac (config) #  show ssc sd-authenticator auth-name SecureLDAP
+------------------------------+---------------------------------------------+
| Description                  | Value                                       |
+------------------------------+---------------------------------------------+
| Name                         | SecureLDAP                                  |
| Type                         | ldap                                        |
| Status of SD authenticator   | enabled                                     |
| Server Address               | dc1.dev-win17.demo.com                      |
| DN Method                    | construct                                   |
| Filter                       | sAMAccountName=%u                           |
| Base DN                      | CN=Users,DC=dev-win19,DC=demo,DC=com        |
| SSL mode                     | starttls                                    |
| Fallback SD permission group | Permission-Group-PYS6-1U8P-HNEG-OARS        |
| Server Port                  | 389                                         |
| Timeout                      | 10                                          |
| Group Attribute              | memberOf                                    |
| Group Field                  | CN                                          |
| Bind DN                      | %u@dev-win17.demo.com                       |
| Group Filter                 |                                             |
| Search DN                    |                                             |
| Search Password              | *****                                       |
+------------------------------+---------------------------------------------+
```


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```
*** Display details for the TACACS+ authenticator ***
amnesiac (config) # show ssc sd-authenticator auth-name Authenticator-Y4RC-M3OI-
J1BE-5N96
+------------------------------+---------------------------+
| Description                  | Value                     |
+------------------------------+---------------------------+
| Name                         | bbotservices              |
| Type                         | tacacs_plus               |
| Status of SD authenticator   | enabled                   |
| Server Address               | bbotservices.cam.demo.com |
| SD Authentication Type       | pap                       |
| Fallback SD permission group |                           |
| Server Port                  | 4900                      |
| Timeout                      | 10                        |
| Group Field                  | permission-group          |
| Secret                       | *****                     |
| Group Service                | zeus                      |
+------------------------------+---------------------------+
```

Related Commands

ssc sd-authenticator add ldap auth-name, ssc sd-authenticator add radius auth-name, ssc sd-authenticator add tacacs_plus auth-name, ssc sd-authenticator list, ssc sd-authenticator test auth-name, ssc sd-authenticator update ldap auth-name, ssc sd-authenticator update radius auth-name, ssc sd-authenticator update tacacs_plus auth-name

show ssc sd-permission-group

Displays details for a specified Services Director permission group.

Syntax

show ssc sd-permission-group pg-name *permission-group*

Parameters

`pg-name` *`permission-group`*

Specify the required permission-group.

Usage Guidelines

This command is also available in user and enable mode.

Typically, there is a single Services Director permission group, with full access. The name of this permission group matches the group returned by the authenticator.

Examples

```
*** show permissions for the admin group ***
amnesiac (config) # show ssc sd-permission-group pg-name admin
+---------------------+--------------------------------------+
| Field               | Value                                |
+---------------------+--------------------------------------+
| description         |                                      |
| permission_group_id | Permission-Group-XG8K-FUYG-WKKV-9IKP |
| tag                 | admin                                |
| children            | None                                 |
+---------------------+--------------------------------------+
```

Related Commands

ssc sd-permission-group create pg-name, ssc sd-permission-group list, ssc sd-permission-group update pg-name

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show ssc search-endpoint

Displays details for a specified Search Endpoint resource. This endpoint is used to retrieve analytics data from your chosen Analytics System.

Syntax

show ssc search-endpoint id endpoint-id

Parameters

`id` *`endpoint-id`*

Specify a unique identifier for the search endpoint, either its tag or UUID.

Usage Guidelines

This command is only used for Search Endpoint resources. Collection Endpoint resources are handled separately, by an equivalent "collection-endpoint" command.

Examples

```
*** list all search-endpoints ***
amnesiac (config) # ssc search-endpoint list
+-------------------------------------+-----------------+
| ID                                  | Tag             |
+-------------------------------------+-----------------+
| Search-Endpoint-P5Y0-8JS4-X0BS-2P9M | JK-EP-Search-01 |
+-------------------------------------+-----------------+

*** display details for a specific search-endpoint ***
amnesiac (config) # show ssc search-endpoint name JK-EP-Search-01
+-----------------------------+-----------------------------------------------------
| Field                       | Value
+-----------------------------+-----------------------------------------------------
| verify_tls                  | True
| search_endpoint_id          | Search-Endpoint-P5Y0-8JS4-X0BS-2P9M
| tag                         | JK-EP-Search-01
| auth_password               | password
| auth_username               | admin
| search_endpoint_address     | demo.com:2020
| use_tls                     | True
| search_endpoint_certificate | LS0tLS1CRUdJTiBDRVJUSUZJCk1JSUNXRENDQWNHZ0F3UJBZ...
| transactions_index          | zxtm_transactions
| logs_index                  | zxtm_logs
+-----------------------------+-----------------------------------------------------
```

Related Commands

ssc search-endpoint create, ssc search-endpoint delete, ssc search-endpoint list, ssc search-endpoint update

show ssc server

Displays the Services Director server settings.

Syntax

show ssc server

Usage Guidelines

This command is also available in user and enable mode.

Examples

```
amnesiac (config) # show ssc server
SSC REST port number: 8100
```

Related Commands

ssc server rest-port-num

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show ssc server thread

Displays Services Director server threads.

Syntax

show ssc server thread

Examples

```
amnesiac (config) # show ssc server thread
+-----------------+-------+
| Field           | Value |
+-----------------+-------+
| threads         | 25    |
| action threads  | 5     |
| monitor threads | 10    |
+-----------------+-------+
```

Related Commands

ssc service enable

show ssc settings analytics

Displays Services Director analytics settings.

Syntax

show ssc settings analytics

Examples

```
amnesiac (config) # show ssc settings analytics
+-------------------------+-------------------+
| Field                   | Value             |
+-------------------------+-------------------+
| transaction_source_type | zxtm_transactions |
+-------------------------+-------------------+
```

Related Commands

ssc settings analytics update

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show ssc settings con-lic

Displays the number of days set to send a warning about the expiration of the controller license.

Syntax

show ssc settings con-lic

Examples

```
amnesiac (config) # show ssc settings con-lic
+---------------------+-------+
| Field               | Value |
+---------------------+-------+
| expiry_warning_days | 30    |
+---------------------+-------+
```

Related Commands

ssc license enterprise controller list

show ssc settings deployment

Displays the number of vTM instances that can be deployed.

Syntax

show ssc settings deployment

Examples

```
amnesiac (config) # show ssc settings deployment
+---------------+-------+
| Field         | Value |
+---------------+-------+
| max_instances | 0     |
+---------------+-------+
```

Related Commands

ssc license enterprise controller list

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show ssc settings external-ip

Displays the external IP corresponding to the Services Endpoint Address when Services Director is running in a private network behind a NAT.

Syntax

show ssc settings external-ip

Examples

```
amnesiac (config) # show ssc settings external-ip
+-------------+--------------+
| Field       | Value        |
+-------------+--------------+
| external_ip | 10.62.150.30 |
+-------------+--------------+
```

Related Commands

ssc settings external-ip

show ssc settings fla-check

Displays whether the FLA checker is enabled for the Services Director.

Syntax

show ssc settings fla-check

Examples

```
amnesiac (config) # show ssc settings fla-check
+-------------------+-------+
| Field             | Value |
+-------------------+-------+
| fla_check_enabled | True  |
+-------------------+-------+
```

Related Commands

ssc settings fla-check enable

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show ssc settings licensing

Displays alert threshold and alert threshold interval settings.

Syntax

show ssc settings licensing

Examples

```
amnesiac (config) # show ssc settings licensing
+--------------------------+-------+
| Field                    | Value |
+--------------------------+-------+
| alert_threshold          | 1     |
| alert_threshold_interval | 300   |
+--------------------------+-------+
```

Related Commands

ssc settings licensing update alert-threshold

show ssc settings logging

Displays metering, inventory, and license log settings.

Syntax

show ssc settings logging

Examples

```
amnesiac (config) # show ssc settings logging
+-------------------+-------+
| Field             | Value |
+-------------------+-------+
| metering_logging  | 0     |
| inventory_logging | 0     |
| license_logging   | 0     |
+-------------------+-------+
```

Related Commands

ssc settings logging update

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show ssc settings master-password

Displays the status of the master password. This can either be Active or Changing.

Syntax

show ssc settings master-password

Examples

```
amnesiac (config) # show ssc settings master-password
+------------------+--------+
| Field            | Value  |
+------------------+--------+
| status           | Active |
+------------------+--------+
```

Related Commands

ssc settings master-password update

show ssc settings metering

Displays metering and log check interval settings.

Syntax

show ssc settings metering

Examples

```
amnesiac (config) # show ssc settings metering
+--------------------------+-------+
| Field                    | Value |
+--------------------------+-------+
| alerts_and_notifications | True  |
| snmp_enabled             | True  |
| log_check_interval       | 3600  |
| meter_interval           | 3600  |
+--------------------------+-------+
```

Related Commands

show ssc dashboard, show ssc metering warning instance-name, ssc metering warning list, ssc settings metering update

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show ssc settings monitoring

Displays Services Director monitoring settings.

Note: The `purge_deleted_vtm`, `purge_deleted_vtm_interval`, and `purge_deleted_vtm_check_period` settings can only be updated via the REST API.

Syntax

show ssc settings monitoring

Examples

```
amnesiac (config) # show ssc settings monitoring
+-----------------------------------+----------+
| Field                             | Value    |
+-----------------------------------+----------+
| controller_failure_period         | 180      |
| instance_failure_period           | 180      |
| host_failure_period               | 180      |
| instance_monitor_interval         | 60       |
| auto_cleanup_vtms                 | all_vtms |
| purge_deleted_vtm                 | False    |
| monitor_email_interval            | 60       |
| purge_deleted_vtm_interval        | 42       |
| purge_deleted_vtm_check_period    | 86400    |
| overdue_monitoring_warning_period | 300      |
| host_monitor_interval             | 60       |
| controller_monitor_interval       | 60       |
+-----------------------------------+----------+
```

Related Commands

ssc settings monitoring update

show ssc settings security

Displays Services Director security settings.

Syntax

show ssc settings security

Examples

```
amnesiac (config) # show ssc settings security
+-----------------------------------+-----------------------------------------...
| Field                             | Value
+-----------------------------------+-----------------------------------------...
| max_login_attempts                | 0
| user_lockout_duration_minutes     | 15
| candidate_service_ssl_certificate |
| auth_success_cache_time_seconds   | 30
| auth_failure_cache_time_seconds   | 10
| ssl-cipher-list                   | ECDH+AESGCM:ECDH+CHACHA20:DH+AESGCM:ECDH+...
+-----------------------------------+-----------------------------------------...
```

Related Commands

ssc settings security update

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show ssc settings telemetry

Displays Services Director phone home telemetry status.

Syntax

show ssc settings telemetry

Examples

```
amnesiac (config) # show ssc settings telemetry
+--------------------+-------------------------------------------------------+
| Field              | Value                                                 |
+--------------------+-------------------------------------------------------+
| destination        | https://telemetry.cam.demo.com/product-feedback/1.0 |
| phone_home_enabled | True                                                  |
+--------------------+-------------------------------------------------------+
```

Related Commands

show ssc settings telemetry archives, ssc settings telemetry update enabled

show ssc settings telemetry archives

Lists the telemetry files that have been created by Services Director.

Syntax

show ssc settings telemetry archives

Usage Guidelines

To view the contents of archived telemetry files, start the Operating System shell (see "Accessing the OS Shell" on page 695) and view the files from there.

To enable the creation and export of telemetry data, see "ssc settings telemetry update enabled" on page 599).

Examples

```
amnesiac (config) # show ssc settings telemetry archives
+---------------------+--------------------------------+
| Date                | Path                           |
+---------------------+--------------------------------+
| 2018-05-24 13:17:48 | /var/opt/tms/telemetry/telem_1 |
| 2018-05-24 13:17:49 | /var/opt/tms/telemetry/telem_2 |
| 2018-05-24 13:17:51 | /var/opt/tms/telemetry/telem_3 |
| 2018-05-24 13:31:11 | /var/opt/tms/telemetry/telem_4 |
| 2018-05-24 13:31:16 | /var/opt/tms/telemetry/telem_5 |
+---------------------+--------------------------------+
```

Related Commands

show ssc settings telemetry, ssc settings telemetry update enabled

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show ssc settings throughput

Displays Services Director bandwidth-pack expiry warning settings.

Syntax

show ssc settings throughput

Examples

```
amnesiac (config) # show ssc settings throughput
+---------------------+-------+
| Field               | Value |
+---------------------+-------+
| expiry_warning_days | 30    |
+---------------------+-------+
```

Related Commands

ssc settings throughput update exp-warningdays

show ssc sku sku-name

Displays Services Director SKU details.

Syntax

show ssc sku [show-all [true | false]] sku-name *name*

Parameters

name

Specify the name of the SKU.

Usage Guidelines

By default, the auto-completion for sku-name only includes SKUs that are compatible with your license.

The show-all switch affects how auto-completion of sku-name. If show-all is set to true, the auto-completion for the SKU names includes all SKUS, and not just those that are compatible with your license.

Examples

```
*** auto-completion (tab key) is limited to SKUS compatible with your license ***
amnesiac (config) # show ssc sku sku-name <tab>
ENT-ADVANCED ENT-ENTERPRISE ENT-WAFPROXY STM-100 STM-200 STM-300 STM-400
STM-WAFPROXY

*** auto-completion (tab key) includes all SKUS, not just compatible ones ***
amnesiac (config) # show ssc sku show-all true sku-name <tab>
BR-ADC-UTILM-WAFP1G-U-01    BR-ADC-UTLM-ADV150M-U-01    BR-ADC-UTLM-ENT10G-U-01
BR-ADC-UTLM-ENT60M-U-01     BR-ADC-UTLM-STD500M-U-01    BR-ADC-UTILM-WAFP3G-U-01
BR-ADC-UTLM-ADV1G-U-01      BR-ADC-UTLM-ENT10M-U-01     BR-ADC-UTLM-STD100M-U-01
BR-ADC-UTLM-STD5G-U-01      BR-ADC-UTILM-WAFP400M-U-01  BR-ADC-UTLM-ADV200M-U-01
BR-ADC-UTLM-ENT150M-U-01    BR-ADC-UTLM-STD10G-U-01     BR-ADC-UTLM-STD60M-U-01
BR-ADC-UTILM-WAFP50M-U-01   BR-ADC-UTLM-ADV20M-U-01     BR-ADC-UTLM-ENT1G-U-01
BR-ADC-UTLM-STD10M-U-01     ENT-ADVANCED                BR-ADC-UTILM-WAFP5G-U-01
BR-ADC-UTLM-ADV300M-U-01    BR-ADC-UTLM-ENT200M-U-01    BR-ADC-UTLM-STD150M-U-01
ENT-ENTERPRISE              BR-ADC-UTLH-ADVHRLY-U-01    BR-ADC-UTLM-ADV3G-U-01
BR-ADC-UTLM-ENT20M-U-01     BR-ADC-UTLM-STD1G-U-01      ENT-WAFPROXY
BR-ADC-UTLH-ENTHRLY-U-01    BR-ADC-UTLM-ADV40M-U-01     BR-ADC-UTLM-ENT300M-U-01
BR-ADC-UTLM-STD200M-U-01    STM-100                     BR-ADC-UTLH-STDHRLY-U-01
BR-ADC-UTLM-ADV500M-U-01    BR-ADC-UTLM-ENT3G-U-01      BR-ADC-UTLM-STD20M-U-01
STM-200                     BR-ADC-UTLM-ADV100M-U-01    BR-ADC-UTLM-ADV5G-U-01
BR-ADC-UTLM-ENT40M-U-01     BR-ADC-UTLM-STD300M-U-01    STM-300
BR-ADC-UTLM-ADV10G-U-01     BR-ADC-UTLM-ADV60M-U-01     BR-ADC-UTLM-ENT500M-U-01
BR-ADC-UTLM-STD3G-U-01      STM-400                     BR-ADC-UTLM-ADV10M-U-01
BR-ADC-UTLM-ENT100M-U-01    BR-ADC-UTLM-ENT5G-U-01      BR-ADC-UTLM-STD40M-U-01
STM-WAFPROXY
```


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```
*** show details for an included SKU ***
amnesiac (config) # show ssc sku sku-name STM-400
+--------------------+-------------------------------------------------------------
| Field              | Value
+--------------------+-------------------------------------------------------------
| status             | Active
| pricing_model      | hourly
| add_on_skus        | [u'ADD-FIPS', u'ADD-WAF', u'ADD-WEBACCEL']
| feature_tier       | STM-400
| features           | anlyt : Enable Realtime Analytics.
|                    | auto  : Enable Autoscaling.
|                    | bwm   : Enable Bandwidth Management classes.
|                    | cache : Enable Web Caching
|                    | comp  : Enable Compression
|                    | cr    : Do not limit the user to cut-down RuleBuilder ...
|                    | evnts : Enable Events and Actions
|                    | glb   : Enable Global Load Balancing
|                    | java  : Enable Java.
|                    | kcd   : Kerberos Constrained Delegation
|                    | lbcel : Array of cells.
|                    | lbcon : Least connection based.
|                    | lbfail: Balance failure class (used only for testing ...
|                    | lbone : Always choose first node in a pool (used ...
|                    | lbrnd : Random.
|                    | lbrob : Round robin.
    .
    .
    .
|                    | spnam : Named node session persistence.
|                    | spsar : Transparent session affinity.
|                    | spssl : SSL session ID session persistence.
|                    | spuni : Universal session persistence.
|                    | spxze : X-Zeus-backend cookie session persistence.
|                    | ssl   : Enable SSL
|                    | svcprt: Enable Service Protection classes
|                    | ts    : Enable TrafficScript
|                    | xml   : Enable XML functions in TrafficScript.
| info               |
| stm_u              | STM-400
| fixed_..._usage    | None
| ent                | True
| resource_unit      | None
| csp                | True
+--------------------+-------------------------------------------------------------
```

Related Commands

ssc sku list

show ssc stm images

Displays list of vTM imported images

Syntax

show ssc stm images

Examples

```
amnesiac (config) # show ssc stm images
----------------------------------------
ZeusTM101_Linux-x86_64.tgz
```

Related Commands

ssc stm import-image file

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show ssc stm license-file

Displays a list of Virtual Traffic Manger licenses.

Syntax

show ssc stm license-file

Usage Guidelines

This command is also available in user and enable mode.

Examples

```
amnesiac (config) # show ssc stm license-file
# Virtual Traffic Manager - License Key File
#
# This file enables Virtual Traffic Manager to run subject to the conditions
# specified within the key. The license key should be imported into the product
# using the web administration interface.
#
# The following values are encoded within the encrypted license key, and are
# provided as a reminder to system administrators of the values.
#
# Info:
# Product: Stingray Traffic Manager
# License Type: SSC
# License Serial: 1234
# Issued on: Mon, 15 Jul 2017 00:00:00 GMT
#
# Valid Until:                          Thu, 15 Aug 2017 10:00:00 GMT
#
# Features:
#   Application Firewall:               No
#   Advanced Connection Analytics:      No
#   Aptimizer:                          No

*** partial listing only ***
```

Related Commands

ssc stm import-lic

show ssc user user-name

Displays Services Director user details.

Syntax

show ssc user user-name *name*

Parameters

name

Specify the name of the user.

Examples

```
amnesiac (config) # show ssc user user-name admin
+----------+-------+
| Field    | Value |
+----------+-------+
| username | admin |
| active   | True  |
+----------+-------+
```

Related Commands

ssc user create user-name

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show ssc version version-name

Displays vTM versions available for deployment.

Syntax

show ssc version version-name *name*

Parameters

name

Specify the name of the Traffic Manager version.

Examples

```
amnesiac (config) # show ssc version version-name 10.1
+------------------+-----------------------------+
| Field            | Value                       |
+------------------+-----------------------------+
| info             |                             |
| status           | Active                      |
| version_filename | ZeusTM_101_Linux-x86_64.tgz |
+------------------+-----------------------------+
```

Related Commands

ssc version update version-name

show ssc vtm-admin-ca

Displays full details of a specified vTM CA certificate. This certificate is required to enable communications with a secure LDAP authentication server.

Syntax

show ssc vtm-admin-ca admin-ca-name *ca-certificate-name*

Parameters

`admin-ca-name` *`ca-certificate-name`*

Specify the name or ID of a CA certificate present on Services Director.

Examples

```
*** List all CA certificates on Services Director ***
amnesiac (config) #  ssc vtm-admin-ca list
+----------+----------------------------------+
| Name     | Unique ID                        |
+----------+----------------------------------+
| VTM-CA-1 | VTM-Admin-CA-KBBH-G7LT-K6SK-B6N4 |
| VTM-CA-2 | VTM-Admin-CA-6J21-KKH3-VSAJ-3209 |
+----------+----------------------------------+

*** Display details for a vTM CA certificate ***
amnesiac (config) #  show ssc vtm-admin-ca admin-ca-name VTM-CA-1
+-----------------------+-------------------------------------------------------...
| Field                 | Value
+-----------------------+-------------------------------------------------------...
| admin_ca_id           | VTM-Admin-CA-KBBH-G7LT-K6SK-B6N4
| tag                   | CA-1
| certificate_authority | -----BEGIN CERTIFICATE-----
|                       | MIICWDCCAcGgAwIBAgIJAOmKu/JQQpwnMA0GCSqGSIb3DQEBCwUAMl...
   .
   .
   .
|                       | XF9oRLSissZA+pXJe4kUT7R01jpCWWd0G4v5Dl+UaoesbALTWBXKJs...
|                       | Otq69iXpnasFp5flIihAAd4VLGTwC4cNo7ax+Q==
|                       | -----END CERTIFICATE-----
| children              | None
+-----------------------+-------------------------------------------------------...
```

Related Commands

ssc vtm-admin-ca create, ssc vtm-admin-ca list, ssc vtm-admin-ca update, ssc vtm-authenticator add ldap auth-name, ssc vtm-authenticator list, ssc vtm-authenticator update ldap auth-name

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show ssc vtm-authenticator

Displays full details of a specified vTM authenticator. This can be for an LDAP, RADIUS or TACACS+ server.

Syntax

show ssc vtm-authenticator auth-name *authenticator-name*

Parameters

authenticator-name

Specify the name of the vTM authenticator.

Examples

```
*** example secure LDAP authenticator ***
amnesiac (config) # show ssc vtm-authenticator auth-name "LDAP Server"
+-------------------------------+---------------------------------------------+
| Description                   | Value                                       |
+-------------------------------+---------------------------------------------+
| Name                          | LDAP Server                                 |
| Type                          | ldap                                        |
| Server Address                | dc1.dev-win19.demo.com                      |
| DN Method                     | construct                                   |
| Filter                        | sAMAccountName=%u                           |
| Base DN                       | CN=Users,DC=dev-win19,DC=demo,DC=com        |
| SSL mode                      |                                             |
| Fallback vTM permission group | admin                                       |
| Server Port                   | 389                                         |
| Timeout                       | 30                                          |
| Group Attribute               | memberOf                                    |
| Group Field                   | CN                                          |
| Bind DN                       | %u@dev- win19.demo.com                      |
| Group Filter                  |                                             |
| Search DN                     |                                             |
| Search Password               | *****                                       |
+-------------------------------+---------------------------------------------+
```

```
*** example RADIUS authenticator ***
amnesiac (config) # show ssc vtm-authenticator auth-name Authenticator-808G-LJWJ-
MT3B-WMDZ
+---------------------------+-----------------+
| Description               | Value           |
+---------------------------+-----------------+
| Name                      | RADIUS Server   |
| Type                      | radius          |
| Server Address            | 10.62.167.194   |
| Fallback permission group | admin           |
| Server Port               | 1812            |
| Timeout                   | 30              |
| Group Attribute           | 1               |
| Secret                    | *****           |
| Group Vendor              | 1476            |
| NAS Identifier            | Internal RADIUS |
| NAS IP address            | 127.0.0.1       |
+---------------------------+-----------------+

*** example TACACS+ server ***
amnesiac (config) # show ssc vtm-authenticator auth-name Authenticator-7F1D-A1K3-
1PO4-VSEF
+---------------------------+------------------+
| Description               | Value            |
+---------------------------+------------------+
| Name                      | TACACS+ Server   |
| Type                      | tacacs_plus      |
| Server Address            | 10.62.167.195    |
| Authentication Type       | pap              |
| Fallback permission group | admin            |
| Server Port               | 49               |
| Timeout                   | 30               |
| Group Field               | permission-group |
| Secret                    | *****            |
| Group Service             | Hoobland         |
+---------------------------+------------------+
```

Related Commands

ssc vtm-admin-ca create, ssc vtm-authenticator add radius auth-name, ssc vtm-authenticator add tacacs_plus auth-name, ssc vtm-authenticator list, ssc vtm-authenticator update ldap auth-name, ssc vtm-authenticator update radius auth-name, ssc vtm-authenticator update tacacs_plus auth-name

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show ssc vtm-permission-group

Displays details for a specified vTM permission group.

Syntax

show ssc vtm-permission-group pg-name *permission-group*

Parameters

`pg-name permission-group`

Specify the required permission-group.

Usage Guidelines

This command is also available in user and enable mode.

There are four default permission groups (*admin*, *Demo*, *Monitoring* and *Guest*), and you can create additional vTM permission groups, see "ssc vtm-permission-group list" on page 638.

Each permission supports the following access levels: ro (read-only), full.

Where a permission branch node and all of its leaf nodes share a permission, only the permission branch node and its access level are displayed.

Where all permissions share a single access level, the permission "all" is used. The *admin* permission group has this setting by default.

Examples

```
*** show permissions for the admin group ***
amnesiac (config) # show ssc vtm-permission-group pg-name admin
+--------------+-----------------------------------------------------+--------+
| Parameter    | Value                                               |        |
+--------------+-----------------------------------------------------+--------+
| Name         | admin                                               |        |
| Unique Name  | admin                                               |        |
| Description  | Full access to all pages                            |        |
| Timeout      | 30                                                  |        |
| Permissions: | ------------------------------------------------- | ------ |
|              | Permission String                                   | Access |
|              | ------------------------------------------------- | ------ |
|              | all                                                 | full   |
+--------------+-----------------------------------------------------+--------+
```

```
*** show permissions for the Demo group ***
amnesiac (config) # show ssc vtm-permission-group pg-name Demo
+--------------+-----------------------------------------------------+--------+
| Parameter    | Value                                               |        |
+--------------+-----------------------------------------------------+--------+
| Name         | Demo                                                |        |
| Unique Name  | Demo                                                |        |
| Description  | Full access, except to user management / system     |        |
| Timeout      | 30                                                  |        |
| Permissions: | --------------------------------------------------- | ------ |
|              | Permission String                                   | Access |
|              | --------------------------------------------------- | ------ |
|              | Access_Management                                   | ro     |
|              | Alerting                                            | full   |
|              | Appliance_Console                                   | none   |
|              | Aptimizer                                           | full   |
|              | Audit_Log                                           | full   |
|              | Backup                                              | ro     |
|              | Bandwidth                                           | full   |
|              | Catalog                                             | full   |
|              | Config_Summary                                      | full   |
|              | Configure                                           | full   |
|              | Connections                                         | full   |
|              | Custom                                              | full   |
|              | DateTime                                            | ro     |
|              | Diagnose                                            | full   |
                  .
                  .
                  .
|              | Rules                                               | full   |
|              | SLM                                                 | full   |
|              | SNMP                                                | ro     |
|              | SOAP_API                                            | none   |
|              | SSL                                                 | full   |
|              | Security                                            | ro     |
|              | Service_Protection                                  | full   |
|              | Shutdown                                            | ro     |
|              | Statd                                               | full   |
|              | Support                                             | full   |
|              | Traffic_IP_Groups                                   | full   |
|              | Traffic_Managers                                    | full   |
|              | Traffic_Managers!AddRemove                          | none   |
|              | Traffic_Managers!Upgrade                            | none   |
|              | Virtual_Servers                                     | full   |
|              | Web_Cache                                           | full   |
|              | Web_Cache!Clear                                     | none   |
|              | Wizard                                              | full   |
|              | Wizard!Backup                                       | none   |
|              | Wizard!ClusterJoin                                  | none   |
|              | Wizard!FreeDiskSpace                                | none   |
|              | Wizard!Restore                                      | none   |
+--------------+-----------------------------------------------------+--------+
```


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```
*** show permissions for the Guest group ***
amnesiac (config) # show ssc vtm-permission-group pg-name Guest
+--------------+-----------------------------------------------------+--------+
| Parameter    | Value                                               |        |
+--------------+-----------------------------------------------------+--------+
| Name         | Guest                                               |        |
| Unique Name  | Guest                                               |        |
| Description  | Read-only access                                    |        |
| Timeout      | 30                                                  |        |
| Permissions: | ------------------------------------------------- | ------ |
|              | Permission String                                   | Access |
|              | ------------------------------------------------- | ------ |
|              | Access_Management                                   | ro     |
|              | Alerting                                            | ro     |
|              | Appliance_Console                                   | none   |
|              | Aptimizer                                           | ro     |
|              | Audit_Log                                           | none   |
|              | Backup                                              | ro     |
|              | Bandwidth                                           | ro     |
|              | Catalog                                             | ro     |
|              | Config_Summary                                      | ro     |
|              | Configure                                           | ro     |
|              | Connections                                         | full   |
|              | Custom                                              | ro     |
|              | DateTime                                            | ro     |
|              | Diagnose                                            | ro     |
|              | Draining                                            | ro     |
                 .
                 .
                 .
|              | Rate                                                | ro     |
|              | Reboot                                              | ro     |
|              | Request_Logs                                        | ro     |
|              | Restart                                             | ro     |
|              | Rules                                               | ro     |
|              | SLM                                                 | ro     |
|              | SNMP                                                | ro     |
|              | SOAP_API                                            | none   |
|              | SSL                                                 | ro     |
|              | Security                                            | ro     |
|              | Service_Protection                                  | ro     |
|              | Shutdown                                            | ro     |
|              | Statd                                               | full   |
|              | Support                                             | ro     |
|              | Traffic_IP_Groups                                   | ro     |
|              | Traffic_Managers                                    | ro     |
|              | Traffic_Managers!AddRemove                          | none   |
|              | Traffic_Managers!Upgrade                            | none   |
|              | Virtual_Servers                                     | ro     |
|              | Web_Cache                                           | full   |
|              | Web_Cache!Clear                                     | none   |
|              | Wizard                                              | ro     |
+--------------+-----------------------------------------------------+--------+
```

```
*** show permissions for the Monitoring group ***
amnesiac (config) # show ssc vtm-permission-group pg-name Monitoring
+--------------+-----------------------------------------------------+--------+
| Parameter    | Value                                               |        |
+--------------+-----------------------------------------------------+--------+
| Name         | Monitoring                                          |        |
| Unique Name  | Monitoring                                          |        |
| Description  | Access only to config summary / monitoring pages    |        |
| Timeout      | 30                                                  |        |
| Permissions: | ------------------------------------------------- | ------ |
|              | Permission String                                   | Access |
|              | ------------------------------------------------- | ------ |
|              | Access_Management                                   | none   |
|              | Access_Management!LocalUsers!Edit                   | full   |
|              | Access_Management!LocalUsers!EditOtherUsers         | none   |
|              | Alerting                                            | none   |
|              | Appliance_Console                                   | none   |
|              | Aptimizer                                           | none   |
|              | Audit_Log                                           | none   |
|              | Backup                                              | none   |
|              | Bandwidth                                           | none   |
|              | Catalog                                             | none   |
|              | Config_Summary                                      | full   |
|              | Configure                                           | none   |
|              | Connections                                         | full   |
|              | Custom                                              | none   |
                 .
                 .
                 .
|              | Request_Logs                                        | none   |
|              | Restart                                             | none   |
|              | Rules                                               | none   |
|              | SLM                                                 | none   |
|              | SNMP                                                | none   |
|              | SOAP_API                                            | none   |
|              | SSL                                                 | none   |
|              | Security                                            | none   |
|              | Service_Protection                                  | none   |
|              | Shutdown                                            | none   |
|              | Statd                                               | full   |
|              | Support                                             | none   |
|              | Traffic_IP_Groups                                   | none   |
|              | Traffic_Managers                                    | none   |
|              | Virtual_Servers                                     | none   |
|              | Web_Cache                                           | full   |
|              | Web_Cache!Clear                                     | none   |
|              | Wizard                                              | none   |
+--------------+-----------------------------------------------------+--------+
```

Related Commands

ssc vtm-permission-group create pg-name, ssc vtm-permission-group list, ssc vtm-permission-group update pg-name

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snmp-server acl

Configures changes to the View-Based Access Control Model (VACM) ACL configuration.

Syntax

[no] snmp-server acl group *name* security-level *level* read-view *name*

Parameters

`group` *`name`*

Specify the name of the SNMP server community.

`security-level` *`level`*

Specify the security level for this ACL entry.

- `noauth:` Does not authenticate packets and does not use privacy. This is the default setting.
- `auth:` Authenticates packets but does not use privacy.
- `authpriv:` Authenticates packets and uses privacy.

Note: This setting determines whether a single atomic message exchange is authenticated.

Note: A security level applies to a group, not to an individual user.

`read-view` *`name`*

Specify that read requests will be restricted to this view.

Usage Guidelines

The **no** command option disables an SNMP server community.

Examples

```
amnesiac (config) # snmp-server acl group ReadOnly security-level auth read-view
ReadOnly
```

Related Commands

show snmp

snmp-server community

Sets an SNMP read-only server community.

Syntax

[no] snmp-server community *name*

Parameters

name

Specify the name of the SNMP server community.

The # and - characters are not allowed at the beginning of the <name> argument. If you use either of these characters at the beginning of the <name> argument, the CLI returns the following error message:

```
% Invalid SNMP community name
```

Usage Guidelines

You can still access the entire MIB tree from any source host using this setting. If you do not want this type of access, you must delete this option and configure the security name for SNMP ACL support. For details, see "snmp-server host" on page 330.

This community string overrides any VACM settings.

The **no** command option disables an SNMP server community.

Examples

```
amnesiac (config) # snmp-server community ReaDonLy
```

Related Commands

show snmp

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snmp-server contact

Sets the SNMP server contact.

Syntax

[no] snmp-server contact *name*

Parameters

name

Specify the user name of the SNMP server community contact.

Usage Guidelines

The **no** command option disables the SNMP server contact.

Examples

```
amnesiac (config) # snmp-server contact john doe
```

Related Commands

show snmp

snmp-server enable

Enables an SNMP server.

Syntax

[no] snmp-server enable | [traps]

Parameters

`traps`

Enables sending of SNMP traps from this system.

Usage Guidelines

The **no** command option disables the SNMP server or traps.

Examples

```
amnesiac (config) # snmp-server enable traps
```

Related Commands

show snmp

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snmp-server group

Configures the View Access Control Model (VACM) group configuration.

Syntax

[no] snmp-server group *group* security-name *name* security-model *model*

Parameters

`group` *`group`*

Specify a group name.

`security-name` *`name`*

Specify a name to identify a requester (allowed to issue gets and sets) or a recipient (allowed to receive traps) of management data. The security name is also required to make changes to the VACM security name configuration.

`security-model` *`model`*

Specify one of the following security models:

- `v1:` Enables SNMPv1 security model.
- `v2c:` Enables SNMPv2c security model.
- `usm:` Enables User-based Security Model (USM).

Usage Guidelines

The **no** command option disables the SNMP server group.

Examples

```
amnesiac (config) # snmp-server group rvbdgrp security-name pulse security-model v1
```

Related Commands

show snmp

snmp-server host

Configures hosts to which to send SNMP traps.

Syntax

[no] snmp-server host {hostname | IPv4-addr | IPv6-addr} traps *community-string*

Parameters

`hostname | IPv4-addr | IPv6-addr`

Specify the hostname, IPv4 address, or IPv6 address for the SNMP server.

`traps community-string`

Send traps to the specified host. Specify the password-like community string to control access. Use a combination of uppercase, lowercase, and numerical characters to reduce the chance of unauthorized access to the appliance. The # and - characters are not allowed at the beginning of the <community string> argument.

Note: If you specify a read-only community string, it takes precedence over this community name and allows users to access the entire MIB tree from any source host. If this is not desired, delete the read-only community string.

Usage Guidelines

The **no** command option disables the SNMP server host.

Examples

```
amnesiac (config) # snmp-server host 10.0.0.1 traps public
```

Related Commands

show snmp

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snmp-server host version

Configures the SNMP version of traps to send to the host.

Syntax

[no] snmp-server host {hostname | *IPv4-addr* | *IPv6-addr*} traps version { 1 | 2 c | 3 remote-user *name*} password encrypted *key* auth-protocol {MD5 | SHA} security-level {noauth | auth | authpriv} | plain-text text auth-protocol MD5 | SHA [security-level {noauth | auth | authpriv}] | [priv-protocol {AES | DES} priv-key {encrypted *key* | plaintext *text*}] [port *port*]

Parameters

`hostname-or-ip-addr`

Specify the hostname, IPv4 address, or IPv6 address for the SNMP server.

`traps`

Send traps to the specified host.

`version`

Specify the SNMP version of traps to send to this host:

- `1:` Specifies SNMPv1.
- `2c:` Specifies SNMPv2c.
- `3:` Specifies SNMPv3. This setting requires the remote-user property to be set.

`remote-user` *`name`*

For SNMPv3 specify the user name.

`password`

Specify the password type:

- `encrypted:` Enable encrypted password authentication. Thisa require
- `plaintext:` Enable plain-text password authentication.

`encrypted` *`key`*

For SNMPv3 specify the user password.

`auth-protocol`

Specify the authorization protocol:

- `MD5:` Enable MD5 security protocol.
- `SHA:` Enable SHA security protocol.

`security-level`

Specify the security level:

- `noauth:` Specify no authorization required.
- `auth:` Specify authorization required.
- `authpriv:` Specify authorization and privacy required.

`priv-protocol`

Specify the privacy protocol:

- `AES:` Specify CFB128-AES-128 as the privacy protocol.
- `DES:` Specify CBC-DES as the privacy protocol.

`priv-key`

Specify the privacy key:

- `encrypted` *key:* Specify encrypted privacy key.
- `plaintext` *text:* Specify plain-text privacy key. The plain-text privacy key must be at least 8 characters.

`port` *port*

Optionally, specify the destination port.

Usage Guidelines

The **no** command option disables the SNMP server host.

Examples

```
amnesiac (config) # snmp-server host 10.0.0.1 traps version 1 "public 99162?" port
1234
```

Related Commands

show snmp, snmp-server community, snmp-server security-name

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snmp-server ifindex

Adds a custom index value for an interface.

Syntax

snmp-server ifindex ***interface index***

Parameters

interface

Specify the interface: **wan0_0**, **lan0_0**, **wan0_1**, **lan0_1**, **primary**, **aux**, **inpath0_0**, **inpath0_1**

index

Specify the index.

Examples

```
amnesiac (config) # snmp-server ifindex aux 1234
```

Related Commands

show snmp

snmp-server ifindex-persist

Enables persistent SNMP interface indexes.

Syntax

[no] snmp-server ifindex-persist

Usage Guidelines

The **no** command option disables the SNMP server group.

Examples

```
amnesiac (config) # snmp-server ifindex-persist
```

Related Commands

show snmp

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snmp-server ifindex-reset

Resets the ifindex values of all interfaces to the factory default value.

Syntax

snmp-server ifindex-reset

Examples

```
amnesiac (config) # snmp-server ifindex-reset
```

Related Commands

show snmp

snmp-server listen enable

Enables SNMP server interface restrictions (that is, it enables access control and blocks requests on all the interfaces).

Syntax

[no] snmp-server listen enable

Usage Guidelines

The **no** command option disables SNMP interface restrictions.

SNMP interface restrictions are not available through the Management Console.

Examples

```
amnesiac (config) # snmp-server listen enable
```

Related Commands

show snmp

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snmp-server listen interface

Adds an interface to the SNMP server access restriction list.

Syntax

[no] snmp-server listen interface *interface*

Parameters

interface

Specify the interface: **primary**, **aux**, **inpath0_0**, **rios_lan0_0**, **rios_wan0_0**

Usage Guidelines

If the list of interfaces is empty, none of the interfaces respond to the queries. If the list of interfaces has at least one entry, then the server listens on that subset of interfaces.

To add an interface to the list to listen on:

```
snmp-server listen interface primary
```

To remove an interface from the list:

```
no snmp-server listen interface <interface>
```

Examples

```
amnesiac (config) # snmp-server listen interface aux
```

Related Commands

show snmp

snmp-server location

Sets the value for the system location variable in the MIB.

Syntax

[no] snmp-server location *ip-addr*

Parameters

ip-addr

Specify the IP address of the system.

Usage Guidelines

The **no** command option disables the SNMP server location.

Examples

```
amnesiac (config) # snmp-server location 10.10.10.1
```

Related Commands

show snmp

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snmp-server security-name

Configures the SNMP security name.

Syntax

[no] snmp-server security-name *name* community *community-string* source *IPv4-addr* | *IPv6-addr* netmask

Parameters

name

Specify the security name.

community *community-string*

Specify the password-like community string to control access. Use a combination of uppercase, lowercase, and numerical characters to reduce the chance of unauthorized access to the appliance. Community strings allow printable 7-bit ASCII characters except for white spaces. Community strings can not begin with '#' or '-'.

If you specify a read-only community string, it takes precedence over this community name and allows users to access the entire MIB tree from any source host. If this is not desired, delete the read-only community string.

source *IPv4-addr* | *IPv6-addr netmask*

Specify the source IPv4 address or IPv6 address and netmask.

Usage Guidelines

The **no** command option disables the trap interface.

Examples

```
amnesiac (config) # snmp-server security-name pulse community public source
10.1.2.3/24
```

Related Commands

show snmp

snmp-server trap-interface

Configures the system to use the IP address of the specified interface in the SNMP trap header.

Syntax

[no] snmp-server trap-interface interface

Parameters

interface

Specify the interface.

Usage Guidelines

The trap interface setting sets which interface IP address is used in the agent-address header field of SNMP v1 trap Protocol Data Units (PDUs). It does set the interface for the trap.

Traps are sent out the Primary interface. If the primary interface is physically disconnected, no traps are sent. Traps can be sent out the auxiliary interface if the trap receiver is reachable from the auxiliary interface.

The **no** command option disables the trap interface.

Examples

```
amnesiac (config) # snmp-server trap-interface aux
```

Related Commands

show snmp

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snmp-server trap-test

Generates an SNMP trap test.

Syntax

snmp-server trap-test

Usage Guidelines

Use this command to send a sample trap test to ensure that the SNMP server is monitoring the appliance.

Examples

```
amnesiac (config) # snmp-server trap-test
```

Related Commands

show snmp

snmp-server user

Configures changes to the User-Based Security (UBS) model.

Syntax

[no] snmp-server user *name* password {encrypted *key* | plaintext *text*} auth-protocol {MD5 | SHA} [priv-protocol {AES | DES} priv-key {encrypted key | plain-text text}]

Parameters

`name`

Specify the user name.

`password`

Specify the password type:

- `encrypted` *key:* Enable encrypted password authentication.
- `plaintext` *text:* Enable plain-text password authentication. The plain-text password must be at least 8 characters.

`auth-protocol`

Specify the authorization protocol:

- `MD5:` Enable MD5 security protocol.
- `SHA:` Enable SHA security protocol.

`priv-protocol`

Specify the privacy protocol:

- `AES:` Specify CFB128-AES-128 as the privacy protocol.
- `DES:` Specify CBC-DES as the privacy protocol.

`priv-key`

Specify the privacy key:

- `encrypted` *key:* Specify encrypted privacy key.
- `plaintext` *text:* Specify plain-text privacy key. The plain-text privacy key must be at least 8 characters.

Usage Guidelines

The **no** command option disables this option.

Examples

```
amnesiac (config) # snmp-server user testuser password plain-text testpass auth-
protocol SHA
```

Related Commands

show snmp

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snmp-server view

Configures changes to the View-based Access Control Model (VACM) configuration.

Syntax

[no] snmp-server view *name* [excluded | included] oid

Parameters

`name`

Specify the user name.

`excluded`

View option. Excludes an oid sub-tree from this view.

`included`

View option. Includes an OID subtree into this view.

`oid`

Specify the object ID. For example: *.1.3.6.1.2.1.1* or *.iso.org.dod.internet.mgmt.mib-2.system*

Usage Guidelines

The **no** command option disables this option.

Examples

```
amnesiac (config) # snmp-server view joedoe included .1.3.6.1.2.1.1
```

Related Commands

show snmp

ssc access-profile add-perm-group

Adds a permission group to a specified access profile.

Syntax

ssc access-profile add-perm-group access-profile-name *access-profile-name* perm-group-name *permission-group-name*

Parameters

access-profile-name

Specify the name of an existing access profile.

permission-group-name

Specify the name of a single permission group to add to the access profile.

Usage Guidelines

This command only enables you to add one permission group at a time. To add additional permission groups to the same access profile, repeat this command for each permission group.

Examples

```
*** confirm access profile has no permission groups ***
amnesiac (config) # show ssc access-profile access-profile-name "RADIUS All"
+-------------------+-----------------------------------+
| Description       | Value                             |
+-------------------+-----------------------------------+
| Name              | RADIUS All                        |
| Unique ID         | Access-Profile-H4U5-3SIR-7VUV-2AG8 |
| Authenticator     | RADIUS Server                     |
| Permission Groups |                                   |
+-------------------+-----------------------------------+

*** add the "admin" permission group to access profile ***
amnesiac (config) # ssc access-profile add-perm-group access-profile-name "RADIUS
All" perm-group-name admin
+-----------------------------------+
| Updated                           |
+-----------------------------------+
| Access profile RADIUS All updated |
+-----------------------------------+
```


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```
*** confirm outcome ***
amnesiac (config) # show ssc access-profile access-profile-name "RADIUS All"
+-------------------+-----------------------------------+
| Description       | Value                             |
+-------------------+-----------------------------------+
| Name              | RADIUS All                        |
| Unique ID         | Access-Profile-H4U5-3SIR-7VUV-2AG8 |
| Authenticator     | RADIUS Server                     |
| Permission Groups | admin                             |
+-------------------+-----------------------------------+

*** add a second permission group to the same access profile ***
amnesiac (config) # ssc access-profile add-perm-group access-profile-name "RADIUS
All" perm-group-name Guest
+-----------------------------------+
| Updated                           |
+-----------------------------------+
| Access profile RADIUS All updated |
+-----------------------------------+

*** confirm outcome ***
amnesiac (config) # show ssc access-profile access-profile-name "RADIUS All"
+-------------------+-----------------------------------+
| Description       | Value                             |
+-------------------+-----------------------------------+
| Name              | RADIUS All                        |
| Unique ID         | Access-Profile-H4U5-3SIR-7VUV-2AG8 |
| Authenticator     | RADIUS Server                     |
| Permission Groups | admin                             |
|                   | Guest                             |
+-------------------+-----------------------------------+
```

Related Commands

show ssc access-profile, ssc access-profile create access-profile-name, ssc access-profile list, ssc access-profile remove-perm-group, ssc access-profile update access-profile-name

ssc access-profile create access-profile-name

Creates an access profile and associates it with an authenticator.

Syntax

ssc access-profile create access-profile-name *access-profile-name* auth-name *authenticator-name*

Parameters

access-profile-name

Specify the name of the new access profile.

authenticator-name

Specify the name of an existing authenticator.

Usage Guidelines

This command does not support the addition of permission groups, see "ssc access-profile create access-profile-name" on page 346.

Use the **no ssc access-profile access-profile-name** command to delete an access profile.

Examples

```
*** create an access profile ***
amnesiac (config) # ssc access-profile create access-profile-name "RADIUS All" auth-
name "RADIUS Server"
+-----------------------------------+
| Created                           |
+-----------------------------------+
| Access profile RADIUS All created |
+-----------------------------------+

*** delete an access profile ***

amnesiac (config) # no ssc access-profile access-profile-name "LDAP Read-Only"
+---------------------------------------+
| Deleted                               |
+---------------------------------------+
| Access profile LDAP Read-Only deleted |
+---------------------------------------+
```

Related Commands

show ssc access-profile, ssc access-profile add-perm-group, ssc access-profile list, ssc access-profile remove-perm-group, ssc access-profile update access-profile-name

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ssc access-profile list

Displays a list of all defined access profiles.

Syntax

ssc access-profile list

Examples

```
amnesiac (config) # ssc access-profile list
+-----------------+-----------------------------------+
| Name            | Unique ID                         |
+-----------------+-----------------------------------+
| LDAP All        | Access-Profile-ZRVA-MXIE-MI92-U787 |
| LDAP Read-Only  | Access-Profile-DAUH-F3NU-XYYA-MISP |
| LDAP Monitoring | Access-Profile-YJ5M-HGIR-B8PZ-C0XU |
| RADIUS All      | Access-Profile-H4U5-3SIR-7VUV-2AG8 |
+-----------------+-----------------------------------+
```

Related Commands

show ssc access-profile, ssc access-profile add-perm-group, ssc access-profile create access-profile-name, ssc access-profile remove-perm-group, ssc access-profile update access-profile-name

ssc access-profile remove-perm-group

Removes a permission group from a specified access profile.

Syntax

ssc access-profile remove-perm-group access-profile-name *access-profile-name* perm-group-name *permission-group-name*

Parameters

access-profile-name

Specify the name of an existing access profile.

permission-group-name

Specify the name of a single permission group to be removed from the access profile.

Usage Guidelines

This command only enables you to remove one permission group at a time. To remove additional permission groups from the same access profile, repeat this command for each permission group.

Examples

```
*** show current permission groups in an access-profile ***
amnesiac (config) # show ssc access-profile access-profile-name "RADIUS All"
+-------------------+-----------------------------------+
| Description       | Value                             |
+-------------------+-----------------------------------+
| Name              | RADIUS All                        |
| Unique ID         | Access-Profile-H4U5-3SIR-7VUV-2AG8 |
| Authenticator     | RADIUS Server                     |
| Permission Groups | admin                             |
|                   | Guest                             |
+-------------------+-----------------------------------+

*** remove one of those permission groups ***
amnesiac (config) #  ssc access-profile remove-perm-group access-profile-name
"RADIUS All" perm-group-name Guest
+-----------------------------------+
| Updated                           |
+-----------------------------------+
| Access profile RADIUS All updated |
+-----------------------------------+
```


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```
*** confirm the result ***
amnesiac (config) show ssc access-profile access-profile-name "RADIUS All"
+-------------------+-----------------------------------+
| Description       | Value                             |
+-------------------+-----------------------------------+
| Name              | RADIUS All                        |
| Unique ID         | Access-Profile-H4U5-3SIR-7VUV-2AG8 |
| Authenticator     | RADIUS Server                     |
| Permission Groups | admin                             |
+-------------------+-----------------------------------+
```

Related Commands

show ssc access-profile, ssc access-profile add-perm-group, ssc access-profile create access-profile-name, ssc access-profile list, ssc access-profile update access-profile-name

ssc access-profile update access-profile-name

Updates the details of an access profile, including the authenticator with which it is associated.

Syntax

ssc access-profile create access-profile-name *access-profile-name* auth-name *authenticator-name*

Parameters

access-profile-name

Specify the name of the new access profile.

authenticator-name

Specify the name of an existing authenticator.

Usage Guidelines

This command does not support:

- The addition of permission groups from the profile. See "ssc access-profile create access-profile-name" on page 346.
- The removal of permission groups from the profile. See "ssc access-profile update access-profile-name" on page 350.

Examples

```
*** show details for an access profile ***
amnesiac (config) # show ssc access-profile access-profile-name "LDAP Monitoring"
+-------------------+-----------------------------------+
| Description       | Value                             |
+-------------------+-----------------------------------+
| Name              | LDAP Monitoring                   |
| Unique ID         | Access-Profile-YJ5M-HGIR-B8PZ-C0XU |
| Authenticator     | LDAP Server                       |
| Permission Groups | Guest                             |
+-------------------+-----------------------------------+

*** update the name of the access profile ***
amnesiac (config) # ssc access-profile update access-profile-name "LDAP Monitoring"
new-access-profile-name "LDAP Statistics"
+----------------------------------------+
| Updated                                |
+----------------------------------------+
| Access profile LDAP Monitoring updated |
+----------------------------------------+
```


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```
*** confirm the change ***
amnesiac (config) # show ssc access-profile access-profile-name "LDAP Statistics"
+-------------------+-----------------------------------+
| Description       | Value                             |
+-------------------+-----------------------------------+
| Name              | LDAP Statistics                   |
| Unique ID         | Access-Profile-YJ5M-HGIR-B8PZ-C0XU |
| Authenticator     | LDAP Server                       |
| Permission Groups | Guest                             |
+-------------------+-----------------------------------+
```

Related Commands

show ssc access-profile, ssc access-profile add-perm-group, ssc access-profile create access-profile-name, ssc access-profile list, ssc access-profile remove-perm-group

ssc action list

Lists Services Director actions.

Syntax

ssc action list

Usage Guidelines

The Services Director can carry out the following actions on Traffic Manager instances:

- deploy an instance with specified parameters
- start and stop an instance
- uninstall an instance
- upgrade an instance

Examples

```
amnesiac (config) # ssc action list
+--------+
| Action |
+--------+
| 1      |
+--------+
```

Related Commands

ssc action update action-name

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ssc action update template-name

Updates a Services Director action based on the specified template.

Syntax

ssc action update template-name *name* | [action-name *name*] | [*action-args*] | [status [Waiting | Pending | Blocked]]

Parameters

`name`

Specify the template name.

`action-name name`

Specify the action name.

`action-args`

Optionally, specify one or more action arguments to be modified in the new template.

`status`

Specify the status:

- `Waiting:` If the action fails and the underlying problems have been corrected change the status of the original action to *Waiting* to cause the action to be re-queued and re-tried.
- `Pending:` If an instance is associated with a failed or blocked action.
- `Blocked:` If an instance is associated with a blocked action.

Usage Guidelines

Updates an action with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to update the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Examples

```
amnesiac (config) # ssc action update action-template test status Waiting
```

Related Commands

ssc action list

ssc action update action-name

Updates a Services Director action.

Syntax

ssc action update action-name *name* status [Waiting | Pending | Blocked] | [Waiting | Pending | Blocked]

Parameters

name

Specify the action name.

status

Specify the status:

- `Waiting:` If the action fails and the underlying problems have been corrected change the status of the original action to *Waiting* to cause the action to be re-queued and re-tried.
- `Pending:` If an instance is associated with a failed or blocked action.
- `Blocked:` If an instance is associated with a blocked action.

Usage Guidelines

When a life cycle action is unsuccessful, you might need to intervene to determine the cause of the problem. Each action is recorded in the inventory database. After any underlying problems have been rectified, the action can be re-tried in one of two ways:

- The original action can have its status changed to **Waiting** so that the action is re-queued and re-tried.
- The instance can have its status changed to a desired status and the system deletes the old action and queues an entirely new action based on the status.

Use the **no ssc action action-name <name>** command to delete an action.

Examples

```
amnesiac (config) # ssc action update action-name test status Waiting
```

Related Commands

ssc action list

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ssc analytics-profile create

Creates a new analytics profile resource. This resource is used for vTM analytics.

Syntax

ssc analytics-profile create logs-to-export *log-list* [tag *value*] [txn-export *Boolean*]

Parameters

`logs-to-export`

A comma-separated list of identifiers for log-export resources. By default, this list can include the following log-export resources:

- `Audit Log`
- `Application Firewall`
- `Process Monitor`
- `Admin Server Access`
- `System - syslog`
- `Event Log`
- `Routing Software`
- `Data Plane Acceleration`
- `System - authentication log`

For example: `"Audit Log","Event Log","System - authentication log"`

For details of these logs, see the Virtual Traffic Manager documentation.

`tag`

(Optional) The customer-facing name for the analytics-profile resource. If this is not set, the tag is set to the UUID value for the resource.

`txn-export`

(Optional) If true, the analytics profile will record that transaction data is enabled. This ensures that any vTM configured using this profile will transmit transaction data (in addition to its assigned logs) to its assigned endpoint.

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Examples

```
*** list all analytics profiles ***
amnesiac (config) # ssc analytics-profile list
+---------------------------------------+----------------+
| ID                                    | Tag            |
+---------------------------------------+----------------+
| Analytics-Profile-6IQG-F6UQ-8C11-7G8F | Audit + System |
| Analytics-Profile-F5V3-S912-G3UP-HPNR | Event          |
| Analytics-Profile-XNAH-H9J1-0MQM-BK59 | Audit          |
| Analytics-Profile-I6DJ-RRQV-KQ5Z-HY7J | Event + System |
| Analytics-Profile-SXSR-UCDA-JJDS-1Q3K | Audit + Event  |
| Analytics-Profile-CHM8-D0PC-58BW-I8GI | System         |
+---------------------------------------+----------------+

*** create an analytics profile that combines Audit, Events and System ***
amnesiac (config) # ssc analytics-profile create logs-to-export "Audit Log","Event
Log","System - authentication log" tag "Audit + Event + System" txn-export true
+---------------------------+-----------------------------------------------------+
| Field                     | Value                                               |
+---------------------------+-----------------------------------------------------+
| tag                       | Audit + Event + System                              |
| enable_transaction_export | True                                                |
| vtm_logs_to_export        | Audit Log, Event Log, System - authentication log |
| analytics_profile_id      | Analytics-Profile-V613-KAI2-4N49-MTL6               |
+---------------------------+-----------------------------------------------------+

*** list all analytics profiles to confirm creation ***
amnesiac (config) # ssc analytics-profile list
+---------------------------------------+------------------------+
| ID                                    | Tag                    |
+---------------------------------------+------------------------+
| Analytics-Profile-6IQG-F6UQ-8C11-7G8F | Audit + System         |
| Analytics-Profile-F5V3-S912-G3UP-HPNR | Event                  |
| Analytics-Profile-XNAH-H9J1-0MQM-BK59 | Audit                  |
| Analytics-Profile-I6DJ-RRQV-KQ5Z-HY7J | Event + System         |
| Analytics-Profile-V613-KAI2-4N49-MTL6 | Audit + Event + System |
| Analytics-Profile-SXSR-UCDA-JJDS-1Q3K | Audit + Event          |
| Analytics-Profile-CHM8-D0PC-58BW-I8GI | System                 |
+---------------------------------------+------------------------+
```

Related Commands

show ssc analytics-profile, ssc analytics-profile delete, ssc analytics-profile list, ssc analytics-profile update

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ssc analytics-profile delete

Delete a specified analytics profile resource. This resource is used for vTM analytics.

Syntax

ssc analytics-profile delete id *profile-id*

Parameters

`id` *`profile-id`*

The identifier for the analytics profile resource, either its **tag** or its UUID.

Examples

```
*** list all analytics profiles ***
amnesiac (config) # ssc analytics-profile list
+----------------------------------------+------------------------+
| ID                                     | Tag                    |
+----------------------------------------+------------------------+
| Analytics-Profile-6IQG-F6UQ-8C11-7G8F | Audit + System         |
| Analytics-Profile-F5V3-S912-G3UP-HPNR | Event                  |
| Analytics-Profile-XNAH-H9J1-0MQM-BK59 | Audit                  |
| Analytics-Profile-I6DJ-RRQV-KQ5Z-HY7J | Event + System         |
| Analytics-Profile-V613-KAI2-4N49-MTL6 | Audit + Event + System |
| Analytics-Profile-SXSR-UCDA-JJDS-1Q3K | Audit + Event          |
| Analytics-Profile-CHM8-D0PC-58BW-I8GI | System                 |
+----------------------------------------+------------------------+

*** delete an analytics profile ***
amnesiac (config) # ssc analytics-profile delete id Event
+-------------------------------------------------------------------+
| Deleted                                                           |
+-------------------------------------------------------------------+
| Analytics Profile Analytics-Profile-F5V3-S912-G3UP-HPNR deleted |
+-------------------------------------------------------------------+

*** List all analytics profiles to confirm deletion ***
amnesiac (config) # ssc analytics-profile list
+----------------------------------------+------------------------+
| ID                                     | Tag                    |
+----------------------------------------+------------------------+
| Analytics-Profile-6IQG-F6UQ-8C11-7G8F | Audit + System         |
| Analytics-Profile-XNAH-H9J1-0MQM-BK59 | Audit                  |
| Analytics-Profile-I6DJ-RRQV-KQ5Z-HY7J | Event + System         |
| Analytics-Profile-V613-KAI2-4N49-MTL6 | Audit + Event + System |
| Analytics-Profile-SXSR-UCDA-JJDS-1Q3K | Audit + Event          |
| Analytics-Profile-CHM8-D0PC-58BW-I8GI | System                 |
+----------------------------------------+------------------------+
```

Related Commands

show ssc analytics-profile, ssc analytics-profile create, ssc analytics-profile list, ssc analytics-profile update

ssc analytics-profile list

Lists all analytics profile resources. These resources are used for vTM analytics.

Syntax

ssc analytics-profile list

Examples

```
amnesiac (config) # ssc analytics-profile list
+---------------------------------------+------------------------+
| ID                                    | Tag                    |
+---------------------------------------+------------------------+
| Analytics-Profile-6IQG-F6UQ-8C11-7G8F | Audit + System         |
| Analytics-Profile-F5V3-S912-G3UP-HPNR | Event                  |
| Analytics-Profile-XNAH-H9J1-0MQM-BK59 | Audit                  |
| Analytics-Profile-I6DJ-RRQV-KQ5Z-HY7J | Event + System         |
| Analytics-Profile-V613-KAI2-4N49-MTL6 | Audit + Event + System |
| Analytics-Profile-SXSR-UCDA-JJDS-1Q3K | Audit + Event          |
| Analytics-Profile-CHM8-D0PC-58BW-I8GI | System                 |
+---------------------------------------+------------------------+
```

Related Commands

show ssc analytics-profile, ssc analytics-profile create, ssc analytics-profile delete, ssc analytics-profile update

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ssc analytics-profile update

Updates an analytics profile resource. This resource is used for vTM analytics.

Syntax

ssc analytics-profile update id *profile-id* [logs-to-export *log-list*] [tag *value*] [txn-export *Boolean*]

Parameters

`id` *`profile-id`*

Specify a unique identifier for the analytics profile, either its tag or UUID.

`logs-to-export`

A comma-separated list of identifiers for log-export resources. By default, this list can include the following log-export resources:

- `Audit Log`
- `Application Firewall`
- `Process Monitor`
- `Admin Server Access`
- `System - syslog`
- `Event Log`
- `Routing Software`
- `Data Plane Acceleration`
- `System - authentication log`

For example: `"Audit Log","Event Log","System - authentication log"`

For details of these logs, see the Virtual Traffic Manager documentation.

`tag`

The customer-facing name for the analytics-profile resource. If this is not set, the tag is set to the UUID value for the resource.

`txn-export`

If true, the analytics profile will record that transaction data is enabled. This ensures that any vTM configured using this profile will transmit transaction data (in addition to its assigned logs) to its assigned endpoint.

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Examples

```
*** list all analytics profiles ***
amnesiac (config) # ssc analytics-profile list
+---------------------------------------+------------------------+
| ID                                    | Tag                    |
+---------------------------------------+------------------------+
| Analytics-Profile-6IQG-F6UQ-8C11-7G8F | Audit + System         |
| Analytics-Profile-F5V3-S912-G3UP-HPNR | Event                  |
| Analytics-Profile-XNAH-H9J1-0MQM-BK59 | Audit                  |
| Analytics-Profile-I6DJ-RRQV-KQ5Z-HY7J | Event + System         |
| Analytics-Profile-V613-KAI2-4N49-MTL6 | Audit + Event + System |
| Analytics-Profile-SXSR-UCDA-JJDS-1Q3K | Audit + Event          |
| Analytics-Profile-CHM8-D0PC-58BW-I8GI | System                 |
+---------------------------------------+------------------------+

*** View properties for a specific analytics profile ***
amnesiac (config) # show ssc analytics-profile id Event
+---------------------------+---------------------------------------+
| Field                     | Value                                 |
+---------------------------+---------------------------------------+
| tag                       | Event                                 |
| enable_transaction_export | True                                  |
| vtm_logs_to_export        | Event Log                             |
| analytics_profile_id      | Analytics-Profile-F5V3-S912-G3UP-HPNR |
+---------------------------+---------------------------------------+

*** Update properties for this analytics profile, and confirm change ***
amnesiac (config) # ssc analytics-profile update id Event txn-export false
+---------------------------+---------------------------------------+
| Field                     | Value                                 |
+---------------------------+---------------------------------------+
| tag                       | Event                                 |
| enable_transaction_export | False                                 |
| vtm_logs_to_export        | Event Log                             |
| analytics_profile_id      | Analytics-Profile-F5V3-S912-G3UP-HPNR |
+---------------------------+---------------------------------------+
```

Related Commands

show ssc analytics-profile, ssc analytics-profile create, ssc analytics-profile delete, ssc analytics-profile list

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ssc app-template import

Import an application template (a .ZIP file) into Services Director.

Syntax

ssc app-template import template-url *URL*

Usage Guidelines

The **no ssc app-template** command deletes an imported application template.

Parameters

URL

URL of the application template.

Examples

```
*** view empty list of application templates ***
amnesiac (config) # ssc app-template list
+-----------------+
| Message         |
+-----------------+
| No record found |
+-----------------+

*** import an application template ***
amnesiac (config) # ssc app-template import template-url http://example.com/
example_filepath/example_filename.zip
+---------------------------------------+
| Imported                              |
+---------------------------------------+
| Imported "Http Service Template__1.0" |
+---------------------------------------+

*** confirm the addition of an application template ***
amnesiac (config) # ssc app-template list
+----------------------------+
| Templates                  |
+----------------------------+
| Http Service Template__1.0 |
+----------------------------+

*** delete specific application template ***
amnesiac (config) #  no ssc app-template template-name "Http Service Template__1.0"
+----------------------------------------------+
| Deleted                                      |
+----------------------------------------------+
| Template Http Service Template__1.0 deleted |
+----------------------------------------------+
```

Related Commands

show ssc app-template, show ssc app-template-instance, ssc app-template list, ssc app-template-instance create, ssc app-template-instance list, ssc app-template-instance update

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ssc app-template list

Lists all application template resources.

Syntax

ssc app-template list

Usage Guidelines

The **no ssc app-template** command deletes an imported application template.

Examples

```
*** list application templates ***
amnesiac (config) # ssc app-template list
+----------------------------+
| Templates                  |
+----------------------------+
| Http Service Template__1.0 |
+----------------------------+

*** delete application template ***
amnesiac (config) #  no ssc app-template template-name "Http Service Template__1.0"
+---------------------------------------------+
| Deleted                                     |
+---------------------------------------------+
| Template Http Service Template__1.0 deleted |
+---------------------------------------------+
```

Related Commands

show ssc app-template, show ssc app-template-instance, ssc app-template import, ssc app-template-instance create, ssc app-template-instance list, ssc app-template-instance update

ssc app-template-instance create

Instantiate a named application template instance, performing both of the following actions:

- Creates a template instance on Services Director.
- Applies the configuration of the template instance to the specified vTM cluster.

Syntax

ssc app-template-instance create template-instance-name *instance-name* template-name *template-id* cluster-id *cluster-id* parameters *parameters*

Usage Guidelines

The **no ssc app-template-instance** command deletes a template instance.

Parameters

instance-name

Specify a new name for the application template instance.

template-id

Specify a unique identifier for the application template, either its tag or UUID.

cluster-id

Specify a unique identifier for the vTM cluster, either its tag or UUID.

parameters

A list of all parameters for the selected application template.

Note: To automatically populate the command line with parameters from the application template, press the **Tab** key after you have typed the **parameters** keyword. You can then update the command line as required before creating the template instance.

Examples

```
*** show empty instance parameter list ***
amnesiac (config) # ssc app-template-instance list
+-----------------+
| Message         |
+-----------------+
| No record found |
+-----------------+
*** create a template instance ***
amnesiac (config) # ssc app-template-instance create
  template-instance-name "TK-421"
  template-name "Http Service Template__1.0"
  cluster-id "Cluster-CRCF-9WDA-T1HE-Z5WS"
  parameters '{"instance_name": "Service Name",
    "pool_nodes": ["127.0.0.1:80",
    "127.0.0.2:80"],
    "public_port": 100}'
```


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```
+-------------------------------------------------------------------------------...
| Created
+-------------------------------------------------------------------------------...
| data.vtm_pool_nodes_table_table.nodes[0]: Refreshing state...
| data.vtm_pool_nodes_table_table.nodes[1]: Refreshing state...
|
| vtm_pool.pool: Creating...
|   auto_scaling_addnode_delaytime:      "" => "0"
|   auto_scaling_enabled:                "" => "false"
|   auto_scaling_external:               "" => "true"
|   auto_scaling_hysteresis:             "" => "20"
        .
        . (system messages: vTM settings)
        .
|   web_cache_enabled:                   "" => "false"
|   web_cache_error_page_time:           "" => "30"
|   web_cache_max_time:                  "" => "600"
|   web_cache_refresh_time:              "" => "2"
| vtm_virtual_server.virtual_server: Creation complete after 0s ...
|
| Apply complete! Resources: 2 added, 0 changed, 0 destroyed.
|
+-------------------------------------------------------------------------------...

*** show all template instances ***
amnesiac (config) # ssc app-template-instance list
+--------------------+
| Template Instance |
--------------------+
| TK-421            |
+--------------------+

*** delete a specific template instance ***
amnesiac (config) # no ssc app-template-instance template-instance-name Template-
Instance-TJVG-671N-ZHOD-MUKP
+----------------+
| Deleted        |
+----------------+
| TK-421 deleted |
+----------------+
```

Related Commands

show ssc app-template, show ssc app-template-instance, ssc app-template import, ssc app-template list, ssc app-template-instance list, ssc app-template-instance update

ssc app-template-instance list

Lists all application template instance resources. Each template instance is identified by a name. If there is no name defined for the instance, the unique template instance identifier is used instead.

Syntax

ssc app-template-instance list

Usage Guidelines

The **no ssc app-template-instance** command deletes a template instance.

Examples

```
amnesiac (config) # ssc app-template-instance list
+---------------------------------------+
| Template Instance                     |
+---------------------------------------+
| Template-Instance-LGBI-671N-ZHOD-T0TA |
+---------------------------------------+

amnesiac (config) # no ssc app-template-instance template-instance-name Template-
Instance-LGBI-671N-ZHOD-T0TA
+-----------------------------------------------+
| Deleted                                       |
+-----------------------------------------------+
| Template-Instance-LGBI-671N-ZHOD-T0TA deleted |
+-----------------------------------------------+
```

Related Commands

show ssc app-template, show ssc app-template-instance, ssc app-template import, ssc app-template list, ssc app-template-instance create, ssc app-template-instance update

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ssc app-template-instance update

Update an application template instance, and re-apply it to the vTM cluster.

Note: You cannot update the selected vTM cluster using this command. Instead, you should create a new template instance, see "ssc app-template-instance create" on page 364.

Syntax

ssc app-template-instance update template-instance-name *instance-name* template-name *template-name* parameters *parameters*

Parameters

instance-name

Specify a new name for the application template instance.

template-name

Specify a unique identifier for the application template, either its tag or UUID.

parameters

A formatted list of all parameters for the selected application template.

Note: To automatically populate the command line with parameters from the application template, press the **Tab** key after you have typed the **parameters** keyword. You can then update the command line as required before creating the template instance.

Examples

```
*** view template instance list ***
amnesiac (config) # ssc app-template-instance list
+----------------------------------------+
| Template Instance                      |
-----------------------------------------+
| Template-Instance-TJVG-L0K8-90AO-MUKP |
+----------------------------------------+

*** view details for a specific template instance ***
amnesiac (config) # show ssc app-template-instance template-instance-name
   Template-Instance-TJVG-L0K8-90AO-MUKP
+----------------------+----------------------------------------+
| Field                | Value                                  |
+----------------------+----------------------------------------+
| template_instance_id | Template-Instance-TJVG-L0K8-90AO-MUKP |
| tag                  |                                        |
| cluster_id           | Cluster-CRCF-9WDA-T1HE-Z5WS            |
| result               | None                                   |
| children             | None                                   |
```

```
| parameters           | {                                      |
|                      |   "instance_name": "Service Name",     |
|                      |   "pool_nodes": [                      |
|                      |     "127.0.0.1:80",                    |
|                      |     "127.0.0.2:80" ],                  |
|                      |   "public_port": 80                    |
|                      | }                                      |
| pending_action       | None                                   |
| template_id          | Http Service Template__1.0             |
+----------------------+----------------------------------------+

*** update the public port for the template instance ***
amnesiac (config) # ssc app-template-instance update
  template-instance-name Template-Instance-TJVG-L0K8-90AO-MUKP
  parameters '{
    "instance_name": "Service Name",
    "pool_nodes": ["127.0.0.1:80", "127.0.0.2:80"],
    "public_port": 100}'

+-------------------------------------------------------------------------...
| Created
+-------------------------------------------------------------------------...
| data.vtm_pool_nodes_table_table.nodes[0]: Refreshing state...
| data.vtm_pool_nodes_table_table.nodes[1]: Refreshing state...
|
|
| vtm_pool.pool: Creating...
|   auto_scaling_addnode_delaytime:      "" => "0"
|   auto_scaling_enabled:                "" => "false"
        .
        . (system messages: vTM settings)
        .
|   web_cache_max_time:                  "" => "600"
|   web_cache_refresh_time:              "" => "2"
| vtm_virtual_server.virtual_server: Creation complete after 0s ...
|
| Apply complete! Resources: 2 added, 0 changed, 0 destroyed.
|
+-------------------------------------------------------------------------...

*** confirm new public port setting ***
amnesiac (config) # show ssc app-template-instance template-instance-name
   Template-Instance-TJVG-L0K8-90AO-MUKP
+----------------------+----------------------------------------+
| Field                | Value                                  |
+----------------------+----------------------------------------+
| template_instance_id | Template-Instance-TJVG-L0K8-90AO-MUKP |
| tag                  |                                        |
| cluster_id           | Cluster-CRCF-9WDA-T1HE-Z5WS            |
| result               | None                                   |
| children             | None                                   |
```


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```
| parameters           | {                                      |
|                      |   "instance_name": "Service Name",     |
|                      |   "pool_nodes": [                      |
|                      |     "127.0.0.1:80",                    |
|                      |     "127.0.0.2:80" ],                  |
|                      |   "public_port": 100                   |
|                      | }                                      |
| pending_action       | None                                   |
| template_id          | Http Service Template__1.0             |
+----------------------+----------------------------------------+
```

Related Commands

show ssc app-template, show ssc app-template-instance, ssc app-template import, ssc app-template list, ssc app-template-instance create, ssc app-template-instance list

ssc backup sd-va config clear

Clears the backup service configuration for the Services Director. The configuration of the remote system is unaffected.

Syntax

ssc backup sd-va config clear

Examples

```
amnesiac (config) # ssc backup sd-va config clear
amnesiac (config) # ssc backup sd-va service status
Backup service is not configured
+------------------------------+-------------------------+- ...
| Config                       | Status                  | ...
+------------------------------+-------------------------+ ...
| Backup Configuration         | Configuration failed    | ...
| Restore Remote Configuration | Successfully configured | ...
+------------------------------+-------------------------+ ...
    ... ----------------------------------------+
    ...  Message                                |
    ... ----------------------------------------+
    ...  Services Director is not configured yet |
    ...  None                                   |
    ... ----------------------------------------+
```

Related Commands

show ssc backup sd-va config, ssc backup sd-va config create, ssc backup sd-va config update, ssc backup sd-va restore local, ssc backup sd-va restore remote, ssc backup sd-va restore remotecfg clear, ssc backup sd-va restore remotecfg create, ssc backup sd-va restore remotecfg update, ssc backup sd-va service status, ssc backup sd-va service enable

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ssc backup sd-va config create

Creates a backup service configuration for the Services Director. Files are backed up to a local location according to a defined backup frequency. These are then synchronized to a remote location using a separate frequency. After synchronizing, a specified number of local files are retained.

Syntax

ssc backup sd-va config create remote-sys *IP-address* remote-sys-path *path* remote-sys-user *user* remote-sys-pass *password* backup-data-trans *protocol* backup-freq *frequency* backup-retain *number* remote-sync-freq *frequency*

Parameters

`remote-sys` *`profile-id`*

IP address of the remote system.

`remote-sys-path` *`path`*

Remote directory for backup files. For example, "/var/home/root".

`remote-sys-user` *`user`*

Remote username.

`remote-sys-pass` *`password`*

Password for the remote user.

`backup-data-trans` *`protocol`*

The protocol to perform the remote transfer ("scp" or "ftp"). 2

`backup-freq` *`frequency`*

The backup frequency (to local), expressed as a number of units. Units are days (d), hours (h) and minutes (m). For example, "6h" represents six hours.

`backup-retain` *`number`*

The number of local backup files to be retained. For example, 3.

`remote-sync-freq` *`frequency`*

The synchronization frequency (local to remote), expressed as a number of units. Units are days (d), hours (h) and minutes (m). For example, "2d" represents two days.

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Examples

```
amnesiac (config) # ssc backup sd-va config create remote-sys 10.62.166.206 remote-
sys-path /space/sd-backup/sd-backup-test/gold-silver-backups remote-sys-user sd-
backup remote-sys-pass password backup-data-trans scp backup-freq 1m backup-retain
10 remote-sync-freq 5m


Succesfully configured backup configuration for Services Director.
Backup restore remote configuration will be created with the same parameters
+-------------------+-------------------------------------------------------+
| Field             | Value                                                 |
+-------------------+-------------------------------------------------------+
| remote-sys        | 10.62.166.206                                         |
| remote-sync-freq  | 5m                                                    |
| backup-data-trans | scp                                                   |
| remote-sys-user   | sd-backup                                             |
| backup-retain     | 10                                                    |
| remote-sys-path   | /space/sd-backup/sd-backup-test/gold-silver-backups |
| backup-freq       | 1m                                                    |
| remote-sys-pass   | ******                                                |
+-------------------+-------------------------------------------------------+
```

Related Commands

show ssc backup sd-va config, ssc backup sd-va config clear, ssc backup sd-va config update, ssc backup sd-va restore local, ssc backup sd-va restore remote, ssc backup sd-va restore remotecfg clear, ssc backup sd-va restore remotecfg create, ssc backup sd-va restore remotecfg update, ssc backup sd-va service status, ssc backup sd-va service enable

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ssc backup sd-va config update

Updates the backup service configuration for the Services Director.

Syntax

ssc backup sd-va config update [remote-sys *IP-address*] | [remote-sys-path *path*] | [remote-sys-user *user*] | [remote-sys-pass *password*] | [backup-data-trans *protocol*] | [backup-freq *frequency*] | [backup-retain *number*] | [remote-sync-freq *frequency*]

Parameters

`remote-sys`

IP address of the remote system.

`remote-sys-path`

Remote directory for backup files. For example, "/var/home/root".

`remote-sys-user`

Remote username.

`remote-sys-pass`

Password for the remote user.

`backup-data-trans`

The protocol to perform the transfer to the remote system ("scp" or "ftp"). 2

`backup-freq`

The backup frequency (to local), expressed as a number of units. Units are days (d), hours (h) and minutes (m). For example, "6h" represents six hours.

`backup-retain`

The number of local backup files to be retained. For example, 3.

`remote-sync-freq`

The synchronization frequency (local to remote), expressed as a number of units. Units are days (d), hours (h) and minutes (m). For example, "2d" represents two days.

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Examples

```
amnesiac (config) # ssc backup sd-va config update backup-freq 2m
+-------------------+-------------------------------------------------------+
| Field             | Value                                                 |
+-------------------+-------------------------------------------------------+
| remote-sys        | 10.62.166.206                                         |
| remote-sync-freq  | 5m                                                    |
| backup-data-trans | scp                                                   |
| remote-sys-user   | sd-backup                                             |
| backup-retain     | 10                                                    |
| remote-sys-path   | /space/sd-backup/sd-backup-test/gold-silver-backups |
| backup-freq       | 2m                                                    |
| remote-sys-pass   | ******                                                |
+-------------------+-------------------------------------------------------+
```

Related Commands

show ssc backup sd-va config, ssc backup sd-va config clear, ssc backup sd-va config create, ssc backup sd-va restore local, ssc backup sd-va restore remote, ssc backup sd-va restore remotecfg clear, ssc backup sd-va restore remotecfg create, ssc backup sd-va restore remotecfg update, ssc backup sd-va service status, ssc backup sd-va service enable

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ssc backup sd-va restore local

Restores the Services Director using a local backup file (created by the Services Director backup service).

Syntax

ssc backup sd-va restore local backup-name *filename* master-password *password*

Parameters

`backup-name` *`filename`*

Specify a backup file from the local backup configuration.

`master-password` *`password`*

Specify the master password that was current when the backup was made.

Usage Guidelines

The response from the restore process lists any vTM image files that were referenced in the backup file. These images are *not* stored with the backup, so you must ensure that they are reloaded if they are no longer present on your system.

Examples

```
amnesiac (config) # ssc backup sd-va restore local backup-name
 backup_10.62.167.199_2015-09-08_18-42-01.zip master-password Bcd4531-22
Warning: Using a password on the command line interface can be insecure.

Services Director configuration successfully restored using backup file
 backup_10.62.167.199_2015-09-08_18-42-01.zip

Please restore following vTM images existing in the previous backup file:
ZeusTM_101_Linux-x86_64.tgz
```

Related Commands

show ssc backup sd-va config, ssc backup sd-va config clear, ssc backup sd-va config create, ssc backup sd-va restore remote, ssc backup sd-va restore remotecfg clear, ssc backup sd-va restore remotecfg create, ssc backup sd-va restore remotecfg update, ssc backup sd-va service status, ssc backup sd-va service enable

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ssc backup sd-va restore remote

Restores the Services Director from a remote backup file.

Syntax

ssc backup sd-va restore remote backup-name *filename* master-password *password*

Parameters

`backup-name` *`filename`*

A backup file from the remote backup configuration.

`master-password` *`password`*

Specify the master password that was current when the backup was made.

Usage Guidelines

The response from the restore process lists any vTM image files that were referenced in the backup file. These images are *not* stored with the backup, so you must ensure that they are reloaded if they are no longer present on your system.

Examples

```
amnesiac (config) # ssc backup sd-va restore remote backup-name
backup_10.62.167.199_2015-12-12_06-06-02.zip master-password Bcd4531-22
Warning: Using a password on the command line interface can be insecure.

Services Director configuration successfully restored using backup file
 backup_10.62.167.199_2015-12-12_06-06-02.zip

Please restore following vTM images existing in the previous backup file:
ZeusTM_101_Linux-x86_64.tgz
```

Related Commands

show ssc backup sd-va config, ssc backup sd-va config clear, ssc backup sd-va config create, ssc backup sd-va restore local, ssc backup sd-va restore remotecfg clear, ssc backup sd-va restore remotecfg create, ssc backup sd-va restore remotecfg update, ssc backup sd-va service status, ssc backup sd-va service enable

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ssc backup sd-va restore remotecfg clear

Clears the remote system definition that is used to restore a Services Director.

Syntax

ssc backup sd-va restore remotecfg clear

Examples

```
*** list current remote config ***
amnesiac (config) # show ssc backup sd-va restore remotecfg
+-------------------+-------------------------------------------------------+
| Field             | Value                                                 |
+-------------------+-------------------------------------------------------+
| remote-sys-user   | sd-backup                                             |
| backup-data-trans | scp                                                   |
| remote-sys-path   | /space/sd-backup/sd-backup-test/gold-silver-backups |
| remote-sys-pass   | ******                                                |
| remote-sys        | 10.62.166.206                                         |
+-------------------+-------------------------------------------------------+

*** clear current config ***
amnesiac (config) #  ssc backup sd-va restore remotecfg clear

*** confirm config is clear ***
amnesiac (config) #  show ssc backup sd-va restore remotecfg
+-----------------+
| Message         |
+-----------------+
| No record found |
+-----------------+
```

Related Commands

show ssc backup sd-va config, ssc backup sd-va config clear, ssc backup sd-va config create, ssc backup sd-va restore local, ssc backup sd-va restore remote, ssc backup sd-va restore remotecfg create, ssc backup sd-va restore remotecfg update, ssc backup sd-va service status, ssc backup sd-va service enable

ssc backup sd-va restore remotecfg create

Specifies the remote system from which a restore of the Services Director is performed.

Syntax

ssc backup sd-va restore remotecfg create remote-sys *IP-address* remote-sys-path *path* remote-sys-user *user* remote-sys-pass *password* backup-data-trans *protocol*

Parameters

`remote-sys`

IP address of the remote system.

`remote-sys-path`

Remote directory for backup files. For example, "/var/home/root".

`remote-sys-user`

Remote username.

`remote-sys-pass`

Password for the remote user.

`backup-data-trans`

The protocol to perform the transfer from the remote system ("scp" or "ftp").

Usage Guidelines

The restore process itself is performed using "ssc backup sd-va restore remotecfg clear" on page 377.

Examples

```
amnesiac (config) # ssc backup sd-va restore remotecfg create remote-sys
10.62.166.206 remote-sys-path /space/sd-backup/sd-backup-test/gold-silver-backups
remote-sys-user sd-backup remote-sys-pass password backup-data-trans scp

Successfully created backup restore remote configuration for Services Director
+-------------------+-------------------------------------------------------+
| Field             | Value                                                 |
+-------------------+-------------------------------------------------------+
| remote-sys-user   | sd-backup                                             |
| backup-data-trans | scp                                                   |
| remote-sys-path   | /space/sd-backup/sd-backup-test/gold-silver-backups |
| remote-sys-pass   | ******                                                |
| remote-sys        | 10.62.166.206                                         |
+-------------------+-------------------------------------------------------+
```

Related Commands

show ssc backup sd-va config, ssc backup sd-va config clear, ssc backup sd-va config create, ssc backup sd-va restore local, ssc backup sd-va restore remote, ssc backup sd-va restore remotecfg create, ssc backup sd-va restore remotecfg update, ssc backup sd-va service status, ssc backup sd-va service enable

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ssc backup sd-va restore remotecfg update

Updates the remote system configuration from which a restore of the Services Director is performed.

Syntax

ssc backup sd-va restore remotecfg create [remote-sys *IP-address*] | [remote-sys-path *path*] | [remote-sys-user *user*] | [remote-sys-pass *password*] | [backup-data-trans *protocol*]

Parameters

`remote-sys`

IP address of the remote system.

`remote-sys-path`

Remote directory for backup files. For example, "/var/home/root".

`remote-sys-user`

Remote username.

`remote-sys-pass`

Password for the remote user.

`backup-data-trans`

The protocol to perform the transfer from the remote system ("scp" or "ftp").

Usage Guidelines

The restore process itself is performed using "ssc backup sd-va restore remotecfg clear" on page 377.

Examples

```
amnesiac (config) # ssc backup sd-va restore remotecfg update backup-data-trans ftp
+-------------------+-------------------------------------------------------+
| Field             | Value                                                 |
+-------------------+-------------------------------------------------------+
| remote-sys-user   | sd-backup                                             |
| backup-data-trans | ftp                                                   |
| remote-sys-path   | /space/sd-backup/sd-backup-test/gold-silver-backups |
| remote-sys-pass   | ******                                                |
| remote-sys        | 10.62.166.206                                         |
+-------------------+-------------------------------------------------------+
```

Related Commands

show ssc backup sd-va config, ssc backup sd-va config clear, ssc backup sd-va config create, ssc backup sd-va restore local, ssc backup sd-va restore remote, ssc backup sd-va restore remotecfg clear, ssc backup sd-va restore remotecfg create, ssc backup sd-va service status, ssc backup sd-va service enable

ssc backup sd-va service enable

Enables the backup service for the Services Director.

Syntax

ssc backup sd-va service enable

Usage Guidelines

Use the **no ssc backup sd-va service** command to disable the backup service.

Examples

```
*** enable backup service ***
amnesiac (config) # ssc backup sd-va service enable
Backup service is enabled

*** disable backup service ***
amnesiac (config) # no ssc backup sd-va service
Backup service is disabled
```

Related Commands

show ssc backup sd-va config, ssc backup sd-va config clear, ssc backup sd-va config create, ssc backup sd-va restore local, ssc backup sd-va restore remote, ssc backup sd-va restore remotecfg clear, ssc backup sd-va restore remotecfg create, ssc backup sd-va restore remotecfg update, ssc backup sd-va service status

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ssc backup sd-va service status

Displays the status of the backup service for the Services Director.

Syntax

ssc backup sd-va service status

Examples

```
amnesiac (config) # ssc backup sd-va service status
Backup service is configured and running
+-----------------------------+-------------------------+---------+
| Config | Status | Message |
+-----------------------------+-------------------------+---------+
| Backup Configuration | Successfully configured | None |
| Restore Remote Configuration | Successfully configured | None |
+-----------------------------+-------------------------+---------+
```

Related Commands

show ssc backup sd-va config, ssc backup sd-va config clear, ssc backup sd-va config create, ssc backup sd-va restore local, ssc backup sd-va restore remote, ssc backup sd-va restore remotecfg clear, ssc backup sd-va restore remotecfg create, ssc backup sd-va restore remotecfg update, ssc backup sd-va service enable

ssc backup vtm-cluster cluster-name backup now

Performs an immediate backup for the specified cluster.

Syntax

ssc backup vtm-cluster cluster-name cluster-id backup now

Parameters

cluster-id

Specify the name of the required cluster.

Usage Guidelines

The cluster must have a defined backup schedule for this command to succeed.

When this command is used, a task is created to perform the backup.

Use the **show ssc backup vtm-cluster cluster-name <cluster-name> task <task-id>** command to check the status of the backup task.

Examples

```
amnesiac (config) # ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-9F4O
backup now
Please check the status of the current task using "show ssc backup vtm-cluster
cluster-name <cluster-name> task <task-id>"
+---------------+---------------------------------------+
| Task          | Details                               |
+---------------+---------------------------------------+
| status        | pending                               |
| backup_id     |                                       |
| creation_date | 2016-06-29 15:11:31.036461            |
| task_subtype  | backup now                            |
| manager       | 10.62.169.160                         |
| cluster_id    | Cluster-AQJE-R4HV-QYR1-9F4O           |
| error_info    | None                                  |
| task_type     | backup restore                        |
| task_id       | BackupRestoreTask-CY7G-X5AB-G0SK-NX5L |
| instance_id   |                                       |
| cluster_tag   |                                       |
+---------------+---------------------------------------+
```

Related Commands

show ssc backup vtm-cluster cluster-name backups

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ssc backup vtm-cluster cluster-name restore backup-name

For a specified cluster, restores an existing backup from that cluster.

Syntax

ssc backup vtm-cluster cluster-name *source_cluster-id* restore backup-name *backup_id* target-cluster *target_cluster_id*

Parameters

source_cluster-id

Specify the name of the cluster from which the backup was taken.

backup_id

Specify the name of the required backup.

target_cluster-id

Specify the name of the cluster upon which the backup will be used.

Usage Guidelines

When this command is used, a task is created to perform the restore.

Use the **show ssc backup vtm-cluster cluster-name <cluster-name> task <task-id>** command to check the status of the restore task.

Examples

```
amnesiac (config) # ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-9F4O
backup now
Please check the status of the current task using "show ssc backup vtm-cluster
cluster-name <cluster-name> task <task-id>"
+---------------+---------------------------------------+
| Task          | Details                               |
+---------------+---------------------------------------+
| status        | pending                               |
| backup_id     |                                       |
| creation_date | 2016-06-29 15:11:31.036461            |
| task_subtype  | backup now                            |
| manager       | 10.62.169.160                         |
| cluster_id    | Cluster-AQJE-R4HV-QYR1-9F4O           |
| error_info    | None                                  |
| task_type     | backup restore                        |
| task_id       | BackupRestoreTask-CY7G-X5AB-G0SK-NX5L |
| instance_id   |                                       |
| cluster_tag   |                                       |
+---------------+---------------------------------------+
```

Related Commands

show ssc backup vtm-cluster cluster-name backups

ssc backup vtm-cluster cluster-name task retry

Re-attempt a failed backup task.

Syntax

ssc backup vtm-cluster cluster-name *cluster-id* task *task_id* retry

Parameters

cluster-id

Specify the name of the cluster upon which the failed task was performed.

task_id

Specify the name of the failed task.

Usage Guidelines

Use the **show ssc backup vtm-cluster cluster-name <cluster-name> task <task-id>** command to check the progress of the task.

Use the **no ssc backup vtm-cluster cluster-name <cluster_id> task <task_id>** command to delete a failed task if required.

Examples

```
*** check task: failed ***
amnesiac (config) # show ssc backup vtm-cluster cluster-name
Cluster-AQJE-R4HV-QYR1-9F4O task BackupRestoreTask-PQ6B-H5PY-JHVM-ZTYI
+---------------+-------------------------------------------------------------
| Field         | Value
+---------------+-------------------------------------------------------------
| status        | failed
| backup_id     |
| creation_date | 2016-06-29 16:48:46
| task_subtype  | backup now
| manager       | 10.62.169.160
| cluster_id    | Cluster-AQJE-R4HV-QYR1-9F4O
| error_info    | Could not select a vTM for backup for cluster Cluster-AQJE-...
| task_type     | backup restore
| task_id       | BackupRestoreTask-PQ6B-H5PY-JHVM-ZTYI
| instance_id   |
| cluster_tag   |
+---------------+-------------------------------------------------------------
```


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```
*** retry after bringing REST API back up ***
amnesiac (config) # ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-
QYR1-9F4O task BackupRestoreTask-PQ6B-H5PY-JHVM-ZTYI retry
+---------------+---------------------------------------+
| Field         | Value                                 |
+---------------+---------------------------------------+
| status        | pending                               |
| backup_id     |                                       |
| creation_date | 2016-06-29 16:48:46                   |
| task_subtype  | backup now                            |
| manager       | 10.62.169.160                         |
| cluster_id    | Cluster-AQJE-R4HV-QYR1-9F4O           |
| error_info    | None                                  |
| task_type     | backup restore                        |
| task_id       | BackupRestoreTask-PQ6B-H5PY-JHVM-ZTYI |
| instance_id   |                                       |
| cluster_tag   |                                       |
+---------------+---------------------------------------+

*** check task: successful ***
amnesiac (config) # show ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-
9F4O task BackupRestoreTask-PQ6B-H5PY-JHVM-ZTYI
+---------------+---------------------------------------+
| Field         | Value                                 |
+---------------+---------------------------------------+
| status        | complete                              |
| backup_id     |                                       |
| creation_date | 2016-06-29 16:48:46                   |
| task_subtype  | backup now                            |
| manager       | 10.62.169.160                         |
| cluster_id    | Cluster-AQJE-R4HV-QYR1-9F4O           |
| error_info    | None                                  |
| task_type     | backup restore                        |
| task_id       | BackupRestoreTask-PQ6B-H5PY-JHVM-ZTYI |
| instance_id   |                                       |
| cluster_tag   |                                       |
+---------------+---------------------------------------+
```

Related Commands

show ssc backup vtm-cluster cluster-name tasks

ssc backup vtm-cluster cluster-name upload backup-name

Transfers a backup file (in TAR format) to a specified Traffic Manager instance. This file is not used in any way.

Syntax

ssc backup vtm-cluster cluster-name *source_cluster-id* upload backup-name *backup_id* target-cluster *target_cluster_id* target-vTM *instance_id*

Parameters

`source_cluster-id`

Specify the name of the cluster from which the backup was taken.

`backup_id`

Specify the name of the required backup.

`target_cluster-id`

Specify the name of the cluster upon which the backup will be used.

`instance_id`

Specify the name of the Traffic Manager instance to which the backup file (in TAR format) will be loaded.

Usage Guidelines

This command only transfers the TAR file to the specified Traffic Manager instance. *NOTE: No operations are performed on this backup file when it reaches the specified Traffic Manager instance.*

When this command is used, a task is created to perform the restore.

Use the **show ssc backup vtm-cluster cluster-name <cluster-name> task <task-id>** command to check the status of the restore task.

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Examples

```
amnesiac (config) # ssc backup vtm-cluster cluster-name Cluster-AQJE-R4HV-QYR1-9F4O
upload backup-name Backup-STD3-X1Q4-GTJ3-WX4T target-cluster Cluster-P2WL-IV2B-V8S6-
COIY target-instance cerise-01

Please check the status of the current task using "show ssc backup vtm-cluster
cluster-name <cluster-name> task <task-id>"
+---------------+---------------------------------------+
| Task          | Details                               |
+---------------+---------------------------------------+
| status        | pending                               |
| backup_id     | Backup-STD3-X1Q4-GTJ3-WX4T            |
| creation_date | 2016-06-29 15:24:07.015535            |
| task_subtype  | upload                                |
| manager       | 10.62.169.160                         |
| cluster_id    | Cluster-P2WL-IV2B-V8S6-COIY           |
| error_info    | None                                  |
| task_type     | backup restore                        |
| task_id       | BackupRestoreTask-DBGB-SI8U-TMM7-KPUE |
| instance_id   | Instance-2YEE-CLUF-NEA8-NWWB          |
| cluster_tag   |                                       |
+---------------+---------------------------------------+
```

Related Commands

show ssc backup vtm-cluster cluster-name backups

ssc backup vtm-cluster create schedule

Creates a backup schedule.

Syntax

ssc backup vtm-cluster create schedule *schedule_id* frequency *frequency* [offset *offset*] [backup_time *time*] [info *description*]

Parameters

schedule_id

Specify a unique name for the required backup schedule.

frequency *frequency*

Specify the basic frequency of the backup.

- `daily:` A daily frequency. This requires a backup_time but not an offset.
- `hourly:` An hourly frequency. This requires an offset but not a backup_time.
- `monthly:` A monthly frequency. This requires both an offset and a backup_time.
- `weekly:` A weekly frequency. This requires both an offset and a backup_time.
- `user_defined:` A customized frequency. This requires an offset but not a backup_time.

backup_time *time*

Specify the backup time (HH:MM) for the schedule. This is supported for daily, weekly and monthly schedules only.

offset

Specify an offset for the selected frequency type, which more closely specifies the point at which the backup will be taken:

- For daily schedules, no offset is supported.
- For an hourly schedule, the offsets represent every quarter of an hour, expressed as minutes. That is: 0, 15, 30 and 45.
- For monthly schedules, the offset is the day number on which the backup should be taken. This is limited to between 1 and 28.
- For weekly schedules, the offset is the day of the week on which the backup should be taken. That is: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday. These offset values are displayed as the numbers 0 to 6 when the details for a schedule are displayed.
- For user defined schedules, various offsets are available: 15min, hour, 12hour, week, month.

info *description*

Optionally, specify a description for the schedule.

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Usage Guidelines

Use the **no ssc backup vtm-cluster create schedule <schedule_id>** command to delete a specified schedule. You cannot delete a schedule that is in use.

Once the schedule is created, you can associate it with one or more clusters using the **ssc cluster create cluster-name <cluster_id> schedule <schedule_id>** command.

Examples

```
*** create a daily backup schedule ***
amnesiac (config) # ssc backup vtm-cluster create schedule sched-daily-01 frequency
daily backup_time 10:10 info "Daily backup schedule"
+-------------+-----------------------------------+
| Field       | Value                             |
+-------------+-----------------------------------+
| info        | Daily backup schedule             |
| schedule_id | BackupSchedule-MF06-31XX-0JWF-55R1 |
| tag         | sched-daily-01                    |
| frequency   | daily                             |
| backup_time | 10:10                             |
| offset      | 100                               |
+-------------+-----------------------------------+

*** create an hourly backup schedule ***
amnesiac (config) # ssc backup vtm-cluster create schedule sched-hourly-01 frequency
hourly offset 30 info "Hourly backup schedule"
+-------------+-----------------------------------+
| Field       | Value                             |
+-------------+-----------------------------------+
| info        | Hourly backup schedule            |
| schedule_id | BackupSchedule-60V4-PWWB-I6M7-OMVA |
| tag         | sched-hourly-01                   |
| frequency   | hourly                            |
| backup_time | N/A                               |
| offset      | 30                                |
+-------------+-----------------------------------+

*** create a monthly backup schedule ***
amnesiac (config) # ssc backup vtm-cluster create schedule sched-monthly-01
frequency monthly offset 11 backup_time 11:30 info "Monthly (11th) backup schedule"
+-------------+-----------------------------------+
| Field       | Value                             |
+-------------+-----------------------------------+
| info        | Monthly (11th) backup schedule    |
| schedule_id | BackupSchedule-F7AP-X5GP-Y974-WWF7 |
| tag         | sched-monthly-01                  |
| frequency   | monthly                           |
| backup_time | 11:30                             |
| offset      | 11                                |
+-------------+-----------------------------------+
```

```
*** create a weekly backup schedule ***
amnesiac (config) #  ssc backup vtm-cluster create schedule sched-weekly-01 frequency
weekly offset Wednesday backup_time 17:50 info "Weekly backup schedule"
+-------------+-----------------------------------+
| Field       | Value                             |
+-------------+-----------------------------------+
| info        | Weekly backup schedule            |
| schedule_id | BackupSchedule-LOUK-W5ZF-IAHR-M8KM |
| tag         | sched-weekly-01                   |
| frequency   | weekly                            |
| backup_time | 17:50                             |
| offset      | 2                                 |
+-------------+-----------------------------------+

*** create a custom backup schedule ***
amnesiac (config) # ssc backup vtm-cluster create schedule sched-user-01 frequency
user_defined offset 12hour info "12-hourly backup schedule"
+-------------+-----------------------------------+
| Field       | Value                             |
+-------------+-----------------------------------+
| info        | 12-hourly backup schedule         |
| schedule_id | BackupSchedule-PSYD-B5VS-1RY6-2TLA |
| tag         | sched-user-01                     |
| frequency   | userdefined                       |
| backup_time | 14:16                             |
| offset      | 720                               |
+-------------+-----------------------------------+

*** delete a schedule: successful ***
amnesiac (config) # no ssc backup vtm-cluster schedule sched-monthly-02
Schedule deleted sucessfully

*** delete a schedule: unsuccessful, as already in use ***
amnesiac (config) # no ssc backup vtm-cluster schedule sched-daily-01
Failed to delete schedule (Cannot purge a resource that is in use)
```

Related Commands

show ssc backup vtm-cluster schedules, ssc backup vtm-cluster update schedule, ssc cluster update cluster-name

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ssc backup vtm-cluster update schedule

Updates a backup schedule.

Syntax

ssc backup vtm-cluster update schedule *schedule_id* [new_name *new_schedule_id*] [frequency *frequency*] [offset *offset*] [backup_time *time*] [info *description*]

Parameters

schedule_id

Specify the required backup schedule.

new_name *new_schedule_id*

Optionally, specify a new name for the schedule. This is supported for all schedules.

frequency *frequency*

Optionally, specify a new frequency for the backup.

- daily: A daily frequency. This requires a backup_time but not an offset.
- hourly: An hourly frequency. This requires an offset but not a backup_time.
- monthly: A monthly frequency. This requires both an offset and a backup_time.
- weekly: A weekly frequency. This requires both an offset and a backup_time.
- user_defined: A customized frequency. This requires an offset but not a backup_time.

backup_time *time*

Optionally, specify a new backup time (HH:MM) for the schedule. This is supported for daily, weekly and monthly schedules only.

offset

Optionally, specify a new offset for the selected frequency type, which more closely specifies the point at which the backup will be taken:

- For daily schedules, no offset is supported.
- For an hourly schedule, the offsets represent every quarter of an hour, expressed as minutes. That is: 0, 15, 30 and 45.
- For monthly schedules, the offset is the day number on which the backup should be taken. This is limited to between 1 and 28.
- For weekly schedules, the offset is the day of the week on which the backup should be taken. That is: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday. These offset values are displayed as the numbers 0 to 6 when the details for a schedule are displayed.
- For user defined schedules, various offsets are available: 15min, hour, 12hour, week, month.

info *description*

Optionally, specify a new description for the schedule.

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Usage Guidelines

Use the **no ssc backup vtm-cluster create schedule <schedule_id>** command to delete a specified schedule. You cannot delete a schedule that is in use.

You can associate a schedule with one or more clusters using the **ssc cluster create cluster-name <cluster_id> schedule <schedule_id>** command.

Examples

```
ssc backup vtm-cluster update schedule sched-weekly-01 offset Wednesday backup_time
12:20
+-------------+-----------------------------------+
| Field       | Value                             |
+-------------+-----------------------------------+
| info        | Weekly backup schedule            |
| schedule_id | BackupSchedule-LOUK-W5ZF-IAHR-M8KM |
| tag         | sched-weekly-01                   |
| frequency   | weekly                            |
| backup_time | 12:20                             |
| offset      | 2                                 |
+-------------+-----------------------------------+
```

Related Commands

show ssc backup vtm-cluster schedules, ssc backup vtm-cluster update schedule, ssc cluster update cluster-name

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ssh client generate identity user

Generates SSH client identity keys for the specified user. SSH provides secure log in for Windows and UNIX clients and servers.

Syntax

ssh client generate identity user user

Parameters

user

Specify the client user login.

Usage Guidelines

The **no ssh client identity user <user>** command disables SSH client identity keys for a specified user.

Examples

```
amnesiac (config) # ssh client generate identity user test
```

Related Commands

show ssh client

ssh client user authorized-key key sshv2

Sets the RSA encryption method by RSA Security and authorized-key for the SSH user.

Syntax

[no] ssh client user *user* authorized-key key sshv2 *public-key*

Parameters

user

Specify the user name. Must be an existing local user.

public-key

Specify the public key for SSH version 2 for the specified SSH user.

Usage Guidelines

The **no** command option disables the authorized-key encryption method.

Examples

```
amnesiac (config) # ssh client user admin authorized-key key sshv2 MyPublicKey
```

Related Commands

show ssh client

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ssc cloud-reg create

Creates a cloud registration resource on the Services Director. This is required during automated self-registration of vTMs.

Syntax

ssc cloud-reg create reg-policy *registration-policy* [e-mail *email-address*] [owner *owner*] [[tag *name*]

Parameters

`reg-policy` *`registration-policy`*

Select a self-registration policy for the cloud registration resource. This is the self-registration policy that will be used during the evaluation of a cloud-based vTM's self-registration.

`e-mail` *`email-address`*

Optionally, specify a valid e-mail address that will be used to contact an administrator if required.

`owner`

Specify an owner for the cloud registration resource. This property is optional when the resource is created, but there is a mandatory validation of this property during the evaluation of a cloud-based vTM's self-registration.

`tag`

Optionally, enter a unique name for the cloud registration resource.

Usage Guidelines

Once you have created the cloud registration resource, you must use the show ssc cloud-reg user-data command to display the user data for the cloud registration resource. This text is required during the AWS instance creation wizard for the first cloud-based vTM in a cluster. See the *Pulse Secure Services Director Getting Started Guide* for full details of this process.

You cannot update a cloud registration resource once it is created.

Examples

```
*** list cloud registration resources ***
amnesiac (config) # ssc cloud-reg list
+-----------------+
| Message         |
+-----------------+
| No record found |
+-----------------+
```

```
*** create a new cloud registration ***
amnesiac (config) # ssc cloud-reg create reg-policy self-reg-01 owner JK tag jk-
cloud-reg-01
+---------------------+-----------------------------+
| Field               | Value                       |
+---------------------+-----------------------------+
| tag                 | jk-cloud-reg-01             |
| owner               | Owner-S5HZ-52G9-HZS2-KIAO   |
| email_address       |                             |
| registration_policy | Policy-SH1M-L5BD-5L9L-YFKK  |
| date_created        | 2016-09-07 13:34:32.404407  |
| user_data_id        | UserData-Z28S-AXW9-PAVA-3YE3 |
+---------------------+-----------------------------+

*** list cloud registration resources again ***
amnesiac (config) # ssc cloud-reg list
+-----------------------------+-----------------+
| ID                          | Tag             |
+-----------------------------+-----------------+
| UserData-Z28S-AXW9-PAVA-3YE3 | jk-cloud-reg-01 |
+-----------------------------+-----------------+
```

Related Commands

show ssc cloud-reg, show ssc cloud-reg user-data id, ssc cloud-reg delete, ssc cloud-reg list

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ssc cloud-reg delete

Deletes a cloud registration resource on the Services Director.

Syntax

ssc cloud-reg delete id *cloud-reg-id*

Parameters

`id` *`cloud-reg-id`*

Select a cloud-registration resource that you want to delete.

Examples

```
*** list all cloud registration resources ***
amnesiac (config) # ssc cloud-reg list
+------------------------------+--------------------+
| ID                           | Tag                |
+------------------------------+--------------------+
| UserData-ORI9-YXGU-37VY-3OPQ | jk-cloud-reg-01    |
| UserData-NVF1-TLGP-R7EY-RUUY | cloud-reg-demo-01  |
+------------------------------+--------------------+

*** delete a cloud registration resource ***
amnesiac (config) # ssc cloud-reg delete id jk-cloud-reg-01
+------------------------------------------------------------+
| Deleted                                                    |
+------------------------------------------------------------+
| Cloud Registration UserData-ORI9-YXGU-37VY-3OPQ deleted |
+------------------------------------------------------------+

*** list all cloud registration resources again ***
amnesiac (config) # ssc cloud-reg list
+------------------------------+--------------------+
| ID                           | Tag                |
+------------------------------+--------------------+
| UserData-NVF1-TLGP-R7EY-RUUY | cloud-reg-demo-01  |
+------------------------------+--------------------+
```

Related Commands

show ssc cloud-reg, show ssc cloud-reg user-data id, ssc cloud-reg create, ssc cloud-reg list

ssc cloud-reg list

Displays a list of cloud registration resources on the Services Director.

Syntax

ssc cloud-reg list

Examples

```
amnesiac (config) # ssc cloud-reg list
+------------------------------+-------------------+
| ID                           | Tag               |
+------------------------------+-------------------+
| UserData-ORI9-YXGU-37VY-3OPQ | jk-cloud-reg-01   |
| UserData-NVF1-TLGP-R7EY-RUUY | cloud-reg-demo-01 |
+------------------------------+-------------------+
```

Related Commands

show ssc cloud-reg, show ssc cloud-reg user-data id, ssc cloud-reg create, ssc cloud-reg delete

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ssc cluster create cluster-name

Creates a User Created Services Director cluster.

Syntax

[no] ssc cluster create cluster-name *name* [schedule *schedule_id*] [owner *cluster-owner*] [analytics-profile *profile-id*]

Parameters

name

Specify a unique name for the cluster.

schedule *schedule_id*

Optionally, specify an existing backup schedule for the cluster.

owner *owner*

Optionally, specify an owner for the cluster.

analytics-profile *profile-id*

Optionally, specify an analytics profile for the cluster.

Usage Guidelines

This cluster is available for use by deployed vTMs only.

You cannot create a *Discovered* cluster using the CLI.

To delete an empty cluster, use the **no ssc cluster cluster-name** command.

Examples

```
amnesiac (config) # ssc cluster create cluster-name JK-Cluster-01 schedule sched-
user-01
+----------------------+-----------------------------------+
| Field                | Value                             |
+----------------------+-----------------------------------+
| status               | Active                            |
| next_backup_time     | 2017-07-17 02:00:00               |
| share_tips           | True                              |
| cluster_port_offset  | None                              |
| in_use               | False                             |
| cluster_type         | User Created                      |
| user_data            | None                              |
| task                 | None                              |
| number_backups       | 5                                 |
| schedule_id          | BackupSchedule-L1X2-UPEN-9O7Q-3X2I |
| tag                  | JK-Cluster-01                     |
| members              | []                                |
| owner                |                                   |
| children             | None                              |
| analytics_profile_id | None                              |
+----------------------+-----------------------------------+
```

Related Commands

show ssc cluster cluster-name, show ssc backup vtm-cluster schedules, ssc cluster list, ssc cluster update cluster-name

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ssc cluster create template-name

Creates a User Created Services Director cluster based on a specified template.

Syntax

ssc cluster create template-name *name* [cluster-name cluster-id] [owner *owner-id*] [schedule *schedule-id*]

Parameters

`template-name` *`name`*

Identify the template you want to use.

`cluster-name` *`cluster-id`*

(Optional) Specify a cluster name. This will be used in preference to any template value.

`owner` *`owner-id`*

(Optional) Specify an owner for the cluster. This will be used in preference to any template value.

`schedule schedule-id`

(Optional) Specify a backup schedule for the cluster. This will be used in preference to any template value.

Usage Guidelines

Create clusters using parameters in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to create the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

This cluster is available for use by deployed vTMs only.

You cannot create a *Discovered* cluster using the CLI.

Examples

```
amnesiac (config) # ssc cluster create template-name cluster-temp cluster-name
Example2
+----------------------+--------------+
| Field                | Value        |
+----------------------+--------------+
| status               | Active       |
| next_backup_time     | None         |
| share_tips           | True         |
| cluster_port_offset  | None         |
| in_use               | False        |
| cluster_type         | User Created |
| user_data            | None         |
| task                 | None         |
| number_backups       | 5            |
| schedule_id          | None         |
| tag                  | Example2     |
| members              | []           |
| owner                |              |
| children             | None         |
| analytics_profile_id | None         |
+----------------------+--------------+
```

Related Commands

show ssc cluster cluster-name, show ssc backup vtm-cluster schedules, ssc cluster update template-name

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ssc cluster list

Lists current clusters. This includes both Discovered and User Created clusters.

Syntax

ssc cluster list

Examples

```
amnesiac (config) # ssc cluster list
+-----------------------------+
| Cluster                     |
+-----------------------------+
| TK-327                      |
| Violet-Cluster              |
| TK-421                      |
| Cluster-A1BQ-V577-V8NY-UIDZ |
+-----------------------------+
```

Related Commands

show ssc cluster cluster-name, show ssc backup vtm-cluster schedules, ssc cluster create cluster-name, ssc cluster update cluster-name

ssc cluster update cluster-name

Updates a Services Director cluster.

Syntax

ssc cluster update cluster-name *name* [schedule *schedule_id*] [new-cluster-name *name*] [status [Active | Inactive]]

Parameters

name

Specify the cluster name.

`new-cluster-name`

Specify a new tag for the cluster.

`schedule`

Specify a backup schedule for the cluster.

`status [Active | Inactive]`

Specify the status of the cluster:

- `Active:` Activates the cluster.
- `Inactive:` Deactivates the cluster. A cluster cannot be marked as **Inactive** if it is in use. A cluster cannot be reactivated after **Inactive** status has been specified.

`analytics-profile`

(Discovered clusters only) Specify an analytics profile for the cluster, using its tag or UUID. See also *Usage Guidelines*.

Usage Guidelines

Use the ssc cluster update cluster-name <cluster_id> schedule null command to detach delete the specified schedule.

Adding an analytics profile to a cluster will enable analytics on all vTMs in the cluster, providing that all required resources (analytics profiles, collection endpoints, search endpoints, and log-export resources) are defined. See the *Pulse Secure Services Director Getting Started Guide* for full details of this process.

Updating the selected analytics profile for a cluster will change the analytics configuration of all vTMs in the cluster.

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Examples

```
*** list all clusters ***
amnesiac (config) # ssc cluster list
+-----------+
| Cluster   |
+-----------+
| Vermilion |
| Cerulean  |
| Emerald   |
+-----------+

*** show properties for a specific cluster ***
amnesiac (config) # show ssc cluster cluster-name Cerulean
+----------------------+-----------------------------------+
| Field                | Value                             |
+----------------------+-----------------------------------+
| status               | Active                            |
| next_backup_time     | None                              |
| share_tips           | True                              |
| cluster_port_offset  | None                              |
| in_use               | True                              |
| cluster_type         | Discovered                        |
| user_data            | None                              |
| task                 | None                              |
| number_backups       | 5                                 |
| schedule_id          | None                              |
| tag                  | Cerulean                          |
| members              | [u'Instance-92Y7-JVCE-00TW-UY1N'] |
| owner                | Owner-F4MQ-6X5X-S07W-B0RI         |
| children             | None                              |
| analytics_profile_id | None                              |
+----------------------+-----------------------------------+
```

```
*** update the cluster ***
amnesiac (config) # ssc cluster update cluster-name Cerulean new-cluster-name
Cerulean-Cluster
+----------------------+-----------------------------------+
| Field                | Value                             |
+----------------------+-----------------------------------+
| status               | Active                            |
| next_backup_time     | None                              |
| share_tips           | True                              |
| cluster_port_offset  | None                              |
| in_use               | True                              |
| cluster_type         | Discovered                        |
| user_data            | None                              |
| task                 | None                              |
| number_backups       | 5                                 |
| schedule_id          | None                              |
| tag                  | Cerulean-Cluster                  |
| members              | [u'Instance-92Y7-JVCE-00TW-UY1N'] |
| owner                | Owner-F4MQ-6X5X-S07W-B0RI         |
| children             | None                              |
| analytics_profile_id | None                              |
+----------------------+-----------------------------------+

*** list all clusters ***
amnesiac (config) # ssc cluster list
+------------------+
| Cluster          |
+------------------+
| Vermilion        |
| Cerulean-Cluster |
| Emerald          |
+------------------+
```

Related Commands

show ssc cluster cluster-name, show ssc backup vtm-cluster schedules, ssc backup vtm-cluster create schedule

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ssc cluster update template-name

Updates a Services Director cluster based on the specified template.

Syntax

ssc cluster update template-name *template-name* [new-cluster-name *name*] [schedule *backup-schedule-id*] [analytics-profile *profile-id*]

Parameters

`template-name`

Specify the template you want to use.

`new-cluster-name`

Specify a new tag for the cluster. This will be used in preference to any template value.

`schedule`

Specify a backup schedule for the cluster. This will be used in preference to any template value.

`analytics-profile`

(Discovered clusters only) Specify an analytics profile for the cluster, using its tag or UUID. This will be used in preference to any template value. See also *Usage Guidelines*.

Usage Guidelines

Update a cluster with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to update the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Adding an analytics profile to a cluster will enable analytics on all vTMs in the cluster, providing that all required resources (analytics profiles, collection endpoints, search endpoints, and log-export resources) are defined. See the *Pulse Secure Services Director Getting Started Guide* for full details of this process.

Updating the selected analytics profile for a cluster will change the analytics configuration of all vTMs in the cluster.

Examples

```
amnesiac (config) # ssc cluster update template-name cluster-temp cluster-name
Cerulean-Cluster schedule sched-user-01
+----------------------+-------------------------------------+
| Field                | Value                               |
+----------------------+-------------------------------------+
| status               | Active                              |
| next_backup_time     | 2017-07-17 02:00:00                 |
| share_tips           | True                                |
| cluster_port_offset  | None                                |
| in_use               | True                                |
| cluster_type         | Discovered                          |
| user_data            | None                                |
| task                 | None                                |
| number_backups       | 5                                   |
| schedule_id          | BackupSchedule-L1X2-UPEN-9O7Q-3X2I  |
| tag                  | Cerulean-Cluster                    |
| members              | [u'Instance-92Y7-JVCE-00TW-UY1N']   |
| owner                | Owner-F4MQ-6X5X-S07W-B0RI           |
| children             | None                                |
| analytics_profile_id | None                                |
+----------------------+-------------------------------------+
```

Related Commands

show ssc cluster cluster-name

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ssc collection-endpoint create

Creates a new Collection Endpoint resource. This resource is used for vTM analytics.

Syntax

ssc collection-endpoint create txn-export-address *address* txn-tls *Boolean* log-export-address *address* auth-type *value* [auth-username *username* auth-password *password*] [auth-token *HEC-token*] [txn-tls-verify *Boolean*] [txn-export-cert *Certificate*] [log-export-cert *Certificate*] [name *value*]

Parameters

`txn-export-address`

The address that transaction data is exported to, in the form *<server>:<port>*.

For example: *demo.com:7090*

`txn-tls`

Indicates whether transaction data requires secure transmission. If `true`, you must also specify txn-export-cert, and you can optionally specify txn-tls-verify.

`log-export-address`

The address that log data is exported to, in the form *<protocol><server>:<port><filepath>*, where <protocol> can be either `http://` or `https://`.

For example: *http://demo.com:8080/logs/collector*.

If protocol is set to `https://`, you must also specify log-export-cert.

`auth-type` *`value`*

The required authorization. This can be set to:

- "None": This indicates no authorization is required.
- "Basic": This indicates that basic HTTP authorization is required. You must also specify auth-username and auth-password.
- "Splunk": This indicates that authorization is performed on the Splunk®[1] platform. You must also specify auth-token.

`auth-username`

The username for HTTP Basic authentication. This is required when auth-type is Basic.

auth-password

The password for HTTP Basic authentication. This is required when auth-type is Basic.

`auth-token`

The HEC authorization token required by the Splunk platform. This is required when auth-type is "Splunk".

1. Splunk is a registered trademark of Splunk Inc. in the USA and other countries.

`txn-tls-verify`

(Optional) If true, indicates that verification of the secure connection to the transaction collection endpoint is required.

`log-tls-verify`

(Optional) If true, indicates that verification of the secure connection to the log collection endpoint is required.

`txn-export-cert`

The certificate of the transaction export collection endpoint. This is required if txn-tls is `true`.

`log-export-cert`

The certificate of the log export collection endpoint. This is required if the <protocol> in log-export-address is `https://`.

`name`

(Optional) The customer-facing name for the collection endpoint resource. If this is not set, the tag is set to the UUID value for the resource.

Usage Guidelines

This command is only used for Collection Endpoint resources. Search Endpoint resources are handled separately, by an equivalent "search-endpoint" command.

Examples

```
*** add a collection endpoint resource that uses no authorization ***
amnesiac (config) # ssc collection-endpoint create txn-export-address demo.com:7090
txn-tls true log-export-address http://demo.com:8080/logs/collector auth-type none
log-tls-verify false name JK-Collection-03
+-----------------------------------+-----------------------------------------+
| Field                             | Value                                   |
+-----------------------------------+-----------------------------------------+
| transaction_tls_verify            | False                                   |
| auth_type                         | none                                    |
| transaction_export_address        | demo.com:7090                           |
| log_export_address                | http://demo.com:8080/logs/collector     |
| auth_token                        |                                         |
| collection_endpoint_id            | Collection-Endpoint-U3FX-MTKU-WSY6-WZ99 |
| transaction_endpoint_certificate |                                         |
| transaction_export_tls            | True                                    |
| log_endpoint_certificate          |                                         |
| tag                               | JK-Collection-03                        |
| log_tls_verify                    | False                                   |
| auth_password                     |                                         |
| auth_username                     |                                         |
+-----------------------------------+-----------------------------------------+
```


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```
*** add a collection endpoint resource that uses HTTP-based authorization ***
amnesiac (config) # ssc collection-endpoint create txn-export-address demo.com:7091
txn-tls true log-export-address http://demo.com:8080/logs/collector auth-type basic
auth-username admin auth-password password name JK-Collection-04
+-----------------------------------+-----------------------------------------+
| Field                             | Value                                   |
+-----------------------------------+-----------------------------------------+
| transaction_tls_verify            | False                                   |
| auth_type                         | basic                                   |
| transaction_export_address        | demo.com:7091                           |
| log_export_address                | http://demo.com:8080/logs/collector     |
| auth_token                        |                                         |
| collection_endpoint_id            | Collection-Endpoint-4N4H-0NL1-T02T-PZZ7 |
| transaction_endpoint_certificate |                                         |
| transaction_export_tls            | True                                    |
| log_endpoint_certificate          |                                         |
| tag                               | JK-Collection-04                        |
| log_tls_verify                    | False                                   |
| auth_password                     | password                                |
| auth_username                     | admin                                   |
+-----------------------------------+-----------------------------------------+

*** add a collection endpoint resource that uses analytics system authorization ***
amnesiac (config) # ssc collection-endpoint create txn-export-address demo.com:7092
txn-tls true log-export-address http://demo.com:8080/logs/collector auth-type Splunk
auth-token token name JK-Collection-05
+-----------------------------------+-----------------------------------------+
| Field                             | Value                                   |
+-----------------------------------+-----------------------------------------+
| transaction_tls_verify            | False                                   |
| auth_type                         | Splunk                                  |
| transaction_export_address        | demo.com:7092                           |
| log_export_address                | http://demo.com:8080/logs/collector     |
| auth_token                        | token                                   |
| collection_endpoint_id            | Collection-Endpoint-YKKP-2S6C-VLMM-7L76 |
| transaction_endpoint_certificate |                                         |
| transaction_export_tls            | True                                    |
| log_endpoint_certificate          |                                         |
| tag                               | JK-Collection-05                        |
| log_tls_verify                    | False                                   |
| auth_password                     |                                         |
| auth_username                     |                                         |
+-----------------------------------+-----------------------------------------+
```

```
*** list all collection endpoints ***
amnesiac (config) # ssc collection-endpoint list
+-----------------------------------------+------------------+
| ID                                      | Tag              |
+-----------------------------------------+------------------+
| Collection-Endpoint-4N4H-0NL1-T02T-PZZ7 | JK-Collection-04 |
| Collection-Endpoint-9D37-B16X-75XG-3K8W | JK-Collection-01 |
| Collection-Endpoint-1EGK-KLKN-R6RB-JDLK | JK-Collection-02 |
| Collection-Endpoint-U3FX-MTKU-WSY6-WZ99 | JK-Collection-03 |
| Collection-Endpoint-YKKP-2S6C-VLMM-7L76 | JK-Collection-05 |
+-----------------------------------------+------------------+
```

Related Commands

show ssc collection-endpoint, ssc collection-endpoint delete, ssc collection-endpoint list, ssc collection-endpoint update

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ssc collection-endpoint delete

Delete a Collection Endpoint resource. This resource is used for vTM analytics.

Syntax

ssc collection-endpoint delete name *endpoint-id*

Parameters

`name` *`endpoint-id`*

The identifier for the collection endpoint resource, either its **tag** or its UUID.

Usage Guidelines

This command is only used for Collection Endpoint resources. Search Endpoint resources are handled separately, by an equivalent "search-endpoint" command.

Examples

```
*** list all collection endpoints ***
amnesiac (config) # ssc collection-endpoint list
+-----------------------------------------+------------------+
| ID                                      | Tag              |
+-----------------------------------------+------------------+
| Collection-Endpoint-4N4H-0NL1-T02T-PZZ7 | JK-Collection-04 |
| Collection-Endpoint-9D37-B16X-75XG-3K8W | JK-Collection-01 |
| Collection-Endpoint-1EGK-KLKN-R6RB-JDLK | JK-Collection-02 |
| Collection-Endpoint-U3FX-MTKU-WSY6-WZ99 | JK-Collection-03 |
| Collection-Endpoint-YKKP-2S6C-VLMM-7L76 | JK-Collection-05 |
+-----------------------------------------+------------------+

*** delete an endpoint ***
amnesiac (config) # ssc collection-endpoint delete name JK-Collection-05
+-----------------------------------------------------------------------+
| Deleted                                                               |
+-----------------------------------------------------------------------+
| Analytics Endpoint Collection-Endpoint-YKKP-2S6C-VLMM-7L76 deleted |
+-----------------------------------------------------------------------+

*** list all collection endpoints to confirm deletion ***
amnesiac (config) # ssc collection-endpoint list
+-----------------------------------------+------------------+
| ID                                      | Tag              |
+-----------------------------------------+------------------+
| Collection-Endpoint-4N4H-0NL1-T02T-PZZ7 | JK-Collection-04 |
| Collection-Endpoint-9D37-B16X-75XG-3K8W | JK-Collection-01 |
| Collection-Endpoint-1EGK-KLKN-R6RB-JDLK | JK-Collection-02 |
| Collection-Endpoint-U3FX-MTKU-WSY6-WZ99 | JK-Collection-03 |
+-----------------------------------------+------------------+
```

Related Commands

show ssc collection-endpoint, ssc collection-endpoint create, ssc collection-endpoint list, ssc collection-endpoint update

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ssc collection-endpoint list

Lists all Collection Endpoint resources. These resources are used for vTM analytics.

Syntax

ssc collection-endpoint list

Usage Guidelines

This command is only used for Collection Endpoint resources. Search Endpoint resources are handled separately, by an equivalent "search-endpoint" command.

Examples

```
amnesiac (config) # ssc collection-endpoint list
+----------------------------------------+------------------+
| ID                                     | Tag              |
+----------------------------------------+------------------+
| Collection-Endpoint-4N4H-0NL1-T02T-PZZ7 | JK-Collection-04 |
| Collection-Endpoint-9D37-B16X-75XG-3K8W | JK-Collection-01 |
| Collection-Endpoint-1EGK-KLKN-R6RB-JDLK | JK-Collection-02 |
| Collection-Endpoint-U3FX-MTKU-WSY6-WZ99 | JK-Collection-03 |
| Collection-Endpoint-YKKP-2S6C-VLMM-7L76 | JK-Collection-05 |
+----------------------------------------+------------------+
```

Related Commands

show ssc collection-endpoint, ssc collection-endpoint create, ssc collection-endpoint delete, ssc collection-endpoint update

ssc collection-endpoint update

Updates a Collection Endpoint resource. This resource is used for vTM analytics.

Syntax

ssc collection-endpoint update name *endpoint-id* [txn-export-address *address*] [txn-tls *Boolean*] [log-export-address *address*] [auth-type *value*] [auth-username *username*] [auth-password *password*] [auth-token *HEC-token*] [txn-tls-verify *Boolean*] [txn-export-cert *Certificate*] [log-export-cert *Certificate*] [new-name *value*]

Parameters

`name`

Specify a unique identifier for the collection endpoint, either its tag or UUID.

`txn-export-address`

The address that transaction data is exported to, in the form *<server>:<port>*.

For example: *demo.com:7090*

`txn-tls`

Indicates whether transaction data requires secure transmission. If `true`, txn-export-cert is required, and txn-tls-verify is optional.

`log-export-address`

The address that log data is exported to, in the form *<protocol><server>:<port><filepath>*, where <protocol> can be either `http://` or `https://`.

For example: *http://demo.com:8080/logs/collector*.

If protocol is set to `https://`, **log-export-cert** is required.

`auth-type`

The required authorization. This can be set to:

- "None": This indicates no authorization is required.
- "Basic": This indicates that basic HTTP authorization is required. If used, auth-username and auth-password are required.
- "Splunk": This indicates that authorization is performed on the Splunk platform. You must also specify auth-token.

`auth-username`

The username for HTTP Basic authentication. This is required when auth-type is "Basic".

`auth-password`

The password for HTTP Basic authentication. This is required when auth-type is "Basic".

`auth-token`

The HEC token from your Splunk platform. This is required when auth-type is "Splunk".

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`txn-tls-verify`

If `true`, indicates that verification of the secure connection to the transaction collection endpoint is required.

`log-tls-verify`

If `true`, indicates that verification of the secure connection to the log collection endpoint is required.

`txn-export-cert`

The certificate of the transaction export collection endpoint. This is required if txn-tls is `true`.

`log-export-cert`

The certificate of the log export collection endpoint. This is required if the <protocol> in log-export-address is `https://`.

`new-name`

(Optional) A replacement name for the collection endpoint resource.

Usage Guidelines

This command is only used for Collection Endpoint resources. Search Endpoint resources are handled separately, by an equivalent "search-endpoint" command.

Examples

```
*** list all collection endpoints ***
amnesiac (config) # ssc collection-endpoint list
+-----------------------------------------+------------------+
| ID                                      | Tag              |
+-----------------------------------------+------------------+
| Collection-Endpoint-4N4H-0NL1-T02T-PZZ7 | JK-Collection-04 |
| Collection-Endpoint-9D37-B16X-75XG-3K8W | JK-Collection-01 |
| Collection-Endpoint-1EGK-KLKN-R6RB-JDLK | JK-Collection-02 |
| Collection-Endpoint-U3FX-MTKU-WSY6-WZ99 | JK-Collection-03 |
| Collection-Endpoint-YKKP-2S6C-VLMM-7L76 | JK-Collection-05 |
+-----------------------------------------+------------------+
```

```
*** show details for a listed collection endpoint ***
amnesiac (config) # show ssc collection-endpoint name JK-Collection-01
+-----------------------------------+-----------------------------------------+
| Field                             | Value                                   |
+-----------------------------------+-----------------------------------------+
| transaction_tls_verify            | False                                   |
| auth_type                         | none                                    |
| transaction_export_address        | demo.com:7070                           |
| log_export_address                | https://demo.com:8080/logs/collector    |
| auth_token                        |                                         |
| collection_endpoint_id            | Collection-Endpoint-9D37-B16X-75XG-3K8W |
| transaction_endpoint_certificate |                                         |
| transaction_export_tls            | False                                   |
| log_endpoint_certificate          |                                         |
| tag                               | JK-Collection-01                        |
| log_tls_verify                    | False                                   |
| auth_password                     |                                         |
| auth_username                     |                                         |
+-----------------------------------+-----------------------------------------+

*** update the collection endpoint, renaming it and changing the port ***
amnesiac (config) # ssc collection-endpoint update name JK-Collection-01 new-name
JK-C-Endpoint-9999 txn-export-address demo.com:9999
+-----------------------------------+-----------------------------------------+
| Field                             | Value                                   |
+-----------------------------------+-----------------------------------------+
| transaction_tls_verify            | False                                   |
| auth_type                         | none                                    |
| transaction_export_address        | demo.com:9999                           |
| log_export_address                | https://demo.com:8080/logs/collector    |
| auth_token                        |                                         |
| collection_endpoint_id            | Collection-Endpoint-9D37-B16X-75XG-3K8W |
| transaction_endpoint_certificate |                                         |
| transaction_export_tls            | False                                   |
| log_endpoint_certificate          |                                         |
| tag                               | JK-C-Endpoint-9999                      |
| log_tls_verify                    | False                                   |
| auth_password                     |                                         |
| auth_username                     |                                         |
+-----------------------------------+-----------------------------------------+
```


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```
*** list all collection endpoints ***
amnesiac (config) # ssc collection-endpoint list
+-----------------------------------------+--------------------+
| ID                                      | Tag                |
+-----------------------------------------+--------------------+
| Collection-Endpoint-4N4H-0NL1-T02T-PZZ7 | JK-Collection-04   |
| Collection-Endpoint-9D37-B16X-75XG-3K8W | JK-C-Endpoint-9999 |
| Collection-Endpoint-1EGK-KLKN-R6RB-JDLK | JK-Collection-02   |
| Collection-Endpoint-U3FX-MTKU-WSY6-WZ99 | JK-Collection-03   |
| Collection-Endpoint-YKKP-2S6C-VLMM-7L76 | JK-Collection-05   |
+-----------------------------------------+--------------------+
```

Related Commands

show ssc collection-endpoint, ssc collection-endpoint create, ssc collection-endpoint delete, ssc collection-endpoint list

ssc database local bind-address

Sets the local MySQL database bind address.

Syntax

[no] ssc database local bind-address *ip-addr*

Parameters

ip-addr

Specify the IP address.

Usage Guidelines

Use the **no** command option to delete the bind address.

Examples

```
amnesiac (config) # ssc database local bind-address 10.0.0.1
```

Related Commands

show ssc database local

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ssc database local db-file delete

Deletes saved Services Director database file.

Syntax

ssc database local db-file delete *filename*

Parameters

filename

Specify the file name for the database.

Examples

```
amnesiac (config) # ssc database local db-file delete dbtest
```

Related Commands

show ssc database local

ssc database local db-file export

Exports the Services Director database to a file.

Syntax

ssc database local db-file export

Usage Guidelines

The name of the exported file is calculated automatically using the following format:

```
sscdb_dump_<SSC VA version string>_<timestamp>.sql
```

Examples

```
amnesiac (config) # ssc database local db-file export
```

Related Commands

show ssc database local db-file

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ssc database local db-file import

Imports the Services Director database from a file.

Syntax

ssc database local db-file import *filename*

Parameters

filename

Specify the file name for the database.

Examples

```
amnesiac (config) # ssc database local db-file import dbtest
```

Related Commands

show ssc database local db-file

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ssc database local port

Sets the local MySQL database port.

Syntax

[no] ssc database local port *port*

Parameters

port

Specify the port for the database.

Usage Guidelines

Use the **no** command option to delete the port.

Examples

```
amnesiac (config) # ssc database local port 1234
```

Related Commands

show ssc database local db-file

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ssc database local username

Sets the local MySQL database username and password.

Syntax

ssc database local username *name* password *password*

Parameters

name

Specify the username for the local database.

password

Specify the password for the local database.

Examples

```
amnesiac (config) # ssc database local username ssc password abcd1234
+-------------+-------------+
| DB Username | DB Password |
+-------------+-------------+
| ssc         | abcd1234    |
+-------------+-------------+
```

Related Commands

show ssc database local credentials

ssc database remote address

Sets the hostname or IP address of the remote database.

Syntax

[no] ssc database remote address *address*

Parameters

address

Specify the hostname or IP address of the remote database.

Usage Guidelines

Use the **no** command option to delete the remote database address.

Examples

```
*** specify a hostname ***
amnesiac (config) # ssc database remote address dmankievicz-03.cam.demo.com

*** specify an IP address ***
amnesiac (config) # ssc database remote address 10.11.12.13
```

Related Commands

show ssc database remote

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ssc database remote db-user-name

Sets the user with privileges for the remote database.

Syntax

ssc database remote db-user-name *name*

Parameters

name

Specify the database user name.

Examples

```
amnesiac (config) # ssc database remote db-user-name dbadmin
```

Related Commands

show ssc database remote

ssc database remote db-user-pwd

Sets the password for the user with privileges for the remote database.

Syntax

ssc database remote db-user-pwd *password*

Parameters

password

Specify the user password.

Examples

```
amnesiac (config) # ssc database remote db-user-pwd db1234
```

Related Commands

show ssc database remote

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ssc database remote port

Sets the remote database port.

Syntax

[no] ssc database remote port *port*

Parameters

port

Specify the port for the remote database.

Usage Guidelines

Use the **no** command option to delete the remote port.

Examples

```
amnesiac (config) # ssc database remote port 1234
```

Related Commands

show ssc database remote

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ssc database use-local

Sets the Services Director to use the local MySQL database.

Syntax

[no] ssc database use-local

Usage Guidelines

Use the **no** command option to stop using the local MySQL database.

Examples

```
amnesiac (config) # ssc database use-local
```

Related Commands

show ssc database remote

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ssc feature-pack create fpname

Creates a Feature Pack resource for the Services Director.

Syntax

ssc feature-pack create fpname *name* [skus *sku-list* |[stm-sku *sku-name* [add-on-skus *add-on-SKU-list*]] [excluded *feature-list*] [info *description*]

Parameters

name

Specify a unique name for the Feature Pack.

skus

(For newer SKUs) Specify a base SKU and one or more additional SKUs. This is a comma-separated list enclosed in double quotes.

stm-sku

(Older base SKUs) Specify the base SKU on which the Feature Pack is based. This is limited to SKUs compatible with your Services Director license. If you specify this, you can also specify add-on-skus.

excluded *list*

(Optional) Specify a comma-separated list of features in double quote marks from the base SKU that are excluded. This includes:

- ts: Excludes TrafficScript
- comp: Excludes compression
- cache: Excludes caching
- glb: Excludes global load balancing
- bwm: Excludes bandwidth management classes
- rate: Excludes rate shaping classes
- slm: Excludes service level monitoring
- auto: Excludes autoscaling
- afm: Excludes use of SAF
- apt: Excludes use of Aptimizer.

This list is a comma-separated list enclosed in double quote marks. A complete list can be seen using the show ssc sku sku-name command for your SKU.

`add-on-skus`

(Older base SKUs) Optionally, specify a list of feature SKUs to be associated with the stm-sku base SKU. This includes:

- `ADD-FIPS:` Federal Information Processing Standards (FIPs)
- `ADD-WAF:` Virtual Web Application Firewall
- `ADD-WEBACCEL:` Web Content Accelerator.

This list is a comma-separated list enclosed in double quote marks.

`info`

Optionally, specify information about the feature pack.

Usage Guidelines

A Feature Pack is a subset (or total set) of the features in a Traffic Manager SKU. The Feature Pack can be applies to vTM instances.

You can view a list of available features for your SKU using the show ssc sku sku-name. You can then specify any of these for exclusion.

The properties that you specify will depend on your base SKU:

- For older SKUs (such as *STM-400*), you specify the stm-sku and add-on-skus properties.
- For newer SKUs (such as *ENT-ADVANCED*), you specify the skus property. This is a comma-separated list of SKUs enclosed in double quote marks.

Examples

```
*** list available Feature Packs ***
amnesiac (config) # ssc feature-pack list
+--------------------+
| FeaturePack        |
+--------------------+
| ENT-ADVANCED_full |
+--------------------+

*** list available SKUs ***
amnesiac (config) # ssc sku list
+----------------+
| Sku            |
+----------------+
| ENT-ADVANCED   |
| ENT-ENTERPRISE |
| ENT-ENTM       |
| ENT-WAFPROXY   |
| STM-100        |
| STM-200        |
| STM-300        |
| STM-400        |
| STM-WAFPROXY   |
+----------------+
```


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```
*** show details for your SKU to see its list of available features ***
amnesiac (config) # show ssc sku sku-name ENT-ADVANCED
+---------------------+-------------------------------------------------------------
| Field               | Value
+---------------------+-------------------------------------------------------------
| status              | Active
| pricing_model       | prepaid
| add_on_skus         | []
| feature_tier        | Advanced
| features            | anlyt : Enable Realtime Analytics.
|                     | auto  : Enable Autoscaling.
|                     | bwm   : Enable Bandwidth Management classes.
|                     | cache : Enable Web Caching
|                     | comp  : Enable Compression
|                     | cr    : Do not limit the user to cut-down RuleBuilder ...
|                     | evnts : Enable Events and Actions
|                     | glb   : Enable Global Load Balancing
|                     | java  : Enable Java.
|                     | lbcel : Array of cells.
|                     | lbcon : Least connection based.
|                     | lbfail: Balance failure class (used only for testing & ...
|                     | lbone : Always choose first node in a pool (used only ...
|                     | lbrnd : Random.
|                     | lbrob : Round robin.
|                     | lbrsp : Fastest response times.
|                     | lbwcon: Weighted least connection based.
|                     | lbwrob: Weighted round robin.
|                     | loca  : Enable Location support.
|                     | moni  : Enable Active Monitors
|                     | rate  : Enable Rate Shaping classes.
|                     | rb    : Do not limit the user to RuleBuilder for ...
|                     | rhi   : Route Health Injection.
|                     | slm   : Enable Service Level Monitoring.
|                     | ssl   : Enable SSL
|                     | svcprt: Enable Service Protection classes

|                     | ts    : Enable TrafficScript
|                     | xml   : Enable XML functions in TrafficScript.
| info                | ENT Advanced
| stm_sku             | ENT-ADVANCED
| fixed_resource_usage| None
| ent                 | True
| resource_unit       | Mbps
| csp                 | False
+---------------------+-------------------------------------------------------------
```

```
*** create a Feature Pack for analytics, based on the ENT-ADVANCED base SKU and an
additional ENT-EMTM SKU ***
amnesiac (config) # ssc feature-pack create fpname ENT-Analytics skus "ENT-
ADVANCED,ENT-ENTM"
+-------------+--------------------------------+
| Field       | Value                          |
+-------------+--------------------------------+
| info        |                                |
| status      | Active                         |
| stm_sku     | ENT-ADVANCED                   |
| add_on_skus | []                             |
| excluded    |                                |
| skus        | [u'ENT-ADVANCED', u'ENT-ENTM'] |
+-------------+--------------------------------+

*** create a Feature Pack, excluding some features***
amnesiac (config) # ssc feature-pack create fpname ENT-ADVANCED-NoRobin stm-sku ENT-
ADVANCED excluded "lbrob" info "ENT-ADVANCED without Round-Robin Load Balancing"
+-------------+--------------------------------------------------+
| Field       | Value                                            |
+-------------+--------------------------------------------------+
| info        | ENT-ADVANCED without Round-Robin Load Balancing |
| status      | Active                                           |
| stm_sku     | ENT-ADVANCED                                     |
| add_on_skus | []                                               |
| excluded    | lbrob                                            |
| skus        | [u'ENT-ADVANCED']                                |
+-------------+--------------------------------------------------+

*** confirm addition of the Feature Pack ***
amnesiac (config) # ssc feature-pack list
+----------------------+
| FeaturePack          |
+----------------------+
| ENT-ADVANCED-NoRobin |
| ENT-Analytics        |
| ENT-ADVANCED_full    |
+----------------------+
```

Related Commands

show ssc feature-pack fpname, ssc feature-pack list, ssc feature-pack update fpname

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ssc feature-pack create template-name

Creates a feature pack based on an existing template.

Syntax

ssc feature-pack create template-name *name* | [fpname *name*] | [stm-sku *sku-name*] | [excluded *comma-separated-list*] | [info *description*] | [add-on-skus *name*]

Parameters

name

Specify a unique name for the feature pack template.

fpname *name*

Specify a unique name for the feature pack.

stm-sku *sku-name*

Specify the SKU Traffic Manager on which the feature pack is based. This is limited to SKUs compatible with your Services Director license.

excluded *list]*

Optionally, specify a list of features from the parent SKU that are excluded. These features include:

- afm: Excludes use of SAF.
- apt: Excludes use of Aptimizer
- auto: Excludes autoscaling
- bwm: Excludes bandwidth management classes
- comp: Excludes compression
- cache: Excludes caching
- glb: Excludes global load balancing
- rate: Excludes rate shaping classes
- slm: Excludes service level monitoring
- ts: Excludes TrafficScript

This list is a comma-separated list enclosed in double quote marks. A complete list can be seen using the show ssc sku sku-name command for your SKU.

info *description*

Optionally, specify information about the feature pack.

`add-on-skus` *`list`*

Optionally, specify a list of feature SKUs to be associated with the parent SKU:

- `ADDFIPS:` Federal Information Processing Standards (FIPs)
- `ADDWAF:` Virtual Web Application Firewall
- `ADDWEBACCEL:` Web Content Accelerator

This list is a comma-separated list enclosed in double quote marks.

Usage Guidelines

A feature pack is a subset of a Traffic Manager SKU. A SKU contains a defined feature set for the Traffic Manager that you can apply to instances.

You can view a list of available features for your SKU using the **show ssc sku sku-name** command. You can then specify any of these for exclusion.

Create feature-packs with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to create the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Examples

```
amnesiac (config) # ssc feature-pack create template-name fptemp-1 fpname fp-1
```

Related Commands

show ssc feature-pack fpname, ssc template create template-name

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ssc feature-pack list

Lists Services Director feature packs.

Syntax

ssc feature-pack list

Examples

```
amnesiac (config) # ssc feature-pack list
+-------------------+
| FeaturePack       |
+-------------------+
| ENT-Analytics     |
| ENT-ADVANCED_full |
+-------------------+
```

Related Commands

show ssc feature-pack fpname, ssc feature-pack create fpname, ssc feature-pack update fpname

ssc feature-pack update fpname

Updates a Services Director feature pack.

Syntax

ssc feature-pack update fpname *name* [info *description*] [status [Active | Inactive]]

Parameters

name

Identify the Feature Pack using its tag or UUID.

info

Specify a description of the feature pack.

status

Specify the status:

- `Active:` Activates a resource.
- `Inactive:` Deactivates a resource. A resource cannot be marked as **Inactive** if it is in use. The resource cannot be reactivated.

Usage Guidelines

You can update a limited number of Feature Pack properties.

You cannot update the majority of properties for a Feature Pack, such as the SKUs that it uses. You must instead create a new Feature Pack and apply it to affected vTMs. This may be required when enabling analytics on a cluster of vTMs. Refer to the *Pulse Secure Services Director Getting Started Guide* for full details.

You cannot delete a Feature Pack. However, you can permanently set its status to Inactive.

Examples

```
amnesiac (config) # ssc feature-pack update fpname ENT-ADVANCED-NoRobin status
Inactive
+-------------+-------------------------------------------------+
| Field       | Value                                           |
+-------------+-------------------------------------------------+
| info        | ENT-ADVANCED without Round-Robin Load Balancing |
| status      | Inactive                                        |
| stm_sku     | ENT-ADVANCED                                    |
| add_on_skus | []                                              |
| excluded    | lbrob                                           |
| skus        | [u'ENT-ADVANCED']                               |
+-------------+-------------------------------------------------+
```

Related Commands

show ssc feature-pack fpname, ssc feature-pack create fpname, ssc feature-pack list

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ssc feature-pack update template-name

Updates a Services Director feature pack based on the specified template.

Syntax

ssc feature-pack update template-name name | [fpname name] | [info description] | [status Active | Inactive]]

Parameters

name

Specify the template name.

name

Specify the feature pack name.

`info` *description*

Specify information about the feature pack.

`status`

Specify the status:

- `Active:` Activates a resource.
- `Inactive:` Deactivates a resource. A resource cannot be marked as **Inactive** if it is in use. The resource cannot be reactivated **Inactive** status has been specified.

Usage Guidelines

Update a feature-pack with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to update the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Examples

```
amnesiac (config) # ssc feature-pack update template-name fptemp fpname fp1 status
Inactive
```

Related Commands

show ssc feature-pack fpname, ssc template create template-name

ssc high-avail certificate

Displays the high availability certificate for a high availability node.

Syntax

ssc high-avail certificate host-or-ip-addr

Parameters

host-or-ip-addr

Specify the host name or IP address of a high availability node.

Usage Guidelines

This command is identical to the "show ssc high-avail list" on page 275 command.

Examples

```
amnesiac (config) # show ssc high-avail certificate host-01.example.domain.com
+---------------------+-------------------------------------------------------
| Certificate Details | host-01.example.domain.com
+---------------------+-------------------------------------------------------
| Server IP/Name      | host-01.example.domain.com
| Fingerprint         | 25:99:36:10:4E:9A:FB:23:8E:8F:37:FD:17:3B:34:4A:6E:...
|                     |
| Issued To           |
| Common Name         | amnesiac
| Organization        | amnesiac
| Organization Unit   | Created Sat Aug 29 02:14:29 2015
| Country             | XX
|                     |
| Issued By           |
| Common Name         | amnesiac
| Organization        | amnesiac
| Organization Unit   | Created Sat Aug 29 02:14:29 2015
| Country             | XX
|                     |
| Validity            |
| Effective On        | Sat, 29 Aug 2015 01:59:30 GMT
| Expires On          | Tue, 26 Aug 2025 01:59:30 GMT
|                     |
| Key                 |
| Type                | sha1withRSAEncryption
| Size                | 2048
|                     |
| PEM                 | -----BEGIN CERTIFICATE-----
|                     | MIIDXTCCAkUCCEs9poyyQcRZMA0GCSqGSIb3DQEBBQUAMHExSDFGFJ
|                     | .
|                     | . (certificate)
|                     | .
|                     | f6vS3P/U3/sIH3aJMQwD11+zNeQ/FXC+CCdFPx2qLvZ2Kpk3La153
|                     | 7cbGLjCk+QaRhA==
|                     | -----END CERTIFICATE-----
+---------------------+-------------------------------------------------------
```


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Related Commands

show ssc feature-pack fpname, ssc feature-pack create fpname

ssc high-avail file-replication reset

Resets the file replication service for the current HA pair.

Syntax

ssc high-avail file-replication reset

Examples

```
amnesiac (config) # ssc high-avail file-replication reset
```

Related Commands

ssc high-avail list

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ssc high-avail create

Creates a Primary standalone Services Director from the current node. This command is useful to change the role of a Services Director after an ejection or other failure.

Syntax

ssc high-avail create traffic-ip *IP-or-hostname*

Parameters

`traffic-ip`

The IP address or host name of the required Service Endpoint Address.

Usage Guidelines

This command will be destructive to an HA pair if the current node is in an HA pair.

Note: If you want to change the Standby node of an HA pair into an Active node, use the "ssc high-avail force-failover" on page 451 command.

This command completes in the background. Use "ssc high-avail reset" on page 459 to check its progress.

Examples

```
*** current HA status of current node (was a Standby) after ejection ***
amnesiac (config) # ssc high-avail list
+---+-----------------+-----+----------+------+----------- ...
| # | Cluster IP/Name | TIP | Database | Role | DB Health ...
+---+-----------------+-----+----------+------+----------- ...
+---+-----------------+-----+----------+------+----------- ...
... -+-------------------+----------------+--------+----------+--------+
 ... | Gluster FS Health | SSC Web Health | System | Serial # | Status |
 ... -+-------------------+----------------+--------+----------+--------+
 ... -+-------------------+----------------+--------+----------+--------+

*** initiate the change to a standalone Primary for the current node ***
amnesiac (config) # ssc high-avail create traffic-ip 10.62.167.203
+---+-----------------+-----+----------+------+----------- ...
| # | Cluster IP/Name | TIP | Database | Role | DB Health ...
+---+-----------------+-----+----------+------+----------- ...
|   | 10.62.167.199   |     |          |      |            ...
+---+-----------------+-----+----------+------+----------- ...
    ... +-------------------+----------------+--------+----------+----------+
    ... | Gluster FS Health | SSC Web Health | System | Serial # | Status   |
    ... +-------------------+----------------+--------+----------+----------+
    ... |                   |                |        |          | Creating |
    ... +-------------------+----------------+--------+----------+----------+
```

```
*** after completion, a standalone Primary is reported ***
amnesiac (config) # ssc high-avail list
+---+-----------------+---------------+-------------------- ...
| # | Cluster IP/Name | TIP           | Database            ...
+---+-----------------+---------------+-------------------- ...
| 1 | 10.62.167.199   | 10.62.167.195 | 10.62.167.194:3306  ...
+---+-----------------+---------------+-------------------- ...
    ... +---------+-----------+-------------------+---------------- ...
    ... | Role    | DB Health | Gluster FS Health | SSC Web Health  ...
    ... +---------+-----------+-------------------+---------------- ...
    ... | Active  | Healthy   | Healthy           | Healthy         ...
    ... +---------+-----------+-------------------+---------------- ...
        ... +-----------------------------+--------------+--------+
        ... | System                      | Serial #     | Status |
        ... +-----------------------------+--------------+--------+
        ... | rbt_ssc 2.3.0-mainline #134 | 005056A652CD | Active |
        ... +-----------------------------+--------------+--------+
```

Related Commands

ssc high-avail failover, ssc high-avail join, ssc high-avail list

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ssc high-avail diagnose

Diagnoses causes for HA pair errors on the current node, and proposes available solutions.

Syntax

ssc high-avail diagnose

Usage Guidelines

This command can be run on either the Active or Standby nodes. The diagnostic inspects the states of the three modules:

- web service
- database
- filestore replication

Based on the health of each module, the diagnostic command returns an instruction set which the user can follow to troubleshoot the issues.

Examples

```
*** When there are errors (example) ***
amnesiac (config) # ssc high-avail diagnose
+-----------+------------+-------------------+
| DB Status | SSC Status | Traffic IP Status |
+-----------+------------+-------------------+
| ok        | failed     | failed            |
+-----------+------------+-------------------+
+-------------------------------+-----------------------------------------+
| Solutions                     | Steps                                   |
+-------------------------------+-----------------------------------------+
| Demote current node to backup | 1: Release traffic ip on current node;  |
| | 2: Demote db to backup on current node;                               |
+-------------------------------+-----------------------------------------+

*** When there are no errors ***
amnesiac (config) # ssc high-avail diagnose
+-----------+------------+-------------------+
| DB Status | SSC Status | Traffic IP Status |
+-----------+------------+-------------------+
| ok        | ok         | ok                |
+-----------+------------+-------------------+
+-----------+-------+
| Solutions | Steps |
+-----------+-------+
+-----------+-------+
```

Related Commands

ssc high-avail discover, ssc high-avail eject, ssc high-avail ejectall, ssc high-avail failover, ssc high-avail force-failover, ssc high-avail force-standby, ssc high-avail join, ssc high-avail list, ssc high-avail reset, ssc high-avail update

ssc high-avail discover

Displays Primary Services Director nodes in the current subnet that do not belong to an HA pair.

Syntax

ssc high-avail discover

Examples

```
amnesiac (config) # ssc high-avail disc
+------------------+---------------------+
| Primary Hostname | Primary Server's IP |
+------------------+---------------------+
| axon-08          | 10.62.98.88         |
| axon-0b          | 10.62.98.91         |
| dvenkman-0f      | 10.62.98.79         |
| jsorrentino-01   | 10.62.99.193        |
| jsorrentino-03   | 10.62.99.195        |
| tkumar-24        | 10.62.99.164        |
| jsorrentino-1f   | 10.62.101.255       |
| jwhitehouse-1a   | 10.62.101.42        |
+------------------+---------------------+
```

Related Commands

ssc high-avail diagnose, ssc high-avail eject, ssc high-avail ejectall, ssc high-avail failover, ssc high-avail force-failover, ssc high-avail force-standby, ssc high-avail join, ssc high-avail list, ssc high-avail reset, ssc high-avail update

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ssc high-avail eject

Ejects a specified Standby node from the current HA pair.

Syntax

ssc high-avail eject *IP-or-hostname*

Parameters

IP-or-hostname

The IP address or host name of the Standby node to be ejected.

Usage Guidelines

This command must be used from the Active node.

Services Director supports a single Standby node.

Examples

```
*** check current HA configuration from Active node ***
amnesiac (config) # ssc high-avail list
+---+-----------------+---------------+--------------------+-------- ...
| # | Cluster IP/Name | TIP           | Database           | Role    ...
+---+-----------------+---------------+--------------------+-------- ...
| 1 | 10.62.167.201   | 10.62.167.202 | 10.62.167.201:3306 | Active  ...
| 2 | 10.62.167.199   |               | 10.62.167.199:3306 | Standby ...
+---+-----------------+---------------+--------------------+-------- ...

*** eject the Standby node ***
amnesiac (config) # ssc high-avail eject 10.62.167.199
+---+-----------------+---------------+--------------------+-------- ...
| # | Cluster IP/Name | TIP           | Database           | Role    ...
+---+-----------------+---------------+--------------------+-------- ...
| 1 | 10.62.167.201   | 10.62.167.202 | 10.62.167.201:3306 | Active  ...
+---+-----------------+---------------+--------------------+-------- ...
```

Related Commands

ssc high-avail diagnose, ssc high-avail discover, ssc high-avail ejectall, ssc high-avail failover, ssc high-avail force-failover, ssc high-avail force-standby, ssc high-avail join, ssc high-avail list, ssc high-avail reset, ssc high-avail update

ssc high-avail ejectall

Ejects all Standby nodes, and tidies all the Standby node metadata/configurations from the Active node. This command can be run even when there is no Standby node.

Syntax

ssc high-avail ejectall

Usage Guidelines

This command must be used from the Active node.

Services Director supports a single Standby node.

Examples

```
*** check current HA configuration from Active node ***
amnesiac (config) # ssc high-avail list
+---+-----------------+---------------+--------------------+-------- ...
| # | Cluster IP/Name | TIP           | Database           | Role    ...
+---+-----------------+---------------+--------------------+-------- ...
| 1 | 10.62.167.201   | 10.62.167.202 | 10.62.167.201:3306 | Active  ...
| 2 | 10.62.167.199   |               | 10.62.167.199:3306 | Standby ...
+---+-----------------+---------------+--------------------+-------- ...

*** eject the Standby node ***
amnesiac (config) # ssc high-avail ejectall
+---+-----------------+---------------+--------------------+-------- ...
| # | Cluster IP/Name | TIP           | Database           | Role    ...
+---+-----------------+---------------+--------------------+-------- ...
| 1 | 10.62.167.201   | 10.62.167.202 | 10.62.167.201:3306 | Active  ...
+---+-----------------+---------------+--------------------+-------- ...
```

Related Commands

ssc high-avail diagnose, ssc high-avail discover, ssc high-avail eject, ssc high-avail failover, ssc high-avail force-failover, ssc high-avail force-standby, ssc high-avail join, ssc high-avail list, ssc high-avail reset, ssc high-avail update

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ssc high-avail failover

This command performs a failover from the Standby node of an HA pair.

Syntax

ssc high-avail failover backup-node *IP-or-hostname*

Parameters

`backup-node` *`IP-or-hostname`*

The IP address or host name of the Standby node. You must issue this command from this Standby node.

Usage Guidelines

Both Active and Standby nodes must be healthy to perform a failover.

As a result of the failover:

- The current Active and Standby nodes will exchange roles.
- The new Active node takes control of the HA pair for all purposes.
- The SEA/TIP points to the now-Active node.

This command completes in the background. Use "ssc high-avail reset" on page 459 to check its progress.

Examples

```
*** current status of the HA pair ***
+---+-----------------+---------------+--------------------+- ...
| # | Cluster IP/Name | TIP           | Database           |  ...
+---+-----------------+---------------+--------------------+- ...
| 1 | 10.62.167.201   | 10.62.167.202 | 10.62.167.201:3306 |  ...
| 2 | 10.62.167.199   |               | 10.62.167.199:3306 |  ...
+---+-----------------+---------------+--------------------+- ...
 ... --------+-----------+-------------------+----------------+- ...
    ... Role    | DB Health | Gluster FS Health | SSC Web Health |  ...
    ... --------+-----------+-------------------+----------------+- ...
    ... Active  | Healthy   | Healthy           | Healthy        |  ...
    ... Standby | Healthy   | Healthy           | Healthy        |  ...
    ... --------+-----------+-------------------+----------------+- ...
        ... ----------------------------+--------------+--------+
        ... System                      | Serial #     | Status |
        ... ----------------------------+--------------+--------+
        ... rbt_ssc 2.3.0-mainline #134  | 005056A60F7D | Active |
        ... rbt_ssc 2.3.0-mainline #134  | 005056A677D3 | Active |
        ... ----------------------------+--------------+--------+

*** initiate failover from the Standby node ***
amnesiac (config) # ssc high-avail failover backup-node 10.62.167.199
Successfully initiated failover on Standby node(10.62.167.199).
Please check [ssc high-avail list] for status
```

```
*** check progress to confirm completion of the failover ***
amnesiac (config) # ssc high-avail list
+---+-----------------+---------------+--------------------+- ...
| # | Cluster IP/Name | TIP           | Database           |  ...
+---+-----------------+---------------+--------------------+- ...
| 1 | 10.62.167.201   |               | 10.62.167.201:3306 |  ...
| 2 | 10.62.167.199   | 10.62.167.202 | 10.62.167.199:3306 |  ...
+---+-----------------+---------------+--------------------+- ...
    ... --------+-----------+-------------------+----------------+- ...
    ... Role    | DB Health | Gluster FS Health | SSC Web Health |  ...
    ... --------+-----------+-------------------+----------------+- ...
    ... Standby | Healthy   | Healthy           | Healthy        |  ...
    ... Active  | Healthy   | Healthy           | Healthy        |  ...
    ... --------+-----------+-------------------+----------------+- ...
        ... ----------------------------+--------------+--------+
        ... System                      | Serial #     | Status |
        ... ----------------------------+--------------+--------+
        ... rbt_ssc 2.3.0-mainline #134  | 005056A60F7D | Active |
        ... rbt_ssc 2.3.0-mainline #134  | 005056A677D3 | Active |
        ... ----------------------------+--------------+--------+

*** Active and Standby have exchanged places, and SEA/TIP has moved ***
```

Related Commands

ssc high-avail diagnose, ssc high-avail discover, ssc high-avail eject, ssc high-avail ejectall, ssc high-avail force-failover, ssc high-avail force-standby, ssc high-avail join, ssc high-avail list, ssc high-avail reset, ssc high-avail update

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ssc high-avail force-failover

This command enables you to perform a failover operation from a healthy Standby node after the Active node becomes unhealthy.

Syntax

ssc high-avail force-failover

Usage Guidelines

This command is different from a regular failover, because the Active node is unhealthy in this case. A regular failover is only supported when both the Active and Standby nodes are healthy.

As a result of the forced failover:

- The current Standby nodes becomes the Active node.
- The SEA/TIP points to the now-Active node.
- The outcome on the unhealthy Active node depends on whether it can be contacted. If the unhealthy Active node can be contacted, it will become the Standby node. The Standby node remains unhealthy until repaired. If the unhealthy Active node cannot be contacted, it will remain as an Active node. When this node is repaired and returned to a healthy state, a "split brain" scenario will result. That is, two healthy nodes in an HA pair both believe themselves to be the Active node, and that the other node is the Standby.

  Note: See "ssc high-avail join" on page 455 for details of the "split brain" scenario, and for instructions on how to recover from it.

This command completes in the background. Use "ssc high-avail reset" on page 459 to check its progress.

Examples

In this example:

- The unhealthy Active node is *amnesiac-01* (10.62.167.193).
- The healthy Standby node is *amnesiac-02* (10.62.167.194)
- The Service Endpoint Address (TIP) is 10.62.167.195.

```
*** View the status of the HA pair from the healthy Standby node ***
*** The Active node is unhealthy, the Standby node is healthy ***
amnesiac-02 (config) # ssc high-avail list
+---+-----------------+---------------+--------------------+--------- ...
| # | Cluster IP/Name | TIP           | Database           | Role     ...
+---+-----------------+---------------+--------------------+--------- ...
| 1 | 10.62.167.194   |               | 10.62.167.194:3306 | Standby  ...
| 2 | 10.62.167.193   | 10.62.167.195 | N/A                | Active   ...
+---+-----------------+---------------+--------------------+--------- ...
```

```
  ... +-----------+-------------------+---------------- ...
  ... | DB Health | Gluster FS Health | SSC Web Health  ...
  ... +-----------+-------------------+---------------- ...
  ... | Healthy   | Healthy           | Healthy         ...
  ... | Degraded  | Degraded          | Degraded        ...
  ... +-----------+-------------------+---------------- ...
    ... +----------------------------------------------------------------------+
    ... | Status                                                               |
    ... +----------------------------------------------------------------------+
    ... | Active                                                               |
    ... | There was a problem communicating with machine 10.62.167.193:9080    |
    ... +----------------------------------------------------------------------+

*** perform a force-failover to make the Standby node into the Active node ***
amnesiac-02 (config) # ssc high-avail force-failover 10.62.167.194

*** monitor progress of the forced failover until complete ***
amnesiac-02 (config) # ssc high-avail list
+---+-----------------+---------------+--------------------+--------- ...
| # | Cluster IP/Name | TIP           | Database           | Role     ...
+---+-----------------+---------------+--------------------+--------- ...
| 1 | 10.62.167.194   | 10.62.167.195 | 10.62.167.194:3306 | Active   ...
| 2 | 10.62.167.193   |               | N/A                | Active   ...
+---+-----------------+---------------+--------------------+--------- ...
  ... +-----------+-------------------+---------------- ...
  ... | DB Health | Gluster FS Health | SSC Web Health  ...
  ... +-----------+-------------------+---------------- ...
  ... | Healthy   | Healthy           | Healthy         ...
  ... | Degraded  | Degraded          | Degraded        ...
  ... +-----------+-------------------+---------------- ...
    ... +----------------------------------------------------------------------+
    ... | Status                                                               |
    ... +----------------------------------------------------------------------+
    ... | Active                                                               |
    ... | There was a problem communicating with machine 10.62.167.193:9080    |
    ... +----------------------------------------------------------------------+
```

Related Commands

ssc high-avail diagnose, ssc high-avail discover, ssc high-avail eject, ssc high-avail ejectall, ssc high-avail failover, ssc high-avail force-standby, ssc high-avail join, ssc high-avail list, ssc high-avail reset, ssc high-avail update

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ssc high-avail force-standby

Performs a forced standby of an Active node.

Syntax

ssc high-avail force-standby

Usage Guidelines

This command is intended as a way to recover from the "split brain" scenario. That is, two healthy nodes in an HA pair both believe themselves to be the Active node, and that the other node is the Standby.

This scenario is possible after a failed force-failover command (see "ssc high-avail force-failover" on page 451).

After this failure:

- The original Active node is unhealthy/uncontactable, and still configured as the Active node in an HA pair. Once repaired, it will show as healthy.
- The original Standby node is now the healthy current Active node.

To confirm this, log into both the Active and the Standby and check the list the high availability status of each. Each will show itself as Active and healthy. To resolve the "split brain", perform a force-standby on the original Active node. This performs the following actions:

- Switches the original Active node to be the new Standby.
- The HA pair reforms.

This command completes in the background. Use "ssc high-avail reset" on page 459 to check its progress.

Examples

In this example:

- The original Active node (which failed by is now repaired) is *amnesiac-01* (10.62.167.193).
- The new Active node (the original Standby) is *amnesiac-02* (10.62.167.194)
- The Service Endpoint Address (TIP) is 10.62.167.195.

```
*** check the HA status of the original (repaired) Active node ***
amnesiac-01 (config) # ssc high-avail list
+---+-----------------+---------------+--------------------+--------- ...
| # | Cluster IP/Name | TIP           | Database           | Role     ...
+---+-----------------+---------------+--------------------+--------- ...
| 1 | 10.62.167.194   |               | 10.62.167.194:3306 | Standby  ...
| 2 | 10.62.167.193   | 10.62.167.195 | 10.62.167.193:3306 | Active   ...
+---+-----------------+---------------+--------------------+--------- ...
```

```
*** check the high availability status of the new Active node ***
amnesiac-02 (config) # ssc high-avail list
+---+-----------------+---------------+--------------------+--------- ...
| # | Cluster IP/Name | TIP           | Database           | Role     ...
+---+-----------------+---------------+--------------------+--------- ...
| 1 | 10.62.167.194   | 10.62.167.195 | 10.62.167.194:3306 | Active   ...
| 2 | 10.62.167.193   |               | N/A                | N/A      ...
+---+-----------------+---------------+--------------------+--------- ...

*** initiate the force-standby from the original Active node ***
amnesiac-01 (config) # ssc high-avail force-standby

*** from the new Active node, check status - the HA pair dissolves ***
amnesiac-02 (config) # ssc high-avail list
+---+-----------------+----- ... -+-----------------------+
| # | Cluster IP/Name | TIP  ...  | Status                |
+---+-----------------+----- ... -+-----------------------+
| 1 | 10.62.167.194   | 10.  ...  | Active                |
| 1 | 10.62.167.193   |      ...  | File System detaching |
+---+-----------------+----- ... -+-----------------------+

*** The HA pair begins to reform ***
amnesiac-02 (config) # ssc high-avail list
+---+-----------------+----- ... -+----------+
| # | Cluster IP/Name | TIP  ...  | Status   |
+---+-----------------+----- ... -+----------+
| 1 | 10.62.167.194   |      ...  | Creating |
| 1 | 10.62.167.193   |      ...  | Creating |
+---+-----------------+----- ... -+----------+

*** after a few minutes, the force-standby completes ***
amnesiac-02 (config) # ssc high-avail list
+---+-----------------+---------------+--------------------+--------- ...
| # | Cluster IP/Name | TIP           | Database           | Role     ...
+---+-----------------+---------------+--------------------+--------- ...
| 1 | 10.62.167.194   | 10.62.167.195 | 10.62.167.193:3306 | Active   ...
| 2 | 10.62.167.193   |               | 10.62.167.194:3306 | Standby  ...
+---+-----------------+---------------+--------------------+--------- ...

*** confirm this result from the new Standby node ***
amnesiac-01 (config) # ssc high-avail list
+---+-----------------+---------------+--------------------+--------- ...
| # | Cluster IP/Name | TIP           | Database           | Role     ...
+---+-----------------+---------------+--------------------+--------- ...
| 1 | 10.62.167.194   | 10.62.167.195 | 10.62.167.193:3306 | Active   ...
| 2 | 10.62.167.193   |               | 10.62.167.194:3306 | Standby  ...
+---+-----------------+---------------+--------------------+--------- ...
```

Related Commands

ssc high-avail diagnose, ssc high-avail discover, ssc high-avail eject, ssc high-avail ejectall, ssc high-avail failover, ssc high-avail force-failover, ssc high-avail join, ssc high-avail list, ssc high-avail reset, ssc high-avail update

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ssc high-avail join

Joins the current unpaired Services Director node to a specified Primary Services Director node.

Syntax

ssc high-avail join *IP-or-hostname*

Parameters

IP-or-hostname

The IP address or host name of the Primary node.

Usage Guidelines

This command initially reports that an attempt to join is in progress, but completes in the background. Use "ssc high-avail reset" on page 459 to check the progress of the join process.

Examples

```
*** confirm node is not in an HA pair ***
amnesiac (config) # ssc high-avail list
+---+-----------------+-----+----------+------+- ...
| # | Cluster IP/Name | TIP | Database | Role |
+---+-----------------+-----+----------+------+- ...
+---+-----------------+-----+----------+------+- ...
amnesiac (config) # ssc high-avail discover
+------------------+---------------------+
| Primary Hostname | Primary Server's IP |
+------------------+---------------------+
| jsorrentino-08   | 10.62.166.200       |
| jkumar-24        | 10.62.167.164       |
| jkelly-09        | 10.62.167.201       |
| jsorrentino-14   | 10.62.168.244       |
| jwhitehouse-1a   | 10.62.168.42        |
+------------------+---------------------+

amnesiac (config) # ssc high-avail join 10.62.167.201
+---+-----------------+-----+- ... -+--------------+
| # | Cluster IP/Name | TIP |  ...  | Status       |
+---+-----------------+-----+- ... -+--------------+
| 1 | 10.62.167.199   |     |  ...  | Node joining |
+---+-----------------+-----+- ... -+--------------+

amnesiac (config) # ssc high-avail list
+---+-----------------+-----+  ... -+---------------------+
| # | Cluster IP/Name | TIP |  ...  | Status              |
+---+-----------------+-----+- ... -+---------------------+
| 1 | 10.62.167.199   |     |  ...  | File System joining |
+---+-----------------+-----+- ... -+---------------------+
```

```
amnesiac (config) # ssc high-avail list
+---+-----------------+---------------+--------------------+- ...
| # | Cluster IP/Name | TIP           | Database           |  ...
+---+-----------------+---------------+--------------------+- ...
| 1 | 10.62.167.201   | 10.62.167.202 | 10.62.167.201:3306 |  ...
| 2 | 10.62.167.199   |               | 10.62.167.199:3306 |  ...
+---+-----------------+---------------+--------------------+- ...
    ... +---------+-----------+-------------------+---------------- ...
    ... | Role    | DB Health | Gluster FS Health | SSC Web Health  ...
    ... +---------+-----------+-------------------+---------------- ...
    ... | Active  | Healthy   | Healthy           + Healthy         ...
    ... | Standby | Healthy   | Healthy           + Healthy         ...
    ... +---------+-----------+-------------------+---------------- ...
        ... ----------------------------+--------------+--------+
        ... System                      | Serial #     | Status |
        ... ----------------------------+--------------+--------+
        ... rbt_ssc 2.3.0-mainline #134  | 005056A60F7D | Active |
        ... rbt_ssc 2.3.0-mainline #134  | 005056A677D3 | Active |
        ... ----------------------------+--------------+--------+
```

Related Commands

ssc high-avail diagnose, ssc high-avail discover, ssc high-avail eject, ssc high-avail ejectall, ssc high-avail failover, ssc high-avail force-failover, ssc high-avail force-standby, ssc high-avail list, ssc high-avail reset, ssc high-avail update

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ssc high-avail list

Displays a list of nodes in the current HA pair.

Syntax

ssc high-avail list

Usage Guidelines

For a standalone Services Director, only one node is listed.

This command is identical to the "show ssc host host-name" on page 276 command.

Examples

```
*** for an HA pair ***
amnesiac (config) # ssc high-avail list
+---+-----------------+---------------+-------------------- ...
| # | Cluster IP/Name | TIP           | Database ...
+---+-----------------+---------------+-------------------- ...
| 1 | jacaranda       | 10.62.167.195 | 10.62.167.194:3306  ...
| 2 | amnesiac        |               | 10.62.167.193:3306  ...
+---+-----------------+---------------+-------------------- ...
 ... +---------+-----------+-------------------+---------------- ...
 ... | Role    | DB Health | Gluster FS Health | SSC Web Health  ...
    ... +---------+-----------+-------------------+---------------- ...
    ... | Active  | Healthy   | Healthy           + Healthy         ...
    ... | Standby | Healthy   | Healthy           + Healthy         ...
    ... +---------+-----------+-------------------+---------------- ...
        ... +------------------------------+--------------+--------+
        ... | System                       | Serial #     | Status |
        ... +------------------------------+--------------+--------+
        ... | rbt_ssc 2.3.0-mainline #134  | 005056A652CD | Active |
        ... | rbt_ssc 2.3.0-mainline #134  | 005056A66723 | Active |
        ... +------------------------------+--------------+--------+

*** for a standalone node ***
amnesiac (config) # ssc high-avail list
+---+-----------------+---------------+-------------------- ...
| # | Cluster IP/Name | TIP           | Database            ...
+---+-----------------+---------------+-------------------- ...
| 1 | jacaranda       | 10.62.167.195 | 10.62.167.194:3306  ...
+---+-----------------+---------------+-------------------- ...
    ... +---------+-----------+-------------------+---------------- ...
    ... | Role    | DB Health | Gluster FS Health | SSC Web Health  ...
    ... +---------+-----------+-------------------+---------------- ...
    ... | Active  | Healthy   | Healthy           + Healthy         ...
    ... +---------+-----------+-------------------+---------------- ...
        ... +------------------------------+--------------+--------+
        ... | System                       | Serial #     | Status |
        ... +------------------------------+--------------+--------+
        ... | rbt_ssc 2.3.0-mainline #134  | 005056A652CD | Active |
        ... +------------------------------+--------------+--------+
```

```
*** for a node that is not in an HA pair ***
+---+-----------------+---------------+-------------------- ...
| # | Cluster IP/Name | TIP           | Database            ...
+---+-----------------+---------------+-------------------- ...
+---+-----------------+---------------+-------------------- ...
    ... +---------+-----------+-------------------+---------------- ...
    ... | Role    | DB Health | Gluster FS Health | SSC Web Health  ...
    ... +---------+-----------+-------------------+---------------- ...
    ... +---------+-----------+-------------------+---------------- ...
        ... +------------------------------+--------------+--------+
        ... | System                       | Serial #     | Status |
        ... +------------------------------+--------------+--------+
        ... +------------------------------+--------------+--------+
```

Related Commands

ssc high-avail diagnose, ssc high-avail discover, ssc high-avail eject, ssc high-avail ejectall, ssc high-avail failover, ssc high-avail force-failover, ssc high-avail force-standby, ssc high-avail join, ssc high-avail reset, ssc high-avail update

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ssc high-avail reset

Performs a factory reset on the current high availability node. This erases the entire HA configuration.

Syntax

ssc high-avail reset

Usage Guidelines

After this command completes, the Services Director must be restarted.

After using this command, you can use:

- "ssc high-avail diagnose" on page 445 to create a standalone node.
- "ssc high-avail list" on page 457 to join an HA pair.

Examples

```
*** logged in on Standby, display current state of HA pair ***
amnesiac (config) # ssc high-avail list
+---+-----------------+---------------+-------------------- ...
| # | Cluster IP/Name | TIP           | Database            ...
+---+-----------------+---------------+-------------------- ...
| 1 | jacaranda       | 10.62.167.195 | 10.62.167.194:3306  ...
| 2 | amnesiac        |               | 10.62.167.193:3306  ...
+---+-----------------+---------------+-------------------- ...
 ... +---------+-----------+-------------------+---------------- ...
 ... | Role    | DB Health | Gluster FS Health | SSC Web Health  ...
    ... +---------+-----------+-------------------+---------------- ...
    ... | Active  | Healthy   | Healthy           + Healthy         ...
    ... | Standby | Healthy   | Healthy           + Healthy         ...
    ... +---------+-----------+-------------------+---------------- ...
        ... +------------------------------+--------------+--------+
        ... | System                       | Serial #     | Status |
        ... +------------------------------+--------------+--------+
        ... | rbt_ssc 2.3.0-mainline #134  | 005056A652CD | Active |
        ... | rbt_ssc 2.3.0-mainline #134  | 005056A66723 | Active |
        ... +------------------------------+--------------+--------+

*** remove this node (Standby) from its HA pair ***
amnesiac (config) # ssc high-avail reset
+---+-----------------+---------------+-------------------- ...
| # | Cluster IP/Name | TIP           | Database            ...
+---+-----------------+---------------+-------------------- ...
+---+-----------------+---------------+-------------------- ...
    ... +---------+-----------+-------------------+---------------- ...
    ... | Role    | DB Health | Gluster FS Health | SSC Web Health  ...
    ... +---------+-----------+-------------------+---------------- ...
    ... +---------+-----------+-------------------+---------------- ...
        ... +------------------------------+--------------+--------+
        ... | System                       | Serial #     | Status |
        ... +------------------------------+--------------+--------+
        ... +------------------------------+--------------+--------+
```

Related Commands

ssc high-avail diagnose, ssc high-avail discover, ssc high-avail eject, ssc high-avail ejectall, ssc high-avail failover, ssc high-avail force-failover, ssc high-avail force-standby, ssc high-avail join, ssc high-avail list, ssc high-avail update

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ssc high-avail token

Displays the current high availability access token. This is present on nodes within HA pairs, and on standalone nodes. Paired nodes must share a high availability access token, which is used to enable authenticated communication between the HA nodes.

Syntax

ssc high-avail token

Usage Guidelines

This command is identical to the "ssc high-avail token remove" on page 465 command.

Examples

```
amnesiac (config) # ssc high-avail token
+--------------------------------------+------------------------- ...
| Token ID                             | Access Token             ...
+--------------------------------------+------------------------- ...
| 3f4a1f71-665c-46e7-aa30-11f2abd6a06d | eyJhdWQiOiAiaHgJaTgRdPcA ...
|                                      | ZW4iLCAiaXNzIjHGwEFggTAf ...
|                                      | ZG1pbiIsICJqdGKjHgkkjGhj ...
|                                      | ZDZhMDZkIiwgImLjhFerwFGH ...
+--------------------------------------+------------------------- ...
 ... ------------------------+-------------+
 ...                         | Description |
 ... ------------------------+-------------+
    ... BpL2NvbW1vbi8xLjAvdG9r | cluster     |
    ... AxIiwgInBybiI6ICJsai1h |             |
    ... 00NmU3LWFhMzAtMTFmMmFi |             |
    ... IxNDQxMjYyMTc2In0=     |             |
    ... ------------------------+-------------+
```

Related Commands

ssc high-avail token add, ssc high-avail token generate, ssc high-avail token list, ssc high-avail token remove

ssc high-avail token add

Adds a token to the current high availability access token. This can be either a node in an HA pair, or standalone node.

Syntax

ssc high-avail token add

Usage Guidelines

This command can only be used when there is no assigned token. Use "ssc high-avail update" on page 466 to remove the current token.

Examples

```
*** confirm no token currently set ***
amnesiac (config) # ssc high-avail token
+----------+--------------+-------------+
| Token ID | Access Token | Description |
+----------+--------------+-------------+
+----------+--------------+-------------+

*** add different token ***
amnesiac (config) # ssc high-avail token add description cluster_token access-token
eyJhdWQiOiAiaH...QxMjc5MTczIn0=

Access token added successfully.

*** confirm addition of new token ***
amnesiac (config) # ssc high-avail token
+--------------------------------------+--------------- ...
| Token ID                             | Access Token   ...
+--------------------------------------+--------------- ...
| f134a204-6b89-46b5-b796-8ddd06377eb6 | eyJhdWQiOiAiaH ...
|                                      | ZW4iLCAiaXNzIj ...
|                                      | biIsICJqdGkiOi ...
|                                      | ZWI2IiwgImV4cC ...
+--------------------------------------+--------------- ...
    ... ----------------------+---------------+
    ...                       | Description   |
    ... ----------------------+---------------+
    ... pL2NvbW1vbi8xLjAvdG9r | cluster_token |
    ... xIiwgInBybiI6ICJhZG1p |               |
    ... 1LWI3OTYtOGRkZDA2Mzc3 |               |
    ... xMjc5MTczIn0=         |               |
    ... ----------------------+---------------+
```

Related Commands

ssc high-avail token, ssc high-avail token generate, ssc high-avail token list, ssc high-avail token remove

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ssc high-avail token generate

Generates a new high availability access token for the current node. This can be either a node in an HA pair, and on standalone node.

Syntax

ssc high-avail token generate

Examples

```
amnesiac (config) # ssc high-avail token generate
+--------------------------------------+------------------------- ...
| Token ID                             | Access Token             ...
+--------------------------------------+------------------------- ...
| 3f4a1f71-665c-46e7-aa30-11f2abd6a06d | eyJhdWQiOiAiaHgJaTgRdPcA ...
|                                      | ZW4iLCAiaXNzIjHGwEFggTAf ...
|                                      | ZG1pbiIsICJqdGKjHgkkjGhj ...
|                                      | ZDZhMDZkIiwgImLjhFerwFGH ...
+--------------------------------------+------------------------- ...
    ... ------------------------+-------------+
    ...                         | Description |
    ... ------------------------+-------------+
    ... BpL2NvbW1vbi8xLjAvdG9r | cluster     |
    ... AxIiwgInBybiI6ICJsai1h |             |
    ... 00NmU3LWFhMzAtMTFmMmFi |             |
    ... IxNDQxMjYyMTc2In0=     |             |
    ... ------------------------+-------------+
```

Related Commands

ssc high-avail token, ssc high-avail token add, ssc high-avail token list, ssc high-avail token remove

ssc high-avail token list

Displays the current high availability access token.

Usage Guidelines

This command is identical to the "ssc high-avail token add" on page 462 command.

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ssc high-avail token remove

Removes the high availability access token from the current node. This can be either a node in an HA pair, and on standalone node.

Syntax

ssc high-avail token *token-id*

Parameters

`token token-id`

The token ID. Use "ssc high-avail token add" on page 462 to display this for the current node.

Examples

```
*** list current token ***
amnesiac (config) # ssc high-avail token
+--------------------------------------+------------------------- ...
| Token ID                             | Access Token             ...
+--------------------------------------+------------------------- ...
| 3f4a1f71-665c-46e7-aa30-11f2abd6a06d | eyJhdWQiOiAiaHgJaTgRdPcA ...
|                                      | ZW4iLCAiaXNzIjHGwEFggTAf ...
|                                      | ZG1pbiIsICJqdGKjHgkkjGhj ...
|                                      | ZDZhMDZkIiwgImLjhFerwFGH ...
+--------------------------------------+------------------------- ...
    ... -----------------------+-------------+
    ...                        | Description |
    ... -----------------------+-------------+
    ... BpL2NvbW1vbi8xLjAvdG9r | cluster     |
    ... AxIiwgInBybiI6ICJsai1h |             |
    ... 00NmU3LWFhMzAtMTFmMmFi |             |
    ... IxNDQxMjYyMTc2In0=     |             |
    ... -----------------------+-------------+

*** remove current HA access token ***
amnesiac (config) # ssc high-avail token remove 3f4a1f71-665c-46e7-aa30-11f2abd6a06d
Token ID '3f4a1f71-665c-46e7-aa30-11f2abd6a06d' removed successfully.

*** confirm removal ***
amnesiac (config) # ssc high-avail token
+----------+--------------+-------------+
| Token ID | Access Token | Description |
+----------+--------------+-------------+
+----------+--------------+-------------+
```

Related Commands

ssc high-avail token, ssc high-avail token add, ssc high-avail token generate, ssc high-avail token list

ssc high-avail update

Updates the Service Endpoint Address of an HA pair (or standalone Services Director).

Syntax

ssc high-avail update traffic-ip *IP-or-hostname*

Parameters

`traffic-ip`

The IP address or host name of the new Service Endpoint Address.

Usage Guidelines

This command can be issued from either the Active or the Standby node.

Note: Do not use this command from the Service Endpoint Address node. The command will fail.

This command affects FLA licensing for vTMs:

- Any Legacy FLA licenses that were created to service the current Service Endpoint Address will fail when the Service Endpoint Address changes. To fix this, generate a new Legacy FLA based on the new Service Endpoint Address.
- Any Universal FLA licenses that are tied to the current Service Endpoint Address will need to be relicensed (see "ssc instance relicense instance-name" on page 496).

Note: After this command completes, a restart of your Services Director service is required.

Examples

```
*** display the current Service Endpoint Address (TIP) ***
amnesiac (config) # ssc high-avail list
+---+-----------------+---------------+-------------------- ...
| # | Cluster IP/Name | TIP           | Database            ...
+---+-----------------+---------------+-------------------- ...
| 1 | 10.62.167.201   | 10.62.167.200 | 10.62.167.201:3306  ...
| 2 | 10.62.167.199   |               | 10.62.167.199:3306  ...
+---+-----------------+---------------+-------------------- ...

*** change the Service Endpoint Address (TIP) ***
amnesiac (config) # ssc high-avail update traffic-ip 10.62.167.202
+---+-----------------+---------------+-------------------- ...
| # | Cluster IP/Name | TIP           | Database            ...
+---+-----------------+---------------+-------------------- ...
| 1 | 10.62.167.201   | 10.62.167.202 | 10.62.167.201:3306  ...
| 2 | 10.62.167.199   |               | 10.62.167.199:3306  ...
+---+-----------------+---------------+-------------------- ...

*** restart the service ***
amnesiac (config) # ssc service restart
```


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Related Commands

ssc high-avail diagnose, ssc high-avail discover, ssc high-avail eject, ssc high-avail ejectall, ssc high-avail failover, ssc high-avail force-failover, ssc high-avail force-standby, ssc high-avail join, ssc high-avail list, ssc high-avail reset

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ssc host add host-name

Adds a Services Director instance host.

Syntax

ssc host add host-name *name* host-user *name* host-pass *password* username *name* | [usage-info *description*] | [retained-info-dir *directory*] | [max-instances *number*] | [cpu-cores *string*] | [info *description*]

Parameters

`host-name` *`name`*

Specify a unique name for this resource.

`host-user` *`name`*

(DEPRECATED) Specify the host administrator user name; you must specify **sscadmin**.

`host-pass` *`password`*

(DEPRECATED) Specify the host administrator password; the default value is **password**.

`username` *`user`*

Specify the user for SSH access; this user must be root.

`usage-info` *`description`*

(DEPRECATED) This property is not used.

`retained-info-dir` *`directory`*

(DEPRECATED) This property is not used.

`max-instances` *`number`*

The number of instances that you can create on this host.

`cpu-cores` *`string`*

(DEPRECATED) This property is not used.

`info` *`description`*

(Optional) Specify descriptive information.

Usage Guidelines

Use the **no ssc host hostname <name>** to delete the host.

Examples

```
amnesiac (config) # ssc host add host-name test-demo1 host-user sscadmin host-pass
password username root
```

Related Commands

show ssc host host-name, ssc host update host-name

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ssc host add template-name

Adds a Services Director host based on a template. Optionally, adds or changes the current values for the new host.

Syntax

ssc host add template-name *name* | [host-name *name*] | [host-user *name*] | [host-pass *password*] | [username *user*] | [usage-info *description*] | [retained-info-dir *number*] | [max-instances *number*] | [cpu-cores *string*] | [info *description*]

Parameters

`name`

Specify the unique name for the template.

`host-name name`

Optionally, specify the host name.

`host-user name`

Optionally, specify the administrator user name. The default value is **sscadmin**.

`host-pass admin-password`

Optionally, specify the administrator password; the default value is **password**.

`username user`

Optionally, specify the user for SSH access; this user must be **root**.

`retained-info-dir directory`

This property is not used.

`usage-info description`

This property is not used.

`max-instances number`

The number of instances that you can create on this host.

`cpu-cores string`

This property is not used.

`info description`

Optionally, specify descriptive information about the new host.

Usage Guidelines

Before you can use this command, you must first create a host template using the **ssc template create** command. Optionally, you can add or modify the current values the specified for the new host.

Examples

```
amnesiac (config) # ssc host add template-name htemp1 host-name test-demo username
root
```

Related Commands

show ssc host host-name, ssc template create template-name

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ssc host host-migrate

Migrate vTM instances between hosts within the same subnet.

Syntax

ssc host host-migrate from *name-or-ip-addr-from* to *ip-addr-to* [force *yes-or-no*]

Parameters

name-or-ip-addr-from

Specify the name of the instance host where the Traffic Manager is migrating from.

ip-addr-to

Optionally, specify the IP address or the name of the instance host where the Traffic Manager is migrating to.

force *yes-or-no*

Forces migration of Traffic Managers regardless of the network topology.

Examples

```
amnesiac (config) # ssc host host-migrate from 10.0.0.1 to 10.0.05 force yes
```

Related Commands

show ssc host host-name

ssc host host-name dns

Configures instance host DNS settings.

Syntax

ssc host host-name *name* dns dns-nameservers *dns-name-servers* | [dns-search *dnsfixes*]

Parameters

name

Specify a unique name for the host.

dns-nameservers *dns-name-servers*

Specify the DNS name server.

dns-search *dns-suffixes*

Optionally, specify a comma separated list of searched domain suffixes.

Examples

```
amnesiac (config) # ssc host host-name test dns dns-nameservers dnstest
```

Related Commands

show ssc host host-name

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ssc host host-name interface dhcp

Configures host instance DHCP on the specified interface.

Syntax

ssc host host host-name name interface *interface-name* dhcp | [dns-nameservers *dns-name-servers*] | [dns-search *dns-suffixes*] | [auto]

Parameters

name

Specify the host name.

interface *interface-name*

Specify the interface name

dhcp

Specify to enable DHCP on this interface.

dns-nameservers *dns-name-servers*

Optionally, specify the DNS name server.

dns-search *dns-suffixes*

Optionally, specify a comma separated list of searched domain suffixes.

auto

Optionally, specify this interface to automatically start up.

Examples

```
amnesiac (config) # ssc host host host-name host1 interface lxcbr0 dhcp
```

Related Commands

show ssc host host-name

ssc host host-name interface ip

Configures the static IP address for the specified interface.

Syntax

ssc host host host-name *name* interface *interface-name* ip *ip-addr* netmask *netmask* | [gateway *ip-addr*] | [dns-nameservers *dns-name-servers*] | [dns-search *dns-suffixes*] | [auto]

Parameters

name

Specify a unique name for the host.

interface *interface-name*

Specify the interface name

ip *ip-addr*

Specify the IP address on this interface.

netmask *netmask-addr*

Specify the netmask address.

gateway *ip-addr*

Specify the IP address for the gateway.

dns-nameservers *dns-name-servers*

Specify the DNS name server.

dns-search *dns-suffixes*

Optionally, specify a comma separated list of searched domain suffixes.

auto

Optionally, specify this interface to automatically start up.

Examples

```
amnesiac (config) # ssc host host host-name host1 interface lxcbr0 ip 10.0.0.1
netmask 255.255.255.0 gateway 10.0.0.2
```

Related Commands

show ssc host host-name

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ssc host host-name user

Configures the log in username and password for the Services Director host.

Syntax

ssc host host-name *name* user *user* password *password*

Parameters

name

Specify the host name.

user

Specify the login username for the host.

password

Specify the login password for the host.

Examples

```
amnesiac (config) # ssc host host-name host1 user admin password test123
```

Related Commands

show ssc host host-name

ssc host list

Lists the Services Director hosts.

Syntax

ssc host list

Examples

```
amnesiac (config) # ssc host list
+---------------+
| Host          |
+---------------+
| tmainline68-h |
+---------------+
```

Related Commands

show ssc host host-name

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ssc host ssh-clear-key

Clears known SSH host entries for a given host.

Syntax

ssc host ssh-clear-key host-name *name*

Parameters

name

Specify the host name.

Examples

```
amnesiac (config) # ssc host ssh-clear-key host-name host1
```

Related Commands

show ssc host host-name, ssc host list

ssc host update host-name

Updates values for a Services Director host.

Syntax

ssc host update host-name *host* | [username *user*] | [status [Active | Inactive]] | [usage-info *description*] | [max-instances *number*] | [cpu-cores *string*] | [info *description*]

Parameters

`host`

Specify the host name.

`username user`

Optionally, specify the user for SSH access; this user must be **root**.

`status [Active | Inactive]`

Specify the status:

`Active`

Activates a resource.

`Inactive`

Deactivates a resource. A resource cannot be marked as **Inactive** if it is in use. The resource cannot be reactivated **Inactive** status has been specified.

`usage-info description`

This property is not used.

`max-instances number`

The number of instances that you can create on this host.

`cpu-cores string`

This property is not used.

`info description`

Optionally, specify descriptive information about the new host.

Usage Guidelines

Update a host resources to add or change common parameters.

Examples

```
*** Parameter change ***
amnesiac (config) # ssc host update host-name host1 status Inactive
```

Related Commands

show ssc host host-name, ssc host list, ssc host add host-name

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ssc host update template-name

Updates a Services Director host based on the specified template.

Syntax

ssc host update template-name *name* | [host-name *name*] | [username *name*] | [status [Active | Inactive]] | [info *description*]

Parameters

`name`

Specify the template name.

`host-name name`

Specify the host name.

`username name`

Optionally, specify the user for SSH access; this user must be **root**.

`status Active | Inactive`

Specify the status:

`Active`

Activates a resource.

`Inactive`

Deactivates a resource. A resource cannot be marked as **Inactive** if it is in use. The resource cannot be reactivated **Inactive** status has been specified.

`info description`

Optionally, specify descriptive information about the new host.

Usage Guidelines

Update an instance host with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to update the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Examples

```
amnesiac (config) # ssc host update template-name hosttemp1 status Active
```

Related Commands

show ssc host host-name, ssc template create template-name

ssc import-cert

Imports an SSL certificate.

Syntax

ssc import-cert *cert-data* | [import-key *key-data*] | [password *password*]

Parameters

cert-data

Specify the certificate data in PEM format.

import-key *key-data*

Specify the key data in PEM format.

password *password*

Specify the private key password.

Usage Guidelines

You must import the SSL certificate and private key before you create instances.

Examples

```
amnesiac (config) # ssc import-cert "cert-data" import-key "<key-data>"
```

Related Commands

show ssc certificate

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ssc import-cert-key

Imports an SSL certificate and private key.

Syntax

ssc import-cert-key *cert-data* password *password*

Parameters

cert-date

Specify the location of the SSL certificate and private key, for example, http, ftp, or scp URL (scp://username:password@host/path/filename).

password *password*

Optionally, specify the private key password.

Usage Guidelines

You must import the SSL certificate and private key before you create instances.

Examples

```
amnesiac (config) # ssc import-cert-key scp://username:pwd@sfhost.example.com/
ssc_archive/cert_key.pem
Certificate and Private Key imported successfully
```

Related Commands

show ssc certificate

ssc import-lic

Imports the Services Director license.

Syntax

ssc import-lic *filename* | file *remote-file-path*

Parameters

filename

Specify the Services Director license filename.

file *remote-file-path*

Optionally, specify the remote location of the license, for example <http, ftp, or scp URL (e.g. scp:// username:password@host/path)>

Usage Guidelines

You must import the Services Director license before you create instances.

Examples

```
amnesiac (config) # ssc import-lic file scp://username:pwd@sfhost.example.com/
ssc_archive/taranis-license
License imported successfully
```

Related Commands

show ssc license enterprise

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ssc instance add instance-name

Adds an externally-deployed vTM instance to the estate of the Services Director.

Syntax

ssc instance add instance-name *name* bandwidth *bandwidth* owner *instance-owner-name* stm-fpname *feature-pack-name* mgmt-address *host-or-ip-addr* [config-options *string*] [admin-username *username*] [admin-password *password*] [rest-address *uri-and-port*] [snmp-address *ip-address*] [ui-address *ip-addr*] [access-profile *access-profile*] [analytics-profile *analytics-profile*]

Parameters

`instance-name` *`name`*

The name of the externally-deployed Traffic Manager instance.

`bandwidth` *`bandwidth`*

The maximum allowed bandwidth for the Traffic Manager instance (in Mbps).

`owner` *`owner`*

Specify who owns the instance.

`stm-fpname` *`feature-pack-name`*

The name of the **feature_pack** resource associated with the Traffic Manager instance. This represents the set of features that are available for the instance.

`mgmt-address` *`host-or-ip-addr`*

Specify the host name or IP address to reach the instance.

`config-options` *`string`*

A single configuration option is supported:

- `snmp!community:` The SNMP v2 community setting for this externally-deployed Traffic Manager instance. This must be set to the same value as the equivalent **snmp!community** property on the **instance** resource (default: "public").

Note: Unlike Services Director-deployed instances, externally-deployed instances do not restart when **config_options** are changed.

`admin-username` *`name`*

The user name for the admin account for the externally-deployed instance.

`admin-password` *`password`*

The password for the admin account for the externally-deployed instance.

`rest-address` *`host-or-ip-addr`*

The address (host or IP address plus port number) of the Traffic Manager instance configuration REST API. If left blank, it defaults to :9070. The **rest-address** must match the instance host name. If you use a hostname instead of an IP address, you must use a fully qualified domain name. You can modify this property only for a externally-deployed Traffic Manager instance (or in a database-only request).

`snmp-address` *`host-or-ip-addr`*

The address (host or IP address plus port number) of the Traffic Manager instance SNMP responder. This setting enables you to set the SNMP address used for metering. If you use a hostname instead of an IP address, you must use a fully qualified domain name. You can modify this property only for a externally-deployed Traffic Manager instance (or in a database-only request).

`ui-address` *`host-or-ip-addr`*

The address (host or IP address plus port number) of the Traffic Manager instance Administration UI. If you do not enter a value, the UI address defaults to :9090. If you use a hostname instead of an IP address, you must use a fully qualified domain name. You can modify this property only for a externally-deployed Traffic Manager instance (or in a database-only request).

`access-profile`

The access profile identifies the authenticator and permission groups required for the user authentication on this Traffic Manager instance.

Note: Access profile is a cluster-level configuration property, and is typically set for the vTM cluster (see "ssc cluster create cluster-name" on page 399). The current cluster-level setting is displayed in this dialogue. If you provide a new value for this property, the analytics profile will be applied to the Traffic Manager, and all other traffic manager instances in its cluster.

See also "ssc access-profile remove-perm-group" on page 348.

`analytics-profile`

The analytics profile identifies the vTM analytics settings for this Traffic Manager instance.

Note: Analytics profile is a cluster-level configuration property, and is typically set for the vTM cluster (see "ssc cluster create cluster-name" on page 399). If you provide a new value for this property, the analytics profile will be applied to the Traffic Manager, and all other traffic manager instances in its cluster.

Usage Guidelines

Before you create a externally-deployed Traffic Manager instance, ensure that you have created a feature pack for the Traffic Manager.

You cannot create a externally-deployed Traffic Manager instance using containers.

Use the **no instance instance-name <name>** to delete an instance.

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Examples

```
amnesiac (config) # ssc instance add instance-name stm-i1 bandwidth 1200 owner janet
stm-fpname default-fp mgmt-address test-demo
```

Related Commands

show ssc instance instance-name, ssc instance create instance-name, ssc instance list

ssc instance create instance-name

Creates a vTM instance.

Syntax

ssc instance create instance-name *name* license-name *name* bandwidth *bandwidth* cpu-usage *cpu* owner *instance-owner-name* stm-fpname *feature-pack-name* stm-version *stm-version-name* host-name *host* mgmt-address *host-or-ip-addr* [config-options *string*] [cluster-id *name*] [container-name *name*] [container-cfg *config-data*] [deploy *none*] [managed *yes-or-none*] [status [Active | Inactive]]

Parameters

`instance-name` *`name`*

Specify a unique name for the Traffic Manager instance.

`license-name` *`name`*

The name of the **license** resource you want to use for this instance. When you modify this property, the Services Director updates the license on the Traffic Manager instance.

`bandwidth` *`bandwidth`*

Specify the bandwidth allowed for this instance (in Mbps).

`cpu-usage` *`cpu`*

A string that describes which CPUs are used for this Traffic Manager instance. If used, you must either:

- Specify a value in a form that is used by the taskset command. For example, "0,3,57".
- Set this property to an empty string. This indicates that the host is not limited in its use of CPU cores (unless it is deployed within an LXC container). This is the default setting for the property if you do not specify a string.

Note: Any change to the **cpu_usage** settings will cause a restart of the instance.

`owner` *`name`*

Specify a string that describes an owner of the instance.

`stm-fpname` *`feature-pack-name`*

Specify the Traffic Manager feature-pack name associated with the instance.

`stm-version` *`stm-version-name`*

The name of the Traffic Manager**version** resource for the instance. If you modify this property, the Services Director upgrades the Traffic Manager instance to the new version. You can change this property only if the instance **status** is Idle.

`host-name` *`host`*

Specify the name of the Traffic Manager instance host on which the instance is running.

`mgmt-address` *`host-or-ip-addr`*

Specify the host name or IP address to reach the instance.

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`config-options` *`string`*

A string containing configuration options for optional features. If specified, this is a space-delimited combination of one or more the following:

- `default:` This option has no effect and is used to avoid an empty string. If this is option is used, no other options can be specified in the **config_options**.
- `admin_ui=yes/no:` Start or bypass the Administration UI for the Traffic Manager instance (default: yes). You must set this to yes if you use the **cluster_id** property.
- maxfds=*number:* The maximum number of file descriptors (default: 4096). This setting must be consistent between all instances in a cluster. (See **Notes**, below).
- webcache!size=*number:* The size of RAM for the web cache (default: 0). This value can be specified in %, MB, GB by appending the corresponding unit symbol to the end of the value when not specifying a value in bytes. For example, 100%, 256MB, 1GB, and so on. This setting must be consistent between all instances in a cluster. (See **Notes**, below).
- `java!enabled=yes/no:` Start or bypass the Java server (default: no). This setting must be consistent between all instances in a cluster. (See **Notes**, below).
- `statd!rsync_enabled=yes/no:` Synchronize historical activity data within a cluster. If this data is unwanted, disable this setting to save CPU and bandwidth (default: yes). This setting must be consistent between all instances in a cluster. (See **Notes**, below).
- `snmp!community:` The SNMP v2 community setting for this instance resource. For metering of externally-deployed instances, this must be set to the same value as the equivalent **snmp!community** property on the instance itself (default: "public").
- num_children=*number:* The number of child processes (default: 1).
- `start_flipper=yes/no:` Start or bypass the flipper process (default: yes). You must set this to yes if you use the **cluster_id** property.
- afm_deciders=*number:* The number of application firewall decider processes. If 0 is specified, the application firewall is not installed (default: 0). **Note**: You cannot update this option after the instance has been deployed.
- flipper!frontend_check_addrs=*host:* Check instance front-end connectivity with a specific host. When the Services Director deploys an instance, it checks connectivity to the default gateway of the instance host by sending ICMP requests to it. If the default gateway is protected by a firewall or blocks ICMP requests, instance deployment can fail. To disable deployment connectivity checks, use **flipper!frontend_check_addrs=""**. This setting must be consistent between all instances in a cluster. (See **Notes**, below).

- flipper!monitor_interval=*number:* The interval, in milliseconds, between flipper monitoring actions. (default: 500 ms). For higher density Traffic Manager instance deployments, use a larger value such as 2000ms. This setting must be consistent between all instances in a cluster. (See **Notes**, below).

Note: Any change to the **config_options** settings will cause a restart of the instance.

Note: Some configuration options, if specified here, must be consistent between all Traffic Manager instances in a cluster:

- maxfds
- webcache!size
- java!enabled
- statd!rsync_enabled
- flipper!monitor_interval
- flipper!frontend_check_addrs

If you set or update the value in one **instance** resource, the Services Director replicates this update automatically to the other instance resources. The instance will restart whenever these are changed, but other instances in the cluster must be restarted manually.

Note: Whenever the **config_options** property is set, all currently modified options must be specified again in the REST call. Any options that are not specified will lose their current value and be reset to their default value.

`cluster-id` *`ID-or-name`*

Optionally, specify the name of a cluster resource to which the instance belongs.

If you do not specify a cluster name, a new cluster name is generated automatically and assigned to the instance.

`container-name` *`name`*

Specify the name of the LXC container in which the instance is running. If this is an empty string or **none**, the Traffic Manager is not run inside a container.

`container-cfg` *`config-data`*

Optionally, specify configuration data for the instance container. The string populates the container configuration file with the gateway IP, the management IP, the WAN IP, the LAN IP, the data plane gateway IP, and the flavor (also called size).

Use the following format:

```
"{'gateway': '10.5.27.1', 'mgmtip':'10.10.10.1/24', 'wanip':'10.10.10.2/24',
'lanip':'10.10.10.3/24', 'dataplanegw':'10.5.5.2', 'flavor':'small'}"
```

Possible flavor values are: small= 256, 1 CPU, medium= 512 2 CPU, or large= 1024 4 CPU.

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`deploy` *`none`*

The default value is **true**. Specify **none** to apply changes to the database but not cause deployment changes. This setting supports testing and database reconciliation. No actions are carried out and no intermediate status is set. If a new instance resource is set to **none** then the status is set to **Idle** upon creation.

`managed` *`none`*

Specify **yes**.

`active [Active | Inactive]`

Specify the status:

- `Active:` Activates a resource.
- `Inactive:` Deactivates a resource. A resource cannot be marked as **Inactive** if it is in use. The resource cannot be reactivated **Inactive** status has been specified.

Usage Guidelines

Before you create a Traffic Manager instance, make sure you have:

- Imported the SSL certificate and key, the Services Director license, the enterprise bandwidth license key, and the Traffic Manager FLA license.
- Created a resource entry for the Traffic Manager FLA license.
- Imported the Traffic Manager image and created a resource entry for it.
- Imported the host OVA and created the host resource.
- Created a feature pack for the Traffic Manager.
- Provisioned the host OVA. When you execute the **ssc host provision** command, it un-tars the OVA, repackages the SSH public key created above and it is provisioned on ESXi. After the host is created in ESXi, the public key is assigned to the user defined in the **ssc host provision** command. After this command is executed you can SSH to the host without a password.

You can create instances without using containers, but you must ensure a degree of network isolation.

Before you create a container using the CLI, make sure that you have a host entry that includes the IP address and host name for the container you are going to create and that you can ping it.

Use the **no instance instance-name <name>** to delete an instance.

Examples

```
*** no container ***
amnesiac (config) # ssc instance create instance-name stm-i1 license name fla-ssl-ssc
bandwidth 1200 cpu-usage 0 owner tim stm-fpname default-fp stm-version stm97 host-
name test-demo mgmt-address test-demo
```

```
*** container ***
amnesiac (config) # ssc instance create instance-name stm-cont-i2 license name fla-
ssl-ssc bandwidth 1200 cpu-usage 0 owner tim stm-fpname default-fp stm-version stm97
host-name test-demo mgmt-address 10.10.10.1 container-name stm-cont-i1 container-cfg
"{'gateway': '10.5.27.1', 'mgmtip':'10.10.10.1/24', 'wanip':'10.10.10.2/24',
'lanip':'10.10.10.3/24', 'dataplanegw':'10.5.5.2', 'flavor':'small'}"
```

Related Commands

show ssc instance instance-name, ssc instance add instance-name, ssc instance list

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ssc instance force-start instance-name

Forces the status of the instance in the MySQL database to be Active.

Syntax

ssc instance force-start instance-name *instance*

Parameters

instance

The instance name.

Usage Guidelines

This command is used where there is an inconsistency between the actual status of the instance and the status of the instance in the MySQL database.

Examples

```
amnesiac (config) # ssc instance force-start instance-name DMaxhill-05
amnesiac (config) # ssc instance force-start instance-name Instance-345879389713
```

Related Commands

show ssc instance instance-name, ssc instance start instance-name, ssc instance list, ssc instance force-stop instance-name

ssc instance force-stop instance-name

Forces the status of the instance in the MySQL database to be Idle.

Syntax

ssc instance force-stop instance-name *instance*

Parameters

instance

The instance name.

Usage Guidelines

This command is used where there is an inconsistency between the actual status of the instance and the status of the instance in the MySQL database.

Examples

```
amnesiac (config) # ssc instance force-stop instance-name DMaxhill-05
amnesiac (config) # ssc instance force-stop instance-name Instance-345879389713
```

Related Commands

show ssc instance instance-name, ssc instance list, ssc instance force-start instance-name

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ssc instance list

Displays a list of names for vTM instances that are registered on the Services Director.

Syntax

ssc instance list

Examples

```
amnesiac (config) # ssc instance list
+------------------------+
| Instance               |
+------------------------+
| Pendragon-00           |
| Pendragon-01           |
| DMaxhill-05            |
| Instance-345879389713  |
+------------------------+
```

Related Commands

ssc instance create instance-name, ssc instance start instance-name, ssc instance stop instance-name

ssc instance start instance-name

Starts a vTM instance.

Syntax

ssc instance start instance-name *instance*

Parameters

instance

The instance name.

Examples

```
amnesiac (config) # ssc instance start instance-name DMaxhill-05
amnesiac (config) # ssc instance start instance-name Instance-345879389713
```

Related Commands

show ssc instance instance-name, ssc instance stop instance-name, ssc instance list

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ssc instance stop instance-name

Stops a vTM instance.

Syntax

ssc instance stop instance-name instance

Parameters

instance

The instance name.

Examples

```
amnesiac (config) # ssc instance start instance-name DMaxhill-05
amnesiac (config) # ssc instance start instance-name Instance-345879389713
```

Related Commands

show ssc instance instance-name, ssc instance start instance-name, ssc instance list

ssc instance relicense instance-name

Relicenses a vTM instance that uses Universal FLA licensing. The instance must have its rest_enabled set to True .

Syntax

ssc instance relicense instance-name instance

Parameters

instance

The instance name.

Examples

```
amnesiac (config) # ssc instance relicense instance-name DMaxhill-05
```

Related Commands

show ssc instance instance-name, ssc instance create instance-name, ssc instance list

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ssc instance update instance-name

Updates values in a vTM instance.

Syntax

ssc instance update instance-name *instance* [new-inst-name *instance*] [license-name name] [bandwidth *bandwidth*] [cpu-usage *cpu*] [stm-fpname *feature-pack-name*] [stm-version *stm-version-name*] [config-options *options*] [container-cfg *config-data*] [managed *yes-or-none*] [deploy *none*] [admin-username *username*] [admin-password *password*] [rest-address *uri-and-port*] [snmp-address *ip-address*] [status [Active | Inactive]] [ui-address *ip-addr*] [access-profile *access-profile*] [analytics-profile *analytics-profile*]

Parameters

`instance`

Specify the name of the Traffic Manager instance.

`new-inst-name instance`

Specify the new name for the instance.

`license-name name`

Specify name of the FLA license resource for the instance

`bandwidth bandwidth`

Specify the bandwidth allowed for this instance.

`cpu-usage cpu`

Specify a string that describes which CPUs that can be used for the instance. The format can be used by the **taskset** command and typically is a single CPU number, such as 0. This command might be unnecessary depending on the container configuration.

`stm-fpname feature-pack-name`

Specify the Traffic Manager feature-pack name associated with the instance.

`stm-version stm-version-name`

Specify the name of the Traffic Manager version-resource for the instance. This is the Traffic Manager version name that is assigned when you imported the Traffic Manager into the Services Director.

`host-name host`

Specify the name of the Traffic Manager instance host on which the instance is running.

`mgmt-address host-or-ip-addr`

Specify the host name or IP address to reach the instance.

`config-options` *`string`*

Specify a string that defines the values for the instance container. The string populates the container configuration file with the gateway IP, the management IP, the WAN IP, the LAN IP, the data plane gateway IP, and the flavor or size: small= 256, 1 CPU, medium= 512 2 CPU, or large= 1024 4 CPU. Use the following format:

```
"{'gateway': '10.5.27.1', 'mgmtip':'10.10.10.1/24', 'wanip':'10.10.10.2/24',
'lanip':'10.10.10.3/24', 'dataplanegw':'10.5.5.2', 'flavor':'small'}"
```

`container-cfg` *`config-data`*

Optionally, specify configuration data for the instance container.

`managed` *`yes-or-none`*

Specify **yes** for Services Director-deployed instances or **none** for externally-deployed instances.

`deploy` *`none`*

The default value is **true**. Specify **none** to apply changes to the database but not cause deployment changes. This setting supports testing and database reconciliation. No actions are carried out and no intermediate status is set. If a new instance resource is set to **none** then the status is set to **Idle** upon creation.

`admin-username` *`username`*

Specify only for externally-deployed instances. Specify the user name of the Traffic Manager instance-administrator user.

`admin-password` *`password`*

Specify only for externally-deployed instances. Specify the password of the Traffic Manager instance-administrator user.

`rest-address` *`uri-and-port`*

Specify only for externally-deployed instances. Specify the IP address, including the port, for the instance REST API.

`snmp-address` *`ip-address`*

Specify only for externally-deployed instances. Specify the IP address, including the port, for the Traffic Manager instance SNMP server.

`active [Active | Inactive]`

Specify the status:

- `Active:` Activates a resource.
- `Inactive:` Deactivates a resource. A resource cannot be marked as **Inactive** if it is in use. The resource cannot be reactivated **Inactive** status has been specified.

`ui-address` *`ip-addr`*

Specify only for externally-deployed instances. Specify the IP address, including the port, for the Traffic Manager instance Admin UI.

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access-profile

The access profile identifies the authenticator and permission groups required for the user authentication on this Traffic Manager instance.

Note: Access profile is a cluster-level configuration property, and is typically set for the vTM cluster (see "ssc cluster create cluster-name" on page 399). The current cluster-level setting is displayed in this dialogue. If you provide a new value for this property, the analytics profile will be applied to the Traffic Manager, and all other traffic manager instances in its cluster.

See also "ssc access-profile remove-perm-group" on page 348.

analytics-profile

The analytics profile identifies the vTM analytics settings for this Traffic Manager instance.

Note: Analytics profile is a cluster-level configuration property, and is typically set for the vTM cluster (see "ssc cluster create cluster-name" on page 399). If you provide a new value for this property, the analytics profile will be applied to the Traffic Manager, and all other traffic manager instances in its cluster.

Examples

```
amnesiac (config) # ssc instance update instance-name inst1 admin-user root admin-
password 1234
```

Related Commands

show ssc instance instance-name, ssc instance list

ssc instance update template-name

Updates a vTM instance based on the specified template.

Syntax

ssc instance update template-name *name* instance-name *instance* [new-inst-name *instance*] [license-name *name*] [bandwidth *bandwidth*] [cpu-usage *cpu*] [stm-fpname *feature-pack-name*] [stm-version *stm-version-name*] [config-options *options*] [container-cfg *configdata*] [managed *yes-or-none*] [deploy *none*] [admin-username *username*] [admin-password *password*] [rest-address *uri-and-port*] [snmp-address *ip-address*] [status [Active | Inactive]] [ui-address *ip-addr*] [access-profile *access-profile*] [analytics-profile *analytics-profile*]

Parameters

`template-name` *`name`*

Specify the template name.

`instance-name` *`instance`*

Specify the current instance name.

`new-inst-name` *`instance`*

Specify the new name for the instance.

`license-name` *`name`*

Specify name of the FLA license resource for the instance

`bandwidth` *`bandwidth`*

Specify the bandwidth allowed for this instance.

`cpu-usage` *`cpu`*

Specify a string that describes which CPUs that can be used for the instance. The format can be used by the **taskset** command and typically is a single CPU number, such as 0. This command might be unnecessary depending on the container configuration.

`stm-fpname` *`feature-pack-name`*

Specify the Traffic Manager feature-pack name associated with the instance.

`stm-version` *`stm-version-name`*

Specify the name of the Traffic Manager version-resource for the instance. This is the Traffic Manager version name that is assigned when you imported the Traffic Manager into the Services Director.

`host-name` *`host`*

Specify the name of the Traffic Manager instance host on which the instance is running.

`mgmt-address` *`host-or-ip-addr`*

Specify the host name or IP address to reach the instance.

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`config-options` *`string`*

Specify a string that defines the values for the instance container. The string populates the container configuration file with the gateway IP, the management IP, the WAN IP, the LAN IP, the data plane gateway IP, and the flavor or size: small= 256, 1 CPU, medium= 512 2 CPU, or large= 1024 4 CPU. Use the following format:

```
"{'gateway': '10.5.27.1', 'mgmtip':'10.10.10.1/24', 'wanip':'10.10.10.2/24',
'lanip':'10.10.10.3/24', 'dataplanegw':'10.5.5.2', 'flavor':'small'}"
```

`container-cfg` *`config-data`*

Optionally, specify configuration data for the instance container.

`managed` *`yes-or-none`*

Specify **yes** for Services Director-deployed instances or **none** for externally-deployed instances.

`deploy` *`none`*

The default value is **true**. Specify **none** to apply changes to the database but not cause deployment changes. This setting supports testing and database reconciliation. No actions are carried out and no intermediate status is set. If a new instance resource is set to **none** then the status is set to **Idle** upon creation.

`admin-username` *`username`*

Specify only for externally-deployed instances. Specify the user name of the Traffic Manager instance-administrator user.

`admin-password` *`password`*

Specify only for externally-deployed instances. Specify the password of the Traffic Manager instance-administrator user.

`rest-address` *`uri-and-port`*

Specify only for externally-deployed instances. Specify the IP address, including the port, for the instance REST API.

`snmp-address` *`ip-address`*

Specify only for externally-deployed instances. Specify the IP address, including the port, for the Traffic Manager instance SNMP server.

`active [Active | Inactive]`

Specify the status:

- `Active:` Activates a resource.
- `Inactive:` Deactivates a resource. A resource cannot be marked as **Inactive** if it is in use. The resource cannot be reactivated **Inactive** status has been specified.

`ui-address` *`ip-addr`*

Specify only for externally-deployed instances. Specify the IP address, including the port, for the Traffic Manager instance Admin UI.

access-profile

The access profile identifies the authenticator and permission groups required for the user authentication on this Traffic Manager instance.

Note: Access profile is a cluster-level configuration property, and is typically set for the vTM cluster (see "ssc cluster create cluster-name" on page 399). The current cluster-level setting is displayed in this dialogue. If you provide a new value for this property, the analytics profile will be applied to the Traffic Manager, and all other traffic manager instances in its cluster.

See also "ssc access-profile remove-perm-group" on page 348.

analytics-profile

The analytics profile identifies the vTM analytics settings for this Traffic Manager instance.

Note: Analytics profile is a cluster-level configuration property, and is typically set for the vTM cluster (see "ssc cluster create cluster-name" on page 399). If you provide a new value for this property, the analytics profile will be applied to the Traffic Manager, and all other traffic manager instances in its cluster.

Usage Guidelines

Updates a Traffic Manager instance with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to update the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Examples

```
amnesiac (config) # ssc instance update template-name tempinst1 instance-name inst1
admin-user root admin-password 1234
```

Related Commands

show ssc instance instance-name, ssc template create template-name

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ssc kpti

Changes the reboot setting for the Kernel Page-Table Isolation (KPTI) feature.

Syntax

ssc kpti [enable | disable]

Examples

```
*** check current state ***
amnesiac (config) # show ssc kpti
KPTI is currently enabled and will remain enabled after reboot.

*** request a change of state ***
amnesiac (config) # ssc kpti disable
Disabled KPTI for next boot. Use "reload" to reboot.
```

Related Commands

show ssc kpti, reload

ssc license enterprise add-on

Activates the enterprise add-on license.

Syntax

[no] ssc license enterprise add-on add *license-key*

Parameters

`add` *license-key*

Specify the add-on license key.

Usage Guidelines

For detailed information about add-on licenses, see *Pulse Services Director Advanced User Guide*. Use the **no ssc license enterprise add-on <license key>** command option to deactivate the enterprise add-on license.

Examples

```
amnesiac (config) # ssc license enterprise add-on XXXXX-
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
```

Related Commands

show ssc license enterprise

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ssc license enterprise add-on list

Displays a list of add-on licenses installed.

Syntax

ssc license enterprise add-on list *license*

Parameters

license

(Optional) Specify an Enterprise add-on license.

Examples

```
amnesiac (config) # ssc license enterprise add-on list
+-----------------------------------------+
| Enterprise Add-On Licenses              |
+-----------------------------------------+
| 417928-23bbc2fb77767ac82db4df862658cabb |
+-----------------------------------------+

amnesia (config) # show ssc license enterprise add-on 417928-
23bbc2fb77767ac82db4df862658cabb
+----------------------------+-------------------------------------------------------
| Field                      | Value
+----------------------------+-------------------------------------------------------
| valid_until                | 2016-10-07
| timestamp                  | 2016-09-27T21:37:13.1475037433
| controller_license         | ERSSC381243-0000-42B9
| bandwidth                  | 5000.0
| serial                     | 417928
| license_key                | LK1-ERSSCAPADD_FIPS:5:417928:20160924237433-0000-...
| controller_license_serial  | 381243
| valid_from                 | Perpetual
| add_on_sku                 | ADD-FIPS
| valid                      | True
+----------------------------+-------------------------------------------------------
```

Related Commands

show ssc license enterprise, ssc instance list

ssc license enterprise bandwidth activate

Activates an enterprise bandwidth license.

Syntax

ssc license enterprise bandwidth activate *license-key*

Parameters

license-key

Specify the enterprise bandwidth license key.

Usage Guidelines

You can have one or more bandwidth licenses depending on the needs of your enterprise. The bandwidth licenses are activated when you import the license key.

Use the **no ssc license enterprise bandwidth <license key>** command to delete an enterprise bandwidth license.

Examples

```
amnesiac (config) # ssc license enterprise bandwidth activate 116415-
0e60bc0fe6b16d659b90d732
+---------------------------+-----------------------------------------------------
| Field                     | Value
+---------------------------+-----------------------------------------------------
| status                    | Active
| valid_until               | 2016-10-07
| timestamp                 | 2016-09-27T21:37:13.1475037433
| controller_license        | ERSSC381243-0000-42B9
| bandwidth                 | 5000.0
| valid_from                | Perpetual
| serial                    | 115415
| license_key               | LK1-ERSSCTPSTM_B_400:5:116415:20160927T213713147...
| controller_license_serial | 381243
| stm_sku                   | STM-400
| valid                     | True
+---------------------------+-----------------------------------------------------
```

Related Commands

show ssc license enterprise, ssc instance list

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ssc license enterprise bandwidth add

Adds an enterprise bandwidth license.

Syntax

ssc license enterprise bandwidth add *license-key*

Parameters

license-key

Specify the enterprise bandwidth license key.

Usage Guidelines

You can have one or more bandwidth licenses depending on the needs of your enterprise. The bandwidth licenses are activated when you import the license key.

Use the **no ssc license enterprise bandwidth <license key>** command to delete an enterprise bandwidth license.

Examples

```
amnesiac (config) # ssc license enterprise bandwidth add LK1-
ERSSCTPSTM_B_400:5:115415:20160927T27433-0000-43B9-5-5263-460B-1E66
+---------------------------+-----------------------------------------------------
| Field                     | Value
+---------------------------+-----------------------------------------------------
| status                    | Active
| valid_until               | 2016-10-07
| timestamp                 | 2016-09-27T21:37:13.1475037433
| controller_license        | ERSSC381243-0000-43B9
| bandwidth                 | 5000.0
| valid_from                | Perpetual
| serial                    | 115415
| license_key               | LK1-ERSSCTPSTM_B_400:5:115415:20160927T2265764750...
| controller_license_serial | 381243
| stm_sku                   | STM-400
| valid                     | True
+---------------------------+-----------------------------------------------------
```

Related Commands

show ssc license enterprise, ssc instance list

ssc license enterprise bandwidth list

Lists enterprise bandwidth license keys.

Syntax

ssc license enterprise bandwidth list

Usage Guidelines

You can have one or more bandwidth licenses depending on the needs of your enterprise. The bandwidth licenses are activated when you import the license key.

Examples

```
amnesiac (config) # ssc license enterprise bandwidth list
+----------------------------------------+
| Enterprise Bandwidth Licenses          |
+----------------------------------------+
| 342005-5e876d4bc34885e04f2c58867e21f1cf |
+----------------------------------------+
```

Related Commands

show ssc license enterprise, ssc instance list

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ssc license enterprise controller list

Lists enterprise controller license keys.

Syntax

ssc license enterprise controller list

Usage Guidelines

Use **no license enterprise controller <key>** to delete an enterprise controller license.

Examples

```
amnesiac (config) # ssc license enterprise controller list
+--------------------------------+
| Enterprise Controller Licenses |
+--------------------------------+
| ERSSC381244-0000-52A9          |
+--------------------------------+
```

Related Commands

show ssc license enterprise, ssc instance list

ssc license enterprise resource-pack add

Adds a resource pack license key.

Syntax

ssc license enterprise resource-pack add *license-key*

Usage Guidelines

Use **no license enterprise resource-pack <key>** to delete an enterprise resource pack license.

Examples

```
amnesiac (config) # ssc license enterprise resource-pack add LK1-
BR_ADC_RES_EMBAS5I_S_01:5:261755:2017081341503363094-0000-4401-5-6DC1-34C2-7045
+---------------------------+-------------------------------------------------------
| Field                     | Value
+---------------------------+-------------------------------------------------------
| valid_until               | 2017-08-31
| timestamp                 | 2017-08-21T17:51:34.1503363094
| controller_license        |
| valid_from                | Perpetual
| license_key               | LK1-BR_ADC_RES_EMBAS5I_S_01:5:261755:2017081341503...
| serial                    | 261755
| controller_license_serial |
| stm_sku                   | ENT-ENTM
| resource_amount           | 5
| valid                     | False
+---------------------------+-------------------------------------------------------
```

Related Commands

show ssc license enterprise, ssc license enterprise resource-pack list

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ssc license enterprise resource-pack list

Lists resource pack license keys.

Syntax

ssc license enterprise resource-pack list

Usage Guidelines

Use **no license enterprise resource-pack <key>** to delete an enterprise resource pack license.

Examples

```
*** list resource pack licenses ***
amnesiac (config) # ssc license enterprise resource-pack list
+-------------------------------------------------------------------------------+
| Enterprise Resource-Pack Licenses |
+-------------------------------------------------------------------------------+
| LK1-BR_ADC_RES_EMBAS5I_S_01:5:261755:2017341363094-0000-4401-5-6DC1-34C2-7045   |
+-------------------------------------------------------------------------------+

*** delete a resource pack license ***
amnesiac (config) # no ssc license enterprise resource-pack
   LK1-BR_ADC_RES_EMBAS5I_S_01:5:261755:2017341363094-0000-4401-5-6DC1-34C2-7045
Successfully deleted resource-pack key
   (LK1-BR_ADC_RES_EMBAS5I_S_01:5:261755:2017341363094-0000-4401-5-6DC1-34C2-7045)
```

Related Commands

show ssc license enterprise, ssc license enterprise resource-pack add

ssc license list

Displays a list of FLA licenses that are present. Where no FLA license is present, this is indicated.

Syntax

ssc license list

Examples

```
amnesiac (config) # ssc license list
+--------------+
| License      |
+--------------+
| universal_v4 |
| legacy_9.3   |
+--------------+
```

Related Commands

show ssc license enterprise

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ssc log metering clear

Deletes backup Services Director metering logs.

Syntax

ssc log metering clear

Examples

```
amnesiac (config) # ssc log metering clear
```

Related Commands

ssc log metering phone-home enable, ssc log metering generate

ssc log metering generate

Extracts metering logs.

Syntax

ssc log metering generate [backup [yes | no]]

Parameters

`backup` *`yes/no`*

Optional. Specify to indicate whether previously-generated logs are to be included. New logs are always included.

Examples

```
amnesiac (config) # ssc log metering generate backup no
```

In this example, the backup switch indicates that no previously-generated logs are required; only new log data (since the most recent log generation) is included. A maximum of ten metering logs can be generated by this process.

Related Commands

ssc log metering phone-home enable, ssc log metering clear

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ssc log metering phone-home enable

Enables/disables the phone home service for Services Director metering logs.

Syntax

[no] ssc log metering phone-home enable

Usage Guidelines

The **no** command option disables the phone home feature.

Examples

```
amnesiac (config) # ssc log metering phone-home enable
```

Related Commands

ssc log metering clear, ssc log metering generate

ssc log-export create

Creates a new log-export resource. This resource is used for vTM analytics.

Syntax

ssc log-export create tag *value* files *file-list* [history {None | All}] [appliance-only *Boolean*]

Parameters

`tag value`

The customer-facing name for the log-export resource. If this is not set, the tag is set to the UUID value for the resource.

`files file-list`

A comma-separated list of log files. The files identified by this list will be sent by the vTM to its assigned collection endpoint.

You can include wildcards if required. You can also include the %ZEUSHOME% variable if required, which represents the Services Director's home directory.

For example: *%ZEUSHOME%/zxtm/log/stingrayafm/log-master/*,%ZEUSHOME%/zxtm/log/stingrayafm/log/**

`history`

(Optional) Identifies how much historic activity should be exported for this log. Use one of the following settings:

- `None`. This indicates that only current activity logs will be exported. All historic activity logs will not be included. This is the default setting.
- `All`. This indicates that all current and historic activity logs will be exported.

`appliance_only`

(Optional) a Boolean setting that indicates log-export usage:

- `true:` the log-export is only supported on virtual appliance installations of the Virtual Traffic Manager, and not on software installations.
- `false`: the log-export is supported on all installations. This is the default setting.

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Examples

```
*** create a log-export resource ***
amnesiac (config) # ssc log-export create tag "Request Logs" files "%ZEUSHOME%/zxtm/
log/myvirtualserver.log"
+----------------+----------------------------------------+
| Field          | Value                                  |
+----------------+----------------------------------------+
| files          | %ZEUSHOME%/zxtm/log/myvirtualserver.log |
| tag            | Request Logs                           |
| appliance_only | False                                  |
| built_in       | False                                  |
| log_export_id  | Log-Export-1YRJ-LIPR-ZWY7-3J1Q         |
| history        | none                                   |
+----------------+----------------------------------------+

*** list all log-export resources to confirm the addition ***
amnesiac (config) # ssc log-export list
+--------------------------------+----------------------------+
| ID                             | Tag                        |
+--------------------------------+----------------------------+
| Log-Export-1YRJ-LIPR-ZWY7-3J1Q | Request Logs               |
| Audit Log                      | Audit Log                  |
| Application Firewall           | Application Firewall       |
| Process Monitor                | Process Monitor            |
| Admin Server Access            | Admin Server Access        |
| System - syslog                | System - syslog            |
| Event Log                      | Event Log                  |
| Routing Software               | Routing Software           |
| Data Plane Acceleration        | Data Plane Acceleration    |
| System - authentication log    | System - authentication log |
+--------------------------------+----------------------------+
```

Related Commands

show ssc log-export, ssc log-export delete, ssc log-export list, ssc log-export update

ssc log-export delete

Deletes a log-export resource. This resource is used for vTM analytics.

Syntax

ssc log-export delete id *log-export-id*

Parameters

`id` *`log-export-id`*

The identifier for the log-export resource, either its **tag** or its UUID.

Usage Guidelines

You can only delete a log-export resource that has an ID of the form `Log-Export-xxxx-xxxx-xxxx-xxxx`. This indicates that the log-export resource was created by a user.

You cannot delete a log-export resource that has an ID that uses English words, and which matches its tag. For example: `Audit Logs`. This indicates that the log-export resource was created automatically when the Services Director was installed.

Examples

```
*** list all log-export resources ***
amnesiac (config) # ssc log-export list
+--------------------------------+-----------------------------+
| ID                             | Tag                         |
+--------------------------------+-----------------------------+
| Log-Export-1YRJ-LIPR-ZWY7-3J1Q | Request Logs                |
| Audit Log                      | Audit Log                   |
| Application Firewall           | Application Firewall        |
| Process Monitor                | Process Monitor             |
| Admin Server Access            | Admin Server Access         |
| System - syslog                | System - syslog             |
| Event Log                      | Event Log                   |
| Routing Software               | Routing Software            |
| Data Plane Acceleration        | Data Plane Acceleration     |
| System - authentication log    | System - authentication log |
+--------------------------------+-----------------------------+

*** try to delete log-export resource that was provided with the product ***
amnesiac (config) # ssc log-export delete id "Audit Log"
+-------+-------------------------------------------------------------------------
| Field | Value
+-------+-------------------------------------------------------------------------
| error | Access to resource is forbidden (Deleting a built-in log export entry...
+-------+-------------------------------------------------------------------------
```


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```
*** delete a specific log-export resource ***
amnesiac (config) # ssc log-export delete id "Request Logs"
+-------------------------------------------------------+
| Deleted                                               |
+-------------------------------------------------------+
| Log Export type Log-Export-1YRJ-LIPR-ZWY7-3J1Q deleted |
+-------------------------------------------------------+

*** list all log-export resources to confirm the deletion ***
amnesiac (config) # ssc log-export list
+--------------------------------+-----------------------------+
| ID                             | Tag                         |
+--------------------------------+-----------------------------+
| Audit Log                      | Audit Log                   |
| Application Firewall           | Application Firewall        |
| Process Monitor                | Process Monitor             |
| Admin Server Access            | Admin Server Access         |
| System - syslog                | System - syslog             |
| Event Log                      | Event Log                   |
| Routing Software               | Routing Software            |
| Data Plane Acceleration        | Data Plane Acceleration     |
| System - authentication log    | System - authentication log |
+--------------------------------+-----------------------------+
```

Related Commands

show ssc log-export, ssc log-export create, ssc log-export list, ssc log-export update

ssc log-export list

Lists all log-export resources. These resources are used for vTM analytics.

Syntax

ssc log-export list

Examples

```
amnesiac (config) # ssc log-export list
+--------------------------------+-----------------------------+
| ID                             | Tag                         |
+--------------------------------+-----------------------------+
| Audit Log                      | Audit Log                   |
| Application Firewall           | Application Firewall        |
| Process Monitor                | Process Monitor             |
| Admin Server Access            | Admin Server Access         |
| System - syslog                | System - syslog             |
| Event Log                      | Event Log                   |
| Routing Software               | Routing Software            |
| Data Plane Acceleration        | Data Plane Acceleration     |
| System - authentication log    | System - authentication log |
+--------------------------------+-----------------------------+
```

Related Commands

show ssc log-export, ssc log-export create, ssc log-export delete, ssc log-export update

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ssc log-export update

Updates a log-export resource. This resource is used for vTM analytics.

Syntax

ssc log-export update id *log-export-id* [tag value [files *file-list*] [history {None | All}] [appliance-only *Boolean*]

Parameters

`id` *`log-export-id`*

The identifier for the log-export resource, either its **tag** or its UUID.

`tag` *`value`*

The customer-facing name for the log-export resource. If this is not set, the tag is set to the UUID value for the resource.

`files` *`files-list`*

A comma-separated list of log files. The files identified by this list will be sent by the vTM to its assigned collection endpoint.

You can include wildcards if required. You can also include the %ZEUSHOME% variable if required, which represents the Services Director's home directory.

For example: *%ZEUSHOME%/zxtm/log/stingrayafm/log-master/*,%ZEUSHOME%/zxtm/log/stingrayafm/log/**

`history`

Identifies how much historic activity should be exported for this log. Use one of the following settings:

- `None`. This indicates that only current activity logs will be exported. All historic activity logs will not be included. This is the default setting.
- `All`. This indicates that all current and historic activity logs will be exported.

`appliance_only`

A Boolean setting that indicates log-export usage:

- `true:` the log-export is only supported on virtual appliance installations of the Virtual Traffic Manager, and not on software installations.
- `false:` the log-export is supported on all installations. This is the default setting.

Usage Guidelines

You can only update a log-export resource that has an ID of the form `Log-Export-xxxx-xxxx-xxxx-xxxx`. This indicates that the log-export resource was created by a user.

You cannot update a log-export resource that has an ID that uses English words, and which matches its tag. For example: `Audit Logs`. This indicates that the log-export resource was created automatically when the Services Director was installed.

Examples

```
*** list all log-export resources ***
amnesiac (config) # ssc log-export list
+--------------------------------+----------------------------+
| ID                             | Tag                        |
+--------------------------------+----------------------------+
| Log-Export-1YRJ-LIPR-ZWY7-3J1Q | Request Logs               |
| Audit Log                      | Audit Log                  |
| Application Firewall           | Application Firewall       |
| Process Monitor                | Process Monitor            |
| Admin Server Access            | Admin Server Access        |
| System - syslog                | System - syslog            |
| Event Log                      | Event Log                  |
| Routing Software               | Routing Software           |
| Data Plane Acceleration        | Data Plane Acceleration    |
| System - authentication log    | System - authentication log |
+--------------------------------+----------------------------+

*** display properties for a specific log-export resource ***
amnesiac (config) # show ssc log-export id "Request Logs"
+----------------+----------------------------------------+
| Field          | Value                                  |
+----------------+----------------------------------------+
| files          | %ZEUSHOME%/zxtm/log/myvirtualserver.log |
| tag            | Request Logs                           |
| appliance_only | False                                  |
| built_in       | False                                  |
| log_export_id  | Log-Export-1YRJ-LIPR-ZWY7-3J1Q         |
| children       | None                                   |
| history        | none                                   |
+----------------+----------------------------------------+

*** update the history property for this log-export resource ***
amnesiac (config) # ssc log-export update id "Request Logs" history all
+----------------+----------------------------------------+
| Field          | Value                                  |
+----------------+----------------------------------------+
| files          | %ZEUSHOME%/zxtm/log/myvirtualserver.log |
| tag            | Request Logs                           |
| appliance_only | False                                  |
| built_in       | False                                  |
| log_export_id  | Log-Export-1YRJ-LIPR-ZWY7-3J1Q         |
| history        | all                                    |
+----------------+----------------------------------------+
```

Related Commands

show ssc log-export, ssc log-export create, ssc log-export delete, ssc log-export list

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ssc manager list

Lists Services Director managers.

Syntax

ssc manager list

Examples

```
amnesiac (config) # ssc manager list
+----------+
| Manager  |
+----------+
| amnesiac |
+----------+
```

Related Commands

show ssc manager manager-name, ssc manager update manager-name

ssc manager update manager-name

Updates Services Director manager settings.

Syntax

ssc manager update manager-name *name* mgmt-mode [enabled | disabled] metering-mode [all | none] licensing-mode [enabled |disabled |enabled-with-alerts]

Parameters

name

Specify a unique name for the manager.

mgmt-mode

Specify the management mode for the manager: *enabled*, *disabled*.

metering-mode

Specify the metering mode for the manager: *all*, *none*.

licensing-mode

Specify the licensing mode for the manager: *enabled*, *disabled*, *enabled-with-alerts*.

Usage Guidelines

Use the **no ssc manager manager-name <name>** command to delete a manager that is flagged as failed.

Use the **no ssc manager manager-name <name> force-delete** command to delete a manager that is not flagged as failed.

Examples

```
amnesiac (config) # ssc manager update manager-name amnesiac mgmt-mode enabled
metering-mode all licensing-mode enabled
```

Related Commands

show ssc manager manager-name, ssc manager list

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ssc manager update template-name

Updates the Services Director manager based on the specified template.

Syntax

ssc manager update template-name name | [manager-name name mgmt-mode enabled | disabled] | [metering-mode all | none] | [licensing-mode enabled | disabled | enabledwithalerts]

Parameters

`name`

Specify the template name.

`manager-name name`

Specify the manager name.

`mgmt-mode`

Specify the management mode for the manager: *enabled*, *disabled*.

`metering-mode`

Specify the metering mode for the manager: *all*, *none*.

`licensing-mode`

Specify the licensing mode for the manager: *enabled*, *disabled*, *enabled-with-alerts*.

Usage Guidelines

Updates a manager with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to update the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Examples

```
amnesiac (config) # ssc manager update template-name mantemp1 manager-name amnesiac
mgmt-mode disabled
```

Related Commands

ssc manager update manager-name, ssc template create template-name

ssc metering warning list

Displays a list of all Traffic Manager instances that have a metering warning raised against them.

Syntax

ssc metering warning list

Usage Guidelines

To display information for failed Traffic Manager instances, see "show ssc owner" on page 287.

Examples

```
amnesiac (config) # ssc metering warning list
+-----------+
| Instance  |
+-----------+
| cerise-02 |
| sienna-01 |
+-----------+
```

Related Commands

show ssc dashboard, show ssc metering warning instance-name, show ssc settings metering, ssc settings metering update

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ssc owner create

Creates an owner on the Services Director. This is used to indicate ownership of registered vTMs and vTM clusters, and is required during automated self-registration of vTMs.

Syntax

ssc owner create [e-mail *email-address*] [secret *password*] [timezone *timezone*] [[tag *name*]

Parameters

`e-mail` *`email-address`*

Optionally, specify a valid e-mail address that will be used to contact an administrator if required.

`secret` *`password`*

Optionally, specify a password for this owner. This is required for automatic self-registration.

`timezone` *`timezone`*

Optionally, specify a timezone for this owner. For example: "Europe/London", "America/Detroit", "GMT".

`tag`

Optionally, specify a unique name for this owner.

Usage Guidelines

No parameters are mandatory. If none are provided, an owner is created with only the UUID set.

Examples

```
*** list owners to confirm which are available ***
amnesiac (config) # ssc owner list
+---------------------------+------+
| Owner ID                  | Tag  |
+---------------------------+------+
| Owner-HSC1-T4QV-BXPB-Z4CZ | HC   |
| Owner-NS3F-FHQ4-RO11-5Y0A | JK   |
| Owner-JJM6-0UII-JUAH-R979 | JRRT |
+---------------------------+------+

*** create new owner 'TK' ***
amnesiac (config) # ssc owner create tag TK timezone Europe/London
+---------------+---------------------------+
| Field         | Value                     |
+---------------+---------------------------+
| instances     | []                        |
| tag           | TK                        |
| timezone      | Europe/London             |
| email_address |                           |
| secret        | QUK5qKRPy2mt              |
| clusters      | []                        |
| owner_id      | Owner-58I2-2N4F-IXG0-8084 |
+---------------+---------------------------+
```

```
*** list owners again ***
amnesiac (config) # ssc owner list
+---------------------------+------+
| Owner ID                  | Tag  |
+---------------------------+------+
| Owner-HSC1-T4QV-BXPB-Z4CZ | HC   |
| Owner-NS3F-FHQ4-RO11-5Y0A | JK   |
| Owner-58I2-2N4F-IXG0-8084 | TK   |
| Owner-JJM6-0UII-JUAH-R979 | JRRT |
+---------------------------+------+
```

Related Commands

show ssc owner, ssc owner delete, ssc owner list, ssc owner update

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ssc owner delete

Deletes an owner on the Services Director.

Syntax

ssc owner delete owner-id *owner*

Parameters

`owner-id` *owner*

Specify the owner you want to delete, using either its tag or UUID.

Examples

```
*** list owners ***
amnesiac (config) # ssc owner list
+---------------------------+------+
| Owner ID                  | Tag  |
+---------------------------+------+
| Owner-HSC1-T4QV-BXPB-Z4CZ | HC   |
| Owner-NS3F-FHQ4-RO11-5Y0A | JK   |
| Owner-58I2-2N4F-IXG0-8084 | TK   |
| Owner-JJM6-0UII-JUAH-R979 | JRRT |
+---------------------------+------+

*** delete owner ***
amnesiac (config) # ssc owner delete owner-id JK
+----------------------------------------+
| Deleted                                |
+----------------------------------------+
| Owner Owner-NS3F-FHQ4-RO11-5Y0A deleted |
+----------------------------------------+

*** list owners to confirm deletion ***
amnesiac (config) # ssc owner list
+---------------------------+------+
| Owner ID                  | Tag  |
+---------------------------+------+
| Owner-HSC1-T4QV-BXPB-Z4CZ | HC   |
| Owner-58I2-2N4F-IXG0-8084 | TK   |
| Owner-JJM6-0UII-JUAH-R979 | JRRT |
+---------------------------+------+
```

Related Commands

show ssc owner, ssc owner create, ssc owner list, ssc owner update

ssc owner list

Displays a list of all owners on the Services Director.

Syntax

ssc owner list

Examples

```
amnesiac (config) # ssc owner list
+---------------------------+------+
| Owner ID                  | Tag  |
+---------------------------+------+
| Owner-HSC1-T4QV-BXPB-Z4CZ | HC   |
| Owner-NS3F-FHQ4-RO11-5Y0A | JK   |
| Owner-58I2-2N4F-IXG0-8084 | TK   |
| Owner-JJM6-0UII-JUAH-R979 | JRRT |
+---------------------------+------+
```

Related Commands

show ssc owner, ssc owner create, ssc owner delete, ssc owner update

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ssc owner update

Updates an owner on the Services Director.

Syntax

ssc owner update owner-id *owner* [e-mail *email-address*] [secret *password*] [timezone *timezone*] [[tag *name*]

Parameters

`owner-id` *`owner`*

Identify the owner that you want to update, using either its tag or UUID.

`e-mail` *`email-address`*

Optionally, specify a valid e-mail address that will be used to contact an administrator if required.

`secret` *`password`*

Optionally, specify a password for this owner. This is required for automatic self-registration.

`timezone`

Optionally, specify a timezone for this owner. For example: "Europe/London", "America/Detroit", "GMT".

`tag`

Optionally, specify a unique name for this owner.

Examples

```
*** list owners ***
amnesiac (config) # ssc owner list
+---------------------------+------+
| Owner ID                  | Tag  |
+---------------------------+------+
| Owner-HSC1-T4QV-BXPB-Z4CZ | HC   |
| Owner-NS3F-FHQ4-RO11-5Y0A | JK   |
| Owner-58I2-2N4F-IXG0-8084 | TK   |
| Owner-JJM6-0UII-JUAH-R979 | Demo |
+---------------------------+------+

*** rename 'Demo' to 'JRRT' ***
amnesiac (config) # ssc owner update owner-id Demo tag JRRT
+---------------+-----------------------------------+
| Field         | Value                             |
+---------------+-----------------------------------+
| instances     | [u'Instance-097D-W8HI-XR4K-GYUF'] |
| tag           | JRRT                              |
| timezone      | Europe/Lisbon                     |
| email_address |                                   |
| secret        |                                   |
| clusters      | [u'Cluster-3FRI-XJST-S2UY-CCMD']  |
| owner_id      | Owner-JJM6-0UII-JUAH-R979         |
+---------------+-----------------------------------+
```

```
*** list owners ***
amnesiac (config) # ssc owner list
+---------------------------+------+
| Owner ID                  | Tag  |
+---------------------------+------+
| Owner-HSC1-T4QV-BXPB-Z4CZ | HC   |
| Owner-NS3F-FHQ4-RO11-5Y0A | JK   |
| Owner-58I2-2N4F-IXG0-8084 | TK   |
| Owner-JJM6-0UII-JUAH-R979 | JRRT |
+---------------------------+------+
```

Related Commands

show ssc owner, ssc owner create, ssc owner delete, ssc owner list

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ssc registration delete

Deletes a specified self-registration request.

Syntax

ssc registration delete *registration-id*

Parameters

registration-id

Specify the ID for the self-registration request.

Examples

```
amnesiac (config) # ssc registration delete registration-id Reg-NF8H-W5UT-ECL3-HFMH
Successfully deleted registration Reg-NF8H-W5UT-ECL3-HFMH
```

Related Commands

show ssc registration, ssc registration list, ssc registration update

ssc registration list

Lists all self-registration requests received by Services Director. This list includes all Approved, Pending, Declined and Blacklisted requests.

Syntax

ssc registration list

Examples

```
amnesiac (config) # ssc registration list
+-------------------------+--------------------+-------------+
| ID                      | REST Address       | Status      |
+-------------------------+--------------------+-------------+
| Reg-NF8H-W5UT-ECL3-HFMH | 10.62.169.167:9070 | Accepted    |
| Reg-RUE7-NV0B-TXE7-RQO6 | 10.62.169.168:9070 | Blacklisted |
| Reg-1K8R-1C1Z-JM3S-W12R | 10.62.169.167:9070 | Pending     |
+-------------------------+--------------------+-------------+
```

Related Commands

show ssc registration, ssc registration delete, ssc registration update

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ssc registration update

Updates the state of a specified self-registration request. This is the standard method for approving a request.

Syntax

ssc registration update registration-id *registration-id* state [blacklist | pending | decline [reason *declined-reason*] | accept [instance-name *name* owner *owner* feature-pack *feature_pack* bandwidth *bandwidth* [access_profile *access_profile*] [analytics_profile *analytics_profile*]]

Parameters

registration-id

Specify the ID for the self-registration request.

state

Specify a new state for the self-registration request. Supported transitions are:

- Pending --> Accepted
- Pending --> Declined
- Pending --> Blacklisted
- Declined --> Pending
- Blacklisted --> Pending

declined-reason

Optionally, specify a reason (as a string) for the transition from Pending to Declined. This is not used for any other state transition.

instance-name

The name for the instance.

owner

The owner of the instance.

feature_pack

The feature pack for the instance.

bandwidth

The bandwidth for the instance.

access_profile

(Optional) The access_profile for the instance.

analytics_profile

(Optional) The analytics profile for the instance.

Usage Guidelines

The following commands represent the four supported state transitions:

- Pending to Declined:

  ssc registration update registration-id <reg-id> state decline reason <reason>

- Pending to Blacklisted:

  ssc registration update registration-id <reg-id> state blacklist

- Declined/Blacklisted back to Pending:

  ssc registration update registration-id <reg-id> state pending

- Pending to Accepted:

  ssc registration update registration-id <reg-id> state accept instance-name <name> owner <owner> feature-pack <feature_pack> bandwidth <bandwidth> access_profile <access_profile> analytics_profile <analytics_profile>

  When the *Pending to Accepted* transition is performed, the authenticator and permission groups in the access profile are applied to the vTM. Existing authenticators and permission groups may be overwritten, but none will be deleted. All members of a cluster are affected.

Examples

```
amnesiac (config) # ssc registration update registration-id Reg-RUE7-NV0B-TXE7-RQO6
state decline reason "Unexpected submission"
+----------------------+--------------------------------------+
| Field                | Value                                |
+----------------------+--------------------------------------+
| snmp_address         | 10.62.169.168:161                    |
| registration_message | Cerise-02 10.4 registration (Tekton) |
| bandwidth            | None                                 |
| owner                | None                                 |
| email_address        | admin@tekton.com                     |
| instance_name        | None                                 |
| uuid                 | 06711d65-b1c6-3301-96d6-005056a63342 |
| hostname             | 10.62.169.168                        |
| declined_reason      | Unexpected submission                |
| instance_version     | 10.4                                 |
| status               | Declined                             |
| snmp_community       | public                               |
| admin_address        | 10.62.169.168:9090                   |
| rest_address         | 10.62.169.168:9070                   |
| feature_pack         | None                                 |
| cluster_identifier   |                                      |
| registration_time    | 2016-03-07 16:44:24                  |
| instance_id          | None                                 |
| management_ip        | 10.62.169.168                        |
| pending_time         | 2016-03-07 16:44:24                  |
| access_profile       | None                                 |
| analytics_profile    | None                                 |
+----------------------+--------------------------------------+
```


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Related Commands

show ssc registration, ssc registration delete, ssc registration list

ssc reg-policy create

Creates a registration policy on the Services Director. This is used during the automatic self-registration of externally-deployed vTMs and cloud-based vTMs.

Syntax

ssc reg-policy create feature-pack *feature-pack* bandwidth *bandwidth* mgmt-ip-subnet *subnet* [tag *name*] [inst-version-low *version*] [inst-version-high *version*] [access-profile *access-profile*] [analytics-profile *analytics-profile*]

Parameters

`feature-pack`

Specify the name of a feature pack.

This is the feature pack that will be assigned to a vTM that is successfully evaluated using this policy.

This is not an acceptance condition, but the evaluation of the **bandwidth** property refers to this property.

`bandwidth`

This is the required bandwidth (in Mbps) for a vTM that is evaluated using this policy.

If there is insufficient bandwidth in the specified Feature Pack for a vTM, the auto-acceptance of the vTM is rejected by the self-registration policy.

`mgmt-ip-subnet`

Specify the IP address and netmask of a subnetwork in CIDR format. For example, 10.122.12.13/18.

This identifies the subnet to which a vTM must belong to be accepted by this policy.

If a vTM that is evaluated by this policy is from outside the specified subnetwork, the auto-acceptance of the vTM is rejected by the self-registration policy.

`tag`

(Optional) A unique name for the self-registration policy.

`inst-version-low`

(Optional) The minimum version for the vTM software. This takes the form X.Y. Examples: 10.0, 10.3.

R1 releases are included automatically for any base version. For example, 10.0 includes 10.0r1.

If a vTM that is evaluated by this policy does not meet this condition, the auto-acceptance of the vTM is rejected by the self-registration policy.

`inst-version-high`

(Optional) The maximum version for the vTM software. This takes the form X.Y. Examples: 10.4, 11.0.

R1 releases are included automatically for any base version. For example, 10.3 includes 10.3r1.

If a vTM that is evaluated by this policy does not meet this condition, the auto-acceptance of the vTM is rejected by the self-registration policy.

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`access-profile`

(Optional) The Access Profile for the policy. This profile identifies the authenticator and permission groups required for the user authentication on this vTM.

If selected, these will be applied to the vTM once it is accepted. All cluster members are affected by this change.

`analytics-profile`

(Optional) The Analytics Profile for the policy. This profile identifies the resources required for analytics on this vTM.

If selected, these will be applied to the vTM once it is accepted. All cluster members are affected by this change.

Examples

```
*** list existing self-reg policies ***
amnesiac (config) # ssc reg-policy list
+----------------------------+----------------+
| Policy ID                  | Tag            |
+----------------------------+----------------+
| Policy-MHM8-AB62-SI2J-DNUX | jk-self-reg-01 |
| Policy-8QU3-ZERY-8IW6-3W6J | self-reg-01    |
+----------------------------+----------------+

*** create a new sel-reg policy 'jk-self-reg-02' ***
amnesiac (config) # ssc reg-policy create feature-pack STM-400_full bandwidth 80
mgmt-ip-subnet 10.20.128.0/18 inst-version-low 10.2 tag jk-self-reg-02
+----------------------------+----------------------------+
| Field                      | Value                      |
+----------------------------+----------------------------+
| instance_version_range_low | 10.2                       |
| bandwidth                  | 80                         |
| tag                        | jk-self-reg-02             |
| management_ip_subnet       | 10.20.128.0/18             |
| feature_pack               | STM-400_full               |
| access_profile             | None                       |
| analytics_profile          | None                       |
| instance_version_range_high |                           |
| policy_id                  | Policy-I7A7-3DN2-6IEB-QF96 |
+----------------------------+----------------------------+

amnesiac (config) # ssc reg-policy list
+----------------------------+----------------+
| Policy ID                  | Tag            |
+----------------------------+----------------+
| Policy-MHM8-AB62-SI2J-DNUX | jk-self-reg-01 |
| Policy-I7A7-3DN2-6IEB-QF96 | jk-self-reg-02 |
| Policy-8QU3-ZERY-8IW6-3W6J | self-reg-01    |
+----------------------------+----------------+
```

Related Commands

show ssc reg-policy, ssc reg-policy delete, ssc reg-policy list, ssc reg-policy update

ssc reg-policy delete

Deletes a registration policy from the Services Director.

Syntax

ssc reg-policy delete policy-id *registration-policy*

Parameters

registration-policy

Specify the name of the registration policy that you want to delete.

Examples

```
*** list self-reg policies ***
amnesiac (config) # ssc reg-policy list
+----------------------------+----------------+
| Policy ID                  | Tag            |
+----------------------------+----------------+
| Policy-MHM8-AB62-SI2J-DNUX | jk-self-reg-01 |
| Policy-I7A7-3DN2-6IEB-QF96 | jk-self-reg-02 |
| Policy-8QU3-ZERY-8IW6-3W6J | self-reg-01    |
+----------------------------+----------------+

*** delete self-reg policy 'jk-self-reg-02' ***
amnesiac (config) # ssc reg-policy delete policy-id jk-self-reg-02
+-------------------------------------------------------+
| Deleted                                               |
+-------------------------------------------------------+
| Registration policy Policy-I7A7-3DN2-6IEB-QF96 deleted |
+-------------------------------------------------------+

*** list self-reg policies to confirm deletion ***
amnesiac (config) # ssc reg-policy list
+----------------------------+----------------+
| Policy ID                  | Tag            |
+----------------------------+----------------+
| Policy-MHM8-AB62-SI2J-DNUX | jk-self-reg-01 |
| Policy-8QU3-ZERY-8IW6-3W6J | self-reg-01    |
+----------------------------+----------------+
```

Related Commands

show ssc reg-policy, ssc reg-policy create, ssc reg-policy list, ssc reg-policy update

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ssc reg-policy list

Displays a list of all a registration policies on the Services Director.

Syntax

ssc reg-policy list

Examples

```
amnesiac (config) # ssc reg-policy list
+----------------------------+----------------+
| Policy ID                  | Tag            |
+----------------------------+----------------+
| Policy-MHM8-AB62-SI2J-DNUX | jk-self-reg-01 |
| Policy-I7A7-3DN2-6IEB-QF96 | jk-self-reg-02 |
| Policy-8QU3-ZERY-8IW6-3W6J | self-reg-01    |
+----------------------------+----------------+
```

Related Commands

show ssc reg-policy, ssc reg-policy create, ssc reg-policy delete, ssc reg-policy update

ssc reg-policy update

Updates a registration policy on the Services Director.

Syntax

ssc reg-policy update policy-id *id* [tag *name*] [feature-pack *feature-pack*] [bandwidth *bandwidth*] [mgmt-ip-subnet *subnet*] [inst-version-low *version*] [inst-version-high *version*] [access-profile *access-profile*] [analytics-profile `analytics-profile`]

Parameters

`policy-id` *`id`*

Specify the name of the registration policy that you want to update.

`tag`

(Optional) A unique name for the self-registration policy.

`feature-pack`

(Optional) The name of a feature pack.

This is the feature pack that will be assigned to a vTM that is successfully evaluated using this policy.

This is not an acceptance condition, but the evaluation of the **bandwidth** property refers to this property.

`bandwidth`

(Optional) The required bandwidth (in Mbps) for a vTM that is evaluated using this policy.

If there is insufficient bandwidth in the specified Feature Pack for a vTM, the auto-acceptance of the vTM is rejected by the self-registration policy.

`mgmt-ip-subnet`

(Optional) The IP address and netmask of a subnetwork in CIDR format. For example, 10.122.12.13/18.

This identifies the subnet to which a vTM must belong to be accepted by this policy.

If a vTM that is evaluated by this policy is from outside the specified subnetwork, the auto-acceptance of the vTM is rejected by the self-registration policy.

`inst-version-low`

(Optional) The minimum version for the vTM software. This takes the form X.Y. Examples: 10.0, 10.3.

R1 releases are included automatically for any base version. For example, 10.0 includes 10.0r1.

If a vTM that is evaluated by this policy does not meet this condition, the auto-acceptance of the vTM is rejected by the self-registration policy.

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`inst-version-high`

(Optional) The maximum version for the vTM software. This takes the form X.Y. Examples: 10.4, 11.0.

R1 releases are included automatically for any base version. For example, 10.3 includes 10.3r1.

If a vTM that is evaluated by this policy does not meet this condition, the auto-acceptance of the vTM is rejected by the self-registration policy.

`access-profile`

(Optional) An access profile. This profile identifies the authenticator and permission groups required for the user authentication on this vTM.

If selected, these will be applied to the vTM once it is accepted. All cluster members are affected by this change.

`analytics-profile`

(Optional) An analytics profile. This profile identifies the resources required to implement analytics on this vTM.

If selected, these will be applied to the vTM once it is accepted. All cluster members are affected by this change.

Examples

```
*** show details for a self-reg policy ***
amnesiac (config) # show ssc reg-policy policy-id self-reg-01
+-----------------------------+----------------------------+
| Field                       | Value                      |
+-----------------------------+----------------------------+
| instance_version_range_low  |                            |
| bandwidth                   | 100                        |
| tag                         | self-reg-01                |
| management_ip_subnet        | 10.62.128.0/18             |
| feature_pack                | STM-400_full               |
| access_profile              | None                       |
| analytics_profile           | None                       |
| instance_version_range_high |                            |
| policy_id                   | Policy-8QU3-ZERY-8IW6-3W6J |
+-----------------------------+----------------------------+
```

```
*** change bandwidth from 100 to 120 ***
amnesiac (config) # ssc reg-policy update policy-id self-reg-01 bandwidth 120
+-----------------------------+----------------------------+
| Field                       | Value                      |
+-----------------------------+----------------------------+
| instance_version_range_low  |                            |
| bandwidth                   | 120                        |
| tag                         | self-reg-01                |
| management_ip_subnet        | 10.62.128.0/18             |
| feature_pack                | STM-400_full               |
| access_profile              | None                       |
| analytics_profile           | None                       |
| instance_version_range_high |                            |
| policy_id                   | Policy-8QU3-ZERY-8IW6-3W6J |
+-----------------------------+----------------------------+
```

Related Commands

show ssc reg-policy, ssc reg-policy create, ssc reg-policy delete, ssc reg-policy list

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ssc sd-admin-ca create

Creates a Services Director CA certificate that is for use with a secure LDAP server authenticator.

Syntax

ssc sd-admin-ca create admin-ca-name *tag* certificate-authority *certificate-text*

Parameters

`tag`

A unique name for the CA certificate.

`certificate-text`

The text of the CA certificate.

Examples

```
*** list certificates ***
amnesiac (config) # ssc sd-admin-ca list
+------+------------------------------+
| Name | Unique ID                    |
+------+------------------------------+
| CA-1 | Admin-CA-5XJ0-HP0Y-YQAX-69O2 |
+------+------------------------------+

*** add a new certificate ***
amnesiac (config) # ssc sd-admin-ca create admin-ca-name CA-2 certificate-authority
"-----BEGIN CERTIFICATE----- ...<certificate body>... -----END CERTIFICATE----- >"
+-----------------------------------------+
| Created                                 |
+-----------------------------------------+
| admin certificate authority CA-2 created |
+-----------------------------------------+

*** confirm creation ***
amnesiac (config) # ssc sd-admin-ca list
+------+------------------------------+
| Name | Unique ID                    |
+------+------------------------------+
| CA-1 | Admin-CA-5XJ0-HP0Y-YQAX-69O2 |
| CA-2 | Admin-CA-6J21-KKH3-VSAJ-3209 |
+------+------------------------------+
```

Related Commands

ssc sd-admin-ca list, ssc sd-admin-ca update, show ssc sd-admin-ca, show ssc sd-admin-ca, ssc sd-authenticator add ldap auth-name, ssc sd-authenticator test auth-name, ssc sd-authenticator update ldap auth-name

ssc sd-admin-ca list

Lists all Services Director CA certificates that are for use with a secure LDAP server authenticator.

Syntax

ssc sd-admin-ca list

Examples

```
amnesiac (config) # ssc sd-admin-ca list
+------+------------------------------+
| Name | Unique ID                    |
+------+------------------------------+
| CA-1 | Admin-CA-5XJ0-HP0Y-YQAX-69O2 |
| CA-2 | Admin-CA-6J21-KKH3-VSAJ-3209 |
+------+------------------------------+
```

Related Commands

ssc sd-admin-ca create, ssc sd-admin-ca update, show ssc sd-admin-ca, show ssc sd-admin-ca, ssc sd-authenticator add ldap auth-name, ssc sd-authenticator test auth-name, ssc sd-authenticator update ldap auth-name

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ssc sd-admin-ca update

Updates a Services Director CA certificate that is for use with a secure LDAP server authenticator.

Syntax

ssc sd-admin-ca create admin-ca-name *tag* certificate-authority *certificate-text* new-admin-ca-name *new-tag*

Parameters

`tag`

A unique name for the CA certificate.

`certificate`

The text of the CA certificate.

`new-tag`

A new unique name for the CA certificate.

Examples

```
*** list certificates ***
amnesiac (config) # ssc sd-admin-ca list
+------+------------------------------+
| Name | Unique ID                    |
+------+------------------------------+
| CA-1 | Admin-CA-5XJ0-HP0Y-YQAX-69O2 |
| CA-2 | Admin-CA-6J21-KKH3-VSAJ-3209 |
+------+------------------------------+

*** rename the CA-2 certificate ***
amnesiac (config) #  ssc sd-admin-ca update admin-ca-name CA-2 new-admin-ca-name LDP2
+-----------------------------------------+
| Updated                                 |
+-----------------------------------------+
| admin certificate authority CA-2 updated |
+-----------------------------------------+

*** confirm update ***
amnesiac (config) # ssc sd-admin-ca list
+------+------------------------------+
| Name | Unique ID                    |
+------+------------------------------+
| CA-1 | Admin-CA-5XJ0-HP0Y-YQAX-69O2 |
| LDP2 | Admin-CA-6J21-KKH3-VSAJ-3209 |
+------+------------------------------+
```

Related Commands

ssc sd-admin-ca create, ssc sd-admin-ca list, show ssc sd-admin-ca, show ssc sd-admin-ca, ssc sd-authenticator add ldap auth-name, ssc sd-authenticator test auth-name, ssc sd-authenticator update ldap auth-name

ssc sd-authenticator add ldap auth-name

Adds an LDAP-based Services Director authenticator. This can be either secure or non-secure.

Syntax

ssc sd-authenticator add ldap auth-name *authenticator-name* auth-status [enabled | disabled] server *server* server dn-method *method* filter *filter* base-dn *base-DN* fallback-group *fallback-group* port *port* timeout *timeout-period* group-attribute *group-attribute* group-field *group-field* bind-dn *bind-DN* group-filter *group-filter* ssl *ssl* [search-dn *search-DN* search-password *password*]

Parameters

`authenticator-name`

Specify a name for the LDAP Services Director authenticator.

`auth-status`

Specify whether the authenticator is either enabled or disabled.

`server`

Specify the IP address or hostname of the LDAP server.

`method`

Specify how the bind DN for a user will be derived. Either:

- `construct:` the bind DN for a user can be constructed from a known string, (see <bind-DN>) or
- `search:` the bind DN for a user can be searched for in the directory. This is necessary if you have users under different directory paths.

`filter`

Specify a filter that uniquely identifies a user located under the Base DN.

The string "%u" will be substituted with the username. For example:

- Active Directory: `"sAMAccountName=%u"`
- Unix LDAP: `"uid=%u"`

`base-DN`

Specify the base DN (Distinguished Name) for directory searches.

`fallback-group`

Specify a permission group. For example, "admin". If <group-attribute> is not defined, or is not set for the user, this permission group will be used. If not specified, users with no attribute matching group-attribute will be denied access.

`port`

Specify the port used to connect to the LDAP server.

`timeout-period`

Specify the timeout period (in seconds) for a connection to the LDAP server.

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group-attribute

Specify the LDAP attribute that gives a user's group. For example: "memberOf". If multiple values are returned by the LDAP server, the first valid one will be used.

group-field

Specify the sub-field of the group-attribute that gives a user's group. For example: if <group-attribute> is "memberOf" which delivers "CN=mygroup, OU=groups, OU=users, DC=mycompany, DC=local", set group-field to "CN". The first matching field will be used.

bind-DN

Specify a template to construct the bind DN from the username. This is only used when <method> is "construct". The string "%u" is replaced by the username. For example:

- `"%u@mycompany.local"`
- `"cn=%u,dn=mycompany,dn=local"`

group-filter

Specify an alternative group search filter. This is only used when the user record returned by the LDAP filter does not contain the required group information.

This will typically be required if you have Unix/POSIX-style user records. If multiple records are returned the list of group names will be extracted from all of them.

The string "%u" will be replaced by the username. For example:

- `"(&(memberUid=%u)(objectClass=posixGroup))"`

ssl

(Optional) Select the required LDAP security type:

- *none*. Select this if your LDAP server does not support secure connections.
- *starttls*. Select this if your LDAP server supports STARTTLS secure connections. You must ensure that a matching CA certificate is present to use this option.
- *ldaps*. Select this if your LDAP server supports LDAPS secure connections. You must ensure that a matching CA certificate is present to use this option.

search-DN

Specify a DN to use when searching the directory for a user's bind DN. These are only used when the DN Method is Search. You can leave these blank if it is possible to perform the bind DN search using an anonymous bind.

search-password

Specify the password for the search-DN.

Usage Guidelines

Use the **no ssc sd-authenticator auth-name** command to delete an authenticator.

You cannot delete a Services Director authenticator that is associated with an access profile.

Examples

```
*** create an LDAP Services Director authenticator ***
amnesiac (config) # ssc sd-authenticator add ldap auth-name "LDAP Server" auth-status
enabled server 10.62.169.170 dn-method "construct" filter "sAMAccountName=%u" base-
dn "OU=users, DC=tekton, DC=local" fallback-group admin port 389 timeout 30 group-
attribute "memberOf" group-field "CN" bind-dn "%u@takton.local" group-filter ssl
starttls "(&(memberUid=%u)(objectClass=posixGroup))"
+--------------------------------------+
| Created                              |
+--------------------------------------+
| SD Authenticator LDAP Server created |
+--------------------------------------+

*** delete an LDAP Services Director ***
amnesiac (config) # no ssc sd-authenticator auth-name "LDAP Server"
+-----------------------------------+
| Deleted                           |
+-----------------------------------+
| Authenticator LDAP Server deleted |
+-----------------------------------+
```

Related Commands

show ssc sd-admin-ca, ssc sd-authenticator list, ssc sd-authenticator test auth-name, ssc sd-authenticator update ldap auth-name, show ssc sd-admin-ca, ssc sd-admin-ca create, ssc sd-admin-ca list, ssc sd-admin-ca update

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ssc sd-authenticator add radius auth-name

Adds a RADIUS-based Services Director authenticator.

Syntax

ssc sd-authenticator add radius auth-name *authenticator-name* auth-status [enable | disable] server *server* fallback-group *fallback-group* port *port* timeout *timeout-period* group-attribute *group-attribute* group-vendor *group-vendor* secret `secret` nas-identifier *NAS-identifier* nas-ip-address *NAS-ip-address*

Parameters

`authenticator-name`

Specify a name for the RADIUS Services Director authenticator.

`auth-status`

Specify whether the authenticator is either enabled or disabled.

`server`

Specify the IP address or hostname of the RADIUS server.

`fallback-group`

Specify a permission group. For example, "admin". If no group is found using the vendor and group identifiers, or the group found is not valid, the permission group specified here will be used.

`port`

Specify the port used to connect to the RADIUS server.

`timeout-period`

Specify the timeout period (in seconds) for a connection to the RADIUS server.

`group-attribute`

Specify the RADIUS identifier for the attribute that specifies an account's group. May be left blank if <fallback-group> is specified.

`group-vendor`

Specify the RADIUS identifier for the vendor of the RADIUS attribute that specifies an account's group. Leave blank if using a standard attribute such as Filter-Id.

`secret`

Specify the secret key shared with the RADIUS server.

`NAS-identifier`

Specify a string identifying the Network Access Server (NAS) which is requesting authentication of the user. This value is sent to the RADIUS server. If left blank the address of the interface used to connect to the server will be used.

`NAS-ip-address`

Specify the identifying IP Address of the NAS which is requesting authentication of the user. This value is sent to the RADIUS server.

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Usage Guidelines

Use the **no ssc sd-authenticator auth-name** command to delete an authenticator.

You cannot delete a Services Director authenticator that is associated with an access profile.

Examples

```
*** create a RADIUS authenticator ***
amnesiac (config) # ssc sd-authenticator add radius auth-name "RADIUS Server" server
10.62.167.193 fallback-group admin port 1812 timeout 30 group-attribute 1 group-
vendor 1476 secret * nas-identifier "Internal RADIUS" nas-ip-address 127.0.0.1
+-------------------------------------+
| Created                             |
+-------------------------------------+
| Authenticator RADIUS Server created |
+-------------------------------------+

*** delete an authenticator ***
amnesiac (config) # no ssc sd-authenticator auth-name "RADIUS Server"
+-------------------------------------+
| Deleted                             |
+-------------------------------------+
| Authenticator RADIUS Server deleted |
+-------------------------------------+
```

Related Commands

show ssc sd-admin-ca, ssc sd-authenticator list, ssc sd-authenticator test auth-name, ssc sd-authenticator update radius auth-name

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ssc sd-authenticator add tacacs_plus auth-name

Adds a TACACS+-based Services Director authenticator.

Syntax

ssc sd-authenticator add tacacs-plus auth-name *authenticator-name* auth-status [enable | disable] server *server* auth-type [pap | ascii] fallback-group *fallback-group* port *port* timeout *timeout-period* group-field *group-field* group-service *group-service* secret *secret*

Parameters

`authenticator-name`

Specify a name for the TACACS+ Services Director authenticator.

`auth-status`

Specify whether the authenticator is either enabled or disabled.

`server`

Specify the IP address or hostname of the TACACS+ server.

`auth-type`

Specify the TACACS+ authentication type, either PAP or ACSII.

`fallback-group`

Specify a permission group. If <group-service> is not defined, or no group value is provided for the user by the TACACS+ server, the group specified here will be used. If this is not specified, users with no TACACS+ defined group will be denied access.

`port`

Specify the port used to connect to the TACACS+ server.

`timeout-period`

Specify the timeout period (in seconds) for a connection to the TACACS+ server.

`group-field`

Specify the TACACS+ "service" field that provides each user's group.

`group-service`

Specify the TACACS+ "service" that identifies a user's group field.

`secret`

Specify the secret key shared with the TACACS+ server.

Usage Guidelines

Use the **no ssc sd-authenticator auth-name** command to delete an authenticator.

You cannot delete a Services Director authenticator that is associated with an access profile.

Examples

```
*** create a TACACS+ authenticator ***
amnesiac (config) # ssc sd-authenticator add tacacs-plus auth-name "TACACS+ Server"
auth-status enabled server 10.62.167.198 auth-type pap fallback-group admin port 49
timeout 30 group-field permission-group group-service "Hoobland" secret
"tacacs_plus_secret"
+-----------------------------------------+
| Created                                 |
+-----------------------------------------+
| SD Authenticator TACACS+ Server created |
+-----------------------------------------+

*** delete an authenticator ***
amnesiac (config) # no ssc sd-authenticator auth-name "TACACS+ Server"
+-----------------------------------------+
| Deleted                                 |
+-----------------------------------------+
| SD Authenticator TACACS+ Server deleted |
+-----------------------------------------+
```

Related Commands

show ssc sd-admin-ca, ssc sd-authenticator list, ssc sd-authenticator test auth-name, ssc sd-authenticator update tacacs_plus auth-name

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ssc sd-authenticator list

Lists all defined Services Director authenticators.

Syntax

ssc sd-authenticator list

Examples

```
amnesiac (config) # ssc sd-authenticator list
+----------------+-----------------------------------+
| Name           | Unique ID                         |
+----------------+-----------------------------------+
| LDAP Server    | Authenticator-D83I-9095-TT8R-CUAT |
| Secure LDAP    | Authenticator-E723-MT4B-JJ3W-BARK |
| RADIUS Server  | Authenticator-808G-LJWJ-MT3B-WMDZ |
| TACACS+ Server | Authenticator-7F1D-A1K3-1PO4-VSEF |
+----------------+-----------------------------------+
```

Related Commands

show ssc sd-admin-ca, ssc sd-authenticator add ldap auth-name, ssc sd-authenticator add radius auth-name, ssc sd-authenticator add tacacs_plus auth-name, ssc sd-authenticator test auth-name, ssc sd-authenticator update ldap auth-name, ssc sd-authenticator update radius auth-name, ssc sd-authenticator update tacacs_plus auth-name

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ssc sd-authenticator test auth-name

Tests a Services Director authenticator using a remote user name and password.

Note: For secure LDAP server, a matching CA certificate must be present on Services Director to enable the operation.

Syntax

ssc sd-authenticator test auth-name *authenticator-name* username *user-name* password *password*

Parameters

authenticator-name

Specify a name for the Services Director authenticator.

user-name

Specify the required user.

password

Specify the password for the required user.

Examples

```
amnesiac (config) # ssc sd-authenticator test auth-name bbotservices username
tacadmin password tacpassword
+--------+---------+
| Result | Message |
+--------+---------+
| True   |         |
+--------+---------+
```

Related Commands

show ssc sd-admin-ca, ssc sd-authenticator add ldap auth-name, ssc sd-authenticator add radius auth-name, ssc sd-authenticator add tacacs_plus auth-name, ssc sd-authenticator list, ssc sd-authenticator update ldap auth-name, ssc sd-authenticator update radius auth-name, ssc sd-authenticator update tacacs_plus auth-name, show ssc sd-admin-ca, ssc sd-admin-ca create, ssc sd-admin-ca list, ssc sd-admin-ca update

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ssc sd-authenticator update ldap auth-name

Updates an LDAP-based Services Director authenticator.

Syntax

ssc sd-authenticator update ldap auth-name *authenticator-name* auth-status [enable | disable] [server *server* | dn-method *method* | filter *filter* | base-dn *base-DN* | fallback-group *fallback-group* | port *port* | timeout *timeout-period* | group-attribute *group-attribute* | group-field *group-field* | bind-dn *bind-DN* | group-filter *group-filter* | ssl *ssl* | search-dn *search-DN* | search-password *password*]

Parameters

`authenticator-name`

Specify the name of the LDAP Services Director authenticator.

`auth-status`

Specify whether the authenticator is either enabled or disabled.

`server`

Specify the IP address or hostname of the LDAP server.

`method`

Specify how the bind DN for a user will be derived. Either:

- `construct:` the bind DN for a user can be constructed from a known string, (see <bind-DN>) or
- `search:` the bind DN for a user can be searched for in the directory. This is necessary if you have users under different directory paths.

`filter`

Specify a filter that uniquely identifies a user located under the Base DN.

The string "%u" will be substituted with the username. For example:

- Active Directory: `"sAMAccountName=%u"`
- Unix LDAP@: `"uid=%u"`

`base-DN`

Specify the base DN (Distinguished Name) for directory searches.

`fallback-group`

Specify a permission group. For example, "admin". If <group-attribute> is not defined, or is not set for the user, this permission group will be used. If not specified, users with no attribute matching group-attribute will be denied access.

`port`

Specify the port used to connect to the LDAP server.

`timeout-period`

Specify the timeout period (in seconds) for a connection to the LDAP server.

group-attribute

Specify the LDAP attribute that gives a user's group. For example: "memberOf". If multiple values are returned by the LDAP server, the first valid one will be used.

group-field

Specify the sub-field of the group-attribute that gives a user's group. For example: if <group-attribute> is "memberOf" which delivers "CN=mygroup, OU=groups, OU=users, DC=mycompany, DC=local", set group-field to "CN". The first matching field will be used.

bind-DN

Specify a template to construct the bind DN from the username. This is only used when <method> is "construct". The string "%u" is replaced by the username. For example:

- `"%u@mycompany.local"`
- `"cn=%u,dn=mycompany,dn=local"`

group-filter

Specify an alternative group search filter. This is only used when the user record returned by the LDAP filter does not contain the required group information.

This will typically be required if you have Unix/POSIX-style user records. If multiple records are returned the list of group names will be extracted from all of them.

The string "%u" will be replaced by the username. For example:

- `"(&(memberUid=%u)(objectClass=posixGroup))"`

ssl

(Optional) Select the required LDAP security type:

- *none*. Select this if your LDAP server does not support secure connections.
- *starttls*. Select this if your LDAP server supports STARTTLS secure connections. You must ensure that a matching CA certificate is present to use this option.
- *ldaps*. Select this if your LDAP server supports LDAPS secure connections. You must ensure that a matching CA certificate is present to use this option.

search-DN

Specify a DN to use when searching the directory for a user's bind DN. These are only used when the DN Method is Search. You can leave these blank if it is possible to perform the bind DN search using an anonymous bind.

search-password

Specify the password for the search-DN.

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Examples

```
amnesiac (config) # ssc sd-authenticator update ldap auth-name "LDAP Server" server
10.62.169.170 dn-method construct filter "sAMAccountName=%u" base-dn "OU=users,
DC=tekton, DC=local" fallback-group admin port 389 timeout 20 group-attribute
"memberOf" group-field "CN" bind-dn "%u@takton.local" group-filter
"(&(memberUid=%u)(objectClass=posixGroup))"
+---------------------------------------+
| Modified                              |
+---------------------------------------+
| SD Authenticator LDAP Server modified |
+---------------------------------------+
```

Related Commands

show ssc sd-admin-ca, ssc sd-authenticator add ldap auth-name, ssc sd-authenticator list, ssc sd-authenticator test auth-name, show ssc sd-admin-ca, ssc sd-admin-ca create, ssc sd-admin-ca list, ssc sd-admin-ca update

ssc sd-authenticator update radius auth-name

Updates a RADIUS-based Services Director authenticator.

Syntax

ssc sd-authenticator create radius auth-name *authenticator-name* auth-status [enable | disable] [server *server* | fallback-group *fallback-group* | port *port* | timeout *timeout-period* | group-attribute *group-attribute* | group-vendor *group-vendor* | secret *secret* | nas-identifier *NAS-identifier* | nas-ip-address *NAS-ip-address*]

Parameters

`authenticator-name`

Specify the name of the RADIUS Services Director authenticator.

`auth-status`

Specify whether the authenticator is either enabled or disabled.

`server`

Specify the IP address or hostname of the RADIUS server.

`fallback-group`

Specify a permission group. For example, "admin". If no group is found using the vendor and group identifiers, or the group found is not valid, the permission group specified here will be used.

`port`

Specify the port used to connect to the RADIUS server.

`timeout-period`

Specify the timeout period (in seconds) for a connection to the RADIUS server.

`group-attribute`

Specify the RADIUS identifier for the attribute that specifies an account's group. May be left blank if <fallback-group> is specified.

`group-vendor`

Specify the RADIUS identifier for the vendor of the RADIUS attribute that specifies an account's group. Leave blank if using a standard attribute such as Filter-Id.

`secret`

Specify the secret key shared with the RADIUS server.

`NAS-identifier`

Specify a string identifying the Network Access Server (NAS) which is requesting authentication of the user. This value is sent to the RADIUS server. If left blank the address of the interface used to connect to the server will be used.

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NAS-ip-address

Specify the identifying IP Address of the NAS which is requesting authentication of the user. This value is sent to the RADIUS server.

Examples

```
amnesiac (config) # ssc sd-authenticator update radius auth-name "RADIUS Server"
server 10.62.167.193 fallback-group admin port 1812 timeout 30 group-attribute 1
group-vendor 1476 secret "radius_secret" nas-identifier "Internal RADIUS" nas-ip-
address 127.0.0.1
+-----------------------------------------+
| Modified                                |
+-----------------------------------------+
| SD Authenticator RADIUS Server modified |
+-----------------------------------------+
```

Related Commands

show ssc sd-admin-ca, ssc sd-authenticator add radius auth-name, ssc sd-authenticator list, ssc sd-authenticator test auth-name

ssc sd-authenticator update tacacs_plus auth-name

Updates a TACACS+-based Services Director authenticator.

Syntax

ssc sd-authenticator update tacacs-plus auth-name *authenticator-name* auth-status [enable | disable] [server *server* | auth-type [pap | ascii]| fallback-group *fallback-group* | port *port* | timeout *timeout-period* | group-field *group-field* | group-service *group-service* | secret *secret*]

Parameters

`authenticator-name`

Specify the name of the TACACS+ Services Director authenticator.

`auth-status`

Specify whether the authenticator is either enabled or disabled.

`server`

Specify the IP address or hostname of the TACACS+ server.

`auth-type`

Specify the TACACS+ authentication type, either PAP or ACSII.

`fallback-group`

Specify a permission group. If <group-service> is not defined, or no group value is provided for the user by the TACACS+ server, the group specified here will be used. If this is not specified, users with no TACACS+ defined group will be denied access.

`port`

Specify the port used to connect to the TACACS+ server.

`timeout-period`

Specify the timeout period (in seconds) for a connection to the TACACS+ server.

`group-field`

Specify the TACACS+ "service" field that provides each user's group.

`group-service`

Specify the TACACS+ "service" that identifies a user's group field.

`secret`

Specify the secret key shared with the TACACS+ server.

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Examples

```
amnesiac (config) # ssc sd-authenticator update tacacs-plus auth-name "TACACS+
Server" server 10.62.167.198 auth-type pap fallback-group admin port 49 timeout 30
group-field permission-group group-service "Hoobland" secret "tacacs_plus_secret"
+-----------------------------------------+
| Modified                                |
+-----------------------------------------+
| SD Authenticator TACACS+ Server modified |
+-----------------------------------------+
```

Related Commands

show ssc sd-admin-ca, ssc sd-authenticator add tacacs_plus auth-name, ssc sd-authenticator list, ssc sd-authenticator test auth-name

ssc sd-permission-group create pg-name

Creates a Services Director permission group for user authentication.

Syntax

ssc sd-permission-group create pg-name *pg-name* [description *description*]

Parameters

pg-name

Specify a name for the Services Director permission group.

description

Optionally, specify a description of the permission group.

Usage Guidelines

Typically, there is a single Services Director permission group, with full access. The name of this permission group must match the group returned by the authenticator.

Use the **no ssc sd-permission-group pg-name** command to delete a permission group.

Examples

```
amnesiac (config) # ssc sd-permission-group create pg-name admin2 description
"administration group"
+--------------------------------+
| Created                        |
+--------------------------------+
| permission group admin created |
+--------------------------------+

*** delete the admin permission group ***
amnesiac (config) # no ssc sd-permission-group pg-name admin
+--------------------------------+
| Deleted                        |
+--------------------------------+
| permission group admin deleted |
+--------------------------------+
```

Related Commands

show ssc sd-permission-group, ssc sd-permission-group list, ssc sd-permission-group update pg-name

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ssc sd-permission-group list

Lists all defined Services Director permission groups.

Syntax

ssc sd-permission-group list

Examples

Typically, there is a single Services Director permission group, with full access. The name of this permission group matches the group returned by the authenticator.

```
amnesiac (config) # ssc sd-permission-group list
+-------+--------------------------------------+
| Name  | Unique ID                            |
+-------+--------------------------------------+
| admin | Permission-Group-XG8K-FUYG-WKKV-9IKP |
+-------+--------------------------------------+
```

Related Commands

show ssc sd-permission-group, ssc sd-permission-group create pg-name, ssc sd-permission-group update pg-name

ssc sd-permission-group update pg-name

Updates a Services Director permission group.

Syntax

ssc sd-permission-group update permission-group-name *pg-name* [new-pg-name `new-pg-name`] [description *description*]

Parameters

`permission-group-name` *`pg-name`*

Specify a name for the Services Director permission group.

`new-pg-name`

Optionally, specify a new name for the Services Director permission group.

`description`

Optionally, specify a description of the permission group.

Usage Guidelines

Typically, there is a single Services Director permission group, with full access. The name of this permission group matches the group returned by the authenticator.

Only the description and name can be changed.

Examples

```
*** list the Services Director permission groups (there is only one) ***
amnesiac (config) # ssc sd-permission-group list
+-------+--------------------------------------+
| Name  | Unique ID                            |
+-------+--------------------------------------+
| admin | Permission-Group-IPI9-J91T-B5J7-D63F |
+-------+--------------------------------------+

*** show details of the only permission group ***
amnesiac (config) # show ssc sd-permission-group pg-name admin
+----------------------+-------------------------------------------------------+
| Field                | Value                                                 |
+----------------------+-------------------------------------------------------+
| description          | Single permission group for SD user authentication.  |
| permission_group_id  | Permission-Group-IPI9-J91T-B5J7-D63F                 |
| tag                  | admin                                                 |
| children             | None                                                  |
+----------------------+-------------------------------------------------------+
```


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```
*** update the permission group ***
amnesiac (config) # ssc sd-permission-group update pg-name admin new-pg-name
charcoal
+--------------------------------+
| Updated                        |
+--------------------------------+
| permission group admin updated |
+--------------------------------+

*** display changes ***
amnesiac (config) # show ssc sd-permission-group pg-name charcoal
+---------------------+-------------------------------------------------------+
| Field               | Value                                                 |
+---------------------+-------------------------------------------------------+
| description         | Single permission group for SD user authentication. |
| permission_group_id | Permission-Group-IPI9-J91T-B5J7-D63F                |
| tag                 | charcoal                                              |
| children            | None                                                  |
+---------------------+-------------------------------------------------------+
```

Related Commands

show ssc sd-permission-group, ssc sd-permission-group create pg-name, ssc sd-permission-group list

ssc search-endpoint create

Creates a new Search Endpoint resource. This resource is used for vTM analytics.

Syntax

ssc search-endpoint create search-endpoint-address *address* transactions-index *index* logs-index *index* use-tls *Boolean* tls-verify *Boolean* [name *value*] auth-username *username* auth-password *password* endpoint-cert *certificate*

Parameters

`search-endpoint-address`

The address of the search endpoint in your analytics system, in the form *<server>:<port>*.

For example: *demo.com:2020*

`transactions-index`

This is the index used for transactions on the Splunk platform.

For example, *zxtm_transactions*.

`logs-index`

This is the index used for logs on the Splunk platform.

For example, *zxtm_logs*.

`use-tls`

Indicates whether queries require secure transmission. If `true`, you must also specify **endpoint-cert**.

`tls-verify`

Indicates whether queries require verification.

`name`

(Optional) The customer-facing name for the search endpoint resource. If this is not set, the tag is set to the UUID value for the resource.

`auth-username`

The authorization username for the search endpoint.

`auth-password`

The authorization password for the search endpoint.

`endpoint-cert`

The certificate for the search endpoint. This is required if **use-tls** is `true`.

Usage Guidelines

This command is only used for Search Endpoint resources. Collection Endpoint resources are handled separately, by an equivalent "collection-endpoint" command.

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Examples

```
*** list all search endpoints (empty) ***
amnesiac (config) # ssc search-endpoint list
+-----------------+
| Message         |
+-----------------+
| No record found |
+-----------------+

*** add a search endpoint resource ***
amnesiac (config) # ssc search-endpoint create search-endpoint-address demo.com:2020
transactions-index zxtm_transactions logs-index zxtm_logs use-tls true tls-verify
true name JK-EP-Search-01 auth-username admin auth-password password endpoint-cert
"LS0tLS1CRUdJTiBDRVJUSAUG5T...SVElGSUNBVEUtLS0tLQo="
+-----------------------------+-----------------------------------------------------
| Field                       | Value
+-----------------------------+-----------------------------------------------------
| verify_tls                  | True
| tag                         | JK-EP-Search-01
| search_endpoint_id          | Search-Endpoint-P5Y0-8JS4-X0BS-2P9M
| auth_password               | password
| auth_username               | admin
| search_endpoint_address     | demo.com:2020
| use_tls                     | True
| search_endpoint_certificate | LS0tLS1CRUdJTiBDRVJUSAUG5T...SVElGSUNBVEUtLS0tLQo=
| transactions_index          | zxtm_transactions
| logs_index                  | zxtm_logs
+-----------------------------+-----------------------------------------------------

*** list all search endpoints to confirm the addition ***
amnesiac (config) # ssc search-endpoint list
+-------------------------------------+-----------------+
| ID                                  | Tag             |
+-------------------------------------+-----------------+
| Search-Endpoint-OFFO-I80A-RVLP-4C49 | JK-EP-Search-01 |
+-------------------------------------+-----------------+
```

Related Commands

show ssc search-endpoint, ssc search-endpoint delete, ssc search-endpoint list, ssc search-endpoint update

ssc search-endpoint delete

Delete a Search Endpoint resource. This resource is used for vTM analytics.

Syntax

ssc search-endpoint delete name *endpoint-id*

Parameters

`name` *`endpoint-id`*

The identifier for the search endpoint resource, either its **tag** or its UUID.

Usage Guidelines

This command is only used for Search Endpoint resources. Collection Endpoint resources are handled separately, by an equivalent "collection-endpoint" command.

Examples

```
*** display a list of all (typically one) search endpoint ***
amnesiac (config) # ssc search-endpoint list
+-------------------------------------+-----------------+
| ID                                  | Tag             |
+-------------------------------------+-----------------+
| Search-Endpoint-P5Y0-8JS4-X0BS-2P9M | JK-EP-Search-01 |
+-------------------------------------+-----------------+

*** Delete a search endpoint ***
amnesiac (config) # ssc search-endpoint delete name JK-EP-Search-01
+-------------------------------------------------------------+
| Deleted                                                     |
+-------------------------------------------------------------+
| Search Endpoint Search-Endpoint-P5Y0-8JS4-X0BS-2P9M deleted |
+-------------------------------------------------------------+
```

Related Commands

show ssc search-endpoint, ssc search-endpoint create, ssc search-endpoint list, ssc search-endpoint update

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ssc search-endpoint list

Lists all Search Endpoint resources. These resources are used for vTM analytics.

Syntax

ssc search-endpoint list

Usage Guidelines

Typically, there is a single search endpoint.

This command is only used for Search Endpoint resources. Collection Endpoint resources are handled separately, by an equivalent "collection-endpoint" command.

Examples

```
amnesiac (config) # ssc search-endpoint list
+-------------------------------------+-----------------+
| ID                                  | Tag             |
+-------------------------------------+-----------------+
| Search-Endpoint-P5Y0-8JS4-X0BS-2P9M | JK-EP-Search-01 |
+-------------------------------------+-----------------+
```

Related Commands

show ssc search-endpoint, ssc search-endpoint create, ssc search-endpoint delete, ssc search-endpoint update

ssc search-endpoint update

Updates a Search Endpoint resource. This resource is used for vTM analytics.

Syntax

ssc search-endpoint update name *endpoint-id* [search-endpoint-address *address*] [use-tls *Boolean*] [tls-verify *Boolean*] [endpoint-cert *certificate*] [auth-username *username*] [auth-password *password*] [new-name *value*]

Parameters

`name` *`endpoint-id`*

Specify a unique identifier for the search-endpoint resource, either its tag or UUID.

`search-endpoint-address`

The address of the search endpoint on the Splunk platform, in the form *<server>:<port>*.

For example: *demo.com:2020*

`transactions-index`

This is the index used for transactions on the Splunk platform.

For example, *zxtm_transactions*.

`logs-index`

This is the index used for logs on the Splunk platform.

For example, *zxtm_logs*.

`use-tls`

Indicates whether queries require secure transmission. If `true`, you must also specify **endpoint-cert**.

`tls-verify`

Indicates whether queries require verification.

`endpoint-cert`

The certificate for the search endpoint. This is required if **use-tls** is `true`.

`auth-username`

The authorization username for the search endpoint.

`auth-password`

The authorization password for the search endpoint.

`new-name`

(Optional) A replacement name for the search endpoint resource.

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Usage Guidelines

This command is only used for Search Endpoint resources. Collection Endpoint resources are handled separately, by an equivalent "collection-endpoint" command.

Examples

```
*** list all search endpoints ***
amnesiac (config) # ssc search-endpoint list
+-------------------------------------+-----------------+
| ID                                  | Tag             |
+-------------------------------------+-----------------+
| Search-Endpoint-P5Y0-8JS4-X0BS-2P9M | JK-EP-Search-01 |
+-------------------------------------+-----------------+

*** display details for a specific search endpoint ***
amnesiac (config) # show ssc search-endpoint name JK-EP-Search-01
+-----------------------------+-----------------------------------------------------
| Field                       | Value
+-----------------------------+-----------------------------------------------------
| verify_tls                  | True
| tag                         | JK-EP-Search-01
| search_endpoint_id          | Search-Endpoint-P5Y0-8JS4-X0BS-2P9M
| auth_password               | password
| auth_username               | admin
| search_endpoint_address     | demo.com:2020
| use_tls                     | True
| search_endpoint_certificate | LS0tLS1CRUdJTiBDRVJUSAUG5T...SVElGSUNBVEUtLS0tLQo=
| transactions_index          | zxtm_transactions
| logs_index                  | zxtm_logs
+-----------------------------+-----------------------------------------------------
*** update a search endpoint to disable verification ***
amnesiac (config) # ssc search-endpoint update name JK-EP-Search-01 tls-verify false
+-----------------------------+-----------------------------------------------------
| Field                       | Value
+-----------------------------+-----------------------------------------------------
| verify_tls                  | False
| tag                         | JK-EP-Search-01
| search_endpoint_id          | Search-Endpoint-P5Y0-8JS4-X0BS-2P9M
| auth_password               | password
| auth_username               | admin
| search_endpoint_address     | demo.com:2020
| use_tls                     | True
| search_endpoint_certificate | LS0tLS1CRUdJTiBDRVJUSAUG5T...SVElGSUNBVEUtLS0tLQo=
| transactions_index          | zxtm_transactions
| logs_index                  | zxtm_logs
+-----------------------------+-----------------------------------------------------
```

Related Commands

show ssc search-endpoint, ssc search-endpoint create, ssc search-endpoint delete, ssc search-endpoint list

ssc server rest-port-num

Configures the Services Director REST API port number.

Syntax

[no] ssc server rest-port-num *port-number*

Parameters

port-number

Specify the REST API port number.

Usage Guidelines

Use the **no** command option to delete the REST API port number.

Examples

```
amnesiac (config) # ssc server rest-port-num 1234
```

Related Commands

show ssc server

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ssc service enable

Starts the Services Director service.

Syntax

[no] ssc service enable

Usage Guidelines

Use the **no** command option disable the service.

Examples

```
amnesiac (config) # ssc service enable
```

Related Commands

show ssc server

ssc service restart

Restarts the Services Director service.

Syntax

ssc service restart

Examples

```
amnesiac (config) # ssc service restart
```

Related Commands

show ssc server

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ssc settings analytics update

Sets the transaction type to match the setting on your vTM analytics platform.

Syntax

```
Sssc settings analytics update transaction-source-type source-type
```

Parameters

`transaction-source-type` *`source-type`*

Specify the text of the transaction type on your Analytics System.

Examples

```
*** view current setting ***
amnesiac (config) # show ssc settings analytics
+-------------------------+-------------------+
| Field                   | Value             |
+-------------------------+-------------------+
| transaction_source_type | zxtm_transactions |
+-------------------------+-------------------+

*** change the default setting to match a tailored analytics system ***
amnesiac (config) # ssc settings analytics update transaction-source-type
xxx_transactions
+-------------------------+------------------+
| Field                   | Value            |
+-------------------------+------------------+
| transaction_source_type | xxx_transactions |
+-------------------------+------------------+
```

Related Commands

show ssc settings analytics

ssc settings con-lic update exp-warningdays

Sets expiration days for a warning to be sent for the Services Director license.

Syntax

ssc settings con-lic update exp-warningdays *number-of-days*

Parameters

number-of-days

Specify the number of days in advance to warn before Services Director license expires.

Examples

```
amnesiac (config) # ssc settings con-lic update exp-warningdays 30
```

Related Commands

show ssc settings con-lic

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ssc settings con-lic update template-name

Updates Services Director license expiration settings based on the specified template.

Syntax

ssc settings con-lic update template-name *name* | exp-warningdays *number-of-days*

Parameters

name

Specify the template name.

number-of-days

Specify the number of days in advance to warn before Services Director license expires.

Usage Guidelines

Updates a Services Director license expiration settings with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to update the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Examples

```
amnesiac (config) # ssc settings con-lic update template-name con-lic-temp1 exp-
warningdays 30
```

Related Commands

show ssc settings licensing

ssc settings deployment update max-instances

Sets the maximum number of deployable instances.

Syntax

ssc settings deployment update max-instances *integer*

Parameters

integer

Specify maximum number of deployable instances, 0 equals no limit.

Usage Guidelines

Typically, zero is the correct value for most deployments. Instances that have been deleted do not count towards the limit. Instances that have been deployed but are not active (that is, have not been started) do count towards the limit. If you create a new instance in excess of this number, the instance is rejected with an error message. If this property is set to a lower number than the number of currently deployed instances then there is no immediate effect but subsequent deployment requests are rejected.

Examples

```
amnesiac (config) # ssc settings deployment update max-instances 0
```

Related Commands

ssc settings list

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ssc settings deployment update template-name

Updates a Services Director deployment based on the specified template.

Syntax

ssc settings deployment update template-name *name* | max-instances *integer*

Parameters

name

Specify the template name.

integer

Specify the maximum number of Traffic Manager instances that can be deployed. The default value zero (0) equals no limit. The value must be a positive integer.

Usage Guidelines

Updates a deployment settings with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to update the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Examples

```
amnesiac (config) # ssc settings deployment update template-name deploytemp1 max-
instances 0
```

Related Commands

ssc settings list, ssc template create template-name

ssc settings external-ip

Sets the external IP corresponding to the Services Endpoint Address when Services Director is running in a private network behind a NAT.

Syntax

[no] ssc settings external-ip

Usage Guidelines

The **no** command option clears the set external IP address.

Examples

```
amnesiac (config) # ssc settings external-ip 10.62.150.30
+-------------+--------------+
| Field       | Value        |
+-------------+--------------+
| external_ip | 10.62.150.30 |
+-------------+--------------+
amnesiac (config) # no ssc settings external-ip
+-------------+-------+
| Field       | Value |
+-------------+-------+
| external_ip | None  |
+-------------+-------+
```

Related Commands

show ssc settings external-ip

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ssc settings fla-check enable

Enables the FLA checker for the Services Director.

Syntax

[no] ssc settings fla-check enable

Usage Guidelines

The **no** command option disables the FLA checker.

Examples

```
amnesiac (config) # ssc settings fla-check enable
+--------------------+-------+
| Field              | Value |
+--------------------+-------+
| fla_check_enabled | True  |
+--------------------+-------+
amnesiac (config) # no ssc settings fla-check enable
+--------------------+-------+
| Field              | Value |
+--------------------+-------+
| fla_check_enabled | False |
+--------------------+-------+
```

Related Commands

show ssc settings fla-check

ssc settings licensing update alert-threshold

Updates Services Director licensing settings.

Syntax

ssc settings licensing update alert-threshold *integer* alert-thld-itvl *seconds*

Parameters

integer

Specify the number of alerts that can be sent. The range is 1-3600, inclusive; the value must be a positive integer.

alert-thld-itvl *seconds*

Specify the period of time, in seconds, between alerts. The default value is 3600 seconds (1 hour). The range is 1-3600, inclusive; the value must be a positive integer.

Usage Guidelines

The threshold and interval settings enable you to specify the time interval before an alert email is sent to the configured alert email addresses. The threshold and interval is reached then an alert message is sent. At most one message is sent per hour, to protect against a flood of messages being sent in the case of complete failure of the primary license server on a busy system.

Examples

```
amnesiac (config) # ssc settings licensing update alert-threshold 10 alert-thld-itvl
3600
```

Related Commands

ssc settings list

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ssc settings licensing update template-name

Updates Services Director licensing settings based on the specified template.

Syntax

ssc settings licensing update template-name *name* alert-threshold *integer* alert-thld-itvl *seconds*

Parameters

name

Specify the template name.

alert-threshold *integer*

Specify the number of alerts that can be sent. The range is 1-3600, inclusive; the value must be a positive integer.

alert-thld-itvl *seconds*

Specify the period of time, in seconds, between alerts. The default value is 3600 seconds (1 hour). The range is 1-3600, inclusive; the value must be a positive integer.

Usage Guidelines

Updates a licensing settings with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to update the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

The threshold and interval settings enable you to specify the time interval before an alert email is sent to the configured alert email addresses. The threshold and interval is reached then an alert message is sent. At most one message is sent per hour, to protect against a flood of messages being sent in the case of complete failure of the primary license server on a busy system.

Examples

```
amnesiac (config) # ssc settings licensing update template-name lictemp1 alert-
threshold 5 alert-thld-itvl 1600
```

Related Commands

ssc settings list

ssc settings list

Lists Services Director settings.

Syntax

ssc settings list

Examples

```
amnesiac (config) # ssc settings list
+-------------------------+
| Settings                |
+-------------------------+
| master_password         |
| logging                 |
| fla_check               |
| controller_licensing    |
| metering                |
| phone_home              |
| licensing               |
| deployment              |
| monitoring              |
| bandwidthpack_licensing |
+-------------------------+
```

Related Commands

ssc settings list

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ssc settings logging update

Updates Services Director logging settings.

Syntax

ssc settings logging update | [license-log *integer*] | [metering-log *integer*] | [inventory-log *integer*]

Parameters

`license-log` *`integer`*

Specify the license value. The range is 0-10. The default value is 0, which equals no logging. A log level of 3+ causes responses to license server requests to be logged in full, including the feature values set by the feature pack and bandwidth associated with the instance making the request. The value must be a positive integer; there is no upper limit.

`metering-log` *`integer`*

Specify the metering logging value. The range is 0-10. The default value is 0 which equals no logging. A log level of 5+ gives a summary of the activities of the metering thread (that is, starting metering, stopping metering, and so forth), while a log level of 9+ provides a detailed logging of each instance being metered. The value must be a positive integer; there is no upper limit.

`inventory-log` *`integer`*

Specify the metering logging value. The range is 0-10. The default value is 0, which equals no logging. A log level of 1+ causes inventory changes to be logged (the equivalent of the audit records). A log level of 3+ causes logging of all deployment and action commands. A log level of 8+ causes logging of the output from all deployment and actions. The value must be a positive integer; there is no upper limit.

Examples

```
amnesiac (config) # ssc settings logging update license-log 5
```

Related Commands

ssc settings list

ssc settings logging update template-name

Updates Services Director logging settings based on the specified template.

Syntax

ssc settings logging update template-name *name* | [license-log *integer*] | [metering-log *integer*] | [inventory-log *integer*]

Parameters

name

Specify the template name.

license-log *integer*

Specify the license value. The range is 0-10. The default value is 0, which equals no logging. A log level of 3+ causes responses to license server requests to be logged in full, including the feature values set by the feature pack and bandwidth associated with the instance making the request. The value must be a positive integer; there is no upper limit.

metering-log *integer*

Specify the metering logging value. The range is 0-10. The default value is 0 which equals no logging. A log level of 5+ gives a summary of the activities of the metering thread (that is, starting metering, stopping metering, and so forth), while a log level of 9+ provides a detailed logging of each instance being metered. The value must be a positive integer; there is no upper limit.

inventory-log *integer*

Specify the metering logging value. The range is 0-10. The default value is 0, which equals no logging. A log level of 1+ causes inventory changes to be logged (the equivalent of the audit records). A log level of 3+ causes logging of all deployment and action commands. A log level of 8+ causes logging of the output from all deployment and actions. The value must be a positive integer; there is no upper limit.

Usage Guidelines

Updates logging with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to update the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Examples

```
amnesiac (config) # ssc settings logging update template-name tempset1 settemp1
license-log 7
```

Related Commands

ssc settings list, ssc template create template-name

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ssc settings master-password reset

This command resets the master password for a Services Director if it in unknown or lost. This command should only be used as a final resort to re-establish a master password.

Syntax

ssc settings master-password reset password *new-password* [force [true | false]]

Parameters

new-password

Specify the new master password. This must be at least 8 characters long, and must have at least:

- One lower case character.
- One upper case character.
- One digit.
- One non-alphanumeric symbol.

force [true | false]

Specify **true** or **false**. If set to **true**, you can reset the password when there are Traffic Manager instances on the Services Director.

Usage Guidelines

This command is invisible from the command line, but is available.

If you wish to change the master password (that is, you know what the current master password is), use the "ssc settings master-password update" on page 227.

If you have just upgraded from Services Director v2.2r1 or earlier, a default master password has been assigned automatically to the Services Director. The default master password is *master1M@*. See the *Pulse Services Director Advanced User Guide* for details.

The master password is used to encrypt the passwords of all connected Traffic Manager instances. If you reset the master password, these Traffic Manager passwords are lost, and you must be re-enter the passwords manually. See “ssc instance update template-name” on page 500.

Where Traffic Manager instances are present on the Services Director, you must include the optional **force true** parameter in the command. This enables the reset to complete. An information message about updating passwords for registered instances is also displayed.

Note: After resetting the master password on the Active Services Director, you must repeat the process for the Standby Services Director.

Examples

```
*** attempt to reset ***
amnesiac (config) # ssc settings master-password reset password Banj-axed27
Not resetting master password
Ensure that "force true" is passed, to confirm that you wish to reset the master
password

*** attempt to reset, including the force true parameter ***
amnesiac (config) # ssc settings master-password reset password Banj-axed27 force
true
Successfully reset master password
You must manually update all passwords for registered instances
```

Note: After resetting the master password on the Active Services Director, you must repeat the process for the Standby Services Director.

Related Commands

show ssc settings master-password, ssc settings list, ssc settings master-password update

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ssc settings master-password update

Updates the Services Director master password on a Services Director.

Syntax

ssc settings master-password update current-password *current-password* new-password *new-password*

Parameters

`current-password` *`current-password`*

Specify the current password.

`new-password` *`new-password`*

Specify the new password. This must be at least 8 characters long, and must have at least:

- One lower case character.
- One upper case character.
- One digit.
- One non-alphanumeric symbol.

Usage Guidelines

This command should be used on the *Active* node in an HA pair.

While the password change completes, the status displayed by the "show ssc settings metering" on page 306 command is Changing. Once complete, it becomes Active.

After you have updated the password on the *Active*Services Director node, repeat the command on the *Standby* node.

Note: If you wish to *reset* the master password (that is, you do not know what the current master password is), use the "ssc settings master-password reset" on page 226.

Examples

```
*** Change the password ***
amnesiac (config) # ssc settings master-password update current-password P0s1-t1ve99
new-password Banj-axed27
+------------------+----------+
| Field            | Value    |
+------------------+----------+
| status           | Changing |
| new_password     | None     |
| current_password | None     |
+------------------+----------+
```

```
*** Monitor the password change while it completes ***
*** (status of "Changing" becomes "Active") ***
amnesiac (config) # show ssc settings master-password
+------------------+----------+
| Field            | Value    |
+------------------+----------+
| status           | Active   |
| new_password     | None     |
| current_password | None     |
+------------------+----------+
```

Related Commands

show ssc settings master-password, ssc settings list

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ssc settings metering update

Updates Services Director metering settings.

Syntax

ssc settings metering update | [meter-interval *integer*] | [log-check-itvl *seconds*] | [snmp-enabled [true | false]] | [alerts-and-notifications [true | false]]

Parameters

`meter-interval` *`integer`*

Specify the period of time, in seconds, between metering actions. The default value is 3600 seconds (1 hour). It cannot be set to more than 3600. The range is 1-3600, inclusive; the value must be a positive integer.

`log-check-itvl` *`seconds`*

Specify the period of time, in seconds, between checks for log-space. The default value is 3600 seconds (1 hour). The range is 1-3600, inclusive; the value must be a positive integer.

`snmp-enabled [true | false]`

Specify **true** or **false** to enable SNMP. By default, this is enabled.

`alerts-and-notifications [true | false]`

Specify **true** or **false** to enable alerts and notifications. By default, this is enabled.

Examples

```
amnesiac (config) # ssc settings metering update meter-interval 1500 log-check-itvl
1500 snmp-enabled False alerts-and-notifications False
+---------------------------+-------+
| Field                     | Value |
+---------------------------+-------+
| alerts_and_notifications | False |
| snmp_enabled              | False |
| log_check_interval        | 1500  |
| meter_interval            | 1500  |
+---------------------------+-------+
```

Related Commands

show ssc dashboard, show ssc metering warning instance-name, show ssc settings metering, ssc metering warning list

ssc settings metering update template-name

Updates Services Director metering settings based on the specified template.

Syntax

ssc settings metering update template-name *name* | [meter-interval *integer*] | [log-check-itvl *seconds*]

Parameters

name

Specify the template name.

meter-interval *integer*

Specify the period of time, in seconds, between metering actions. The default value is 3600 seconds (1 hour). It cannot be set to more than 3600. The range is 1-3600, inclusive; the value must be a positive integer.

log-check-itvl *seconds*

Specify the period of time, in seconds, between checks for log-space. The default value is 3600 seconds (1 hour). The range is 1-3600, inclusive; the value must be a positive integer.

Usage Guidelines

Updates metering with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to update the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Examples

```
amnesiac (config) # ssc settings metering update template-name mettemp1 meter-
interval 3600
```

Related Commands

ssc settings list

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ssc settings monitoring update

Updates Services Director monitoring settings.

Syntax

ssc settings monitoring update [cont-fail-period *seconds*] | [ins-fail-perid *seconds*] | [host-fail-period *seconds*] | [ovd-mon-warn-pd *seconds*] | [ins-mon-itvl *seconds*] | [cont-mon-itvl *seconds*] | [mon-email-itvl *seconds*] | [host-mon-itvl *seconds*] | [auto-cleanup-vtms *setting*]

Parameters

`cont-fail-perid` *seconds*

Specify the number of seconds after which a Services Director is considered failed. The default value is 180.

`ins-fail-perid` *seconds*

Specify the number of seconds after which an instance is considered failed. The default value is 180.

`host-fail-perid` *seconds*

Specify the number of seconds after which a host is considered failed. The default value is 180.

`cont-mon-itvl` *seconds*

Specify the number of seconds between monitoring Services Directors. The default value is 60.

`ins-mon-itvl` *seconds*

Specify the number of seconds between monitoring instances. The default value is 60.

`host-mon-itvl` *seconds*

Specify the number of seconds between monitoring hosts. The default value is 60.

`ovd-mon-warn-pd` *seconds*

Specify the number of seconds to consider monitoring overdue. The default value is 300.

`mon-email-itvl` *seconds*

Specify the number of seconds between monitoring alert emails. The default value is 60.

`auto-cleanup-vtms` *setting*

Select the required setting for auto cleanup of failed vTMs: *off*, *self_registered_vtms*, *all_vtms*.

Examples

```
amnesiac (config) # ssc settings monitoring update host-mon-itvl 360 mon-email-itvl
3600
```

Related Commands

show ssc settings monitoring

ssc settings monitoring update template-name

Updates Services Director monitoring settings based on a specified template.

Syntax

ssc settings monitoring update template-name *name* [cont-fail-period *seconds*] | [ins-fail-period *seconds*] | [host-fail-period *seconds*] | [ovd-mon-warn-pd *seconds*] | [ins-mon-itvl *seconds*] | [cont-mon-itvl *seconds*] | [mon-email-itvl *seconds*] | [host-mon-itvl *seconds*]

Parameters

name

Specify the template name.

`cont-fail-period` *seconds*

Specify the umber of seconds after which a Services Director is considered failed. The default value is 180 seconds.

`ins-fail-period` *seconds*

Specify the number of seconds after which an instance is considered failed. The default value is 180 seconds.

`host-fail-period` *seconds*

Specify the number of seconds after which a host is considered failed. The default value is 180 seconds.

`ovd-mon-warn-pd` *seconds*

Specify the number of seconds to consider monitoring overdue. The default value is 300 seconds.

`ins-mon-itvl` *seconds*

Specify the number of seconds between monitoring instances. The default value is 60 seconds.

`cont-mon-itvl` *seconds*

Specify the number of seconds between monitoring Services Directors. The default value is 60 seconds.

`mon-email-itvl` *seconds*

Specify the number of seconds between monitoring alert emails. The default value is 60 seconds.

`host-mon-itvl` *seconds*

Specify the number of seconds between monitoring hosts. The default value is 60 seconds.

Usage Guidelines

Updates metering with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to update the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

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Examples

```
amnesiac (config) # ssc settings monitoring update template-name monitortemp1 host-
mon-itvl 360 mon-email-itvl 360
```

Related Commands

show ssc settings monitoring

ssc settings security update

Updates Services Director security settings.

Syntax

ssc settings monitoring update [user_lockout_duration_minutes *minutes*] | [max_login_attempts max_login_attempts]

Parameters

`user_lockout_duration_minutes` *`minutes`*

Specify a suspension lockout duration (in minutes). If the max_login_attempts threshold limit is reached, the suspension duration lockout is applied. This has a default of 1 minute, and a maximum of 1440 minutes (equal to one day).

`max_login_attempts` *`max_login_attempts`*

Specify the maximum number of failed Services Director login attempts for a user. This has a default of zero, which indicates that there is no maximum.

Examples

```
amnesiac (config) # ssc settings security update max-login-attempts 3 user-lockout-
duration 15
+-------------------------------+-------+
| Field                         | Value |
+-------------------------------+-------+
| user_lockout_duration_minutes | 15    |
| max_login_attempts            | 3     |
+-------------------------------+-------+
```

Related Commands

show ssc settings security

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ssc settings telemetry update enabled

Enables/Disables Services Director's phone home telemetry feature.

When enabled, Services Director collects and exports phone home telemetry data to Pulse Secure.

Syntax

ssc settings telemetry update enabled [true | false]

Parameters

`true`

Enables the phone home telemetry feature.

`false`

Disables the phone home telemetry feature.

Examples

```
*** show phone home telemetry status ***
enable amnesiac (config) # show ssc settings telemetry
+--------------------+-------------------------------------------------------+
| Field              | Value                                                 |
+--------------------+-------------------------------------------------------+
| destination        | https://telemetry.cam.demo.com/product-feedback/1.0 |
| phone_home_enabled | False                                                 |
+--------------------+-------------------------------------------------------+

*** Enable phone home telemetry ***
enable amnesiac (config) # ssc settings telemetry update enabled true
+--------------------+-------------------------------------------------------+
| Field              | Value                                                 |
+--------------------+-------------------------------------------------------+
| destination        | https://telemetry.cam.demo.com/product-feedback/1.0 |
| phone_home_enabled | True                                                  |
+--------------------+-------------------------------------------------------+

*** Enable phone home telemetry ***
enable amnesiac (config) # ssc settings telemetry update enabled false
+--------------------+-------------------------------------------------------+
| Field              | Value                                                 |
+--------------------+-------------------------------------------------------+
| destination        | https://telemetry.cam.zeus.com/product-feedback/1.0 |
| phone_home_enabled | False                                                 |
+--------------------+-------------------------------------------------------+
```

Related Commands

show ssc settings telemetry archives, show ssc settings telemetry archives

ssc settings throughput update exp-warningdays

Sets expiration days for a warning to be sent for the Services Director about of bandwidth pack licenses.

Syntax

ssc settings throughput update exp-warningdays *number-of-days*

Parameters

number-of-days

Specify the number of days in advance to warn before Services Director license expires.

Examples

```
amnesiac (config) # ssc settings throughput update exp-warningdays 30
```

Related Commands

show ssc settings throughput

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ssc settings throughput update template-name

Updates Services Director throughput expiration settings based on the specified template.

Syntax

ssc settings throughput update template-name *name* | exp-warningdays *number-of-days*

Parameters

name

Specify the template name.

number-of-days

Specify the number of days in advance to warn for throughput expiration.

Usage Guidelines

Update a Services Director license expiration settings with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to update the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Examples

```
amnesiac (config) # ssc settings throughput update template-name thrutemp1 exp-
warningdays 30
```

Related Commands

show ssc settings throughput

ssc sku list

Lists Services Director SKUs.

Syntax

ssc sku list [show-all [true | false]

Usage Guidelines

By default, the list only includes SKUs that are compatible with your license.

If **show-all** is set to true, the list includes all SKUS, and not just those that are compatible with your license.

Examples

```
*** show SKUs compatible with your license (default) ***
amnesiac (config) # ssc sku list
+-------------+
| Sku         |
+-------------+
| STM-200     |
| STM-SAF-400 |
| STM-100     |
| STM-400     |
| STM-SAF-300 |
| STM-300     |
+-------------+

*** show all SKUs, not just those that are compatible with your license ***
amnesiac (config) # ssc sku list show-all true
+----------------------------+
| Sku                        |
+----------------------------+
| BR-ADC-UTILM-WAFP1G-U-01   |
| BR-ADC-UTILM-WAFP3G-U-01   |
| BR-ADC-UTILM-WAFP400M-U-01 |
| BR-ADC-UTILM-WAFP50M-U-01  |
| BR-ADC-UTILM-WAFP5G-U-01   |
   .
   . (truncated list)
   .
| ENT-ADVANCED               |
| ENT-ENTERPRISE             |
| ENT-WAFPROXY               |
+----------------------------+
```

Related Commands

show ssc stm images, ssc feature-pack create fpname

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ssc stm import-image file

Imports a vTM image.

Syntax

ssc stm import-image file *filename-or-remote-location*

Parameters

`filename-or-remote-location`

Specify the filename or the remote location of the Traffic Manager image, for example, http, ftp, or scp URL (scp://username:password@host/path/filename).

Examples

```
amnesiac (config) # ssc stm import-image file scp://root@sf.test.com/ssc_archive/
ZeusTM_97_Linux-x86_64.tgz
```

Related Commands

show ssc stm images

ssc stm import-lic

Imports the vTM Flexible Licensing Architecture (FLA) license.

Syntax

ssc stm import-lic *local-license* | [file *remote-location* license-name *remote-license*]

Parameters

local-license

Specify the filename of a locally-accessible license.

remote-location

Specify the remote location of the license, for example for example, http, ftp, or scp URL (scp://username:password@host/path/filename).

remote-license

Specify the filename of a remotely-accessible license.

Usage Guidelines

This command can be used to import a license either from a locally-accessible license file, or a remotely-accessible license file.

Note: You must import the following files into the Services Director before you can create instances: SSL certificate and key, Services Director license, enterprise bandwidth license key, FLA license, and Traffic Manager image. If you have not received your license files, contact Pulse Secure Licensing for assistance.

Examples

```
*** local file import ***
amnesiac (config) # ssc stm import-lic license.txt

*** remote file import ***
amnesiac (config) # ssc stm import-lic file http://remote.example.com
license-name license.txt
```

Related Commands

show ssc stm images

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ssc template copy source

Creates a copy of a template.

Syntax

ssc template copy source *template-name* destination *new-name*

Parameters

template-name

Specify the template source name.

destination *new-name*

Specify the new template name.

Examples

```
amnesiac (config) # ssc template copy source hosttemp1 destination hosttemp2
```

Related Commands

ssc template list

ssc template create template-name

Creates a template for Services Director resources. You use templates to save resource values for reuse later.

Syntax

ssc template create template-name *name* [*arguments*]

Usage Guidelines

This command must be used in conjunction with a Services Director CLI command (see below).

Create templates for resources with the predefined parameters for use later. The predefined parameters in the template are passed to the resource. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments) using the resource create and update commands.

To create a feature pack **fp-1** without using the template:

```
ssc feature-pack create fpname fp-1 stm-sku STM-200 excluded 'ts comp'
```

To create a feature-pack template **fptemp-1** :

```
ssc template create template-name fptemp-1 stm-sku STM-200 excluded 'ts comp'
```

To create a feature pack **fp-2** by using template **fptemp-1** :

```
ssc feature-pack create template-name fptemp-1 fpname fp-2  info test
```

Update the template **fptemp-1** with new values:

```
ssc template update template-name fptemp-1 stm-sku STM-300
```

To show the updated template **fptemp-1** :

```
show ssc template template-name fptemp-1
+---------------+----------+
| Field         | Value    |
+---------------+----------+
| stm-sku       | STM-300  |
| excluded      | ts comp  |
| template-name | fptemp-1 |
+---------------+----------+
```

Use the **no template template-name <name>** command option to disable the template.

Examples

```
amnesiac (config) # ssc template create template-name fptemp-1 stm-sku STM-200
excluded 'ts comp'
```

Related Commands

ssc template list

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ssc template list

Lists Services Director templates.

Syntax

ssc template list

Examples

```
amnesiac (config) # ssc template list
+-----------------+
| Template        |
+-----------------+
| fptemp1         |
| hosttemp1       |
+-----------------+
```

Related Commands

ssc user create template-name, ssc template update template-name

ssc template update template-name

Updates an existing Services Director template.

Syntax

ssc template update template-name [*arguments*]

Usage Guidelines

Update templates to add or change common input parameters for specific resources, for example to up date the existing template **fptemp-1** with new values:

Examples

```
ssc template update template-name fptemp-1 stm-sku STM-300
+---------------+----------+
| Field         | Value    |
+---------------+----------+
| stm-sku       | STM-300  |
| excluded      | ts comp  |
| template-name | fptemp-1 |
+---------------+----------+
amnesiac (config) # ssc template update template-name fptemp-1 stm-sku STM-300
```

Related Commands

ssc template list

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ssc user list

Lists the Services Director user accounts.

Syntax

ssc user list

Examples

```
amnesiac (config) # ssc user list
+-------+
| User  |
+-------+
| admin |
+-------+
```

Related Commands

ssc user create template-name, ssc template update template-name

ssc user create template-name

Creates a Services Director user account based on a template.

Syntax

ssc user create template-name *name* user-name *name* password *password*

Parameters

name

Specify a unique name for the template.

name

Specify the user name. The default name is **sscadmin**.

password

Specify the password for the user.

Usage Guidelines

Creates users with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to create the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Examples

```
amnesiac (config) # ssc user create template-name usertemp1 user-name test password
test123
```

Related Commands

ssc user list

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ssc user create user-name

Creates a Services Director user account.

Syntax

ssc user create user-name *name* password *password*

Parameters

name

Specify the user name. The default name is **sscadmin**.

password

Specify the password for the user.

Examples

```
amnesiac (config) # ssc user create user-name test password test123
```

Related Commands

ssc user list

ssc user update template-name

Updates user settings based on the specified template.

Syntax

ssc user update template-name *name* | [user-name *name*] | [active [Active | Inactive]] | [password password]

Parameters

name

Specify the template name.

name

Specify the user name. The default name is **sscadmin**.

active

Specify the status:

- `Active:` Activates a resource.
- `Inactive:` Deactivates a resource. A resource cannot be marked as **Inactive** if it is in use. The resource cannot be reactivated **Inactive** status has been specified.

password *password*

Specify the password for the user.

Usage Guidelines

Updates user settings with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to update the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Examples

```
amnesiac (config) # ssc user update template-name usertemp1 user-name admin1
```

Related Commands

ssc user list

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ssc user update user-name

Updates user template.

Syntax

ssc user update user-name *name* | [active [*Active* | *Inactive*]] [password *password*] [aws-access-key *aws-key*] [aws-secret-access-key *aws-secret-key*]

Parameters

name

Specify the user name. The default name is **sscadmin**.

`active`

Specify the status:

- `Active:` Activates a resource.
- `Inactive:` Deactivates a resource. A resource cannot be marked as **Inactive** if it is in use. The resource cannot be reactivated once **Inactive** status has been specified.

`password` *password*

Specify the password for the user.

aws-key

Specify the access key for your AWS credentials.

aws-secret-key

Specify the secret access key for your AWS credentials.

Examples

```
amnesiac (config) # ssc user update user-name admin1 status Inactive
```

Related Commands

ssc user list

ssc version create template-name

Creates a vTM version based on a template.

Syntax

ssc version create template-name *name* vfilename *name-of-version-tarball-file* vdirectory *name-of-directory-to-which-tarball-extracts* | [info *description*]

Parameters

name

Specify a unique name for the template.

name-of-version-tarball-file

Specify the name of the Traffic Manager image.

name-of-directory-to-which-tarball-extracts

Specify the name of directory to which Traffic Manager image extracts; if none, specify the tarball name.

info *description*

Optionally, specify information about the template.

Usage Guidelines

Creates versions with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to create the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Examples

```
amnesiac (config) # ssc version create template-name vtemp1 vfilename stm97
vdirectory ZeusTM_97_Linux-x86_64.tgz
```

Related Commands

show ssc version version-name, ssc version list

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ssc version create

Creates an version name for the vTM image or tarball.

Syntax

ssc version create version-name *name* vfilename *name-of-version-tarball-file* vdirectory *directory-or-tarball-name* | [info *description*]

Parameters

unique-name

Specify a unique name for the Traffic Manager image.

name-of-version-tarball-file

Specify the name of the Traffic Manager image.

directory-or-tarball-name

Specify the name of directory to which tarball extracts; if none, specify the tarball name.

info *description*

Optionally, specify a description of the image.

Usage Guidelines

Creates a version name for the Traffic Manager image or *tarball*.

Examples

```
amnesiac (config) # ssc version create version-name stm97 vfilename ZeusTM_97_Linux-x86_64.tgz
```

Related Commands

show ssc version version-name, ssc version list

ssc version list

Lists the vTM images.

Syntax

ssc version list

Examples

```
amnesiac (config) # ssc version list
+---------+
| Version |
+---------+
| stm97   |
+---------+
```

Related Commands

ssc version create, ssc version update template-name

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ssc version update template-name

Updates the version settings based on the specified template.

Syntax

ssc version update template-name *name* | [version-name `name`] | [vfilename *image-filename*]| | [status [Active | Inactive]] | [info *description*]

Parameters

name

Specify the template name.

name-of-version-tarball-file

Specify the name of the Traffic Manager image.

vdirectory *name-of-directory-to-which-tarball-extracts*

Specify the name of directory to which Traffic Manager image extracts; if none, specify the tarball name.

status

Specify the status:

- `Active:` Activates a resource.
- `Inactive:` Deactivates a resource. A resource cannot be marked as **Inactive** if it is in use. The resource cannot be reactivated **Inactive** status has been specified.

info *description*

Optionally, specify a description of the template.

Usage Guidelines

Updates version settings with the parameters predefined in an existing template. The existing template is created by the **ssc template create** command. The predefined parameters in the existing template are passed to the resource to update the command. You have the option to replace or add extra parameters that exist in the specified template (that is, add extra arguments).

Examples

```
amnesiac (config) # ssc version update template-name vtemp1 status Inactive
```

Related Commands

show ssc version version-name, ssc version list

ssc version update version-name

Updates the version.

Syntax

ssc version update version-name *name* | [vfilename *image-filename*] | | [status [Active | Inactive]] | [info *description*]

Parameters

name

Specify the version name.

name-of-version-tarball-file

Specify the name of the Traffic Manager image.

`status [Active | Inactive]`

Specify the status:

- `Active:` Activates a resource.
- `Inactive:` Deactivates a resource. A resource cannot be marked as **Inactive** if it is in use. The resource cannot be reactivated **Inactive** status has been specified.

`info` *description*

Optionally, specify a description of the template.

Examples

```
amnesiac (config) # ssc version update version-name stm97 status Inactive
```

Related Commands

show ssc version version-name, ssc version list

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ssc vtm-admin-ca create

Creates a vTM CA certificate that is for use with a secure LDAP server authenticator.

Syntax

ssc vtm-admin-ca create admin-ca-name *tag* certificate-authority *certificate-text*

Parameters

`tag`

A unique name for the CA certificate.

`certificate-text`

The text of the CA certificate.

Examples

```
*** List all vTM CA certificates on Services Director ***
amnesiac (config) #  ssc vtm-admin-ca list
+----------+-----------------------------------+
| Name     | Unique ID                         |
+----------+-----------------------------------+
| VTM-CA-1 | VTM-Admin-CA-KBBH-G7LT-K6SK-B6N4 |
+----------+-----------------------------------+

*** add a new certificate ***
amnesiac (config) # ssc vtm-admin-ca create admin-ca-name VTM-CA-2 certificate-
authority "-----BEGIN CERTIFICATE----- ...<certificate body>... -----END
CERTIFICATE----- >"
+-----------------------------------------------+
| Created                                       |
+-----------------------------------------------+
| admin certificate authority VTM-CA-2 created |
+-----------------------------------------------+

*** confirm creation ***
amnesiac (config) #  ssc vtm-admin-ca list
+----------+-----------------------------------+
| Name     | Unique ID                         |
+----------+-----------------------------------+
| VTM-CA-1 | VTM-Admin-CA-KBBH-G7LT-K6SK-B6N4 |
| VTM-CA-2 | VTM-Admin-CA-6J21-KKH3-VSAJ-3209 |
+----------+-----------------------------------+
```

Related Commands

ssc vtm-admin-ca list, ssc vtm-admin-ca update, show ssc vtm-admin-ca, ssc vtm-authenticator add ldap auth-name, ssc vtm-authenticator list, ssc vtm-authenticator update ldap auth-name

ssc vtm-admin-ca list

Lists all vTM CA certificate that are for use with a secure LDAP server authenticator.

Syntax

ssc vtm-admin-ca list

Examples

```
amnesiac (config) #  ssc vtm-admin-ca list
+----------+----------------------------------+
| Name     | Unique ID                        |
+----------+----------------------------------+
| VTM-CA-1 | VTM-Admin-CA-KBBH-G7LT-K6SK-B6N4 |
| VTM-CA-2 | VTM-Admin-CA-6J21-KKH3-VSAJ-3209 |
+----------+----------------------------------+
```

Related Commands

ssc vtm-admin-ca create, ssc vtm-admin-ca update, show ssc vtm-admin-ca, ssc vtm-authenticator add ldap auth-name, ssc vtm-authenticator list, ssc vtm-authenticator update ldap auth-name

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ssc vtm-admin-ca update

Updates a vTM CA certificate that is for use with a secure LDAP server authenticator.

Syntax

ssc vtm-admin-ca create admin-ca-name *tag* certificate-authority *certificate-text* new-admin-ca-name *new-tag*

Parameters

`tag`

A unique name for the CA certificate.

`certificate`

The text of the CA certificate.

`new-tag`

A new unique name for the CA certificate.

Examples

```
*** list certificates ***
amnesiac (config) #  ssc vtm-admin-ca list
+----------+-----------------------------------+
| Name     | Unique ID                         |
+----------+-----------------------------------+
| VTM-CA-1 | VTM-Admin-CA-KBBH-G7LT-K6SK-B6N4 |
| VTM-CA-2 | VTM-Admin-CA-6J21-KKH3-VSAJ-3209 |
+----------+-----------------------------------+

*** rename the CA-2 certificate ***
amnesiac (config) #  ssc vtm-admin-ca update admin-ca-name VTM-CA-2 new-admin-ca-
name V-LDP2
+-----------------------------------------+
| Updated                                 |
+-----------------------------------------+
| admin certificate authority CA-2 updated |
+-----------------------------------------+

*** confirm update ***
amnesiac (config) # ssc vtm-admin-ca list
+----------+-----------------------------------+
| Name     | Unique ID                         |
+----------+-----------------------------------+
| VTM-CA-1 | VTM-Admin-CA-KBBH-G7LT-K6SK-B6N4 |
| V-LDP2   | VTM-Admin-CA-6J21-KKH3-VSAJ-3209 |
+----------+-----------------------------------+
```

Related Commands

ssc vtm-admin-ca create, ssc vtm-admin-ca list, show ssc vtm-admin-ca, ssc vtm-authenticator add ldap auth-name, ssc vtm-authenticator list, ssc vtm-authenticator update ldap auth-name

ssc vtm-authenticator add ldap auth-name

Adds an LDAP-based vTM authenticator. This can be either secure on non-secure.

Syntax

ssc vtm-authenticator add ldap auth-name *authenticator-name* server *server* dn-method *method* filter *filter* base-dn *base-DN* fallback-group *fallback-group* port *port* timeout *timeout-period* group-attribute *group-attribute* group-field *group-field* bind-dn *bind-DN* group-filter *group-filter* ssl *ssl* [search-dn *search-DN* search-password *password*]

Parameters

authenticator-name

Specify a name for the LDAP vTM authenticator.

server

Specify the IP address or hostname of the LDAP server.

method

Specify how the bind DN for a user will be derived. Either:

- `construct:` the bind DN for a user can be constructed from a known string, (see <bind-DN>)
- `search:` the bind DN for a user can be searched for in the directory. This is necessary if you have users under different directory paths.

filter

Specify a filter that uniquely identifies a user located under the Base DN.

The string "%u" will be substituted with the username. For example:

- Active Directory: `"sAMAccountName=%u"`
- Unix LDAP: `"uid=%u"`

base-DN

Specify the base DN (Distinguished Name) for directory searches.

fallback-group

Specify a permission group. For example, "admin". If <group-attribute> is not defined, or is not set for the user, this permission group will be used. If not specified, users with no attribute matching group-attribute will be denied access.

port

Specify the port used to connect to the LDAP server.

timeout-period

Specify the timeout period (in seconds) for a connection to the LDAP server.

group-attribute

Specify the LDAP attribute that gives a user's group. For example: "memberOf". If multiple values are returned by the LDAP server, the first valid one will be used.

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group-field

Specify the sub-field of the group-attribute that gives a user's group. For example: if <group-attribute> is "memberOf" which delivers "CN=mygroup, OU=groups, OU=users, DC=mycompany, DC=local", set group-field to "CN". The first matching field will be used.

bind-DN

Specify a template to construct the bind DN from the username. This is only used when <method> is "construct". The string "%u" is replaced by the username. For example:

- `"%u@mycompany.local"`
- `"cn=%u,dn=mycompany,dn=local"`

group-filter

Specify an alternative group search filter. This is only used when the user record returned by the LDAP filter does not contain the required group information.

This will typically be required if you have Unix/POSIX-style user records. If multiple records are returned the list of group names will be extracted from all of them.

The string "%u" will be replaced by the username. For example:

- `"(&(memberUid=%u)(objectClass=posixGroup))"`

ssl

(Optional) Select the required LDAP security type:

- *none*. Select this if your LDAP server does not support secure connections.
- *starttls*. Select this if your LDAP server supports STARTTLS secure connections. You must ensure that a matching CA certificate is present to use this option.
- *ldaps*. Select this if your LDAP server supports LDAPS secure connections. You must ensure that a matching CA certificate is present to use this option.

search-DN

Specify a DN to use when searching the directory for a user's bind DN. These are only used when the DN Method is Search. You can leave these blank if it is possible to perform the bind DN search using an anonymous bind.

search-password

Specify the password for the search-DN.

Usage Guidelines

Use the **no ssc vtm-authenticator auth-name** command to delete an authenticator.

You cannot delete a vTM authenticator that is associated with an access profile.

Examples

```
*** create an LDAP authenticator ***
amnesiac (config) # ssc vtm-authenticator add ldap auth-name "LDAP Server 2" server
10.62.169.170 dn-method "construct" filter "sAMAccountName=%u" base-dn "OU=users,
DC=tekton, DC=local" fallback-group admin port 389 timeout 30 group-attribute
"memberOf" group-field "CN" bind-dn "%u@takton.local" group-filter
"(&(memberUid=%u)(objectClass=posixGroup)) ssl starttls"
+-----------------------------------------+
| Created                                 |
+-----------------------------------------+
| vTM Authenticator LDAP Server 2 created |
+-----------------------------------------+

*** delete an authenticator ***
amnesiac (config) # no ssc vtm-authenticator auth-name "LDAP Server 2"
+-----------------------------------------+
| Deleted                                 |
+-----------------------------------------+
| vTM Authenticator LDAP Server 2 deleted |
+-----------------------------------------+
```

Related Commands

show ssc vtm-authenticator, ssc vtm-authenticator list, ssc vtm-authenticator update ldap auth-name

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ssc vtm-authenticator add radius auth-name

Adds a RADIUS-based vTM authenticator.

Syntax

ssc vtm-authenticator add radius auth-name *authenticator-name* server *server* fallback-group *fallback-group* port *port* timeout *timeout-period* group-attribute *group-attribute* group-vendor *group-vendor* secret *secret* nas-identifier *NAS-identifier* nas-ip-address *NAS-ip-address*

Parameters

authenticator-name

Specify a name for the RADIUS vTM authenticator.

server

Specify the IP address or hostname of the RADIUS server.

fallback-group

Specify a permission group. For example, "admin". If no group is found using the vendor and group identifiers, or the group found is not valid, the permission group specified here will be used.

port

Specify the port used to connect to the RADIUS server.

timeout-period

Specify the timeout period (in seconds) for a connection to the RADIUS server.

group-attribute

Specify the RADIUS identifier for the attribute that specifies an account's group. May be left blank if <fallback-group> is specified.

group-vendor

Specify the RADIUS identifier for the vendor of the RADIUS attribute that specifies an account's group. Leave blank if using a standard attribute such as Filter-Id.

secret

Specify the secret key shared with the RADIUS server.

NAS-identifier

Specify a string identifying the Network Access Server (NAS) which is requesting authentication of the user. This value is sent to the RADIUS server. If left blank the address of the interface used to connect to the server will be used.

NAS-ip-address

Specify the identifying IP Address of the NAS which is requesting authentication of the user. This value is sent to the RADIUS server.

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Usage Guidelines

Use the **no ssc vtm-authenticator auth-name** command to delete an authenticator.

You cannot delete a vTM authenticator that is associated with an access profile.

Examples

```
*** create a RADIUS authenticator ***
amnesiac (config) # ssc vtm-authenticator add radius auth-name "RADIUS Server 2"
server 10.62.167.193 fallback-group admin port 1812 timeout 30 group-attribute 1
group-vendor 1476 secret * nas-identifier "Internal RADIUS" nas-ip-address 127.0.0.1
+-------------------------------------------+
| Created                                   |
+-------------------------------------------+
| vTM Authenticator RADIUS Server 2 created |
+-------------------------------------------+

*** delete an authenticator ***
amnesiac (config) # no ssc vtm-authenticator auth-name "RADIUS Server 2"
+-------------------------------------------+
| Deleted                                   |
+-------------------------------------------+
| vTM Authenticator RADIUS Server 2 deleted |
+-------------------------------------------+
```

Related Commands

show ssc vtm-authenticator, ssc vtm-authenticator list, ssc vtm-authenticator update radius auth-name

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ssc vtm-authenticator add tacacs_plus auth-name

Adds a TACACS+-based vTM authenticator.

Syntax

ssc vtm-authenticator add tacacs-plus auth-name *authenticator-name* server *server* auth-type [pap | ascii] fallback-group *fallback-group* port *port* timeout *timeout-period* group-field *group-field* group-service *group-service* secret *secret*

Parameters

authenticator-name

Specify a name for the TACACS+ vTM authenticator on the Services Director.

server

Specify the IP address or hostname of the TACACS+ server.

auth-type

Specify the TACACS+ authentication type, either PAP or ACSII.

fallback-group

Specify a permission group. If <group-service> is not defined, or no group value is provided for the user by the TACACS+ server, the group specified here will be used. If this is not specified, users with no TACACS+ defined group will be denied access.

port

Specify the port used to connect to the TACACS+ server.

timeout-period

Specify the timeout period (in seconds) for a connection to the TACACS+ server.

group-field

Specify the TACACS+ "service" field that provides each user's group.

group-service

Specify the TACACS+ "service" that identifies a user's group field.

secret

Specify the secret key shared with the TACACS+ server.

Usage Guidelines

Use the **no ssc vtm-authenticator auth-name** command to delete an authenticator.

You cannot delete a vTM authenticator that is associated with an access profile.

Examples

```
*** create a TACACS+ authenticator ***
amnesiac (config) # ssc vtm-authenticator add tacacs-plus auth-name "TACACS+ Server
2" server 10.62.167.198 auth-type pap fallback-group admin port 49 timeout 30 group-
field permission-group group-service "Hoobland" secret "tacacs_plus_secret"
+--------------------------------------------+
| Created                                    |
+--------------------------------------------+
| vTM Authenticator TACACS+ Server 2 created |
+--------------------------------------------+

*** delete an authenticator ***
amnesiac (config) # no ssc vtm-authenticator auth-name "TACACS+ Server 2"
+--------------------------------------------+
| Deleted                                    |
+--------------------------------------------+
| vTM Authenticator TACACS+ Server 2 deleted |
+--------------------------------------------+
```

Related Commands

show ssc vtm-authenticator, ssc vtm-authenticator list, ssc vtm-authenticator update tacacs_plus auth-name

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ssc vtm-authenticator list

Lists all defined vTM authenticators.

Syntax

ssc vtm-authenticator list

Examples

```
amnesiac (config) # ssc vtm-authenticator list
+----------------+-----------------------------------+
| Name           | Unique ID                         |
+----------------+-----------------------------------+
| LDAP Server    | Authenticator-D83I-9095-TT8R-CUAT |
| Secure LDAP    | Authenticator-J82I-2237-GR9R-ADCB |
| RADIUS Server  | Authenticator-808G-LJWJ-MT3B-WMDZ |
| TACACS+ Server | Authenticator-7F1D-A1K3-1PO4-VSEF |
+----------------+-----------------------------------+
```

Related Commands

show ssc vtm-authenticator, ssc vtm-admin-ca create, ssc vtm-authenticator add radius auth-name, ssc vtm-authenticator add tacacs_plus auth-name, ssc vtm-authenticator update ldap auth-name, ssc vtm-authenticator update radius auth-name, ssc vtm-authenticator update tacacs_plus auth-name

ssc vtm-authenticator update ldap auth-name

Updates an LDAP-based vTM authenticator.

Syntax

ssc vtm-authenticator update ldap auth-name *authenticator-name* [server *server* | dn-method *method* | filter *filter* | base-dn *base-DN* | fallback-group *fallback-group* | port *port* | timeout *timeout-period* | group-attribute *group-attribute* | group-field *group-field* | bind-dn *bind-DN* | group-filter *group-filter* | ssl *ssl* | search-dn *search-DN* | search-password *password*]

Parameters

authenticator-name

Specify the name of the LDAP vTM authenticator.

server

Specify the IP address or hostname of the LDAP server.

method

Specify how the bind DN for a user will be derived. Either:

- `construct:` the bind DN for a user can be constructed from a known string, (see <bind-DN>) or
- `search:` the bind DN for a user can be searched for in the directory. This is necessary if you have users under different directory paths.

filter

Specify a filter that uniquely identifies a user located under the Base DN.

The string "%u" will be substituted with the username. For example:

- Active Directory: `"sAMAccountName=%u"`
- Unix LDAP: `"uid=%u"`

base-DN

Specify the base DN (Distinguished Name) for directory searches.

fallback-group

Specify a permission group. For example, "admin". If <group-attribute> is not defined, or is not set for the user, this permission group will be used. If not specified, users with no attribute matching group-attribute will be denied access.

port

Specify the port used to connect to the LDAP server.

timeout-period

Specify the timeout period (in seconds) for a connection to the LDAP server.

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group-attribute

Specify the LDAP attribute that gives a user's group. For example: "memberOf". If multiple values are returned by the LDAP server, the first valid one will be used.

group-field

Specify the sub-field of the group-attribute that gives a user's group. For example: if <group-attribute> is "memberOf" which delivers "CN=mygroup, OU=groups, OU=users, DC=mycompany, DC=local", set group-field to "CN". The first matching field will be used.

bind-DN

Specify a template to construct the bind DN from the username. This is only used when <method> is "construct". The string "%u" is replaced by the username. For example:

- `"%u@mycompany.local"`
- `"cn=%u,dn=mycompany,dn=local"`

group-filter

Specify an alternative group search filter. This is only used when the user record returned by the LDAP filter does not contain the required group information.

This will typically be required if you have Unix/POSIX-style user records. If multiple records are returned the list of group names will be extracted from all of them.

The string "%u" will be replaced by the username. For example:

- `"(&(memberUid=%u)(objectClass=posixGroup))"`

ssl

(Optional) Select the required LDAP security type:

- *none*. Select this if your LDAP server does not support secure connections.
- *starttls*. Select this if your LDAP server supports STARTTLS secure connections. You must ensure that a matching CA certificate is present to use this option.
- *ldaps*. Select this if your LDAP server supports LDAPS secure connections. You must ensure that a matching CA certificate is present to use this option.

search-DN

Specify a DN to use when searching the directory for a user's bind DN. These are only used when the DN Method is Search. You can leave these blank if it is possible to perform the bind DN search using an anonymous bind.

search-password

Specify the password for the search-DN.

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Examples

```
amnesiac (config) # ssc vtm-authenticator update ldap auth-name "LDAP Server" server
10.62.169.170 dn-method construct filter "sAMAccountName=%u" base-dn "OU=users,
DC=tekton, DC=local" fallback-group admin port 389 timeout 20 group-attribute
"memberOf" group-field "CN" bind-dn "%u@takton.local" group-filter
"(&(memberUid=%u)(objectClass=posixGroup))"
+-----------------------------------------+
| Modified                                |
+-----------------------------------------+
| vTM Authenticator LDAP Server modified  |
+-----------------------------------------+
```

Related Commands

show ssc vtm-authenticator, ssc vtm-admin-ca create, ssc vtm-authenticator list

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ssc vtm-authenticator update radius auth-name

Updates a RADIUS-based vTM authenticator.

Syntax

ssc vtm-authenticator create radius auth-name *authenticator-name* [server *server* | fallback-group *fallback-group* | port *port* | timeout *timeout-period* | group-attribute *group-attribute* | group-vendor *group-vendor* | secret *secret* | nas-identifier *NAS-identifier* | nas-ip-address *NAS-ip-address*]

Parameters

authenticator-name

Specify the name of the RADIUS vTM authenticator.

server

Specify the IP address or hostname of the RADIUS server.

fallback-group

Specify a permission group. For example, "admin". If no group is found using the vendor and group identifiers, or the group found is not valid, the permission group specified here will be used.

port

Specify the port used to connect to the RADIUS server.

timeout-period

Specify the timeout period (in seconds) for a connection to the RADIUS server.

group-attribute

Specify the RADIUS identifier for the attribute that specifies an account's group. May be left blank if <fallback-group> is specified.

group-vendor

Specify the RADIUS identifier for the vendor of the RADIUS attribute that specifies an account's group. Leave blank if using a standard attribute such as Filter-Id.

secret

Specify the secret key shared with the RADIUS server.

NAS-identifier

Specify a string identifying the Network Access Server (NAS) which is requesting authentication of the user. This value is sent to the RADIUS server. If left blank the address of the interface used to connect to the server will be used.

NAS-ip-address

Specify the identifying IP Address of the NAS which is requesting authentication of the user. This value is sent to the RADIUS server.

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Examples

```
amnesiac (config) # ssc vtm-authenticator update radius auth-name "RADIUS Server"
server 10.62.167.193 fallback-group admin port 1812 timeout 30 group-attribute 1
group-vendor 1476 secret "radius_secret" nas-identifier "Internal RADIUS" nas-ip-
address 127.0.0.1
+-------------------------------------------+
| Modified                                  |
+-------------------------------------------+
| vTM Authenticator RADIUS Server modified  |
+-------------------------------------------+
```

Related Commands

show ssc vtm-authenticator, ssc vtm-authenticator add radius auth-name, ssc vtm-authenticator list

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ssc vtm-authenticator update tacacs_plus auth-name

Updates a TACACS+-based vTM authenticator.

Syntax

ssc vtm-authenticator update tacacs-plus auth-name *authenticator-name* [server *server* | auth-type [pap | ascii] | fallback-group *fallback-group* | port *port* | timeout *timeout-period* | group-field *group-field* | group-service *group-service* | secret *secret*]

Parameters

authenticator-name

Specify the name of the TACACS+ vTM authenticator.

server

Specify the IP address or hostname of the TACACS+ server.

auth-type

Specify the TACACS+ authentication type, either PAP or ACSII.

fallback-group

Specify a permission group. If <group-service> is not defined, or no group value is provided for the user by the TACACS+ server, the group specified here will be used. If this is not specified, users with no TACACS+ defined group will be denied access.

port

Specify the port used to connect to the TACACS+ server.

timeout-period

Specify the timeout period (in seconds) for a connection to the TACACS+ server.

group-field

Specify the TACACS+ "service" field that provides each user's group.

group-service

Specify the TACACS+ "service" that identifies a user's group field.

secret

Specify the secret key shared with the TACACS+ server.

Examples

```
amnesiac (config) # ssc vtm-authenticator update tacacs-plus auth-name "TACACS+
Server" server 10.62.167.198 auth-type pap fallback-group admin port 49 timeout 30
group-field permission-group group-service "Hoobland" secret "tacacs_plus_secret"
+---------------------------------------------+
| Modified                                    |
+---------------------------------------------+
| vTM Authenticator TACACS+ Server 2 modified |
+---------------------------------------------+
```

Related Commands

show ssc vtm-authenticator, ssc vtm-authenticator add tacacs_plus auth-name, ssc vtm-authenticator list

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ssc vtm-permission-group create pg-name

Creates a vTM permission group for user authentication.

Syntax

ssc vtm-permission-group create pg-name *pg-name* [description *description*] [timeout *timeout-period*]

Parameters

pg-name

Specify a name for the vTM permission group.

description

Optionally, specify a description of the permission group.

timeout-period

Optionally, specify a timeout period (in minutes).

If this is not specified, it defaults to 30.

Usage Guidelines

This command creates the group, but does not support the setting of permissions. To set access levels for activities, see "ssh server allowed-ciphers" on page 641.

Use the **no ssc vtm-permission-group pg-name** command to delete a permission group.

You cannot delete a permission group that is associated with an access profile.

Examples

```
amnesiac (config) # ssc vtm-permission-group create pg-name Statistics description
"RO subset of monitoring" timeout 30
+-------------------------------------+
| Created                             |
+-------------------------------------+
| permission group Statistics created |
+-------------------------------------+

*** delete the Statistics permission group ***
amnesiac (config) # no ssc vtm-permission-group pg-name Statistics
+-------------------------------------+
| Deleted                             |
+-------------------------------------+
| permission group Statistics deleted |
+-------------------------------------+
```

Related Commands

show ssc vtm-permission-group, ssc vtm-permission-group list, ssc vtm-permission-group update pg-name

ssc vtm-permission-group list

Lists all defined vTM permission groups.

Syntax

ssc vtm-permission-group list

Examples

```
amnesiac (config) # ssc vtm-permission-group list
+------------+-------------------------------------+
| Name       | Unique ID                           |
+------------+-------------------------------------+
| admin      | admin                               |
| Demo       | Demo                                |
| Statistics | Permission-Group-E5O9-N28C-13OC-AT0I |
| Monitoring | Monitoring                          |
| Guest      | Guest                               |
+------------+-------------------------------------+
```

Related Commands

show ssc vtm-permission-group, ssc vtm-permission-group create pg-name, ssc vtm-permission-group update pg-name

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ssc vtm-permission-group update pg-name

Updates a vTM permission group for user authentication.

Syntax

ssc vtm-permission-group update permission-group-name *pg-name* [new-pg-name *new-gp-name*] [description *description*] [timeout *timeout-period*] [[remove] permission *permission* access *access*]

Parameters

pg-name

Specify a name for the vTM permission group.

new-pg-name

Optionally, specify a new name for the permission group.

description

Optionally, specify a description of the permission group.

timeout-period

Optionally, specify a timeout period (in minutes).

If this is not specified, it defaults to 30.

remove

Include this to remove the specified **permission** instead of adding it.

permission

The permission for which the access is to be set.

access

The required access (none, ro, full) for the permission.

Usage Guidelines

This command includes support for setting access levels for specific activities.

There are four default permission groups (**admin**, **Demo**, **Monitoring** and **Guest**), and you can create additional permission groups, see "ssc vtm-permission-group list" on page 638.

Each permission supports the following access levels: none, ro (read-only), full.

Where a permission branch node is specified as the permission, all of its leaf nodes will share the specified access level.

Where all permissions require the same access level, the permission "all" can be used. The admin permission group has this setting by default.

Examples

```
*** update the permission group ***
amnesiac (config) # ssc vtm-permission-group update pg-name my_pg permission Pools
access full
+--------------------------------+
| Updated                        |
+--------------------------------+
| permission group my_pg updated |
+--------------------------------+

*** display changes ***
amnesiac (config) # show ssc vtm-permission-group pg-name my_pg
+--------------+----------------------------------------------------+--------+
| Parameter    | Value                                              |        |
+--------------+----------------------------------------------------+--------+
| Name         | my_pg                                              |        |
| Unique Name  | Permission-Group-XIG4-FUQT-YAWN-H2JF               |        |
| Description  |                                                    |        |
| Timeout      | 30                                                 |        |
| Permissions: | ------------------------------------------------- | ------ |
|              | Permission String                                  | Access |
|              | ------------------------------------------------- | ------ |
|              | Connections                                        | full   |
|              | Connections!Details                                | full   |
|              | Draining                                           | none   |
|              | Log_Viewer                                         | none   |
|              | Log_Viewer!View                                    | none   |
|              | Map                                                | none   |
|              | Monitoring                                         | none   |
|              | Monitoring!Edit                                    | none   |
|              | Pools                                              | full   |
|              | Pools!Edit                                         | full   |
|              | Pools!Edit!Autoscaling                             | full   |
|              | Pools!Edit!Bandwidth                               | full   |
|              | Pools!Edit!Connection_Management                   | full   |
|              | Pools!Edit!DNSAutoscaling                          | full   |
|              | Pools!Edit!Kerberos_Protocol_Transition            | full   |
|              | Pools!Edit!Load_Balancing                          | full   |
|              | Pools!Edit!Monitors                                | full   |
|              | Pools!Edit!Persistence                             | full   |
|              | Pools!Edit!SSL                                     | full   |
|              | Request_Logs                                       | none   |
|              | Statd                                              | none   |
|              | Web_Cache                                          | none   |
|              | Web_Cache!Clear                                    | none   |
+--------------+----------------------------------------------------+--------+
```

Related Commands

show ssc vtm-permission-group, ssc vtm-permission-group create pg-name, ssc vtm-permission-group list

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ssh server allowed-ciphers

Sets the list of allowed ciphers for ssh server.

Syntax

[no] ssh server allowed-ciphers *ciphers*

Parameters

`ciphers`

Specify cipher or comma separated list of ciphers, in quotation marks. Default ciphers configured are aes128-ctr, aes192-ctr, and aes256-ctr.

Supported ciphers are:

- `aes128cbc`
- `3descbc`
- `blowfishcbc`
- `cast128cbc`
- `arcfour`
- `aes192cbc`
- `aes256cbc`
- `aes128ctr`
- `aes192ctr`
- `aes256ctr`

Usage Guidelines

The **no** command option resets the SSH server allowed ciphers.

Examples

```
amnesiac (config) # ssh server allowed-ciphers "aes128-ctr,aes192-ctr,aes256-ctr"
```

Related Commands

show ssc server

ssh server enable

Enables SSH access to the system.

Syntax

[no] ssh server enable

Usage Guidelines

The **no** command option disables SSH access.

Examples

```
amnesiac (config) # ssh server enable
```

Related Commands

show ssc server

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ssh server listen enable

Enables SSH interface restriction access to the system (that is, it enables access control and blocks requests on all the interfaces).

Syntax

[no] ssh server listen enable

Usage Guidelines

If the list of interfaces is empty, none of the interfaces respond to the queries.

The **no** command option disables SSH interface restrictions which causes SSH to accept connections from all interfaces.

SSH interface restrictions are not available through the Management Console.

Examples

```
amnesiac (config) # ssh server listen enable
```

Related Commands

show ssc server

ssh server listen interface

Adds one or more interfaces to the SSH server access restriction list (thus, it unblocks requests on the specified interface).

Syntax

[no] ssh server listen interface *interface*

Parameters

interface

Specify the interface: **primary**, **aux**, **inpath0_0**, **inpath0_1**, **rios_lan0_0**, **rios_wan0_0**

Usage Guidelines

If the list of interfaces is empty, none of the interfaces respond to the queries. If the list of interfaces has at least one entry, then the server listens on that subset of interfaces.

Examples

```
amnesiac (config) # ssh server listen interface primary
```

Related Commands

show ssc server

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ssh server port

Sets a port for SSH access.

Syntax

[no] ssh server port *port*

Parameters

port

Specify a port for SSH access.

Usage Guidelines

The **no** command option resets the SSH port to its default.

Examples

```
amnesiac (config) # ssh server port 8080
```

Related Commands

show ssc server

ssh server v2-only enable

Enables SSH server to accept only v2 connections, which are more secure.

Syntax

[no] ssh server v2-only enable

Usage Guidelines

This command restricts the server to accept only v2 protocol connections, which are more secure.

The **no** command option removes the restriction.

Examples

```
amnesiac (config) # ssh server v2-only enable
```

Related Commands

show ssc server

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tcpdump stop-trigger delay

Configures the time to wait before stopping a TCP dump.

Syntax

[no] tcpdump stop-trigger delay *duration*

Parameters

duration

Specify the amount of time to wait before stopping all running TCP dumps when RiOS finds a match. The default delay is 30 seconds.

Usage Guidelines

You might not want to stop your TCP dump immediately. By configuring a delay, the system has time to log more data without abruptly cutting off the dumps. The default delay is 30 seconds.

Examples

```
amnesiac (config) # tcpdump stop-trigger delay 10
```

Related Commands

tcpdump stop-trigger enable, tcpdump stop-trigger regex, tcpdump stop-trigger restart

tcpdump stop-trigger enable

Enables the TCP dump to stop running, triggered by a match against a configured regular expression and the system log file.

Syntax

[no] tcpdump stop-trigger enable

Usage Guidelines

There is a limit to the amount of TCP dump data the system can collect. After a problem has occurred, the TCP dump buffer could have rotated, overwriting the information about the problem. This command enables a trigger that stops a continuous TCP dump after a specific log event occurs. This enables you to troubleshoot issues and isolate the TCP dump data specific to a problem.

The **no** version of the command disables the TCP dump stop-trigger process.

Examples

```
amnesiac (config) # tcpdump stop-trigger regex ntp
amnesiac (config) # tcpdump stop-trigger delay 20
amnesiac (config) # tcpdump stop-trigger enable
```

Related Commands

tcpdump stop-trigger delay, tcpdump stop-trigger regex, tcpdump stop-trigger restart

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tcpdump stop-trigger regex

Sets the regular expression that triggers the stopping of TCP dumps.

Syntax

tcpdump stop-trigger regex *regex*

Parameters

regex

Specify a PERL regular expression to match. RiOS compares the PERL regular expression against each entry made to the system logs. The system matches on a per-line basis.

Usage Guidelines

Use the **tcpdump stop-trigger regex** command to configure a regular expression that represents a condition that, when matched, stops all running TCP dumps. After this match is found, all TCP dump sessions are stopped after the delay configured by the **tcpdump stop-trigger delay** command.

Examples

In the following example, RiOS searches for the pattern *ntp* in the system logs. The system waits 20 seconds after there is a match and then stops all TCP dumps that are still running.

```
amnesiac (config) # tcpdump stop-trigger regex ntp
amnesiac (config) # tcpdump stop-trigger delay 20
amnesiac (config) # tcpdump stop-trigger enable
```

Related Commands

tcpdump stop-trigger delay, tcpdump stop-trigger enable, tcpdump stop-trigger restart

tcpdump stop-trigger restart

Restarts the TCP dump stop-trigger process.

Syntax

tcpdump stop-trigger restart

Usage Guidelines

If you change the regular expression or delay, use the **tcpdump stop-trigger restart** command to restart the stop-trigger process.

Examples

```
amnesiac (config) # tcpdump stop-trigger regex ntp
amnesiac (config) # tcpdump stop-trigger delay 50
amnesiac (config) # tcpdump stop-trigger enable
amnesiac (config) # tcpdump stop-trigger restart
```

Related Commands

tcpdump stop-trigger delay, tcpdump stop-trigger enable, tcpdump stop-trigger regex

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tcpdump-x all-interfaces

Configures a list of all interfaces for a TCP dump capture.

Syntax

[no] tcpdump-x all-interfaces [capture-name *capture-name*] continuous | | buffer-size *size-in-KB* | duration *seconds* [schedule-time *HH:MM:SS* [schedule-date *YYYY/MM/DD*]] | [rotate-count *num-files*] | [snaplength *snaplength*] | [sip *src-addr*] | [dip *dst-addr*] | [sport *src-port*] | [dport *dst-port*] | [dot1q {tagged | untagged | both}] | [ip6] | [custom *custom-param*] | [file-size *megabytes*]

Parameters

`capture-name` *`capture-name`*

Specify a capture name to help you identify the TCP Dump. The default filename uses the following format:

`<hostname>_<interface>_<timestamp>.cap`

Where hostname is the hostname of the appliance, interface is the name of the interface selected for the trace (for example, **lan0_0**, **wan0_0**), and timestamp is in the YYYY-MM-DD-HH-MM-SS format.

Note: The cap file extension is not included with the filename when it appears in the capture queue.

`continuous`

Start a continuous capture.

`buffer-size` *`size-in-KB`*

Specify the size in KB for all packets.

`duration` *`seconds`*

Specify the run time for the capture in seconds. The default is 30 seconds.

`schedule-time` *`HH:MM:SS`*

Specify a time to initiate the trace dump in the following format: HH:MM:SS.

`schedule-date` *`YYYY/MM/DD`*

Specify a date to initiate the trace dump in the following format: YYYY/MM/DD

`rotate-count` *`num-files`*

Specify the number of files to rotate.

`snaplength` *`snaplength`*

Specify the snap length value for the trace dump. The default value is 1518. Specify **0** for a full packet capture (recommended for CIFS, MAPI, and SSL traces).

`sip` *`src-addr`*

Specify a comma-separated list of source IP addresses. The default setting is all IP addresses.

`dip` *`dst-addr`*

Specify a comma-separated list of destination IP addresses. The default setting is all IP addresses.

`sport` *`src-port`*

Specify a comma-separated list of source ports. The default setting is all ports.

`dport` *`dst-port`*

Specify a comma-separated list of destination ports. The default setting is all ports.

`dot1q`

Specify one of the following to filter dot1q packets:

- `tagged:` Capture only tagged traffic.
- `untagged:` Capture only untagged traffic.
- `both:` Capture all traffic.

Note: Do not use the **sip**, **dip**, **sport**, **dport** and **custom** parameters together when using the **dot1q both** option. Use the **tcpdump** command instead to capture this information.

For detailed information about dot1q VLAN tunneling, see your networking equipment documentation.

`ip6`

Specify IPv6 packets for packet capture.

`custom` *`custom-param`*

Specify custom parameters (flags) for packet capture. You need to enclose the customer parameter in quotes if it contains more than one word.

`file-size` *`megabytes`*

Specify the file size of the capture in megabytes.

Usage Guidelines

You can capture and retrieve multiple TCP trace dumps. You can generate trace dumps from multiple interfaces at the same time and you can schedule a specific date and time to generate a trace dump.

Examples

The following example starts a continuous capture for a file named *tcpdumpexample* with a duration of 120 seconds:

```
amnesiac (config) # tcpdump-x all-interfaces capture-name tcpdumpexample
continuous duration 120
```

The following example captures untagged traffic on destination port 7850 and ARP packets:

```
amnesiac (config) # tcpdump-x all-interfaces dot1q untagged dport 7850 custom "and
arp"
```

The following example captures VLAN tagged traffic for host 10.11.0.6 and ARP packets:

```
amnesiac (config) # tcpdump-x all-interfaces dot1q tagged sip 10.11.0.6 custom "or
arp"
```


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The following example captures tagged ARP packets only:

```
amnesiac (config) # tcpdump-x all-interfaces dot1q tagged custom "and arp"
```

The following example captures untagged ARP packets only:

```
amnesiac (config) # tcpdump-x all-interfaces dot1q untagged custom "and arp"
```

Related Commands

show tcpdump-x, tcpdump

tcpdump-x capture-name stop

Stops the specified TCP dump capture.

Syntax

[no] tcpdump-x capture-name capture-name stop

Parameters

capture-name

Specify the capture name to stop.

Examples

```
amnesiac (config) # tcpdump-x capture-name example stop
```

Related Commands

show tcpdump-x, tcpdump

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tcpdump-x interfaces

Configures a comma-separated list of interfaces to capture in the background.

Syntax

[no] tcpdump-x interfaces *interface-name* continuous | duration *seconds* [schedule-time *HH:MM:SS* [schedule-date *YYYY/MM/DD*]] | [rotate-count *num-files*] | [snaplength *snaplength*] | [sip *src-addr*] | [dip *dst-addr*] | [sport *src-port*] [dport *dst-port*] | [dot1q {tagged | untagged | both}] [ip6] | [custom *custom-param*] | [file-size *megabytes*]

Parameters

`interface-name`

Specify a comma-separated list of interfaces: **primary**, **aux**, **lan0_0**, **wan0_0**

`continuous`

Start a continuous capture.

`duration seconds`

Specify the run time for the capture in seconds.

`schedule-time HH:MM:SS`

Specify a time to initiate the trace dump in the following format: HH:MM:SS

`schedule-date YYYY/MM/DD`

Specify a date to initiate the trace dump in the following format: YYYY/MM/DD

`rotate-count num-files`

Specify the number of files to rotate.

`snaplength snaplength`

Specify the snap length value for the trace dump. The default value is 1518. Specify **0** for a full packet capture (recommended for CIFS, MAPI, and SSL traces).

`sip src-addr`

Specify the source IP addresses. The default setting is all IP addresses.

`dip dst-addr`

Specify a comma-separated list of destination IP addresses. The default setting is all IP addresses.

`sport src-port`

Specify a comma-separated list of source ports. The default setting is all ports.

`dport dst-port`

Specify a comma-separated list of destination ports. The default setting is all ports.

`dot1q`

Specify one of the following to filter dot1q packets:

- `tagged:` Capture only tagged traffic.
- `untagged:` Capture only untagged traffic.
- `both:` Capture all traffic.

Note: Do not use the **sip**, **dip**, **sport**, **dport** and **custom** parameters together when using the **dot1q both** option. Use the **tcpdump** command to capture this information.

For detailed information about dot1q VLAN tunneling, see your networking equipment documentation.

`ip6`

Specify IPv6 packets for packet capture.

`custom` *`custom-param`*

Specify custom parameters (flags) for packet capture.

`file-size` *`megabytes`*

Specify the file size of the capture in megabytes.

Examples

```
amnesiac (config) # tcpdump-x interfaces inpath0_0 continuous
amnesiac (config) # tcpdump-x interfaces aux ip6 sip 2003::5
```

Related Commands

show tcpdump-x, tcpdump

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telnet-server enable

Enables you to access the CLI using telnet. This feature is disabled by default.

Syntax

[no] telnet-server enable

Usage Guidelines

You can use telnet to troubleshoot your system. It enables you to access the CLI from another system.

Examples

```
amnesiac (config) # telnet-server enable
```

Related Commands

show telnet-server

username disable

Disables the account so that no one can log in.

Syntax

[no] username userid disable

Parameters

userid

Specify the user login: **admin** or **monitor**.

Usage Guidelines

The **no** command option re-enables the specified user account.

Examples

```
amnesiac (config) # username monitor disable
```

Related Commands

ssh client generate identity user

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username nopassword

Disables password protection for a user.

Syntax

username userid nopassword

Parameters

userid

Specify the user login: **admin** or **monitor**.

Examples

```
amnesiac (config) # username monitor nopassword
```

Related Commands

ssh client generate identity user

username password

Sets the password for the specified user.

Syntax

username *userid* password *cleartext* [old-password *cleartext*]

Parameters

`userid`

Specify the user login: **admin** or **monitor**.

`password` *`cleartext`*

Specify the new password. The password must be at least 6 characters.

`old-password` *`cleartext`*

Specify the old password.

Usage Guidelines

The password is entered in cleartext format on the command line.

The **old-password** option allows you to check the minimum character difference between the old and new passwords under account control management.

Examples

```
amnesiac (config) # username admin password xyzzzZ
```

Related Commands

ssh client generate identity user

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username password 0

Sets the password for the specified user.

Syntax

username *userid* password 0 *cleartext-password*

Parameters

`userid`

Specify the user login: **admin** or **monitor**.

`cleartext-password`

Specify the password. The password must be at least 6 characters.

Usage Guidelines

The password is entered in cleartext format on the command line.

Examples

```
amnesiac (config) # username admin password 0 xyzzzZ
```

Related Commands

ssh client generate identity user

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username password 7

Sets the password for the specified user using the encrypted format of the password. Use this command if it becomes necessary to restore your appliance configuration, including the password.

Syntax

username *userid* password 7 *encrypted-password*

Parameters

`userid`

Specify the user login: **admin** or **monitor**.

`encrypted-password`

Specify the encrypted password. The password must be at least 6 characters.

Usage Guidelines

Use this command to restore your password using an encrypted version of the password. You can display the encrypted version of the password using the **show running configuration** command.

For example, executing **username monitor password awesomepass** results in the following line being added to the running configuration file:

```
username monitor password 7 $1$f2Azp8N8$n0oy6Y1KhCfuMo93f24ku/
```

If you need to restore your password in the future, you would paste:

```
username monitor password 7 $1$f2Azp8N8$n0oy6Y1KhCfuMo93f24ku/
```

in the CLI, to restore your monitor password to **awesomepass**.

Examples

```
amnesiac (config) # username admin password 7 $1$f2Azp8N8$n0oy6Y1KhCfuMo93f24ku/
```

Related Commands

ssh client generate identity user

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web auto-logout

Sets the number of minutes before the Management Console automatically logs out the user.

Syntax

[no] web auto-logout *minutes*

Parameters

minutes

Specify the number of minutes before the system automatically logs out the user. The default value is 15 minutes.

Usage Guidelines

The **no** command option disables the automatic log out feature.

Examples

```
amnesiac (config) # web auto-logout 20
```

Related Commands

show web

web auto-refresh timeout

Enables session timeouts on auto-refreshing report pages.

Syntax

[no] web auto-refresh timeout

Usage Guidelines

Disabling this feature keeps you logged in indefinitely on a report page that is auto-refreshing. This can be a security risk.

The **no** command option disables time-out.

Examples

```
amnesiac (config) # web auto-refresh timeout
```

Related Commands

show web

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web enable

Enables the Management Console.

Syntax

[no] web enable

Usage Guidelines

The Management Console is enabled by default.

The **no** command option disables the Management Console.

Examples

```
amnesiac (config) # web enable
```

Related Commands

show web

web http enable

Enables HTTP access to the Management Console.

Syntax

[no] web http enable

Usage Guidelines

The Management Console is enabled by default.

The **no** command option disables the Management Console.

Examples

```
amnesiac (config) # web http enable
```

Related Commands

show web

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web http port

Sets the Web port for HTTP access.

Syntax

[no] web http port *port*

Parameters

port

Specify the port number. The default value is 80.

Usage Guidelines

The **no** command option resets the Web port to the default value.

Examples

```
amnesiac (config) # web http port 8080
```

Related Commands

show web

web httpd listen enable

Restricts Web interface access to this system (that is, it enables access control and blocks requests on all the interfaces).

Syntax

[no] web httpd listen enable

Usage Guidelines

The **no** command option disables Web interface restrictions.

Web interface restrictions are not available through the Management Console.

Examples

```
amnesiac (config) # web httpd listen enable
```

Related Commands

show web

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web httpd listen interface

Adds an interface to the Web server access restriction list.

Syntax

[no] web httpd listen interface *interface*

Parameters

interface

Specify the interface: **primary**, **aux**, **inpath0_0**, **rios_lan0_0**, **rios_wan0_0**

Usage Guidelines

If the list of interfaces is empty, none of the interfaces respond to the queries. If the list of interfaces has at least one entry, then the server listens on that subset of interfaces.

Examples

```
amnesiac (config) # web httpd listen interface aux
```

Related Commands

show web

web httpd log-format

Changes the Web server log format (Apache httpd LogFormat).

Syntax

[no] web httpd log-format *log-format-for-Apache-httpd*

Parameters

`log-format-for-Apache-httpd`

Specify the log format arguments for Apache LogFormat. For detailed information about the Apache LogFormat arguments, see http://httpd.apache.org/docs.

Usage Guidelines

The **no** command option disables Web log-format.

Examples

```
amnesiac (config) # web httpd log-format "%h %l %u %t \"%r\" %>s %b"
```

Related Commands

show web

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web httpd server-header

Changes the Apache Server header line. (Apache httpd LogFormat).

Syntax

[no] web httpd server-header "Server:"-header-line

Parameters

"Server:"-header-line

Specify the log format arguments for Apache LogFormat. For detailed information about the Apache Server header line, see http://httpd.apache.org/docs.

Usage Guidelines

The **no** command option disables Web log-format.

Examples

```
amnesiac (config) # web httpd server-header "Server:Example HTTPD Server"
```

Related Commands

show web

web httpd timeout

Configures the Web server timeout period.

Syntax

[no] web httpd timeout *number-of-seconds*

Parameters

number-of-seconds

Specify the Web server timeout period in seconds.

Usage Guidelines

The **no** command option disables Web log-format.

Examples

```
amnesiac (config) # web httpd log-format "%h %l %u %t \"%r\" %>s %b"
```

Related Commands

show web

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web https enable

Enables HTTPS access to the Web-based management console.

Syntax

[no] web https enable

Usage Guidelines

The **no** command option disables access to the Web-based management console.

Examples

```
amnesiac (config) # web https enable
```

Related Commands

show web

web https port

Sets the HTTPS secure Web port.

Syntax

[no] web https port *port*

Parameters

port

Specify the port number. The default value is **80**.

Usage Guidelines

The **no** command option disables support on a secure port.

Examples

```
amnesiac (config) # web https port 8080
```

Related Commands

show web

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web prefs log lines

Sets the number of lines for the system log page.

Syntax

[no] web prefs log lines *number*

Parameters

number

Specify the number of lines per log page.

Usage Guidelines

The **no** command option disables the number of log lines.

Examples

```
amnesiac (config) # web prefs logs lines 10
```

Related Commands

show web

web proxy host

Sets the HTTP, HTTPS, and FTP proxy.

Syntax

[no] web proxy host *ip-addr* [port *port*] [user-cred username *username* password *password* [authtype *authentication-type*]]

Parameters

`ip-addr`

Specify the IP address for the host.

`port` *`port`*

Specify the port for the host.

`user-cred`

Optionally, specify the user credentials for the autolicensing feature:

- `username` *username:* Specify the user name.
- `password` *password:* Specify the password, in cleartext format.

`authtype` *`authentication-type`*

Optionally, specify the authentication type:

- `basic:` Authenticates user credentials by requesting a valid user name and password. This is the default setting.
- `digest:` Provides the same functionality as basic authentication; however, digest authentication improves security because the system sends the user credentials across the network as a Message Digest 5 (MD5) hash.
- `ntlm:` Authenticates user credentials based on an authentication challenge and response.

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Usage Guidelines

Use this command to enable the appliance to use a Web proxy to contact the Pulse Secure licensing portal and fetch licenses in a secure environment. You can optionally require user credentials to communicate with the Web proxy for use with the autolicensing feature. You can specify the method used to authenticate and negotiate these user credentials.

The **no** command option resets the Web proxy settings to the default behavior. Web proxy access is disabled by default.

RiOS supports the following proxies: Squid, Blue Coat Proxy SG, Microsoft WebSense, and McAfee Web Gateway.

Examples

```
amnesiac (config) # web proxy host 10.1.2.1 port 1220
```

Related Commands

show web

web rest-server enable

Enables the REST (REpresentational State Transfer) server.

Syntax

[no] web rest-server enable

Usage Guidelines

The **no** command disables the REST server.

Examples

```
amnesiac (config) # web rest-server enable
```

Related Commands

show web

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web session renewal

Sets the session renewal time. This is the time before the Web session time-out. If a Web request comes in, it automatically renews the session.

Syntax

[no] web session renewal *minutes*

Parameters

minutes

Specify the number of minutes. The default value is **10** minutes.

Usage Guidelines

The **no** command option resets the session renewal time to the default value.

Examples

```
amnesiac (config) # web session renewal 5
```

Related Commands

show web

web session timeout

Sets the session time-out value. This is the amount of time the cookie is active.

Syntax

[no] web session timeout *minutes*

Parameters

minutes

Specify the number of minutes. The default value is **60** minutes.

Usage Guidelines

The **no** command option resets the session time-out to the default value.

Examples

```
amnesiac (config) # web session timeout 120
```

Related Commands

show web

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web snmp-trap conf-mode enable

Enables SNMP traps in Web configure mode.

Syntax

[no] web snmp-trap conf-mode enable

Usage Guidelines

The **no** command option disables this setting.

Examples

```
amnesiac (config) # web snmp-trap conf-mode enable
```

Related Commands

show web

web soap-server enable

Enables the Simple Object Access Protocol (SOAP) server.

Syntax

[no] web soap-server enable

Usage Guidelines

The **no** command option disables this setting.

Examples

```
amnesiac (config) # web soap-server enable
```

Related Commands

show web

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web soap-server port

Enables the Simple Object Access Protocol (SOAP) server port.

Syntax

[no] web soap-server port *port*

Parameters

port

Specify the port.

Usage Guidelines

The **no** command option disables this setting.

Examples

```
amnesiac (config) # web soap-server port 1234
```

Related Commands

show web

web ssl cert generate

Generates a new SSL key and self-signed certificate.

Syntax

web ssl cert generate | [key-size 512 | 1024 | 2048] | [country *string*] | [email *email-address*] | [locality *string*] | [org *string*] | [org-unit *string*] | [state *string*] | [valid-days *integer*]

Parameters

`key-size`

Specify the key size.

`country *string*`

Specify the certificate two-letter country code. The country code can be any two-letter code, such as the ISO 3166 Country Codes, as long as the appropriate Certificate Authority can verify the code.

`email *email-address*`

Specify the email address of the contact person.

`locality *string*`

Specify the city.

`org *string*`

Specify the organization.

`org-unit *string*`

Specify the organization unit (for example, the company).

`state *string*`

Specify the state. You cannot use abbreviations.

`valid-days *integer*`

Specify how many days the certificate is valid. If you omit **valid-days**, the default is 2 years.

Examples

```
amnesiac (config) # web ssl cert generate
```

Related Commands

show web ssl cert

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web ssl cert generate-csr

Generates a certificate signing request with current private key.

Syntax

web ssl cert generate-csr [common-name *name*] [country *string*] [email *email-address*] [locality *string*] [org *string*] [org-unit *string*] [state *string*]

Parameters

`common-name` *`name`*

Specify the common name of the certificate authority.

`country` *`string`*

Specify the certificate two-letter country code. The country code can be any two-letter code, such as the ISO 3166 Country Codes, as long as the appropriate Certificate Authority can verify the code.

`email` *`email-address`*

Specify the email address of the contact person.

`locality` *`string`*

Specify the city.

`org` *`string`*

Specify the organization.

`org-unit` *`string`*

Specify the organization unit (for example, the company).

`state` *`string`*

Specify the state. You cannot use abbreviations.

`valid-days` *`int`*

Specify how many days the certificate is valid. If you omit **valid-days**, the default is 2 years.

Usage Guidelines

This command is available on the Interceptor appliance starting in version 4.0.

Examples

```
amnesiac (config) # web ssl cert generate-csr
```

Related Commands

show web ssl cert

web ssl cert import-cert

Imports a certificate, optionally with current private key, in PEM format, and optionally a password.

Syntax

web ssl cert import-cert *cert-data* import-key *key* [password *password*]

Parameters

`import-cert` *`cert-data`*

Specify the text of the certificate file in PEM format.

`import-key` *`key`*

Specify the text of the private key in PEM format.

`password` *`password`*

Optionally, specify a password.

Usage Guidelines

If no key is specified the incoming certificate is matched with the existing private key, and accepted if the two match. A password is required if imported certificate data is encrypted.

Examples

```
amnesiac (config) # web ssl cert import-cert <cert-text> import-key <key-text>
```

Related Commands

show web ssl cert

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web ssl cert import-cert-key

Imports a certificate with current private key in PEM format.

Syntax

web ssl cert import-cert-key *cert-key-data* [password *password*]

Parameters

`import-cert-key` *`cert-key-data`*

Specify the text of the private key and certificate file in PEM format.

`[password` *`password`*`]`

Optionally, specify a password.

Examples

```
amnesiac (config) # web ssl cert import-cert-key <key-text>
```

Related Commands

show web ssl cert

web ssl protocol sslv2

Sets the SSL v2 protocols for Apache to use.

Syntax

[no] web ssl protocol sslv2

Usage Guidelines

The **no** command option disables this setting.

Examples

```
amnesiac (config) # web ssl protocol sslv2
```

Related Commands

show web ssl cert

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web ssl protocol sslv3

Sets the SSL v3 protocols for Apache to use.

Syntax

[no] web ssl protocol sslv3

Usage Guidelines

The **no** command option disables this setting.

Examples

```
amnesiac (config) # web ssl protocol sslv3
```

Related Commands

show web ssl cert

web ssl protocol tlsv1

Sets the SSL v1 protocols for Apache to use.

Syntax

[no] web ssl protocol tlsv1

Usage Guidelines

The **no** command option disables this setting.

Examples

```
amnesiac (config) # web ssl protocol tlsv1
```

Related Commands

show web ssl cert

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web ssl protocol tlsv1.1

Sets the SSL v1.1 protocols for Apache to use.

Syntax

[no] web ssl protocol tlsv1.1

Usage Guidelines

The **no** command option disables this setting.

Examples

```
amnesiac (config) # web ssl protocol tlsv1.1
```

Related Commands

show web ssl cert

web ssl protocol tlsv1.2

Sets the SSL v1.2 protocols for Apache to use.

Syntax

[no] web ssl protocol tlsv1.2

Usage Guidelines

The **no** command option disables this setting.

Examples

```
amnesiac (config) # web ssl protocol tlsv1.2
```

Related Commands

show web ssl cert

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write memory

Saves the current configuration settings to memory.

Syntax

write memory

Examples

```
amnesiac (config) # write memory
```

Related Commands

show info

write terminal

Displays commands to recreate current running configuration.

Syntax

write terminal

Examples

```
amnesiac (config) # write terminal
```

Related Commands

show info

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Accessing the Operating System Shell

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Introduction

This chapter described how to access the operating system shell so that you can issue commands.

Note: Once you have accessed the operating system shell, the **OS Shell** function is automatically enabled in the Services Director VA GUI. This cannot be disabled once enabled.

Accessing the OS Shell

Administrator users can access the operating system shell to issue commands. The admin password is required on the first login only.

To access the OS shell:

1. Connect to the CLI:

   ```
   login as: admin
   Pulse Services Director
   admin@10.62.167.199's password:
   Last login: Tue Sep 11 09:43:12 2016 from 10.62.134.242
   amnesia > enable
   amnesia # configure terminal
   amnesia (config) #
   ```

2. Start the OS shell:

   ```
   amnesia (config) # _shell
   [admin@amnesia ~]#
   ```

   You are now in the operating system shell.

3. To exit the OS shell, type ctrl + D.

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