Pulse Connect Secure/Pulse Policy Secure

REST API Solutions Guide

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REST API Solutions Guide

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8.6	Added the following sections: - Getting HTML5 Sessions Statistics - Getting Active Basic HTML5 Sessions Statistics - Getting Active Advanced HTML5 Sessions Statistics - Added "URL Encoding" topic under the Overview section.
8.5.1	Updated the following sections with curl command: - Exporting TOTP Users from One Device to Another Device - Importing TOTP Users from One Device to Another Device - Getting Active Sessions - Getting Particular Active Session Details - Deleting a Particular Active Session - Deleting All Active Sessions
8.5	Added the following section for 9.1R8 release: PCS-specific - Resetting TOTP User - Unlocking TOTP User PPS-specific - Getting Authentication API Key - Pulse Policy Secure Alert Based Admission Control APIs
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8.1	Updated Profiler REST APIs URL
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7.1	Removed the unused header "Postman-Token" from the Guide.
7.0	Updated the "PCS/PPS Configuration Using REST APIs" section with: - Export without ESAP and Pulse Client packages API. - Backup/restore binary configuration - Added sample curl commands
6.0	Updated the "PCS/PPS Configuration Using REST APIs" section with IF MAP related REST APIs.
5.1	Updated the "PCS/PPS Configuration Using REST APIs" section with AD and LDAP related REST APIs.
5.0	Updated with "PCS/PPS Configuration Using REST APIs" section.

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Overview

The REST API provides a standardized method for Next-Gen firewalls, NAC devices, and third-party systems to interact with PCS/PPS. Representational state transfer (REST) or RESTful Web services are one way of providing interoperability between computer systems on the Internet. REST-compliant Web services allow requesting systems to access and manipulate textual representations of Web resources using a uniform and predefined set of stateless operations. In a RESTful Web service, requests made to a resource's URI will elicit a response that may be in XML, HTML, JSON or some other defined format. PCS/PPS supports JSON format only.

REST methods determine the HTTP method for manipulating the resources defined in the service operation. The kind of operations available include those predefined by the HTTP verbs GET, POST, PUT, DELETE and so on. The response may confirm that some alteration has been made to the stored resource, and it may provide hypertext links to other related resources or collections of resources. By making use of a stateless protocol and standard operations, REST systems aim for fast performance, reliability, and the ability to grow, by re-using components that can be managed and updated without affecting the system as a whole, even while it is running.

Note: REST API Support for PCS/PPS involves only Configuration APIs. Also, PCS/PPS supports only the GET, POST, PUT and DELETE APIs.

The valid and supported values are described in the Table 1.

Table 1: Valid and Supported Values

HTTP Verb	Definition
DELETE	Delete an existing resource.
GET	Retrieve a representation of a resource.
POST	Create a new resource
PUT	Create a new resource to a new URL or modify an existing resource to an existing URL.

The error codes supported are described in the Table 2.

Table 2: Error Codes Supported

HTTP Verb	Definition
200 OK	Requesting for resource information successful using GET Resource update successful using PUT
201 Created	Resource creation successful using POST
204 No Content	Deletion of resource successful with no body. Even PUT, POST may return 204 if no errors or warnings seen
400 – Bad Request	Any Request (GET/PUT/POST/DELETE, and so on) is invalid. Example: Incorrect JSON format

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HTTP Verb	Definition
401 – Unauthorized	Any REST Call with invalid credentials
403 – Forbidden	REST Call with valid credentials but no permission
404 – Not found	Requested resource in URI does not exist
422 – Unprocessable Entity	Any validation/referential integrity errors that would result in failure of PUT/POST/DELETE request
500 Server Error	When PCS/PPS rest server is not responding

URL Encoding

A URL can be from a limited set of characters belonging to the US-ASCII character set. Characters outside these character set are not allowed to be placed directly within URLs, but their encoded value preceded by % can be used in the URLs.

Table 3: URL Encoding

Character	URL Encoding (UTF-8)
<space>	%20
#	%23
$	%24
%	%25
&	%26
*	%2A
/	%2F
@	%40
\	%5C

Example:

- To get active session details of user "admin user"

curl -k -u <api-key>: https://<pcs-ip>/api/v1/system/activeusers?name= admin%20user

- To get active session details of user "admin@user"

curl -k -u <api-key>: https://<pcs-ip>/api/v1/system/activeusers?name= admin%40user

For more details, refer https://www.urlencoder.io/learn/.

Authentication for REST APIs

Basic authentication using the HTTP authorization header is used to authenticate username/password on the Administrators auth. server. It is expected that the user is already configured in the Administrators auth. server. On a successful login, a random token (api_key) is generated once and sent back as a JSON response. Further access to APIs can use this api_key value as username and password as empty in their Authorization header for access.

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Note: A new random api_key is generated on a successful login. The user can continue to use this key till the administrator:

- Enables/disables the user account
- Enables/disables the Allow REST API feature for that user

Basic Authentication using the HTTP Authorization Header

Configurations for REST APIs

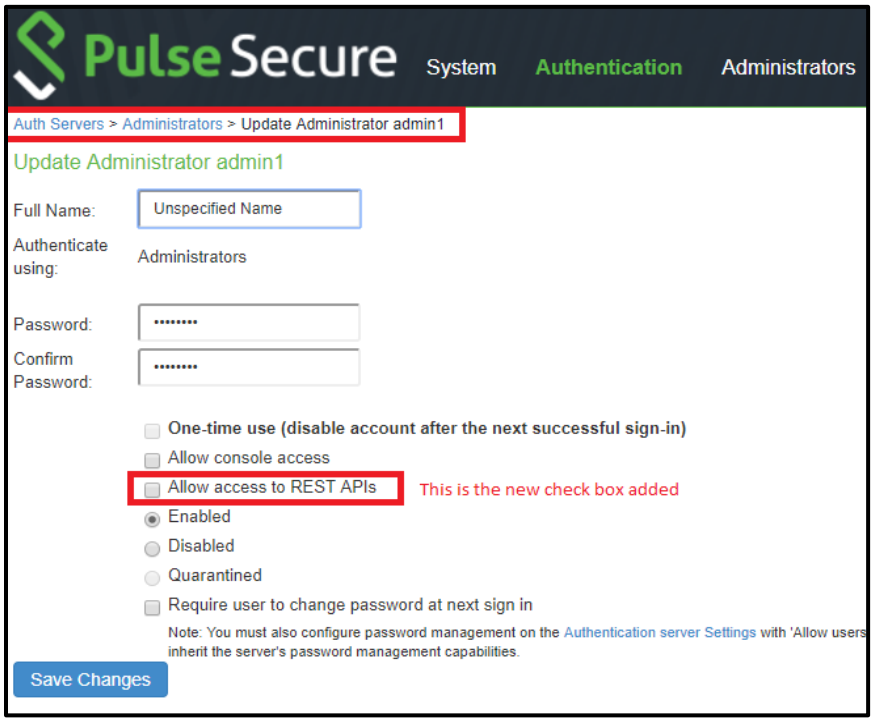
The configuration of PCS/PPS can be accessed using REST APIs. The PCS/PPS configuration is represented in a json form when accessed using REST APIs. The structure of the JSON representation is very similar to the structure of PCS/PPS XML configuration.

A new admin UI option for users under "Administrators" authserver has been added. REST API authentication would be successful only for those users who have this option enabled.

REST API access can be enabled from Pulse Connect Secure Admin console as shown below or from Pulse Connect Secure serial console.

To enable this check box in Pulse Connect Secure Admin Console:

1. Go to Authentication > Auth. Servers >Administrators > Update Administrator admin1.
2. Select the Allow access to REST APIs check box. See figure below.
3. Click Save Changes.



Enabling REST API Access for an Administrator from the Serial Console

REST API access for an administrator user can be enabled during initial configuration and while creating a new administrator user.

During initial provisioning, there are no administrator accounts configured and the system prompts to create a new administrator user. For the option “Do you want to enable REST API access for this administrator (y/n):”, enter y.

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Note: Any characters other than "y" or "n" are invalid responses.

```
~ — ssh shri@10.243.53.143

Internal port configuration completed, proceeding to next step...

---------------------------------

Internal NIC: .[OK]
Currently there are no administrators configured...

Please create an administrator user.
Admin username: admindb
Password:
Confirm password:
Do you want to enable REST API access for this administrator (y/n): y

The administrator was successfully created.

-----------------------------------
```

When creating a new administrator user from the console using the option "2. Create admin username and password", for the option "Do you want to enable REST API access for this administrator (y/n):", enter **y**.

```
~ — ssh shri@10.243.53.143

Current version: 9.0R1 (build 63950)
Rollback version: 8.3R4 (build 60528)
Reset version:  8.1R4.1 (build 37682)

Licensing Hardware ID: 0332MJ0WK0NUP111S
Serial Number: 03321220151000018

Please choose from among the following options:
   0. Start shell
 100. mount root rw and start rsync...
 101. mount root rw and chpax /home/bin...
 102. modify platform code...
 103. validate files...
 104. Start sshd for debugging ...
 105. Manage fault injection scenarios
   1. Network Settings and Tools
   2. Create admin username and password
   3. Display log/status
   4. System Operations
   5. Toggle password protection for the console (Off)
   6. Create a Super Admin session.
   7. System Maintenance
   8. Reset allowed encryption strength for SSL
Choice: 2

Please create an administrator username and password.
Admin username: consoleadmin

Password:
Confirm password:
Do you want to enable REST API access for this administrator (y/n): y

The administrator consoleadmin was successfully created.
```

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The entire communication is over TLS. An example is explained below:

```
REQUEST

GET /api/v1/auth HTTP/1.1

Host: 10.209.112.106

Authorization: Basic YWRtaW5kYjpkYW5hMTIz

Content-Type: application/json

RESPONSE

HTTP/1.1 200 OK

Content-Type: application/json

Expires: -1

Keep-Alive: timeout=15

{ "api_key": "p5mMlc7RQu81R2NvssLCCZhP05kf0N2ONFeYeLXX6aU=" }
```

Equivalent Curl Command

Note: While using curl command, ensure appropriate server CA certs is installed in the cert store recognized by curl. The sample curl commands provided in this document assumes you have appropriate server CA certs installed.

```
COMMAND

curl -i -u admindb:dana123 -G https://<hostname>/api/v1/auth

RESPONSE

HTTP/1.1 200 OK

Content-Type: application/json

{"api_key":"p9/h85ytEmkDzvkGSmQ4z77p6Ya7aLIC42vh0F9CGaQ="}


api_key received in response to authentication request should be used as
Username with EMPTY password in all future requests. Refer to the
examples in Sample GET/POST/PUT/DELETE Request and Responses in PCS.
```

Realm-based Authentication (Recommended)

Pulse Secure recommends realm-based authentication instead of basic authentication using the HTTPS authorization header.

```
REQUEST

POST /api/v1/realm_auth HTTP/1.1

Host: 10.209.116.214
```

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```
Content-Type: application/json
Authorization: Basic YWRtaW46ZGFuYTEyMw==
{
  "realm": "adminrealm"
}
RESPONSE
HTTP/1.1 200 OK
content-type →application/json
{
    "api_key": "NjQzOGU0N2I5MDUyMWZhZWM0NmZiMTMxY2U3M2YyM2Q="
}
```

Authorization header for all future requests should perform Basic Auth using above api_key value as username and password as empty.

```
REQUEST
GET /api/v1/configuration HTTP/1.1
Host: 10.209.112.106
Authorization: Basic
cDVtTWxjN1JRdTgxUjJOdnNzTENDWmhQMDVrZjBOMk9ORmVZZUxYWDZhVT06
RESPONSE
HTTP/1.1 200 OK
Content-Length →283
Content-Type →application/json
{
"administrators":
{ "href": "/api/v1/configuration/administrators" }
,
"authentication":
{ "href": "/api/v1/configuration/authentication" }
,
"system":
{ "href": "/api/v1/configuration/system" }
,
"users":
{ "href": "/api/v1/configuration/users" }
}
```

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Sample GET/POST/PUT/DELETE Request and Responses in PCS

Below is a sample of GET/POST/PUT/DELETE request and responses:

GET API Call: Fetch the Specific User under Local Authentication Server

```
REQUEST

GET /api/v1/configuration/authentication/auth-servers/auth-server/Sys-
Local/local/users/user/user0001 HTTP/1.1

Host: 10.209.112.106

Authorization: Basic
cDkvaDg1eXRFbWtEenZrR1NtUTR6NzdwNllhN2FMSUM0MnZoMEY5Q0dhUT06

Content-Type: application/json

RESPONSE

HTTP/1.1 200 OK

Content-Length: 309

Content-Type: application/json

{

    "change-password-at-signin": "false",

    "console-access": "false",

    "enabled": "true",

    "fullname": "user0001",

    "one-time-use": "false",

    "password-encrypted":
"3u+UR6n8AgABAAAATjgR31G4neKag2hxI+wjaNsRRZGD6wMQVkLEQv+DPQZdUrQi5IWPuihJ
f8tnrsBV0XCQly6WgZ79Jv1fyzmssg==",

    "username": "user0001"

}
```

Equivalent Curl Command

```
COMMAND

curl -i -u p9/h85ytEmkDzvkGSmQ4z77p6Ya7aLIC42vh0F9CGaQ=: -X GET
https://<hostname>/api/v1/configuration/authentication/auth-servers/auth-
server/System%20Local/local/users/user/user0001

RESPONSE

HTTP/1.1 200 OK

Content-Type: application/json

Content-Length: 303

{

  "change-password-at-signin": "false",
```

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```
  "console-access": "false",
  "enabled": "true",
  "fullname": "user0001",
  "one-time-use": "false",
  "password-encrypted":
"3u+UR6n8AgABAAAAOrKwtwwYUZlizIhEaq54tt550UA39gKEP8AQ7sjr/WTdtPLf36
mpsI5zGWpORVRjEIFAzVOvmxwgXVLBEJnIRQ==",
  "username": "user0001"
}
```

POST API Call: Create User for Existing Local Authentication Server

```
REQUEST
POST /api/v1/configuration/authentication/auth-servers/auth-server/Sys-
Local/local/users/user HTTP/1.1
Host: 10.209.112.106
Authorization: Basic
cDkvaDg1eXRFbWtEenZrR1NtUTR6NzdwNllhN2FMSUM0MnZoMEY5Q0dhUT06
Content-Type: application/json
{
  "change-password-at-signin": "false",
  "console-access": "false",
  "enabled": "true",
  "fullname": "user0001",
  "one-time-use": "false",
  "password-encrypted":
"3u+UR6n8AgABAAAATjgR31G4neKag2hxI+wjaNsRRZGD6wMQVkLEQv+DPQZdUrQi5IWPuihJ
f8tnrsBV0XCQly6WgZ79Jv1fyzmssg==",
  "username": "user0001"
}
RESPONSE
HTTP/1.1 200 OK
Content-Length: 122
Content-Type: application/json
{
    "result": {
        "info": [
            {
                "message": "Operation succeed without warning or error!"
```

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```
            }
        ]
    }
}
```

Equivalent Curl Command

```
COMMAND

curl -i -u hv5uaqOWF5kuISVnUiGEabOL8fsczsK98zVwpHYWgKE=: -X POST
https://<hostname>/api/v1/configuration/authentication/auth-servers/auth-
server/System%20Local/local/users/user -H 'Content-Type:
application/json' -d '{"change-password-at-signin": "false", "console-
access": "false", "enabled": "true", "fullname": "user0001", "one-time-
use": "false", "password-cleartext": "abc123", "username": "user0002"}'

RESPONSE

HTTP/1.1 201 CREATED

Content-Type: application/json

Content-Length: 128


{
  "result": {
    "warnings": [
      {
        "message": "The configuration has been implicitly changed"
      }
    ]
  }
}
```

PUT API Call: Update Full name field of Specific user

```
REQUEST

PUT /api/v1/configuration/authentication/auth-servers/auth-server/Sys-
Local/local/users/user/user0001/fullname HTTP/1.1

Host: 10.209.112.106

Authorization: Basic
cDkvaDg1eXRFbWtEenZrR1NtUTR6NzdwNllhN2FMSUM0MnZoMEY5Q0dhUT06

Content-Type: application/json

Cache-Control: no-cache

{

  "fullname":"REST API test for user0001"
```

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```
}

RESPONSE

HTTP/1.1 200 OK

Content-Length: 122

Content-Type: application/json

{

  "result": {

    "info": [

      {

        "message": "Operation succeed without warning or error!"

      }

    ]

  }

}
```

Equivalent Curl Command

```
COMMAND

curl -i -u hv5uaqOWF5kuISVnUiGEabOL8fsczsK98zVwpHYWgKE=: -X PUT
https://<hostname>/api/v1/configuration/authentication/auth-servers/auth-
server/System%20Local/local/users/user/user0001/fullname -H 'Content-
Type: application/json' -d '{"fullname": "user0001"}'

RESPONSE

HTTP/1.1 200 OK

Content-Type: application/json

Content-Length: 124

{

  "result": {

    "info": [

      {

        "message": "Operation succeeded without warning or error!"

      }

    ]

  }

}
```

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After updating, fetch the User details and observe the fullname field updated:

```
REQUEST

GET /api/v1/configuration/authentication/auth-servers/auth-server/Sys-
Local/local/users/user/user0001 HTTP/1.1

Host: 10.209.112.106

Authorization: Basic
cDkvaDg1eXRFbWtEenZrR1NtUTR6NzdwNllhN2FMSUM0MnZoMEY5Q0dhUT06

Content-Type: application/json

RESPONSE

HTTP/1.1 200 OK

Content-Length →327

Content-Type →application/json

{

  "change-password-at-signin": "false",

  "console-access": "false",

  "enabled": "true",

  "fullname": "REST API test for user0001",

  "one-time-use": "false",

  "password-encrypted":
"3u+UR6n8AgABAAAATjgR31G4neKag2hxI+wjaNsRRZGD6wMQVkLEQv+DPQZdUrQi5IWPuihJ
f8tnrsBV0XCQly6WgZ79Jv1fyzmssg==",

  "username": "user0001"

}
```

DELETE API Call: DELETE Specific User

```
REQUEST

DELETE /api/v1/configuration/authentication/auth-servers/auth-server/Sys-
Local/local/users/user/user0001 HTTP/1.1

Host: 10.209.112.106

Authorization: Basic
cDkvaDg1eXRFbWtEenZrR1NtUTR6NzdwNllhN2FMSUM0MnZoMEY5Q0dhUT06

Content-Type: application/json

RESPONSE

HTTP/1.1 200 OK

Content-Length →122

Content-Type →application/json

{
```

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```
  "result": {
    "info": [
      {
        "message": "Operation succeed without warning or error!"
      }
    ]
  }
}
```

Equivalent Curl Command

```
COMMAND

curl -i -u hv5uaqOWF5kuISVnUiGEabOL8fsczsK98zVwpHYWgKE=: -X DELETE
https://<hostname>/api/v1/configuration/authentication/auth-servers/auth-
server/System%20Local/local/users/user/user0002/

RESPONSE

HTTP/1.1 204 NO CONTENT

Content-Type: application/json

Content-Length: 0
```

After deleting, try to fetch the resource and you would observe 404 response.

```
REQUEST

GET /api/v1/configuration/authentication/auth-servers/auth-
server/Sys-Local/local/users/user/user0001 HTTP/1.1

Host: 10.209.112.106

Authorization: Basic
cDkvaDg1eXRFbWtEenZrR1NtUTR6NzdwNllhN2FMSUM0MnZoMEY5Q0dhUT06

Content-Type: application/json

Cache-Control: no-cache

RESPONSE

404 NOT FOUND

Content-Length: 105

Content-Type: application/json

{
  "result": {
    "errors": [
      {
        "message": "Resource does not exist."
```

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```
      }
    ]
  }
}
```

Representing Configuration Resources Using Links

When performing a GET request on a configuration resource, the json response may have "href" attributes to represent smaller resources within.

As an example, `"GET /api/v1/configuration"` returns:

```
{
  "users": {
    "href": "/api/v1/configuration/users"
  },
  "system": {
    "href": "/api/v1/configuration/system"
  },
  "authentication": {
    "href": "/api/v1/configuration/authentication"
  },
  "administrators": {
    "href": "/api/v1/configuration/administrators"
  }
}
```

The href values can be used to access smaller resources.

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Sample GET/POST/PUT/DELETE Request and Responses in PPS

Below is a sample of GET/POST/PUT/DELETE request and responses:

GET API Call: Fetch the Details under Endpoint Policy

This example shows how to fetch the details under endpoint policy in PPS.

```
REQUEST
GET /api/v1/configuration/uac HTTP/1.1

Host xx.xx.xx.xx

Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06

Content-Type: application/json

{
    "admissionControl": {
        "href": "/api/v1/configuration/uac/admissionControl"
    },
    "host-enforcer": {
        "href": "/api/v1/configuration/uac/host-enforcer"
    },
    "infranet-enforcer": {
        "href": "/api/v1/configuration/uac/infranet-enforcer"
    },
    "mac-address-realms": {
        "href": "/api/v1/configuration/uac/mac-address-realms"
    },
    "network-access": {
        "href": "/api/v1/configuration/uac/network-access"
    },
    "snmpEnforcement": {
        "href": "/api/v1/configuration/uac/snmpEnforcement"
    }
}
RESPONSE
HTTP/1.1 200 OK

Content-Length: 340

Content-Type: application/json
```

Equivalent Curl Command

```
COMMAND

curl -i -u g4dncT4699c+IWip/+8urgXM0Luy1vQdj9zNxEFWEbM=: -X GET
https://<hostname>/api/v1/configuration/uac

RESPONSE

HTTP/1.1 200 OK

Content-Type: application/json
```

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```
Content-Length: 620
{
  "admissionControl": {
    "href": "/api/v1/configuration/uac/admissionControl"
  },
  "host-enforcer": {
    "href": "/api/v1/configuration/uac/host-enforcer"
  },
  "infranet-enforcer": {
    "href": "/api/v1/configuration/uac/infranet-enforcer"
  },
  "mac-address-realms": {
    "href": "/api/v1/configuration/uac/mac-address-realms"
  },
  "network-access": {
    "href": "/api/v1/configuration/uac/network-access"
  },
  "networkDeviceAdministration": {
    "href": "/api/v1/configuration/uac/networkDeviceAdministration"
  },
  "snmpEnforcement": {
    "href": "/api/v1/configuration/uac/snmpEnforcement"
  }
```

POST API Call: Create an SRX Enforcer in Infranet Enforcer Connection

This example shows how to create an SRX Enforcer in Infranet Enforcer connection.

```
REQUEST
POST /api/v1/configuration/uac/infranet-enforcer/connections/infranet-
enforcer/ HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
    "idp-for-local-sessions-only": "true",
    "junos": {
        "location-group": "- No 802.1X -",
        "password-encrypted":
"3u+UR6n8AgABAAAAofSnIBrU19vdwUslG5LG4cg1QH6CbXDSmY4ZW0x85HY="
    },
    "name": "SRX",
    "serial-number": [
        "SJFIOQJI4KNM"
    ],
    "severity-filter": "medium",
    "use-idp": "false"
```

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```
}
```

RESPONSE

```
HTTP/1.1 201 OK
Content-Length: 122
Content-Type: application/json
{
    "result": {
        "info": [
            {
                "message": "Operation succeed without warning or
error!"
            }
        ]
    }
}
```

Equivalent Curl Command

COMMAND

```
curl -i -u g4dncT4699c+IWip/+8urgXM0Luy1vQdj9zNxEFWEbM=: -X POST
https://<hostname>/api/v1/configuration/uac/infranet-
enforcer/connections/infranet-enforcer -H 'Content-Type:
application/json' -d '{"idp-for-local-sessions-only": "true", "junos": {
"location-group": "- No 802.1X -", "password-
encrypted":"3u+UR6n8AgABAAAAofSnIBrU19vdwUslG5LG4cg1QH6CbXDSmY4ZW0x85HY="
},"name": "SRX","serial-number": ["SJFIOQJI4KNM"],"severity-filter":
"medium", "use-idp": "false"}'
```

RESPONSE

```
HTTP/1.1 201 CREATED


Content-Type: application/json

Content-Length: 124


{
  "result": {
    "info": [
      {
        "message": "Operation succeeded without warning or error!"
      }
    ]
  }
}
```

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PUT API Call: Update Existing Configuration Where In Initial Location Group is Configured as Guest

This example updates the existing configuration where in the initial Location Group is configured as "Guest" and then later updated to "Default" Location group.

Before Updating the Location Group

```
REQUEST
GET api/v1/configuration/uac/network-access/radius-clients/radius-
client/Radius%20Client HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
    "location-group": "Guest",
    "name": "Radius Client",

}
RESPONSE
HTTP/1.1 200 OK
Content-Length: 122
Content-Type: application/json
```

Equivalent Curl Command

```
COMMAND

curl -i -u g4dncT4699c+IWip/+8urgXM0Luy1vQdj9zNxEFWEbM=: -X PUT
https://<hostname>/api/v1/configuration/uac/network-access/radius-
clients/radius-client/Radius%20Client -H 'Content-Type: application/json'
-d '{"location-group": "Default","name": "Radius Client"}'

RESPONSE

HTTP/1.1 200 OK

Content-Type: application/json

Content-Length: 124

{

  "result": {

    "info": [

      {

        "message": "Operation succeeded without warning or error!"

      }

    ]

  }

}
```

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After Updating the Location Group

```
REQUEST
PUT api/v1/configuration/uac/network-access/radius-clients/radius-
client/Radius%20Client HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{

    "location-group": "Default",

    "name": "Radius Client",

}
RESPONSE
HTTP/1.1 200 OK
Content-Length: 122
Content-Type: application/json
{
    "result": {
        "info": [
            {
                "message": "Operation succeed without warning or
error!"
            }
        ]
    }
}
```

DELETE API Call: Delete an SNMP Device

This example shows how to delete SNMP device from PPS.

```
REQUEST
DELETE api/v1/configuration/uac/snmpEnforcement/clients/client/ruckus
HTTP/1.1
Host 10.96.73.37
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
RESPONSE
HTTP/1.1 204 NO CONTENT
Content-Length: 0
Content-Type: application/json
```

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Equivalent Curl Command

```
COMMAND

curl -I -u g4dncT4699c+IWip/+8urgXM0Luy1vQdj9zNxEFWEbM=: -X DELETE
https://<hostname>/api/v1/configuration/uac/snmpEnforcement/clients/clien
t/ruckus

RESPONSE

HTTP/1.1 204 NO CONTENT

Content-Type: application/json

Content-Length: 0
```

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PCS/PPS Configurations Using REST APIs

- Getting Active Sessions
- Getting Particular Active Session Details
- Deleting a Particular Active Session
- Deleting All Active Sessions
- Querying Set of Leased Licenses in the License Server System
- Pulling State from a License Server on a License Client
- Configuring Certificates based on CSR Workflow
- Creating a CSR for a Device Certificate
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- Getting System Information
- Retrieving Serial Number and Machine ID
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- Specifying Session Validity for REST Admin Session
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- Creating a Cluster
- Adding a Member to Cluster
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- Joining a Cluster
- VIP Failover
- Configuring IF MAP Server
- Configuring IF MAP Client
- Configuring No IF MAP Server
- Getting Config Without Pulse Packages (ESAP and Pulse Client Packages)
- Backing Up Binary Configuration
- Restoring Binary Configuration (import=normal)
- Restoring Binary Configuration (import=full)

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Getting Active Sessions

REQUEST

Fetch default number of active sessions (default=200)

```
curl -k -u <api-key>: https://<pcs-ip>/api/v1/system/active-users
```

Example :

```
curl -k -u K7Z7xA54AKnv1++kcViamCCiUrEBgMSP+sHKar4EcKY=:
https://10.209.125.4/api/v1/system/active-users
```

Fetch specified number of active sessions

```
curl -k -u <api-key>: https://<pcs-ip>/api/v1/system/active-
users?number=<number>
```

Example :

```
curl -k -u K7Z7xA54AKnv1++kcViamCCiUrEBgMSP+sHKar4EcKY=:
https://10.209.125.4/api/v1/system/active-users?number=250
```

RESPONSE

```
Content-Type: application/json
{
      "active-users": {
        "active-user-records": {
          "active-user-record": [
            {
              "active-user-name": "user1",
              "agent-type": "Windows 8.1 Google Chrome",
              "authentication-realm": "localrealm",
              "endpoint-security-status": "Not Applicable\nPassed
      Policies: \nFailed Policies: \nEliminated Roles: ",
              "events": 0,
              "login-node": "localhost2",
              "network-connect-ip": null,
              "network-connect-transport-mode": null,
              "session-id":
      "sidb03b1e971b7ebe163bb70c966a8ae2b50767aae300000000",
              "pulse-client-version": "9.1.4.1316",
              "user-roles": "localrealm",
              "user-sign-in-time": "2018/08/23 11:45:40"
            },
            {
              "active-user-name": "user2",
              "agent-type": "Windows 7 Google Chrome",
              "authentication-realm": "localrealm",
              "endpoint-security-status": "Not Applicable\nPassed
```

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```
      Policies: \nFailed Policies: \nEliminated Roles: ",
             "events": 0,
             "login-node": "localhost2",
             "network-connect-ip": null,
             "network-connect-transport-mode": null,
             "session-id":
      "sid68377b6249d24784edfdd07edfe61ee9934b556100000000",
             "user-roles": "localrealm",
             "user-sign-in-time": "2018/08/23 11:46:15"
           }
          ]
        },
        "total-matched-record-number": 2,
        "total-returned-record-number": 2,
        "user-login-permission": true
      }
}
```

Getting Particular Active Session Details

REQUEST

```
curl -k -u <api-key>: https://<pcs-ip>/api/v1/system/active-
users?name=user2
```

Example:

```
curl -k -u K7Z7xA54AKnv1++kcViamCCiUrEBgMSP+sHKar4EcKY=:
https://10.209.125.4/api/v1/system/active-users?name=user2
```

RESPONSE

```
Content-Type: application/json
{
      "active-users": {
        "active-user-records": {
           "active-user-record": [
             {
               "active-user-name": "user2",
               "agent-type": "Windows 7 Google Chrome",
               "authentication-realm": "localrealm",
               "endpoint-security-status": "Not Applicable\nPassed
      Policies: \nFailed Policies: \nEliminated Roles: ",
               "events": 0,
               "login-node": "localhost2",
```

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```
                "network-connect-ip": null,
                "network-connect-transport-mode": null,
                "session-id":
      "sid68377b6249d24784edfdd07edfe61ee9934b556100000000",
                "user-roles": "localrealm",
                "user-sign-in-time": "2018/08/23 11:46:15"
            }
          ]
        },
        "total-matched-record-number": 1,
        "total-returned-record-number": 1,
        "user-login-permission": true
      }
}
```

Deleting a Particular Active Session

REQUEST

```
curl -k -u <api-key>: https://<pcs-ip>/api/v1/system/active-
users/session/sid6dc167193b66fef812ef3fdba62729e53f8499f0c25df3be -X DELETE
```

Example:

```
curl -k -u K7Z7xA54AKnv1++kcViamCCiUrEBgMSP+sHKar4EcKY=:
https://10.209.125.4/api/v1/system/active-
users/session/sid6dc167193b66fef812ef3fdba62729e53f8499f0c25df3be -X DELETE
```

RESPONSE

```
HTTP/1.1 204 NO CONTENT
Content-Length: 0
Content-Type: application/json
```

Deleting All Active Sessions

REQUEST

```
curl -k -u <api-key>: https://<pcs-ip>/api/v1/system/active-users?all -X
DELETE
```

Example:

```
curl -k -u K7Z7xA54AKnv1++kcViamCCiUrEBgMSP+sHKar4EcKY=:
https://10.209.125.4/api/v1/system/active-users?all -X DELETE
```

RESPONSE

```
HTTP/1.1 204 NO CONTENT
```

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```
Content-Length: 0
Content-Type: application/json
```

Querying Set of Leased Licenses in the License Server System

```
REQUEST
GET /api/v1/license/license-server-lease-information HTTP/1.1
Host: 10.209.114.226
Authorization: Basic
c2czWUJmc1lyUjcwN2daSFh6RHdqME1YSnNhdDZmcXlaOVZKNFNSdStaZz06
Content-Type: application/json
RESPONSE
HTTP/1.1 200 OK
Content-Length: 2210
Content-Type: application/json
{
      "leased-license-counts": {
         "features": {
            "feature": [
              {
                 "clients": {
                    "client-info": [
                       {
                           "leased-count": 0,
                           "name": "client1"
                       }
                     ]
                  },
                  "name": "Advanced Mobile License - Onboarding",
                  "total-count": 0
               },
               {
                  "clients": {
                  "client-info": [
                    {
                       "leased-count": 0,
                       "name": "client1"
                    }
```

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```
                ]
            },
            "name": "Cloud Secure feature",
            "total-count": 0
        },
        {
            "clients": {
              "client-info": [
                {
                   "leased-count": 0,
                   "name": "client1"
                }
              ]
            },
            "name": "Concurrent Meeting Users",
            "total-count": 0
         },
         {
            "clients": {
              "client-info": [
               {
                  "leased-count": 200,
                  "name": "client1"
               },
               {
                  "leased-count": 0,
                  "name": "client2"
               }
              ]
             },
             "name": "Concurrent Users",
             "total-count": 200
          },
          {
             "clients": {
               "client-info": [
                 {
                   "leased-count": 0,
                   "name": "client1"
```


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```
                    }
                  ]
                },
                "name": "Named Users",
                "total-count": 0
              },
              {
                "clients": {
                  "client-info": [
                    {
                      "leased-count": 0,
                      "name": "client1"
                    }
                  ]
                },
                "name": "Premier Java Remote Desktop Applet",
                "total-count": 0
              }
            ]
          },
          "machine-id": "VASPMVKIT1NJNFPPS",
          "query-summary": {},
          "release-info": {
          "build-number": "10124",
          "version": "9.0"
      },
          "serial-number": null,
          "signature":
      "HMx/W0VhDAABAAAApoB/uSUYcwJSlk7HeXVMXK6+KsIPTrJnjXrUci
      JEef2EKWyqgbDGoXhzYaGDl6Ye29oOw2KRQlyCM/HRpIpujA==",
          "time-stamp": "Fri Aug 24 14:43:00 2018"
      }
}
```


Pulling State from a License Server on a License Client

```
REQUEST
PUT /api/v1/license/license-client-lease-state HTTP/1.1
Host: 10.209.114.228
```

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```
Authorization: Basic
OWZBcVNKUkRCcEdjSEVQY3A0aDZ2UnFwdjhXbExIYzUxRS91TVU1VnBnMD06

Content-Type: application/json

{


}
```

Note: While using above URL (i.e., license-client-lease-state) by PUT operation, we provide empty JSON body as input, because PUT operation expects JSON body.

RESPONSE

```
HTTP/1.1 200 OK

Content-Length: 86

Content-Type: application/json

{
   "result": {
      "info": [
         {
           "message": "Success"
         }
      ]
   }
}
```

Configuring Certificates based on CSR Workflow

REQUEST

```
POST /api/v1/system/certificates/device-certificates HTTP/1.1

Host: 10.209.114.228

Authorization: Basic aWZuM2VmZVZTRU9YNVZkVVZ3eFpiYWdob3VCTndxZEkyaExubUcyVU5ibz06

Content-Type: application/json

{
         "cert":"MIINzgIBAzCCDYoGCSqGSIb3DQEHAaCCDXsEgg13MIINczCCBgQGCSqGSIb3DQE
         HAaCCBfUEggXxMIIF7TCCBekGCyqGSIb3DQEMCgECoIIE9jCCBPIwHAYKKoZIhvcNAQwBAz
         AOBAjpYgwUOJOweAICB9AEggTQFjak4T3ftSlkdoiOtc/xvhSfrrkezsl09tN6tqyuVYWFQ
         UZkpUIg4v2pU1zOvFOTPplnoVCmeiL2HX7OzuLPALcnSvGmaq61I+Y5dBWMmXMo+bs8sU36
         p6YS4D9Bq3VIMecAHwzc/30hPf+gaaoYSQiMuLa34CnNeFxPfxMlH0sXi1QeqaLAtMno5AM
         QW1/nHSAyJPwa5OWrJ5mkfHKh4kog893diYwo1mlIqlp7Qseza4+uosWAthih/jac1iDmlb
         03kjR+OQAukXFQ19ejvyrmMhcjhozARqwMgEj6I+JpdJPUxvwVytQ20Nj4lNDRnAb5sp1oA
         i0u5aN49afY6kRjNuKUeUkEmrpmumNJJufkDkKx1eqYOBOqQ50K1w9qFhEOaOLivGQa1Ijz
         Nyc+Bbs2TMw8RJWDsA7TVJhQKBcVjtIOSFzsVjyWJeI9VzB+iUbi+XCHYRQP0W6el6HWg2b
         31iNhMID5Lt2GWQOzT6iUVNlsZFoofyfXsZBY0JC6nsbvZVMRNBGXE2fEFA/qIga8Gn5E9z
         cIqibnXXW0jAOa+m3d+KRR49XaoAjgzpJ3ErqLVz1l/nGTix9W3H4mSHd9xX43h6Pbz0tGm
```

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u6l9nnWP/52y6/TMQQB5v0RHe0klj+uX00ZuezmmeYEapX+SObQrMqmnvTgWApf7FzulcvA
IHomQ184MJzarNnhOpO1AQGESaa6tABtk2Yzpbm+g5SAgnjwxH0IjeF/kwapQttIYc1TM3q
Q9EsPKqbpaQna4qETIRLI3R6GVNTBnG/g9M9MQh2MtnvonSOlpjDs+TtLoO+BtY9J2XSMK0
wtXyONb67xjTRRsC1u1fAvP4RdyHpmM4JO3+VW1F4n8Vzl+RYrRj0sKja/jHm1ElZvhxJHb
wEMFDSvFIqAVfQGQKy1iJWSjalNeO2TEPVJOf2o+TofnYDq4hk0tABVdWLRfmn3byi91+xi
oIOLputEGG8ZtoAdlPkag/lKBnWa37z3eHnfQC9qWU8dcONBQo/HFxupj482jQa7lUg3fp7
apM4CuDQEgJWYNS4/Z+5+zEqq9q+/w9ke5Y/a/5ukeP9HRS3xpeEe56qb98qPx3dXSSDgXt
D1L6r48Dl+4ISYmLEl0yFwXtJ3vuYk5NiUjmZsuI1tnLQoxim5z6NUZ5/7G04mG/BzAX3qT
74MlRzVDa7uZdJPyJLyTGUtidn562HvYnrGtO9P+08OH6c2Dp4eOgNQCrhPP51ZHd9VNo0n
yqtZmZ0E4oHN4G7ud+6fwIvaSF9gpw1iTWAF5122dr1llAe3ZFPs5bzv7jrfY7LGuTh+l00
3MshmtYZAiw8nM1ODm4HstQsSxHWVb+WK4uiorvhq2cplJ+71rGQI/kCM8hdZJOUYzsrnQX
QUn/rS1O0w9VAP88SG9mJiQynoX4+BKYtnn4XE4D3tEFUygD2RmG2GdeGBjOeHh/KeMrXk2
z9oLEn7CaDeZQCp/7wGdDLfb/nAkmyiO6DWkPZzDAzGdSDd0gRTkY4LdtyjPTkeADN+wXvj
h6tutjgWgHEHI3xnvMan1/rzZV80SGpbqWFEcLCk158YuprYqVRN2CmJCILoVbUaay6Vq9j
aHkIkT3lxzU6UkNTKxqo3Rhad9StfxCRqlrYxgd8wEwYJKoZIhvcNAQkVMQYEBAEAAAAwXQ
YJKoZIhvcNAQkUMVAeTgBsAGUALQA2AGMANQA0AGUAMABjADQALQAyAGYANQBkAC0ANABjA
GYAMAAtAGEAYwBiAGUALQBhADAAYgBjAGUAZgA4AGIAYgA4AGEAMzBpBgkrBgEEAYI3EQEx
XB5aAE0AaQBjAHIAbwBzAG8AZgB0ACAAUgBTAEEAIABTAEMAaABhAG4AbgBlAGwAIABDAHI
AeQBwAHQAbwBnAHIAYQBwAGgAaQBjACAAUAByAG8AdgBpAGQAZQByMIIHZwYJKoZIhvcNAQ
cGoIIHWDCCB1QCAQAwggdNBgkqhkiG9w0BBwEwHAYKKoZIhvcNAQwBBjAOBAgQOOB7+SpCl
QICB9CAggcgKOhImrEmUqPOG8XR59tFV0HOdvnlfzxI7aM6PnAgwPiMSxa6e69kZ/DCeY5V
5XZkfW+nYAZvgGuZw26oLgVz14T/j0Z3kYTKcn1Mx+gvj5coadwfR21HirvwyndeXKJ6w1Y
h4omK/x4891AFgvKizeeOewczIGmWCqQh81HUgiR8aAfLU2neKxcLoGOfhQnN5k/SSKsBTu
UBQ80zGiXh+48xS4CTzE8vEyDXyQqE09sqxoDtWTw7U5cV8qXwpgy+FSb4c/Y/RCggTqmCL
+NwSMCvhEGfKSq9ZwJvniEpsQ1mHzK/e4ZRQH/C+eNCccV/6zR5onNbZ0fpVTGDCCG0Z970
5zzGur5z83CGy53fcHS2fdoQP6kqps7VeKbym2NBBT6tx9ZD4Ue988EQwkM0dw/7/9resv6
VnL+T9prJJq7pEPKyl8ocTSTPbINsSJ8f6z+R01/cxOnpyZ3pe2kWneC0xVUeTCsfip5DEb
OfgaCy4omJstlx57Z5GQrVfsO1V21NjY6i0Ev7e2AGyn+Kq2ZcrTBzijQpoA0djljaFodkB
VPwROkXCEjScfV/YjURTSgVcv1F1k/OyVf3EDcTXzjtOEuvkLrYsBANzAtcchE7tMlJdVlD
v4lA5nudd1plgQkwp911LOM5AieKMGuaSFLCq0RNTho61AFTeEOCgK1uDoRtac+TtgzrAyQ
GpUwQ/j/CFzy2yhQzSg2+nOFDA4D2I2Bw3SyMVAw45NtPPYnoplY9j0iRPfSOUzbHqULI8P
vRyICY3EhIv7MVzG812TMD1WOvZzaNonSB4plj+rq+aL6YHl5O3/AQ5v/n3b/ebrKDSSTYR
OC1nVfxxwF+nLTMeCPumAfb8JWdAmOvsUmyd8j8b6CgE2fMsR6yzZMmTcdispYe1r+at4hd
7v57K2JKcTKffS23zU9QZ6w30+soSr4dKhXVKoFny8pGZkgA5Dd5ksytKJgKJHM5Z6yRij8
cc0WwPrqK9jZvFxq0+t8rAFUA1QRbM6nnwF4g6z2vMdEtUYtnNXIZIWe5E6YJ1mxzn26dFA
t2AnM8MelPSNVaxVqhoCZAZOdRmhYXg4uT+4rMazBXJ7txtCNsQd/sW4WpOp9jzRoANfhxK
2uKkfRS62216u6hCoVCMj5D7UjB/4S80NZIwa67cikY/89t4vEZbwvS0dLQ2CMiQVeeUFTo
4Hq32RaVRPhIJql0MH/fyMIvSfqEoMUnY/D/26rKnivVp9XZdyd2ZKMV5nNFtbwC6UhhQ76
PwKRg5GsOuDjUxHzy0DXIgTcSuZWUeuDNM0iyVZ2LVCRPyTWAiur0nepcn1nVcehlxddqGS
u1AWSqmOODMmwymtm6mDKAvLnN8qjpL742bTIHkmxtUvoNxrgT4i+0jwGWlGNy6sx3JAXIY
Zv85xt+cV5KDvmF822w6CtUs5l8lWvBdAC6WD+wmnQzGsqvSbj9jLLKFxOtLYs863dDDtEN
dZIytrCKjEKNloY8X0flN1fczguZ8ssBa6XWQ4hjgwanpjBsvReJZcWogUFqYuXtZUB/mIU
SZyNSIFwCO4cWa4vqE4P1Pjl56jnIdpqwgqaljHTm7WsCEIbgdBfyJp75/vJR/A4PAJcsZm
FfIayNwM/zePFhZp0UdxrnoptZfsF4XspgZEPbHyxmfQG7f8sfAQq0iQlH0kpaBD3VuTrud
gOfFbVfrjim8UXUNhKpYSgy3GWeHXadrOHsOZ0Yj0a/AY5Wwny7RJAZO00UCMLGRVFxYjj9
RQvCPphejNVmhLNqlT3dqEczH3TptR4xILuoXC6sQkViBhV7dEp0nVzA6jUzCGOnYmCWi7/
N6+bD1XHC6dg76igIUHHiJz0jqHfIoxqAak+72Iv706QtVMyI+Cpe4FLRqhoNUJpHAT7+5E
Oq2WqWXB+KXk5/Wh7/CIo6pZsAuEAU0elDDz/mex2oUfigYvtywFPBo0fWzTqkWvP7Pl8E5
wudKl9Q+JYoNZVaapChTDJF9/OoVE1g0rrQ5nxzKQRrTbtekZSJ5j66p107ux2R+Q7MpRsm
wT8ERgW8CexPHOAIKAWSBpWaT6ogh1MletHIK++ShXSIRa3NbDjrwkU8q0E9wlCUyAfXnQv
4pTQaGHadF/j2F2foMBAW2Jgh1KP9UgB54K+KLRjoIFcEUqqh+j42bh2/c0jAppJtWNgn2j
FQzuK2I3E0MVVNOEPJmEvpDXM1DZZhFNxeL8D+LfMn1B4zNTdngE0arUOspr72Rm0Rx43Oc
U0w/nkL6DckhvIZdco4PSLLXJeBW/fBc2Ws04/qxEKwreGwCr3fM17X4HZtCRJOsVj0Bg6J
Ap3f30Os55bjQanFubM9YFZrC6rGnKshyiUIFutMPwzbuIWCWQP29TnlSJWk91C0jb2oy6/
2O9o7U78grLvGllSyynqehN8TLxP9MDswHzAHBgUrDgMCGgQU9XDxDBt/loGEHzU/DE0xAa
6823YEFFmEIfAiPtILVXcDNuDn0rU1xc24AgIH0A==",

"password": <certifcicate_password>,

"internal-interfaces": { "internal-interface" : ["<Internal Port>",

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```
        "vport1"] },
        "external-interfaces": { "external-interface" : ["<External Port>"] },
        "management-interface": true
}
RESPONSE
HTTP/1.1 201 CREATED
Content-Length: 112
Content-Type: application/json
{
      "result": {
       "info": [
         {
           "message": "Operation successfully completed."
         }
       ]
      }
}
```

Creating a CSR for a Device Certificate

```
REQUEST
POST /api/v1/system/certificates/device-certificate-csrs HTTP/1.1
Host: 10.209.114.228
Authorization: Basic
aWZuM2VmZVZTRU9YNVZkVVZ3eFpiYWdob3VCTndxZEkyaExubUcyVU5ibz06
Content-Type: application/json
{
      "subject-common-name": "QA.pcs.company.com",
      "key-type": "ECDSA",
      "ecc-curve": "P-384"
}
RESPONSE
HTTP/1.1 201 OK
Content-Length: 266
Content-Type: application/json
{
      "result": {
         "info": [
```

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```
          {
             "message": "Created CSR 'CSR_164' successfully"
          },
          {
             "message": "Use POST
      /api/v1/system/certificates/device-certificate-
      csrs/CSR_164/certificate to upload the signed certificate"
          }
       ]
      }
}
```

Deleting Device Certificate by Its Subject Name

```
REQUEST

DELETE /api/v1/system/certificates/device-
certificates/srikrsa.test.saqacertserv.com HTTP/1.1

Host: 10.209.114.228

Authorization: Basic
aWZuM2VmZVZTRU9YNVZkVVZ3eFpiYWdob3VCTndxZEkyaExubUcyVU5ibz06

Content-Type: application/json

RESPONSE

HTTP/1.1 204 NO CONTENT

Content-Length: 0

Content-Type: application/json
```

Getting System Information

```
REQUEST

GET /api/v1/system/system-information HTTP/1.1

Host: 10.209.114.228

Authorization: Basic
aWZuM2VmZVZTRU9YNVZkVVZ3eFpiYWdob3VCTndxZEkyaExubUcyVU5ibz06

Content-Type: application/json

RESPONSE

HTTP/1.1 200 OK

Content-Length: 193

Content-Type: application/json
```

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```
{
      "rollback-partition-information": {
         "build": "2330",
         "os-name": "ive-sa",
         "os-version": "9.1R2"
      },
      "software-inventory": {
         "software": {
           "build": "4520",
           "name": "IVE-OS",
           "type": "operating-system",
           "version": "9.1R4"
         }
      },
      "system-information": {
         "hardware-model": "PSA5000-V",
         "host-name": "localhost2",
         "os-name": "ive-sa",
         "os-version": "9.1R4",
         "serial-number": "VASPHJPEG824R1U0S"
      }
}
```

Retrieving Serial Number and Machine ID

```
REQUEST
GET /api/v1/system/system-information HTTP/1.1
Host: 10.96.116.30
Authorization: Basic
czM3MzVDTFVYbnFObFR5NHdNSTFES3piSDhrMTVwR0pLV2gwOTlMYmxhYz06
Content-Type: application/json
RESPONSE
HTTP/1.1 200 OK
Content-Length: 193
Content-Type: application/json
{
  "rollback-partition-information": {
    "build": "5801",
```

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```
    "os-name": "ive-sa",
    "os-version": "9.1R6"
  },
  "software-inventory": {
    "software": {
      "build": "6087",
      "name": "IVE-OS",
      "type": "operating-system",
      "version": "9.1R7"
    }
  },
  "system-information": {
    "cluster-node": {},
    "hardware-model": "PSA-3000",
    "host-name": "node1",
    "machine-id": "0312MB24A0EZ504VS",
    "os-name": "ive-sa",
    "os-version": "9.1R7",
    "serial-number": "0312022017100103"
  }
}
```

Realm-based Administrator User Using Administrator Local Authentication Server

```
REQUEST
POST /api/v1/realm_auth HTTP/1.1
Host: 10.209.114.228
Authorization: Basic YWRtaW4xOmRhbmExMjM=
Content-Type: application/json
{
      "realm": "<realm-name>"
}
RESPONSE
HTTP/1.1 200 OK
Content-Type: application/json
{
      "api_key": "MjUwOGQyNzAyOWU3MWQ2MzNiMTM2Njg2MzAwNDg3MjU="
}
```

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Realm-based Administrator User Using AD Authentication Server

```
REQUEST
POST /api/v1/realm_auth HTTP/1.1
Host: 10.209.114.228
Authorization: Basic bmF6ZWVyOlBzZWN1cmUxMjMk
Content-Type: application/json
{
      "realm": "AdminADRealm"
}
RESPONSE
HTTP/1.1 200 OK
Content-Type: application/json
{
      "api_key": "ODRjOTcxOTY5ZTlmYTcwY2QwYzk1ZDBjMWQ5N2RmN2Q="
}
```

Realm-based Administrator User Using LDAP Authentication Server

```
REQUEST
POST /api/v1/realm_auth HTTP/1.1
Host: 10.209.114.228
Authorization: Basic bmF6ZWVyOlBzZWN1cmUxMjMk
Content-Type: application/json
{
     "realm": "LDAPRealm"
}
RESPONSE
HTTP/1.1 200 OK
Content-Type: application/json
{
      "api_key": "ZTQxNTIxOTJhNmUwMjg3MWI5MjZkYmE1MGM0MzdiMDI="
}
```

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Realm-based Administrator User Using Radius Authentication Server

```
REQUEST
POST /api/v1/realm_auth HTTP/1.1
Host: 10.209.114.225
Authorization: Basic amFjazpqdW5pcGVy
Content-Type: application/json
{
      "realm": "RadiusAdminRealm"
}
RESPONSE
HTTP/1.1 200 OK
Content-Type: application/json
{
      "api_key": "MGMzZjJkZDZlYmRlYzg0MDE5NzkwYzE1ZGM5MmQyYTQ="
}
```

Realm-based Administrator User from a Particular Source IP

```
REQUEST
PUT /api/v1/configuration/administrators/admin-
realms/realm/AdminLocalAuthRealm/authentication-policy/source-
ip/customized HTTP/1.1
Host: 10.209.114.228
Authorization: Basic
T1dFM056VTBPVEl5T0dFeU16WXpOakU0WVRFek9EWXhOamRoTVdVNFpqYz06
Content-Type: application/json
{
      "customized": "selected-ip"
}
RESPONSE
HTTP/1.1 200 OK
Content-Length: 124
Content-Type →application/json
{
      "result": {
         "info": [
           {
              "message": "Operation succeeded without warning or
```

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```
      error!"
           }
       ]
      }
}
REQUEST
POST /api/v1/configuration/administrators/admin-
realms/realm/AdminLocalAuthRealm/authentication-policy/source-
ip/ips/ip HTTP/1.1
Host: 10.209.114.228
Authorization: Basic
T1dFM056VTBPVEl5T0dFeU16WXpOakU0WVRFek9EWXhOamRoTVdVNFpqYz06
Content-Type: application/json
{
   "access": "allow",
   "address": "10.96.158.3",
   "netmask": "255.255.255.255"
}
RESPONSE
HTTP/1.1 201 CREATED
Content-Length: 124
Content-Type: application/json
{
      "result": {
        "info": [
         {
           "message": "Operation succeeded without warning or
      error!"
         }
       ]
      }
}
```

Realm-based Administrator Authorization Role Mapping to .Administrator Role

```
REQUEST
PUT /api/v1/configuration/administrators/admin-
realms/realm/AdminADRealm/role-mapping-rules HTTP/1.1
Host: 10.209.114.228
Authorization: Basic
```

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```
TldVNFl6TmtOVEZqTkRFek1EUXdPVGRoTlRrMk9UWTBaR0l3TkRnM1ptST06
Content-Type: application/json
{
      "user-selects-role": "false",
      "rule": [
        {
           "roles": [
            ".Administrators"
           ],
           "stop-rules-processing": "true",
           "group": {
             "group-names": [
                "PCS-QA/systems"
             ]
           },
           "name": "AdminADRoleMapping"
        }
      ],
      "user-selects-roleset": "false"
}
RESPONSE
HTTP/1.1 200 OK
Content-Length: 124
Content-Type: application/json
{
      "result": {
        "info": [
          {
            "message": "Operation succeeded without warning or
      error!"
          }
        ]
      }
}
```

Specifying Session Validity for REST Admin Session

```
REQUEST
PUT /api/v1/configuration/administrators/admin-roles/admin-
```

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```
role/%2EAdministrators/general/session-options HTTP/1.1

Host: 10.209.114.228

Authorization: Basic
TldVNFl6TmtOVEZqTkRFek1EUXdPVGRoTlRrMk9UWTBaR0l3TkRnM1ptST06

Content-Type: application/json

{

    "idle-timeout": "5"

}

RESPONSE

HTTP/1.1 200 OK

Content-Length: 124

Content-Type: application/json

{

          "result": {

              "info": [

                  {

                      "message": "Operation succeeded without
      warning or error!"

                  }

              ]

          }

}
```

Getting Active Directory Search Groups

```
REQUEST

GET /api/v1/configuration/authentication/auth-servers/auth-
server/ADServer/ad/server-catalog/groups HTTP/1.1

Host: 10.209.116.192

Authorization: Basic
RU9jaHYwdmlqVnJibDBqeE9obTlYZDVOdHhVS2FMeSttVzBqL1pKUXh6bz06

Content-Type: application/json

RESPONSE

HTTP/1.1 200 OK

Content-Length: 294

Content-Type: application/json

{

      "ad-group": [

       {
```

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```
        "group": "PCS-QA/core",
        "name": "PCS-QA/core",
        "sid": "S-1-5-21-3875260349-1888520165-453808128-1112"
      },
      {
        "group": "PCS-QA/systems",
        "name": "PCS-QA/systems",
        "sid": "S-1-5-21-3875260349-1888520165-453808128-1108"
      }
    ]
}
```

Adding Search Group to Active Directory

```
REQUEST

PUT /api/v1/configuration/authentication/auth-servers/auth-
server/ADServer/ad/server-catalog/groups HTTP/1.1

Host: 10.209.116.192

Authorization: Basic
RU9jaHYwdmlqVnJibDBqeE9obTlYZDVOdHhVS2FMeSttVzBqL1pKUXh6bz06

Content-Type: application/json

{
      "ad-group": [
         {
             "group": "PCS-QA/systems",
             "name": "PCS-QA/systems"
         },
         {
             "group": "PCS-QA/core",
             "name": "PCS-QA/core"
         }
      ]
}

RESPONSE

HTTP/1.1 200 OK

Content-Length: 124

Content-Type: application/json

{
   "result": {
```

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```
      "info": [
       {
         "message": "Operation succeeded without warning or error!"
       }
      ]
   }
}
```

Updating Active Directory Group

NOTE: To update a group, first get already available list using GET operation and append new group to it before PUT.

```
REQUEST

PUT /api/v1/configuration/authentication/auth-servers/auth-
server/ADServer/ad/server-catalog/groups HTTP/1.1

Host: 10.209.116.192

Authorization: Basic
RU9jaHYwdmlqVnJibDBqeE9obTlYZDVOdHhVS2FMeSttVzBqL1pKUXh6bz06

Content-Type: application/json

{
      "ad-group": [
        {
           "group": "PCS-QA/core",
           "name": "PCS-QA/core",
           "sid": "S-1-5-21-3875260349-1888520165-453808128-1112"
        },
        {
           "group": "PCS-QA/systems",
           "name": "PCS-QA/systems",
           "sid": "S-1-5-21-3875260349-1888520165-453808128-1108"
        },
        {
           "group": "PCS-QA/client",
           "name": "PCS-QA/client",
           "sid": "S-1-5-21-3875260349-1888520165-453808128-1113"
        }
      ]
}

RESPONSE
```

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```
HTTP/1.1 200 OK

Content-Length: 124

Content-Type: application/json

{

      "result": {

         "info": [

          {

            "message": "Operation succeeded without warning or
         error!"

          }

         ]

    }

}
```

Deleting Active Directory Groups

```
REQUEST

PUT /api/v1/configuration/authentication/auth-servers/auth-
server/ADServer/ad/server-catalog/groups HTTP/1.1

Host: 10.209.116.192

Authorization: Basic
RU9jaHYwdmlqVnJibDBqeE9obTlYZDVOdHhVS2FMeSttVzBqL1pKUXh6bz06

Content-Type: application/json

{

      "ad-group": [

      ]

}

RESPONSE

HTTP/1.1 200 OK

Content-Length: 124

Content-Type: application/json

{

      "result": {

         "info": [

           {

             "message": "Operation succeeded without warning or
         error!"

           }

         ]
```

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```
    }
}
```

Getting All LDAP Group List

```
REQUEST

GET /api/v1/configuration/authentication/auth-servers/auth-
server/LDAPServer/ldap/server-catalog/groups HTTP/1.1

Host: 10.209.116.192

Authorization: Basic
RU9jaHYwdmlqVnJibDBqeE9obTlYZDVOdHhVS2FMeSttVzBqL1pKUXh6bz06

Content-Type: application/json
```

Adding Groups to LDAP

```
REQUEST

PUT /api/v1/configuration/authentication/auth-servers/auth-
server/LDAPServer/ldap/server-catalog/groups HTTP/1.1

Host: 10.209.116.192

Authorization: Basic
RU9jaHYwdmlqVnJibDBqeE9obTlYZDVOdHhVS2FMeSttVzBqL1pKUXh6bz06

Content-Type: application/json

{
      "user-group": [
        {
          "dn": "CN=Administrators,CN=Builtin,DC=pcs-
      qa,DC=blrlab,DC=net",
          "group-type": "static",
          "name": "Administrators"
        },
        {
          "dn": "CN=Users,CN=Builtin,DC=pcs-qa,DC=blrlab,DC=net",
          "group-type": "static",
          "name": "Users"
        }
      ]
}

RESPONSE

HTTP/1.1 200 OK

Content-Length: 124
```

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```
Content-Type: application/json
{
      "result": {
         "info": [
           {
             "message": "Operation succeeded without warning or
         error!"
           }
         ]
    }
}
```

Updating LDAP Source Group

NOTE: To update a group, first get already available list using GET operation and append new group to it and then perform PUT operation.

```
REQUEST
PUT /api/v1/configuration/authentication/auth-servers/auth-
server/LDAPServer/ldap/server-catalog/groups HTTP/1.1
Host: 10.209.116.192
Authorization: Basic
RU9jaHYwdmlqVnJibDBqeE9obTlYZDVOdHhVS2FMeSttVzBqL1pKUXh6bz06
Content-Type: application/json
{
      "user-group": [
        {
          "dn": "CN=Administrators,CN=Builtin,DC=pcs-
      qa,DC=blrlab,DC=net",
          "group-type": "static",
          "name": "Administrators"
        },
        {
          "dn": "CN=Users,CN=Builtin,DC=pcs-qa,DC=blrlab,DC=net",
          "group-type": "static",
          "name": "Users"
        },
        {
          "dn": "CN=Guests,CN=Builtin,DC=pcs-qa,DC=blrlab,DC=net",
          "group-type": "static",
          "name": "Guests"
```

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```
        }
    ]
}
```

RESPONSE

```
HTTP/1.1 200 OK
Content-Length: 124
Content-Type: application/json
{
      "result": {
         "info": [
           {
             "message": "Operation succeeded without warning or
         error!"
           }
         ]
    }
}
```

Deleting LDAP Source Group

REQUEST

```
PUT /api/v1/configuration/authentication/auth-servers/auth-
server/LDAPServer/ldap/server-catalog/groups HTTP/1.1
Host: 10.209.116.192
Authorization: Basic
RU9jaHYwdmlqVnJibDBqeE9obTlYZDVOdHhVS2FMeSttVzBqL1pKUXh6bz06
Content-Type: application/json
{
      "user-group": [
      ]
}
```

RESPONSE

```
HTTP/1.1 200 OK
Content-Length: 124
Content-Type: application/json
{
      "result": {
         "info": [
           {
```

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```
            "message": "Operation succeeded without warning or
        error!"
          }
        ]
    }
}
```

Creating a Cluster

```
REQUEST
PUT /api/v1/cluster HTTP/1.1
Host: 10.209.114.228
Authorization: Basic
TldVNFl6TmtOVEZqTkRFek1EUXdPVGRoTlRrMk9UWTBaR0l3TkRnM1ptST06
Content-Type: application/json
{
    "cluster-name": "cluster1",
    "cluster-password": "dana123",
    "member-name": "nodeA",
    "action": "create"
}
RESPONSE
HTTP/1.1 200 OK
Content-Length: 118
Content-Type: application/json
{
          "result": {
              "info": [
                  {
                      "message": "Created cluster
      'cluster1' successfully"
                  }
              ]
          }
}
```

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Adding a Member to Cluster

```
REQUEST

POST /api/v1/cluster/members HTTP/1.1

Host: 10.209.116.214

Authorization: Basic
THI5bmxreU50UE04MWJ6OHRhbjhFMW1PYTVuV3V5MG5XN0oyNmNWcTRhbz06

Content-Type: application/json

{

   "member-name" : "node225",

   "member-ip" : "3.209.114.225",

   "member-netmask" : "255.0.0.0",

   "member-gateway" : "3.0.0.1",

   "member-external-ip" : "2.209.114.225",

   "member-external-netmask" : "255.0.0.0",

   "member-external-gateway" : "2.0.0.1"

}

RESPONSE

HTTP/1.1 200 OK

Content-Length: 125

Content-Type: application/json

{

  "result": {

    "info": [

      {

        "message": "Added member 'node225' to cluster
successfully"

      }

    ]

  }

}
```

Getting Cluster Status

```
REQUEST

GET /api/v1/cluster HTTP/1.1

Host: 10.209.114.228

Authorization: Basic
TWN2cUEzbFRYQXcySjBSbGpKWTAzdk1oa2RiTDFLUVJDUjNNdlQ0UlRJdz06
```

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```
Content-Type: application/json
RESPONSE
HTTP/1.1 200 OK
Content-Length: 619
Content-Type: application/json
{
      "members": [
          {
              "enabled": true,
              "external-ip": "",
              "external-network": "",
              "internal-ip": "3.209.114.225",
              "internal-netmask": "255.0.0.0",
              "name": "node225",
              "notes": "Enabled, Unreachable",
              "status-code": "0x18"
          },
          {
              "enabled": true,
              "external-ip": "10.209.114.194",
              "external-network": "255.255.240.0",
              "internal-ip": "3.209.114.228",
              "internal-netmask": "255.0.0.0",
              "name": "nodeA",
              "notes": "Leader",
              "status-code": "0x19004"
          }
          ],
          "mode": "Active/Active",
          "name": "cluster1"
}
{
         "external-vip-ipv4": "10.204.56.76",
         "external-vip-owner": "node-51-39",
         "internal-vip-ipv4": "10.204.56.75",
         "internal-vip-owner": "node-51-39",
         "members": [
           {
             "enabled": true,
```

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```
            "external-ip": "10.204.56.82",
            "external-netmask": "255.255.240.0",
            "internal-ip": "10.204.51.39",
            "internal-netmask": "255.255.240.0",
            "name": "node-51-39",
            "notes": "Leader",
            "status-code": "0x1b004"
          },
          {
            "enabled": true,
            "external-ip": "10.204.56.87",
            "external-netmask": "255.255.240.0",
            "internal-ip": "10.204.56.88",
            "internal-netmask": "255.255.240.0",
            "name": "Node-something",
            "notes": "Enabled, Unreachable",
            "status-code": "0x18"
          }
        ],
        "mode": "Active/Passive",
        "name": "TEST-CLUSTER"
}
```

Deleting Cluster Member

```
REQUEST
DELETE /api/v1/cluster/members/node225 HTTP/1.1
Host: 10.209.114.228
Authorization: Basic
TWN2cUEzbFRYQXcySjBSbGpKWTAzdk1oa2RiTDFLUVJDUjNNdlQ0UlRJdz06
Content-Type: application/json
RESPONSE
HTTP/1.1 200 OK
Content-Length: 129
Content-Type: application/json
{
          "result": {
              "info": [
```

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```
                    {
                        "message": "Removed member 'node225'
      from cluster successfully"
                    }
                ]
            }
}
```

Getting Health Check Status

```
REQUEST
GET /api/v1/system/healthcheck
Host: 10.209.114.228
Content-Type: application/json
RESPONSE
HTTP/1.1 200 OK
Content-Type: application/json
{
   "message": "Security Gateway is accessible."
}

REQUEST
GET /api/v1/system/healthcheck?status=all HTTP/1.1
Host: 10.209.114.228
Content-Type: application/json
RESPONSE
Content-Type: application/json
{
    "CPU-UTILIZATION4": 8,
    "SSL-CONNECTION-COUNT": 0,
    "MAX-LICENSED-USERS-REACHED": "NO",
    "SWAP-UTILIZATION": 1,
    "DISK-UTILIZATION": -1,
    "USER-COUNT": 0,
    "VPN-TUNNEL-COUNT": 0
}

REQUEST
GET /api/v1/system/healthcheck?status=sbr HTTP/1.1
```

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```
Host: 10.209.114.228
Content-Type: application/json
RESPONSE
Content-Type: application/json
{
   "SBR-AVAILABLE": 1
}
```

Joining a Cluster

```
REQUEST
PUT /api/v1/cluster HTTP/1.1
Host: 10.209.114.228
Authorization: Basic
SkUyV1BaVjRjcGxleElRMnNiZXpYajE2dEVIUm9Oa05WWDdRWHh3MmpJZz06
Content-Type: application/json
{
   "cluster-name": "cluster",
   "cluster-password": "dana123",
   "member-address": "3.209.114.225",
   "action": "join"
}
RESPONSE
HTTP/1.1 200 OK
Content-Length: 116
Content-Type: application/json
{
   "result": {
     "info": [
       {
         "message": "Joined cluster 'cluster' successfully"
       }
     ]
   }
}
```

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VIP Failover

```
REQUEST

PUT /api/v1/cluster

Host: 10.209.114.228

Authorization: Basic
SkUyV1BaVjRjcGxleElRMnNiZXpYajE2dEVIUm9Oa05WWDdRWHh3MmpJZz06

Content-Type: application/json

{

   "action": "vip-failover"

}

RESPONSE

In case of active-passive cluster:

{

  "result": {

    "info": [

      {

        "message": "VIP fail-over initiated"

      }

    ]

  }

}

In case of active-active cluster:

{

  "result": {

    "info": [

      {

        "message": "Node not part of an Active-Passive cluster.
Invalid operation."

      }

    ]

  }

}
```

Configuring IF MAP Server

```
REQUEST

PUT /api/v1/configuration/system/ifmap/overview/ifmap-config/

Host: xx.xxx.xxx.xxx
```

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```
Authorization: Basic
SkUyV1BaVjRjcGxleElRMnNiZXpYajE2dEVIUm9Oa05WWDdRWHh3MmpJZz06

Content-Type: application/json

{

      "ifmap-config": " server "

}

RESPONSE

HTTP/1.1 200 OK

Content-Length: 116

Content-Type: application/json

{

    "result": {

       "info": [

          {

              "message": ": "Operation succeeded without warning or
error!"

          }

       ]

    }

}
```

Configuring IF MAP Client

```
REQUEST

PUT /api/v1/configuration/system/ifmap/overview/ifmap-config/

Host: xx.xxx.xxx.xxx

Authorization: Basic
SkUyV1BaVjRjcGxleElRMnNiZXpYajE2dEVIUm9Oa05WWDdRWHh3MmpJZz06

Content-Type: application/json

{

"auth-type": "basic",

    "cert": "None",

    "ifmap-config": "client",

    "password-encrypted":
"3u+UR6n8AgABAAAAe9Px2XELrbvvAZACcoOJXBM105llgG8QQLNR4hcLNrE=",

    "server-url": "https://<PPS-IP-Address>/dana-ws/soap/dsifmap",

    "username": "admin1"

}

{
```

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```
    "auth-type": "cert",
    "cert": "xx.xxx.xx.xx",
    "ifmap-config": "client",
    "password-encrypted":
"3u+UR6n8AgABAAAAe9Px2XELrbvvAZACcoOJXBM105llgG8QQLNR4hcLNrE=",
    "server-url": "https://<PPS-IP_Address>/dana-ws/soap/dsifmap",
    "username": "admin1"
}

RESPONSE
HTTP/1.1 200 OK
Content-Length: 116
Content-Type: application/json
{
    "result": {
       "info": [
          {
              "message": ": "Operation succeeded without warning or
error!"
          }
       ]
    }
}
```

Configuring No IF MAP Server

```
REQUEST
PUT /api/v1/configuration/system/ifmap/overview/ifmap-config/
Host: xx.xxx.xxx.xxx
Authorization: Basic
SkUyV1BaVjRjcGxleElRMnNiZXpYajE2dEVIUm9Oa05WWDdRWHh3MmpJZz06
Content-Type: application/json
{
      "ifmap-config": "no-ifmap"
}
RESPONSE
HTTP/1.1 200 OK
Content-Length: 116
Content-Type: application/json
```

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```
{
    "result": {
       "info": [
          {
              "message": ": "Operation succeeded without warning or
error!"
          }
       ]
    }
}
```

Getting Config Without Pulse Packages (ESAP and Pulse Client Packages)

```
REQUEST

GET /api/v1/configuration/authentication/endpoint/host-
checker/esaps?expand&&excludePulsePackages HTTP/1.1

Host: 10.209.125.139

Authorization: Basic
dS9UOURJRWswZzVyMTdieUJqVnhaQnExZUpTTW9ndCtIdGZzMnczMmlzRT06

Content-Type: application/json

RESPONSE

HTTP/1.1 200 OK

Content-Length: 561

Content-Type: application/json

{
      "active-version": "3.3.5",
         "default-version": "3.3.5",
         "esap": [
           {
               "esap-version": "3.3.5",
               "last-activated-time": "Sun 17 Mar 2019 23:54:12
         PDT",
               "upload-time": "Sun 17 Mar 2019 23:53:35 PDT"
            },
            {
               "esap-version": "3.3.6",
               "last-activated-time": "Never",
               "upload-time": "Mon 18 Mar 2019 21:45:31 PDT"
            },
```

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```
            {
               "esap-version": "3.3.7",
               "last-activated-time": "Never",
               "upload-time": "Mon 18 Mar 2019 21:46:12 PDT"
            }
         ],
         "force-same-esap": "false",
         "opswat-sdk-version": "4"
}
```

Backing Up Binary Configuration

```
REQUEST

GET /api/v1/system/binary-configuration HTTP/1.1

Host: 10.204.51.39

Authorization: Basic
dS9UOURJRWswZzVyMTdieUJqVnhaQnExZUpTTW9ndCtIdGZzMnczMmlzRT06

RESPONSE

HTTP/1.1 200 OK

Content-Type: text/html; charset=utf-8

Content-Length: 50753630

UEsDBBQAAAAIAE9VmU4J1asqz3cDAKx3AwAKABwAc3lzdGVtLmNmZ1VUCQADvUHB

XL1BwVx1eAsAAQQAAAAABAAAAAAAC4D0fwnTMa1OLV2XgACOdwMAINEfP2AuIVXV

B1FhtptLC259gyNPT7WwhtQKbp2Y2+d1h1MTflQis8wbHytXP19D+SM+amX5UKeO

GDUggxgbrEQMXmwOSv8YBrvXIBShmGO5BVqfUemvdNK3OB+S/g8+LIPG5i2c3LVm

W8hY3PLQ9CJHMrFSBFtgyTX2at85MGCsupxd2gOQQ9e138KrI2hBoywDzCJiRUSU

...
```

Restoring Binary Configuration (import=normal)

The import normal mode will import the binary configuration excluding the IP, network configurations and cluster configuration. The normal mode is similar to default option in binary import.

```
REQUEST

PUT /api/v1/system/binary-configuration?import=normal HTTP/1.1

Or

PUT /api/v1/system/binary-configuration HTTP/1.1

Host: 10.204.51.39

Authorization: Basic
dS9UOURJRWswZzVyMTdieUJqVnhaQnExZUpTTW9ndCtIdGZzMnczMmlzRT06
```

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```
Content-Type: text/html; charset=utf-8
RESPONSE
HTTP/1.1 200 OK
{
  "result": {
    "info": [
      {
        "message": "Operation successfully completed."
      }
    ]
  }
}
Error Cases:
import mode specified is incorrect (other than normal or full)
Content-Length: 100
Content-Type: application/json
{
 "result": {
     "errors": [
       {
          "message": "Invalid import mode"
       }
     ]
  }
}
Content type is not a base 64 encoded binary configuration string
Content-Length: 126
Content-Type: application/json
{
 "result": {
    "errors": [
      {
        "message": "Error - Failed to extract configuration files"
      }
     ]
  }
}
```

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Restoring Binary Configuration (import=full)

The import full mode will import everything from the binary configuration provided in the body. This is similar to full binary import.

```
REQUEST
PUT /api/v1/system/binary-configuration?import=full HTTP/1.1
Host: 10.204.51.39
Authorization: Basic
dS9UOURJRWswZzVyMTdieUJqVnhaQnExZUpTTW9ndCtIdGZzMnczMmlzRT06
Content-Type: text/html; charset=utf-8
Body data:
Base64 configuration string as received in GET request)

UEsDBBQAAAAIAE9VmU4J1asqz3cDAKx3AwAKABwAc3lzdGVtLmNmZ1VUCQADvUHB
XL1BwVx1eAsAAQQAAAAABAAAAAAAC4D0fwnTMa1OLV2XgACOdwMAINEfP2AuIVXV
B1FhtptLC259gyNPT7WwhtQKbp2Y2+d1h1MTflQis8wbHytXP19D+SM+amX5UKeO
GDUggxgbrEQMXmwOSv8YBrvXIBShmGO5BVqfUemvdNK3OB+S/g8+LIPG5i2c3LVm
……
RESPONSE
HTTP/1.1 200 OK
Content-Length: 112
Content-Type: application/json
{
  "result": {
    "info": [
      {
        "message": "Operation successfully completed."
      }
    ]
  }
}
Error Cases:
import mode specified is incorrect (other than normal or full)
Content-Length: 100
Content-Type: application/json
{
 "result": {
     "errors": [
```

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```
        {
           "message": "Invalid import mode"
        }
      ]
   }
}
Content type is not a base 64 encoded binary configuration string
Content-Length: 126
Content-Type: application/json
{
 "result": {
    "errors": [
      {
        "message": "Error - Failed to extract configuration files"
      }
      ]
   }
}
```

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PCS-Specific Configurations Using REST APIs

- Creating a VLAN
- Deleting a VLAN
- Creating a User Role
- Fetching the User Login Statistics
- Updating the User Role Settings
- Deleting a User Role
- Creating a User Realm
- Deleting a User Realm
- Creating a Resource Profile
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- Creating a Resource Policy
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- Creating an AD Authentication Server
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- Creating a Radius Server
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- Fetching the Resource with Multiple Identifiers
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- Fetching Active Number of HTML5 Sessions
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- Updating Password in Clear Text
- Applying Authcode and Downloading Licenses from PCLS on VA-SPE|PSA-V
- Applying License
- Deleting License
- Getting License Clients
- Getting License Report from License Server
- Enabling/Disabling ICE License
- Getting the Current Status of ICE License
- Exporting TOTP Users from One Device to Another Device
- Importing TOTP Users from One Device to Another Device
- Resetting TOTP User
- Unlocking TOTP User
- Sample Error Responses

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- Limitations

Creating a VLAN

To create a VLAN on a cluster node:

```
REQUEST

POST /api/v1/configuration/system/network/vlans/Node88/vlan/ HTTP/1.1

Host: 10.209.113.88

Authorization: Basic
MVhDbDJTSUhkV3ZjUkd6WXM1T1V3MU5wbHNmemJPbTJxSHI2NVZCdXp5bz06

Content-Type: application/json

{

    "arp-cache": {

        "arp-entry": []

    },

    "name": "vlan-int-1",

    "routes": {

        "route": []

    },

    "settings": {

        "default-gateway": "2.0.0.1",

        "default-vlan-interface": "false",

        "enable-ipv6": "enabled",

        "ip-address": "2.2.2.2",

        "ipv6-address": "fc00:7777:5678:5678::222",

        "ipv6-default-gateway": "fc00:7777:5678:5678::3",

        "ipv6-prefix-length": "64",

        "is-enabled": "enabled",

        "netmask": "255.0.0.0",

        "vlan-id": "2",

        "vlan-parent": "0"

    },

    "virtual-ports": {

        "virtual-port": []

    }
```

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```
}
RESPONSE
HTTP/1.1 201 CREATED
Content-Length: 128
Content-Type: application/json
{
"result": {
"warnings": [
{
"message": "The configuration has been implicitly changed"
}
            ]
          }
}
```

Deleting a VLAN

To delete a VLAN from cluster node:

```
REQUEST

DELETE /api/v1/configuration/system/network/vlans/Node88/vlan/vlan-int-1
HTTP/1.1
Host: 10.209.113.88

Authorization: Basic
MVhDbDJTSUhkV3ZjUkd6WXM1T1V3MU5wbHNmemJPbTJxSHI2NVZCdXp5bz06
Content-Type: application/json

RESPONSE

HTTP/1.1 204 NO CONTENT

Content-Length: 0

Content-Type: application/json
```

Creating a User Role

To create a user role:

```
REQUEST
POST /api/v1/configuration/users/user-roles/user-role/ HTTP/1.1
```

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```
Host: 10.209.113.88

Authorization: Basic
MVhDbDJTSUhkV3ZjUkd6WXM1T1V3MU5wbHNmemJPbTJxSHI2NVZCdXp5bz06

Content-Type: application/json

{

    "name": "rest-userrole-4",

    "web": {

        "web-bookmarks": {

            "bookmark": [

                {

                    "auto-allow": "disable",

                    "description": "",

                    "name": "web-bm-1",

                    "new-window": "false",

                    "no-address-bar": "false",

                    "no-tool-bar": "false",

                    "parent": "--none--",

                    "standard": {

                        "url": "http://www.msn.com"

                    }

                }

            ]

        },

        "web-options": {

            "browsing-untrusted-sslsites": "true",

            "flash-content": "false",

            "hpxproxy-connection-timeout": "1800",

            "http-connection-timeout": "240",

            "java-applets": "true",

            "mask-hostname": "false",

            "persistent-cookies": "false",

            "rewrite-file-urls": "false",

            "rewrite-links-pdf": "false",

            "unrewritten-page-newwindow": "false",
```

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```
            "user-add-bookmarks": "false",
            "user-enter-url": "false",
            "users-bypass-warnings": "false",
            "warn-certificate-issues": "true",
            "websocket-connection-timeout": "900"
        }
    }
}
RESPONSE
HTTP/1.1 201 CREATED
Content-Length: 122
Content-Type: application/json
        {
            "result": {
                "info": [
                    {
                        "message": "Operation succeed without
   warning or error!"
                    }
                ]
            }
        }
```

Fetching the User Login Statistics

To fetch the user login statistics:

```
REQUEST
GET /api/v1/system/user-stats HTTP/1.1
Host: 10.209.113.88
Authorization: Basic
MVhDbDJTSUhkV3ZjUkd6WXM1T1V3MU5wbHNmemJPbTJxSHI2NVZCdXp5bz06
Content-Type: application/json
RESPONSE
HTTP/1.1 200 OK
Content-Length: 169
Content-Type: application/json
{
```

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```
        "user-stats": {
          "allocated-user-count": "25",
          "current-user-count": "0",
          "max-active-user-count-24hrs": "1",
          "min-active-user-count-24hrs": "0"
        }
}
```

Updating the User Role Settings

To update the user role settings:

```
REQUEST

PUT /api/v1/configuration/users/user-roles/user-role/rest-userrole-4
HTTP/1.1

Host: 10.209.113.88

Authorization: Basic
MVhDbDJTSUhkV3ZjUkd6WXM1T1V3MU5wbHNmemJPbTJxSHI2NVZCdXp5bz06

Content-Type: application/json

{

    "name": "rest-userrole-4",

    "web": {

        "web-bookmarks": {

            "bookmark": [

                {

                    "auto-allow": "disable",

                    "description": "",

                    "name": "web-bm-1",

                    "new-window": "false",

                    "no-address-bar": "false",

                    "no-tool-bar": "false",

                    "parent": "--none--",

                    "standard": {

                        "url": "http://www.yahoo.com"

                    }

                }

            ]
```

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```
        },
        "web-options": {
            "browsing-untrusted-sslsites": "true",
            "flash-content": "false",
            "hpxproxy-connection-timeout": "1800",
            "http-connection-timeout": "240",
            "java-applets": "true",
            "mask-hostname": "false",
            "persistent-cookies": "false",
            "rewrite-file-urls": "false",
            "rewrite-links-pdf": "false",
            "unrewritten-page-newwindow": "false",
            "user-add-bookmarks": "false",
            "user-enter-url": "false",
            "users-bypass-warnings": "false",
            "warn-certificate-issues": "true",
            "websocket-connection-timeout": "900"
        }
    }
}
        }
    }
}
```

RESPONSE

```
HTTP/1.1 200 OK
Content-Length: 122
Content-Type: application/json
{
        "result": {
           "info": [
             {
               "message": "Operation succeed without warning or
   error!"
             }
           ]
```

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```
            }
}
```

Deleting a User Role

To delete a user role:

```
REQUEST

DELETE /api/v1/configuration/users/user-roles/user-role/rest-userrole-4
HTTP/1.1

Host: 10.209.113.88

Authorization: Basic
MVhDbDJTSUhkV3ZjUkd6WXM1T1V3MU5wbHNmemJPbTJxSHI2NVZCdXp5bz06

Content-Type: application/json

RESPONSE

HTTP/1.1 204 NO CONTENT

Content-Length: 0

Content-Type: application/json
```

Creating a User Realm

To create a user realm:

```
REQUEST

POST /api/v1/configuration/users/user-realms/realm/ HTTP/1.1

Host: 10.209.113.88

Authorization: Basic
MVhDbDJTSUhkV3ZjUkd6WXM1T1V3MU5wbHNmemJPbTJxSHI2NVZCdXp5bz06

Content-Type: application/json

{

    "accounting-server": "None",

    "authentication-group": "",

    "authentication-policy": {

        "browser": {

            "customized": "any-user-agent",

            "user-agent-patterns": {

                "user-agent-pattern": []

            }
```

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```
        },
        "certificate": {
            "cert-key-value-pairs": {
                "cert-key-value-pair": []
            },
            "customized": "allow-all-users"
        },
        "host-checker": {
            "enforce-all-policies": "false",
            "enforce-policy-list": null,
            "evaluate-all-policies": "false",
            "evaluate-logic": "all-policies-must-succeed",
            "evaluate-policy-list": null
        },
        "limits": {
            "guaranteed-minimum": null,
            "limit-concurrent-users": "false",
            "max-sessions-per-user": "1",
            "maximum": null
        },
        "password": {
            "primary-password-expiration-warning-days": "14",
            "primary-password-management": "true",
            "primary-password-minimum-length": "4",
            "primary-password-restricted": "allow-passwords-of-minimum-
length",
            "secondary-password-expiration-warning-days": "14",
            "secondary-password-management": "false",
            "secondary-password-minimum-length": "4",
            "secondary-password-restricted": "allow-passwords-of-minimum-
length"
        },
        "source-ip": {
            "customized": "any-ip",
```


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```
            "ips": {
                "ip": []
            }
        }
    },
    "authentication-server": "AD server",
    "description": "",
    "device-server": "None",
    "directory-server": "AD server",
    "dynamic-policy": {
        "dynamic-policy-evaluation": "false",
        "refresh-interval": "60",
        "refresh-policies": "false",
        "refresh-roles": "false"
    },
    "editing-description": "false",
    "inbound-ifmap-attributes": "false",
    "migration-sharing-type": "enable-session-migration",
    "name": "rest-user-realm",
    "role-mapping-rules": {
        "rule": [
            {
                "name": "rest-admin-rule",
                "roles": [
                    "test1"
                ],
                "stop-rules-processing": "false",
                "user-name": {
                    "test": "is",
                    "user-names": [
                        "user1"
                    ]
                }
```


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```
            }
        ],
        "user-selects-role": "false",
        "user-selects-roleset": "false"
    },
    "secondary-authentication-settings": {
        "authentication-must-succeed": "true",
        "name": "-",
        "password-input": "user",
        "predefined-password": "",
        "predefined-user-name": "",
        "user-name-input": "user"
    },
    "session-migration": "false"
}
```

RESPONSE

```
HTTP/1.1 201 CREATED
Content-Length: 122
Content-Type: application/json
{
    "result": {
        "info": [
            {
                "message": "Operation succeed without warning or error!"
            }
        ]
    }
}
```

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Deleting a User Realm

To delete a user realm:

```
REQUEST

DELETE /api/v1/configuration/users/user-realms/realm/rest-user-realm
HTTP/1.1

Host: 10.209.113.88

Authorization: Basic
MVhDbDJTSUhkV3ZjUkd6WXM1T1V3MU5wbHNmemJPbTJxSHI2NVZCdXp5bz06

Content-Type: application/json

RESPONSE

HTTP/1.1 204 NO CONTENT

Content-Length: 0

Content-Type: application/json
```

Creating a Resource Profile

To create a web resource profile:

```
REQUEST

POST /api/v1/configuration/users/resource-profiles/web-profiles/web-
profile/ HTTP/1.1

Host: 10.209.113.88

Authorization: Basic
MVhDbDJTSUhkV3ZjUkd6WXM1T1V3MU5wbHNmemJPbTJxSHI2NVZCdXp5bz06

Content-Type: application/json

{

    "custom": {

        "bookmarks": {

            "bookmark": [

                {

                    "apply": "all",

                    "description": "",

                    "name": "web-resourceprofile",

                    "new-window": "false",

                    "no-address-bar": "false",

                    "no-tool-bar": "false",
```

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```
                    "roles": null,
                    "url": "http://www.google.com"
                }
            ]
        },
        "client-authentication": [],
        "java-acl": [],
        "rewriting-options": {
            "ptp": [],
            "selective-rewriting": "false",
            "use-jsam": [],
            "use-wsam": []
        },
        "sso-basic-ntlm-kerberos": [],
        "sso-header": [],
        "sso-post": [],
        "url": "http://www.google.com",
        "web-compression": [],
        "webacl": [
            {
                "rules": {
                    "rule": [
                        {
                            "action": "allow",
                            "name": "Allow http://www.google.com:80/*",
                            "resource": "http://www.google.com:80/*"
                        }
                    ]
                }
            }
        ],
        "webcaching": []
    },
```


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```
    "description": "",
    "name": "web-resourceprofile",
    "roles": [
        "rest-userrole-3"
    ]
}
RESPONSE
HTTP/1.1 201 CREATED
Content-Length: 128
Content-Type: application/json
{
    "result": {
        "warnings": [
            {
                "message": "The configuration has been implicitly changed"
            }
        ]
    }
}
```

Deleting a Resource Profile

To delete a web resource profile:

```
REQUEST
DELETE /api/v1/configuration/users/resource-profiles/web-profiles/web-
profile/web-resourceprofile HTTP/1.1
Host: 10.209.113.88
Authorization: Basic
MVhDbDJTSUhkV3ZjUkd6WXM1T1V3MU5wbHNmemJPbTJxSHI2NVZCdXp5bz06
Content-Type: application/json
RESPONSE
HTTP/1.1 204 NO CONTENT
Content-Length: 0
Content-Type: application/json
```

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Creating a Resource Policy

To create a web resource policy:

```
REQUEST

POST /api/v1/configuration/users/resource-policies/web-policies/web-
acls/web-acl/ HTTP/1.1

Host: 10.209.113.88

Authorization: Basic
MVhDbDJTSUhkV3ZjUkd6WXM1T1V3MU5wbHNmemJPbTJxSHI2NVZCdXp5bz06

Content-Type: application/json

{

    "action": "allow",

    "apply": "selected",

    "description": "",

    "name": "web-acl-policy",

    "parent-type": "none",

    "resources": [

        "1.1.1.1:80,443/*"

    ],

    "roles": [

        "rest-userrole-1"

    ],

    "rules": {

        "rule": []

    }

}

RESPONSE

HTTP/1.1 201 CREATED

Content-Length: 122

Content-Type: application/json

{

    "result": {

        "info": [

            {

                "message": "Operation succeed without warning or error!"
```

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```
            }
        ]
    }
}
```

Fetching a Resource Policy

To fetch a web resource policy:

```
REQUEST

GET /api/v1/configuration/users/resource-policies/web-policies/web-
acls/web-acl/name=web-acl-policy,parent-type=none HTTP/1.1

Host: 10.209.113.88

Authorization: Basic
MVhDbDJTSUhkV3ZjUkd6WXM1T1V3MU5wbHNmemJPbTJxSHI2NVZCdXp5bz06

Content-Type: application/json

RESPONSE

HTTP/1.1 200 OK

Content-Length: 245

Content-Type: application/json

{
    "action": "allow",
    "apply": "selected",
    "description": "",
    "name": "web-acl-policy",
    "parent-type": "none",
    "resources": [
        "1.1.1.1:80,443/*"
    ],
    "roles": [
        "rest-userrole-1"
    ],
    "rules": {
        "rule": []
    }
}
```

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Deleting a Resource Policy

To delete a web resource policy:

```
REQUEST

DELETE /api/v1/configuration/users/resource-policies/web-policies/web-
acls/web-acl/name=web-acl-policy,parent-type=none HTTP/1.1

Host: 10.209.113.88

Authorization: Basic
MVhDbDJTSUhkV3ZjUkd6WXM1T1V3MU5wbHNmemJPbTJxSHI2NVZCdXp5bz06

Content-Type: application/json

RESPONSE

HTTP/1.1 204 NO CONTENT

Content-Length: 0

Content-Type: application/json
```

Creating an AD Authentication Server

```
REQUEST

POST /api/v1/configuration/authentication/auth-servers/auth-server
HTTP/1.1

Host: 10.209.114.152

Authorization: Basic
QmJYZlZ6eER2Tzhodjh4NzhlU28vU1NNZ0tHelJJUHhsbC9pdjcrZlRxcz06

Content-Type: application/json

{
    "ad": {
        "server-catalog": {
            "custom-variables": {
                "custom-variable": []
            },
            "expressions": {
                "custom-expression": []
            },
            "groups": {
                "ad-group": []
            }
        },
        "settings": {
```

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```
            "additional-options": {
                "allow-trusted-domains": "false",
                "change-machine-password-after-every": "0",
                "enable-ntlm-protocol": "true",
                "enable-periodic-password-change-of-machine-account":
"false",
                "kerberos": "true",
                "max-domain-connections": "5",
                "ntlm-protocol": "ntlmv2"
            },
            "container-name": "Computers",
            "domain": "TEST",
            "kerberos-realm": "TEST.SAQACERTSERV.COM",
            "nodenames": [
                {
                    "computer-name": "0332MWK0NRP111",
                    "machine-hardware-id": "0332MOGWK0NRP111S",
                    "node": "localhost2"
                }
            ],
            "password-encrypted":
"3u+UR6n8AgABAAAAyCaUPKhCg3J/y46bhB4wz6mnupQH0oTHOTfTexJxP2k=",
            "save-credentials": "true",
            "username": "Administrator"
        }
    },
    "logical-name": "",
    "name": "AD-Server",
    "user-record-sync": "false"
}
```


RESPONSE


```
HTTP/1.1 201 CREATED
Content-Length: 128
Content-Type: application/json
{
"result": {
"warnings": [
{
"message": "The configuration has been implicitly changed"
}
             ]
```


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```
            }
}
```

Deleting an AD Authentication Server

```
REQUEST

DELETE /api/v1/configuration/authentication/auth-servers/auth-
server/AD-Server HTTP/1.1

Host: 10.209.114.152

Authorization: Basic
QmJYZlZ6eER2Tzhodjh4NzhlU28vU1NNZ0tHelJJUHhsbC9pdjcrZlRxcz06

Content-Type: application/json

RESPONSE

HTTP/1.1 204 NO CONTENT

Content-Length: 0

Content-Type: application/json
```

Creating an LDAP Authentication Server

```
REQUEST

POST /api/v1/configuration/authentication/auth-servers/auth-server HTTP/1.1

Host: 10.209.114.152

Authorization: Basic
QmJYZlZ6eER2Tzhodjh4NzhlU28vU1NNZ0tHelJJUHhsbC9pdjcrZlRxcz06

Content-Type: application/json

{

    "ldap": {

        "server-catalog": {

            "attributes": {

                "user-attribute": [

                    {

                        "name": "cn"

                    },

                    {

                        "name": "department"

                    },
```

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```
                    {
                        "name": "departmentNumber"
},
                    {
                        "name": "employeeNumber"
                    },
                    {
},
                    {
                        "name": "o"
                    },
                    {
                        "name": "ou"
                    },
                    {
                        "name": "sAMAccountName"
                    },
                    {
                        "name": "uid"
                    },
                    {
                        "name": "homeDirectory"
                    },
                    {
                        "name": "homeDrive"
                    },
                    {
"name": "wWWHomePage"
                    }
                ]
            },
            "custom-variables": {
                "custom-variable": []
            },
```


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```
            "expressions": {
                "custom-expression": []
            },
            "groups": {
                "user-group": []
            }
        },
        "settings": {
            "admin-dn":
"CN=Administrator,CN=Users,DC=test,DC=saqacertserv,DC=com",
            "admin-password-encrypted":
            }
"3u+UR6n8AgABAAAAQkYh+Te/ebXL7gSn+W6IEPOV2YFsaaikH2SVxkb8lTKzWhS1EPFlsNXBpuQP5sW
XfeOYfjmhQSRZ5DP/z9UhQ/l16DDne9/u7Lw67HyE/8Q=",
"attribute-to-update-at-server": "",
            "attribute-type": "type-integer",
            "attribute-value-to-update-at-server": "<LOGINTIMELDAP>",
            "authentication-required-to-search-ldap": "true",
            "backup-port-1": null,
            "backup-port-2": null,
            "backup-server-1": "",
            "backup-server-2": "",
            "connection-timeout": "15",
            "connection-type": "plain",
            "enable-attribute-update-at-server": "false",
            "group-base-dn": "",
            "group-filter": "",
            "ldap-server-type": "active-directory",
            "meetings": {
                "email-address": "mail",
                "full-name": "displayname",
                "name-attribute-mapping": "",
                "user-name": "samaccountname"
            },
            "member-attribute": "",
            "nested-group-level": "0",
            "port": "389",
            "query-attribute": "",
```


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```
            "reverse-group-search": "false",
            "search-timeout": "60",
            "server": "10.209.124.88",
            "server-catalog": "catalog",
            "test-user-dn": "",
            "user-base-dn": "DC=test,DC=saqacertserv,DC=com",
            "user-filter": "samaccountname=<USER>",
            "validate-referral-cert": "verifyserverconfigured",
            "validate-server-cert": "false"
        }
    },
    "logical-name": "",
    "name": "LDAP-Server",
    "user-record-sync": "false"
}
RESPONSE
HTTP/1.1 201 CREATED
Content-Length: 128
Content-Type: application/json
{
  "result": {
  "warnings": [
   {
     "message": "The configuration has been implicitly changed"
   }
  ]
           }
}
```

Creating a Radius Server

```
REQUEST
POST /api/v1/configuration/authentication/auth-servers/auth-server
HTTP/1.1
Host: 10.209.114.152
Authorization: Basic
QmJYZlZ6eER2Tzhodjh4NzhlU28vU1NNZ0tHelJJUHhsbC9pdjcrZlRxcz06
Content-Type: application/json
{
    "logical-name": "",
```

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```
    "name": "Radius-Server",
    "radius": {
        "server-catalog": {
            "attributes": {
                "user-attribute": []
            },
            "custom-variables": {
                "custom-variable": []
            },
            "expressions": {
                "custom-expression": []
            }
        },
        "settings": {
            "accounting-port": "1813",
            "authenticate-with-tokens-onetimepassword": "false",
            "authentication-port": "1812",
            "backup-accounting-port": "1813",
            "backup-authentication-port": "1812",
            "backup-server": "10.209.126.179",
            "backup-shared-secret-encrypted":
"3u+UR6n8AgABAAAA2Th1sUV9vXDS9gRdMt1yCB4Ol6tacMTwhWsTlIFd7Q4=",
            "custom-radius-rules": {
                "custom-radius-rule": []
            },
            "interim-update-interval": null,
            "load-balance-auth": "false",
            "nasid": "",
            "nasipaddr": "10.209.113.88",
            "process-radius-disconnect": "false",
            "retries": "0",
            "server": "10.209.126.179",
            "shared-secret-encrypted":
"3u+UR6n8AgABAAAA2Th1sUV9vXDS9gRdMt1yCB4Ol6tacMTwhWsTlIFd7Q4=",
            "timeout": "30",
            "use-nc-assigned-ip": "false",
            "use-subsession-interim-update": "false",
            "user-name": "<USER>(<REALM>)[<ROLE SEP=\",\">]"
        }
    },
```


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```
    "user-record-sync": "false"
}
RESPONSE
HTTP/1.1 201 CREATED
Content-Length: 128
Content-Type: application/json
{
  "result": {
  "warnings": [
   {
     "message": "The configuration has been implicitly changed"
   }
  ]
}
```

Modifying Radius Server Details

```
REQUEST
PUT /api/v1/configuration/authentication/auth-servers/auth-
server/Radius-Server HTTP/1.1
Host: 10.209.114.152
Authorization: Basic
QmJYZlZ6eER2Tzhodjh4NzhlU28vU1NNZ0tHelJJUHhsbC9pdjcrZlRxcz06
Content-Type: application/json
{
    "name": "Radius-Server",
    "radius": {
        "settings": {
            "backup-accounting-port": "1814",
            "backup-authentication-port": "1816",
            "backup-server": "2.2.2.2"
        }
    }

}
RESPONSE
HTTP/1.1 200 OK
Content-Length: 128
Content-Type: application/json
```

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```
{
    "result": {
        "info": [
            {
                "message": "Operation succeeded without warning or
error!"
            }
        ]
    }
}
```

Creating Sign-In-Policy

```
REQUEST

POST /api/v1/configuration/authentication/signin/urls/access-
urls/access-url/ HTTP/1.1

Host: 10.209.113.89

Authorization: Basic
MEthMXM0MmJraHpjYms0WFZCZ29Xb3k1Nk5NL3JqaDBwQ05iTmFhUlh5ST06

Content-Type: application/json

{

    "description": "",

    "enabled": "true",

    "page": "Default Sign-In Page",

    "realm-select": "pick-list",

    "url-pattern": "test/url3/",

    "user": {

        "enable-new-ux-pages": "false",

        "meeting-url": "*/meeting/",

        "post-authentication-signin-notification-id": "None",

        "post-authentication-signin-notification-skip": "false",

        "pre-authentication-signin-notification-id": "None",

        "realms": [

            "Users"

        ]

    }

}
```

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```
RESPONSE

HTTP/1.1 201 CREATED

Content-Length: 128

Content-Type: application/json

{

    "result": {

        "info": [

            {

                "message": "Operation succeeded without warning or
error!"

            }

        ]

    }

}
```

Deleting Sign-in-Policy

```
REQUEST

DELETE /api/v1/configuration/authentication/signin/urls/access-
urls/access-url/test%5C%2Furl3%5C%2F HTTP/1.1

Host: 10.209.113.89

Authorization: Basic
MEthMXM0MmJraHpjYms0WFZCZ29Xb3k1Nk5NL3JqaDBwQ05iTmFhUlh5ST06

Cache-Control: no-cache

RESPONSE

HTTP/1.1 204 NO CONTENT

Content-Length: 0

Content-Type: application/json
```

Disabling Sign-in-URL

```
REQUEST

PUT /api/v1/configuration/authentication/signin/urls/access-urls/access-
url/test%5C%2Furl1%5C%2F/enabled HTTP/1.1

Host: 10.209.113.89

Authorization: Basic
MEthMXM0MmJraHpjYms0WFZCZ29Xb3k1Nk5NL3JqaDBwQ05iTmFhUlh5ST06
```

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```
Content-Type: application/json
{
    "enabled": "false"
}
RESPONSE
HTTP/1.1 200 OK
Content-Length: 128
Content-Type: application/json
{
    "result": {
        "info": [
            {
                "message": "Operation succeeded without warning or
error!"
            }
        ]
    }
}
```

Creating a Web Bookmark for a Role

To create a web bookmark for a role:

```
REQUEST
POST /api/v1/configuration/users/user-roles/user-role/rest-userrole-
1/web/web-bookmarks/bookmark HTTP/1.1
Host: 10.209.113.88
Authorization: Basic
MVhDbDJTSUhkV3ZjUkd6WXM1T1V3MU5wbHNmemJPbTJxSHI2NVZCdXp5bz06
Content-Type: application/json
Cache-Control: no-cache
{
    "auto-allow": "disable",
    "description": "",
    "name": "webbm",
    "new-window": "false",
    "no-address-bar": "false",
    "no-tool-bar": "false",
```

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```
    "parent": "--none--",
    "standard": {
        "url": "http://www.yahoo.com"
     }
}
RESPONSE
HTTP/1.1 201 CREATED
Content-Length: 122
Content-Type: application/json
{
    "result": {
        "info": [
            {
                "message": "Operation succeed without warning or error!"
            }
        ]
    }
}
```

Reordering

For re-ordering existing ordered elements in the configuration, a PUT API can be used with an 'order' suffix. This API can be used to reorder any ordered element in the configuration including role-mapping-rules, resource policies and ACLs.

Example: Reorder existing role-mapping-rules in a specific realm.

```
REQUEST
PUT /api/v1/configuration/users/user-realms/realm/testRealm/role-
mapping-rules/rule/order HTTP/1.1
Host: 10.209.112.106
Authorization: Basic
Y1VPZE1XZ1ZubVEvVnIrcWwrd3lJY3F0Y05WTGhDVkx1M0wrdk5YR3hzVT06
Content-Type: application/json
{
  "rule": [
    {
      "href": "/api/v1/configuration/users/user-
```

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```
realms/realm/testRealm/role-mapping-rules/rule/rule3"

    },

    {

      "href": "/api/v1/configuration/users/user-
realms/realm/testRealm/role-mapping-rules/rule/rule1"

    }

  ]

}

RESPONSE

HTTP/1.1 200 OK

content-length: 122

content-type: application/json

{

    "result": {

        "info": [

            {

                "message": "Operation succeed without warning or error!"

            }

        ]

    }

}
```

Fetching the Resource with Multiple Identifiers

Example: Retrieve one of SNMP Trap server configured on PCS device

```
REQUEST

GET /api/v1/configuration/system/log/snmp/localhost2/trap-servers/trap-
server/ip=1.1.1.1,port=162 HTTP/1.1

Host: 10.209.112.106

Authorization: Basic
T0o1dzVpK3g4U0dKV0d1TkJCdWlwVzREaUc0SjZvbkExMVljc0RtNU14bz06

RESPONSE

HTTP/1.1 200 OK

content-length: 65

content-type: application/json
```

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```
{
    "community": "public",
    "ip": "1.1.1.1",
    "port": "162"
}
```

Updating Resource Identified Using Multiple Identifiers

Example: Updating the community string for specific SNMP trap server identified by IP and port

```
REQUEST
PUT /api/v1/configuration/system/log/snmp/localhost2/trap-servers/trap-
server/ip=1.1.1.1,port=162/community HTTP/1.1
Host: 10.209.112.106
Authorization: Basic
T0o1dzVpK3g4U0dKV0d1TkJCdWlwVzREaUc0SjZvbkExMVljc0RtNU14bz06
Content-Type: application/json
{
    "community": "pulsesecure"
}
RESPONSE
HTTP/1.1 200 OK
content-length: 122
content-type: application/json
{
    "result": {
        "info": [
            {
                "message": "Operation succeed without warning or error!"
            }
        ]
    }
}
```

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Fetching Active Number of HTML5 Sessions

```
REQUEST

curl -k -u <api-key>: https://<pcs-ip>/api/v1/stats

Example:

curl -k -u Tv6YQPETDVOxeO0LCkcOfWeQ5qeET2WStO8GbilIltA=:
https://10.96.158.110/api/v1/stats

RESPONSE

content-type: application/json

{
  "active-advanced-html5-sessions": {
    "active-advanced-html5-sessions-rdp": 0,
    "active-advanced-html5-sessions-ssh": 0,
    "active-advanced-html5-sessions-telnet": 0,
    "active-advanced-html5-sessions-total": -2,
    "active-advanced-html5-sessions-vnc": 0
  },
  "active-basic-html5-sessions": {
    "active-basic-html5-sessions-rdp": 0,
    "active-basic-html5-sessions-ssh": 0,
    "active-basic-html5-sessions-telnet": 0,
    "active-basic-html5-sessions-total": 0
  },
  "cpu-load": {
    "average-cpu-load": "0.33",
    "dsagentd-load": "0.00",
    "is-cpu-overloaded": "false",
    "is-dsagentd-overloaded": "false"
  }
}
```

Fetching Active Number of Basic HTML5 Sessions

```
REQUEST

curl -k -u <api-key>: https://<pcs-ip>/api/v1/stats/active-basic-
html5-sessions

Example:

curl -k -u Tv6YQPETDVOxeO0LCkcOfWeQ5qeET2WStO8GbilIltA=:
https://10.96.158.110/api/v1/stats/ active-basic-html5-sessions
```

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```
RESPONSE

content-type: application/json

{

  "active-basic-html5-sessions-rdp": 0,

  "active-basic-html5-sessions-ssh": 0,

  "active-basic-html5-sessions-telnet": 0,

  "active-basic-html5-sessions-total": 0

}
```

Fetching Active Number of Advanced HTML5 Sessions

```
REQUEST

curl -k -u <api-key>: https://<pcs-ip>/api/v1/stats/ active-advanced-
html5-sessions

Example:

curl -k -u Tv6YQPETDVOxeO0LCkcOfWeQ5qeET2WStO8GbilIltA=:
https://10.96.158.110/api/v1/stats/ active-advanced-html5-sessions

RESPONSE

content-type: application/json

{

  "active-advanced-html5-sessions-rdp": 0,

  "active-advanced-html5-sessions-ssh": 0,

  "active-advanced-html5-sessions-telnet": 0,

  "active-advanced-html5-sessions-total": -2,

  "active-advanced-html5-sessions-vnc": 0

}
```

Updating Password in Clear Text

Example: Updating password of System Local User.

```
REQUEST


PUT /api/v1/configuration/authentication/auth-servers/auth-
server/System%20Local/local/users/user/user0001/password-cleartext
HTTP/1.1

Host: 10.209.112.106

Authorization: Basic
T0o1dzVpK3g4U0dKV0d1TkJCdWlwVzREaUc0SjZvbkExMVljc0RtNU14bz06
```

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```
Content-Type: application/json

{

   "password-cleartext": "Psecure"

}

RESPONSE

HTTP/1.1 200 OK

content-length: 128

content-type: application/json

{

   "result": {

     "warnings": [

       {

          "message": "The configuration has been implicitly changed"

       }

     ]

   }

}
```

Applying Authcode and Downloading Licenses from PCLS on VA-SPE|PSA-V

In PCS 8.3R4|PPS 5.4R4, this REST API can be used to download the license key from PCLS and install on the Virtual Appliance.

```
REQUEST
PUT /api/v1/license/auth-code HTTP/1.1
Host: 10.209.125.7
Authorization: Basic
TnBDUk1veFFFQTJKZjM0S2ZxV2JKUlhRaDJaWGFrYnkvWVpTR3hhNTdmbz0=
Content-Length: 35
Content-Type: application/json
{
  "auth-code":"<auth-code-to-apply>"
```

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```
}
RESPONSE
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: 191
{
   "result": {
     "info": [
       {"message": "Installed new license key \"landmark utility
prestige trip mayor diesel faucet summer prestige income heritage\""}
     ]
   }
}
```

Applying License

```
REQUEST
PUT /api/v1/license/license-key?action=install HTTP/1.1
Host: 10.209.125.7
Authorization: Basic
TnBDUk1veFFFQTJKZjM0S2ZxV2JKUlhRaDJaWGFrYnkvWVpTR3hhNTdmbz0=
Content-Type: application/json
{
   "keys":[
     "key1",
     “key2”,
     ….
   ]
}
Example:
{
   "keys":[
     "operation tree crayon holiday kingdom lasso doorway square
dish modem gecko",
     "buffalo safety inch topaz banquet nitrogen garnish step
recital wedge trace"
   ]
}
RESPONSE
HTTP/1.1 200 OK
Content-Type: application/json
{
    "result": {
```

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```
        "info": [
         {
           "message": "Installed licenses"
         }
        ]
    }
}
```

Deleting License

```
REQUEST
PUT /api/v1/license/license-key?action=delete HTTP/1.1
Host: 10.209.125.7
Authorization: Basic
TnBDUk1veFFFQTJKZjM0S2ZxV2JKUlhRaDJaWGFrYnkvWVpTR3hhNTdmbz0=
Content-Type: application/json
{
   "keys":[
      "key1",
      “key2”,
      ….
   ]
}

Example:
{
   "keys":[
      "operation tree crayon holiday kingdom lasso doorway square
dish modem gecko",
      "buffalo safety inch topaz banquet nitrogen garnish step
recital wedge trace"
   ]
}
RESPONSE
HTTP/1.1 200 OK
Content-Type: application/json
{
   "result": {
     "info": [
       {
          "message": "Deleted <number> licenses"
       }
     ]
   }
}
```

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Getting License Clients

```
REQUEST
GET /api/v1/license/license-clients HTTP/1.1
Host: 10.209.125.7
Authorization: Basic
TnBDUk1veFFFQTJKZjM0S2ZxV2JKUlhRaDJaWGFrYnkvWVpTR3hhNTdmbz0=
Content-Type: application/json
RESPONSE
HTTP/1.1 200 OK
Content-Type: application/json
{
  "license_clients": [
    {
      "feature_capacities": [
        {
          "feature_name": "add_user_count",
          "leased_value": 25
        },
        {
          "feature_name": "onboard",
          "leased_value": 0
        },
        {
          "feature_name": "embeddedrdpapplet",
          "leased_value": 0
        },
        {
          "feature_name": "vm_cores_leasable",
          "leased_value": 4
        },
        {
          "feature_name": "add_meeting_user_count",
          "leased_value": 0
        },
        {
          "feature_name": "cloudsecure_count",
          "leased_value": 0
        },
        {
          "feature_name": "named_user_count",
          "leased_value": 0
        },
        {
```

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```
          "feature_name": "ueba",
          "leased_value": 0
        }
      ],
      "last_renewal": "Wed, 04 Dec 2019 06:32:26 GMT",
      "machine_id": "VASPH3944M9D8551S",
      "name": "va_spe_3_3_125_4"
    },
    {
      "feature_capacities": [
        {
          "feature_name": "add_user_count",
          "leased_value": 25
        },
        {
          "feature_name": "onboard",
          "leased_value": 0
        },
        {
          "feature_name": "embeddedrdpapplet",
          "leased_value": 0
        },
        {
          "feature_name": "vm_cores_leasable",
          "leased_value": 4
        },
        {
          "feature_name": "add_meeting_user_count",
          "leased_value": 0
        },
        {
          "feature_name": "cloudsecure_count",
          "leased_value": 0
        },
        {
          "feature_name": "named_user_count",
          "leased_value": 0
        },
        {
          "feature_name": "ueba",
          "leased_value": 0
        }
      ],
      "last_renewal": "Thu, 05 Dec 2019 13:45:31 GMT",
      "machine_id": "VASPHXVK2E117PM8S",
      "name": "va_spe_3_3_125_8"
    },
  ]
```


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```
}
```

Getting License Report from License Server

REQUEST

```
GET /api/v1/license/report HTTP/1.1
Host: 10.209.125.7
Authorization: Basic
TnBDUk1veFFFQTJKZjM0S2ZxV2JKUlhRaDJaWGFrYnkvWVpTR3hhNTdmbz0=
Content-Type: application/json
```

RESPONSE

```
HTTP/1.1 200 OK
Content-Type: application/json
```

License Usage Report

```
{
   "LicenseUsageReport": {
     "MachineID": "VASPMMXXXXXXXX",
     "build-number": "4762",
     "cumulative-report": {…},
     "granular-report": {…},
     "cluster-granular-report": {…},
     "time-stamp": "Mon Jan 13 20:04:40 2020",
     "version": "9.1"
   }
}
```

Cumulative Report
https://<license-server>/api/v1/license/report/cumulative-report

```
{
   "cumulative-report": {
     "add-meeting-user-count": {
       "Year":[
        {
          "Month": [
            {
              "Date": [
                {
                  "Leased": "0",
                  "Maximum": "30",
                  "id": "06"
                }
                {…},
                {…},
                {…},
                {…}
              ]
```

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```
                "Leased": "0",
                "Maximum": "30",
                "id": "Jan",
            }
            {…}
          ]
          "id": "2020"
        }
        {…}
      ]
    }
}
```

Granular Report

https://<license-server>/api/v1/license/report/granular-report

```
{
  "license-client": [
    {
      "add-user-count": {
        "Year": [
          {
            "Month": [
              {
                "Date": [
                 {…},
                 {…},
                 {…},
                 {…}
                ]
                "Leased": "0",
                "Maximum": "0",
                "id": "Jan"
             }
           ],
           "id": "2020"
         }
        ]
      },
      "name": "PSA_V_10_209_125_101",
      "software-version": "7.4"
    },
    {…}
}
```

Cluster Granular Report

https://<license-server>/api/v1/license/report/cluster-granular-report

```
{
   "add-user-count": {
     "Year": [
```

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```
        {
          "Month": [
            {
              "Date": [
                {
                  "Leased": "40",
                  "Maximum": "21",
                  "client-node": "node63lc,node66lc",
                  "id": "24"
                },
                {
                  "Leased": "40",
                  "Maximum": "1",
                  "client-node": "node63lc,node66lc",
                  "id": "25"
                },
                {
                  "Leased": "40",
                  "Maximum": "1",
                  "client-node": "node63lc,node66lc",
                  "id": "26"
                }
              ],
              "Leased": "40",
              "Maximum": "21",
              "id": "Feb"
            }
          ],
          "id": "2020"
        }
      ]
    },
    "cluster-name": "liccluster"
}
```


The following extensions of the API are supported:

1. /api/v1/license/report – entire license report in JSON
2. /api/v1/license/report/cumulative-report – The cumulative report.
   - Following trace-down options available here
     i. /api/v1/license/report/cumulative-report/<license-feature-type>
     ii. /api/v1/license/report/cumulative-report/<license-feature-type>/<year>
     iii. /api/v1/license/report/cumulative-report/<license-feature-type>/<year>/<month>
     iv. /api/v1/license/report/cumulative-report/<license-feature-type>/<year>/<month>/<day>

3. /api/v1/license/report/granular-report – License usage report per license client.
   - Following trace-down options available here
     i. /api/v1/license/report/granular-report/<license-client>
     ii. /api/v1/license/report/granular-report/<license-client>/<add-user-count>

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iii. /api/v1/license/report/granular-report/<license-client>/<add-user-count>/<year>

iv. /api/v1/license/report/granular-report/<license-client>/<add-user-count>/<year>/<month>

v. /api/v1/license/report/granular-report/<license-client>/<add-user-count>/<year>/<month>/<day>

Example:

API - /api/v1/license/report/granular-report/node63lc/add-user-count/2020/Mar/20

```
{
    "Leased": 40,
    "Maximum": 14,
    "id": "20"
}
```

4. /api/v1/license/report/cluster-granular-report – License usage report per license client cluster.

- Following trace-down options available here

i. /api/v1/license/report/cluster-granular-report/<license-client>

ii. /api/v1/license/report/cluster-granular-report/<license-client>/<add-user-count>

iii. /api/v1/license/report/cluster-granular-report/<license-client>/<add-user-count>/<year>

iv. /api/v1/license/report/cluster-granular-report/<license-client>/<add-user-count>/<year>/<month>

v. /api/v1/license/report/cluster-granular-report/<license-client>/<add-user-count>/<year>/<month>/<day>

Example:

API - /api/v1/license/report/cluster-granular-report/liccluster/add-user-count/2020/Mar/22

```
{
    "Leased": 40,
    "Maximum": 16,
    "cluster-member": [
        "node63lc",
        "node66lc"
    ],
    "id": "22"
}
```

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Enabling/Disabling ICE License

Enabling ICE License

```
Content of ice_enable.json file:
more ice_enable.json
{
   "mode": "enabled"
}
```

REQUEST

```
curl -k -u <api-key>: https://<pcs-ip>/api/v1/license/ice -X PUT -H
"Content-Type: application/json" -d @ice_enable.json

Example:
curl -k -u TVGJ9xV9XvuA1JDB1nPkjC5BilAQAhUMn2dPHLZgP/o=:
https://10.209.125.4/api/v1/license/ice -X PUT -H "Content-Type:
application/json" -d @ice_enable.json
```

RESPONSE

```
HTTP/1.1 200 OK
Content-Type: application/json
{
  "result": {
    "info": [
      {
        "message": "ICE license is enabled"
      }
    ]
  }
}
```

Disabling ICE License

```
Content of ice_disable.json file:
more ice_disable.json
{
   "mode" : "disabled"
}
```

REQUEST

```
curl -k -u TVGJ9xV9XvuA1JDB1nPkjC5BilAQAhUMn2dPHLZgP/o=:
https://10.209.125.4/api/v1/license/ice -X PUT -H "Content-Type:
application/json" -d @ice_disable.json
```

RESPONSE

```
HTTP/1.1 200 OK
Content-Type: application/json
{
  "result": {
    "info": [
      {
        "message": "ICE license is disabled"
```

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```
      }
    ]
  }
}
```

Getting the Current Status of ICE License

```
REQUEST
curl -k -u <api-key>: https://<pcs-ip>/api/v1/license/ice

Example:
curl -k -u TVGJ9xV9XvuA1JDB1nPkjC5BilAQAhUMn2dPHLZgP/o=:
https://10.209.125.4/api/v1/license/ice
RESPONSE
ICE License Enabled
HTTP/1.1 200 OK
Content-Type: application/json
{
  "mode": "enabled"
}

ICE License Disabled
HTTP/1.1 200 OK
Content-Type: application/json
{
  "mode": "disabled"
}
```

Exporting TOTP Users from One Device to Another Device

```
REQUEST
curl -k -u <api-key>: https://pcs-ip>/api/v1/totp/<TOTP-AUTH-SERVER-NAME>/users
NOTE: This API can be executed only on TOTP server configured as Local (and not
Remote).
Example:
curl -k -u X1O3oczUMJbhI8ba3Ov0McD54QCwBgwpSHwOGUVu5Ck=:
https://10.209.115.20/api/v1/totp/Google%20TOTP%20Auth%20Server/users
RESPONSE
HTTP/1.1 200 OK
Content-Length: 191
Content-Type: application/json
{
      "users":
      "21ubWxSvAwABAAAAlx9igwcQok9s+MV0zg/b+oer3z7Kj0iXbVzJ+qDMiguTtWZaxnGHGTGQE
      cHD7BTMGjz1QYbO00zBF+6DGp2y/9pj+8Wf4SXTQbYIeDomT4w2Kl4oc1EZhFruWLWnll+58x2
```

```
      b0kxsURCb+P0It8K+msqFXBhOEDY7l0W4+P+A8UZaz6In/gMq8Qd766i7RN1oZ+hzHUMYJUB72
      tzIQ+CiA8tTv6aweC6TGy9/a9C6vVbLY0+ZUgGTffWzJxcoZbEbdwiCFoZyex5UWTUFIj0Z4XA
      PoZ4HTWZsxP5YwXcJpsnbOzCqW/dTB6WpYWYp6R+MUn2yu/hZeu7z1qVhXlr8bK5LifH/u6J76
      SpErL1eELh1bYF17DWPfo6xspG7rffhs2k9vPVB1oq2kud+42hPo6vZaMfcwaz9lKRrftIgAu2
      o3JBJfdNHrUTOu2+Y6Qmc0in6MfIBNNrVr9D6hdWmIdrNr7PXHa4uJoP+CAuOp3OamTox2sgmv
      E7YNjC0SlSPgyFfx0kfzCb2K3Mrcq1UuJUJLhK7L3lne4f1QiWKoZ8q8zluaV+eRSJHBez9Pjo
      +LzBpYwoXStduOC20FVY4+KCHDasufdAOCD/Lga4mFFE5ItAui18ObOfRtxLvoZUIuGS8w019m
      bRaNDlVa52sUzuZBClqx+4lueBCQYEUNrDrHVG0AzqUBbAeL+WV8VRJrxVW8sIlArqY8n29pD6
      6BozsGKoxBqXSe/fZxEDu9ZqI4xfzSCCsfqTiv0LAM4p+cZekhcjvRwtuImNjX+qj7A=="
}
```

Importing TOTP Users from One Device to Another Device

```
REQUEST
curl -k -u <api-key>: https://<pcs-ip>/api/v1/totp/<TOTP-AUTH-SERVER-NAME>/users -H
"Content-Type: application/json" -d @totp_users.json -X POST
NOTE: This API can be executed only on TOTP server configured as Local (and not
Remote).
Example:
curl -k -u K7Z7xA54AKnv1++kcViamCCiUrEBgMSP+sHKar4EcKY=:
https://10.209.125.4/api/v1/totp/TOTP_SERVER/users -H "Content-Type:
application/json" -d @totp_users.json -X POST
{
      "users":
      "21ubWxSvAwABAAAAlx9igwcQok9s+MV0zg/b+oer3z7Kj0iXbVzJ+qDMiguTtWZaxnGHGTGQE
      cHD7BTMGjz1QYbO00zBF+6DGp2y/9pj+8Wf4SXTQbYIeDomT4w2Kl4oc1EZhFruWLWnll+58x2
      b0kxsURCb+P0It8K+msqFXBhOEDY7l0W4+P+A8UZaz6In/gMq8Qd766i7RN1oZ+hzHUMYJUB72
      tzIQ+CiA8tTv6aweC6TGy9/a9C6vVbLY0+ZUgGTffWzJxcoZbEbdwiCFoZyex5UWTUFIj0Z4XA
      PoZ4HTWZsxP5YwXcJpsnbOzCqW/dTB6WpYWYp6R+MUn2yu/hZeu7z1qVhXlr8bK5LifH/u6J76
      SpErL1eELh1bYF17DWPfo6xspG7rffhs2k9vPVB1oq2kud+42hPo6vZaMfcwaz9lKRrftIgAu2
      o3JBJfdNHrUTOu2+Y6Qmc0in6MfIBNNrVr9D6hdWmIdrNr7PXHa4uJoP+CAuOp3OamTox2sgmv
      E7YNjC0SlSPgyFfx0kfzCb2K3Mrcq1UuJUJLhK7L3lne4f1QiWKoZ8q8zluaV+eRSJHBez9Pjo
      +LzBpYwoXStduOC20FVY4+KCHDasufdAOCD/Lga4mFFE5ItAui18ObOfRtxLvoZUIuGS8w019m
      bRaNDlVa52sUzuZBClqx+4lueBCQYEUNrDrHVG0AzqUBbAeL+WV8VRJrxVW8sIlArqY8n29pD6
      6BozsGKoxBqXSe/fZxEDu9ZqI4xfzSCCsfqTiv0LAM4p+cZekhcjvRwtuImNjX+qj7A=="
}
RESPONSE
HTTP/1.1 200 OK
content-length →47
Content-Type: application/json
{
      “message' => 'Successfully imported user data'
}
```

Resetting TOTP User

```
REQUEST
curl -k -u <api-key>: https://<pcs-ip>/api/v1/totp/<TOTP-AUTH-SERVER-
NAME>/users/<totp-user>?operation=reset -X PUT
```

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Example :

```
curl -k -u nNuALLLWajGujVF2yT4qyP4nYxy/nwXxBKp0CHu2AZQ=:
https://3.3.125.4/api/v1/totp/TOTP_SERVER/users/qauser1001?operation=reset
-X PUT
```

RESPONSE

Scenario: TOTP user reset

```
HTTP/1.1 200 OK
Content-Type: application/json
{
  "result": {
    "info": [
      {
        "message": "TOTP user 'qauser1001' under Authserver
'TOTP_SERVER' has been reset"
      }
    ]
  }
}
```

Scenario: TOTP user does not exist

```
HTTP/1.1 200 OK
Content-Type: application/json
{
  "result": {
    "errors": [
      {
        "message": "TOTP user 'qauser1001' is not present under
Authserver 'TOTP_SERVER'"
      }
    ]
  }
}
```

Unlocking TOTP User

REQUEST

```
curl -k -u <api-key>: https://<pcs-ip>/api/v1/totp/<TOTP-AUTH-SERVER-
NAME>/users/<totp-user>?operation=unlock -X PUT
```

Example :

```
curl -k -u nNuALLLWajGujVF2yT4qyP4nYxy/nwXxBKp0CHu2AZQ=:
https://3.3.125.4/api/v1/totp/TOTP_SERVER/users/qauser1001?operation=unlock
-X PUT
```

RESPONSE

Scenario: TOTP user unlocked

```
HTTP/1.1 200 OK
Content-Type: application/json
{
```

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```
  "result": {
    "info": [
      {
        "message": "TOTP user 'qauser1001' under Authserver
'TOTP_SERVER' has been unlocked"
      }
    ]
  }
}
```

Scenario: TOTP user cannot be unlocked

```
HTTP/1.1 200 OK
Content-Type: application/json
{
  "result": {
    "errors": [
      {
        "message": "Error: Only locked users can be unlocked"
      }
    ]
  }
}
```

Sample Error Responses

400 BAD REQUEST

REQUEST

```
PUT /api/v1/configuration/users/user-realms/realm/testRealm/role-
mapping-rules/rule/rule1 HTTP/1.1

Host: 10.209.112.106

Authorization: Basic
Y1VPZE1XZ1ZubVEvVnIrcWwrd3lJY3F0Y05WTGhDVkx1M0wrdk5YR3hzVT06

Content-Type: application/json

{

    "name": "rule1",

    "roles": [

        "Users"

    ],

    "stop-rules-processing": "false",

    "user-name": {

        "test": "is",
```

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```
        "user-names": [
            "*",
        ]
    }
}
RESPONSE
HTTP/1.1 400 BAD REQUEST
content-length: 92
content-type: application/json
{
"message": "The browser (or proxy) sent a request that this server
could not understand."
}
```

Solution: Invalid JSON body content in Request. Please check if JSON is valid.

```
REQUEST
PUT /api/v1/configuration/users/user-roles/user-role/rest-userrole-1
HTTP/1.1
Host: 10.209.113.88
Authorization: Basic
MVhDbDJTSUhkV3ZjUkd6WXM1T1V3MU5wbHNmemJPbTJxSHI2NVZCdXp5bz06
{
    "name": "rest-userrole-1",
    "web": {
        "web-bookmarks": {
            "bookmark": [
                {
                    "auto-allow": "disable",
                    "description": "",
                    "name": "web-bm-1",
                    "new-window": "false",
                    "no-address-bar": "false",
                    "no-tool-bar": "false",
                    "parent": "--none--",
                    "standard": {
```

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```
                        "url": "http://www.yahoo.com"
                    }
                }
            ]
        },
        "web-options": {
            "browsing-untrusted-sslsites": "true",
            "flash-content": "false",
            "hpxproxy-connection-timeout": "1800",
            "http-connection-timeout": "240",
            "java-applets": "true",
            "mask-hostname": "false",
            "persistent-cookies": "false",
            "rewrite-file-urls": "false",
            "rewrite-links-pdf": "false",
            "unrewritten-page-newwindow": "false",
            "user-add-bookmarks": "false",
            "user-enter-url": "false",
            "users-bypass-warnings": "false",
            "warn-certificate-issues": "true",
            "websocket-connection-timeout": "900"
        }
    }
}
```

RESPONSE

```
HTTP/1.1 400 BAD REQUEST
Content-Length: 99
Content-Type: application/json
{
    "result": {
        "errors": [
            {
                "message": "Accepts only JSON."
```

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```
            }
        ]
    }
}
```

Note: Include the “Content-Type” header in the request with a value “application/json” as used in the examples above.

403 Forbidden

```
REQUEST
GET /api/v1/auth HTTP/1.1
Host: 10.209.112.106
Authorization: Basic YWRtaW5kYjpkYW5hMTIz
Content-Type: application/json
RESPONSE
HTTP/1.1 403 Forbidden
cache-control: no-store
connection: Keep-Alive
content-type: text/html; charset=utf-8
expires:-1
keep-alive: timeout=15
strict-transport-security →max-age=31536000
transfer-encoding: chunked
```

Solutions:

1. Make sure admin user used for authentication has "Allow access to REST APIs" option enabled from admin UI
2. Admin Username and Password passed in Authorization header are correct
3. If api_key is available, use api_key value as username and password as empty in authorization header

404 NOT FOUND

```
REQUEST
GET /api/v1/configuration/users/user-realms/realm/testRealm/role-
mapping-rules/rule HTTP/1.1
```

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```
Host: 10.209.112.106

Authorization: Basic
Y1VPZE1XZ1ZubVEvVnIrcWwrd3lJY3F0Y05WTGhDVkx1M0wrdk5YR3hzVT06

RESPONSE

HTTP/1.1 404 NOT FOUND

content-length: 213

content-type: application/json

{

    "result": {

        "errors": [

            {

                "message": "Invalid resource path; use \"users/user-
realms/realm/testRealm/role-mapping-rules/rule/<resource-id>\" to access
a specific resource"

            }

        ]

    }

}
```

Solution: Resource-id should be passed in Resource path as shown in example below.

```
REQUEST

GET /api/v1/configuration/users/user-realms/realm/testRealm/role-
mapping-rules/rule/rule1 HTTP/1.1

Host: 10.209.112.106

Authorization: Basic
Y1VPZE1XZ1ZubVEvVnIrcWwrd3lJY3F0Y05WTGhDVkx1M0wrdk5YR3hzVT06

RESPONSE

HTTP/1.1 200 OK

content-length: 167

content-type: application/json

{

    "name": "rule1",

    "roles": [

        "Users"

    ],
```

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```
    "stop-rules-processing": "false",

    "user-name": {

        "test": "is",

        "user-names": [

            "*"

        ]

    }

}
```

Solution: Invalid JSON body content in Request. Please check if JSON is valid.

422 UNPROCESSABLE ENTITY

```
REQUEST

POST /api/v1/configuration/users/user-realms/realm/testRealm/role-
mapping-rules/rule/ HTTP/1.1

Host: 10.209.112.106

Authorization: Basic
Y1VPZE1XZ1ZubVEvVnIrcWwrd3lJY3F0Y05WTGhDVkx1M0wrdk5YR3hzVT06

Content-Type: application/json

{

    "name": "rule2",

    "roles": [

        "Users",

        "testRole1"

    ],

    "stop-rules-processing": "false",

    "user-name": {

        "test": "is",

        "user-names": [

            "user1"

        ]

    }

}

RESPONSE

HTTP/1.1 422 UNPROCESSABLE ENTITY
```

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```
content-length: 368

content-type: application/json

{

    "result": {

        "errors": [

            {

                "message": "[/users/user-
realms/realm[name=testRealm]/role-mapping-rules/rule[name=rule2]/roles]
Invalid reference: no 'User Roles' object found with identifier
'testRole1'."

            },

            {

                "message": "Failed to resolve path references"

            },

            {

                "message": "Commit failed"

            }

        ]

    }

}
```

Solution: Make sure to have all the referenced resources are created first using POST call and then repeat.

Limitations

1. Configuration of large data objects is not qualified- ESAP, Pulse Client package, Custom Sign-in page, applets, and so on.
2. Resource names similar to resource tags e.g. vlans, roles, etc. should be avoided while creating new resources.

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PPS-Specific Configurations Using REST APIs

- Creating the HC Policy
- Deleting the HC Policy
- Creating the Infranet Enforcer
- Deleting the Infranet Enforcer
- Creating a Resource Policy
- Deleting a Resource Policy
- Creating a RADIUS Client
- Deleting a RADIUS Client
- Creating a RADIUS Attribute Policy
- Deleting a RADIUS Attribute Policy
- Creating SNMP Device
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- Creating SNMP Policy
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- Creating Device Group - TACACS+
- Deleting Device Group- TACACS+
- Creating TACACS+ Client
- Deleting TACACS+ Client
- Creating Shell Policies
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- Creating Admission Control Client
- Deleting Admission Control Client
- Creating Admission Control Policy
- Deleting Admission Control Policy
- Getting Authentication API Key
- Pulse Policy Secure Alert Based Admission Control APIs
- Profiler REST APIs

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Creating the HC Policy

```
REQUEST
POST api/v1/configuration/authentication/endpoint/host-
checker/policies/policy HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
    "policy-name": "HC",
    "regular": {
        "platforms": {
            "chromeos": {
                "dashboard": {
                    "consider-for-reporting": "true"
                },
                "remediation": {
                    "custom-instructions": "",
                    "enable-custom-instructions": "false",
                    "send-reason-strings": "true"
                }
            },
            "windows": {
                "dashboard": {
                    "consider-for-reporting": "true"
                },
                "remediation": {
                    "custom-instructions": "",
                    "delete-files": "false",
                    "enable-custom-instructions": "false",
                    "files": null,
                    "kill-processes": "false",
                    "processes": null,
                    "send-reason-strings": "true"
                },
                "rule-expression": {
                    "custom-expression": "",
                    "requirement": "all"
                },
                "rules": {
                    "advancedRule": [],
                    "firewall-rules": {
                        "firewall-rule": [
                            {
                                "needs-monitoring": "false",
                                "product-list": null,
                                "product-selection-option":
"specific",
                                "rule-name": "rule1",
                                "select-specific-product": "false",
                                "select-specific-vendor": "true",
                                "selected-product-list": {
                                   "product-info": [
                                        {
                                            "product-name":
"Windows Firewall (10.x)",
                                            "turn-on-firewall":
"true"
```

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```
                                        },
                                        {
                                            "product-name":
"Windows Firewall (6.x)",
                                            "turn-on-firewall":
"false"
                                        }
                                    ]
                                },
                                "turn-on-firewall-all": "false",
                                "vendor-list": [
                                    "Microsoft Corporation"
                                ]
                            }
                        ]
                    }
                }
            }
        }
    }
}
```

RESPONSE

```
{
    "result": {
        "warnings": [
            {
                "message": "The configuration has been implicitly
changed"
            }
        ]
    }
}
```

Deleting the HC Policy

REQUEST

```
DELETE api/v1/configuration/authentication/endpoint/host-
checker/policies/policy/HC  HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
```

RESPONSE

```
HTTP/1.1 204 NO CONTENT
Content-Length: 0
Content-Type: application/json
```

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Creating the Infranet Enforcer

```
REQUEST
POST api/v1/configuration/uac/infranet-
enforcer/connections/infranet-enforcer HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
    "idp-for-local-sessions-only": "true",
    "junos": {
        "location-group": "- No 802.1X -",
        "password-encrypted":
"3u+UR6n8AgABAAAAofSnIBrU19vdwUslG5LG4cg1QH6CbXDSmY4ZW0x85HY="
    },
    "name": "SRX",
    "serial-number": [
        "ABCNWPWFS"
    ],
    "severity-filter": "medium",
    "use-idp": "false"
}
RESPONSE
{
    "result": {
        "info": [
            {
                "message": "Operation succeeded without warning or
error!"
            }
        ]
    }
}
```

Deleting the Infranet Enforcer

```
REQUEST
DELETE api/v1/configuration/uac/infranet-
enforcer/connections/infranet-enforcer/SRX HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
RESPONSE
HTTP/1.1 204 NO CONTENT
Content-Length: 0
Content-Type: application/json
```

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Creating a Resource Policy

REQUEST

```
POST api/v1/configuration/uac/infranet-enforcer/resource-access-
policies/resource-access-policy/ HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
    "action": "allow-access",
    "apply": "all-roles",
    "apply-ie-options": "all-options",
    "deny-message": "",
    "description": "",
    "ie-options": [],
    "infranet-enforcer": [
        "(all)"
    ],
    "name": "Resource Policy",
    "resources": [
        "10.25.15.0/24:*"
    ],
    "roles": null,
    "vsys": ""
}
```

RESPONSE

```
{
    "result": {
        "info": [
            {
                "message": "Operation succeeded without warning or
error!"
            }
        ]
    }
}
```

Deleting a Resource Policy

REQUEST

```
DELETE api/v1/configuration/uac/infranet-enforcer/resource-access-
policies/resource-access-policy/Resource%20Policy HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
```

RESPONSE

```
HTTP/1.1 204 NO CONTENT
Content-Length: 0
Content-Type: application/json
```

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Creating a RADIUS Client

REQUEST

```
POST /api/v1/configuration/uac/network-access/radius-clients/radius-
client HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
    "coa-support": "false",
    "description": "",
    "disconnect-support": "true",
    "dynamic-auth-port": "3799",
    "enable": "true",
   "gatewayid": "",
    "ip-address": "10.204.88.12",
    "ip-address-range": "1",
    "kek-encrypted": "",
    "key-wrap-format": "HEX",
    "key-wrap-support": "false",
    "location-group": "Default",
    "mack-encrypted": "",
    "make-model": "Ruckus Wireless",
    "name": "Ruckus",
    "ruckus-certificate-verification": "false",
    "ruckus-password-encrypted": "",
    "shared-secret-encrypted":
"3u+UR6n8AgABAAAAofSnIBrU19vdwUslG5LG4cg1QH6CbXDSmY4ZW0x85HY="
}
```

RESPONSE

```
{
    "result": {
        "info": [
            {
                "message": "Operation succeeded without warning or
error!"
            }
        ]
    }
}
```

Deleting a RADIUS Client

REQUEST

```
Delete /api/v1/configuration/uac/network-access/radius-clients/radius-
client/Ruckus HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
```

RESPONSE

```
HTTP/1.1 204 NO CONTENT
Content-Length: 0
Content-Type: application/json
```

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Creating a RADIUS Attribute Policy

```
REQUEST
POST /api/v1/configuration/uac/network-access/radius-attribute/radius-
attributes-policies/radius-attribute-policy HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
    "apply": "all",
    "description": "",
    "location-group": [
        "Guest"
    ],
    "name": "Return Attribute policy",
    "network-interface": "automatic",
    "open-port": "false",
    "return-attribute-flag": "false",
    "return-attributes": {
        "return-attribute": []
    },
    "roles": null,
    "send-session-timeout-by-default": "false",
    "send-termination-action-by-default": "false",
    "vlan": "65",
    "vlan-check": "true"
}
RESPONSE
{
    "result": {
        "info": [
            {
                "message": "Operation succeeded without warning or
error!"
            }
        ]
    }
}
```

Deleting a RADIUS Attribute Policy

```
REQUEST
DELETE  /api/v1/configuration/uac/network-access/radius-
attribute/radius-attributes-policies/radius-attribute-
policy/Return%20Attribute%20policy/HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
RESPONSE
HTTP/1.1 204 NO CONTENT
```

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```
Content-Length: 0
Content-Type: application/json
```

Creating SNMP Device

REQUEST

```
POST /api/v1/configuration/uac/snmpEnforcement/clients/client HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
    "default-vlan": "0",
    "description": "",
    "enable": "true",
    "ip-address": "10.204.88.12",
    "location-group": "none",
    "model": "Ruckus Wireless",
    "name": "ruckus",
    "read-auth-password-encrypted": "",
    "read-auth-protocol": "md5",
    "read-priv-password-encrypted": "",
    "read-priv-protocol": "",
    "read-security-level": "auth",
    "read-username": "public",
    "snmp-enforcement": "false",
    "snmp-version": "V2",
    "ssh-passphrase-encrypted": "",
    "ssh-port-number": "22",
    "ssh-private-key-encrypted": "",
    "ssh-user-name": "",
    "ssh-user-password-encrypted": "",
    "sys-contact": "https://support.ruckuswireless.com/contact_us",
    "sys-description": "Ruckus Wireless ZD1200",
    "sys-location": "350 West Java Dr. Sunnyvale, CA 94089 US",
    "sys-name": "ruckus",
    "trap-auth-password-encrypted": "",
    "trap-auth-protocol": "md5",
    "trap-priv-password-encrypted": "",
    "trap-priv-protocol": "",
    "trap-security-level": "auth",
    "trap-username": "public",
    "use-samecredential": "true",
    "write-auth-password-encrypted": "",
    "write-auth-protocol": "md5",
    "write-priv-password-encrypted": "",
    "write-priv-protocol": "",
    "write-security-level": "auth",
    "write-username": "public"
}
```

RESPONSE

```
{
    "result": {
        "info": [
            {
                "message": "Operation succeeded without warning or
```

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```
error!"
            }
        ]
    }
}
```

Deleting SNMP Device

```
REQUEST
DELETE
/api/v1/configuration/uac/snmpEnforcement/clients/client/ruckus/HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json

RESPONSE
HTTP/1.1 204 NO CONTENT
Content-Length: 0
Content-Type: application/json
```

Creating SNMP Policy

```
REQUEST
POST  /api/v1/configuration/uac/snmpEnforcement/snmpPolicies/policy
HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
    "apply-to-roles": "selected",
    "description": "",
    "location-group": "Guest Wired",
    "name": "SNMP policy",
    "roles": [
        "Guest Wired Restricted"
    ],
    "vlan": "65"
}

RESPONSE
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
    "result": {
        "info": [
            {
                "message": "Operation succeeded without warning or
error!"
            }
        ]
    }
```

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```
}
```

Deleting SNMP Policy

```
REQUEST
DELETE
/api/v1/configuration/uac/snmpEnforcement/snmpPolicies/policy/SNMP%20policy
HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
RESPONSE
HTTP/1.1 204 NO CONTENT
Content-Length: 0
Content-Type: application/json
```

Creating Device Group - TACACS+

```
REQUEST
POST /api/v1/configuration/uac/networkDeviceAdministration/groups/group/
HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
    "admin-realm": "Admin Users",
    "description": "",
    "name": "Device Group"
}
RESPONSE
{
    "result": {
        "info": [
            {
                "message": "Operation succeeded without warning or error!"
            }
        ]
    }
}
```

Deleting Device Group- TACACS+

```
REQUEST
DELETE
/api/v1/configuration/uac/networkDeviceAdministration/groups/group/Device%20Group
HTTP/1.1
Host xx.xx.xx.xx
```

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```
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
```

RESPONSE

```
HTTP/1.1 204 NO CONTENT
Content-Length: 0
Content-Type: application/json
```

Creating TACACS+ Client

REQUEST

```
POST api/v1/configuration/uac/networkDeviceAdministration/clients/client
HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
    "description": "",
    "deviceGroup": "Device Group",
    "enable": "true",
    "ipAddress": "10.204.88.244",
    "ipAddressRange": "1",
    "name": "TACACS client",
    "shared-secret-encrypted":
"3u+UR6n8AgABAAAAofSnIBrU19vdwUslG5LG4cg1QH6CbXDSmY4ZW0x85HY="
}
```

RESPONSE

```
{
    "result": {
        "warnings": [
            {
                "message": "The configuration has been implicitly changed"
            }
        ]
    }
}
```

Deleting TACACS+ Client

REQUEST

```
DELETE
/api/v1/configuration/uac/networkDeviceAdministration/clients/client/TACACS
%20client HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
```

RESPONSE

```
HTTP/1.1 204 NO CONTENT
Content-Length: 0
Content-Type: application/json
```

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Creating Shell Policies

REQUEST

```
POST /api/v1/configuration/uac/networkDeviceAdministration/policies/policy
HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
    "apply-action": "deny",
    "apply-groups": "all",
    "apply-roles": "all",
    "commandSets": {
        "command-set": []
    },
    "defaultPrivilege": "1",
    "description": "",
    "groups": null,
    "maxPrivilege": "1",
    "name": "TACACS policy",
    "roles": null
}
```

RESPONSE

```
{
    "result": {
        "info": [
            {
                "message": "Operation succeeded without warning or error!"
            }
        ]
    }
}
```

Deleting Shell Policies

REQUEST

```
DELETE
/api/v1/configuration/uac/networkDeviceAdministration/policies/policy/TACACS%20policy
HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
```

RESPONSE

```
HTTP/1.1 204 NO CONTENT
Content-Length: 0
Content-Type: application/json
```

RESPONSE

```
{
    "result": {
```

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```
        "warnings": [
            {
                "message": "The configuration has been implicitly changed"
            }
        ]
    }
}
```

Creating Admission Control Client

REQUEST

```
POST  /api/v1/configuration/uac/admissionControl/clients/client HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
    "description": "",
    "enable": "true",
    "ipAddress": "10.204.88.12",
    "name": "FORTINET",
    "templateID": "fortigate-text.itmpl"
}
```

RESPONSE

```
{
    "result": {
        "info": [
            {
                "message": "Operation succeeded without warning or error!"
            }
        ]
    }
}
```

Deleting Admission Control Client

REQUEST

```
DELETE  /api/v1/configuration/uac/admissionControl/clients/client/FORTINET HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
```

RESPONSE

```
HTTP/1.1 204 NO CONTENT
Content-Length: 0
Content-Type: application/json
```

Creating Admission Control Policy

REQUEST

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```
POST /api/v1/configuration/uac/admissionControl/policies/policy/ HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
    "action": "ignore",
    "apply": "selected",
    "count": "1",
    "event": "utm:ips",
    "name": "policy1",
    "replacementRole": null,
    "replacementType": "Permanent",
    "roles": null,
    "severity": "critical",
    "templateID": "fortigate-text.itmpl"
}
```

RESPONSE

```
{
    "result": {
        "info": [
            {
                "message": "Operation succeeded without warning or error!"
            }
        ]
    }
```

Deleting Admission Control Policy

REQUEST

```
DELETE /api/v1/configuration/uac/admissionControl/policies/policy/policy1 HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic
VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
```

RESPONSE

```
HTTP/1.1 204 NO CONTENT
Content-Length: 0
Content-Type: application/json
```

Getting Authentication API Key

REQUEST

```
GET <PPS-IP Address>/api/v1/auth
```

RESPONSE

```
"api_key": "NAIq3DNqOh7aDTsXJbZRUo4b+tILb1vpf5sasdasdfao="
```

REQUEST

```
GET <PPS-IP Address>/api/v1/auth/profiler/auth
```

RESPONSE

```
"api_key": "NAIq3DNqOh7aDTsXJbZRUo4b+tILb1vpf5sasdasdfao="
```

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Pulse Policy Secure Alert Based Admission Control APIs

Checking Status of PPS Server

```
REQUEST
GET <PPS-IP Address>/api/v1/integration/status
RESPONSE
"{\"message\": \"API server is up\"}"
```

Getting Session Details for Endpoint Based on IP Address

```
REQUEST
GET <PPS-IP Address>/api/v1/integration/sessions/<endpoint-IP Address>
RESPONSE
{
  "data": [
    {
      "ip": "10.xxx.xx.xx",
      "macaddr": "00-56-65-bf-0b-cx",
      "switch_ip": "",
      "switch_port": "",
      "username": "user1"
    }
  ]
}
Note: This sample response is for Juniper SDSN.
```

Getting Session Details for Endpoint Based on MAC Address

```
REQUEST
GET <PPS-IP Address>/api/v1/integration/sessions/<endpoint-MAC Address>
RESPONSE
{
  "data": [
    {
      "macaddr": "00-56-65-bf-0b-cx",
      "switch_ip": "",
      "switch_port": "",
    }
  ]
}
```

Sending Alert Event to PPS

```
REQUEST
PUT /api/v1/ integration/sessions
For example:
Sample PUT request Payload for Juniper SDSN is {"event-name":"block-endpoint",
"srcip":"10.xxx.xx.xxx"}.
Note: The event-names and field to parse the source-IP from the event should be
```

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```
defined in the admission control template.
RESPONSE
HTTP/1.1 204 NO CONTENT
```

Profiler REST APIs

Approving Devices

```
REQUEST
PUT api/v1/profiler/endpoints/simplified/xx:xx:xx:xx:xx:xx HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
   "status": "approved"
}
RESPONSE
HTTP/1.1 200 OK
Content-Type: application/json
{
  "Successfully updated.”
}
```

Updating Device Attributes

```
REQUEST
PUT api/v1/profiler/endpoints/simplified/xx:xx:xx:xx:xx:xx HTTP/1.1
Host xx.xx.xx.xx
Authorization: Basic VU9qSTlGTzNrYVk5d0t2aXpBN1dPZ0FyZlN1S3FmTkNnQUh0R0ZuR0xSbz06
Content-Type: application/json
{
   "manufacturer": "Windows",
   "os": "Windows"
}
RESPONSE
HTTP/1.1 200 OK
Content-Type: application/json
{
  "Successfully updated.”
}
```

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