



Pulse Connect Secure Release Notes

9.1R13.1

Build 16253

Default ESAP Version: ESAP 3.4.8

PDC 9.1R13.1 Build 12971

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Revision History

The following table lists the revision history for this document:

Document Revision	Date	Description
13.1	December 2021	<ul style="list-style-type: none"> Version 9.1R13.1: <ul style="list-style-type: none"> Added "Noteworthy Information in 9.1R13.1 Release" on page 13 Added to the Fixed Issues the "Release 9.1R13.1 PRs" on page 28 Added to the Known Issues "Release 9.1R13.1 PRs" on page 60
13.0	October 2021	<ul style="list-style-type: none"> Version 9.1R13: <ul style="list-style-type: none"> Added "Noteworthy Information in 9.1R13 Release" on page 13 Added "Release 9.1R13 Features" on page 17 Added to the Fixed Issues the "Release 9.1R13 PRs" on page 28 Added to the Known Issues "Release 9.1R13 PRs" on page 60 Version: 9.1R11.5: Added one point to the "Noteworthy Information in 9.1R11.5 Release" on page 14
12.2	October 2021	Version 9.1R12.1: A new "Release 9.1R12.1 PRs" on page 29 section in Fixed Issues. Added two PRs.
12.1	September 2021	Version 9.1R12: Updated the Noteworthy Information in 9.1R12 Release section.
12	August 2021	Version 9.1R12:

Document Revision	Date	Description
		<ul style="list-style-type: none"> Added the Noteworthy Information in 9.1R12 Release section. Added the New Features > Release 9.1R12 Features section. Updated the Fixed Issues section > 9.1R12 list. Updated the Known Issues section > 9.1R12 list.
11.4	May 2021	Updated the Noteworthy Information in 9.1R11 Release section and updated the Fixed Issues.
11.4	April 2021	Updated the Fixed and Known Issues for 9.1R11.4.
11.3	April 2021	Updated Fixed Issues and Known for 9.1R11.3.
11.0	January 2021	Changed the company logo, initial publication for 9.1R11.
10.1	December 2020	Updated the Noteworthy Information in 9.1R10 Release section with the MSSP License reporting enhancements.
10.0	December 2020	Version 9.1R10: Initial Publication.
9.1	November 2020	<ul style="list-style-type: none"> Updated the Fixed Issues > 9.1R9.1 list. Updated the Known Issues > 9.1R9.1 list.
9.0.1	November 2020	<ul style="list-style-type: none"> Updated the Fixed Issues > 9.1R8.2 list. Updated the Known Issues > 9.1R9 list.
9.0	October 2020	Initial Publication: 9.1R9
8.4	September 2020	Initial Publication: 9.1R8.2
8.3	August 2020	Initial Publication: 9.1R8.1
8.2	August 2020	Updated the Known Issues section.
8.1	July 2020	Updated the Fixed Issues > 9.1R7 and 9.1R8 list.

Document Revision	Date	Description
8.0	July 2020	Initial Publication: 9.1R8
7.0	June 2020	Initial Publication 9.1R7 Updated the Fixed Issues > 9.1R1 Release with PRS-368927
6.0	May 2020	Initial Publication: 9.1R6
5.3	April 2020	Updated the Known Issues section for 9.1R5
5.2	April 2020	Cosmetic change for 9.1R5
5.1	April 2020	Updated the New Features section for 9.1R5
5.0	April 2020	Initial Publication: 9.1R5
4.3	April 2020	Initial Publication: 9.1R4.3
4.2	March 2020	Initial Publication: 9.1R4.2
4.1	February 2020	Initial Publication: 9.1R4.1
4.0	January 2020	Initial Publication: 9.1R4
3.1	October 2019	Updated the Known Issues section for 9.1R3
3.0	October 2019	Initial Publication: 9.1R3
2.0	July 2019	Initial Publication: 9.1R2
1.0	May 2019	Initial Publication: 9.1R1

Introduction

This document is the release notes for Pulse Connect Secure Release 9.1R13.1. This document contains information about what is included in this software release: supported features, feature changes, unsupported features, and known issues. If the information in the release notes differs from the information found in the documentation set, follow the release notes.

Hardware Platforms

You can install and use this software version on the following hardware platforms:

- PSA300, PSA3000, PSA5000, PSA7000f, PSA7000c

To download software for these hardware platforms, go to <https://support.pulsesecure.net/>.

Virtual Appliance Editions

This software version is available for the following virtual appliance editions:

- Virtual Pulse Secure Appliance (PSA-V)

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- 9.1R1 release onwards, VA-DTE is not supported.



- From 9.0R1 release, Pulse Secure has begun the End-of-Life (EOL) process for the VA-SPE virtual appliance. In its place, Pulse Secure has launched the new PSA-V series of virtual appliances designed for use in the data center or with cloud services such as Microsoft Azure, Amazon AWS, OpenStack Fabric and Alibaba Cloud.
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The following table lists the virtual appliance systems qualified with this release:

Platform	Qualified System
VMware	<ul style="list-style-type: none"> • HP ProLiant DL380 G5 with Intel(R) Xeon(R) CPU • ESXi 7.0 Update 2c

Platform	Qualified System
OpenStack KVM	<ul style="list-style-type: none"> CentOS 7.7 QEMU/OpenStack KVM v1.4.0 Linux Server Release 6.4 on an Intel Xeon CPU L5640 @ 2.27GHz 24GB memory in host Allocation for virtual appliance: 4vCPU, 4GB memory and 40GB disk space
Hyper-V	<ul style="list-style-type: none"> Microsoft Hyper-V Server 2016 and 2019
Azure-V	<ul style="list-style-type: none"> Standard DS2 V2 (2 Core, 2 NICs) Standard DS3 V2 (4 Core, 3 NICs) Standard DS4 V2 (8 Core, 3 NICs)
AWS-V	<ul style="list-style-type: none"> T2.Medium (2 Core, 3 NICs and 2 NICs) T2.Xlarge (4 Core, 3 NICs) T2.2Xlarge (8 Core, 3 NICs)
Alibaba Cloud	<ul style="list-style-type: none"> ecs.g6.2xlarge (8 vCPU, 32GB, 2 NICs)

To download the virtual appliance software, go to: <https://support.pulsesecure.net/>

VMware Applications

The following table lists the VMware applications qualified:

Platform	Qualified
VMware	
VMware Horizon View Connection Server version 7.12	Rewriter
VMware Horizon Agent version 7.12	VDI Profiles
VMware Horizon View HTML Access version 5.4	VDI Profiles
VMware Horizon View Client version 5.4	VDI Profiles

Upgrade Paths

The following table describes the tested upgrade paths. Please note that here x and y refer to the following:

x: Latest maintenance release version:

y: Versions less than x

Upgrade From	Qualified	Compatible
9.1Rx	Yes	-
9.1Ry	-	Yes
9.0Rx	Yes	-
9.0Ry	-	Yes

For versions prior to 9.0, first upgrade to release 9.0Rx|9.0Ry, and then upgrade to 9.1Rx.



If your system is running beta or hot-fix version of the software, roll back to your previously installed official software release before you upgrade to 9.1Rx. This practice ensures that the rollback version is a release suitable for production.

Note: On a PCS/PPS virtual appliance, we highly recommend to freshly deploy a PSA-V from 8.3Rx and higher based OVF, when any of the following conditions are met:

- If the disk utilization goes beyond 85%.
- If an admin receives iveDiskNearlyFull SNMP Trap.
- If the factory reset version on the PSA-V is 7.x|8.0.

Upgrade Scenario Specific to Virtual Appliances

PSA-Vs cannot be upgraded to 9.1R10 without a core license installed. Follow these steps to upgrade to 9.1R10:



x: Latest maintenance release version

1. If PSA-V is running 8.3Rx:
 - Upgrade to 9.0Rx.

- Install the Core license through Authcode.
 - Upgrade to 9.1Rx.
2. If PSA-V is running 9.0Rx or later:
 - Install the Core license through Authcode.
 - Upgrade to 9.1Rx.

For details, see the “[Noteworthy Information in 9.1R4.3 Release](#)” section.

General notes

1. For policy reasons security issues are not normally mentioned in release notes. For more information on our security advisories, please see our [security advisory page](#).
2. In 8.2R1.1 and above, all the PCS client access binaries (Network Connect, WSAM, Host Checker, JSAM, Windows Terminal Services, Citrix Terminal Services) are signed with a SHA2 code signing certificate to improve security and ensure compatibility with Microsoft OS’s 2016 restrictions on SHA1 code signing. This certificate will expire on April 12, 2021. For details, refer to the KB articles [KB14058](#) and [KB43834](#).
3. Important note: Windows 7 machines must contain a March 10, 2015 Windows 7 Update to be able to accept and verify the SHA2-signed binaries properly. This Windows 7 update is described [here](#) and [here](#). If this update is not installed, then PCS 8.2R1.1 and later will suffer from reduced functionality (see PRS-337311 underneath). (As a general rule, Pulse Secure, LLC recommends that client machines be kept current with the latest OS updates to maximize security and stability).
4. When custom ciphers are selected, there is a possibility that some of the ciphers are not supported by the web browser. If any ECDH/ECDSA ciphers are selected, they require an ECC certificate to be mapped to the internal/external interface. If a ECC certificate is not installed and mapped to the internal and external ports (if enabled), administrators may not be able to sign in to the appliance. The only way to recover from this situation is to connect to the system console and select option 8 to reset the SSL settings. Option 8 resets the SSL setting to factory default. Any customization is lost and will need to be reconfigured. This is applicable only to Inbound SSL settings.
5. Pre-5.0 Android and pre-9.1 iOS devices don’t support Suite B ciphers. If Suite B is enabled, Pulse client on pre-5.0 Android and pre-9.1 iOS devices will not be able to connect to the PCS device.
6. The minimum ESAP version supported on 9.1R10 is 3.4.8 and later.

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- 9.1R2 release onwards, Network Connect (NC) client and legacy Windows Secure Application Manager (WSAM) client are not supported.



- From 9.1R1 release onwards, Active Directory Legacy Mode configuration is not supported. If you have an existing Active Directory authentication server using Legacy Mode, first migrate to Standard Mode and then upgrade PCS. For the detailed migration procedure, refer [KB40430](#).
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Noteworthy Information in 9.1R13.1 Release

From 9.1R13.1, ISA virtual platforms can be configured as license clients. For more information, refer to the *License Management Guide*.

Noteworthy Information in 9.1R13 Release

- At role level, based on the admin selection of solution type, end users can create HTML5 bookmarks.
- Logs are enhanced to include client certificate information.
- Refer to [KB44408](#) for the recommendations / best practices to deploy Virtual Appliance and the logs needed for analysis/troubleshooting.
- An option to configure the PSAL time-out under System Maintenance à Options.
- A warning message regarding the session disconnection displays when the localization settings are changed.
- Logs are enhanced to provide more ICT related information.

Noteworthy Information in 9.1R12 Release

- SNMP monitoring enhancement to map index numbers of the interfaces across ifTable and ipAddrTable.
- The grace period for expired licenses is now reduced from 91 days to 31 days.
- Logs are refined and enhanced. They now include session information such as the Session ID, Session start data and end data.
- Enhancements to dsagentd done to address session resumption issues.

- Source IP restrictions can now be disabled for admin realms from the serial console menu through an option we have provided newly.

Noteworthy Information in 9.1R11.5 Release

- Added an option for the Admin to enable users to download the Pulse Client Components removal (Pulse Upgrade Helper) tool on Windows End User machines upon Browser access. This option helps to remediate the certificate expiry issue. For more information, refer [KB44781](#) and [KB44810](#).
- This release provides important security hardening. For more information refer to [SA44800](#).
- Source IP restriction (RFC1918) is removed on Admin Realms for fresh deployments on OpenStack KVM platform. Default source IP restrictions are applicable for PSA appliances, VMWare, and Hyper-V platforms.
- An option is available on adminUI to force the users to re-authenticate on IDP inspite of the active user session.

Noteworthy Information in 9.1R11.4 Release

- This release provides important security hardening. For more information refer to [SA44784](#).

Noteworthy Information in 9.1R11 Release

- The HTTP only DSDID session cookies were introduced from Release 9.0R3. From release 9.1R11 onwards, the DSDID cookies are enabled by default for all new roles created. On upgrade, if DSDID is not enabled for any of the roles, a warning message displays on the dashboard. A link displays on the UI, administrator can click to enable DSDID cookies option for all the roles.
- Major browsers disable TLS1.0 and TLS1.1 by default. Administrators are recommended to use TLS1.2 and later and also select Maximize Security option under **Configuration > Security> SSL options** for inbound and outbound connections. If not selected, a warning message displays.
From 9.1R11 onwards, for new ESP VPN Tunneling Connection Profiles, AES256/SHA256 (maximize security) encryption is chosen by default.
- User logs and Administrator logs are refined and enhanced to display more information.

- A source IP restriction is added on Admin Realms so that admins can connect with only private addresses (RFC1918) on fresh deployments or when the configurations are cleared. This restriction is applicable to PSA appliances, VMWare, Hyper-V, and OpenStack KVM.
- From 9.1R11, SHA1 hashing algorithm is removed from the "Maximize Security (High Ciphers)" settings

Noteworthy Information in 9.1R10 Release

- Added stability improvements for L4 JSAM connections.
- Added following licensing reporting enhancements on MSSP deployments:
 - When the license client has concurrent users license installed locally, the client excludes the local installed count while sending lease usage to the license server.
 - When the license client has ICE license enabled or has an evaluation license installed which gives maximum platform limit for concurrent users, the license lease usage reported by client is zero.
 - The license client allows 10% extra usage over the licensed limit. This applies for maximum lease limit as well. In such case, the license client reports only the maximum lease limit usage. For example, if license client has leased 100 licenses and 110 users are logged in, license client reports only 100 as usage to the license server.
- Host header validation is introduced in 9.1R10. When this option is enabled on the server under **System > Configuratin > Security > Miscellaneous**, the Pulse Client upgrade through PCS may fail. For more information, refer to [KB44646](#).
- Added graphs to display advanced HTML5 connections under System Status dashboard. Refer to "Displaying System Status" in Pulse Connect Secure Administration Guide.

Noteworthy Information in 9.1R8 Release

For 9.1R8, Pulse Collaboration Client is packaged using PCS 9.1R7 build.

Noteworthy Information in 9.1R4.3 Release

- In 9.1Rx OVF a critical issue was observed. The 9.1R4.3 release addresses this issue.
- On some of the installations, it was observed that a few read-only files were being overwritten. Customers are experiencing HTTP 500 response for some of the admin requests. The 9.1R4.3 release addresses this issue.

- Upgrade works only if VA is deployed with 8.3 OVF onwards. If VA is deployed with pre 8.3 OVF, upgrade to this image will not work.
- Refer to [KB44408](#) **for the recommendations / best practices to deploy Virtual Appliance and the logs needed for analysis/troubleshooting.**

New Features

The following table describes major features that are introduced in the corresponding release:

Feature	Description
Release 9.1R13.1 Features	
ISA virtual platforms as license clients	ISA virtual platforms can be configured as license clients from 9.1R13.1. For more information, refer to the <i>License Management Guide</i> .
Release 9.1R13 Features	
AWS marketplace publishing	AWS marketplace publishing with GP3 AMI image to reduce the PCS upgrade time on AWS.
Release 9.1R12.1 Features	
No new features applicable to this release.	
Release 9.1R12 Features	
Integrity Checker	The integrity tool allows an administrator to verify the PCS Image installed on Virtual or Hardware Appliances This tool checks the integrity of the complete file system and finds any additional/modified files in the system.
Intune integration enhancements	This feature enhancement allows Windows users to fetch attributes from Intune by using MAC address option.
Advanced HTML5 Enhancements	The feature enhancement allows users to create admin/end-user Advanced HTML5 bookmarks.
SeamlessMigration of PCS instance in AWS.	This feature allows to modify internal port and external port of PCS deployed in AWS.
Choice of interface for each configured syslog server	This feature enhancement allows to add Source interface selection for each syslog servers configured in the PCS. It enables the admin to select a source interface with which address packets are sent to the syslog server.
REST API Enhancements for Named Users	This feature enables the admin to access the named users and its information and delete them on both PCS and License Server in Named User Repository mode using REST APIs.
Release 9.1R11.5 Features	

Feature	Description
No new features applicable for this release.	
Release 9.1R11.4 Features	
No new features applicable for this release.	
Release 9.1R11.3 Features	
No new features applicable for this release.	
Release 9.1R11 Features	
Advanced HTML5 solution (General Availability version)	PCS supports Advanced HTML5 Access solution. This Advanced HTML5 Access solution supports two Advanced HTML5 sessions by default and includes multiple monitors, session recording, audio recording, high sound quality, and camera support. From 9.1.R11, Advanced HTML5 access is available as General Availability version.
Release 9.1R10 Features	
No new features applicable for this release. Refer to Noteworthy Information in 9.1R10 Release for more details.	
Release 9.1R9.1 Features	
No new features applicable for this release.	
Release 9.1R9 Features	
SNMP v3 multiple user support	PCS supports two users to be registered with an SNMP engine with different authentication and privilege settings.
ESP Tunnel for Mixed Mode	PCS provides option to use ESP tunnel for 6in4 and 4in6 traffic.
Advanced HTML5 solution (Trial version)	PCS supports Advanced HTML5 Access solution. This Advanced HTML5 Access solution supports two Advanced HTML5 sessions by default and includes multiple monitors, session recording, audio recording, high sound quality, and camera support.
Remote microphone support in WTS	Supports microphones connected to the client computer during the remote session.
Release 9.1R8.2 Features	



Feature	Description
No new features added in this release.	
Release 9.1R8.1 Features	
No new features added in this release.	
Release 9.1R8 Features	
UEBA package for fresh installation of PCS/PPS	In case you have a fresh installation of PCS/PPS, you may download latest UEBA package from Pulse Secure Support Site (my.pulsesecure.net) and add the package at Behavior Analysis page before using Adaptive Authentication or Geolocation based Conditional Access.
Show users by access type	Apart from showing the number of concurrent user sessions, PCS Dashboard now shows the L4 access type (PSAM) and Clientless access type (Browser) logins as non-tunnel users.
PCS Protection from Overload	This feature disallows user login, user login via Pulse Desktop, HTML5 connection or connection to a web resource when the CPU load is above a certain threshold. By default, this option is disabled for PCS upgrades and enabled for new installation.
Reset/Unlock TOTP user through REST API	This release provides REST API to Reset/Unlock a user under a TOTP server.
New license SKUs for PCS/PPS	In this release, added around 120 new license SKUs for PCS/PPS.
Support for pool of NTP servers and NTP status check	PCS now supports pool of NTP servers up to 4 NTP servers to sync date and time.
Release 9.1R7 Features	
Automatic enable/disable ICE license	<p>This release provides automatic management of ICE license. PCS enables ICE license when the logged in users count crosses the maximum licensed users count and disables ICE license when the logged in users count drops below the maximum licensed users count.</p> <p>As an example, If you installed 100 licensed user counts, when the 101th user logs in, ICE license gets automatically enabled.</p>


Feature	Description
Show current HTML5 RDP sessions in Dashboard	This release provides HTML5 sessions information in the dashboard and the trend graph that helps admin to view the CPU usage and take necessary action to provide better remote access experience for the users.
Support for srcset attribute in HTML	PCS provides support for the responsive images (in web applications) via rewriter by rewriting the srcset attribute value. The corresponding images would be fetched on client application based on screen size, resolutions and other features.
Enable/Disable FQDN ACL	FQDN ACL feature was enabled by default earlier even though there are no policies configured. A new admin configurable option to enable or disable FQDN ACL feature is added in 9.1R7 at System > Configuration > VPN tunneling.
Release 9.1R6 Features	
Hyperlink to Host Checker Policies	In the User Realms > Authentication Policy > Host Checker page, the policy names now have hyperlinks. Click the link to view the policy configuration.
Hardware ID in the System Maintenance page	The System > Maintenance > Platform page displays Hardware ID along with the other platform details.
Serial number in the Licensing screen	The System > Configuration > Licensing page, displays Hardware Id and Serial number.
Enable/Disable option for ICE license	<p>This release provides REST API to do the following on a Standalone/Cluster:</p> <ul style="list-style-type: none"> • enable/disable ICE license • get the current status of ICE license.
Release 9.1R5 Features	
Terraform template support for AWS and Azure	PCS can be deployed using Terraform templates on supported hypervisors and cloud platforms.

Feature	Description
Location based Conditional Access	Conditional Access feature for Cloud Secure now provides a mechanism to enforce access control policies based on location parameters by defining policies for applications.
Password management for Open LDAP	LDAP based password management works with generic LDAP servers such as OpenLDAP.
Microsoft Intune MDM integration	In this release, the Pulse Secure device access management framework supports integration with Microsoft Intune.
HTML5 Sessions report	Active number of HTML5 sessions on PCS can be obtained using a REST API call to <code>api/v1/stats/active-html5-sessions</code> .
MSSP Reporting enhancements	<p>It is now possible to extract any particular license client/cluster report through REST API. Enhancements include:</p> <ul style="list-style-type: none"> • Cluster-wise view in the license report. • License report in JSON format through REST. • Options to get cluster/client/period sub-section of the granular report through REST.
SSLDump for VLAN	In this release, SSLDump utility supports VLAN. Admins can use this tool for debugging / data collection purpose.
Edit default gateway configuration	In PCS hosted on a cloud environment, it is now possible to edit default gateway configuration from UI.
Host Checker feature enhancement	Host Checker policy to detect and allow hard disk in which encryption is in progress.
License server with Active-Active cluster	<p>Administrators can:</p> <ul style="list-style-type: none"> • create license server with Active Active cluster on virtual/cloud and hardware platforms. • lease all different type of licenses to license clients from any node of active-active cluster. • surrender/recall licenses from any node of active-active cluster.
Release 9.1R4.3 Features	

Feature	Description
No new features added for this release	
Release 9.1R4.2 Features	
No new features added for this release	
Release 9.1R4.1 Features	
No new features added for this release	
Release 9.1R4 Features	
PCS VA on Alibaba Cloud	PCS now supports VA deployment on Alibaba Cloud.
Conditional Access	Conditional Access feature for Cloud Secure provides a mechanism to enforce access control policies based on user and device parameters by defining policies for applications. Conditional Access policies are evaluated during application access time while roles are mapped to the session during the session creation time.
REST API enhancements	<p>Enhancements include:</p> <ul style="list-style-type: none"> • Update to "Getting Active Sessions" • Update to "Getting System Information" • Added "Fetching the User Login Statistics" • Added "Health Check Status" • Added "VIP Failover" • Added "Applying License" • Added "Deleting License" • Added "Getting License Clients" • Added "Getting License Report from License Server" • Added Profiler REST APIs
vTM and PCS Integration for Load Balancing	The Platform Limit, Maximum Licensed User Count and Cluster Name attribute values are available for optimal load balancing.

Feature	Description
Support for Windows Redstone 6	In 9.1R4 release, Windows Redstone 6 - version 1909 is qualified.
Support for SharePoint 2019	In 9.1R4 release, SharePoint 2019 is qualified.
Support for VMware VDI 7.9, and 7.10	In 9.1R4 release, VMware VDI versions 7.9 and 7.10 are qualified.
Support for Citrix Virtual Apps and Desktops 7 1909	In 9.1R4 release, Citrix Virtual Apps and Desktops 7 1909 is qualified.
Protect passwords stored in local auth server using stronger hash	When a new local authentication server is created, now admin has a choice to store the password with strong hashing using pbkdf2.
Support license reporting per license client	<p>Licensing report is enhanced with usage statistics for each PCS instance - maximum user count per month per PCS/per MSSP.</p> <p>MSSPs can now:</p> <ul style="list-style-type: none"> • generate accurate usage reports of their customers. • make the structured report in XML format to enable for parsing and usage for dashboard.
Release 9.1R3 Features	
Consolidated system and troubleshooting logs	The various system logs and troubleshooting logs that help in investigating user access issues and system issues can be configured and accessed using the Log Selection page.
Connect to nearest available DC	The LDAP authentication configuration is enhanced in 9.1R3 to locate the nearest Microsoft domain controllers, which are spread across the globe, by resolving DNS SRV records.
Zero touch provisioning	From 9.1R3 release, PCS can detect and assign DHCP networking settings automatically at the PCS VM boot up. In the script included in the PSA-V package, the PCS parameters should be set to null in order to fetch the networking configuration automatically from the DHCP server.

Feature	Description
	<p> This feature is not supported on PSA hardware.</p>
PCS hosted in OpenStack cloud	OpenStack is an open source cloud computing platform that allows deploying and managing a cloud infrastructure as an IaaS service. As part of this release, Pulse Secure supports deploying PCS KVM in OpenStack cloud.
VMware tools support	From 9.1R3 release, VMware support is qualified for VMware 10.3.10, ESXi 6.7 Update 2c.
Debug Log storage expansion	From 9.1R3 release, the maximum debug log size is increased to 1024 MB on hardware platforms.
Periodic iostat data collection	From 9.1R3 release, the "iostat" information is gathered periodically and made available as part of node monitoring in system snapshot.
Control copy/paste option for a user from an HTML5 session	9.1R3 release provides option to the administrators as well as end-user to enable/disable copy/paste from HTML5 RDP sessions. This option will be available under User Roles as well as Admin Created Bookmarks".
Enhancements to Local Authentication Server default password	From 9.1R3 release, for a fresh installation, the valid password range defined is 0-999. Minimum length 10 and maximum length 128 are set as default values.
Restricting access to default resource policies	<p>From 9.1R3 release, for a fresh installation, the following predefined resource policies are set to "Deny" state by default.</p> <ul style="list-style-type: none"> • Web Access Resource Policy "Initial Policy for Local Resources" • Windows File Access Resource Policy "Initial File Browsing Policy" <p> The predefined policy for VPN Tunneling is not provided.</p>
IKEv2 Fragmentation	IKEv2 packets can be larger than the MTU especially the IKE_AUTH packets which include the certificate chain. These larger IKE packets get fragmented in the intermediate devices. This feature implements fragmentation at IKE level and avoids IP fragmentation.

Feature	Description
MSS value for TCP connections on Tun devices	Due to larger IPv6 header as compared to IPv4, if the MSS of the PCS external interface is not set appropriately, the packets would be dropped on the external interface. This feature enables to set MSS to a lower value so that TCP connections are not dropped for 6-in-4 cases or when there is NAT translation somewhere in the network before reaching PCS.
Release 9.1R2 Features	
SP-Initiated SAML SSO	Pulse Secure supports SP-initiated SAML SSO when PCS is configured as IdP in gateway mode. PCS uses the existing user session in generating SAML assertion for the user for SSO.
IDP initiated SAML Single Logout	This feature provides a single logout functionality wherein if a user gets logged out of a session from one application, PCS (configured as IdP) notifies all other connected applications of that user with Single Logout.
Flag Duplicate Machine ID in access logs	<p>Pulse client expects the machine ID is unique on each machine. If multiple endpoints have the same machine ID, for security reasons, the existing sessions with the same machine id are closed.</p> <p>A new access log message is added to flag the detection of a duplicate Machine ID in the following format:</p> <p><i>Message: Duplicate machine ID "<Machine_ID>" detected. Ending user session from IP address <IP_address>. Refer document KB25581 for details.</i></p>
Microsoft RDWeb HTML5 Access	<p>The newly introduced Microsoft RDWeb resource profile controls access to the published desktops and applications based on HTML5. The Microsoft RDWeb templates significantly reduce the configuration time by consolidating configuration settings into one place and by pre-populating a variety of resource policy settings.</p> <hr/> <p> In the 9.1R2 release, Microsoft RDWeb HTML5 access does not support Single Sign On. SSO will be made available in the future release.</p> <hr/>

Feature	Description
Backup configs and archived logs on AWS S3/Azure Storage	<p>Two new methods of archiving the configurations and archived logs are available now apart from SCP and FTP methods:</p> <p>Pulse Connect Secure now supports pushing configurations and archived logs to the S3 bucket in the Amazon AWS deployment and to the Azure storage in the Microsoft Azure deployment.</p>
V3 to V4 OPSWAT SDK migration	<p>PCS supports the migration of servers and clients to OPSWAT v4 to take advantage of latest updates.</p>
Report Max Used Licenses to HLS VLS	<p>From 9.1R2 release, the licensing client (PCS) starts reporting maximum used sessions count instead of the maximum leased licenses count. For MSP customers, this change helps in billing the tenants based on maximum sessions used.</p>
VA Partition Expansion	<p>PCS/PPS supports upgrading from 8.2Rx to 9.1R2 for the following supported platforms:</p> <ul style="list-style-type: none"> • VMware ESXi • OpenStack KVM • Hyper-V <p>When upgrading a VA-SPE running 8.2R5.1 or below that was deployed with an OVF template to a higher version, the upgrade was failing. This feature solves the upgrade problem for VMware, OpenStack KVM and Hyper-V. Refer KB41049 for more details.</p>
Release 9.1R1 Features	
Software Defined Perimeter	<p>Pulse Secure SDP uses PCS appliances which individually act as either an SDP controller or an SDP gateway. Mobile users of the Pulse Secure Client perform authentication on an SDP controller which runs an Authentication, Authorization and Accounting (AAA) Service. The SDP controller then enables direct communication between the user and the SDP gateways that protect the user's authorized resources and enables requested encryption.</p>

Feature	Description
DNS traffic on any physical interface	Prior to 9.1R1 release, DNS traffic was sent over the Internal interface. Starting with 9.1R1 release, an administrator can modify the DNS setting to any physical interface namely Internal Port, External Port or Management Port.
Authentication failure management	Account Lockout option is provided to manage user authentication failures for admin users of local authentication server. The admin user account will be locked after specified number of consecutive wrong password attempts. The account will be unlocked after the specified lockout period or by using the Unlock option.
Support for "client-name" parameter in HTML5 Access	User can pass "client-name" in HTML5 rdp using launcher method. The %clientname% variable is matched with a workstation ID and normally that variable is unique and dedicated remote desktop computer name.
Deploying PSA-V in OpenStack KVM	User can deploy PSA-V in OpenStack KVM using a template.
User access to internet resources on an Azure-based or AWS-based PCS	AWS VPC GW and Azure VNet GW drop packets if the source IP is the endpoint tunnel IP. This feature NATs endpoint tunnel IP to Internal interface IP. The NAT allows user to access internet resources when connected to a VPN tunnel on an Azure or AWS-based PCS.
REST API enhancements	<p>Enhancements include:</p> <ul style="list-style-type: none"> Getting Config without Pulse packages such as ESAP package and Pulse Client package Backing up and restoring binary configuration

Fixed Issues

The following table lists release numbers and the PRS numbers with the summary of the issue fixed during that release:

Problem Report Number	Summary
Release 9.1R13.1 PRs	
PRS-404658	Advanced HTML5 SSH Sessions and do not support scroll bar.
PRS-404298	Advanced HTML5 Copy/Paste does not work for SSH.
PRS-402150	Suddenly new L3 ESP/SSL VPN connection request fails for users due to auto-generation of Dsagentd cores.
Release 9.1R13 PRs	
PRS-403552	Client certificate information (serial number and certificate) is not available in PCS user access logs.
PRS-403495	Browser based end user UI error message for invalid credentials is not seen.
PRS-403462	Warn customers to follow mandatory steps before upgrading PCS/PPS.
PRS-403370	PDF files with streams having no Length attribute create segmentation fault causing rewriter server core.
PRS-403036	Source IP restriction for IPV6 Subnet in Roles restriction is not working.
PRS-403027	Core Access: SSO redirect with concur is not working
PRS-402999	XML import fails when config with the connection set containing option "Connect to URL of this server only" is disabled. This is due to improper initialization
PRS-402922	Improvements for ICT
PRS-402855	PCS archiving is not happening on Azure server
PRS-402633	DSDID length is not calculated properly causing Process web crash in FIPS mode.
PRS-402583	ICT page is skewed to left in classic UI but OK in new UI
PRS-402338	"Bookmarks open in new window" option is not exported in XML Export.

Problem Report Number	Summary
PRS-402271	While creating citrix profiles and change the options from java/html5/non-java, the auto policies created are not being handled as expected.
PRS-402253	Display a log message when the Root Partition gets into Read/Write Mode
PRS-402218	Unable to open Sharepoint documents using MS office native apps.
PRS-402075	HTML5: Option needed to hide basic HTML5 bookmarks/RDP launcher
PRS-401872	File download fail as file URL is getting truncated where newline exist in file name.
PRS-401553	When launching the Citrix client, 60 seconds delay is seen with no UI feedback, before PSAL download link appears.
PRS-401376	dsTermServ.exe crashes and unable to access terminal services with Applocker installed.
PRS-401160	Import of configs from older software to 9.1R11.4 may generate some error logs along with 'import done' message.
PRS-400261	REST API incorrectly responding to queries with ascii symbols
PRS-400152	With Recursive DNS domain name resolution for LDAP server is not successful.
PRS-399042	Process dswwsd crashed during network fluctuation when some of the variable is not set correctly.
PRS-398648	Enabling/Disabling ICE license on PSA7000 increases the CPU usage
PRS-392135	Pulse One disconnected from PCS after PCS upgrade
PRS-390822	Page rendering issue due to Cross-origin Object.
Release 9.1R12.1 PRs	
PRS-403735	Lost connections and dsagent process restarts due to a malformed IKEv2 packet.
PRS-403191	Unable to assign NCIP from the static IP pool in PCS 9.1R12.
Release 9.1R12 PRs	

Problem Report Number	Summary
PRS-401930	Authentication fails with no authentication prompt even though "Allow Smartcard with Network Level Authentication" shows enabled in the UI. However, XML export shows it as "Disabled".
PRS-401673	Due to Password Policy Control Changes introduced in 9.1R5, if we do not receive the proper response from LDAP server the authentication fails and associated process crashes.
PRS-401574	Duplicated Named User Licenses as usernames are treated case sensitive.
PRS-401421	PCS does not send DSID cookie to Pulse Client (SiteMinder authentication).
PRS-401356	The default admin realm is enabled with source IP restriction which restricts the access from a public network..
PRS-401318	Event log modification from "info to critical" for SYS30948 and from "critical to major" for SYS30912.
PRS- 401294	Log ERR32037 "Server name contains unsupported/unsafe characters", is seen even if the server name is valid and spelling unsafe is corrected in 9.1R12.
PRS-401213	Web crashes (restart) due to a problem in JSAM/WSAM data path leading to user disconnection and reconnection.
PRS-401185	Multiple Syslog entries are seen under in A/A clusters having more than 2 nodes.
PRS-401064	PSA7000 shows improper interface speeds when VLAN is configured.
PRS-400976	Multiple monitors, sound does not work when HTML5 is configured with NLA and no SSO set.
PRS-400960	Static IP via Radius Attributes not working as expected.
PRS-400951	Static IP allocation fails when there are IP pools which overlap with other IP pools.
PRS-400771	Windows Terminal Services client disconnects the sessions intermittently.
PRS-400725	Windows Terminal Services client disconnects when copying the files.

Problem Report Number	Summary
PRS-400655	Importing certificates from system config fails when there is no password set during config export.
PRS-400495	Azure PCS instance goes unresponsive intermittently.
PRS-400285	Added an event log to monitor internal shard usage.
PRS-400243	VIP status change notification event sent by passive node on reboot is treated as VIP status change notification from Active node, and users notice VPN reconnection.
PRS-400229	Session extension using PDC through SAML authentication server does not work.
PRS-400206	Changes to entity ID and SAML auth server instances are not recorded in the admin access log.
PRS-400067	Windows Pulse Client 9.1r11 with Avaya One-X causes BSOD.
PRS-400023	when User role is duplicated, VPN tunneling option is reset to default options and not updated.
PRS-399963	Impexserver crash is observed when importing PCS is having a duplicate certificate.
PRS-399925	Yearly graph shows incorrect data for active user sessions.
PRS-399842	After upgrade to 9.1R11, IP Assignments through LDAP/Radius Attributes is failing but Static Pool works fine.
PRS-399626	PSA7000f server restarts unexpectedly and user connection fails. Additional logs added to determine the Root Cause.
PRS-399559	Static IP allocation issue when multi session is enabled.
PRS-399450	Citrix VDI not working in the first attempt, Second attempt starts working and CTS launches and connects.
PRS-399409	Only ntpd Client service runs going further (Previously both server and client services were run).
PRS-399192	Failed to upload configuration on the newly registered PSA device on pulse one.

Problem Report Number	Summary
PRS-399136	Redirected URLs encoded not passing properly.
PRS-399021	When creating an admin role, User roles in the Users delegation displays incorrect number of selected roles.
PRS-398969	Bandwidth management policy does not work in the SSL Mode.
PRS-398814	guacd process protection mechanism where each instance of guacd instance is monitored and killed if the instance takes 100% CPU till the grace time.
PRS-398703	Healthcheck.cgi does not work from F5 load balancer.
PRS-398600	Named User Record/Database do not show up on license client.
PRS-398371	VLAN details are not removed from VLAN page after removing VLAN ID from management port.
PRS-398348	PCS device does not send the SNMPv3 trap out from the device.
PRS-398270	Expired certificates alarms for deleted certificates.
PRS-398262	Web process failures due to DSEvntTimer observed on PCS.
PRS-398002	Limitation on number of realms in sign in URL while connecting through PDC client.
PRS-397693	Compliance report for hostchecker policies mapped against realm/role is generated for user that does not belongs to that realm/role.
PRS-397676	License server low-level protocol error,Code=[6]: Could not resolve host name through external port.
PRS-397664	XML export of Admin/User realms shows the directory-server attribute same as authentication-server even though there is None in the UI.
PRS-397574	With Pre Host checker configured, if the Pulse credentials prompt times out, the session is extended instead of resumption.
PRS-397461	Basic HTML5 : Users not able to use mouse emulation with guacamole RDP sessions on iOS13 iPad.
PRS-397414	Extra fields appear under Role > Web Bookmark for new or existing bookmark prior to upgrade.

Problem Report Number	Summary
PRS-397380	User record synchronisation feature may not occur as-expected across all configured devices.
PRS-397349	User Record Sync clients disconnecting from green to grey status.
PRS-397346	Host Checker Re-Triggers with error message 'ESAP upgrade is needed or Patch Management policy configured' in event logs.
PRS-397290	SAML Single logout is failing.
PRS-397213	MSSP: watermark does not get reset, even if license client is not leasing licenses from the license server.
PRS-397059	AAA: X-forward-for IP is not evaluated/used when using geoLocationCountry rules.
PRS-397043	One cluster node stops accepting new VPN connections post getting deactivate/activated in cluster.
PRS-396972	Number of MC groups has been increased to 40 & 36 on Linux and Windows respectively.
PRS-396200	Upgrade fails when data partition does not have enough space to hold system configurations.
PRS-396062	Users unable to join hosted pulse collaboration meeting session through IE 11 browser.
PRS-395544	Upgrade failing for one node In A/P cluster.
PRS-395508	User gets disconnected when cert restriction policy is configured and SAML authentication server is used. This has been fixed as part of this PRS.
PRS-395347	Incorrect Source IP address used when sending packets to secondary radius server (When using "Traffic Decoupling" at "Auth Server Level").
PRS-394657	Pulse Collaboration: Customer gets an error while scheduling the meeting if the localization set to French.
PRS-394572	SNMP alerts shows abnormal increase in device temperature.
PRS-394202	Manual failover takes time to resume user tunnel connections. This is now improved.

Problem Report Number	Summary
PRS-393712	Terminal Session stops working after upgrade to 9.1R8. Adding logs to improve debug ability.
PRS-393675	Failed to send API requests from PCS(MDM) to Microsoft Intune for device authorization.
PRS-391871	Openstack KVM deployment - after reboot only local subnet can connect, PCS ignoring other packets.
PRS-390315	Fed-Wide session sync delay between Replicas results in user session getting removed from Imported sessions within few minutes.
PRS-380985	Incorrect Interface Status sent by the PCS appliance while performing SNMP Walk after upgrade to 9.1R1.
Release 9.1R11.5 PRs	
PRS-401116	Pulse Upgrade Helper tool upgrades Pulse Desktop Client once and terminates IE processes during the process.
PRS-400823	State Storage full and Program cache-server failed.
PRS-400746	Unable to see the details of package uploaded into Staging Area in Admin UI
PRS-400717	Improper titles for lines on HTML5 dashboard graph and some titles missing in Concurrent users graph.
PRS-400614	PSAL fails to launch Java Applets.
PRS-400653	In versions 9.1R11.4 and below, if the 'HTTP only cookie' option is enabled for admin role, the super admin session will not work.
PRS-400544	Program web recently failed on 9.1R11.3
PRS-399600	Users are not prompted to enter credentials as well as MFA on successful connection to VPN.
PRS-399576	The localization support is not available for new options on user created advanced HTML5 bookmarks.
PRS-399150	Host header Validation is failing for Virtual hostnames.
PRS-396923	PSA 5000 crashes with no access to UI or Console.

Problem Report Number	Summary
PRS-384770	GARP frames are not being sent under Default VLAN configured on an interface - VIP IP is not accessible after manual failover in A/P cluster.
Release 9.1R11.4 PRs	
PRS-400095	Web crash due to empty session IDs.
PRS-399115	Warm restart of services is observed on two node PSA7K AA cluster when run continuously for multiple days causing L3 and L4 connection drops.
PRS-398510	Error code 1326 displays on Pulse Client when username/password is saved on Client and expired on AD server.
PCS-27395	Custom expression failure messages is flooding User Access Logs.
Release 9.1R11.3 PRs	
PRS-400438	Code signing certificate fails globally when launching HC using browser. The certificate issue is addressed. For information refer KB44781 .
Release 9.1R11 PRs	
PRS-398532	During Kernel Panic (System stalls with no access to Admin UI), PCS/PPS devices will automatically reboot by default.
PRS-397979	Process snapshot gets generated for dsagentd/Web processes in 9.1R10. This issue can happen rarely when Client closes PSAM session with PCS server immediately just after closing TCP application connection.
PRS-397324	Dsagentd crashes when PCS System load average goes high.
PRS-397190	Rename all the places that contain WSAM keyword on the Admin UI to PSAM.
PRS-397171	Kernel panic is observed sometimes and PCS restarts.
PRS-397072	Host Check fails on macOS 11.1 when the policy is enforced. For more information, refer KB44663 .
PRS-397046	Background image and recaptcha is not loading through rewriter.
PRS-397000	Supporting corner cases for jquery usage in client side rewriter handling.
PRS-396944	WTS: End users unable to enable MIC on the user interface.

Problem Report Number	Summary
PRS-396870	PDC: Virtual adapter stops intercepting IPv6 packets on Mac/Windows/Linux platforms using PDC 9.1R9 build in ESP mix mode.
PRS-396773	Host Checker fails after upgrading ESAP version to 3.7.1 or 3.7.2 or 3.7.4 from any previous ESAP version on macOS endpoints (KB44643).
PRS-396675	Fixed rewriting for other elements of div tag caused due to Data-srcset support.
PRS-396389	User is not able to configure Azure as backup server in China region.
PRS-396262	Login button is not enabled when accessing web rewriter through IE browser.
PRS-396134	NTP will not synchronize time when default VLAN ID is configured on the interface.
PRS-396116	Browser-based Host checker fails to get launched in 64 Bit Internet Explorer.
PRS-396097	Kernel panic "nf_udp_esp6" may be observed on PSA7000F.
PRS-395982	Rename all the places that contain WSAM keyword on the Admin UI to PSAM.
PRS-395902	Pulse Component Set is selected to NONE does not update the "connstore" in spite of changing the connection set. A warning message is displayed to guide configuring the "Connection Set".
PRS-395813	Disabled DMI Inbound connections setting is not retained after reboot.
PRS-395330	SNMP query for "sysObjectID" is returning PSA7000F for PSA7000C platform.
PRS-394382	Handling rewriting of Data URLs at server side code to avoid rewriter crashes.
PRS-392135	Pulse One disconnected from PCS after PCS upgrade.
PRS-391667	Aligned the latest MaxMind DB pointer with local DB for Ueba package upgrade.

Problem Report Number	Summary
PRS-390324	Spikes are observed at regular intervals in the concurrent SSL connections graph.
Release 9.1R10 PRs	
PRS-395039	<p>License client reports the excess allowed usage while sending the usage to server.</p> <p>This issue is fixed to limit the reported count to maximum lease limit.</p>
PRS-394744	<p>"Error updating data for chart hc_failure_reason/auth_mechanism" log on PCS is not seen.</p> <p>The Exception that was causing this error is fixed.</p>
PRS-394586	<p>Administrator can set a guaranteed minimum users on a realm to allow an user from that realm to log into the PCS/PPS when the licensed concurrent user limit is reached.</p> <p>From Release 9.1R10, guaranteed minimum users is applicable when no ICE license is installed or ICE license is installed and enabled.</p>
PRS-393989	<p>When the current MSP license expires, and customers installs a new MSP license, VLS needs to re-register with PCLS. This was not happening previously, and this resulted in billing against older authcode.</p> <p>In 9.1R10, we have fixed this issue, so that VLS re-registers with the next active MSP license. Hence, the license usage is reported against the new authcode.</p>
PRS-393140	<p>Certificate authentication fails when the option 'Trusted for Client Authentication' is disabled in client CA certificate hierarchy.</p> <p>Added a new user access log and an Admin UI note to alert the PCS administrator in such cases.</p>
PRS-389455	<p>Analytics Device OS graph does not show Windows 10 OS information.</p> <p>This issue is fixed in 9.1R10 onwards.</p>
PRS-387059	<p>Unable to publish config when trusted client CA cert (using CRL) is deleted on Master appliance.</p>

Problem Report Number	Summary
	This issue is fixed in 9.1R10 onwards.
PRS-380696	Predefined Host Checker policy can now be configured with a ignore category based on the vendor.
PRS-390086	End-Points connected through slow internet now will not hit the incomplete ESAP package download scenario.
PRS-395701	<p>Access to advanced HTML5 custom URL is not successful without user logging into PCS server.</p> <p>The user is now prompted to log into PCS followed by log in prompt to target machine.</p>
Release 9.1R9.1 PRs	
PRS-396149	Web process restarts when Client Application profiles are configured under SAM --> Resource Profiles .
PRS-396441	For advanced HTML5 sessions, web process restarts if the FQDN is not resolved.
PRS-396463	For advanced HTML5 sessions, login may fail if the target machine username or password contain special characters.
Release 9.1R9 PRs	
PRS-395306	"Failed file system integrity check" warning appears on Admin UI when the file "integrity_check" is either not created or deleted. This is addressed in 9.1R9.
PRS-394759	DHCP Set option is added for AWS (If no DNS server configured in DHCP option set, it will take the second IP address as primary DNS server from the internal port subnet).
PRS-394604	Agent Type in active users page on PCS fails to show Windows OS version with 9.1R8 PDC builds.
PRS-394537	XML export shows virtual Platform for physical license clients. This is addressed in 9.1R9 release.
PRS-394242	Rewriter client side parser issue fixed for DanaGetURLUnencoded API.
PRS-394137	Performance tuning is incorporated for FQDN ACL feature.

Problem Report Number	Summary
PRS-394107	Pulse Client version does not display under "Active Users" tab for mobile devices. The issue is addressed in 9.1R9.
PRS-394075	Pulse Collaboration stops working after Setup Client download fails, after upgrading it to PCS 9.1R8.
PRS-393736	Dssecidcheck program fails. This is addressed in 9.1R9.
PRS-393649	If a session is no longer present in the system when the IP lease period is active, then the IP address is released back to the DHCP server.
PRS-393627	Host Checker: Compliance check fails when using Sophos Cloud Endpoint 2.8.6.
PRS-393624	SNMP polling on ifHighSpeed does not return the correct speed of a network interface, if default VLAN is enabled for that interface. This is resolved in 9.1R9.
PRS-393603	File Share: When a big file is uncompressed, PCS will ensure that all the chunks are read properly from 9.1R9.
PRS-393544	On the "Virtual Port" view page, if admin clicks "Cancel" button without saving any changes, then Network service is restarted. This is addressed in 9.1R9.
PRS-393437	From 9.1R9, if PCS VA is hosted by VMware, then NTP setting at "Date and Time" page will have an extra note which informs admin that the Virtual appliance should have only one source of Time Sync (VMware ESXi or NTP Server, NOT both).
PRS-393313	Web Process crash due to timer Library corruption is addressed in 9.1R9.
PRS-393269	PCS was unable to handle "Unknown" OCSP Response. This is addressed in 9.1R9.
PRS-393230	Sometimes, TCP Dump does not start. This is addressed in 9.1R9.
PRS-393070	Logical volume support is removed from KVM instances.
PRS-392547	Custom start page takes about a minute to show up when connected from IE with split tunnel and VPN auto-launch enabled. This is addressed in 9.1R9.

Problem Report Number	Summary
PRS-392359	The default password length has been increased and the same has been updated in the Azure ARM Template.
PRS-391949	In spite of installing the Meeting license on a virtual appliance running A/A cluster, the effective count of concurrent meeting users remain zero. This is addressed in 9.1R9.
PRS-391629	PSAL Linux is unable to connect to PCS. This is addressed in 9.1R9.
PRS-391573	During domain controller reachability test under LDAP Auth Server, PCS does not close the LDAP TCP socket connection with domain controller. This is addressed in 9.1R9.
PRS-391273	When SAML config has both SLS and SSO service types using same Location URL, Import XML fails causing SAML metadata publish to go into loop. This is addressed in 9.1R9.
PRS-389484	PCS appliance now sends IPv6 Neighbor Advertisement with correct VLAN tag for user roles mapped with sourceIP as VLAN interface.
PRS-389448	dsagentd process crashes when handling multicast traffic. This is addressed in 9.1R9.
PRS-388972	Session extension fails when custom sign-in page is configured for the sign-in policy. This is addressed in 9.1R9.
PRS-387807	When default VLAN is enabled, virtual port is not considered for the user role while calculating the source IP. So, default IP was assigned as source IP. This is addressed in 9.1R9.
Release 9.1R8.2 PRs	
PRS-394540	A tactical fix was provided as part of 9.1R8.1 (PRS-393243). However, Custom Rule Expression evaluation is now made more robust with thread safety in 9.1R8.2.
PRS-394113	PCS can parse and store up to 32 IP addresses returned by DNS server.
PRS-393865	Running TCP Dumps can get the Disk Full as there is no Log Rotation in place. This is addressed in 9.1R8.2.
PRS-393666	Application level integrity check was missing on PCS for Fragmented EAP-TLS packets. This is addressed in 9.1R8.2.

Problem Report Number	Summary
PRS-393440	Host Checker fails with Error "Host checker did not get installed properly. Your computer does not meet requirements". This is addressed in 9.1R8.2.
PRS-392873	The desktop settings configured under terminal services bookmarks will not apply if the resource's Operating System is Windows 8 or later. This issue is seen in Pulse Client 9.1R8.1 or earlier. The issue is resolved after implementing new interfaces of the Microsoft MsTscAx component.
PRS-392156	Modified WebRequest code to prevent null pointer (Hprewrite-server) crashes.
PRS-391188	DHCP options disappear upon clicking "Refresh Now" button under Connection Profiles > Proxy Server Settings. This is addressed in 9.1R8.2.
PRS-391141	Duplicate syslog (SYS31407) messages appear in event logs. This is addressed in 9.1R8.2.
PRS-388494	Large Username XML Import now logs proper error message.
PRS-385110	Upgrade failure due to white spaces in the configuration is fixed in 9.1R8.2.
Release 9.1R8.1 PRs	
PRS-393434	Time drift is observed when NTP is configured on Virtual Appliances. This can affect authentication, cluster sync, and cause licensing issues. This is addressed in 9.1R8.1 (KB44558).
PRS-393243	Host Checker policy evaluation fails very intermittently for some time if policy rules need to be evaluated based on Custom Rule expression. This is addressed in 9.1R8.1.
PRS-392995	dsagentd crashes occasionally in load condition during initial data channel establishment. This is addressed in 9.1R8.1.
PRS-392842	The Overview/cockpit graphs representation will now show data similar to the Classic UI (It will omit the duration for which the data is not available).
PRS-392593	Restriction of REST API commands via the internal port is now fixed.
PRS-392254	SNMP polling was not returning false PCS Model Number and device type. This is addressed in 9.1R8.1.
PRS-392153	Session Server failures due to cluster instability is fixed in 9.1R8.1.

Problem Report Number	Summary
PRS-392096	Winbindd crash seen due to an exception is fixed in 9.1R8.1.
PRS-391990	SSH/Netconf clients should now be able to connect PCS DMI Agent successfully.
PRS-391708	Quick navigation link added to Enable/Disable FQDN ACL. And the following warning message is also added: "Ensure that there is no DNS latency/delay in the network to avoid performance issues".
PRS-391690	When a license client surrenders a license, the expiry date of that surrendered license keeps changing in license server to keep the expiry date always as 10 days (default) ahead of current date. The change is reflected in "License Summary" page of license server admin UI. But the change is not always reflected correctly at the "Pool of available licenses" section under the "Configure Clients" tab as there is a sync-up issue. This is addressed in 9.1R8.1.
PRS-391253	When Pulse Desktop client is used, PCS server does not provide session ID in User Access log after a successful login. Here "session ID" denotes the last 8 characters of actual session ID in server, and it is used to differentiate a session from other sessions for one user. From 9.1R8.1, PCS server will provide this ID for all types of Pulse clients after successful logins.
PRS-390500	From 9.1R8.1, PCS end user name will appear as client name (instead of Localhost) in HTML5 RDP session.
PRS-389526	From 9.1R8.1, a warning message will be sent only when the lease request fails or no leasable license is left with the number of users reaching towards maximum concurrent users limit.
PRS-389251	Frequent warning message about "number of concurrent users is nearing system limit" creates confusion about actual issue with concurrent users limit. Form 9.1R8.1, a warning message will be sent only when lease request fails or no leasable license is left and number of users are reaching towards maximum concurrent users.
PRS-387936	Global session configuration values (Users > User Roles > Default Options) are used when individual user role is not configured with session options.

Problem Report Number	Summary
Release 9.1R8 PRs	
PRS-392702 PRS-391725	Additional logging to debug web crashes.
PRS-392244 PRS-388907	Active users were not able to sync to the newly added node on a 3 node Active/Active cluster. This is addressed in 9.1R8.
PRS-392040 PRS-388907	User sessions are not synced across the nodes in an Active/Passive cluster. This is addressed in 9.1R8.
PRS-391902	Invalid packet processing in kernel is addressed in 9.1R8.
PRS-391879	Intermittent audio disconnect issue with HTML5 RDP session is addressed in 9.1R8.
PRS-391837 PRS-380638	tncs process crash with Host Checker caching enabled is addressed in 9.1R8.
PRS-391004	The dsunitysamlhandler process crash is addressed in 9.1R8.
PRS-390937	In 9.1R4 to 9.1R7, when multi monitor option is selected under the Terminal Services session/bookmark page as well as under Terminal Services Options page, XML config data shows incorrect value. This is addressed in 9.1R8.
PRS-390916	Kernel panic during upgrade on PSA5000-V running 9.1R3 on Hyper-V. This is addressed in 9.1R8.
PRS-390907	Log rollover is implemented for postgresd so that it does not cause the Disk to get full.
PRS-390831	SAML authentication is now successful when signing is enabled for SAML requests/responses using certificates.
PRS-390828	As dshealthstatsunity process was getting exited due to exceeding process size, data was not being sent to Pulse One for that particular interval and thus calculated cumulative count at Pulse One was incorrect. This issue is addressed in 9.1R8.
PRS-390769	Kernel logging options are added by default for better debuggability.

Problem Report Number	Summary
PRS-390426	As process was getting exited due to exceeding process size, data was not being sent to Pulse One for that particular interval. This issue is addressed in 9.1R8.
PRS-390274	For config elements with unicode characters and having length exceeding 4096 bytes, the config import fails on Pulse One client. This issue is addressed in 9.1R8.
PRS-390217	Tunnels get dropped during connection resumption due to a server error. This is addressed in 9.1R8.
PRS-389927	The TCPDump filter expression can now contain characters from the set "<> ;()[]?#\$\$^&*=\'\`\" .
PRS-389897	Kernel Panic hrtimer_interrupt issue is fixed.
PRS-389771	Multiple VIP fail over was seen on Virtual A/P cluster due to the time drift between system clock and hardware clock. This is addressed in 9.1R7 (KB44457).
PRS-389756	The dsagentd process crash during assignment of IP address from DHCP server is addressed in 9.1R8.
PRS-388630	With current OPSWAT library code, the verification of update functionality was not working. OPSWAT has fixed the issue and provided a new library.
PRS-388104	The top-roles section displayed on dashboard was not showing the roles name in Japanese and other languages. This issue is fixed for both Classic UI and New UI in 9.1R8.
PRS-385646	<p>Whenever a user tries to access the VDI resource, a wrong error code for timeout was written in the logfile. The user sees the message "Missing host name/IP, Invalid host name/IP: "</p> <p>To address the issue:</p> <ol style="list-style-type: none"> 1. Timeout error ID is passed to write in logfile. 2. A proper validation has been done for the wrong false alarm.

Problem Report Number	Summary
PRS-364693	Bandwidth Management policy not getting enforced for VPN tunneling users is fixed in 9.1R8 - https://kb.pulsesecure.net/articles/Pulse_Secure_Article/KB44402/?kA13Z000000L3Dc .
PCS-20480	PCS was returning "Incorrect ICE action" error message when trying to execute api/v1license/ice REST API to fetch the current status of ICE. This is addressed in 9.1R8.
Release 9.1R7 PRs	
PRS-391296	Application access using Citrix Terminal Services through IE browser fails in 9.1R5-9.1R6 PCS versions. This is addressed in 9.1R7.
PRS-390778	Host Checker support for OS version check is added for iOS versions 13.4 and 13.4.1.
PRS-390775	PCS syslog forwarder does not work if connection to syslog server fails during startup of the syslog forwarder process. This is addressed in 9.1R7.
PRS-390530	Enterprise user onboarding fails in Mac OS Catalina as the filename extension was not populated as '.mobileconfig'. This extension is added in 9.1R7.
PRS-390475	Noticeable slowness was seen in several applications including Citrix HTML5 video rendering in 9.1R3-9.1R6 PCS versions. This is addressed in 9.1R7.
PRS-390401	SNMP functionality was not working after cache sync. This is addressed in 9.1R7.
PRS-390234	User access log now shows real-time active HTML5 sessions count.
PRS-390118	In PCS A/P cluster split and joined scenario, lease license IDs are validated to reset the stale ID and license client will be able to lease licenses successfully.
PRS-389481	Cloud Platforms: Improved SNAT performance by tuning kernel module parameters based on the memory available in the device.

Problem Report Number	Summary
PRS-389209	With PCS 9.0R2-9.1R6 and Pulse 9.0R2-9.1R3, the client continues to send the CAV traffic to PCS every 300 seconds even when Cloud Secure license is not installed. From PCS 9.1R7 onwards, the PDC client (Pulse 9.0R2-9.1R3) will contact the PCS server only once per user session - KB44410 .
PRS-388932	From PCS 9.1R7, the "Synchronization of last access time in user sessions" option in A/A Cluster mode will be auto-enabled and grayed out when the "Synchronize user sessions" option is enabled (otherwise, it can affect session migration). Existing cluster configuration is not modified during upgrade, so we recommend admins to enable this option for existing configurations as well.
PRS-388455	If epupdate_hist.xml is hosted internally with no authentication and if "Use Proxy Server" (With/without auth) is enabled with FQDN or IP Address, the first 3 characters are ignored thus causing it to fail. For example, proxy.domain.net is taken as xy.domain.net. This issue is now fixed for both PCS and PPS.
PRS-382777	Client's original Source IP was not logged if Load Balancer is used. Client's Source IP is now retrieved from 'X-Forwarded-For' header and logged in user access logs.
Release 9.1R6 PRs	
PRS-390370 PRS-390145	Java Script is displayed after the user scans the QR code only during the TOTP user registration.
PRS-390352	Hostname resolution for an FQDN with up to 255 characters was not supported through the L3 tunnel in PCS 9.1R5.
PRS-390198	Admin cannot download reports in PDF format for PCS.
PRS-389973	HTML5 connections cause memory leak in Guacamole server and result in high memory usage and swap memory usage
PRS-389811	CPU Allocation issue on PSA-7000 (all flavors/varieties) appliances in case of Single-Arm mode VA deployments is now resolved on PSA-7000 HW and ESXi (VMWare) solutions. Refer KB44446 for more details.

Problem Report Number	Summary
PRS-389744	Process snapshot for "dserver-tasks" is generated while deleting meeting objects for corresponding users.
PRS-389544	Some of the examples listed under "Split Tunneling Networks" policies are not supported.
PRS-389523	External backend resource access using HTTP GET request with username in the URL for the file login.cgi fails through Rewriter.
PRS-389517	Web server crashes and results in User disconnections due to websocket upgrade related messages during Auth Only URL access.
PRS-389440	User Accounts under TOTP Auth server Users section cannot be exported.
PRS-389406	Delayed or no response from PCS for SNMP queries under load condition.
PRS-389276	The corruption of blob during the epupdate results in Host Checker scan failure for users until the next successful epupdate.
PRS-389262	Web process snapshot is generated while sending POST request by REST API with an empty body.
PRS-389127	Garbled text in Citrix VDI profiles page when accessed using bookmark with the Japanese language.
PRS-388796	The dsagentd process (client server process) crashes and frequently disconnects in 9.1R4 when there are more than 1024 tunnels including MobIKE IKEv2 tunnels.
PRS-388645	After upgrading PCS/PPS to 9.1R3-9.1R5, slow Host Checker response is observed due to a very frequent re-evaluation of Cybereason Active Probe product.
PRS-388542	Garbled text in file share page when accessed using bookmark with the Japanese language.
PRS-374603	During system downtime activities such as an upgrade, Event IDs such as 20412/20413 are missing in the Syslog server.
Release 9.1R5 PRs	
PRS-389938	9.1R4.3 Radius crashing, unable to authenticate Pulse.

Problem Report Number	Summary
PRS-389550	Intermittently, the system throughput falls drastically and user connections fail.
PRS-389246	"500 Internal Error" is displayed when opening Authentication related pages.
PRS-389212	Intuitive Customer friendly ways and relevant logs to avoid customers configuring single core.
PRS-388958	Idle timeout session is not working, OWA 2016 keepalives not ignored through web-rewrite.
PRS-388885	License Surrendering not happening due to the heartbeat not sent.
PRS-388743	Host Checker :: OS Checks :: MAC :: Add support to configure Minimum Service Pack/Version for MAC Catalina(10.15).
PRS-388734	PSA7000 at 30% total CPU due to two guacd processes at 100% CPU, planning pandemic and wanted to know root cause.
PRS-388536	One node in Cluster is surrendering the licenses to the License server. However, the increment of the surrendered time is not happening.
PRS-388479	PSA5000 : 9.1R4 : A/P Cluster : REST API calls are failing intermittently when they are executed in a loop continuously.
PRS-388429	Text corrected under Log/Monitoring > Admin Access > Settings.
PRS-388421	PCS 9.1R4 incorrectly reporting duplicate machine ID.
PRS-388409	Unable to upload config to Pulse One: Configuration changed while preparing configuration to upload.
PRS-388331	After upgrade VA-DTE & PSA-V to 9.1R4, nfqueue unable to create IPTables when VM is configured with 1 CPU core only.
PRS-388244	FileShare:: Customer unable to download direct file from FileShare on 9.1R4 PCS version.
PRS-387954	Rewrite: Web page of the maps web applications fails to load via rewrite.
PRS-387780	Registered PCS Appliance failing with Pulse one communication after importing user config and shows registration expired error message.

Problem Report Number	Summary
PRS-387641	"Sign Out message" does not properly display unicode text (Japanese, Korean, Chinese, etc.) with Sign-In Pages via browser.
PRS-387359	Unable to authenticate user using certificate. Reason: Wrong Certificate::unsupported name constraint type.
PRS-387349	System: Built-in Trusted Server CAs cannot be removed if they have subCAs.
PRS-387062	PSAM sending unintended traffic via tunnel to VPN in 9.1R3.
PRS-386875	User Sessions get disconnected after upgrading to 9.1R3HF1.
PRS-385747	Program dsdashsummary failing continuously on PCS running on 9.0R4.1.
PRS-385466	Sharepoint 2019 is not loading properly through web-rewrite.
PRS-385027	VDI Bookmark would not establish connection to the VDI resource without host entry on the client machine.
PRS-384955	XML Import of trusted server CAs generates a spurious admin log message for each unchanged CA.
PRS-382364	System: Device does not boot up when upgrading from 8.3R7.1 to 9.0R5 with option DELETES all system and user configuration data before installing the service package is selected.
PRS-381972	System : Licensing : "License server low-level protocol error, server=, Code = [6] :Could not resolve host name" populated in event logs of license server.
PRS-381905	After upgrading to iOS 13, HTML5 Access users seems to have broken the on-screen mouse pointer.
PRS-381716	AAA::Issues with host checker when user logs in to a different realm with TOTP auth server enabled.
PRS-381699	Pulse One 2.0.1902: Certificate > Trusted Server CA changes not being distributed (deleted expired CA).
PRS-381678	VIP became unreachable from enforcer when upgrading from 5.4R7 to 9.1R2.
PRS-381046	Rewrite: Dynamic365 menu tabs do not render when on 9.1R1.

Problem Report Number	Summary
PRS-380298	User access log indicates Login failed using auth server LDAP Server (Failed::unable to verify the first certificate) for wrong password.
PRS-380225	"Program fqdnac1 recently failed" event failure on PCS 9.0R4.
PRS-379752	Reboot failed on PSA7000f.
PRS-379137	Gliffy Plugin in Confluence does not work via Web Rewrite.
PRS-376852	IPV4 Settings change in External or Internal port keeping Default VLAN ID same does not reflect under VLAN tab..
PRS-365669	SNMP: ifAdEntAddr mapped to wrong ifAdEntIndex values.
Release 9.1R4.3 PRs	
PRS-389246	"500 Internal Error" is displayed when opening Authentication related pages.
Release 9.1R4.2 PRs	
PRS-380298	User Access log indicates "Login failed using Auth. server LDAP server (Failed: unable to verify the first certificate)" for wrong password.
PRS-387780	Registered PCS Appliance fails with Pulse One communication after importing user config and shows "Registration Expired" error message.
Release 9.1R4.1 PRs	
PRS-382268	PDC throws Authentication rejected by server [Error : 1319] when using global PCS url.
PRS-387062	PSAM sending unintended traffic via tunnel to VPN in 9.1R3.
Release 9.1R4 PRs	
PRS-365669	SNMP: ifAdEntAddr mapped to wrong ifAdEntIndex values.
PRS-367786	Device locked up and dropped all connections due to Web process consuming CPU.
PRS-375181	VLS does not throw any error if there is no response for Heartbeats sent to PCLS.
PRS-377456	EasyPrint feature using the Premier Java RDP Applet not working.

Problem Report Number	Summary
PRS-379345	Program dsagentd failed.
PRS-379411	PCS not sending any Syslog traffic to configured Syslog servers.
PRS-379801	Active Sync stopped working after upgrading the device to 9.0R4.
PRS-380136	Cluster communication and state storage problems on A/A cluster.
PRS-380765	Program dsagentd recently failed after upgrading PCS from 9.0R3.2 to 9.0R4.
PRS-380796	PCS-VA sending critical SNMP alerts while leasing license.
PRS-380993	DFS: process snapshot generated by snmptrap process.
PRS-381100	Program dsagentd recently failed while running Mixed [V4 and V6] 60K VPN Tunneling ACL's throughput test on PSA5k for secure cache build-3164.
PRS-381366	Multiple users getting disconnected from Pulse Client.
PRS-381403	Sharing Feature is not working in macOS Catalina.
PRS-381579	Sometimes empty logs are seen under "Log/Monitoring".
PRS-381621	9.0R4 and 9.0R5 SPE (PSA-V) do not show the User Record Sync column in Admin UI > Auth Server page.
PRS-381633	Host Checker checking for virus definition file based on Number of updates fails for Sophos Endpoint Security and Control 10.8.4.
PRS-381736	After Upgrade from 8.3R7.1 to 9.1R1, error encountered while upgrading cache (in Host Checker).
PRS-381795	[FQDN ACL / NFQUEUE] Request DEV help in determining why thousand of VPN Tunnels dropped traffic within.
PRS-381960	Facing slowness when accessing web application through Authorization-only access post upgrading to PCS OS 9.0R5.
PRS-381963	Group Names in the role mapping rule will get added with &, # and; special character if more than 5 groups are selected with AD as the auth server.
PRS-381984	The cookie setting should be included in the resource profile.
PRS-382001	UI: Description incorrect on default deny in 9.1R3 initial deployment.

Problem Report Number	Summary
PRS-382021	Button to dismiss the banner on PPS/PCS Dashboard for not accepting Perpetual license is not working.
PRS-382031	Need to replace VA-SPE PSA-V in "Only EVAL licenses are allowed for manual installation in VA-SPE PSA-V".
PRS-382035	Proper logging for NFQUEUE full and drops needed, also consider this situation for cluster A/P failover or add to healthcheck.
PRS-382191	Unable to ping the IPv6 VLAN-Gateway from the PCS device after changing the Gateway address.
PRS-382240	User dropped from the VPN tunnel connection ##g_dhcp_proxy_wbuf is maxed!.
PRS-382350	Unknown RAID status in PSA7000f due to no space left on device.
PRS-382804	Active node went unresponsive in A/P cluster and generated multiple Watchdog snapshots.
PRS-384939	"Invalid EKU text" error found while configuring "E-mail protection" under EKU text.
PRS-384963	Host checker: After upgrading to 9.1R3, HC "Successfully loaded" message is garbled when it is initiated in browser with Japanese language.
PRS-384967	healthcheck.api showing incorrect MAXIMUM-LICENSED-USER-COUNT in AA cluster.
PRS-385144	Web Rewrite: Images not loading on the web page for a web resource configured via rewrite.
PRS-385150	Access via SSH port forwarding fails.
PRS-385159	Home page of eTime (Timesheet) Web application is not rendering properly via Rewrite in all web browsers.
PRS-385203	Add iOS check for 13.2, 13.2.1, 13.2.2.
PRS-385496	Adding default policy for Citrix resources.
PRS-385500	VLS should use only MSP Authcode for registering with PCLS.
PRS-385526	Add iOS Check for 13.2.3.

Problem Report Number	Summary
PRS-385550	Users cannot see full display of shared screen, if the size of text, app and other items in the "Scale & layout" in Display settings is set to 150% (Recommended) on the client's machine.
PRS-385721	Unable to restore Local User Accounts Backup on PCS 9.0R5.
PRS-387517	DanaLoc appears to be missing when using IE11.
PRS-387541	Web Rewrite: Drop-down menu, Refresh button, Change Password option and Login button not working on the login page.
Release 9.1R3 PRs	
PRS-366490	System Temperature status value on SNMP server displaying wrong value.
PRS-371351	Citrix sessions drop regularly causing various issues. These issues are observed in PCS 9.0 with Citrix port 2598 via JSAM. This issue is not found in 8.2R8.
PRS-371699	Users unable to login as well as dropping users - LMDB full.
PRS-372805	Realm level certificate restriction skipped with SAML Auth.
PRS-372999	Host checker is failing for Host Checker (OS-Check only) for Chrome OS 71.0.3578.127 with PCS 9.0R1 firmware version.
PRS-373160	Dropdown option misses internal menu while accessing via web rewrite.
PRS-374124	VDI Session are not showing under Virtual Desktop Sessions.
PRS-374146	UNC path is not handled properly by HOB Applet.
PRS-374318	PCS deployed on the AWS Cloud showing speed 10 Mbps.
PRS-374344	Last core dumps being generated at customer after 9.0R2.1HF6 with fixes.
PRS-374603	Syslog missing event logging info when upgrading.
PRS-374765	PSA7000f RAID failed after upgrading.
PRS-374831	Login page is not rendering properly for a web resource configured through rewrite.
PRS-374992	PCS using DUO as secondary authentication fails the first authentication attempt after installation.

Problem Report Number	Summary
.PRS-375079	CORE.fqdnac crashes continues to occur even after 9.0R2.1HF6 (with fix).
PRS-375880	None of the contents in the Azure web portal are loading through rewrite.
PRS-375906	Unable to load a sign-in page getting stuck in loading the web page while accessing a web resource configured through the rewrite.
PRS-376036	PCS evaluation of the custom expression "time.dayOfYear" is not working as expected.
PRS-376247	Factory-reset does not work in 9.1R1 instead it boot up PCS with current image.
PRS-376249	Logon page of SAP fiori portal displayed as blank in IE11 only via rewrite.
PRS-376343	Mails are not getting synced in Native Email Client in iOS when using SA as ActiveSync Proxy due to stale records present and crash is happening in aseproxy-server service.
PRS-376357	When extending Pulse Client sessions, it causes network drop.
PRS-376429	JSAM stuck on loading forever on IE - Java.
PRS-376458	HOB stuck on loading forever on IE - Java.
PRS-376500	Azure 9.0R3.1 - postgresd service restarts constantly after deployment.
PRS-376520	Host checker fails to detect FireEye Endpoint Agent 29.7.0.
PRS-376840	Running Add command when the Disk is missing will cause a minor error message which requires a reboot.
PRS-376869	Dns_cache process snapshots persist after upgrading to 9.0R4HF6.
PRS-376953	Unable to view PDF files in the myDocuments application.
PRS-377022	File Share accessing issue in 9.0R4.
PRS-377160	HTML-5 -RDP requires additional authentication.
PRS-377482	After upgrading to 9.1R1, host checker word is garbled when it is initiated in browser with Japanese language.
PRS-377681	PSA7000f reports HDDs missing and inactive after upgrade to 9.1R1.

Problem Report Number	Summary
PRS-377825	After upgrading to 9.1R1, the name of the user role displayed in submenu is broken if the language is in Korean.
PRS-377979	When accessing the resources via bookmark, contents are not displayed correctly.
PRS-378049	Failed filesystem integrity check message seen on PSA5K console after upgrading from 9.1R1 to 9.1R2-2119.
PRS-378882	Periodic Snapshot settings via REST fails with error "Modification of Attribute not Allowed".
PRS-378964	When the admin clicks on 'Agent', they receive an error "the page you requested could not be found".
PRS-379125	Pulse One 2.0.1901: With PCS 9.0R5 (EA) having failure in target importing SAML using Artifact - empty "Source Artifact Resolution Service URL".
PRS-379336	Chat option not working on the Medical application.
PRS-379773	Syslog - If an appliance is rebooted, it cannot successfully reconnect to a P1 syslog server.
PRS-379974	Critical Events do not get displayed in System > Overview Page.
PRS-380009	REST API calls failing for RDWeb Profiles in PCS.
PRS-380148	When syslog server's FQDN resolves to two IP addresses, one of which is reachable, PCS/PPS may fail to connect.
PRS-380762	Delay during session failover of PCS in Active/Active cluster in AWS.
PRS-381014	Japanese words are garbled when we click on the File share bookmark.
PRS-381318	DMI get-config of RDWeb resource profile returns badly formed XML.
Release 9.1R2 PRs	
PRS-367907	FQDNST denied IP is going via tunnel.
PRS-370210	Clear config on PSA 300 fails with unable to mount /webserver partition.
PRS-372439	Post failover, session resumption delayed with Pulse Client.
PRS-373290	Clear config on PSA 300 fails with unable to mount /webserver partition.

Problem Report Number	Summary
PRS-375013	Radius OTP as Secondary authentication fails for the Pulse Client.
PRS-375329	HOB failed to launch through Java in IE.
PRS-375886	JSAM launch failing for IE -JAVA.
PRS-376312	Factory reset from VMware VA console does not load the factory reset version and loads the current version.
PRS-376348	VMWare View 5.1 client does not connect after upgrade.
PRS-376859	Premier Java Applet for Terminal Service failed to download .jar file.
PRS-377945	Publishing for certain block types causes many log messages and other side effects.
Release 9.1R1 PRs	
PCS-5064	Remove legacy mode from Active Directory auth. server.
PRS-375534	JSAM Stats value (Bytes count) is not getting displayed in IE - Activex.
PRS-375067	DNS resolution not working for alternate VPN connections.
PRS-374597	The definition update is not listed for Sentinelone product in "epupdate_hist.xml" file.
PRS-374057	Unable to add the resource <userAttr.Framed-Route> in IPV4 address under Split tunneling policy for PCS version 9.0Rx.
PRS-374037	Rewrite: PSAL launching Citrix app multiple times in an infinite loop on all the browsers.
PRS-373948	Contents of a web response are not getting compressed as content encoding header is missing in the response from PCS.
PRS-373769	Host Checker IMC detects the Antivirus Change in the client PC and report it to IMV even when Perform Check every min is set to 0.
PRS-373696	Split tunneling FQDN policy with special character, fails to save.
PRS-370953	Unable to edit word documents hosted on SharePoint 2013 via PTP using MS Edge.

Problem Report Number	Summary
PRS-371023	Resource access dropped (RDP, SSH etc.) intermittently on SAW environment.
PRS-373102	Core Access: E-mail web page getting stuck on "login processing".
PRS-373076	Core Access:Web page shows horizontal scrollbars at the bottom of screen.
PRS-372181	DanaLoc fails in case of old window object reference from a new window object.
PRS-372834	PSAM:Pulse SAM takes at least 40 seconds to open custom start up page in UI Options compared to WSAM.
PRS-372677	AAA/Security/Pulse: SAML AuthnRequest leaks data across users with "Reuse NC/Pulse session" enabled.
PRS-372595	User getting same IP address assigned from IP pool in few hours.
PRS-372489	Pulse browser Toolbar is flickering when accessing OWA 2016 resource on iOS device through webrewrite.
PRS-372285	PSA 7000f Frequently reports one of the power supplies is back up.
PRS-372055	Unable to save Citrix listed application using Hostname with port number.
PRS-371973	HC: Compliance fails using Pulse Desktop client 9.0.2 build 1151.
PRS-371970	Users with username in UPN format in System Local Authserver are unable to log in using TOTP after upgrading to 9.0R3.
PRS-371944	Killed user session admin log "ADM23534" does not display admin user but the actual user being terminated.
PRS-371800	PCS device is unable to get the enrolled mobile device attribute from MDM server.
PRS-371394	Setting the hash property of location object causes problem in IE, Edge and Firefox browsers because the URL is appended with fragment identifier. In chrome and Safari browsers things work fine.
PRS-371602	Post upgrade to PCS 9.0R3, "License server low-level protocol error Code = [47]" error is triggered on license client.
PRS-371513	Page does not load via IE browser.

Problem Report Number	Summary
PRS-371406	"Auto populate domain information" behavior when unchecked: blank first then if wrong password, auto populates domain.
PRS-371357	HTML5 RDP logging do not show realm and shows ().
PRS-371342	Add iOS Check 12.1.1.
PRS-371266	Menu is not loading when accessing the application through web-rewrite.
PRS-371231	PCS 9.0 VA-DTE :: Nodes in cluster gets disabled automatically.
PRS-371205	Multicast Traffic not working intermittently in the VPN Tunnel in 8.3R6 / 5.3R6 version and after restarting services, works fine for all users.
PRS-371154	Wrong information in the log messages for Authorization Only Access when source ip restriction is configured on role.
PRS-371114	Add support for adding parameters "client-name" for HTML5 Access.
PRS-369351	LDAP authorization does not work when using ikev2 tunnel (handle 10K tunnels+few hundred ikev2 clients).
PRS-370138	Read-only admin sessions see an option as disabled that is actually enabled on user roles.
PRS-369960	Page displayed while PSAL downloads to a Mac client shows instruction for Mac; but then references Windows System Tray.
PRS-369200	Logs are not fully displayed if select the date as filter.
PRS-369142	File browsing SSO is not working with user details are given in variable form as well when configured to use system credentials.
PRS-369031	When a configuration object is renamed, not all of the resulting configuration changes are uploaded to Pulse One.
PRS-368927	Web process crashes and logs "ERR31093: Program web recently failed." in the event logs.
PRS-367879	Core Access: Unable to import or download the image using PTP.
PRS-367789	DMI agent not responding to netconf commands as expected.
PRS-367285	System Active/Passive cluster responding to ICMP request even after shutdown.

Problem Report Number	Summary
PRS-366634	Randomly users are not able to access IPv6 resources through VPN device via VPN tunneling.
PRS-364219	PSA7000f interface status in Network Settings not working.
PRS-366490	System Temperature status value on SNMP server displaying wrong value.
PRS-371351	Citrix sessions drop regularly causing various issues. These issues are observed in PCS 9.0 with Citrix port 2598 via JSAM. This issue is not found in 8.2R8.
PRS-371699	Users unable to login as well as dropping users - LMDB full.

Known Issues

The following table lists the known issues introduced in 9.1R13.1 and also the ones outstanding from previous releases:

Problem Report Number	Release Note
Release 9.1R13.1 PRs	
PCS-29121	<p>Symptom: Toolbar not visible for bookmarks in PTP mode when using Chrome and Edge browsers.</p> <p>Condition: Condition: When web bookmark is configured to access over PTP mode instead of rewriter mode.</p> <p>Workaround: Open PCS home page URL in a new tab to see the toolbars again. If opening through bookmarks from PCS home page, select to open in new tab using right click.</p>
PCS-31811	<p>Symptom: UI shows ISA concurrent users for an existing 9.x license client.</p> <p>Condition: When editing an existing 9.x license client on license server running 9.1R13.1.</p> <p>Workaround: Ignore the ISA concurrent users field. Leasing functionality is not affected.</p>
Release 9.1R13 PRs	
PRS-404800	<p>Symptom: Display of messages like "unregister_netdevice: waiting for tun_0_327 to become free. Usage count = 1".</p> <p>Condition: When IPv6 is configured.</p> <p>Workaround: None</p>
PRS-403498	<p>Symptom: OS check passes on latest Windows 11 machine when checks are configured for "Windows 10-64-Bit".</p> <p>OS check will pass on Windows 10 machine when checks are configured for latest "Windows 11-64-Bit".</p> <p>Windows 11 (preview version) returns version string as Windows 10 in the kernel.</p>

Problem Report Number	Release Note
	<p>Condition: OS check policy for Windows 11 systems.</p> <p>Workaround: NA</p>
PRS-403270	<p>Symptom: Telnet/SSH bookmarks are not working on Windows 11 as IE is deprecated.</p> <p>Condition: When using Windows 11 as client machine and accessing PCS through browser.</p> <p>Workaround: Access Telnet/SSH bookmarks using HTML5 solution.</p>
Release 9.1R12.1 PRs	
No new known issues found in this release.	
Release 9.1R12 PRs	
PRS-402731	<p>Symptom: In A/P Cluster, users might notice a delay in the VPN session resumption when restart service triggered on cluster by Admin.</p> <p>Condition: In A/P Cluster, delay in user VPN session resumption happens when Admin does restart services on cluster.</p> <p>Workaround: It is a delay in session resumption and session shall resume after some time. Admin can restart services during the maintenance window.</p>
PRS-402447	<p>Symptom: The image quality needs improvement for advanced HTML5 RDP.</p> <p>Condition: When a user access advanced HTML5 RDP bookmark.</p> <p>Workaround: None</p>
PRS-401279	<p>Symptom: Downloading files with 6in4 and 4in6 not working properly in PSA hardware whereas 4in4 and 6in6 are working.</p> <p>Condition: ESP mixed mode configured on HW.</p> <p>Workaround: Disable "Use ESP tunnel for 6in4 and 4in6 traffic" in Configuration --> VPN Tunneling.</p>
PCS-28369	<p>Symptom: VMware tools version shows as Unsupported Older Version.</p> <p>Condition: When PCS is deployed on ESXi version 7.0.</p>

Problem Report Number	Release Note
	Workaround: None. Functionalities such as Reboot, Shutdown, Power Off, NTP sync will continue to work without any issues.
Release 9.1R11.5 PRs	
No new known issues found in this release.	
Release 9.1R11.4 PRs	
PRS-400951	<p>Symptom: Static IP allocation fails for both single and multi-session enabled users.</p> <p>Condition: Overlapping IP pools are configured in VPN profile.</p> <p>Workaround: If the overlapping IP pool is broken up/split up this issue is not seen.</p>
PRS-400802	<p>Symptom: Static IP allocation fails for both single and multi-session enabled users.</p> <p>Condition: Users having multiple preferred IP addresses and/or multiple users assigned same preferred IP address.</p> <p>Workaround: None.</p>
PRS-400717	<p>Symptom: Improper titles for lines on HTML5 dashboard graph and some titles missing in Concurrent users graph.</p> <p>Condition: This issue appears after upgrading to 9.1R11 even without load.</p> <p>Workaround: On old UI, for a particular graph, click "Edit" and select "Restore Factory Defaults".</p>
PRS-400668	<p>Symptom: Pulse Desktop Client (PDC) always displays upgrade prompt even when client version on the endpoint and the server are same. Clicking on upgrade prompt performs no action (Cosmetic/UI issue).</p> <p>Condition: Occurs when the Pulse Desktop Client has Symantec signed binaries and the PCS on which it is hosted (9.1R11.3/ 9.1R10.2/ 9.1R9.2/ 9.1R8.4) is signed by Digicert.</p>

Problem Report Number	Release Note
	<p>Workaround: Disable End-point upgrade on Pulse Connect Secure (PCS). Enable again only when a higher version of PDC is activated on PCS and let the users trigger the client upgrade through the browser.</p>
PRS-400614	<p>Symptom: PSAL fails to launch Java Applets.</p> <p>Condition: Observed on clean environment (both PDC and PCS) and is not consistent.</p> <p>Workaround: Re-trigger JSAM by clicking start button.</p>
PRS-400631	<p>Symptom: AP cluster fail-over VIP is taking more time for Cluster VIP reachable.</p> <p>Condition: When clicking Fail-over VIP button from Cluster status page (Cluster setup configured with IPv6 ip address).</p> <p>Workaround: None.</p>
PRS-400639	<p>Symptom: Sometimes back-end resources are not accessible over L7 VPN.</p> <p>Condition: When both L3 & L7 VPN are connected.</p> <p>Workaround: Disconnect the L3 VPN & access back-end resources. Connect back to L3 VPN.</p>
Release 9.1R11.3 PRs	
PRS-400509	<p>Symptom: The PSAL installation prompts for admin credentials on windows 8.1 for Local user.</p> <p>Condition: On Windows 8.1 Endpoints.</p> <p>Workaround: Right click on the PSAL msi-> Properties and enable Unblock. Click Apply and OK. Then install the PSAL.</p>
PRS-400486	<p>Symptom: Upgrade prompts missing on connecting to latest PCS.</p> <p>Condition: When endpoint has PSIS Installed.</p> <p>Workaround: Uninstall PSIS.</p>
Release 9.1R11 PRs	

Problem Report Number	Release Note
PRS-399842	<p>Symptom: Pulse client is assigned an IP address from static pool while configuration is to prefer IP from LDAP/Radius attribute.</p> <p>Condition: LDAP/Radius attribute template and static IP address/range is configured in a single user profile as resources.</p> <p>Workaround: Split the connection profile into multiple profiles like one Profile with LDAP/Radius attributes/resources and other configuration and another profile with static IP address/range and other configuration. The new profiles can be ordered correctly to maintain the expected order of resources.</p>
PRS-398621	<p>Symptom: Enabling “SNMP Diagnostic Logging On” is not working.</p> <p>Condition: When manually “SNMP Diagnostic Logging On” is enabled.</p> <p>Workaround: None.</p>
PRS-398303	<p>Symptom: HTML5 bookmarks will not be accessible.</p> <p>Condition: When using IE browser.</p> <p>Workaround: Use Chrome, MS edge or Firefox browsers.</p>
PRS-398121	<p>Symptom: User sessions are not syncing with one of the node in Active-Active cluster.</p> <p>Condition: LMDB related error messages observed.</p> <p>Workaround: Clear session data.</p>
Release 9.1R10 PRs	
PRS-397227	<p>Symptom: Admin URLs are not accessible if administrator logs in with IPv6 address of PCS.</p> <p>Condition: When the administrator uses IPv6 address for admin login.</p> <p>Workaround: Use IPv4 address or FQDN address.</p>
PRS-397064	<p>Symptom: For advanced HTML5 sessions, on administrator UI shows IP address instead of hostname under virtual desktop sessions page.</p> <p>Condition: When an advanced HTML5 bookmark is configured with a hostname.</p>

Problem Report Number	Release Note
	Workaround: None.No functionality impact.
PRS-396921	<p>Symptom: When a user access basic html5 bookmark, guacd process may restart.</p> <p>Condition: When the target machine is configured with NLA & CredSSP options: Force update clients.</p> <p>Workaround: Use "CredSSP options: Mitigated".</p>
PRS-396895	<p>Symptom: For basic HTML5 connections file transfer is not working on macOS.</p> <p>Condition: When a basic html5 bookmark is accessed by using Safari browser.</p> <p>Workaround: Access basic html5 bookmark using chrome browser.</p>
PRS-396827	<p>Symptom: When advanced HTML5 connections are accessed first time, user may see "Failed to connect to gateway" message.</p> <p>Condition: When advanced HTML5 bookmark is configured with a hostname.</p> <p>Workaround: Refresh the page or go back to landing page and access the bookmark again.</p>
PRS-396726	<p>Symptom: Active user page "Agent Type" shows "Mac OS 10.15" in place of "Mac OS 11.0.1".</p> <p>Condition: When using Safari on macOS version BigSur 11.0.1.</p> <p>Workaround: None.</p>
PRS-396499	<p>Symptom: For advanced HTML5 connections, graph shows invalid values.</p> <p>Condition: When user access advanced HTML5 bookmarks.</p> <p>Workaround: Check the HTML5 session count on the virtual desktop sessions page.</p>
Release 9.1R9.1 PRs	
PRS-396733	Symptom: For advanced HTML5 bookmarks, when the target machine is configured with hostname resource, may not be available at times.

Problem Report Number	Release Note
	<p>Condition: When VLAN based source IP is configured under the roles along with the hostname.</p> <p>Workaround: Configure target machine with IP address.</p>
PRS-396710	<p>Symptom: For advanced HTML5 sessions, REST API count displays invalid values.</p> <p>Condition: When no active HTML5 session is present.</p> <p>Workaround: Check the HTML5 count on Virtual desktop session page.</p>
PRS-396609	<p>Symptom: For unsuccessful HTML5 connection, VDS page displays the entry for advanced bookmarks.</p> <p>Condition: When user is unable to connect to target machine.</p> <p>Workaround: None.</p>
PRS-396606	<p>Symptom: Ctrl+C (abort) command is not working for advanced html5 sessions.</p> <p>Condition: When user access Putty SSH session within Windows 10VM through advanced html5 bookmark.</p> <p>Workaround: None.</p>
PRS-396540	<p>Symptom: On the IE browser for the advanced HTML5 intermediate, login page text displays "submit query" instead of submit.</p> <p>Condition: When NLA encryption is configured without SSO.</p> <p>Workaround: None.</p>
Release 9.1R9 PRs	
PRS-396149	<p>Symptom: Web process crashes.</p> <p>Condition: With new PSAM improvement changes, when PSAM is configured with client application functionality, ACL Deny results are always treated as UDP connection deny request which is causing the issue.</p> <p>Workaround: Configure resources with WSAM destinations.</p>

Problem Report Number	Release Note
PRS-395973	<p>Symptom: User column for SNMP traps does not show the username.</p> <p>Condition: When an SNMP trap is added for v2c and then SNMP version is changed to v3.</p> <p>Workaround: Delete the trap server and then reconfigure the trap sever with user details.</p>
PRS-395925	<p>Symptom: "IP Owned by device with HWADDR" messages at MAJOR level seen in Admin logs after upgrade to 9.1R9.</p> <p>Condition: These messages are seen during the following sequence:</p> <ol style="list-style-type: none"> 1. Active Passive Cluster upgrade (Example: Node-1 and Node-2) 2. Upgrade started on Node-1. Node-1 with upgraded version is starting up. 3. Node-2 holds the VIP, till it goes for a reboot. <p>Workaround: None. These messages do not cause any impact to the cluster functionality.</p>
PRS-395911	<p>Symptom: Pull state from server not leasing licenses to all the nodes in cluster. Following event logs are seen:</p> <p>E.g.: 2020-10-19 17:25:01 - DFS_VA_NODE_115_19 - [127.0.0.1] Root::System() [] - Lease request on behalf of DFS_VA_NODE_115_20 by DFS_VA_NODE_115_19 failed: Not Cluster Member, status code=0x22..</p> <p>Condition: When, occasionally, both the cluster nodes talk to license server to fetch the license clients.</p> <p>Workaround:</p> <ol style="list-style-type: none"> 1. Do XML export of license clients. 2. Delete the affected license clients using admin UI. 3. Re-import the license clients from XML file.
PRS-395722	<p>Symptom: For existing HTML5 profiles configuration through REST may not set solution type properly always.</p>

Problem Report Number	Release Note
	<p>Condition: While updating the existing HTML5 profile solution type.</p> <p>Workaround: Create new profile through REST API.</p>
PRS-395711	<p>Symptom: For Advanced HTML5 user's Zoom sessions, audio stream can be inconsistent.</p> <p>Condition: When Zoom application is used for meeting session over Advanced HTML5 session.</p> <p>Workaround: Use Microsoft Teams application.</p>
PRS-395709	<p>Symptom: In MAC Safari browser, Advanced HTML5 sessions clipboard is not available.</p> <p>Condition: When using MAC Safari browser in Advanced HTML5 session.</p> <p>Workaround: Use Chrome browser for clipboard access.</p>
PRS-395707	<p>Symptom: For Advanced HTML5 RDP sessions, Microsoft Teams video call might disconnect the session.</p> <p>Condition: When making a Microsoft Teams video call in Advanced HTML5 RDP session.</p> <p>Workaround: None.</p>
PRS-395703	<p>Symptom: For Advanced HTML5 sessions, some documents may not invoke print function properly.</p> <p>Condition: When printing a text document with Notepad++.</p> <p>Workaround: Use default document mode.</p>
PRS-395699	<p>Symptom: For Advanced HTML5 RDP sessions, video quality can be inconsistent at times.</p> <p>Condition: When accessing high resolution video streaming in an Advanced HTML5 RDP session.</p> <p>Workaround: None.</p>
PRS-395696	<p>Symptom: For Advanced HTML5 sessions, error messages are not displayed.</p>

Problem Report Number	Release Note
	<p>Condition: When target machine is not reachable.</p> <p>Workaround: None.</p>
PRS-395223	<p>Symptom: REST based import of user role fails with the following error: "/sam/sam-options/wsam-autoinstall] Unsupported attribute type 0".</p> <p>Condition:</p> <ol style="list-style-type: none"> 1. User role config obtained from PCS running pre-9.1R9 through REST. 2. Admin uses REST PUT POST to import the config from Step 1 on PCS running 9.1R9. <p>Workaround: Replace wsam-autoinstall with wsam-autouninstall and use REST based import.</p>
PRS-395217	<p>Symptom: Pulse One fails to sync files Windows ACL policies on Target PCS from Master PCS.</p> <p>Condition: On Master PCS, when made changes to Windows File ACL policies and tried to push it to targets where the same policies are already present.</p> <p>Workaround: Manually export those ACL policies from Master PCS and manually import them on Target PCS.</p>
PRS-394390	<p>Symptom: PCS is not responding to ping with payload size larger than the MTU size.</p> <p>Condition: Issue occurs in 4in6 scenario. when pinging a protected resource with large packet size.</p> <p>Workaround: None.</p>
PRS-393851	<p>Symptom: Invalid Admin log shows as "Unable to synchronize time, either NTP server(s) are unreachable or provided symmetric key(s) are incorrect." even though NTP servers are reachable and clock is syncing.</p> <p>Condition: When upgrading to 9.1R8.1 or later builds.</p> <p>Workaround: None. There is no functionality impact</p>

Problem Report Number	Release Note
PRS-393672	<p>Symptom: Noticeable slowness seen in upgrade from 9.1R4 to 9.1R8 on AWS platform.</p> <p>Condition: When the load on data center is high. Also, depends on the network parameters in the given zone.</p> <p>Workaround: Please plan upgrades with sufficient upgrade window.</p>
PCS-22768	<p>Symptom: Remote-program, Multi Monitor, Session recording options are not working for end-user created bookmark.</p> <p>Condition: When a user tries to access end-user created advanced HTML5 bookmark.</p> <p>Workaround: User can use admin created bookmarks.</p>
PCS-22757	<p>Symptom: Advanced HTML5 graph is not implemented.</p> <p>Condition: When accessing advanced HTML5 bookmarks.</p> <p>Workaround: User can check the advanced bookmark count by using REST API/Active Virtual Desktop Sessions page.</p>
Release 9.1R8.2 PRs	
PCS-22360	<p>Symptom: SAML SLO is not initiated from PCS to its IDP when the user's browser-based session is ended.</p> <p>Condition: When user is authenticated using any browser to PCS with SAML authentication method where PCS is SAML SP, user session is ended in browser because of idle timeout or max session timeout or if admin ends the user session from PCS Admin console. Currently only manual sign out from browser session is supported to send SLO request to IDP from PCS side.</p> <p>Workaround: Close the browser window and launch a new browser window, so that user is prompted for authentication again for security reasons.</p>
Release 9.1R8.1 PRs	
No new known issues found in this release	
Release 9.1R8 PRs	
PRS-393174	Symptom: Local proxy PAC file not working in Internet Explorer 11.

Problem Report Number	Release Note
	<p>Condition: When PAC file resides on a local system.</p> <p>Workaround: Store the PAC file on an HTTP/HTTPS-accessible server and use that link for Internet Explorer 11 proxy settings.</p>
PRS-393172	<p>Symptom: Windows client connecting to PCS using Firefox ESR 68.10 intermittently throws error during Compliance check through Proxy configuration.</p> <p>Condition: Using Firefox ESR 68.10 version.</p> <p>Workaround: Once a successful connection is established from the client to the server using Chrome/IE, try connecting to the server using Firefox ESR. This works as expected.</p>
PRS-393146	<p>Symptom: Host Checker process tncs crash.</p> <p>Condition: When user role is configured with 120 HC rules and policy check interval is every one minute and with 8K user load.</p> <p>Workaround: (Recommended) Increase the Host Checker policy check interval.</p>
PRS-392934	<p>Symptom: PCS does not restrict user logins, even though dsagentd crossed 80% CPU utilization.</p> <p>Condition: Noticed the issue especially with clusters and when changing from Active-Active to Active-Passive cluster or vice versa.</p> <p>Workaround: Restart of System Services should solve the issue.</p>
PRS-392749	<p>Symptom: Pulse collaboration client version is not same in Mac and Windows.</p> <p>Condition: When user installs 9.1R8 Pulse collaboration client.</p> <p>Workaround: None.</p>
PRS-392345	<p>Symptom: Archiving on AWS S3 storage and Azure is failing when DNS server is not reachable from internal interface.</p>

Problem Report Number	Release Note
	<p>Condition: When admin trying to Archive using AWS S3 bucket or Azure storage account on management port and DNS server is not reachable through internal port.</p> <p>Workaround: Admin has to configure internal port for DNS resolution, Archival interface can be internal/management for archiving on AWS S3 bucket or Azure storage account.</p>
PRS-392236	<p>Symptom: Hyper-V 9.1R8 upgrade from earlier versions is not supported.</p> <p>Condition: When upgrading from the earlier versions, say 9.1R5.</p> <p>Workaround: Install a fresh instance of 9.1R8 and import the config from the earlier version.</p>
PRS-391999	<p>Symptom: TOTP Authentication fails for all users.</p> <p>Condition: After importing TOTP users into the PCS via REST API.</p> <p>Workaround: Use Export and Import option under TOTP Authentication server in Admin UI.</p>
PRS-391947	<p>Symptom: Websocket URL is not accessible.</p> <p>Condition: When trying to access https://web.whatsapp.com/ URL.</p> <p>Workaround: None</p>
PRS-391305	<p>Symptom: Upgrading Azure images from 9.1R5 to any later releases returns with error message if the factory reset version is 9.1R5.</p> <p>Condition: When factory reset version is 9.1R5.</p> <p>Workaround: Export the existing PCS configurations, deploy the new PCS image with the latest version, and import the PCS configurations.</p>
PRS-390577	<p>Symptom: Active user page is not displaying node details correctly for the users connected in AA cluster after split and join.</p> <p>Condition: After cluster split and re-join.</p> <p>Workaround: Display issue, user sessions will not get impacted. Newly connected sessions are showing the details correctly.</p>

Problem Report Number	Release Note
PRS-390488	<p>Symptom: Host checker is getting timed out (can be seen on user access log) and user is getting logged out.</p> <p>Condition: When periodic evaluation is enabled.</p> <p>Workaround: This issue is not replicable every time, but as a workaround, we have suggested to disable dynamic evaluation or increase the periodic policy evaluation interval.</p>
PRS-384976	<p>Symptom: Host Checker installation error found Intermittently while installing Host Checker or Pulse Client [HC enabled] through browser [Chromium Edge/Chrome/Firefox].</p> <p>Condition: Fresh Installation of Host Checker or Pulse Client [Host Checker enabled] through browser [Chromium Edge/Chrome/Firefox] after uninstalling old Host Checker components</p> <p>Workaround:</p> <ul style="list-style-type: none"> • Uninstall the Host Checker/Pulse Client components manually and reboot the system. <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • Manually kill Host Checker process before installing Pulse Client/Host Checker components.
PRS-375138	<p>Symptom: Client upload logs fails for Network Connect and JSAM.</p> <p>Condition: After launching Network Connect and JSAM on Windows 10, client upload log fails.</p> <p>Workaround: None</p>
PCS-21262	<p>Symptom: Update in PSAM Resource policies configuration from Admin portal is not getting applied immediately to existing users with UDP PSAM sessions.</p>

Problem Report Number	Release Note
	<p>Condition: When Admin changes ACL action from Deny to Allow for a particular UDP based resource (i.e., UDP Server Application) for which user already has UDP PSAM Session active, user will still see access denied and vice-versa. But this condition might occur very rarely in real world scenario.</p> <p>Workaround: Admin can choose to delete existing UDP PSAM user sessions for which ACL action changes from Deny to Allow and vice-versa.</p> <p>Alternatively, user can disconnect and connect PSAM UDP based application session.</p>
PCS-20664	<p>Symptom: Pulse client is not showing correct error message when there is no bandwidth to allocate for L3 tunnel.</p> <p>Error message in Pulse client - "Unable to allocate IP address".</p> <p>Condition: When there is no bandwidth to allocate for L3 tunnel for that specific user.</p> <p>Workaround: Display issue, correct error message will get displayed in User Access logs.</p> <p>Error message in User Access logs - "Cannot find a qualified bandwidth management policy for user based on current available bandwidth."</p>
Release 9.1R7 PRs	
PCS-20433	<p>Symptom: Existing HTML5 active sessions are not displayed under "Active Virtual Desktop Sessions" tab.</p> <p>Condition: After cluster upgrade, existing HTML5 sessions are not displayed under "Active Virtual Desktop Sessions" tab.</p> <p>Workaround: User has to re-login and connect to HTML5 session.</p>
Release 9.1R6 PRs	
PCS-19628	<p>Symptom: Platform page shows hypervisor information as KVM instead of Alibaba-Cloud-KVM or OpenStack-KVM.</p> <p>Condition: This issue is seen only with PCS deployed on Alibaba Cloud and OpenStack hypervisors.</p>

Problem Report Number	Release Note
	Workaround: None. There is no functionality loss though. PCS will function without any issues.
Release 9.1R5 PRs	
PRS-390106	<p>Symptom: Inconsistent upgrade issues seen while upgrading Hyper-V images in clustering and single node.</p> <p>Condition: Upgrading a Hyper-V image to 9.1R5.</p> <p>Workaround: If cluster upgrade fails, reboot the node which is not upgraded. If the issue persists, try upgrading the nodes individually and then form cluster.</p>
PRS-389742	<p>Symptom: Cannot register the device with Intune to get SCEP profile that has IMEI as common name.</p> <p>Condition: The devices like Wi-fi only iPad / Wi-Fi only android tablets that do not have IMEI support or do not have IMEI.</p> <p>Workaround: None.</p>
PRS-389737	<p>Symptom: Cluster VIP is not getting migrated to other node when active node's internal interface is not reachable and external port is reachable.</p> <p>Condition: In AP Cluster configured with both internal and external port, when active node's internal port became unreachable.</p> <p>Workaround: Reboot the cluster node having issue with internal interface is unreachable.</p>
PRS-389642	<p>Symptom: XML import is failing if configuration file has syslog IPv6 settings.</p> <p>Condition: if one of the devices configured IPv6 syslog server on log settings, the XML import will fail on another device if the same XML is exported from first device.</p> <p>Workaround: Export the binary system configuration and import on another device.</p>
PRS-389451	<p>Symptom: TCPDump fails to capture packets when multiple interfaces are selected.</p>

Problem Report Number	Release Note
	<p>Condition: When multiple interface - Internal, External and Management are selected.</p> <p>Workaround: Select individual interface to capture packets using TCPDump.</p>
PRS-389409	<p>Symptom: User sessions will be removed for the session logged in at the time of second node upgrade in AP cluster.</p> <p>Condition: During AP cluster upgrade, when the first node comes up after upgrading newer version, it informs other node to upgrade. During this time if any new user logs in, then all those sessions will be removed after second node goes for upgrade.</p> <p>Workaround: User needs to re-login.</p>
PRS-388121	<p>Symptom: Reliable users may be prompted for secondary authentication despite Adaptive authentication being enabled for the realm.</p> <p>Condition: Adaptive Authentication feature may not work in some scenarios where nodes are in the cluster setup.</p> <p>Workaround: None.</p>
Release 9.1R4.3 PRs	
No new known issues found in this release	
Release 9.1R4.2 PRs	
No new known issues found in this release	
Release 9.1R4.1 PRs	
No new known issues found in this release	
Release 9.1R4 PRs	
PCS-18480	<p>Symptom: Bookmark based access flow for Cloud based apps does NOT support MFA.</p> <p>Condition: When user tries to access any Cloud apps using Bookmark based flow, MFA based Conditional Access policies does Not work and will Deny the access to user.</p>

Problem Report Number	Release Note
	<p>Workaround: Access Cloud apps using SP Initiated flow for MFA to work, or do NOT configure MFA for these Bookmark based Cloud apps.</p>
PCS-18217	<p>Symptom: License report did not show proper values for older dates (Dec month) after upgrading to 9.1R4 image.</p> <p>Condition: License report generated from License server running with lesser than 9.1R4 version will have older data (For example: Dec-2019) and after upgrading the license sever to 9.1R4 image, data for older months will not be accurate.</p> <p>Workaround: None</p>
PCS-18002	<p>Symptom: Pulse Collaboration meeting is not getting launched with PSAL in macOS Catalina from the second time.</p> <p>Condition: In macOS Catalina, Pulse Collaboration meeting can be launched only after the fresh download of the client. If we try to relaunch the meeting, it is getting failed.</p> <p>Workaround: Delete the Pulse Collaboration client folder and perform a fresh download before launching the meeting.</p>
PCS-17932	<p>Symptom: TOTP server, Certificate server and SAML server authentication do not work for MFA based Conditional Access policy settings.</p> <p>Condition: When TOTP server, Certificate server and SAML server are configured as MFA server for Conditional Access.</p> <p>Workaround: Any other supported Authentication server can be configured as MFA server.</p>
PCS-17926	<p>Symptom: License report doesn't show the software version for one of the members cluster setup.</p> <p>Condition: When cluster is in license client</p> <p>Workaround: None (Display issue).</p>
PRS-387697	<p>Symptom: HOB launch on CentOS failing when Oracle JDK is installed.</p> <p>Condition: Oracle JDK installed on CentOS.</p>

Problem Report Number	Release Note
	Workaround: Install OpenJDK.
PRS-387572	<p>Symptom: AliCloud PCS-7K-V: Watchdog restarting cgi-server auth processes (cgi).</p> <p>Condition: Beyond 20K concurrent users under Pulse ESP and PSAM throughput test.</p> <p>Workaround: None</p>
PRS-387499	<p>Symptom: Hob auto-launch - PSAL failing with error "Failed to contact server".</p> <p>Condition: When auto-launch is enabled on HOB bookmark.</p> <p>Workaround: Disable auto-launch.</p>
PRS-387452	<p>Symptom: SSH does not work after restarting services in AWS and Azure.</p> <p>Condition: After performing restart services.</p> <p>Workaround: SSH works after a reboot.</p>
PRS-387192	<p>Symptom: Rewriter issues with SharePoint 2019 – a few buttons and icons does not load and rename file does not work.</p> <p>Condition: When using PCS web bookmark for the new SharePoint 2019 server.</p> <p>Workaround: Switch to Classic View in SharePoint 2019.</p>
PRS-384976	<p>Symptom: Host Checker error found Intermittently while installing Pulse Client via Chromium Edge browser in presence of Host Checker configured.</p> <p>Condition: Host Checker configured.</p> <p>Workaround: Click on Ignore button.</p>
Release 9.1R3 PRs	
PCS-15327	Symptom: When trying to restart PCS from vCenter, PCS shuts down instead of restart.

Problem Report Number	Release Note
	<p>Condition: When trying to restart PCS using the Restart Guest option from vCenter.</p> <p>Workaround: Restart PCS using the PSA-V virtual console.</p>
PRS-382259	<p>Symptom: DNS address and domain names are taken from DHCP server when deploying new PCS instance in AWS and Azure.</p> <p>Condition: When passing DNS address and domain name as parameter for initial configuration, DNS address and domain name are taken from DHCP server.</p> <p>Workaround: Reconfigure DNS address and domain in network over view page.</p>
PRS-382085	<p>Symptom: Not able to enable "copy/paste" option for end user created bookmarks after upgrade from 9.1R2 to 9.1R3.</p> <p>Condition: After an upgrade, not able to enable "copy/paste" option in the end user created bookmarks.</p> <p>Workaround: The user has to delete and create the bookmarks to enable "copy/paste" option.</p>
PRS-382083	<p>Symptom: Not able to enable "copy/paste" option via RDP launcher URL.</p> <p>Condition: When trying to enable "Copy/paste" option via RDP launcher URL.</p> <p>Workaround:</p> <ul style="list-style-type: none"> • User should use admin created bookmark. • User should use end-user created bookmark.
PRS-382078	<p>Symptom: AWS or Azure new PCS deployment fails when customer using old templates with admin password is less than 10 characters.</p> <p>Condition: When the template contains admin password with less than 10 characters.</p> <p>Workarounds: Customer has to provide admin password length with minimum of 10 characters.</p>

Problem Report Number	Release Note
PRS-382021	<p>Symptom: Dismiss until next upgrade option is not working for banner related to perpetual licensing.</p> <p>Condition: Admin clicks on Dismiss until next upgrade.</p> <p>Workaround: Use the Close button for temporary solution.</p>
PRS-381990	<p>Symptom: During peak hours when multiple users try to do browser-based login on PSA5K, a few users might not be able to connect in the very first attempt.</p> <p>Condition: When PCS is upgraded to 9.1R3 on PSA5K.</p> <p>Workaround: When the failed user tries to reconnect, the login will happen successfully.</p>
PRS-381853	<p>Symptom: Azure PCS - Network interface speed is showing as "Unknown" in the Network Overview page.</p> <p>Condition: When deploying new PCS instance in Azure, the network interface speed is showing as "Unknown" in the Network Overview page.</p> <p>Workaround: This is just a display issue.</p>
PRS-381707	<p>Symptom: Intermittently, Behavioral analytics dashboard page shows "Unable to connect to database" error.</p> <p>Condition: Sometimes, when admin navigates to Behavioral analytics dashboard page, "Unable to connect to database" error is seen.</p> <p>Workaround: Administrator can reload the Behavioral analytics dashboard page after some time to get the details on the page.</p>
PRS-381579	<p>Symptom: Sometimes logs are not shown under Log/Monitoring page.</p> <p>Condition: Not applicable.</p> <p>Workaround: Refresh the page or click on the Update button on the logs page.</p>
PRS-381554	<p>Symptom: When File rule configured for validating a file location using System default Directories <%HOME%> policy evaluation failed on macOS 10.14x or any higher versions.</p>

Problem Report Number	Release Note
	<p>Condition: If file located at System Directories <%HOME%> and configured a Hostcheck policy with File Rule for macOS 10.14.x or higher versions.</p> <p>Workaround: Need to add permissions for "Pulse Client" under "Accessibility" and "Full Disk Access" and which can be accessed from "System Preferences" > "Security & Privacy"-> "Privacy</p> <p>Or without providing permission /tmp location can be used for File validation.</p>
PRS-381403	<p>Symptom: Sharing Feature is not working in macOS Catalina.</p> <p>Condition: When Attendee Joined in Pulse Collaboration meeting via macOS Catalina, Attendee cannot share the Desktop. But Attendee can view the Presenter's screen.</p> <p>Workaround: None</p>
PRS-367403	<p>Symptom: Pulse collaboration not getting launched in macOS.</p> <p>Condition: When the Java version above 8 is installed in the macOS, Pulse collaboration will not launch.</p> <p>Workaround: Use Java version 8 for launching the Pulse collaboration in macOS.</p>
Release 9.1R2 PRs	
PRS-14530	<p>Symptom: Shutdown of PSA-V deployed on KVM hypervisor does not complete.</p> <p>Conditions:</p> <ul style="list-style-type: none"> • PSA-V is deployed on KVM hypervisor. • Shutdown is initiated from PSA-V virtual console. <p>Workaround: None</p>
PRS-361501	<p>Symptom: Sometimes end-user is unable to access backend resources.</p> <p>Conditions:</p> <ol style="list-style-type: none"> 1. PCS is deployed as an AP cluster.

Problem Report Number	Release Note
	<p>2. Admin has configured VLAN source IP under User Roles.</p> <p>3. VIP changes from active node to passive node.</p> <p>Workaround: Log out and then log back in as an end user.</p>
PRS-374575	<p>Symptom: DNS Search Order notes for macOS needs correction as Device only DNS is supported in macOS.</p> <p>Condition: macOS supports Device only DNS.</p> <p>Workaround: None</p>
PRS-377549	<p>Symptom: Older PSIS is not upgrading to 9.1R2 PSIS version.</p> <p>Condition: When CTS, WTS and VDI gets upgraded to 9.1R2 in Windows 10 Redstone 5 and later, PSIS is not upgraded to latest version.</p> <p>Workaround: None. Old PSIS will continue to work and no impact seen.</p>
PRS-377700	<p>Symptom: Using REST API - Archiving Schedule settings change from hourly to specified time does not update the hour/minute setting.</p> <p>Condition: None</p> <p>Workaround: Apply the same API again the second time.</p>
PRS-378101	<p>Symptom: JSAM fails to launch on Mac OS Catalina 10.15.</p> <p>Conditions:</p> <ul style="list-style-type: none"> • Configured a role with Host checker. • Configured JSAM access with auto-launch. <p>Workaround: None</p>
PRS-379014	<p>Symptom: After single logout with PCS as SP, the SP lands on either IdP page or SP page.</p> <p>Condition: PCS is configured as IdP and another PCS configured as SP with single logout enable.</p> <p>Workaround: None.</p>

Problem Report Number	Release Note
Release 9.1R1 PRs	
PRS-373762	<p>Symptom: Named User Remote Repo (NURR) mode does not work when MSSP unlimited license is installed on the License server.</p> <p>Condition: MSSP Unlimited License installed on License server.</p> <p>Workaround: Pulse Secure advises MSSP customers with MSSP SKU to not use NURR mode.</p>
PCS-11922	<p>Symptom: DNS Port selection will not take any effect. DNS traffic will go through Internal Port only.</p> <p>Condition: On a PCS Virtual Appliance, when Administrative Network is enabled under Traffic Segregation. This issue is not applicable for PSA Hardware Devices.</p> <p>Workaround: None</p>
Cloud Secure	
PRS-371781	<p>Symptom: Blocked ECP users will not be updated if Generic is selected under LDAP server Type.</p> <p>Condition: LDAP server type selected is Generic.</p> <p>Workaround: Select the LDAP server type as Active Directory.</p>
PRS-372846	<p>Symptom: Blocked ECP users will have a "Blocked till time" of 5 minutes.</p> <p>Condition: Request count for a particular user is less than 3.</p> <p>Workaround: None</p>
PRS-372861	<p>Symptom: Blocked ECP users will not be removed from the ECP reports page based on "Blocked till time".</p> <p>Condition: When a user entry is present in the ECP reports page.</p> <p>Workaround: None</p>

Documentation

Pulse documentation is available at <https://www.ivanti.com/support/product-documentation>.

Technical Support

When you need additional information or assistance, you can contact the "Pulse Secure Global Support Center (PSGSC):

- <https://support.pulsesecure.net/>
- support@pulsesecure.net

Call us at 1- 844-751-7629 (toll-free USA)

For more technical support resources, browse the support website <https://support.pulsesecure.net/>.