



# Pulse Secure Desktop Client: Release Notes

Pulse Secure Desktop Client 9.1R8.2 Build 3999.17 and Pulse Secure Desktop Client for Linux 9.1R8.2 Build 197

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# Overview

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This is the release-notes document for Pulse Secure Desktop Client (Pulse Client) version 9.1R8.2. This document provides a cumulative list of all enhancements, fixes and known issues for 9.1R8.2. If the information in the release notes differs from the information found in the documentation set, follow the release notes.

Pulse Client provides a secure and authenticated connection from an endpoint device (either Windows, macOS or Linux) to a Pulse Secure gateway (either Pulse Connect Secure or Pulse Policy Secure). For a complete description of the capabilities of Pulse Client, see online help within Pulse Client itself, or *Pulse Secure Desktop Client: Administration Guide* available at <https://www.pulsesecure.net/techpubs>.

# New Features

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

Features	Description
<b>Release 9.1R8.2</b>	
System Extension support on MacOS	System Extensions/Network Extensions allow to extend the functionality of macOS without requiring kernel-level access.
Pulse Client installer notarization	Pulse macOS client installer allows notarization to support future macOS releases and improve security on macOS and its applications.
<b>Release 9.1R8</b>	
No new features for this release.	
<b>Release 9.1R7.1</b>	
No new features for this release.	
<b>Release 9.1R7</b>	
No new features for this release.	
<b>Release 9.1R6</b>	
No new features for this release.	
<b>Release 9.1R5</b>	
PSAM session window	This feature allows the PSAM users to view the active session information of the configured applications and destinations.
Security Enhancement to support HTTPOnly cookie	Added support to handle the <i>HTTPOnly</i> session cookies in pulse client as part of security enhancement.
Disabling JNPRNS via Advance Client configuration	The feature runs a script/workflow to disable <i>JNPRNS</i> driver every time the user establishes a VPN connection and prevents reattaching of <i>JNPRNS</i> driver on restart. This process results in slight increase in time taken for establishing the VPN connection.
Support for Fedora 30, Ubuntu 19.10 and Debian 10.10 platforms	Pulse Client on Windows now supports Fedora 30, Ubuntu 19.10 and Debian 10.10 platforms.
<b>Release 9.1R4.2</b>	
No new features for this release.	
<b>Release 9.1R4.1</b>	
No new features for this release.	
<b>Release 9.1R4</b>	

Features	Description
PSAM details tab	This allows the PSAM users to see the details of the applications which are tunneled via SAM client.
Support after Linux NPAPI removal	This allows to launch JSAM and HOB from Linux browser after deprecation of NPAPI support..
Yubikey smart card support	Yubikey can be used as PIV smart card for VPN authentication. <b>Note:</b> <b>Accept certificates with smartcard logon Enhanced Key Usage</b> option should be enabled on PCS.
Windows Hello for Business	Pulse Desktop Client will now support Windows Hello for business using certificate trust.
<b>Release 9.1R3.1</b>	
Linux Client Auto Reconnect	Pulse Desktop Linux Client will now automatically attempt to reconnect in case of an interrupted connection, such as temporarily losing the Wi-Fi connection.
<b>Release 9.1R3</b>	
EKU/OID filtering for client certificate selection	Pulse Client now provides the administrator an option to specify EKU Text or EKU OID for filtering the certificates displayed in the certificate selection prompt during Cert-Auth. Pulse Client filters the certificates automatically, so that only relevant certificates are displayed.
Optional loading for KEXT Component	Pulse Client on macOS nows load KEXT component only if <b>Traffic Enforcement</b> or <b>Lockdown mode</b> options are enabled. Otherwise, the KEXT component, which requires high privilege access, is not loaded.
pulselauncher.exe to access certs from System Store	Pulse launcher tool (pulselauncher.exe), which is a standalone client-side command-line program, can now access certificates located in system store allowing for certificate-based authentication from the tool.
<b>Release 9.1R2</b>	
FQDN resource and IPv4 resource-based split tunneling conflict resolution	PCS supports both FQDN-based and IP-based split tunneling capabilities. When a customer uses both split tunneling rules, PCS now provides flexibility for the customer to choose which rules to give precedence, and ensures the resource access is not impacted when there are conflicting rules.
Manage Pulse Client versions feature support	PCS now supports the ability to enforce a minimum client version that can connect to the VPN. Administrators have the flexibility to provide a minimum version requirement separately for desktop and mobiles to enforce different client versions.
Support for Windows 10 Version 1903 (OS build 10.0.18362.207)	Pulse Client on Windows now supports Windows 10 Version 1903 (OS build 10.0.18362.207) Enterprise, 64 bit and Windows 10 Version 1903 (OS build 10.0.18362.207) Professional, 64 bit.
macOS KEXT Notarization	Apple mandates that all macOS applications are notarized by Apple. The Pulse Client for macOS KEXT component is now notarized by Apple.
<b>Release 9.1R1</b>	

Features	Description
Launching Pulse Desktop Client using URL	<p>Pulse Client can now be launched using a URL. Customers can insert the URL in any tools (For example: Support ticket management tool), so that when a user clicks on the URL, Pulse Client is invoked and connects to the VPN.</p> <p><b>Note:</b> The <b>Allow saving logon information</b> option must be enabled in the Pulse Connect Secure server settings to use the Launching Pulse Desktop Client using URL feature. (Enable <b>Allow saving logon information</b> &gt; <b>Users</b> &gt; <b>Pulse Secure Client</b> &gt; <b>Connections</b> &gt; &lt;connection name&gt;).</p>
Pulse SAM IPv6 Support	<p>Pulse Client now supports IPv6 traffic tunneling in Pulse SAM mode on Windows 10, Windows 8.1 and Windows 7 platforms.</p>
Automatic Keyboard popup on Surface Pro	<p>When a user selects the username or password field for Pulse Client installed on a Windows Surface device, the virtual keyboard automatically pops up so that the user can enter the required credential.</p>

# Fixed Issues

The following table lists issues that have been fixed and are resolved by upgrading to this release.

Problem Report Number	Summary
<b>Release 9.1R8.2</b>	
PRS-393652	Wireless Dot1x authentication fails on upgrading to PDC 9.1R8.
PRS-393440	Host Checker fails with TncCHandleException.
PRS-393346	The Sign-In Notification page shows the text underlined.
PRS-393157	GPU used by the Pulse Client on MAC with SAML Embedded Browser is used to connect to VPN.
PRS-392444	Some heavy applications such as Microsoft Teams configured through PSAM may exhibit slowness with time due to a Memory Leak in PSAM driver.
PRS-392320	RHEL 8 has deprecated many libraries that are required by libwebkitgtk, which is used by Pulse Client.
PRS-391172	Pulse Client does not change the interface metric to "1" and sets to "automatic".
PRS-390943	Pulse client not reverting back the windows hosts file after the pulse client logs off.
PRS-389976	Setup client unable to invoke PSAL on MAC machines.
<b>Release 9.1R8</b>	
PRS-392383	Pulse Client UI reports "Pulse Secure service is not running".
PRS-390998	System proxy settings are ignored due to wrong hardcoded path to libproxy.so.
PRS-390864	Pulse Desktop Client (Windows/MAC) does not honor the configured Split-Tunneling policies (Allow or Deny) due to Non-Compressed DNS responses.
PRS-390115	Pulse Client on macOS uses dedicated graphics card, causing faster battery drain.
PRS-389851	Pulse Client gets stuck at Host Checker when endpoint has Pulse Secure Installer Service (PSIS) older than 9.1R7.1 installed.
PRS-378040	Microsoft APIs return the incorrect value '6.2' when running Host Checker for system files such as GdiPlus.dll, as the applications are not manifested for Windows 8.1 and Windows 10.
<b>Release 9.1R7.1</b>	
PRS-392785	Upgrade to PDC 9.1R7 results in folder access issues. Pulse Logs can miss certain files or folders.
PRS-390486	DNS entries set manually on Physical adapters are not restored when FQDN Split Tunneling is configured.
PRS-392325	Not able to open 'C:\ProgramData\Pulse Secure' folder after installing PULSE9.1R7.



Problem Report Number	Summary
PRS-392444	Some heavy applications such as Microsoft Teams configured through PSAM may exhibit slowness with time due to a Memory Leak in PSAM driver.
PRS-391108	PSAM resource is not accessible when configured more than once with different port numbers on multiple lines. Only resource:port configured in first line is accessible. <b>Note:</b> This issue is fixed only for IPV4, IPV6 issue is tracked with PRS-392916.
PRS-390922	Intermittently, DNS entries on physical adapters are not restored if the machine is rebooted during a tunneled connection that has FQDN split tunneling configured.
<b>Release 9.1R7</b>	
PRS-390306	Pulse Desktop Client (Windows) does not honor the configured Split-Tunneling policies (Allow or Deny) due to Non-Compressed DNS responses. For more information, refer to KB article <a href="https://kb.pulsesecure.net/articles/Pulse_Secure_Article/KB44461/?kA13Z000000L3IN">https://kb.pulsesecure.net/articles/Pulse_Secure_Article/KB44461/?kA13Z000000L3IN</a> .
PRS-390704	MSI uninstall through SCCM fails with "1622 (ERROR_INSTALL_LOG_FAILURE)".
PRS-390512	PDC sets the "Domain Suffix Order" set incorrectly on macOS.
PRS-390472	Intermittently, Pulse Desktop Client (Windows) does not update the exclude routes in its routing table after a tunnel connection. For more information, refer to KB article <a href="https://kb.pulsesecure.net/articles/Pulse_Secure_Article/KB44461/?kA13Z000000L3IN">https://kb.pulsesecure.net/articles/Pulse_Secure_Article/KB44461/?kA13Z000000L3IN</a> .
PRS-389668	FQDN Split tunneling Deny Policies matches the substring as opposed to the complete suffix match (e.g. rass.net goes out of the tunnel even when the FQDN ST Deny rule is set to *.s.net).
PRS-391241	Pulse client installation may fail on native foreign Windows 10 operating system. For more information, refer to KB article <a href="https://kb.pulsesecure.net/articles/Pulse_Secure_Article/KB44485/?kA13Z000000L3IN">https://kb.pulsesecure.net/articles/Pulse_Secure_Article/KB44485/?kA13Z000000L3IN</a> .
<b>Release 9.1R6</b>	
PRS-389100	Intermittently, DNS entries on physical adapters are not restored if the machine loses Network connectivity or if it goes to sleep/hibernate during a tunnelled connection when using FQDN split tunnelling. For more information, refer to KB article <a href="https://kb.pulsesecure.net/articles/Pulse_Secure_Article/KB44429/?kA13Z000000L3Fn">https://kb.pulsesecure.net/articles/Pulse_Secure_Article/KB44429/?kA13Z000000L3Fn</a> .
<b>Release 9.1R5</b>	
PRS-388633	Unable to access Internet Sites after upgrading PDC to 9.1R4 on Mac OS
PRS-388691	It has been reported that the location awareness rule evaluation is returning unexpected results in 9.0R6 & 9.1R4 compared to the previous versions.
PRS-387110	Virtual adapter stops intercepting packets on Mac using PDC 9.1.3 build 1413
PRS-388636	Juniper Network Service can be disabled on Pulse client if it causes interop issues (Such as Slowness/Still Traffic).

Problem Report Number	Summary
PRS-388412	PAC file is not changing to instantproxy.pac when "No proxy" is configured on the PCS server.
PRS-388265	During cert auth, Pulse client is reconnecting multiple times leading to increased authentication attempts.
PRS-388262	IPv6 Default route does not get created for the VA if the native adapter (en0) is configured with both v4 and v6 addresses.
PRS-387552	While processing 802.1x connection setup in "machine then user" mode, PPS ends up using the same Access-Accept attributes for both machine and user auth.
PRS-385220	Prompts saying unable to import Certificate Revocation List while Captive portal in Embedded browser loads on Windows machine - PDC 9.1.4 (1937.1).
PRS-381658	MAC PDC client fails to detect the smart card in the presence of client auth EKU has configured till pulse App restarted.
PRS-379979	Multiple windows login prompt when we use Pulse Credential Provider with Host Checker.
PRS-368884	Upon performing a switch user, 802.1x connection is disconnected when using a pulse client whereas it doesn't while using Native supplicant.
<b>Release 9.1R4.2</b>	
PRS-388662	After upgrading to 9.1R4 and above, PSAM is unable to access any resources when multiple ports are configured.
PRS-387136	Pulse Client connection is not connected after resuming from Sleep.
PRS-359819	Pulse Layer 3 session disconnects when RDP session is closed, causing the resource to drop.
<b>Release 9.1R4.1</b>	
PRS-379737	PSAM forces all the Java URL's request default to IPv6.
PRS-382268	PDC throws Authentication rejected by server [Error : 1319] when using global url
PRS-382271	Users are facing issues while accessing the Shock Wave Flash application via PSAM. The application gets stuck randomly.
PRS-382277	PSAM WFP mode blocks local socket bind operation.
PRS-387062	PSAM sending unintended traffic via tunnel to VPN in PULSE9.1R3
<b>Release 9.1R4</b>	
PRS-385393	PSAM resource access does not work when connecting to 9.0 or 8.3 gateways using 9.1 client.
PRS-385207	PSAM does not work with local host-based applications when WFP is enabled.
PRS-384881	CAV feature generating traffic to PCS node, though not enabled. Cloud license is not installed on PCS.
PRS-384768	Pulse: File Based PAC support deprecated.

Problem Report Number	Summary
PRS-382796	CLI based PDC on Linux fails to prompt for password during authentication.
PRS-382167	Route table is not getting updated once the session is extended, when Embedded browser is enabled.
PRS-381808	Lockdown mode is not getting enforced on the Client machine.
PRS-381613	For macOS machines, Pulse SAML embedded browser prompts to pick the certificate from the list of incorrect certificates to authenticate with Microsoft Azure IDP.
PRS-380636	Pulse client wireless suppression does not re-enable wireless adapter intermittently.
PRS-380251	Chrome browser version 76.x on macOS is unable to proxy the traffic and access the resource.
PRS-380125	Embedded Browser for Captive portal comes up blank when Lockdown mode is enabled.
PRS-379972	The pop-up message in Japanese is garbled while un-installing Pulse Client 9.1R2.
PRS-373430	Location Awareness policy is getting evaluated for both physical and virtual adapter and causing the Pulse client disconnection.
<b>Release 9.1R3.1</b>	
PRS-380218	Unable to resolve the DNS in Pulse Desktop Client - 9.1R2 for macOS.
PRS-379939	Wireless Suppression - Wireless adapters are disabled and needs to be enabled manually.
PRS-378109	Unable to establish tunnel with smart card reader when end-user has latest 10.15 macOS i.e.Catalina.
<b>Release 9.1R3</b>	
PRS-380761	FQDN Split Tunneling Route, AddRoute shows error 87.
PRS-380652	"Host checker did not get installed properly" error appears on browser after the machine reboot.
PRS-379992	Incorrect client platform as 'Windows' instead of 'Win' causes lockdown exception to fail.
PRS-379156	"Failed to clear PIN" error when using Yubikey smart card.
PRS-378089	Pulse Client prompt "Blank screen" when using SAML-OKTA Authentication with Pulse Embedded Browser.
PRS-377657	Pulse UI will be in securing connection state for more than 3 minutes. when traffic enforcement is enabled for both Ipv4 and Ipv6
PRS-377995	On multi-display setups, the Pulse Secure desktop client login window spawns offscreen.
PRS-377274	Enter Key is not working when using SAML Authentication with Pulse Embedded Browser.
PRS-376663	Username is limited to 32 character on ChromeOS Pulse Client.
PRS-376034	For stealth mode connection Use Desktop Credentials option should not be enabled while creating the connection.
<b>Release 9.1R2</b>	

Problem Report Number	Summary
PRS-372170	Missing certificate issue when Pulse Client is launched in Ubuntu 18.0.4 version.
PRS-360574	IPv6 - After upgrading Pulse Client from 5.3R2 to 5.3R4.1 on a macOS machine, IPv6 DNS is not getting set on the Virtual adapter.
PRS-374418	Pulse Client Uninstall.app is not code signed.
PRS-376098	Logon Scripts are not running with lockdown mode enabled.
PRS-371051	Installing Pulse Client 9.0R2+ on macOS is creating a performance hit over time.
PRS-371718	Kernel panic issues is observed on macOS Mojave (10.14) with Pulse Client version 9.0R3 (build 1599).
PRS-374606	Machine tunnel is not working as expected with DNS domain suffix and step up deletes the domain from the list incorrectly.
PRS-372350	NSIS error message is thrown after installing Pulse Client through SCCM.
PRS-372096	Smart card (Certificate) authentication is failing with Pulse Client 9.0R3 after Gemalto SafeNet client is upgraded to 10.2.
PRS-372087	Overwrite DNS suffixes on macOS clients.
PRS-368845	Random IPv4 resource is failing when ACL and split tunneling are configured with FQDN.
<b>Release 9.1R1</b>	
PRS-376174	Symbolic link creation fails after Pulse upgrade.
PRS-369889	Authentication with Host Checker verification fails on Kernel 4.18.0-10.
PRS-371071	Unable to add multiple certificates to gnome-keyring.
PRS-375343	Pulse: Customer facing frequent disconnection post adding FQDN and IPv4 addresses in Split tunneling rules.
PRS-372327	Wireless suppression fails to re-enable wireless NIC when surface PRO's USB network adapter is unplugged.
PRS-371725	Pulse: macOS: Re-branding: Modified Username and Password Label not showing completely on MAC machines.
PRS-371066	Color management is not working in macOS 10.14(Mojave) when French language is used.
PRS-370972	Wireless disconnects after upgrading to Win 10 1803.
PRS-370894	Pulse desktop client prompts for proxy credentials when wild card exception is used in PCS URL.
PRS-370690	Captive Portal detection via Pulse client fails and shows a blank page with latest 9.0R2.1 version in Windows 10 OS.
PRS-370459	Pulse is not honoring the zscaler proxy exception.
PRS-370348	20 seconds delay is observed to establish the tunnel when the unreachable proxy PAC is unreachable.

# Known Issues

The following table lists the Known issues in the current release.

Problem Report Number	Release Note
<b>Release 9.1R8.2</b>	
PRS-394809	<p><b>Symptom:</b> Pulse system extension activation flow fails to kick-in until pulse client is relaunched if network is not available.</p> <p><b>Condition:</b> When end-user system is not connected to network (WiFi/LAN).</p> <p><b>Workaround:</b> Exit Pulse Client from Pulse tray and re-launch Pulse Client.</p>
PRS-394790	<p><b>Symptom:</b> Host Checker evaluation error is shown when connecting to PCS through browser after 9.1R8.2 Host Checker components get installed.</p> <p><b>Condition:</b> When end-user tries to connect to PCS servers with older versions over browser.</p> <p><b>Workaround:</b> Click "try again" to solve the HC evaluation error.</p>
PRS-394703	<p><b>Symptom:</b> Sometimes, on Chrome browser before re-directing to PSAL download page, a gibberish message is displayed in a popup.</p> <p><b>Condition:</b> When connecting to a PCS on Chrome browser.</p> <p><b>Workaround:</b> Refresh the Chrome Browser or use Safari.</p>
PRS-394581	<p><b>Symptom:</b> IT administrators can upload the package but cannot install successfully.</p> <p><b>Condition:</b> Latest PDC client version is distributed through PCS versions earlier than 9.1R8.2.</p> <p><b>Workaround:</b> Manually install PSsetupClient.dmg, PSAL.dmg to patch installed version of Setup Client and PSAL on the machine.</p>
PRS-394339	<p><b>Symptom:</b> Pulse System extension process is running upon reboot when Traffic Enforcement was previously activated for the user.</p> <p><b>Condition:</b> Traffic Enforcement was previously activated for the user.</p> <p><b>Workaround:</b> Uninstall Pulse Client and reboot.</p>
PRS-394150	<p><b>Symptom:</b> Lockdown Exceptions may not work as expected due to Process Path missing in certain conditions.</p> <p><b>Condition:</b> Lockdown/Traffic Enforcement mode is active.</p> <p><b>Workaround:</b> None.</p>
PRS-393958	<p><b>Symptom:</b> Apple embedded browser pops up when pulse client uses captive portal environment.</p> <p><b>Condition:</b> Lockdown mode or Captive Portal detection is enabled.</p> <p><b>Workaround:</b> Manually close the Apple Embedded Browser.</p>

Problem Report Number	Release Note
PRS-393682	<p><b>Symptom:</b> Post installation of Pulse Client, user notices that the connection is established without ESP.</p> <p><b>Condition:</b> If ESP mode is enabled with traffic enforcement.</p> <p><b>Workaround:</b> If reconnect fails, manually disconnect from the server and reconnect.</p>
PRS-393498	<p><b>Symptom:</b> Pulse System Extension is not fully uninstalled. "systemextensionsctl list" command shows state "uninstalling".</p> <p><b>Condition:</b> Uninstall Pulse Client and reboot.</p> <p><b>Workaround:</b> State "uninstalling" is always shown initially after the reboot. After some time, run the command "systemextensionsctl list" again and the item disappears from the list.</p>
PRS-392323	<p><b>Symptom:</b> When a custom lockdown exception is configured on PCS, endpoint does not reflect the changes.</p> <p><b>Condition:</b> The exceptions configured as Custom are omitted by the client.</p> <p><b>Workaround:</b> None.</p>
<b>Release 9.1R8</b>	
PRS-393346	<p><b>Symptom:</b> The in Sign-In Notification page shows the text underlined.</p> <p><b>Condition:</b> Upgrade to Pulse Desktop Client 9.1R8.</p> <p><b>Workaround:</b> None. For more information, refer to KB article <a href="#">KB44548</a>.</p>
PRS-393265	<p><b>Symptom:</b> Pulse client installation and upgrade is failing on Windows 8, 32-bit machine.</p> <p><b>Condition:</b> Standalone as well as browser based Installation and upgrade is failing on Windows 8, 32-bit machine.</p> <p><b>Workaround:</b> None.</p>
PRS-393210	<p><b>Symptom:</b> On macOS, Pulse Client service crash observed while replacing the Connection-set through browser.</p> <p><b>Condition:</b> During the new connection set replacement through browse.</p> <p><b>Workaround:</b> None. Client recovers automatically.</p>
PRS-393129	<p><b>Symptom:</b> Loading of PSAL and getting the PSAL launch prompt takes more than 15 minutes with FireFox web browser on Window10.</p> <p><b>Condition:</b> This issue is observed with specific combination FireFox 68.10.0 ESR Version and Windows 10.</p> <p><b>Workaround:</b> Get the latest Version for FireFox Web Browser 78.0 ESR Version.</p>
PRS-393107	<p><b>Symptom:</b> Pulse client is not getting uninstalled completely.</p> <p><b>Condition:</b> When client is uninstalled through msi.</p> <p><b>Workaround:</b> Reboot the machine or end process (PulseSecureService.exe) from task manager.</p>

Problem Report Number	Release Note
PRS-393088	<p><b>Symptom:</b> PDC client prompts to enter AD login credentials even though the login details are already saved.</p> <p><b>Condition:</b> Login details are already saved.</p> <p><b>Workaround:</b> User has to re-enter the login details.</p>
PRS-393055	<p><b>Symptom:</b> In Active Users Page does not display Windows version.</p> <p><b>Condition:</b> When End user establishes a VPN connection from Windows endpoint.</p> <p><b>Workaround:</b> None.</p>
PRS-393007	<p><b>Symptom:</b> Pulse Client prompts for reboot after the successful upgrade and connections are not getting imported.</p> <p><b>Condition:</b> When a client is upgraded through browser as non-admin user.</p> <p><b>Workaround:</b> Close the Reboot prompt window and launch Pulse Client from the browser.</p>
PRS-392954	<p><b>Symptom:</b> On macOS Pulse Client service crash is observed during log rotation.</p> <p><b>Condition:</b> Occasionally, during log file rotation.</p> <p><b>Workaround:</b> None. Client recovers automatically.</p>
PRS-392916	<p><b>Symptom:</b> PSAM fails to tunnel ipv6 traffic when resources are configured with each port on a unique line.</p> <p><b>Condition:</b> PSAM fails to tunnel ipv6 traffic when resources are configured with each port on a unique line.</p> <p><b>Workaround:</b> Ports can be comma separated in a single line with IP.</p>
PRS-392904	<p><b>Symptom:</b> Intermittently PDC fails to establish tunnel during Host Checker evaluation.</p> <p><b>Condition:</b> Host Checker evaluation fails at client side.</p> <p><b>Workaround:</b> Reboot the machine.</p>
PRS-392731	<p><b>Symptom:</b> Pulse Client UI temporarily becomes unresponsive or crash during freshly installation Or upgrade. End user may also observe this behavior during an active connection to Server.</p> <p><b>Condition:</b> When using configurations such as SSL/FIPS or L3/L4 VPN connection.</p> <p><b>Workaround:</b> None. When connected to Server, this issue is observed only with the Pulse Client UI and not with the Tunnel service. Pulse Client UI automatically restarts without disrupting existing connection or tunnel traffic.</p>
PRS-392580	<p><b>Symptom:</b> 'Advanced Connection Details' translation string of Pulse client on non-english OS is not correct.</p> <p><b>Condition:</b> During 'Advanced Connection Details' check.</p> <p><b>Workaround:</b> None.</p>
PRS-392444	<p><b>Symptom:</b> When accessing UDP traffic with Pulse SAM cause memory leak</p> <p><b>Condition:</b> UDP Applications access in Pulse SAM tunnel.</p> <p><b>Workaround:</b> Reboot the machine.</p>

Problem Report Number	Release Note
PRS-392171	<p><b>Symptom:</b> Multicast traffic is not tunneled through Pulse client.</p> <p><b>Condition:</b> When Multicast is enabled for user role, the multicast applications cannot send multicast traffic to server.</p> <p><b>Workaround:</b> None</p>
PRS-390026	<p><b>Symptom:</b> macOS user may observe pulse client is connecting twice during dual authentication.</p> <p><b>Condition:</b> Pulse client is connecting twice during dual authentication.</p> <p><b>Workaround:</b> None</p>
PRS-384976	<p><b>Symptom:</b> Host Checker installation error found Intermittently while installing Host Checker or Pulse Client [HC enabled] through browser [Chromium Edge/Chrome/Firefox]</p> <p><b>Condition:</b> 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><b>Workaround:</b> Perform one of the following:</p> <ul style="list-style-type: none"> <li>• Uninstall the Host Checker/Pulse Client components manually and reboot the system.</li> <li>• Manually kill Host Checker process before installing Pulse Client/Host Checker Component.</li> </ul>
<b>Release 9.1R7.1</b>	
PRS-392383	<p><b>Symptom:</b> Pulse Client gets stuck at Host Checker when endpoint has Pulse Secure Installer Service (PSIS) older than 9.1R7.1 installed.</p> <p><b>Condition:</b> Issue occurs when Host Checker with SAML authentication is configured and external browser is used for SAML authentication.</p> <p><b>Workaround:</b> Perform the actions when Pulse Client is launched in following ways:</p> <ul style="list-style-type: none"> <li>• Through a browser: Disable HC</li> <li>• SAML based Authentication: Use embedded browser or disable HC</li> <li>• Directly: No issue</li> <li>• If above workarounds cannot be implemented, use the new PSIS that is available separately.</li> </ul>
PRS-389851	<p><b>Symptom:</b> Pulse Client UI reports "Pulse Secure service is not running".</p> <p><b>Condition:</b> Issues occurs when Pulse9.1R7 Client is used with PSIS Older than 9.1R7.1 and HC configured on the Realm.</p> <p><b>Workaround:</b> Perform the actions when Pulse Client is launched in following ways:</p> <ul style="list-style-type: none"> <li>• Through a browser: Disable HC</li> <li>• SAML based Authentication: Use embedded browser or disable HC</li> <li>• Directly: No issue</li> <li>• If above workarounds cannot be implemented, use the new PSIS that is available separately.</li> </ul>
<b>Release 9.1R7</b>	
No new known issues for this release.	



## Problem Report Number

## Release Note

### Release 9.1R6

No new known issues for this release.

### Release 9.1R5

PRS-389504	<p><b>Symptom:</b> Slight increase in time may be observed in establishing tunnel.</p> <p><b>Condition:</b> Users might observe slightly increased time to establish connection over VPN.</p> <p><b>Workaround:</b> None.</p>
PRS-389140	<p><b>Symptom:</b> PULSE Help on macOSX 10.15.3 Catalina does not open</p> <p><b>Condition:</b> Impact on Help pages</p> <p><b>Workaround:</b> PDC help pages are available online under Technical Publications.</p>
PRS-388988	<p><b>Symptom:</b> When embedded browser is used, Pulse is not caching the IDP session cookie.</p> <p><b>Condition:</b> The session on the IDP was still active and the user gets the prompt.</p> <p><b>Workaround:</b> None.</p>
PRS-388775	<p><b>Symptom:</b> Failing in DSID resumption after SAML auth from external browser.</p> <p><b>Condition:</b> Client fails to establish connection with PCS.</p> <p><b>Workaround:</b> Use embedded Browser.</p>
PRS-388986	<p><b>Symptom:</b> After disconnecting SDP 2.5 connection. Classic connection prompts for multiple authentication.</p> <p><b>Condition:</b> On connecting a SDP connection and then re-initiating classic connection.</p> <p><b>Workaround:</b> None.</p>
PRS-388403	<p><b>Symptom:</b> Pulse Collaboration (When launched from pulse client) functionality is broken with enabling of 'HTTP Only Cookie' for user role.</p> <p><b>Condition:</b> When the user provides the credentials, Pulse connection disconnects and Pulse Collaboration launches.</p> <p><b>Workaround:</b> Disable the 'HTTP Only Cookie' option.</p>

### Release 9.1R4.2

No new known issues for this release.

### Release 9.1R4.1

No new known issues for this release.

### Release 9.1R4

PRS-387732	<p><b>Symptom:</b> Application type strings are not displaying properly in localized languages.</p> <p><b>Condition:</b> For a few languages.</p> <p><b>Workaround:</b> None</p>
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Problem Report Number	Release Note
PRS-382268	<p><b>Symptom:</b> Pulse Desktop Client throws <b>Authentication rejected by server</b> error for SAML authentication.</p> <p><b>Condition:</b> When attempts to connect to a Global URL.</p> <p><b>Workaround:</b> None</p>
PRS-382277	<p><b>Symptom:</b> PSAM WFP mode blocks local socket bind operations.</p> <p><b>Condition:</b> When performing pass packet for the local IPs, the packet was blocked by the current framework.</p> <p><b>Workaround:</b> None</p>
PRS-384976	<p><b>Symptom:</b> Host checker error is found while installing Pulse Client via Chromium-based Edge browser.</p> <p><b>Condition:</b> When Host Checker is configured.</p> <p><b>Workaround:</b> Click <b>Ignore</b> button.</p>
PRS-382162	<p><b>Symptom:</b> Pulse Desktop Client is unable to establish the tunnel.</p> <p><b>Condition:</b> With non-PIV smart cards on Catalina.</p> <p><b>Workaround:</b> None</p>
PRS-386924	<p><b>Symptom:</b> FQDN split tunneling resource access is going through physical adapter instead of virtual adapter.</p> <p><b>Condition:</b> CNAME support is not there for FQDN split tunneling.</p> <p><b>Workaround:</b> None</p>
PRS-386953	<p><b>Symptom:</b> User is unable to access the internet.</p> <p><b>Condition:</b> When CAV feature is disabled.</p> <p><b>Workaround:</b> User can change registry settings as advised below and remove proxy settings from Proxy setting dialogue of Windows.</p> <pre data-bbox="444 1297 1477 1413">[HKEY_CURRENT_USER\Software\Policies\Microsoft\Internet Explorer\Control Panel] "Proxy"=dword:00000000 "Autoconfig"=dword:00000000</pre>
PRS-387174	<p><b>Symptom:</b> Connection set is not adding in the installed Pulse Desktop Client.</p> <p><b>Condition:</b> When Pulse Desktop Client is launched through the browser.</p> <p><b>Workaround:</b> None</p>
PRS-387183	<p><b>Symptom:</b> Pulse Desktop Client hangs while adding connection.</p> <p><b>Condition:</b> When the user attempts to add the Pulse Desktop Client connection.</p> <p><b>Workaround:</b> Restart the machine.</p>

Problem Report Number	Release Note
PRS-387340	<p><b>Symptom:</b> Manual extend session is failing for the first time and prompts with error "Too many concurrent users".</p> <p><b>Condition:</b> When the user selects the Extend session option.</p> <p><b>Workaround:</b> Pulse Desktop Client automatically prompts for re-authentication, which will extend the session successfully.</p>
PRS-387397	<p><b>Symptom:</b> Windows Hello for Business session is failing with (Missing Certificate) error.</p> <p><b>Condition:</b> When the user attempts to establish Pulse Desktop Client connection Windows Hello for Business session for the first time.</p> <p><b>Workaround:</b> Connection is established successfully after a few minutes.</p>
<p><b>Release 9.1R3.1</b></p>	
<p>There are no new known issues for this release.</p>	
<p><b>Release 9.1R3</b></p>	
PRS-381992	<p><b>Symptom:</b> Intermittently PDC is prompting end-user to select the certificate when both Smart card plugged-in and user certificate presents.</p> <p><b>Condition:</b> When PDC is upgraded from 9.XRY where X&lt;= 1 and Y &lt; 3 to 9.1R3.</p> <p><b>Workaround:</b> Export/ import current config using Jamcommand to update connstore.</p>
PRS-381825	<p><b>Symptom:</b> 9.1R3 PDC latest strings are not localized.</p> <p><b>Condition:</b> If end-user has 9.1R3 PDC.</p> <p><b>Workaround:</b> N/A</p>
PRS-381819	<p><b>Symptom:</b> Pulse Desktop Client UI is fluctuating on one of the HP models.</p> <p><b>Condition:</b> End user uses HP EliteBook 840 G5.</p> <p><b>Workaround:</b> NA</p>
PRS-381646	<p><b>Symptom:</b> Credential Provider feature does not work when there is no Tile present during user login.</p> <p><b>Condition:</b> L3 and L2 CP feature will not work.</p> <p><b>Workaround:</b> NA</p>
PRS-381585	<p><b>Symptom:</b> Admin should allow to enable any one option either "Windows secure Application manager" or "VPN Tunneling".</p> <p><b>Condition:</b> When WSAM is enabled, PSAM also gets enabled as WSAM is now deprecated. Along with this VPN Tunneling option is not to be chosen as Pulse Secure Client will be enabled.</p> <p><b>Workaround:</b> Choose either WSAM or VPN Tunneling option.</p>
PRS-381449	<p><b>Symptom:</b> Still Downloads of NC and WSAM were allowed.</p> <p><b>Condition:</b> Only admin users can download using URL</p> <p><b>Workaround:</b> NA</p>

Problem Report Number	Release Note
PRS-381388	<p><b>Symptom:</b> Network Connect client will be able to upgrade and connect.</p> <p><b>Condition:</b> Since we need to support existing Network Connect client users, the binary is a part of package.</p> <p><b>Workaround:</b> Since upgrade is done as part of initial connect, no action is needed.</p>
PRS-381170	<p><b>Symptom:</b> Home button does not appear after upgrade.</p> <p><b>Condition:</b> On upgrading the pulse client.</p> <p><b>Workaround:</b> Disconnect and connect back to the controller.</p>
PRS-381151	<p><b>Symptom:</b> 5.2RX PDC clients are able to establish a successful tunnel in the absence of Client Auth ECU.</p> <p><b>Condition:</b> When "Enable Automatic Client Certificate Selection" is enabled.</p> <p><b>Workaround:</b> N/A</p>
PRS-378109	<p><b>Symptom:</b> Unable to establish tunnel with smart card reader.</p> <p><b>Condition:</b> When end-user has latest 10.15 Mac OS i.e. Catalina.</p> <p><b>Workaround:</b> N/A</p>
PRS-374068	<p><b>Symptom:</b> Un-installing of Pulse Desktop Client is asking for a reboot.</p> <p><b>Condition:</b> Observed on Windows 10 OS RS6 i.e. 1903.</p> <p><b>Workaround:</b> N/A</p>
PRS-370025	<p><b>Symptom:</b> With the latest SRX OS UAC L3 connection is failing to establish.</p> <p><b>Condition:</b> If SRX OS version is 15.X and above.</p> <p><b>Workaround:</b> N/A</p>
<b>Release 9.1R2</b>	
PRS-377549	<p><b>Symptom:</b> Older PSIS is not upgrading to 9.1R2 PSIS version.</p> <p><b>Condition:</b> When Pulse Client is deployed from 9.1R2 on Windows endpoints, PSIS is not upgraded to the latest version.</p> <p><b>Workaround:</b> Old PSIS will continue to work and no impact seen.</p>
PRS-378873	<p><b>Symptom:</b> Pulse Client is getting disconnected frequently after connecting to PCS on macOS.</p> <p><b>Condition:</b> The endpoint should be dual stack. PCS should be configured for FQDN based split tunneling with Route Monitor enabled.</p> <p><b>Workaround:</b> Disable the option Route Monitor.</p>
<b>Release 9.1R1</b>	

## Problem Report Number

## Release Note

PRS-373432

**Symptom:** For launching Pulse Client from a URL, the following are the prescribed parameters:

- connect
- name
- server
- userrealm
- username

Launching Pulse Client using a URL might throw an error, if:

- The same parameter is included multiple times while crafting the URL.
- Any other non-prescribed parameter, other than above-mentioned five prescribed parameters are used.

**Condition:** Entering multiple values for the five parameters (name, server, userrealm, username and store) or any additional parameter, as shown in the following URLs:

```
pulsesecureclient://
connect?name=NAME&server=SERVERURL&userrealm=REALM&username=USER1&username=USER2&store=TRUE&store=FALSE
```

In this example, multiple values (USER1 and USER2) for the parameter username and multiple values (TRUE and FALSE) for the parameter store are entered.

```
pulsesecureclient://
connect?name=NAME&server=SERVERURL&userrealm=REALM&username=USER&store=TRUE&extra=TRUE&other=SOMETHING
```

In this example, a non-prescribed parameter (other) is used.

**Workaround:** None

PRS-374076

**Symptom:** When launching Pulse Client using a URL, some characters in the username parameter might not get displayed in the Pulse Client UI as expected.

**Condition:** Entering the username parameter in the following URL:

```
pulsesecureclient://
connect?name=NAME&server=SERVERURL&userrealm=REALM&username=test&=user&store=TRUE
```

In this example, username will be considered as "test" instead of "test&=user".

**Workaround:** Use ascii encoding values for special characters.

In the above-mentioned example, for the username to be considered as "test&=user", use %26 for & and %3D for = in the URL, as shown below:

```
pulsesecureclient://
connect?name=NAME&server=SERVERURL&userrealm=REALM&username=test%26%3Duser&store=TRUE
```

Problem Report Number	Release Note
PRS-373177	<p><b>Symptom:</b> Launching Pulse Client using a URL is not working as expected for differently worded values for the "server" parameter.</p> <p><b>Condition:</b> Entering differently worded values for the "server" parameter. The following three URLs refer to the same connection, but server values are worded differently.</p> <p>Though the connections with the following three server URLs (<a href="https://pcsserver.com/sign-in/">https://pcsserver.com/sign-in/</a>, <a href="https://pcsserver.com/sign-in">https://pcsserver.com/sign-in</a>, <a href="https://pcsserver.com/sign-in">pcsserver.com/sign-in</a>) would ideally be the same connection, these three connections are treated as different connections while launching Pulse Client from a URL.</p> <pre>pulsesecureclient://connect?name=Pulse Connection&amp;server=https://pcsserver.com/sign-in/&amp;userrealm=Users&amp;username=user1&amp;store=TRUE</pre> <pre>pulsesecureclient://connect?name= Pulse Connection &amp;server=https://pcsserver.com/sign-in&amp;userrealm=Users&amp;username=user1&amp;store=TRUE</pre> <pre>pulsesecureclient://connect?name= Pulse Connection &amp;server=pcsserver.com/sign-in&amp;userrealm=Users&amp;username=user1&amp;store=TRUE</pre> <p><b>Workaround:</b> None</p>
PRS-374087	<p><b>Symptom:</b> L3 based FQDN Split Tunneling feature with PSAM coexistence is not supported.</p> <p><b>Condition:</b> Dual Stack is enabled on a Pulse Client machine.</p> <p><b>Workaround:</b> None</p>
PRS-374384	<p><b>Symptom:</b> A user is not able to download the Pulse Client from any package.</p> <p><b>Condition:</b> The Pulse Client package is uploaded before the PCS upgrade.</p> <p><b>Workaround:</b> Upload the junosepulse.pkg and download the installers.</p>
PRS-374876	<p><b>Symptom:</b> Unable to connect to a PCS Server from Pulse Client for Linux.</p> <p><b>Condition:</b> Primary network card of a machine has multiple aliased IP addresses set.</p> <p><b>Workaround:</b> Ensure that the primary network card does not have multiple aliased IP addresses.</p>
PRS-374627	<p><b>Symptom:</b> Wireless LAN L2 connection disconnects immediately when the LAN L2 connection is established.</p> <p><b>Condition:</b> When FIPS is enabled for L2 wireless connection.</p> <p><b>Workaround:</b> Disable the FIPS in wireless connection.</p>
PRS-375458	<p><b>Symptom:</b> Pre-9.0R3 Pulse Client fails to establish the Pulse SAM connection with PCS 9.1R1.</p> <p><b>Condition:</b> A Pulse SAM connection fails when a pre-9.0R3 Pulse Client tries to establish the Pulse SAM connection with PCS 9.1R1.</p> <p><b>Workaround:</b> To upgrade Pulse Client to 9.1R1, launch Pulse Client through a browser.</p> <p><b>Note:</b> Pulse SAM connection fails to connect due to the following error:  "Failed to set dns name query event, err:87" or "Failed to set netbios query event " or "Failed to set tcp/udp samize event" or "Failed to set tcpConnect event" or "Failed to set dns srv query event".</p>

Problem Report Number	Release Note
PRS-375900	<p><b>Symptom:</b> Shutting down the client PC will trigger the machine tunnel.</p> <p><b>Condition:</b> Credential Provider option is enabled, and the user shuts down the client PC.</p> <p><b>Workaround:</b> None</p>
PRS-375897	<p><b>Symptom:</b> Pulse Client will take few seconds to show as connected when the client PC goes from sleep mode to awake mode.</p> <p><b>Condition:</b> Credential Provider option is enabled, and the client PC goes to sleep mode.</p> <p><b>Workaround:</b> None</p>
PRS-373995	<p><b>Symptom:</b> Pulse Client fails to trigger the Credential Provider.</p> <p><b>Condition:</b> When the Windows machine gets restarted.</p> <p><b>Workaround:</b> None</p>
PRS-375916	<p><b>Symptom:</b> While launching Pulse Client from a URL, it prompts for the realm name information, even if the realm name is mentioned in the URL.</p> <p><b>Condition:</b> When <b>Allow saving logon information</b> option is not enabled in connection profile.</p> <p><b>Workaround:</b> Enable Allow saving logon information option in connection profile.</p>
PRS-375956	<p><b>Symptom:</b> In case of an upgrade triggered from Pulse Client from version 9.0R3 to 9.1R1 and after the upgrade process is completed, the user is unable to connect, and a network error is displayed in the connection status of the Pulse Client UI.</p> <p><b>Condition:</b> Upgrade using Pulse Client on Windows 10 (x64) Redstone 5.</p> <p><b>Workaround:</b> Reboot the machine after the upgrade or restart the Pulse Secure service.</p>
PRS-376021	<p><b>Symptom:</b> User attempts to log in to a browser-based session fail with the error message "Detected an Internal Error" sometimes.</p> <p><b>Condition:</b> When accessing Mac via Safari.</p> <p><b>Workaround:</b> Restart the machine.</p>
PRS-375766	<p><b>Symptom:</b> Pulse Client fails to add the route in case of FQDN based split tunneling.</p> <p><b>Condition:</b> While adding the route in the local system.</p> <p><b>Workaround:</b> None</p>
PRS-376174	<p><b>Symptom:</b> Upgrading Pulse Client for Linux displays the following warnings:</p> <ul style="list-style-type: none"> <li>• In: failed to create symbolic link '/usr/local/pulse/libjavascriptcoregtk-1.0.so': File exists</li> <li>• In: failed to create symbolic link '/usr/local/pulse/libjavascriptcoregtk-1.0.so.0': File exists</li> <li>• In: failed to create symbolic link '/usr/local/pulse/libwebkitgtk-1.0.so': File exists</li> <li>• In: failed to create symbolic link '/usr/local/pulse/libwebkitgtk-1.0.so.0': File exists</li> </ul> <p><b>Condition:</b> While adding the route in the local system.</p> <p><b>Workaround:</b> None</p>

Problem Report Number	Release Note
PRS-376205	<p><b>Symptom:</b> Advanced connection details are not displaying as expected for SAML embedded browser-based authentication.</p> <p><b>Condition:</b> When Enable Session Extended option is enabled.</p> <p><b>Workaround:</b> None</p>
PRS-376209	<p><b>Symptom:</b> FQDN resource is going through the tunnel, even though it is configured in split tunneling excluded policy.</p> <p><b>Condition:</b> When FQDN based split tunneling is enabled.</p> <p><b>Workaround:</b> None</p>
PRS-376071	<p><b>Symptom:</b> L2 Wireless suppression fails to re-enable the wireless NIC.</p> <p><b>Condition:</b> Unplugging the wired USB network adapter from Surface Pro.</p> <p><b>Workaround:</b> None</p>
PRS-376034	<p><b>Symptom:</b> For stealth mode connection Use Desktop Credentials option should not be enabled while creating the connection.</p> <p><b>Condition:</b> When stealth tunnel is configured for "Machine only" mode.</p> <p><b>Workaround:</b> None</p>
PRS-376235	<p><b>Symptom:</b> Pulse Client will be in connect state after replacing the connection set with the manually added connection.</p> <p><b>Condition:</b> When added Sign-In URL is configured with VPN Only Access/Always-on VPN and Lock-down option is enabled.</p> <p><b>Workaround:</b> Click on cancel instead of retry and try to establish the connection after one minute.</p>
PRS-376278	<p><b>Symptom:</b> Unable to establish Pulse SAM connection on Windows 7 machine using Pulse Client 9.1R1 connecting to pre-9.1R1 PCS.</p> <p><b>Condition:</b> Pulse Client 9.1R1 will not able to establish Pulse SAM connection with pre-9.1R1 PCS.</p> <p><b>Workaround:</b> Use 9.1R1 PCS build.</p>
PRS-372921	<p><b>Symptom:</b> TFTP connection is getting a timeout error.</p> <p><b>Condition:</b> When Pulse SAM connection is established.</p> <p><b>Workaround:</b> None</p>
PRS-376378	<p><b>Symptom:</b> Delay is observed while accessing FQDN resources.</p> <p><b>Condition:</b> When Split Tunneling with route monitor is enabled.</p> <p><b>Workaround:</b> None</p>



# Product Codes (GUIDs) for SCCM Deployments

If you deploy Pulse Client using Microsoft System Center Configuration Manager (SCCM, formerly SMS), it can be helpful to know the Product Codes (GUIDs) of Pulse Client installation bundles. SCCM uses these codes to determine whether products are already installed. The table below gives the product codes for the corresponding release of Pulse Client for the given the architecture (32-bit or 64-bit) and locale (language environment).

Language	Product Codes (GUIDs)
<b>Release 9.1R8.2</b>	
<b>PulseSecure.x86.msi</b>	
English	{CA8EA9AC-A485-4EA4-8FB5-A9F556B4891E}
Chinese (Taiwan)	{E1E968E5-0236-4B32-B1D0-9401013E29CF}
German	{DF6EBF33-7404-4F30-9E35-2E30666F6A35}
Spanish	{629B45C7-2AD8-4C0F-9780-A7FC9C3533B5}
French	{64385380-CCAD-4B90-92B7-4DB7D8E6AAB9}
Italian	{EBEBC1F4-1810-4BA9-BA8B-250C52A8C34A}
Japanese	{CC1D3228-9F7D-478F-BF3D-CD8E332E26C2}
Korean	{8196D479-0CCE-4BBF-B7FB-74E499620DBE}
Polish	{F27D7A79-EE95-4361-A55D-98E7D45CFCF3}
Chinese (China)	{7073DB94-FEA4-4F55-B0C9-4CBE45A25823}
<b>PulseSecure.x64.msi</b>	
English	{C9B45FE9-3A5D-4F2B-8D8C-AA0F07D95664}
Chinese (Taiwan)	{465D85D4-71FB-4958-90A6-BFBCCF79A846}
German	{B21FD4FD-E326-4421-9C04-C885D957CF7B}
Spanish	{50626AA4-F8DF-4612-8EDC-665B2F7165C4}
French	{D85444F8-31E5-486E-8C04-DCFD9B481F8C}
Italian	{0867CD09-891C-4E0D-A67D-CEFFF763B0A1}
Japanese	{064D3451-C19C-41A4-9422-32C2937D05B7}
Korean	{3A67302F-AADB-4019-9AE8-6AE49256AF68}
Polish	{B9D4042A-1BBF-4989-93C4-293F39F90C2B}
Chinese (China)	{B70EBCEC-DC41-43E3-B2F1-22B880A2F02E}

Language	Product Codes (GUIDs)
<b>Release 9.1R8</b>	
<b>PulseSecure.x86.msi</b>	
English	{BE3759C9-ED1B-4534-9992-D33FEB06DC1A}
Chinese (Taiwan)	{5A420BBB-5145-4DE5-A390-50BBCB4C35F1}
German	{391F069C-1C2E-458E-B981-6B5B7B4393B1}
Spanish	{0079948F-7812-48F3-BC2E-85A7A9B76559}
French	{E9576348-B518-42D1-9A2C-4F0BE1F34537}
Italian	{8AEE0E80-AA4D-4529-B389-83E861BC63DA}
Japanese	{4313B8B1-B5FC-4FA9-BC2E-CD7F96D2946D}
Korean	{DBAE8ABB-EA78-4DFE-9F78-878B097C80CC}
Polish	{A0CF51E4-77A0-47CB-B843-ADDBA42A8C27}
Chinese (China)	{02ECCB67-9889-448F-B260-6BF5A1C9D5EB}
<b>PulseSecure.x64.msi</b>	
English	{9BF8BF6A-F051-42CE-A8D1-FB12C9F7ADB1}
Chinese (Taiwan)	{3F4E0A87-B489-456D-931D-907092B77CAF}
German	{C56CBFB9-3A1C-4EFF-9B80-B4018F6FBACB}
Spanish	{432AE064-FD9A-4456-BA47-C514F01217D2}
French	{0529AF68-52B7-4C9E-A5A7-C249189EB1E5}
Italian	{63F55DFF-B3BE-448B-BA12-65736CAADB9D}
Japanese	{B6D7E60E-2A28-47A4-89A4-EB7576B7877E}
Korean	{10FBC69B-34C0-4530-8309-4C7B7D64A6F0}
Polish	{D42E9418-5F4E-4362-8EE1-2F454086893F}
Chinese (China)	{665CB68E-143F-4CB8-8A70-3A1448616452}
<b>Release 9.1R7.1</b>	
<b>PulseSecure.x86.msi</b>	
English	{DC4BBFAB-D6C1-4DD0-AEBA-9553D4F8B141}
Chinese (Taiwan)	{0D6EE522-D7AA-43EB-ACE6-D9FD57658C6E}
German	{EB6FE65C-D398-4DE1-9BA9-E98D91A7D010}
Spanish	{66D77BCC-1F52-4D5B-AE50-5B5651A10FDE}
French	{2C3FB174-1800-452C-822B-B5669DAB7AC0}
Italian	{E10C8587-4CA1-40A8-8F04-B963CF87B169}

Language	Product Codes (GUIDs)
Japanese	{B683865A-8832-4F98-9481-1634F6D3B27E}
Korean	{9BF14E8C-A0AB-49A3-86C9-E1BA8041D748}
Polish	{0753C63E-6CF7-4387-A54A-415FD55ACEAD}
Chinese (China)	{597304A5-59EF-4B4E-818F-621DCAC2BEFB}
<b>PulseSecure.x64.msi</b>	
English	{A5ED1CBD-5B4A-4F92-BA10-2F8E16FC90C4}
Chinese (Taiwan)	{5D23C591-6A61-424C-8574-2CAA44095868}
German	{50427461-43BD-4F68-A6AD-4C848B9201EF}
Spanish	{2F1AE891-D676-472C-A278-238E0FC9D98A}
French	{FDD1E92A-10D9-46B1-8E2F-7754E8451F38}
Italian	{AC887AAE-075C-4D11-BE71-4EC672F06174}
Japanese	{06CA5969-C489-4DCA-8219-47C6DB3AE05F}
Korean	{7D048840-D4F8-4FD3-90EE-61247D4F5A94}
Polish	{03764A58-DC0C-4261-B266-8F4FAA9E56D6}
Chinese (China)	{ADFB6D58-605F-4F64-B651-2748827CA13E}
<b>Release 9.1R7</b>	
<b>PulseSecure.x86.msi</b>	
English	{DAB2AFAC-A351-431D-884A-7F7B988DB38E}
Chinese (Taiwan)	{FF20FF98-4A25-4A9E-A2D9-06FCD25949A9}
German	{2F4D28BB-846A-46B1-8749-0F4373B0711E}
Spanish	{AF643664-5AA1-4254-B5E7-F8E975200825}
French	{FEB2FE8F-823C-4E49-A62C-6B1D3D0E466A}
Italian	{8A4C6CF3-DB8A-4D70-8223-A38DC2BFE427}
Japanese	{4A250D5C-AE13-4803-89F2-75EB818BAD63}
Korean	{05EE7BFD-DE86-409C-999A-478DF7FE6FFB}
Polish	{D88940BF-6564-4C18-9843-5087BD136D4D}
Chinese (China)	{EFB90E22-CEEB-4AD8-9638-ADEF7F6B16CC}
<b>PulseSecure.x64.msi</b>	
English	{6D8DF24A-085C-4C75-9D40-55D26259529E}
Chinese (Taiwan)	{AEB43E95-F73B-4032-90EE-76F0D7784C60}
German	{A2E1922C-23F7-4C14-8571-72915286D983}

Language	Product Codes (GUIDs)
Spanish	{CBB7C2BA-1474-41EC-9B7D-9ABF3984DF47}
French	{A9FC219F-4A2C-416B-93A7-4C07801CFFD4}
Italian	{56AB7498-9FCE-4F8E-ADE0-B7B566EBDABD}
Japanese	{6EC2A780-A552-4237-A0C3-C1254833065D}
Korean	{CF3913AA-CD4E-408E-A566-AC911A1AE956}
Polish	{574F5439-085F-46C7-B0D7-8A929E440A9D}
Chinese (China)	{7B29B591-915D-4CB0-B257-E6511EE2C7D6}

**Release 9.1R6****PulseSecure.x86.msi**

English	{424F8FE1-6CA7-46C6-8A35-D279CE19C43A}
Chinese (Taiwan)	{568779E8-AAFC-448F-8361-2BA2B0B72FE8}
German	{FCE0DFAC-97CB-47E2-A99B-8E077D3C0B4D}
Spanish	{59C41788-E875-4E03-8532-525DA5A33D19}
French	{0499ABB7-D466-49EA-80C2-4FFB127D37D8}
Italian	{761E3307-CA98-4146-AEA2-6EFDE07E121E}
Japanese	{931C3646-6519-4E73-8CE8-834A56D90828}
Korean	{A71EC037-6E92-4257-ACA1-5AC7A892A28E}
Polish	{846C5357-F550-48D3-B1F7-481AF9A7F23C}
Chinese (China)	{3A1D28C7-4982-4109-ABDF-45E4B355CDCA}

**PulseSecure.x64.msi**

English	{BDD725A4-DA50-4B7E-A113-B902731D76C0}
Chinese (Taiwan)	{AAF03B12-5519-4E08-84E0-3ACB11843DC7}
German	{AA3D63C5-3F00-4FDE-8642-F4BFE56D23E4}
Spanish	{09A38197-CA58-46BE-899F-58FBB9747C4B}
French	{75657019-5C90-41EC-8173-2736FFC1C194}
Italian	{35F2522D-5E54-4AE9-8892-E39C1A1ABC8}
Japanese	{4F7D0985-2366-4A51-B90C-5CCB263D98C8}
Korean	{B8D52E92-97A4-4A9A-8412-52C3EDD53FB0}
Polish	{5C24EA6E-A6AE-47CD-90AE-8952F9D9A66E}
Chinese (China)	{1CCF54B2-B717-4564-8736-18E01A4253A1}

**Release 9.1R5**

Language	Product Codes (GUIDs)
<b>PulseSecure.x86.msi</b>	
English	{5E729506-4089-423C-8872-0B53B16DF741}
Chinese (Taiwan)	{145EAFB5-EFED-4CFC-8082-EEDB15428BF7}
German	{D6F6A0CB-8A7D-436E-B661-C4994A98F8E9}
Spanish	{6E1C2DEE-BFF9-413A-873C-5F6A250D8F8E}
French	{FA759476-7C38-4CF4-9812-628B22FCACE7}
Italian	{290613FA-1B79-4888-88AE-BE50D4735D97}
Japanese	{CA6C6BCF-7F56-442A-9D8F-844178E062A8}
Korean	{1ECDE1C9-B867-4383-9183-5D7D4CA04EDD}
Polish	{5B310EDE-9A25-4D7A-BCF4-ED73D27D3F97}
Chinese (China)	{4C5E699B-C3FF-409C-B532-577AB544E499}
<b>PulseSecure.x64.msi</b>	
English	{2941886A-F921-4B37-BA74-399B5B5F8D62}
Chinese (Taiwan)	{9468EE4F-1137-4BD6-B515-1DAC6670BA01}
German	{2941886A-F921-4B37-BA74-399B5B5F8D62}
Spanish	{D6C7F8EB-7A3A-48FE-9E5F-77A04058DACE}
French	{CA3C027A-7DAB-4987-8311-32EC6D4FC7D2}
Italian	{E2202B9B-0B89-40FA-8F15-4B843570ECC9}
Japanese	{C6626313-EF36-4E38-908C-586C35DF825E}
Korean	{89CE23AA-9311-47AB-B8D8-04E51A7AD0F8}
Polish	{DF8D95A9-76B6-42F4-9C57-DF05B501458A}
Chinese (China)	{512C5BFC-D540-4D38-AA15-DA41E46542D8}
<b>Release 9.1R4.2</b>	
<b>PulseSecure.x86.msi</b>	
English	{F67FEB7F-BBED-47B9-891D-D85B50F89113}
Chinese (Taiwan)	{DF626C9F-B2D9-4B54-BA65-91A81F8A6C1F}
German	{9C04AF20-14D4-4ECC-9E62-903EAD921B8F}
Spanish	{5E2FA19A-2D94-417D-A1E1-EC2A8F21D191}
French	{DA743680-3198-4F10-BD0A-BB86B59B96BF}
Italian	{06A590C5-26F8-4F32-9869-6AC47211A60F}
Japanese	{29F7327D-AFD5-41A2-9E08-E0DAC918525C}

Language	Product Codes (GUIDs)
Korean	{249E83EB-2F6D-4AFD-87FE-9710BB6B3EBE}
Polish	{952E3C4E-CE44-4130-A7A5-5A95A707D564}
Chinese (China)	{0B60857A-DA9C-47A0-A5FF-037E8AF1C5AD}
<b>PulseSecure.x64.msi</b>	
English	{A5C9D703-23B4-4960-A239-E057444C1584}
Chinese (Taiwan)	{F34311D7-6DC0-4E2F-8D19-6465FC6D569D}
German	{60FAD516-82F6-4F2A-8D3E-162CC65E7DA9}
Spanish	{B1D5B1D9-F4DE-4FAF-938D-015E1976B0A6}
French	{2B92CD3E-160B-458F-8D25-3908146E1499}
Italian	{E9686D5E-5480-4686-AC1E-84643708D705}
Japanese	{894224A8-A2D1-46DE-9079-8DEC76971B3C}
Korean	{66828680-84B7-4BB4-A809-8EC2B4DE89C4}
Polish	{2F9A1BF3-8CC7-4A0B-BD8E-791D6C5A94DF}
Chinese (China)	{742FC3BC-E2E4-4954-9C2C-1DF103CD8F87}
<b>Release 9.1R4.1</b>	
<b>PulseSecure.x86.msi</b>	
English	{5215E6A1-3933-49EB-ADA9-0871C19C128D}
Chinese (Taiwan)	{02D42712-5827-4659-B364-7243B3A0FE97}
German	{C4BA215F-620B-4100-A637-5CF82E9EDD16}
Spanish	{0700E2D2-974E-4E1C-8E67-C955049FCC5E}
French	{589F0E50-0EAD-4D0E-ADD4-55DDED20F883}
Italian	{4A4AADDD-C2E0-4193-B42D-97CF217FB9F0}
Japanese	{5F6A8768-94E1-447E-B431-3F82378501FE}
Korean	{2EE3C13E-052C-4BF3-B45B-F04C9DC05917}
Polish	{9E26AED6-47CA-4C90-84D0-78F7BE277421}
Chinese (China)	{A0115293-A7C9-48F3-8268-49A5526F3A86}
<b>PulseSecure.x64.msi</b>	
English	{3085498A-262B-4C9A-B875-BB967DA16C99}
Chinese (Taiwan)	{CD484040-E805-4308-85E3-6CBF5281BA27}
German	{ED6ABAAB-875B-47D8-8BA8-CD5CCA266E22}
Spanish	{D8389068-3D3F-4296-8E24-B5E36C94C19F}

Language	Product Codes (GUIDs)
French	{8F3F686B-BA2F-42FC-8C4D-B8A6FBB0739F}
Italian	{4F5F2807-BBCF-4F96-87E9-93F23C998679}
Japanese	{38DC6C8B-F8D0-40D1-ABAC-1EA2EA07F3AF}
Korean	{BDF8860C-9DD4-4C01-BC7C-A15943DAE3A6}
Polish	{759E346B-E4E5-4F7A-AA11-67AD8DC8B82E}
Chinese (China)	{C69095E0-59A8-478F-AA12-00A34B14BE51}

**Release 9.1R4****PulseSecure.x86.msi**

English	{BC8FCC72-3ED8-4014-8837-1AD01DD3C899}
Chinese (Taiwan)	{9A4FDB33-1313-45EA-980D-88A59F0C6648}
German	{FB9CD619-2A1F-450A-B8A4-7956FE971466}
Spanish	{9C77B28E-B36D-40A9-88CA-0B8624CB7AF3}
French	{8EAD2B6D-B140-45F6-BD34-A722A17CC260}
Italian	{119503CE-8FC9-4426-A092-4D6D13DE4C10}
Japanese	{7E90E833-AD58-4848-A930-3FF2CCFBACED}
Korean	{8A6DC402-F46B-4CC2-A7B8-41E2D7564802}
Polish	{C111FAE0-0E6B-44E9-989B-F662922A0D91}
Chinese (China)	{77392EFE-680A-42FE-BB7F-639E19EEFC2F}

**PulseSecure.x64.msi**

English	{91C2C98E-84B4-4164-876F-810F13609E8D}
Chinese (Taiwan)	{11BAE0AD-EE6F-420E-B34D-E90411C95A9D}
German	{F6B0DC67-11F1-4114-BF14-155699114D0A}
Spanish	{AE1B864E-0853-4783-BB59-3C1664DE190B}
French	{542572B0-AFD9-4AFC-B180-26007892C817}
Italian	{F968BA03-C078-4270-91DB-94A550F78186}
Japanese	{276E4EDD-E771-4173-B4CB-6AA285E62ACE}
Korean	{CF86FFC8-4116-49FE-8C51-0E397BF7C49A}
Polish	{820E1F6B-41E7-43F3-9D47-15940421E2F8}
Chinese (China)	{00513CFC-8662-4C1A-AB4B-E2B4D20CFAD8}

**Release 9.1R3.1****PulseSecure.x86.msi**

Language	Product Codes (GUIDs)
English	{453B9DF8-C824-4FF7-A30A-45057FC47B38}
Chinese (Taiwan)	{73A29004-6079-4054-B4E2-A142590E855F}
German	{B157C347-F8EC-4837-9C31-2747E5BFAF0B}
Spanish	{1866AD3F-7A86-472D-B697-22ACFE701F54}
French	{C6365279-9237-432D-AF50-0A9227DCE90A}
Italian	{ACC29DE3-2F20-4AD7-8690-F571050F7352}
Japanese	{16EB3D51-06BC-4FCE-AD72-473BEB2DE687}
Korean	{991527D4-6ECE-428E-9904-5CACDCF44CB7}
Polish	{4A10143C-AA40-4F06-BF17-7A82E4705D55}
Chinese (China)	{3F935EFF-8628-4683-B0FB-469BD03E97A2}
<b>PulseSecure.x64.msi</b>	
English	{3F935EFF-8628-4683-B0FB-469BD03E97A2}
Chinese (Taiwan)	{099ABAB5-2FE7-4612-BAAD-E5AA89FDF3AB}
German	{3857ED90-67DA-4735-B3B8-834366F69AC0}
Spanish	{15425246-47A4-4C2E-BEE7-A7AA34B46B87}
French	{C8684A61-2DFF-4D38-AE89-2657FBEEEEBC}
Italian	{4831DCC6-89B3-4264-ABC6-B20F283ADB4B}
Japanese	{B6D4B748-AB1A-41DC-8943-69A6E7E2A60D}
Korean	{05013BE1-5DF4-484E-B1F5-E5CDFC639B32}
Polish	{8316156F-50CD-483D-B3E3-47A2387AF4E2}
Chinese (China)	{89ACC5BA-F2C5-479F-A61C-1701A1796431}
<b>Release 9.1R3</b>	
<b>PulseSecure.x86.msi</b>	
English	{82E5EEF6-4D31-481D-802D-EC1FCBFB04D8}
Chinese (Taiwan)	{B42F3689-2448-4D4D-AB07-FA54E2F3DBC6}
German	{D55F048A-1397-4C7B-9582-D3B215B6E855}
Spanish	{DF6CFDDE-ECA0-4A40-BA04-E1CAD05D2BF0}
French	{921F5395-76A1-4366-8C66-05F5776BC512}
Italian	{8D71216C-5DAA-4FE8-9F15-5C2BE52FA820}
Japanese	{6A2FD259-FF21-433B-ADFA-7FADB31DC194}
Korean	{A52117D6-5E2C-4FA1-BDF9-D074E294E93C}



Language	Product Codes (GUIDs)
Polish	{6FA8BC6F-506A-4136-AF5C-6F62F034CED1}
Chinese (China)	{8A7C2CEF-43A6-4D5F-A8BC-D494EE01AAE2}
<b>PulseSecure.x64.msi</b>	
English	{3F1271DA-D808-41BA-B070-6522FF9D4C23}
Chinese (Taiwan)	{C509C6DE-B335-4E4D-82CA-495720594205}
German	{E8110F78-82A8-48E4-815C-6F60562DD753}
Spanish	{58ECBD03-AC3C-479C-A6AA-F0CFE725A469}
French	{D8449807-3489-49E4-9F59-EC71AA68F083}
Italian	{2FC48975-5904-4387-ADD0-3D51D4E44DE9}
Japanese	{FD4BC5BB-9E07-44C8-ACBA-63C98C863920}
Korean	{2D8E7DF8-C23B-42F5-95E4-FF22EDE9106D}
Polish	{B2DB488A-8102-4A9D-B1BE-4B26388E5B99}
Chinese (China)	{73E9D64F-A5F7-4792-807B-7BB67D627F2D}
<b>Release 9.1R2</b>	
<b>PulseSecure.x86.msi</b>	
English	{25CFACD8-CAAC-4FA5-9054-34C58140B1D3}
Chinese (Taiwan)	{DD6DA542-4D51-4182-98CD-7F73A0B15B81}
German	{AA83EB42-3662-49DB-A6B9-7F70AA74E439}
Spanish	{605BC1B9-FF40-4073-A3D0-C943CC668DAF}
French	{7740527C-A2E4-42FD-8A12-F4337AB3DA17}
Italian	{B1ABE9F2-1C59-45B9-BB7F-EA1F4689A0FA}
Japanese	{32285458-FE60-481C-B618-0E50285C2C91}
Korean	{AEDDC0C0-756A-4DEC-9862-A88083535CA7}
Polish	{A549BAFC-D6D7-4A54-A147-3D72D7C082FB}
Chinese (China)	{4E8E635F-9443-4250-89F3-9D5F046AEA45}
<b>PulseSecure.x64.msi</b>	
English	{DDFE22C2-8C81-45D6-8C95-932C1EDAD5EF}
Chinese (Taiwan)	{7031AF51-BC44-4C6D-8649-AC8D5F3FC796}
German	{F1133159-3AC3-41D1-A5BE-49958C4E3AA1}
Spanish	{A73D39F3-AE14-4BE5-823E-F42A79557956}
French	{C6B0EC3E-F8C1-4001-A2AF-8E23968460B4}

Language	Product Codes (GUIDs)
Italian	{B515EF30-FDB1-4200-A468-7BE0DEABED51}
Japanese	{0B5AB9AA-5639-4DB9-B429-D9E491B995CB}
Korean	{678B1E92-9DFC-4D6C-B6E8-AA6117249E55}
Polish	{198BB78A-1907-45BD-8DBC-36C2FC73AA95}
Chinese (China)	{8F7E1898-6918-4929-BCCB-55E259DD4364}

### Release 9.1R1

#### PulseSecure.x86.msi

English	{D9BD510B-2DC6-4A20-8B26-D07C799C41FC}
Chinese (Taiwan)	{174C857C-11BE-45D8-9063-37B02C1508B8}
German	{BE7A60AA-3FF5-4D35-9CA7-461851369C4A}
Spanish	{F3F3B743-BCF2-4601-BF6B-1078C0CE0704}
French	{488CE0C8-77B0-4A2C-B3BA-D0A5CE2BDAC4}
Italian	{376E943E-958C-47CD-9EE5-A40CBE6483B7}
Japanese	{63B578ED-BD3E-40A6-B3F7-166708E49BA4}
Korean	{972FA217-F5B6-4715-917F-BC0EF7407EFC}
Polish	{C38E6C1E-9BA6-44C5-8E9B-16C8445AF457}
Chinese (China)	{1953E341-C083-4661-8AE5-930A0A1E2106}

#### PulseSecure.x64.msi

English	{AB8FE63C-3C46-4F5E-96AE-ED50CAF74723}
Chinese (Taiwan)	{63EDC13F-9910-429A-AB79-0CA61FFB2CF1}
German	{AA936E6F-A772-4974-9856-EBD778381786}
Spanish	{F14E4340-BDC5-433E-A3AC-D822B84746B6}
French	{F83F8C27-DAB0-4E6D-9DB0-EDAEA0EED12A}
Italian	{F5492346-A562-4FD9-9F3D-E2A1A9A7B2CA}
Japanese	{70F811F4-4269-4F3C-BB89-AE4AC46EA3ED}
Korean	{9BA77365-3010-41EA-B35B-9FFF3D9989C}
Polish	{4D41B4DD-A16F-41B6-A38E-D9C19BD02CDE}
Chinese (China)	{26D8FD5B-7B82-458C-8F61-C783E6F8619B}

# Product Compatibility

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See the latest *Pulse Secure Supported Platforms Guide* (available from <https://www.pulsesecure.net/techpubs>) for supported versions of operating systems, browsers, and servers in this release.

# Upgrade Instructions

## Upgrade Paths

The following table describes the tested upgrade paths.

Release	Description
9.1Rx	You can upgrade directly to 9.1R8.2.
9.0Rx	You can upgrade directly to 9.1R8.2.
5.3Rx	You can upgrade directly to 9.1R8.2.

**Note:** For a Pulse SAM connection, you cannot upgrade to 9.1Rx from a pre-9.0R3 build. To upgrade, use a web browser. Also, on a Windows 7 machine, you cannot establish the Pulse SAM connection with pre-9.1R1 PCS.

**Note:** From 9.1R3 release onwards, Network Connect (NC) client and Windows Secure Application Manager (WSAM) client are not supported.

**Note:** Client upgrades are not supported to or from beta releases.

To run Pulse Secure Desktop Client version 5.3R1 or later under Windows 7, the host must contain a March 10, 2015 Windows 7 Update to be able to properly accept and verify SHA2-signed binaries. This Windows 7 update is described at <https://support.microsoft.com/en-us/kb/3033929>. If this update is not installed (in other words, if a Windows 7 host has not received an Operating System update since March 10, 2015), Pulse Client 5.3R1 and later operates with reduced functionality (see PRS-337311). As a general rule, Pulse Secure recommends that client devices are kept current with the latest Operating System updates to maximize security and stability.

## General Notes

Security-related issues are not normally covered in Pulse Secure release notes. To learn more about security advisories affecting Pulse Secure products, see the Pulse Secure security advisory page (<https://kb.pulsesecure.net/?atype=sa>).

# Documentation

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Pulse Secure documentation is available at <https://www.pulsesecure.net/support>

# Technical Support

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

- <https://www.pulsesecure.net/support>
- [support@pulsesecure.net](mailto:support@pulsesecure.net)

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

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