



Pulse Secure Access Standalone Upgrade

How-to

This document covers the required steps to upgrade a standalone Pulse Secure Access device.

Table of Contents

Step 1: Confirming a Supported Upgrade Path	3
Step 2: Downloading the Service Package	3
Step 3: Creating Backup Files	3
Step 3.1: Exporting a System Configuration File	3
Step 3.2: Exporting a User Accounts File	4
Step 3.3: Exporting an IVS Configuration File	5
Step 4: Clearing your Logs	5
Step 4.1: Deleting the System Log Files	6
Step 4.2: Deleting the Client Upload logs	6
Step 4.3: Deleting the System Snapshot Files	7
Step 5: Upgrading or Downgrading the Appliance	8
Step 5.a: Install Service Package	8
Step 5.b: Manage Staged Service Package	10



Note: This document applies to SA OS 7.0 and above.

Step 1: Confirming a Supported Upgrade Path

In order to ensure configuration and user data integrity after the upgrade, we strongly recommend that you follow the supported upgrade path documented in the first Release Notes (R1) for that branch. In the first Release Note for every branch, there is a section titled “Upgrading to this Release” where you can find this information. Subsequent Release Notes will only list branch fixes and limitations. If you are upgrading from a release which is not listed, then please upgrade to one of the listed releases first before proceeding to your chosen branch. For example, if you are currently running 6.0R3.1 and you would like to upgrade to 7.1R2, you would need to check the Secure Access Release Notes for Release version 7.1R1.

Step 2: Downloading the Service Package

You can install a different service package by first obtaining the software from the [Pulse Secure Support Website](#). Package files are encrypted and signed so that the SA Series Appliance server accepts only valid packages issued by Pulse Secure. This measure prevents the SA Series Appliance server from accepting Trojan horse programs.

Step 3: Creating Backup Files

Before installing a new service package, please export your current system configuration, local user accounts, customized user settings, and role and policy information.

Step 3.1: Exporting a System Configuration File

Your System Configuration file contains Network, Cluster, License, and SNMP settings. To export an encrypted binary system configuration file:

1. In the admin console, choose **Maintenance > Import/Export > Configuration**.
2. Under **Export**, enter a password if you'd like to password-protect the configuration file.
3. Click **Save Config As** to create the system.cfg file.

Import/Export

Configuration User Accounts IVS XML Import/Export

Export

To export system settings to a configuration file, click **Save Config As**. You can optionally password-protect this file:

Password for configuration file:

Confirm Password:

Save Config As...



Note: When exporting an SA Series FIPS configuration file, note that information about the machine's security world or key store is included in the file. Therefore, you need an administrator card that is associated with the security world in order to successfully import the configuration file into another machine.

Step 3.2: Exporting a User Accounts File

The User Accounts file contains Sign in Settings (includes sign sing policies, sign in pages, and all authentication servers), Authentication Realms, Roles, Network Access, Resource policies, Resource Profiles, User accounts, and Meeting settings. To export an encrypted binary local user accounts file:

1. In the admin console, choose **Maintenance > Import/Export > Import/Export User Accounts**.
2. Under **Export**, enter a password if you'd like to password-protect the configuration file.
3. Click **Save Config As** to create the **user.cfg** file.

Import/Export

Configuration User Accounts IVS XML Import/Export

Export

Export user settings to a configuration file. You can optionally password-protect this file:

Password for configuration file:

Confirm Password:

Save Config As...

Step 3.3: Exporting an IVS Configuration File (Applies only to SA-x000 & x500 devices)

The Instant Virtual System (IVS) configuration file contains IVS Profiles, System, Authentication, Administrators, Administrators, Users, Resources Policies, and Maintenance settings. To export an encrypted binary IVS file:

1. In the admin console, choose **Maintenance > Import/Export > Import/Export IVS**.
2. Under **Export**, enter a password if you'd like to password-protect the configuration file.
3. Click **Save Config As** to create the **ivs.cfg** file.

Import/Export

Configuration User Accounts **IVS** XML Import/Export

Export

To export IVS settings to an encrypted configuration file, click Save Config As. You can optionally password-protect the configuration file.

Password for configuration file:

Confirm Password:



Note: IVS is only available if you have an IVS license.

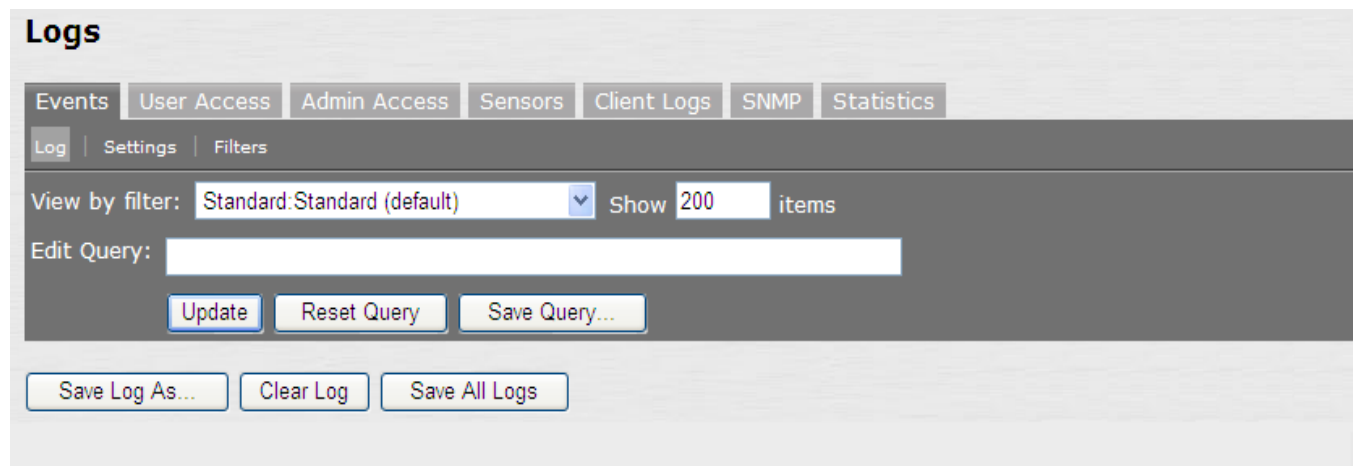
Step 4: Clearing your Logs

Installing a service package can take several minutes and requires the SA Series Appliance to reboot. Because existing system data is backed up during this process, you can decrease installation time by clearing your system logs before trying to install a service package. System log Files are text files stored on an SA Series Appliance to track system events. An SA Series Appliance produces an Events log, User Access log, Administrator Access log, Sensors log, Client Upload logs, and System Snapshot Files. These files will be preserved unless these files are deleted prior to upgrading.

Step 4.1: Deleting the System Log Files

To delete the System Log Files:

1. In the admin console, choose **Log/Monitoring**.
2. Select **Events log**, **User Access log**, **Administrator Access log**, or **Sensors log**.
3. If you would like to save your System Logs before upgrading select **Save All Logs** to download your Events log, User Access log, Administrator Access log, and Sensors log in a single zip file.
4. Select **Clear Log**, and repeat for each remaining System Log.



5. Select **Clear Log**, and repeat for each remaining System Log.

Step 4.2: Deleting the Client Upload logs

To delete the Client Upload logs:

1. In the admin console, choose **Log/Monitoring > Client Logs > Uploaded Logs**.
2. If you would like to save your Client Uploaded Logs before upgrading select **<Log-File-Name>.zip** to download each log file.
3. Select the **trash icon** to delete each file.

Uploaded Log Listing




Events
User Access
Admin Access
Sensors
Client Logs
SNMP
Statistics

Uploaded Logs
Settings

Uploaded Logs Details
 Log Disk Size: 200 MB
 Disk Available: 194 MB
 Disk Used: 6 MB

Please Note: Uploaded logs are **NOT** preserved over upgrades. Uploaded logs can be downloaded/deleted from their respective 'Log Node'. Once a node is deleted from a cluster, logs from that node are lost. You can have uploaded logs archived regularly in [archiving](#). Refreshing this page is only supported via the refresh button below.

Logs manipulation

File	Date	User/Realm	Client Component	Log Node	Error	
log-20121001-012300.zip	2012-10-01 01.23.00 +0100 BST	user03 / Users	Network Connect 7.0.0	localhost2	nc.windows.app.23791	
log-20121001-012242.zip	2012-10-01 01.22.42 +0100 BST	user02 / Users	Network Connect 7.0.0	localhost2	nc.windows.app.23791	
log-20121001-012224.zip	2012-10-01 01.22.24 +0100 BST	user01 / Users	Network Connect 7.0.0	localhost2	nc.windows.app.23791	

Step 4.3: Deleting the System Snapshot Files

To delete the System Snapshot Files:

1. In the admin console, choose **Maintenance > Troubleshooting > System Snapshot**.
2. If you would like to save your System Snapshot files before upgrading select **<Snapshot-File-Name>** to download each snapshot.
3. Put a check each snapshot file you would like to delete and choose **Delete**.

Troubleshooting

User Sessions | Monitoring | Tools | **System Snapshot** | Remote Debugging

A snapshot of the system state captures details that can help Juniper Support diagnose system performance problems. The system stores up to ten snapshots, which are packaged into an encrypted "dump" file that you can download to a network machine and then email to Juniper Support.

Take Snapshot | Delete

<input type="checkbox"/> Snapshot	Size	Date
<input checked="" type="checkbox"/> Admin generated snapshot (with debuglog, config)	287396 bytes	2012-10-01 01:32:14
<input checked="" type="checkbox"/> Admin generated snapshot (with debuglog, config)	287270 bytes	2012-10-01 01:30:13
<input checked="" type="checkbox"/> Admin generated snapshot (with debuglog, config)	287225 bytes	2012-10-01 01:28:53

Step 5: Upgrading or Downgrading the Appliance

The admin console lets you install a new service package immediately or stage the service package. For "slower" networks, we recommend you stage the service package on your appliance.

Step 5.a: Install Service Package

This feature is typically used to upgrade to newer versions of the system software, but you can also use this process to downgrade to a previous version or to delete all your current configuration settings and start from a "clean slate." If needed, you may also roll back to a previous system state through the serial console or the web admin console.

To install a service package:

1. In the admin console, select **Maintenance > System > Upgrade/Downgrade**.
2. Under Section Install Service Package, select **Browse** to find the service package on your hard drive that you obtained from the Pulse Secure Customer Support Center. If you want to delete your current configuration settings but continue to use the same SA Series Appliance version, choose the service package that is currently installed on your appliance and select **Delete all system and user data**. If you do not choose **Delete all system and user data**, then you will receive the following error below:
3. Alternately, if you are downgrading to an older service package or deleting your configuration settings, you will need to select **Delete all system and user data**.

WARNING: The option to **delete all system and user data** is only required if you are downgrading you're an appliance to a version which is lower than the version which is currently running on your system. Selecting the option to **delete all system and user data** will restore your appliance to an un-configured state, and you will have to reestablish network connectivity before reconfiguring the system. **Do NOT check this box** if you wish to retain existing settings and data during a system upgrade to a newer service package. Please note that if your appliance is an SA Series FIPS, then choosing this option will delete your existing security world or key store, and also your certificates.



Note: If you want to delete your current configuration settings but continue to use the same SA Series Appliance version, choose the service package that is currently installed on your appliance and select Delete all system and user data. If you do not choose Delete all system and user data, then you will receive the following error below:



The service package you uploaded is the same as the existing package. Click [here](#) to continue.

4. Select Submit to upload new package into staging area.

System Maintenance
Install Service Package

Platform Upgrade/Downgrade Options Installers

Installing a service package can take several minutes and requires the system to reboot. Because existing system data is backed up during this process, you can decrease installation time by clearing your [system log](#) before trying to install a service package.

Install Service Package

From File

C:\7.1R1.1-b17943-package.pkg

From Staged Package

Choose this option if you want to install the staged service package.

DELETES all system and user configuration data before installing the service package, restoring the member to an unconfigured state. Use this option if you want to downgrade to an older service package than the currently installed package. Do NOT check this box if you want to retain existing settings and data during a system upgrade to a newer service package.

Note: This option does not change the factory image.

Step 5.b: Manage Staged Service Package

Staging lets you to push the package to a directory on the SA Series Appliance before the planned maintenance time and then install the package during the maintenance window. Note that staging does not provide the ability to schedule the installation of the stored service package. It only pushes the service package to the device without installing it. You must still manually start the installation process.

To install a service package:

1. In the admin console, select **Maintenance > System > Upgrade/Downgrade**.
2. Under Section Manage Staged Service Package, select **Browse** to find the service package on your hard drive that you obtained from the Pulse Secure Customer Support Center. If you want to delete your current configuration settings but continue to use the same SA Series Appliance version, choose the service package that is currently installed on your appliance and select **Delete all system and user data**. If you do not choose **Delete all system and user data**, then you will receive the following error below:
3. Alternately, if you are downgrading to an older service package or deleting your configuration settings, select **Delete all system and user data**.

WARNING: The option to **delete all system and user data** is only required if you are downgrading you're an appliance to a version which is lower than the version which is currently running on your system. Selecting the option to **delete all system and user data** will restore your appliance to an un-configured state, and you will have to reestablish network connectivity before reconfiguring the system. **Do NOT check this box** if you wish to retain existing settings and data during a system upgrade to a newer service package. Please note that if your appliance is an SA Series FIPS, then choosing this option will delete your existing security world or key store, and also your certificates.



Note: If you want to delete your current configuration settings but continue to use the same SA Series Appliance version, choose the service package that is currently installed on your appliance and select Delete all system and user data. If you do not choose Delete all system and user data, then you will receive the following error below:



Info

The service package you uploaded is the same as the existing package. Click [here](#) to continue.

4. Select **Submit** to upload new package into staging area

Manage Staged Service Package

Upload new package into staging area

C:\7.1R1.1-b17943-package.pkg

Delete Staged Package



Note: If you choose to revert to delete all system and user data from the appliance using this option, you will have to reestablish network connectivity before reconfiguring the system. Also note that you cannot roll back to a version lower than 3.1.

5. Under Section Install Service Package, select **From Staged Package <SA Version and Build>**.

System Maintenance
Install Service Package

Platform Upgrade/Downgrade Options Installers

Installing a service package can take several minutes and requires the system to reboot. Because existing system data is backed up during this process, you can decrease installation time by clearing your [system log](#) before trying to install a service package.

Install Service Package

From File

From Staged Package **7.1R1.1 (build 17943)**

Choose this option if you want to install the staged service package.

DELETES all system and user configuration data before installing the service package, restoring the member to an unconfigured state. Use this option if you want to downgrade to an older service package than the currently installed package. **Do NOT check this box** if you want to retain existing settings and data during a system upgrade to a newer service package.

Note: This option does not change the factory image.

For any questions or issues relating to the procedures outlined in this document, please contact support. For details on how to engage support, please refer to the following link: <https://pulsesecure.net/support/>