

Use OS Security Packages



For supported software information, click here.

Versa Networks periodically provides operating system security packages (OS SPacks), which provide updates to the Analytics, Director, and Versa Operating SystemTM (VOSTM) system software to protect the devices against newly identified security vulnerabilities. It is recommended that you install OS SPacks on all deployed Versa Networks devices when the OS SPacks become available. In addition, it is recommended that you upgrade to the latest VOS software releases when they become available, which is typically every 60 to 90 days.

You can upgrade the OS SPacks on one or more VOS devices from a Director node.

This article discusses how to install an OS SPack on Analytics, Director, and VOS devices. Note that Versa Director and VOS devices use different OS SPack files.

Use OS SPacks with Director Nodes

For Releases 22.1.1 and later.

To use OS SPacks, you edit the parameters for downloading the OS SPack, you download the OS SPack to the Director node, and then you install the OS security package.

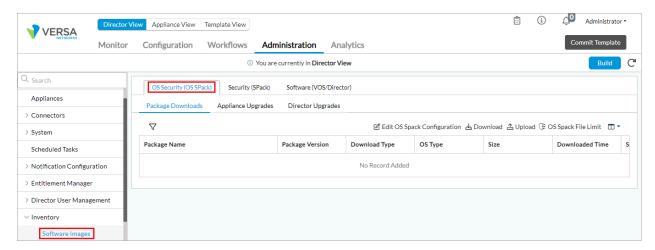
Optionally, you can set a limit for the number of downloaded OS SPack files that the Director node retains. The default limit is five files.

Edit the OS SPack Download Parameters

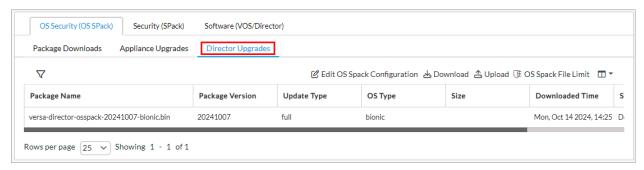
The OS SPack download parameters define the URL from which to download OS SPacks for a Director node.

To edit the OS SPack configuration for a Director node:

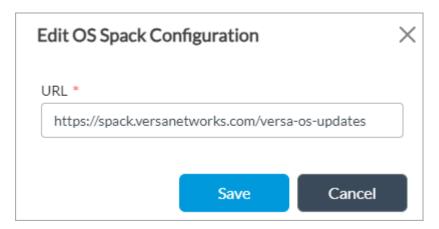
- 1. In Director view, select the Administration tab in the top menu bar.
- 2. Select Inventory > Software Images in the left menu bar. The OS Security (OS SPack) tab displays by default.



3. In the OS Security (OS SPack) tab, select the Director Upgrades tab.



4. Click Edit OS SPack Configuration. The Edit OS SPack Configuration popup window displays.



- 5. Enter the URL from which to download OS SPacks for the Director.
- 6. Click Save.

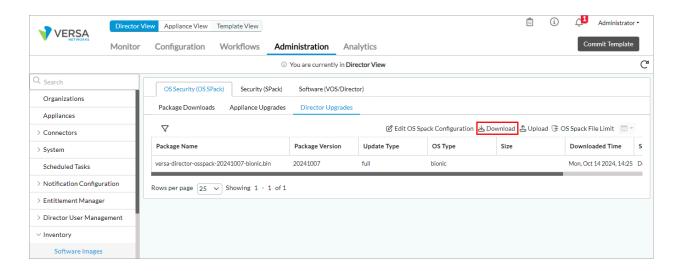
Download the OS SPack on a Director Node

For Releases 22.1.1 and later.

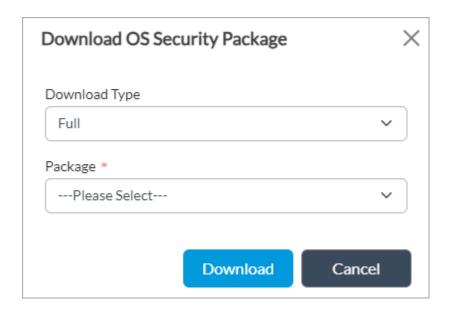
The OS SPack is a self-installable binary file. You can download the file from the Director GUI or you can download it manually, directly to the Director node.

To download an OS SPack to a Director node and then install it:

- 1. In Director view, select the Administration tab in the top menu bar.
- 2. Select Inventory > Software Images in the left menu bar. The OS Security (OS SPack) tab display by default.
- 3. In the OS Security (OS SPack) tab, select the Director Upgrades tab. The table in the main pane lists the OS SPacks that have been downloaded.



a. Click the Download icon. In the Download OS Security Package popup window, enter the following information.



Field	Description
Download Type	Select the type of download: • Full—Select to download a new OS SPack to Director. Select this opti Director node. • Incremental—Select to upgrade the OS SPack on a Director node.
Package (Required)	Select the name of the OS SPack.

- b. Click Download. The downloaded file is saved in the /var/versa/packages/osspack/versa-director/ directory.
- 4. To download the OS SPack binary file manually:
 - a. Download the binary file from the folder at https://versanetworks.box.com/v/osspack or from the alternate download server, https://upload.versa-networks.com/index.php/s/nEkF9xOO3e7BA9Z. An example of an OS SPack filename is versa-director-osspack-20200214.bin.
 - b. Copy the OS SPack file to the Director node. You can copy the file using SCP. For AWS, you must use SSH keys to perform SCP.

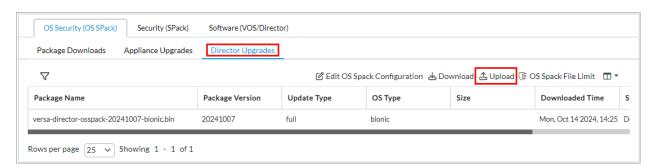
Manually Upload an OS SPack on a Director Node

For Releases 22.1.4 and later.

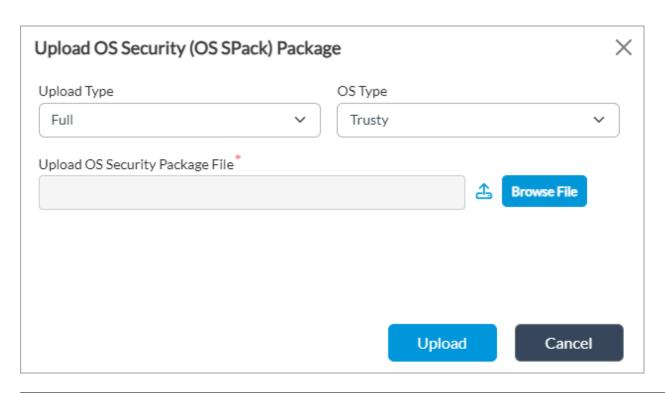
If the Director node does not have internet access, you can download an OS SPack to a local computer and then manually upload it to the Director node. The OS SPack filename must start with the string versa-director-osspack and the filename extension must be .bin.

To upload an OS SPack manually from a local computer to the Director node:

- 1. In Director view, select the Administration tab in the top menu bar.
- 2. Select Inventory > Software Images in the left menu bar.
- 3. Select the OS Security (OS SPack) tab, and then select the Director Upgrades tab.



4. Click Upload. The Upload OS Security (OS SPack) Package popup window displays. Enter Information for the following fields.



Field	Description
Upload Type	Select the type of OS SPack to upload. Ensure that you select the same type as the OS SPack file that you want to upload. • Full—Download the full database repository. A full download overwrites the OS SPack that is installed on the Director node. • Incremental—Upload only an update to the currently installed OS SPack. To determine whether an incremental update is available, check the release notes for the OS SPack version.
OS Type	Select the OS type running on the Director node: Bionic (Ubuntu 18.04) Trusty (Ubuntu 14.04)
Upload OS Security Package File	Click Browse File, and then select the OS SPack file to upload from the local computer. Note that filename must start with the string versa-director-osspack and the filename extension must be .bin.

5. Click Upload.

To display information about the manual OS SPack upload, click the Tasks icon in the horizontal menu bar.

Install the OS SPack

Install the OS security pack update by executing the following Linux commands from a bash shell:

```
~$ chmod a+x filename.bin ~$ sudo .lfilename.bin
```

Note: When you install the OS SPack, no running services on the Director node are affected, and you do not need to restart any services.

To display a list of OS SPack versions that are present on a Director node, SSH into the node and issue the following shell command:

cat /opt/versa/etc/osspack/manifest.json | grep "version":'

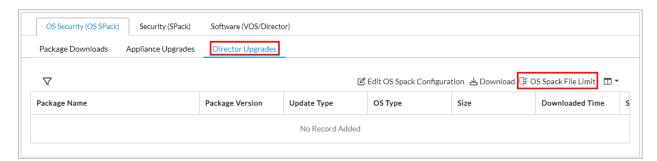
Note that in this command, the text string **version** is preceded by a single quotation mark followed by a double quotation mark.

Set the OS SPack File Limit

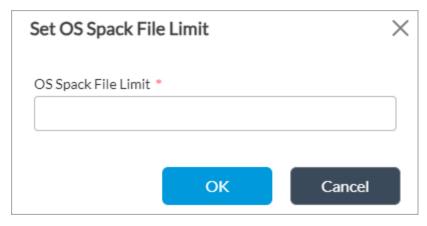
This procedure is optional. When you schedule an OS SPack download to a Director node, the Director node retains the last five OS SPacks by default. When this limit is reached, it deletes the oldest SPack. You set separate file limits for VOS OS SPack files and Director OS SPack files.

To change the number of OS SPacks that the Director node retains for a Director node:

- 1. In Director view, select the Administrator tab in the top menu bar.
- 2. Select Inventory > Software Images in the left menu bar.
- 3. In the OS Security (OS SPack) tab, select the Director Upgrades tab.



- 4. Click the OS SPack File Limit icon.
- In the Set SPack File Limit popup window, enter the maximum number of SPacks to retain on the Director node. The default is 5. You configure the file limit as per the system memory availability.



6. Click OK.

Use OS SPacks with VOS Devices

For Releases 22.1.1 and later.

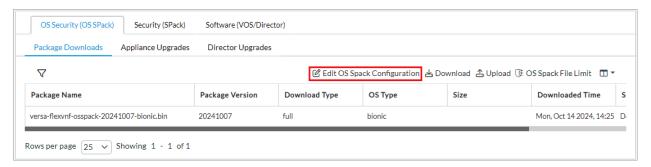
To use OS SPacks, you edit the parameters for downloading the OS SPack, you download the OS SPack to the Director node, and then you install the OS security package on a VOS device.

Edit the OS SPack Download Parameters

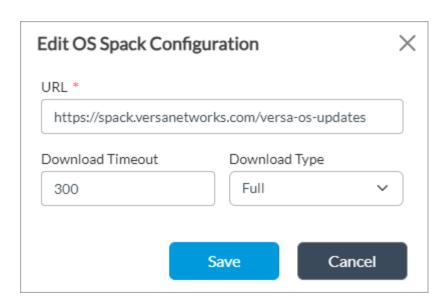
The OS SPack download parameters define the URL from which to download OS SPacks, whether to perform full or incremental updates for a device, and the time for download timeout.

To edit the OS SPack configuration for a device:

- 1. In Director view, select the Administration tab in the top menu bar.
- 2. Select Inventory > Software Images in the left menu bar. The OS Security (OS SPack) tab display by default.
- 3. In the OS Security (OS SPack) tab, select the Package Downloads tab.



4. Click Edit OS SPack Configuration. In the Edit OS SPack Configuration popup window, enter the following information.



Field	Description
URL (Required)	Enter the URL from which to download OS SPacks.
Download Timeout	Enter the time, in minutes, for the download to timeout. Range: 300 through 3600 minutes (5 through 60 hours) Default: 300 minutes
Download Type	Select the OS SPack download type: Full—Download the full database repository. A full download overwrites the OS SPack that is installed on the device. Incremental—Download only an update to the currently installed OS SPack. To determine whether an incremental update is available, check the release notes for the OS SPack version.

5. Click Save.

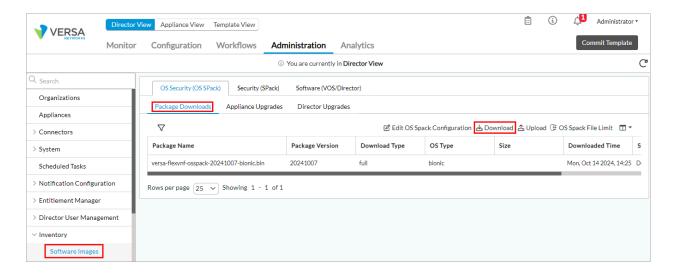
Download the OS SPack for a VOS Device

For Releases 22.1.1 and later.

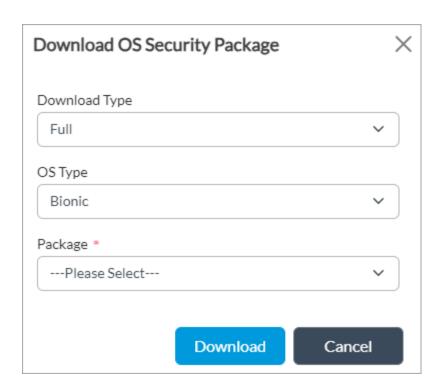
You download the OS SPack for a VOS device to a Director node and then install or upgrade OS SPack on the VOS device.

To download the OS SPack for a VOS device:

- 1. Before you download and install the OS SPack, configure DNS settings so that the Director node can locate the server from which to download the OS SPack. For more information, see Configure DNS Settings.
- 2. In Director view, select the Administration tab in the top menu bar.
- 3. Select Inventory > Software Images in the left menu bar.
- 4. Select the OS Security (OS SPack) tab in the horizontal menu bar, and then select the Package Downloads tab. The table in the main pane lists the OS SPacks that have already been downloaded.



5. Click the Download icon to download the OS Security package. In the Download OS Security Package popup window, enter information for the following.



Field	Description
Download Type	Select the type of download: • Full—Download the complete OS SPack to the Director node. Select this open the Director node. • Incremental—Select to upgrade the OS SPack on a Director node with only OS SPack.
OS Type	Select the OS type running on the Director node: Bionic (Ubuntu 18.04) Trusty (Ubuntu 14.04)
Package (Required)	Select the name of the OS SPack.

6. Click Download. The OS SPack is downloaded, and it is then listed in the table in the main pane.

Manually Upload an OS SPack for a VOS Device

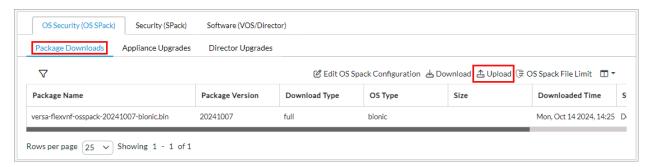
For Releases 22.1.4 and later.

If the VOS device does not have internet access, you can download an OS SPack to a local computer and then manually upload it to the VOS device. The OS SPack filename must start with the string versa-flexvnf-osspack and the

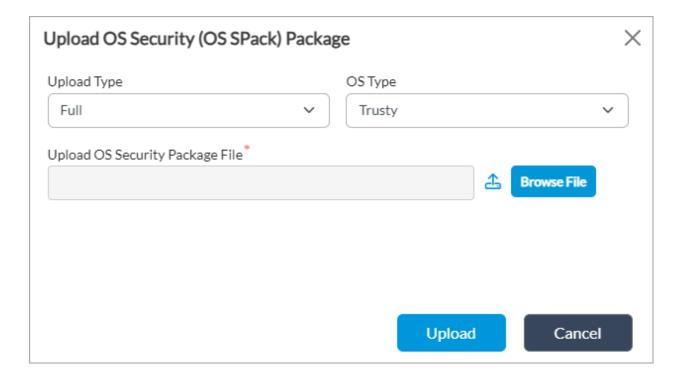
filename extension must be .bin.

To upload an OS SPack manually from a local computer to a VOS device:

- 1. In Director view, select the Administration tab in the top menu bar.
- 2. Select Inventory > Software Images in the left menu bar.
- 3. Select the OS Security (OS SPack) tab, and then select the Package Downloads tab.



4. Click Upload. The Upload OS Security (OS SPack) Package popup window displays. Enter information for the following fields.

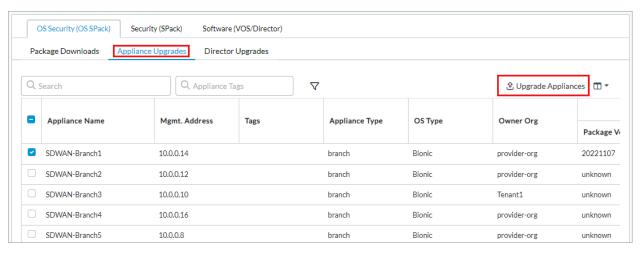


Field	Description
Upload Type	Select the type of OS SPack to upload. Ensure that you select the same type as the OS SPack file that you want to upload. • Full—Download the full database repository. A full download overwrites the OS SPack that is installed on the VOS device. • Incremental—Upload only an update to the currently installed OS SPack. To determine whether an incremental update is available, check the release notes for the OS SPack version.
OS Type	Select the OS type running on the Director node: Bionic (Ubuntu 18.04) Trusty (Ubuntu 14.04)
Upload OS Security Package File	Click Browse File, and then select the OS SPack file to upload from the local computer. Note that filename must start with the string versa-flexvnf-osspack and the filename extension must be .bin.

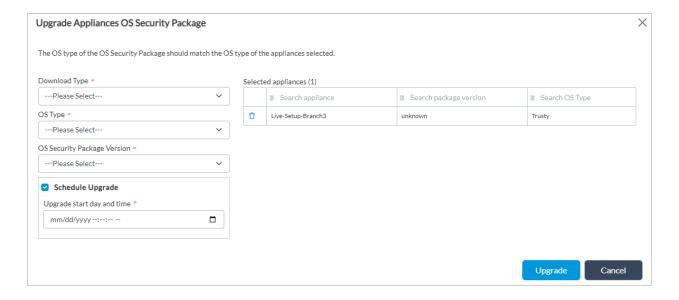
Install the OS SPack

To install the OS SPack on a VOS device:

1. In the OS Security (OS SPack) tab, select the Appliance Upgrades tab.



- 2. Select the VOS device or devices on which to install the OS SPack, or select the box next to the Appliance Name column to select all devices.
- 3. Click Upgrade Appliances. The Upgrade Appliances OS Security Package popup window displays. Enter the following information.

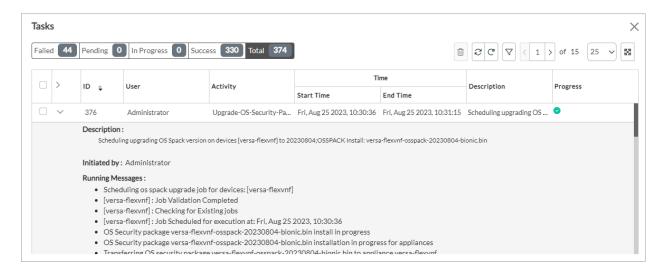


Field	Description
Download Type (Required)	Select the type of downloaded package: • Full—Select a new OS SPack. Select this option if an OS SPack is not alreated. • Incremental—Select to upgrade the device.
OS Type	Select the OS type running on the VOS node: • Bionic (Ubuntu 18.04) • Trusty (Ubuntu 14.04)
OS Security Package Version (Required)	Select the OS SPack from the list of downloaded SPacks.
Schedule Upgrade	Click to schedule a date and time for the upgrade to occur. Enter the date in the enter the time in the format <i>hh:mm:ss</i> (hours:minutes:seconds, using 24-hour fo
Selected Appliances	Displays the device or devices you selected for upgrade.

- 4. Click Upgrade. If you have not set a schedule for upgrade, the OS SPack is upgraded immediately.
- 5. To check the status of the download and installation of the OS SPack, click the Tasks icon in the horizontal menu bar.



The Tasks popup window displays details of the OS SPack download tasks, including failed, pending, in progress, successful, and total tasks.



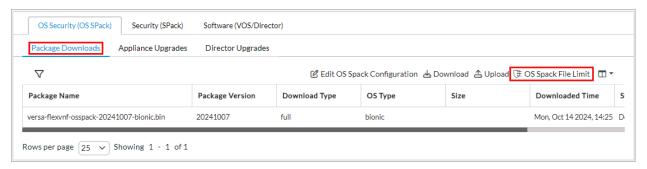
To display a list of OS SPack versions that are present on a VOS device, issue the following CLI command:

Set the OS SPack File Limit

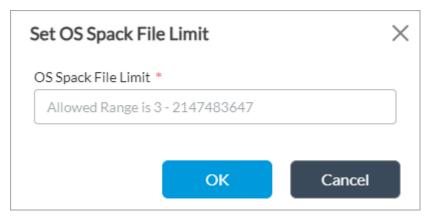
This procedure is optional. When you schedule an OS SPack download to a Director node, the Director node retains the last five OS SPacks by default. When this limit is reached, it deletes the oldest SPack. You set separate file limits for VOS OS SPack files and Director OS SPack files.

To change the number of OS SPacks that the Director node retains for a VOS device:

- 1. In Director view, select the Administrator tab in the top menu bar.
- 2. Select Inventory > Software Images in the left menu bar.
- 3. In the OS Security (OS SPack) tab, select the Package Downloads tab.



- 4. Click the OS SPack File Limit icon.
- 5. In the Set SPack File Limit popup window, enter the maximum number of SPacks to retain on the Director node for the VOS device. The default is 5. You configure the file limit as per the system memory availability.

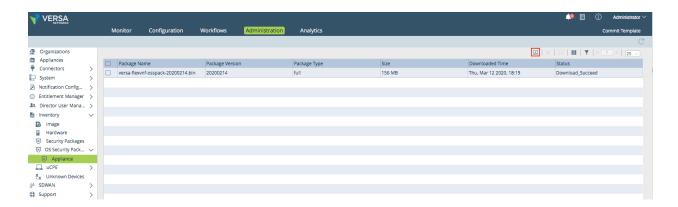


6. Click OK.

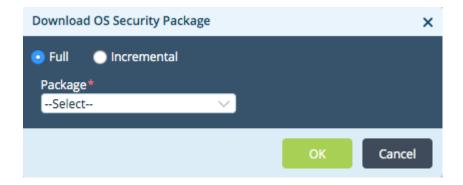
Download and Install an OS SPack on a VOS Device for Releases 21.2 and Earlier

For Releases 21.2.x and earlier.

- 1. Before you download and install the OS SPack, configure DNS settings so that the Director node can locate the server from which to download OS SPack. For more information about DNS settings, see <u>Configure DNS Settings</u>.
- 2. In Director view, select the Administrator tab in the top menu bar.
- 3. Select Inventory > OS Security Package > Appliance in the left men bar. The table in the main pane lists the OS SPacks that have already been installed.



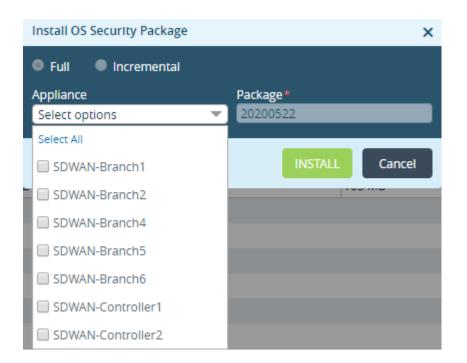
4. Click the Download icon to download the OS Security package. The Download OS Security Package popup window displays.



- 5. Click Full to download an OS SPack to a VOS device. In the Package field, select the name of the OS SPack package. Note that the Incremental option is not supported.
- 6. Click OK. The OS SPack is downloaded, and it is then listed in the table in the main pane.
- 7. Select the OS SPack from the main pane, and then click the Minimum Install icon.



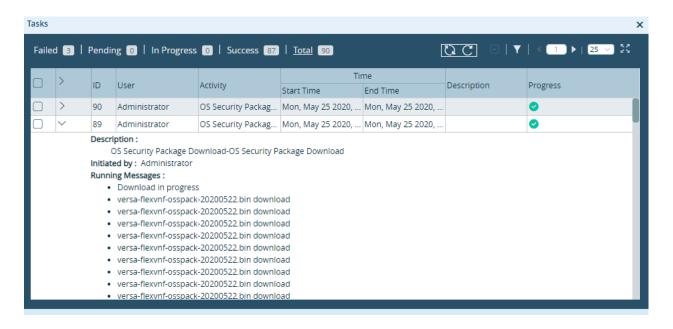
8. The Install OS Security Package popup window displays.



- 9. In the Appliance field, select the VOS device or devices on which to install the OS SPack, or click Select All to select all devices.
- 10. Click Install.
- 11. To check the status of the download and installation of the OS SPack, click the Tasks icon in the horizontal menu bar.



The Tasks popup window displays details of the OS SPack download tasks, including failed, pending, in progress, successful, and total tasks.



To display a list of OS SPack versions that are present on a VOS device, issue the following CLI command:

versa-flexvnf-cli> show security osspack info

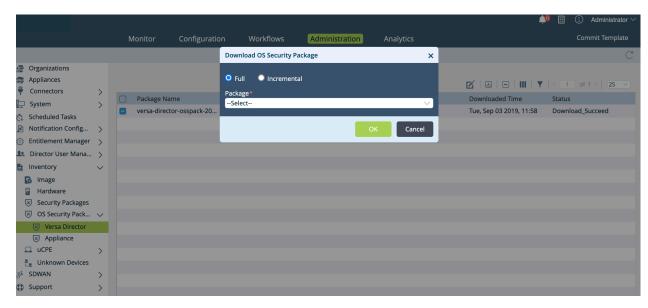
Download and Install an OS SPack on a Director Node for Releases 21.2 and Earlier

For Releases 21.2.x and earlier.

The OS SPack is a self-installable binary file. You can download the file from the Director GUI or you can download it manually, directly to the Director node.

To download an OS SPack to a Director node and then install it:

- 1. To download the OS SPack binary file from the Director GUI:
 - a. In Director view, select the Administration tab in the top menu bar.
 - b. Select Inventory > OS Security Pack > Versa Director in the left menu bar.
 - c. Click the Download icon.
 - d. In the Download OS Security Package popup window, select the name of the software package.



- e. Click OK. The downloaded file is saved in the /var/versa/packages/osspack/versa-director/ directory.
- 2. To download the OS SPack binary file manually:
 - a. Download the binary file from the folder at https://versanetworks.box.com/v/osspack or from the alternate download server, https://upload.versa-networks.com/index.php/s/nEkF9xOO3e7BA9Z. An example of an OS SPack filename is versa-director-osspack-20200214.bin.
 - Copy the OS SPack file to the Director node. You can copy the file using SCP. For AWS, you must use SSH keys to perform SCP.
- 3. Install the security update by executing the following Linux commands from a bash shell:
 - ~\$ chmod a+x filename.bin ~\$ sudo ./filename.bin

Note: When you install the OS SPack, no running services on the Director node are affected, and you do not need to restart any services.

To display a list of OS SPack versions that are present on a Director node, SSH into the node and issue the following shell command:

cat /opt/versa/etc/osspack/manifest.json | grep "version":

Note that in this command, the text string **version** is preceded by a single quotation mark followed by a double quotation mark.

Download and Install an OS SPack on an Analytics Node

To download and install an OS SPack on an Analytics node, follow the procedure in the previous section, <u>Download and Install an OS SPack on a Director Node</u>. Ensure that the binary file that you download and use to install the security update is the binary file for Analytics.

You can also download the OS SPack by issuing the following commands from the CLI:

request security osspack check updates
request security osspack download bundle version
request security osspack download file *filename* (for Releases 21.1.4 and later)
request security osspack install bundle *bundle-name*

To display a list of OS SPack versions that are present on an Analytics node, for Releases 21.1.1 and later, issue the following CLI command:

analytics-cli> show security osspack info

For releases prior to Release 21.1.1, SSH into the Analytics node and issue the following shell command:

cat /opt/versa/etc/osspack/manifest.json | grep "version":

Note that in this command, the text string **version** is preceded by a single quotation mark followed by a double quotation mark.

Troubleshoot OS SPacks

This section describes command you can use to verify the OS SPacks on Director nodes and VOS devices and to troubleshoot the OS SPack installation. For Releases 21.1.1 and later, you can also use these commands on Analytics nodes. Before you can issue these commands, you must configure DNS settings, as described in Configure DNS Settings.

To troubleshoot OS SPacks on Versa Analytics (for Releases 21.1.1 and later):

• To verify details about the OS SPack, run the **show security osspack info** CLI command. The command output displays the OS SPack version and update type.

To troubleshoot OS SPacks on Versa Director:

• To verify details about the OS SPack, run the **show security osspack info** CLI command. The command output displays the OS SPack version and update type.

To troubleshoot OS SPacks on VOS devices:

- To verify details about the OS SPack, run the show security osspack info CLI command. The command output displays the OS SPack version and update type.
- To check whether OS SPack updates are available, run the request security osspack check updates CLI command.
- To verify the OS SPack download bundle version number, run the request security osspack download bundle version version number CLI command.

Supported Software Information

Releases 20.2 and later support all content described in this article, except:

- Release 21.1.1 adds support for troubleshooting commands for Analytics devices.
- Release 21.1.4 adds the **request security osspack download file** command on Analytics devices.
- Release 22.1 enhances the GUI screens for using OS SPacks with Director and VOS devices; you can edit OS SPack download parameters and set the OS SPack file limit.
- Release 22.1.4 supports manual upload of OS SPack files for Director and VOS devices.

Additional Information

Configure DNS Settings
Use Security Packages