



Using SD-AVC

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Using SD-AVC

Use the SD-AVC Dashboard to:

- Monitor devices operating with SD-AVC
- View detailed traffic analytics interactively
- Deploy Protocol Packs

Connecting

Using a Chrome browser with access to the device hosting the SD-AVC Network Service, open the SD-AVC Dashboard. The Dashboard is accessible using the service IP configured when setting up the SD-AVC Network Service, and port 8443, in the format:

https://<service-ip>:8443

Example:

https://10.56.196.153:8443



Note

The SD-AVC Dashboard uses the same authentication as the platform hosting the SD-AVC Network Service. The host platform may use locally configured usernames and passwords, or it may use other methods, such as an Authentication, Authorization, and Accounting (AAA) server.

If prompted, enter the username and password used on the host platform.

Application Visibility Page

The Application Visibility page provides an interactive display of the network activity handled by the devices in the network operating with SD-AVC, as well as displaying any warnings or errors for each device.

Brief summary of the information and controls on the page:

Table 1: Top of Window

Information/Control	Description
All Devices	Indicates that the application data displayed in this window includes traffic handled by all devices in the network that are operating with SD-AVC.
Filter	Filters the displayed application data to include only a single segment or a single device. (A network segment is a group of devices that share the same purpose, such as routers within the same hub.)
Time Range	Time range for application data displayed on this page.

Table 2: Summary Pane

Information/Control	Description
Classification Score	Last measured classification quality score for the device. This indicates the degree of classification quality (specificity), calculated according to traffic volume. Higher score indicates better quality.
First Packet Classification	Ratio of flows classified on the first packet, to total TCP/UDP flows.
Total Usage	Total traffic volume handled in the selected time range.
SD-AVC Coverage Ratio	Ratio of flows covered by the SD-AVC application rules pack, to the total number of TCP/UDP flows.
Asymmetric Index	Last measured degree of asymmetry seen by device. This is the ratio of asymmetric flows to total flows for TCP and DNS traffic. 0 is least asymmetry, and 10 is highest asymmetry.
Timeline	Graph of one of the following (select in dropdown menu): <ul style="list-style-type: none"> • Bandwidth • Classification score • First packet classification score • SD-AVC coverage ratio

Table 3: Applications by Usage Pane

Information/Control	Description
Table of applications	Usage and business relevance for each network application. Hover over an application, or select one or more applications, to display data for those applications in the Timeline pane.
View Rules	Application data compiled by SD-AVC, organized into rules ready for export to participating devices in the network. The information is sent when the devices request an Application Rules Pack from the SD-AVC Network Service.

Table 4: Network Monitoring Pane

Information/Control	Description
Note: When filtering to display data for a single segment or device, this pane displays information for that segment or device.	
Segments	Network segments. Click to filter display by a network segment.
Devices	Devices in the network. Click to filter display by a device.
Installed Protocol Packs	Protocol Packs installed on devices in the network.
Status	
Connection	<p>Device connectivity with the SD-AVC Network Service.</p> <ul style="list-style-type: none"> • Green: All connectivity messages for all devices are being received. • Orange: Warning. Some connectivity messages have not been received. SD-AVC will monitor the device for restoration of connectivity. Click to view affected devices. • Red: No messages are being received. Click to view affected devices. <p>Troubleshooting:</p> <ul style="list-style-type: none"> • Check connectivity on UDP port 50000. If no problem is found with connectivity, contact Cisco TAC.

Information/Control	Description
Update	<p>Status of updates from the SD-AVC Network Service to devices in the network. Updates include application and configuration data, and are made by standard FTP connection.</p> <ul style="list-style-type: none"> • Green: Application data updates from the SD-AVC Network Service are being received and installed correctly by all devices in the network. • Orange: Some messages are being received; some are missing. Wait a few minutes for the issue to resolve or escalate to red. Click to view affected devices. • Red: One of the following may have occurred for one or more devices in the network: <ul style="list-style-type: none"> (a) No messages are being received. (b) Failure to install an application data update from the SD-AVC Network Service. <p>Click to view affected devices.</p> <p>Troubleshooting:</p> <ul style="list-style-type: none"> • Verify FTP connectivity on ports 20, 21. • On the affected device(s), execute show tech-support nbar platform to display NBAR data useful for troubleshooting. Save the output for use by TAC if the problem persists.
Exporter	<p>Status of device data export to the SD-AVC Network Service.</p> <ul style="list-style-type: none"> • Green: All messages are being received. • Orange: On one or more devices, some messages are being received, and some are not being received. Wait a few minutes for the issue to resolve or escalate to red status. Click to view affected devices. • Red: On one or more devices, no messages are being received. Click to view affected devices. <p>Troubleshooting:</p> <ul style="list-style-type: none"> • On the affected device(s), check FTP connectivity on UDP port 50000. If no problem is found with connectivity, contact Cisco TAC.
MS-Office365 Connector	<p>The MS-Office365 Connector component improves classification of Microsoft Office 365 traffic. It requires connectivity to a DNS server. By default, SD-AVC uses Cisco OpenDNS servers: 208.67.222.222 and 208.67.220.220</p> <ul style="list-style-type: none"> • Green: Correct operation. • Orange: Problem with connectivity to the DNS server. • Red: No response from the DNS server.

Table 5: Business Relevance Pane

Information/Control	Description
Graph	Indicates portions of traffic classified as: <ul style="list-style-type: none"> • Business-relevant • Business-irrelevant • Default

Protocol Packs Page

The Protocol Pack Update page enables deploying Protocol Packs to devices in the network that are using SD-AVC. The page contains tabs for loading and scheduling deployment of Protocol Pack files, and checking status.

Understanding Protocol Pack Files

Cisco releases Protocol Packs on an ongoing basis. Each Protocol Pack release provides updates that expand and improve AVC application recognition. Typically, it is recommended to use the latest Protocol Pack compatible with the OS running on a device. The [Protocol Library page](#) indicates the latest Protocol Pack and provides compatibility information.

Protocol Packs are available using the Cisco [Download Software](#) tool. When using the tool, specify a platform and then navigate to software downloads for the platform.

Protocol Pack filename format:

```
pp-adv-<platform-type>-<OS>-<engine-id>-<protocol-pack-version>.pack
```

Platform type may be, for example, asr1k, csr1000v, or isr4000. However, a Protocol Pack may be installed on any compatible device, even if that device is not indicated by the filename.

Uploading Protocol Packs to the SD-AVC Repository

Use the SD-AVC network service to deploy Protocol Packs to participating devices in the network.

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- Step 1** Select a Protocol Pack to deploy (typically the latest Protocol Pack compatible with the OS running on a device). See the [Protocol Library page](#) for compatibility information.
- Step 2** Download the Protocol Pack using the Cisco [Download Software](#) tool. In the filename of the downloaded Protocol Pack, note the engine ID.
- Step 3** In the SD-AVC Dashboard, upload the Protocol Pack file into the Protocol Pack repository. The repository is stored on the device hosting the SD-AVC network service.

Protocol Packs page > Manage & Deploy button > Protocol Pack Repository > Upload

Deploying Protocol Packs to Devices



Note In SD-AVC high availability configurations, if a device switches over to its secondary SD-AVC network service, then switches back to its primary, the device has a temporary “switchback” status. During this brief period, you cannot deploy Protocol Packs to the device. See [SD-AVC High Availability](#).

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- Step 1** Open the SD-AVC Dashboard Protocol Packs page.
Protocol Packs page > **Manage & Deploy** button > **Deploy to...**
- Step 2** In the **Protocol Pack Repository** pane, select a Protocol Pack or the **Builtin** option.
The **Builtin** option re-installs the original built-in Protocol Pack that was included with the OS (for example, Protocol Pack 33.0.0 for Cisco IOS-XE Fuji 16.7.1).
- Step 3** In the **Deploy to...** pane, select a segment and one or more devices, then click **Continue**.
Note After selecting a Protocol Pack, only devices running an IOS version compatible with the Protocol Pack can be selected.
- Step 4** Select the time to deploy the Protocol Pack(s), then click **Continue**.
- Step 5** Review the deployment plan and click the **Deploy** button.
Note To return to an earlier step, click the step number.
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