



# Software-Defined Application Visibility and Control

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## Information About Software-Defined Application Visibility and Control

Software-Defined Application Visibility and Control (SD-AVC) is a network-level AVC controller that aggregates application data from multiple devices and sources and provides composite application information.

SD-AVC collects application data from across the network and deploys protocol pack updates in a centralized manner. SD-AVC recognizes most enterprise network traffic and provides analytics, visibility, and telemetry into the network application recognition. SD-AVC profiles all the endpoints (including wireless bridged virtual machines) connected to the access nodes to perform anomaly detection operations, such as Network Address Translation (NAT). SD-AVC can discover and alert when the same MAC address is used simultaneously on different networks.

You can enable the Software-Defined Application Visibility and Control feature on a per-WLAN basis. Also, you can turn on and turn off the Software-Defined Application Visibility and Control functionalities independently.



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**Note** If the SD-AVC process (stilepd) crashes, Capwapd process restart or AP reload is required to resume the SD-AVC operation.

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## Enabling Software-Defined Application Visibility and Control on a WLAN (CLI)

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	<b>configure terminal</b> <b>Example:</b> Device# configure terminal	Enters global configuration mode.
<b>Step 2</b>	<b>wireless profile policy <i>policy-name</i></b> <b>Example:</b> Device(config)# wireless profile policy test-policy-profile	Configures WLAN policy profile and enters wireless policy configuration mode.
<b>Step 3</b>	<b>no central switching</b> <b>Example:</b> Device(config-wireless-policy)# no central switching	Disables central switching and enables local switching.
<b>Step 4</b>	<b>ip nbar protocol-discovery</b> <b>Example:</b> Device(config-wireless-policy)# ip nbar protocol-discovery	Enables application recognition on the wireless policy profile by activating the NBAR2 engine.
<b>Step 5</b>	<b>end</b> <b>Example:</b> Device(config-wireless-policy)# end	Exits wireless policy configuration mode and returns to privileged EXEC mode.

## Configuring Software-Defined Application Visibility and Control Global Parameters (CLI)

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	<b>configure terminal</b> <b>Example:</b> Device# configure terminal	Enters global configuration mode.

	<b>Command or Action</b>	<b>Purpose</b>
<b>Step 2</b>	<b>avc sd-service</b> <b>Example:</b> Device(config-sd-service)# avc sd-service	Enables SD-AVC and enters software-definition service configuration mode.
<b>Step 3</b>	<b>segment <i>segment-name</i></b> <b>Example:</b> Device(config-sd-service)# segment AppRecognition	Configures a segment name identifying a group of devices sharing the same application services.
<b>Step 4</b>	<b>controller</b> <b>Example:</b> Device(config-sd-service)# controller	Enters SD service controller configuration mode to configure connectivity parameters.
<b>Step 5</b>	<b>address <i>ip-address</i></b> <b>Example:</b> Device(config-sd-service-controller)# address 209.165.201.0	Configures controller IP address. Supports only IPv4 address.
<b>Step 6</b>	<b>destination-ports sensor-exporter <i>value</i></b> <b>Example:</b> Device(config-sd-service-controller)# destination-ports sensor-exporter 21730	Configures the destination port for communicating with the controller.
<b>Step 7</b>	<b>dscp <i>dscp-value</i></b> <b>Example:</b> Device(config-sd-service-controller)# dscp 16	Enables DSCP marking.
<b>Step 8</b>	<b>source-interface <i>interface interface-number</i></b> <b>Example:</b> Device(config-sd-service-controller)# source-interface GigabitEthernet21	Configures source interface for communicating with the controller.
<b>Step 9</b>	<b>transport application-updates https url-prefix <i>url-prefix-name</i></b> <b>Example:</b> Device(config-sd-service-controller)# transport application-updates https url-prefix cisco	Configures transport protocols for communicating with the controller.
<b>Step 10</b>	<b>vrf <i>vrf-name</i></b> <b>Example:</b> Device(config-sd-service-controller)# vrf doc-test	Associates the VRF with the source interface.

	Command or Action	Purpose
<b>Step 11</b>	<b>end</b> <b>Example:</b> Device (config-sd-service-controller) # end	Exits the SD service controller configuration mode and enters privileged EXEC mode.