



Metadata NBAR Integration

The Metadata NBAR Integration feature integrates Network-Based Application Recognition (NBAR) with metadata so that NBAR is enabled as the source for metadata. The flow information gathered from NBAR is stored and propagated using metadata.

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Finding Feature Information

Your software release may not support all the features documented in this module. For the latest feature information and caveats, see the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the Feature Information Table at the end of this document.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Information About Metadata NBAR Integration

Benefits of Metadata NBAR Integration

The flow information from NBAR is generated only on the node on which NBAR is configured and is not available to the downstream devices. To gather flow information, NBAR must be enabled on all downstream devices. Enabling NBAR on all downstream devices may not be possible always because some nodes may be incapable of performing deep packet inspection (DPI). When NBAR is integrated with metadata, metadata

information can be propagated to downstream nodes using Resource Reservation Protocol (RSVP), thereby substituting NBAR for DPI whenever DPI is not possible.

Metadata NBAR Integration

NBAR as a source for metadata is enabled by default when you create a class map with metadata-based filters, create a policy map that uses the class, and attach the policy map to the target.

You can disable NBAR as a source for metadata by using the **no metadata nbar** command.



Note

NBAR does not support the telepresence-data, vmware-view, webex-video, webex-voice, and wyze-zero-client application types.

How to Integrate NBAR with Metadata

Integrating NBAR with Metadata

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **metadata flow**
4. **metadata flow transmit**
5. **metadata flow reverse transmit**
6. **class-map** *class-map-name*
7. **match application** *application-name*
8. **exit**
9. **policy-map** *policy-map-name*
10. **class** *class-map-name*
11. **exit**
12. **exit**
13. **interface** *type number*
14. **service-policy** {**input** | **output**} *policy-map-name*
15. **exit**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable	Enables privileged EXEC mode.

	Command or Action	Purpose
	Example: Device> enable	Enter your password if prompted.
Step 2	configure terminal Example: Device# configure terminal	Enters global configuration mode.
Step 3	metadata flow Example: Device(config)# metadata flow	Enables metadata on a device.
Step 4	metadata flow transmit Example: Device(config)# metadata flow transmit	Enables RSVP transmission of information flows to downstream devices.
Step 5	metadata flow reverse transmit Example: Device(config)# metadata flow reverse transmit	Enables reverse metadata information flows for the forward sessions.
Step 6	class-map <i>class-map-name</i> Example: Device(config)# class-map c1	Creates a class map that is to be used for matching packets to a specified class, and enters QoS class-map configuration mode.
Step 7	match application <i>application-name</i> Example: Device(config-cmap)# match application webex-meeting	Classifies an application based on the specified application name.
Step 8	exit Example: Device(config-cmap)# exit	Exits QoS class-map configuration mode.
Step 9	policy-map <i>policy-map-name</i> Example: Device(config)# policy-map p1	Creates or modifies a policy map that can be attached to one or more interfaces to specify a service policy, and enters QoS policy-map configuration mode.

	Command or Action	Purpose
Step 10	class <i>class-map-name</i> Example: Device(config-pmap)# class c1	Specifies the name of the class whose policy you want to create or change, and enters QoS policy-map class configuration mode.
Step 11	exit Example: Device(config-pmap-c)# exit	Exits QoS policy-map class configuration mode and enters QoS policy-map configuration mode.
Step 12	exit Example: Device(config-pmap)# exit	Exits QoS policy-map configuration mode and enters global configuration mode.
Step 13	interface <i>type number</i> Example: Device(config)# interface gigabitethernet 0/0	Specifies the interface type and number and enters interface configuration mode.
Step 14	service-policy {input output} <i>policy-map-name</i> Example: Device(config-if)# service-policy output p1	Attaches a policy map to an input interface, a virtual circuit (VC), an output interface, or a VC that will be used as the service policy for the interface or VC.
Step 15	exit Example: Device(config-if)# exit	Exits interface configuration mode and returns to global configuration mode.

Configuration Examples for Metadata NBAR Integration

Example: Integrating NBAR with Metadata

The following example shows how to create a class map with metadata-based filters, create a policy map that uses the class, and attach the policy map to a target, thereby enabling NBAR as a source for metadata:

```
Device> enable
Device# configure terminal
Device(config)# metadata flow
Device(config)# metadata flow transmit
Device(config)# metadata flow reverse transmit
Device(config)# class-map c1
Device(config-cmap)# match application webex-meeting
```

```

Device(config-cmap)# exit
Device(config)# policy-map p1
Device(config-pmap)# class c1
Device(config-pmap-c)# exit
Device(config-pmap)# exit
Device(config)# interface gigabitethernet 0/0
Device(config-if)# service-policy output p1
Device(config-if)# exit

```

Additional References

Related Documents

Related Topic	Document Title
Cisco IOS commands	Master Command List, All Releases
Metadata commands	Quality of Service Solutions Command Reference

Technical Assistance

Description	Link
The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for Metadata NBAR Integration

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

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Table 1: Feature Information for Metadata NBAR Integration

Feature Name	Releases	Feature Information
Metadata NBAR Integration	15.2(4)M	The Metadata NBAR Integration feature provides integration of NBAR with metadata so that NBAR acts as the source for metadata, and the flow information gathered from NBAR is stored and propagated using metadata. The following commands were introduced or modified: debug metadata nbar, metadata flow transmit, metadata source nbar.