Fine-Grain NBAR for Select Applications

NBAR provides two levels of application recognition: coarse-grain and fine-grain modes. Coarse-grain mode optimizes performance. Fine-grain mode provides NBAR's full application recognition capabilities, but with a higher performance cost. By default, NBAR operates in coarse-grain mode.

Information About Fine-Grain NBAR for Selective Applications

Fine-Grain NBAR for Selective Applications

Overview

NBAR provides two levels of application recognition: coarse-grain and fine-grain modes. Coarse-grain mode optimizes performance. Fine-grain mode provides NBAR's full application recognition capabilities, but with a higher performance cost.

By default, NBAR operates in coarse-grain mode. NBAR automatically changes to fine-grain mode when required, based on the configuration and traffic patterns. Typically, it is not necessary to change NBAR's automatic behavior, but you can configure fine-grain mode manually, using the procedure described below.

Forcing fine-grain mode for specific applications may be useful for monitoring a subset of applications, without adversely affecting performance, while other applications continue in coarse-grain mode.

How to Configure Fine-Grain NBAR for Specific Applications

To override NBAR's automatic behavior and force fine-grain mode, use the following procedure. The procedure enables specifying applications individually by name or specifying applications that match a specific attribute value, such as "business-relevance = business-relevant".

Configure fine-grain mode:

```
enable
configure terminal
ip nbar classification granularity fine-grain { [protocol protocol-name] | [attribute
```

```
attribute-type attribute-value] }
exit
```

Display the currently configured NBAR classification mode:

```
show ip nbar classification granularity { [protocol protocol-name] | [attribute attribute-type
 attribute-value] }
```

Example

This example configures fine-grain mode for the application protocol, **cisco-media-audio**, then verifies with the **show** command.

```
Device#enable
Device#configuration terminal
Device(config)#ip nbar classification granularity fine-grain protocol cisco-media-audio
Device(config)#exit
Device#show ip nbar classification granularity protocol cisco-media-audio

Protocol                  Force mode
-------------------------------------
cisco-media-audio         fine-grain
```

How to Configure Fine-Grain NBAR for Selective Applications

Configuring Fine-Grain NBAR for Selective Applications

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ip nbar classification granularity fine-grain protocol** *protocol-name*
4. **exit**
5. **show ip nbar classification granularity protocol** *protocol-name*

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Device> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.

	Command or Action	Purpose
Step 3	**ip nbar classification granularity fine-grain protocol** *protocol-name* **Example:** `Device(config)# ip nbar classification granularity fine-grain protocol 3pc`	Configures the fine-grain NBAR classification mode and specifies the protocol name which represents an application.
Step 4	**exit** **Example:** `Router(config)# exit`	Exits the global configuration mode and enters privileged EXEC mode.
Step 5	**show ip nbar classification granularity protocol** *protocol-name* **Example:** `Device(config)# show ip nbar classification granularity protocol 3pc`	Displays the currently configured NBAR classification mode.

Configuration Examples for Fine-Grained NBAR for Selective Applications

Example: Fine-Grain NBAR for Selective Applications

The following example shows how to configure the fine-grain classification mode of NBAR and select a protocol name that represents an application:

```
Device> enable
Device# configuration terminal
Device(config)# ip nbar classification granularity fine-grain protocol 3cp
Device(config)# exit
```

Example: Verifying the Fine-Grain NBAR for Selective Applications

The following example shows how to verify the classification granularity of the currently configured protocol:

```
Device # show ip nbar classification granularity protocol 3pc

Protocol                  Force mode
-------------------------------------
3pc                       fine-grain
```

Additional References

Related Documents

Related Topic	Document Title
Cisco IOS commands	*Cisco IOS Master Command List, All Releases*
AVC information	*AVC User Guide*

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.	https://www.cisco.com/c/en/us/support/index.html

Feature Information for Fine-Grain NBAR for Selective Applications

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.

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.

Table 1: Feature Information for Fine-Grain NBAR for Selective Application

Feature Name	Releases	Feature Information
Fine-Grain NBAR for Selective Applications	15.5(2)T	By default NBAR operates in the fine-grain mode, offering NBAR's full application recognition capabilities. Used when per-packet reporting is required, fine-grain mode offers a troubleshooting advantage. Cisco recommends using fine-grain mode only when detailed Layer 7 metrics is required to be extracted by NBAR for critical applications. The fine-grain NBAR for Selective Apps feature enables a customer to dynamically monitor critical applications including collection of detailed Layer 7 metrics. The feature helps troubleshoot slowness in a particular application while the rest of the applications are running in in coarse-grain mode and thus preventing any impact on the performance of the system. The following command was introduced or modified: **ip nbar custom**.