NBAR Coarse-Grain Classification

NBAR provides two levels of application recognition—coarse-grain and fine-grain. By default, NBAR operates in coarse-grain mode.

Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see Bug Search Tool and 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.

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 NBAR Coarse-Grain Classification

Overview of NBAR Coarse-Grain Classification

NBAR provides two levels of application recognition-coarse-grain and fine-grain. By default NBAR operates in the coarse-grain mode.

By minimizing deep packet inspection, coarse-grain mode offers a performance advantage and reduces memory resource demands. This mode is useful in scenarios where the full power of fine-grain classification is not required.

Simplified Classification

Coarse-grain mode employs a simplified mode of classification, minimizing deep packet inspection. NBAR caches classification decisions made for earlier packets, then classifies later packets from the same server similarly.

Limitations of Coarse-Grain Mode

Coarse-grain mode has the following limitations in metric reporting detail:

- Granularity: Caching may result in some reduction in the granularity. For example, NBAR might classify some traffic as **ms-office-365** instead of as the more specific **ms-office-web-apps**.
- Evasive applications: Classification of evasive applications, such as BitTorrent, eMule, and Skype, may be less effective than in fine-grain mode. Consequently, blocking or throttling may not work as well for these applications.

Comparison of Fine-grain and Coarse-grain Modes

Coarse-grain mode has the following limitations in metric reporting detail:

	Fine-Grain Mode	Coarse-Grain Mode
Classification	Full-power of deep packet inspection	Simplified classification Some classification according to similar earlier packets.
Performance	Slower	Faster
Memory Resources	Higher memory demands	Lower memory demands
Sub-classification	Full supported	Partial support
Field Extraction	Full supported	Partial support
Ideal usage	Per-packet policy Example: class-map that looks for specific url	When there is no requirement for specific per-packet operations.

Additional References for NBAR Coarse-Grain Classification

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 NBAR Coarse-Grain Classification

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 NBAR Coarse-Grain Classification

Feature Name	Releases	Feature Information
NBAR Coarse-Grain Classification	Cisco IOS XE Release 3.14S	Network Based Application Recognition (NBAR) provides two levels of application recognition—coarse-grain and fine-grain. By default NBAR operates in the fine-grain mode, offering NBAR's full application recognition capabilities. By minimizing deep packet inspection, coarse-grain mode offers a performance advantage and reduces memory resource demands. The following command was introduced or modified: **ip nbar classification granularity** and **show ip nbar classification granularity**.
NBAR Coarse-Grain Classification	Cisco IOS XE Release 3.16S Cisco IOS XE 16.x releases	Default mode changed to coarse-grain.