NBAR Protocol Pack

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The NBAR Protocol Pack feature provides an easy way to load a protocol pack, which is a single compressed file that contains multiple Protocol Description Language (PDL) files and a manifest file. Before this feature was introduced, PDLs had to be loaded separately. With NBAR Protocol pack, a set of required protocols can be loaded, which helps network-based application recognition (NBAR) to recognize additional protocols for classification on your network.

The protocol pack manifest file contains a description of the protocol pack. Packet Description Language Modules (PDLMs) are used to add support for a protocol that is currently not available as part of the Cisco IOS software.

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.

Prerequisites for the NBAR Protocol Pack

- The protocol pack must be copied to the local disk to avoid any errors after rebooting.

Restrictions for the NBAR Protocol Pack

- Only one protocol pack is supported.

Information About the NBAR Protocol Pack

Protocol Pack Overview

Application recognition modules (also known as PDLMs) can be used to extend the functionality of NBAR by enabling NBAR to recognize additional protocols on your network. A PDLM is used to add support for a protocol that is currently not available as part of the Cisco IOS software. A PDLM extends the list of protocols that NBAR can recognize.

A protocol pack is a single compressed file that contains multiple PDL files and a manifest file. Your organization determines the contents of the protocol pack. Protocol packs allow you to load a set of protocols together rather than load them separately.

Protocol packs provide the following features:

- They are easy to load.
- They are easy to upgrade to a higher version protocol pack or revert to a lower version protocol pack.
- They provide only the required set of protocols.

Cisco provides a specific identity number for the organization (also known as "publisher") that creates the protocol packs and uses Cisco tools and processes to create new protocol packs. The organization that creates the protocol pack owns the pack.

The Default Protocol Pack (DPP) is provided as the base protocol pack version with the Cisco IOS image in the router.

How to Load the NBAR Protocol Pack

Loading the NBAR Protocol Pack

Perform the following task to load a NBAR protocol pack.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ip nbar protocol-pack** *protocol-pack* [**force**]
4. **exit**
5. **show ip nbar protocol-pack** {protocol-pack | **active**} [**detail**]

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Router> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Router# configure terminal`	Enters global configuration mode.
Step 3	**ip nbar protocol-pack** *protocol-pack* [**force**] **Example:** `Router(config)# ip nbar protocol-pack harddisk:defProtoPack`	Loads the protocol pack. • Use the **force** keyword to specify and load a protocol pack of a lower version, which is different from the default protocol pack version.
Step 4	**exit** **Example:** `Router(config)# exit`	Returns to privileged EXEC mode.
Step 5	**show ip nbar protocol-pack** {protocol-pack | **active**} [**detail**] **Example:** `Router(config)# show ip nbar protocol-pack active`	Displays the protocol pack information. • Verify the loaded protocol pack version, publisher, and other details using this command. • Use the *protocol-pack* argument to display information about the specified protocol pack. • Use the **active** keyword to display active protocol pack information. • Use the **detail** keyword to display detailed protocol pack information.

Configuration Examples for the NBAR Protocol Pack

Example: Loading the NBAR Protocol Pack

The following example shows how to load an NBAR protocol pack named defProtoPack from the harddisk:

```
Router> enable
Router# configure terminal
Router(config)# ip nbar protocol-pack harddisk:defProtoPack
Router(config)# exit
```

The following example shows how to load a default NBAR protocol pack:

```
Router> enable
Router# configure terminal
Router(config)# default ip nbar protocol-pack
Router(config)# exit
```

The following example shows how to load a protocol pack of a lower version using the **force** keyword:

```
Router> enable
Router# configure terminal
Router(config)# ip nbar protocol-pack harddisk:olddefProtoPack force
Router(config)# exit
```

Example: Verifying the Loaded NBAR Protocol Pack

The following sample output from the **show ip nbar protocol-pack** command shows information about the active protocol pack:

```
Router# show ip nbar protocol-pack active

ACTIVE protocol pack:
Name:                           Default Protocol Pack
Version:                        1.0
Publisher:                      Cisco Systems Inc.
```

The following sample output from the **show ip nbar protocol-pack** command shows detailed information about the active protocol pack:

```
Router# show ip nbar protocol-pack active detail

ACTIVE protocol pack:
Name:                           Default Protocol Pack
Version:                        1.0
Publisher:                      Cisco Systems Inc.
Protocols:
base                            Mv: 4
ftp                             Mv: 5
http                            Mv: 18
static                          Mv: 6
socks                           Mv: 2
nntp                            Mv: 2
tftp                            Mv: 2
exchange                        Mv: 3
vdolive                         Mv: 1
sqlnet                          Mv: 2
netshow                         Mv: 3
```

```
sunrpc                          Mv: 3
streamwork                      Mv: 2
citrix                          Mv: 11
fasttrack                       Mv: 3
gnutella                        Mv: 7
kazaa2                          Mv: 11
```

The following sample output from the **show ip nbar protocol-pack** command shows the protocol pack present in the specified disk location:

```
Router# show ip nbar protocol-pack disk:0ppsmall_higherversion

Name:                           Default Protocol Pack
Version:                        2.0
Publisher:                      Cisco Systems Inc.
```

The following sample output from the **show ip nbar protocol-pack** command shows detailed protocol pack information present in the specified disk location:

```
Router# show ip nbar protocol-pack disk:0ppsmall_higherversion detail

Name:                           Default Protocol Pack
Version:                        2.0
Publisher:                      Cisco Systems Inc.
Protocol Pack contents:
iana                      Mv: 1
base                      Mv: 4
tftp                      Mv: 2
```

Additional References

Related Documents

Related Topic	Document Title
Cisco IOS commands	Cisco IOS Master Commands List, All Releases
Cisco IOS LAN Switching commands	Cisco IOS LAN Switching Command Reference
Cisco IOS QoS configuration information	*Cisco IOS QoS Configuration Guide*

Standards

Standard	Title
None	--

MIBs

MIB	MIBs Link
None	To locate and download MIBs for selected platforms, Cisco software releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

RFCs

RFC	Title
None	--

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 NBAR Protocol Pack

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 NBAR Protocol Pack

Feature Name	Releases	Feature Information
NBAR Protocol Pack	Cisco IOS XE Release 3.3S	This feature was introduced on Cisco ASR 1000 Series Aggregation Services Routers. The NBAR Protocol Pack feature provides an easy way to configure the protocol pack, which is a set of protocols developed and packed together. The following commands were introduced or modified: **default ip nbar protocol-pack**, **ip nbar protocol-pack**, **show ip nbar protocol pack**.