



## Working with Protocol Packs

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# NBAR2 Protocol Pack Overview

NBAR2 Protocol Pack 19.1.0 contains the Enhanced Web Classification feature that supports multi-transactions export of URLs. For more information on this feature, see [Classifying Network Traffic Using NBAR](#)

Bittorrent blocking capability has been improved with the newly supported uTorrent and transmission clients.

## Protocol Pack Compatibility

NBAR2 Protocol packs are released for specific NBAR engine versions. You can load an NBAR2 protocol pack only if the NBAR engine version used in the Wireless controller (WLC) software platform is the same as or higher than the engine version that the protocol pack is released for. However, you are strongly recommended to use the protocol pack that is the exact match for the engine.

**Table 1: Compatibility Table**

WLC Software Release	NBAR Engine Used	Protocol packs released for the NBAR engine used
8.7	NBAR engine 23	<ul style="list-style-type: none"> <li>• 19.1.0 (built-in)</li> <li>• 24.0.0 (Optional upgrade)</li> </ul>
8.6	NBAR engine 23	<ul style="list-style-type: none"> <li>• 19.1.0 (built-in)</li> <li>• 24.0.0 (Optional upgrade)</li> </ul>
8.5	NBAR engine 23	<ul style="list-style-type: none"> <li>• 19.1.0 (built-in)</li> <li>• 24.0.0 (Optional upgrade)</li> </ul>
8.4	NBAR engine 23	<ul style="list-style-type: none"> <li>• 19.1.0 (built-in)</li> <li>• 24.0.0 (Optional upgrade)</li> </ul>
8.3	NBAR engine 23	<ul style="list-style-type: none"> <li>• 19.1.0 (built-in)</li> <li>• 24.0.0 (Optional upgrade)</li> </ul>
8.2	NBAR engine 23	<ul style="list-style-type: none"> <li>• 14.0.0</li> </ul>
8.1	NBAR engine 16	<ul style="list-style-type: none"> <li>• Protocol packs compatible with NBAR engine 13</li> <li>• 9.0.0 (comes only built-in, in 8.0)</li> <li>• 11.0.0</li> <li>• 12.0.0</li> </ul>
8.0		

WLC Software Release	NBAR Engine Used	Protocol packs released for the NBAR engine used
7.6	NBAR engine 13	<ul style="list-style-type: none"> <li>• 4.1.1</li> <li>• 6.3.0</li> <li>• 6.4.0</li> </ul>
7.5		



**Note** Consider a WLC running a 7.6 or older software release, loaded with a compatible protocol pack. If this controller is upgraded to software release 8.0, then it will start using protocol pack 9.0.0, which comes in-built in 8.0 release. Additionally you can choose to download protocol pack 11.0.0, which in turn will be loaded instead of 9.0.0. However, if you revert back to the older software release, then the older protocol pack loaded for that release will be loaded again.



**Note** If you try to load an incompatible protocol pack on a controller, it will be rejected with an error message stating that the protocol pack is incompatible with the underlying NBAR software version. Any existing protocol pack on the controller, will remain active.

### Cisco Access Points NBAR Support

The NBAR engine and Protocol Pack supported on the Cisco Access Points are listed in the table.

*Table 2: Support for NBAR Engine and Protocol Pack On Cisco APs*

Cisco Access Points	NBAR Engine Version	Protocol Pack Version
Cisco Wave 1 Access Points	23	14
Cisco Wave 2 Access Points	35	33

### Downloading NBAR2 Protocol Packs

Use only the tested and certified protocol packs which are released on cisco.com. You can download these protocol packs from this location:

<http://software.cisco.com/download/navigator.html>

A protocol pack is numbered in a format that is similar to this:

pp-AIR-8.3-(NBAR Engine Number)-(Protocol Pack Version).pack

For example, the Wireless Controller Release 8.3 uses NBAR engine version 23. Hence, protocol packs released for Release 8.3 will have a numbering that is similar to this:

pp-AIR-8.3-23-19.1.0.pack

# Loading an NBAR2 Protocol Pack

Using FTP or TFTP, you can download newer versions of protocol packs into the controller.




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**Note** You are recommended to download protocol packs into the controller only during maintenance. This is because during download the CPU usage will be quite high, which may cause disruptions in the network. It takes no more than three minutes for the download to complete and for the protocol pack to become operational. You do not need to reboot the controller after the download.

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**Step 1** Enter this command to download a protocol pack:

**transfer download datatype** *avc-protocol-pack*

Information that is similar to the following is displayed:

```
Mode..... FTP
Data Type..... AVC Protocol Pack
FTP Server IP..... xx.xxx.xxx.xx
FTP Server Port..... 21
FTP Path..... <directory path>
FTP Filename..... pp-AIR-8.3-23-19.1.0.pack
FTP Username..... cisco
FTP Password..... *****
```

Starting transfer of AVC Protocol Pack

This may take some time.  
Are you sure you want to start? (y/N)

**Step 2** Answer **y** at the prompt to start the download.

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# Viewing the Protocol Pack and AVC Engine Details

## Protocol Pack Details

To view the name and version of the loaded protocol pack, enter this command:

**show avc protocol-pack version**

Information that is similar to the following is displayed:

```
AVC Protocol Pack Name: Advanced Protocol Pack
AVC Protocol Pack Version: 19.1.1.0
```

## AVC Engine Details



### Note

An NBAR2 protocol pack can be installed on a device only if the NBAR engine version on the platform is the same as or later than the version required by the NBAR2 protocol pack.

To view the AVC engine version which the controller is using, enter this command:

**show avc engine version**

Information that is similar to the following is displayed:

```
AVC Engine Version: 23
```

