Release Notes for NBAR2 Protocol Pack 24.0.0 for Cisco Wireless Controllers

Supported Platforms

Network-Based Application Recognition (NBAR2) Protocol Pack 24.0.0 support is provided for Cisco Wireless LAN Controller platforms, starting with the Cisco Wireless Release 8.4.

NBAR2 Protocol Pack 24.0.0 is supported on the following Cisco Wireless Controller platforms:

- Cisco 5508 Wireless Controller
- Cisco 5520 Wireles Controller
- Cisco Flex 7510 Wireless Controllers
- Cisco 8510 Wireless Controller
- Cisco 8540 wireless Controller
- Cisco Wireless Services Module 2 (WiSM2)

Note

- Cisco Wireless Release 8.4, uses NBAR engine 23, and contains NBAR2 Protocol Pack 19.1.0 built-in. Optionally, you can upgrade to NBAR2 Protocol Pack 24.0.0. For more information about software releases and compatible protocol packs, see Working with Protocol Packs.
- Though the NBAR2 protocol library and the protocol signatures support IPv6 traffic classification, Cisco Wireless Controller platforms currently support only IPv4 traffic classification.
- The Cisco 2504 Wireless Controller supports Application Visibility and Control, but supports only built-in protocol packs present in Wireless Controller software releases. It does not support downloading and installing protocol packs.

New Protocols in NBAR2 Protocol Pack 24.0.0

The table below lists the new protocols added in NBAR2 Protocol Pack 24.0.0 (protocols added since 19.1.0).

Protocol Name	Common Name	Long Description
avast-antivirus	Avast Antivirus	Avast Antivirus and security.
cassandra	Cassandra	Apache Cassandra is an open source distributed database management system designed to handle large amounts of data across many commodity servers, providing high availability with no single point of failure.
cisco-collab-control	Cisco Collaboration Control	Cisco Collaboration Control messages by various Cisco Unified Communication clients.
cisco-collaboration-audio	Cisco Collaboration Audio	Cisco Collaboration Voice traffic associated with various Cisco Unified Communication clients.
cisco-collab-video	Cisco Collaboration Video	Cisco Collaboration Video by various Cisco Unified Communication clients.
cisco-phone-control	Cisco Phone Control	Control flow of Cisco IP phone.
cisco-phone-media	Cisco Phone Media	Cisco-media is used mainly in corporations and can be used on- or off-site.
cisco-spark-audio	Cisco Spark Audio	Cisco Spark Audio - Audio of unified communications client and SaaS with mobile team communication: group chat, private chat, video calls with screen sharing and file sharing.
cisco-spark-media	Cisco Spark Media	Cisco Spark Media - Media of unified communications client and SaaS with mobile team communication: group chat, private chat, video calls with screen sharing and file sharing.
cisco-spark-video	Cisco Spark Video	Cisco Spark Video - Video of unified communications client and SaaS with mobile team communication: group chat, private chat, video calls with screen sharing and file sharing
facebook-audio	Facebook Audio Streaming	Facebook audio streaming services.
facebook-media	Facebook Media Streaming	Facebook media streaming services.
facebook-video	Facebook Video Streaming	Facebook video streaming services.
google-services-audio	Google Services Audio	Audio streaming related to various Google services, APIs, and collaboration software.

Protocol Name	Common Name	Long Description
google-services-media	Google Services Media	Media streaming related to various Google services, APIs, and collaboration software.
google-services-video	Google Services Video	Media streaming related to various Google services, APIs, and collaboration software.
ipass	iPass	iPass allow users to connect millions of hotspots around the world.
itunes-media	iTunes Media	Media streaming for iTunes media player and media library application.
mcafee-antivirus	McAfee Antivirus	McAfee Antivirus and security.
ms-lync-control	Skype for Business (MS-Lync) Control	Skype for Business (formerly Microsoft Lync) is a communications and collaboration platform that brings together an experience inspired by Skype with enterprise-grade security, compliance, and control. Features include presence, IM, voice and video calls, and online meetings. Because it is built into Microsoft Office, initiating chats, calls, and meetings is an integrated experience within Office.
telepresence-audio	Telepresence Audio	Telepresence Voice.
tus-files	TusFiles	TusFiles is a cloud storage provider for online hosting and sharing of files.
web-rtc	WebRTC	WebRTC provides browsers and mobile applications with Real-Time Communications (RTC) capabilities.
web-rtc-audio	WebRTC Audio	WebRTC provides browsers and mobile applications with Real-Time Communications (RTC) capabilities.
web-rtc-video	WebRTC Video	WebRTC provides browsers and mobile applications with Real-Time Communications (RTC) capabilities.
wechat	WeChat	WeChat is a mobile text and voice messaging communication service. The app is available on Android, iPhone, BlackBerry, Windows Phone and Symbian phones.

Deprecated Protocols in NBAR2 Protocol Pack 24.0.0

In this release, no protocol has been deprecated.

Updated Protocols in NBAR2 Protocol Pack 24.0.0

This release includes the following improvements to classification:

- Improved classification of many client programs through HTTP user-agents.
- New capabilities for classifying clients and servers in the network.
- Separate classification of audio and video for cisco-spark and web-rtc protocols.
- Improved separation of various Google services, using socket-cache mechanism.
- Improvements to host-based signatures.

The following table lists the protocols updated in NBAR2 Protocol Pack for Cisco IOS Version 15.5(3)M2 since 19.1.0.

Protocol	Updates
amazon-web-services	Updated signatures
cifs	Updated signatures
cisco-collaboration	Updated signatures
cisco-jabber-control	Updated signatures
cisco-phone	Updated signatures, changed attributes
cisco-phone-media	Changed attributes
cisco-phone-video	Changed attributes
cisco-spark	Updated signatures
conference-server	Updated signatures
conferencing	Updated signatures
connected-backup	Updated signatures
crashplan	Updated signatures
google-services	Updated signatures
http	Updated signatures
icloud	Updated signatures
kerberos	Updated signatures
ldap	Updated signatures
mongo	Updated signatures
ms-office-365	Updated signatures

Protocol	Updates
ms-office-web-apps	Updated signatures
ms-services	Updated signatures
ms-wbt	Updated signatures
mysql	Updated signatures
ntp	Updated signatures
oracle-sqlnet	Updated signatures
outlook-web services	Updated signatures
perforce	Updated signatures
rtcp	Updated signatures
rtcp	Updated signatures
rtp	Updated signatures
rtp-audio	Updated signatures
rtp-video	Updated signatures
sip	Updated signatures
sqlserver	Updated signatures
ssl	Updated signatures
tcpoverdns	Updated signatures
telepresence-audio	Updated signatures
telepresence-control	Updated signatures
telepresence-media	Updated signatures
telnet	Updated signatures
tftp	Updated signatures
vmware-vsphere	Updated signatures
vnc	Updated signatures
webex-meeting	Updated signatures
wifi-calling	Updated signatures

Caveats in NBAR2 Protocol Pack 24.0.0

Note If you have an account on Cisco.com, you can view information on select caveats, using the Bug Search Tool (https://tools.cisco.com/bugsearch/search).

Open Caveats in NBAR2 Protocol Pack 24.0.0

The following table lists the caveats open in NBAR2 Protocol Pack 24.0.0 (since 19.1.0) for Cisco IOS Version 15.5(3)M2:

Caveat ID Number	Description
CSCuh49380	PCoIP session-priority configuration limitation.
CSCuh53623	Segmented packets are not classified when using NBAR sub classification.
CSCun61772	IPv4 bundles might be used in IPv6 traffic.

Caveats Resolved in NBAR2 Protocol Pack 24.0.0

The following table lists the caveats resolved in NBAR2 Protocol Pack 24.0.0 (since 19.1.0) for Cisco IOS Version 15.5(3)M2:

Caveat ID Number	Description
CSCuz03729	DNS parser skips on additional records which include valid A and AAA.
CSCuz38621	NBAR does not classify SIP voice traffic properly
CSCuz51687	Missing host for icloud-content.coms
CSCva08934	Different classification between coarse-grain and fine-grain granularity.
CSCva18641	SIP traffic port 5061 is classified as unknown.
CSCva23181	IMAP protocol does not receive final classification.
CSCva26298	Socket cache entry causes YouTube classification.
CSCva30089	NBAR attributes are not supported for static protocols.
CSCva65247	mySQL port 3306 traffic is classified as unknown.

Special Notes and Limitations

Protocol Name	Special Note or Limitation
apple-app-store	Login and a few encrypted sessions are classified as iTunes.
bittorrent	HTTP traffic generated by the bitcomet bittorrent client might be classified as HTTP.
capwap-data	For capwap-data to be classified correctly, capwap-control must also be enabled.
ftp	During configuring QoS class-map with ftp-data, the FTP protocol must be selected. As an alternative, the FTP application group can be selected.
hulu	Encrypted video streaming generated by hulu may be classified as its underlying protocol rtmpe.
logmein	Traffic generated by the logmein android app may be classified incorrectly as ssl.
ms-lync	Login and chat traffic generated by the ms-lync client may be classified incorrectly as ssl.
pcanywhere	Traffic generated by pcanywhere for mac may be classified as unknown.
perfect-dark	Some perfect-dark sessions may be classified as unknown.
qq-accounts	Login to QQ applications which is not via the internet may not be classified as qq-accounts.
ssl	The Sub Classification (SC) mechanism was modified to include search for wildcard. **Note** The SC rule for the part of the Server Name Indication (SNI) or the common name (CN) can now include a wildcard. If a wildcard is not used, the complete SNI or the CN is required. For example, you can either use, "*.pqr.com" or "abc.pqr.com" to classify abc.pqr.com.