



Release Notes for NBAR2 Protocol Pack 14.0.0 for Cisco Wireless Controllers

- [Supported Platforms, page 2](#)
- [New Protocols in NBAR2 Protocol Pack 14.0.0, page 2](#)
- [Updated Protocols in NBAR2 Protocol Pack 14.0.0, page 13](#)
- [Deprecated Protocols in NBAR2 Protocol Pack 14.0.0, page 13](#)
- [Caveats in NBAR2 Protocol Pack 14.0.0, page 14](#)
- [Restrictions and Limitations in NBAR2 Protocol Pack 14.0.0, page 15](#)
- [Recommended Configurations, page 16](#)

Supported Platforms

Network-Based Application Recognition (NBAR2) Protocol Pack 14.0.0 support is provided for Cisco Wireless LAN Controller platforms, starting with the 8.2 release.

NBAR2 Protocol Pack 14.0.0 is supported on the following Cisco Wireless LAN Controller platforms:

- Cisco 5508 Wireless Controller
- Cisco 5520 Wireless Controller
- Cisco Flex 7500 Series Wireless Controllers
- Cisco 8510 Wireless Controller
- Cisco 8540 wireless Controller
- Cisco Wireless Services Module 2 (WiSM2)



Note

- Cisco Wireless LAN Controller software release 8.2, uses NBAR engine 23, and contains NBAR2 Protocol Pack 14.0.0 built-in. For more information on 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 LAN 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 LAN Controller software releases. It does not support downloading and installing protocol packs.

New Protocols in NBAR2 Protocol Pack 14.0.0

The following new protocols have been added in NBAR2 Protocol Pack 14.0.0.

Protocol Name	Common Name	Long Description
ipfix	ipfix	IPFIX is the 10th version of the protocol Netflow, which is a network protocol developed by Cisco Systems for collecting IP traffic information and monitoring network traffic. The 9th version of this protocol is classified as Netflow.
netflow	netflow	NetFlow is a network protocol developed by Cisco Systems for collecting IP traffic information and monitoring network traffic. This protocol classifies version 9 of Netflow, while version 10 is classified as IPFIX.
4chan	4chan	Website that hosts found images and discussions on them.

Protocol Name	Common Name	Long Description
58-city	58-city	Classified information about 58 cities in China.
abc-news	abc-news	Web Portal for television network
accuweather	accuweather	Weather forecasting website.
adcash	adcash	Advertising network.
addthis	addthis	Social bookmarking service.
adweek	Adweek	Marketing, Media and advertising news.
airbnb	Airbnb	Airbnb - Online accommodation rental service.
allrecipes	AllRecipes	AllRecipes - Recipes and cooking guide.
ameba	Ameba	Ameba - Japanese blogging and social networking website.
american-express	American Express	American Express - Financial services company.
ancestry-com	Ancestry.com	Ancestry.com - Online family history resource.
ask-com	Ask.com	Ask.com - Search engine.
asus	Asus	Asus - Manufacturer of PCs and PC components.
atlassian	Atlassian	Atlassian - Project Control and Management Software.
att-web-services	ATT	ATT - Telecom and Internet provider.
audible-com	Audible.com	Audible.com - Digital audio version for books, magazines, information and more.
aweber	Aweber	Aweber - Email marketing Service.
backpage	Backpage.com	Backpage.com - Free classified ads.
badoo	Badoo	Badoo - Social networking service.
bandcamp-com	Bandcamp	Bandcamp - Explore online music posted by independent artists.
bank-of-america	Bank of America	Bank of America - Global financial services company.
basecamp	Basecamp	Basecamp - Web based project management tool.
bbc	BBC	BBC - Web Portal for news update.

Protocol Name	Common Name	Long Description
bild-de	Bild.de	Bild.de - Online edition of German tabloid.
bing	Bing	Bing - Microsofts internet search engine.
bitbucket	Bitbucket	Bitbucket - Source code hosting site.
bitly	bitly	bitly - Web portal for bookmarking and sharing links.
blackboard-com	Blackboard	Blackboard - Online course management system.
blaze-news	The Blaze	The Blaze - News and Opinion website.
bleacher-report	Bleacher Report	Bleacher Report - Web Portal for Sports news update.
bluehost	Bluehost	Bluehost - Web hosting portal.
buffer-com	Buffer	Buffer - App to share web pages with social media.
business-insider	Business Insider	Business Insider - Online news web portal.
buzzfeed	BuzzFeed	BuzzFeed - News portal.
california-gov	California.gov	California.gov - California government official website.
capital-one	Capital One	Capital One - U.S. based bank holding company.
cbs	CBS	CBS - CBS news website.
cbs-sports	CBS Sports	CBS Sports - Sports news website.
chase-bank	Chase	Chase - Consumer and commercial banking company.
citi-bank	Citi	Citi - Financial services company.
clickbank	ClickBank	ClickBank - Online marketplace for Digital products.
cnbc	CNBC	CNBC - Official website of CNBC channel for Business and Financial market news.
cnet	CNET	CNET - Tech and gadget related news, reviews, and shopping.
conduit-com	Conduit	Conduit - Online website to create community toolbar.
constant-contact-com	Constant Contact	Constant Contact - Online marketing service.
coupons-com	Coupons.com	Coupons.com - An online coupons and deals website.

Protocol Name	Common Name	Long Description
coursera	Coursera	Coursera - Educational site, offer online courses from top universities.
craigslist	Craigslist	Craigslist - Popular online classifieds.
csdn	CSDN	CSDN - Chinese IT community/forum for Software related issues.
daily-mail	Daily Mail	Daily Mail - Web Portal for news update.
dangdang	Dangdang	Dangdang - Chinese general E-commerce company.
daum	Daum	Daum - Popular South Korean web portal.
discover-com	Discover	Discover - Financial services company.
disney-web-portal	Disney	Disney - Official Disney website.
douban	Douban	Douban - Chinese social networking service.
drudge-report-com	Drudge Report	Drudge Report - News aggregator.
ehow-web-portal	eHow	eHow - Website featuring tutorials on a wide variety of subjects.
engadget	Engadget	Engadget - E-commerce for gadgets and electronics.
entertainment-weekly	Entertainment Weekly	Entertainment Weekly - Entertainment new and video clips.
e-online	E! Online	E! Online - Online entertainment news.
etsy	Etsy	Etsy - E-commerce website for homemade or vintage items.
european-union-web-portal	European Union	European Union - Official website for European Union.
eventbrite	Eventbrite	Eventbrite - Event organization and invite site.
evernote	Evernote	Evernote - Synched note taking and web bookmarking app.
fedex	FedEx	FedEx - Courier delivery services.
feedly	Feedly	Feedly - News Aggregator.
fiverr	Fiverr	Fiverr - E-Commerce site generally for \$5.

Protocol Name	Common Name	Long Description
flickr	Flickr	Flickr - Image and video hosting website, web services and online community
foodnetwork	Food Network	Food Network - Official website for the TV network about food and cooking.
foursquare	Foursquare	Foursquare - helps you find the perfect places to go with friends.
fox-news	Fox News	Fox News - Web Portal for news update.
github	GitHub	GitHub - Code management portal for open Source projects.
gizmodo	Gizmodo	Gizmodo - Blogs about design and technology.
gmx-mail	GMX Mail	GMX Mail - German based webmail service.
godaddy	GoDaddy	GoDaddy - Domain registrar.
goodreads	Goodreads	Goodreads - Book review and cataloging.
hollywood-reporter	The Hollywood Reporter	The Hollywood Reporter - News related to the entertainment industry.
hootsuite	HootSuite	HootSuite - Social Network management.
hostgator	HostGator	HostGator - Web hosting portal.
hotels-com	Hotels.com	Hotels.com - Webportal for finding hotel deals and booking it online.
huffingtonpost	The Huffington Post	The Huffington Post - Online news website.
imdb	IMDB	IMDB - Movie information, reviews and previews.
indeed-com	Indeed	Indeed - The job search engine.
independent-news	Destructoid	Destructoid - An independent blog focused on video games.
indiatimes	Indiatimes	Indiatimes - Online news portal.
indiegogo	Indiegogo	Indiegogo - Online Fund raiser for new ideas/products.
infusionsoft	Infusionsoft	Infusionsoft - Software company providing solutions for sales and marketing.

Protocol Name	Common Name	Long Description
intuit	Intuit	Intuit - Software company for financial and tax related services.
investopedia	Investopedia	Investopedia - A wiki focused on information related to investments.
ipfix	ipfix	IPFIX is the 10th version of the protocol Netflow, which is a network protocol developed by Cisco Systems for collecting IP traffic information and monitoring network traffic. The 9th version of this protocol is classified as Netflow.
java-web-portal	Java Update	Java Update - Java update software service.
jimdo	Jimdo	Jimdo - Portal for to creating web site and blog.
jingdong-360buy	Jingdong (360buy.com)	Jingdong (360buy.com) - Chinese e-commerce site.
joomla	Joomla	Joomla - Content Management System for building web sites.
kayak-com	Kayak	Kayak - Online Flight and Hotel reservation/deals website.
kickstarter	Kickstarter	Kickstarter - Platform for creative projects with funding goal and deadline.
letv-com	LeTV	LeTV - Chinese online video portal.
livedoor	Livedoor	Livedoor - Japanese Internet service provider.
liveperson	LivePerson	LivePerson - Online Marketing and Web analytics service provider.
livestrong-com	LiveStrong.com	LiveStrong.com - Health and fitness information.
mailchimp	MailChimp	MailChimp - Email service provider.
major-league-baseball-com	Official Major League Baseball	Official Major League Baseball - Web Portal for Sports news update.
mashable	Mashable	Mashable - News blog website for social network and new technology.
mint-com	Mint.com	Mint.com - Web-based personal finance tool.
monster-com	Monster.com	Monster.com - Online job search portal.
mtv	MTV	MTV - Official website for MTV.

Protocol Name	Common Name	Long Description
nate-com	Nate	Nate - Web portal and Search engine.
national-institute-of-health	NIH	NIH - National Institute of Health and Human services.
national-public-radio	National Public Radio	National Public Radio - US radio station to provide news and other programs.
nbc-news	NBC News	NBC News - NBC Universals news website.
netflow	netflow	NetFlow is a network protocol developed by Cisco Systems for collecting IP traffic information and monitoring network traffic. This protocol classifies version 9 of Netflow, while version 10 is classified as IPFIX.
nhl-com	NHL.com	NHL.com - The National Hockey League official website.
nike	Nike	Nike - Shoe and sports apparel manufacturer.
noaa	NOAA	NOAA - Ocean and Atmospheric research agency.
ny-daily-news	NY Daily News	NY Daily News - News portal.
nytimes	The New York Times	The New York Times - Newspaper website.
okcupid	OkCupid	OkCupid - Online Dating website.
outbrain	Outbrain	Outbrain - Online help for publishers and bloggers.
patch-com	Patch.com	Patch.com - Local news website.
paypal	PayPal	PayPal - E-commerce website for handling online transactions.
pbs-web-portal	Public Broadcasting Service	Public Broadcasting Service - an American television network.
people-web	People.com	People.com - Web portal for the Weekly magazine People.
pinterest	Pinterest	Pinterest - Social photo sharing website.
playstation-store	Playstation Store	Playstation Store - Sony Playstation online marketplace.
playstation-web-portal	Playstation.com	Playstation.com - Sony Playstation related e-commerce.
pocket	Pocket	Pocket - App to save web pages.
prezi	Prezi	Prezi - Presentation tool.

Protocol Name	Common Name	Long Description
priceline-com	Priceline.com	Priceline.com - Travel services company focused on offering discount rates.
publishers-clearing-house	Publishers Clearing House	Publishers Clearing House - Online marketing company.
rakuten	Rakuten	Rakuten - Japanese e-commerce site.
realtor-com	Realtor.com	Realtor.com - Web portal Real Estate.
rediff-com	Rediff.com	Rediff.com - Online news, information and web portal.
retailmenot	RetailMeNot	RetailMeNot - Online coupon and deals.
reuters	Reuters	Reuters - News portal.
rotten-tomatoes	Rotten Tomatoes	Rotten Tomatoes - Online information and reviews about new films.
samsung	Samsung	Samsung - Electronics retail site.
scribd	Scribd	Scribd - Web based document posting and sharing service.
sfgate	SFGate	SFGate - Bay area news portal.
shutterstock	Shutterstock	Shutterstock - Online collection of Stock photographs and illustrations.
sky-news	Sky.com	Sky.com - Web portal for news.
slate-magazine	Slate Magazine	Slate Magazine - Online daily magazine.
slickdeals	Slickdeals	Slickdeals - An online coupons and deals website.
sohu-com	Sohu.com	Sohu.com - Chinese search engine with other services like games and advertising.
southwest-airlines	Southwest Airlines	Southwest Airlines - Airlines service in United States.
speedtest	Speedtest	Speedtest - Test the download and upload speed of the internet.
spiegel-online	Spiegel Online	Spiegel Online - Web portal for the Germans magazine Der Spiegel.
stack-overflow	Stack Overflow	Stack Overflow - Question and Answering site for programmers.
statcounter	StatCounter	StatCounter - Web traffic analyser.

Protocol Name	Common Name	Long Description
swagbucks	Swagbucks	Swagbucks - Online rewards program.
tagged-com	Tagged	Tagged - Social networking site based in California.
taringa	Taringa	Taringa - Argentinian Social network.
ted	TED	TED - Conference and Talk show to share ideas.
telegraph	The Telegraph	The Telegraph - Online news portal.
tesco	Tesco.com	Tesco.com - General E-commerce website.
the-atlantic	The Atlantic	The Atlantic - News portal.
thehive	theCHIVE	theCHIVE - Funny photos and videos.
the-daily-beast	The Daily Beast	The Daily Beast - American news reporting and opinion website.
thefreedictionary-com	The Free Dictionary	The Free Dictionary - Online dictionary aggregator.
the-pirate-bay	The Pirate Bay	The Pirate Bay - BitTorrent index and search engine.
tianya	Tianya	Tianya - Chinese forum for blogging, microblogging and photo album services.
time-news	TIME.com	TIME.com - Webportal for TIME Magazine.
tinyurl	TinyURL	TinyURL - Shortens the long URL.
t-mobile-web-services	t-mobile-web-services	T Mobile - Telecommunication and phone service provider.
tmz	TMZ	TMZ - Entertainment news.
torrentz	Torrentz	Torrentz - BitTorrent metasearch engine.
trulia	Trulia	Trulia - Online portal for Real Estate.
tudou	Tudou	Tudou - Popular Chinese video sharing website.
twitch-tv	TwitchTV	TwitchTV - Justin.tv gaming specific livestreaming platform.
typepad	TypePad	TypePad - Blogging service website.
unite-airlines	United Airlines	United Airlines - Online Flight reservation from United Airlines.

Protocol Name	Common Name	Long Description
uol	UOL	UOL - Brazilian web portal for news and entertainment.
usaa	USAA	USAA - Insurance company.
usa-today	USA Today	USA Today - Website for newspaper USA Today.
usbank	U.S.Bank	U.S.Bank - Online banking web portal for U.S Bank.
usps	USPS	USPS - US Postal Service website.
verizon-web-services	Verizon	Verizon - Internet, TV and Phone service provider.
verizon-wireless-web-services	verizon-wireless-web-services	Verizon Wireless - Telecom and Internet provider.
vine	Vine	Vine - Mobile App for sharing photos and videos clips.
vkontakte	VKontakte	VKontakte - Russian social networking service.
wall-street-journal	Wall Street Journal	Wall Street Journal - Web Portal for news update.
warriorforum	WarriorForum	WarriorForum - Internet Marketing Forums.
washington-post	The Washington Post	The Washington Post - American daily newspaper.
weather-com	Weather.com	Weather.com - Weather Channel web portal.
weather-gov-web-portal	Weather.gov	Weather.gov - Weather web portal.
webmd	WebMD	WebMD - Health information service.
weibo	Sina Weibo	Sina Weibo - Chinese microblogging site.
wells-fargo	Wells Fargo	Wells Fargo - Global financial services company.
wetransfer	WeTransfer	WeTransfer - Online file transferring platform.
whitepages	WhitePages Inc	WhitePages Inc - Business and Peoples Contact directory in United States.
wikia	Wikia	Wikia - Web portal to contribute and share the knowledge.
wired-com	Wired.com	Wired.com - Online magazine.
wordreference-com	WordReference.com	WordReference.com - Online dictionaries, translator and word games.
worldstarhiphop	WorldstarHipHop	WorldstarHipHop - Entertainment, hip hop, music videos and blogs.

Protocol Name	Common Name	Long Description
wunderground-com	Weather Underground	Weather Underground - Weather web portal.
xbox-web-portal	Xbox Live	Xbox Live - Microsoft online gaming service.
xda-developers	XDA-Developers	XDA-Developers - Large online community of smart phone and tablet developers.
xinhuanet	The Xinhuanet	The Xinhuanet - Chinese official website for the news agency Xinhua.
yandex	Yandex	Yandex - Russian search engine.
yellowpages-us	Yellow Pages	Yellow Pages - Online directory and Mapping services.
youku	Youku	Youku - Chinese video hosting and sharing service.
zendesk	Zendesk	Zendesk - Customer support web application.
zillow	Zillow	Zillow - Online portal for Real Estate.
zippyshare	Zippyshare	Zippyshare - File hosting site.
zulily	Zulily	Zulily - Online shopping aimed for Moms apparel and home decor items.

Updated Protocols in NBAR2 Protocol Pack 14.0.0

The following table displays the protocols that have been updated in NBAR2 Protocol Pack 14.0.0:

Protocol	Updates
cisco-jabber-control	Added new signatures and tuned the existing signatures.
cisco-jabber-audio	Added new signatures and tuned the existing signatures.
cisco-jabber-im	Added new signatures and tuned the existing signatures.
capwap-control	Updated signatures.
bittorrent	Bittorrent blocking capabilities were improved with the newly supported uTorrent and transmission clients.
bittorrent-networking	Bittorrent blocking capabilities were improved with the newly supported uTorrent and transmission clients.
encrypted-bittorrent	Bittorrent blocking capabilities were improved with the newly supported uTorrent and transmission clients.
Whatsapp	Updated signatures.
webex-media	Updated signatures.
webex-app-sharing	Updated signatures. DNS is an underlying supported protocol.
internet-video-streaming	Updated signatures.
Netflix	Updated signatures.

Deprecated Protocols in NBAR2 Protocol Pack 14.0.0

The following protocols have been deprecated in NBAR2 Protocol Pack 14.0.0:

- msn-messenger
- msn-messenger-ft
- msn-messenger-video

Caveats in NBAR2 Protocol Pack 14.0.0

Caveats describe unexpected behavior in a product. The Open Caveats section lists open caveats that apply to the current release and may apply to previous releases. A caveat that is open for a prior release and is still unresolved applies to all future releases until it is resolved. To view the details of the software bugs pertaining to your product, perform the following task:

- 1 Click the Caveat ID/Bug ID number in the table.
- 2 The corresponding Bug Search Tool page is displayed with details of the Caveat ID/Bug ID.

The Bug Search Tool (BST), which is the online successor to the Bug Toolkit, is designed to improve the effectiveness in network risk management and device troubleshooting. The BST allows partners and customers to search for software bugs based on product, release, and keyword, and aggregates key data, such as bug details, product, and version. The tool has a provision to filter bugs based on credentials to provide external and internal bug views for the search input. To view the details of a caveat whose ID you do not have, perform the following procedure:

- 1 Access the BST using your Cisco user ID and password at: <https://tools.cisco.com/bugsearch/>
- 2 In the Bug Search window that is displayed, enter the necessary information in the corresponding fields.

For more information about how to use the [Cisco Bug Search Tool](#) effectively, including how to set email alerts for bugs and to save bugs and searches, see the Bug Search Tool Help & FAQ page.

Resolved Caveats in NBAR2 Protocol Pack 14.0.0

The following table lists the resolved caveats in NBAR2 Protocol Pack 14.0.0:

Resolved Caveat	Description
CSCus00367	NBAR2 not recognizing the cisco-phone traffic
CSCut53393	MS SQLServer signature quick reject does not work.

Known Caveats in NBAR2 Protocol Pack 14.0.0

The following table lists the known caveats in NBAR2 Protocol Pack 14.0.0:

Known Caveat	Description
CSCun61772	IPv4 bundles might be used in IPv6 traffic

Restrictions and Limitations in NBAR2 Protocol Pack 14.0.0

The following table lists the limitations and restrictions in NBAR2 Protocol Pack 14.0.0:

Protocol	Limitation/Restriction
apple-app-store	Login and a few encrypted sessions are classified as <i>iTunes</i>
bittorrent	<i>http</i> traffic generated by the <i>bitcomet bittorrent</i> client might be classified as <i>http</i>
capwap-data	For <i>capwap-data</i> to be classified correctly, <i>capwap-control</i> must also be enabled
cisco-jabber	Encrypted <i>cisco jabber</i> might be classified as unknown.
ftp	During configuring QoS class-map with <i>ftp-data</i> , the <i>ftp</i> protocol must be selected. As an alternative, the <i>ftp</i> application group can be selected.
hulu	Encrypted video streaming generated by <i>hulu</i> might be classified as its underlying protocol <i>rtmpe</i>
logmein	Traffic generated by the <i>logmein</i> android app might be misclassified as <i>ssl</i>
ms-lync	Login and chat traffic generated by the <i>ms-lync</i> client might be misclassified as <i>ssl</i>
pcanywhere	Traffic generated by <i>pcanywhere</i> for mac might be classified as unknown
perfect-dark	Some <i>perfect-dark</i> sessions might be classified as unknown
qq-accounts	Login to QQ applications which is not via web may not be classified as <i>qq-accounts</i>
secondlife	Voice traffic generated by <i>secondlife</i> might be misclassified as <i>ssl</i>
ssl	<p>Sub Classification (SC) mechanism was modified to include search for wildcard.</p> <p>Note 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.</p> <p>For example, you can either use, "*.pqr.com" or "abc.pqr.com" to classify abc.pqr.com.</p>

Recommended Configurations

The following configurations are tested and recommended for blocking the respective traffic.

Recommended Configuration	Caveat for reference
To block Picasa traffic, you need to block Google services and the Picasa application, because Google applications share signatures.	CSCud40143
To block Gmail traffic, you need to block Google services and the Gmail application, because Google applications share signatures.	CSCud43226
To effectively apply AVC policy for FTP , we need to add both <i>ftp-data</i> and <i>ftp</i> as part of the AVC Profile.	—