Release Notes for Cisco ASDM, 7.16(x)

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This document contains release information for Cisco ASDM Version 7.16(x) for the Cisco ASA series.

Important Notes

- **ASDM signed-image support in 9.16(3.19)/7.18(1.152) and later**—The ASA now validates whether the ASDM image is a Cisco digitally signed image. If you try to run an older ASDM image with an ASA version with this fix, ASDM will be blocked and the message "%ERROR: Signature not valid for file disk0:/<filename>" will be displayed at the ASA CLI. ASDM release 7.18(1.152) and later are backwards compatible with all ASA versions, even those without this fix. (CSCwb05291, CSCwb05264)
- **SNMPv3 users using MD5 hashing and DES encryption are no longer supported, and the users will be removed when you upgrade to 9.16(1)**—Be sure to change any user configuration to higher security algorithms using the **snmp-server user** command before you upgrade.
- **SSH host key action required in 9.16(1)**—In addition to RSA, we added support for the EDDSA and ECDSA host keys for SSH. The ASA tries to use keys in the following order if they exist: EDDSA, ECDSA, and then RSA. When you upgrade to 9.16(1), the ASA will fall back to using the existing RSA key. However, we recommend that you generate higher-security keys as soon as possible using the **crypto key generate** {**eddsa** | **ecdsa**} command. Moreover, if you explicitly configure the ASA to use the RSA key with the **ssh key-exchange hostkey rsa** command, you must generate a key that is 2048 bits or higher. For upgrade compatibility, the ASA will use smaller RSA host keys only when the default host key setting is used. RSA support will be removed in a later release.
- **In 9.16 and later, certificates with RSA keys are not compatible with ECDSA ciphers**—When you use the ECDHE_ECDSA cipher group, configure the trustpoint with a certificate that contains an ECDSA-capable key.
- **RSA keys using that are smaller than 2048 cannot be generated in 9.16(1)**—You can no longer generate RSA keys smaller than 2048 using the **crypto key generate rsa** command.

  For SSH, existing smaller keys can continue to be used after upgrading, but we recommend that you upgrade to a larger size, or to a higher security key type.

  For other features, existing certificates signed with RSA key sizes smaller than 2048 cannot be used in ASA 9.16.1 and later. You can use the **crypto ca permit-weak-crypto** command to allow use of existing smaller keys, but even with this command, you cannot generate new smaller RSA keys..
- **ssh version command removed in 9.16(1)**—This command has been removed. Only SSH version 2 is supported.
- **SAMLv1 feature removed in 9.16(1)**—Support for SAMLv1 was removed.

- **No support for DH groups 2, 5, and 24 in 9.16(1)**—Support has been removed for the DH groups 2, 5, and 24 in SSL DH group configuration. The **ssl dh-group** command has been updated to remove the command options **group2**, **group5**, and **group24**.
- **Cisco announces the feature deprecation for Clientless SSL VPN effective with ASA version 9.17(1)**—Limited support will continue on releases prior to 9.17(1).
- **No support in ASA 9.15(1) and later for the ASA 5525-X, ASA 5545-X, and ASA 5555-X**—ASA 9.14(x) is the last supported version. For the ASA FirePOWER module, the last supported version is 6.6.
- **For the Firepower 1010, invalid VLAN IDs can cause problems**—Before you upgrade to 9.15(1) or later, make sure you are not using a VLAN for switch ports in the range 3968 to 4047. These IDs are for internal use only, and 9.15(1) includes a check to make sure you are not using these IDs. For example, if these IDs are in use after upgrading a failover pair, the failover pair will go into a suspended state. See CSCvw33057 for more information.
- **Chacha-poly ciphers**—AnyConnect has an updated list of supported cryptographic algorithms: AnyConnect Secure Mobility Client Features, Licenses, and OSs, Release 4.10, which are proposed to the ASA when starting TLS-based VPN traffic.

System Requirements

ASDM requires a computer with a CPU with at least 4 cores. Fewer cores can result in high memory usage.

ASDM Java Requirements

You can install ASDM using Oracle JRE 8.0 (**asdm-***version***.bin**) or OpenJRE 1.8.x (**asdm-openjre-***version***.bin**).

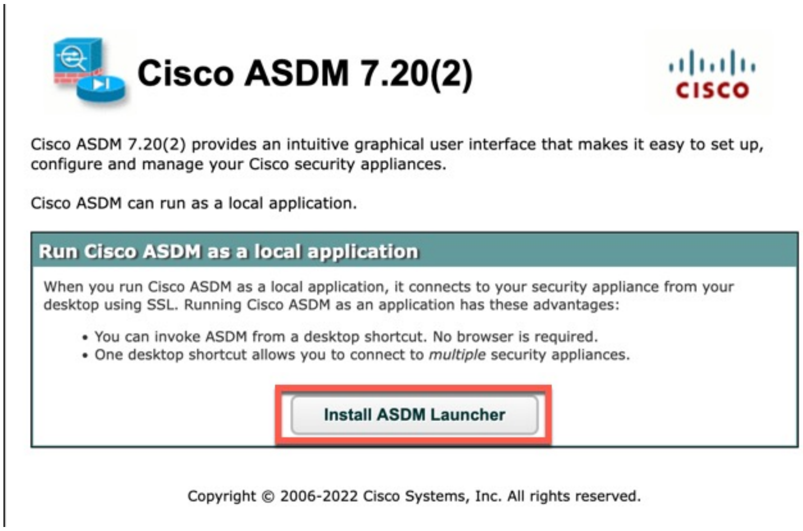
Note ASDM is not tested on Linux.

Table 1: ASA and ASA FirePOWER: ASDM Operating System and Browser Requirements

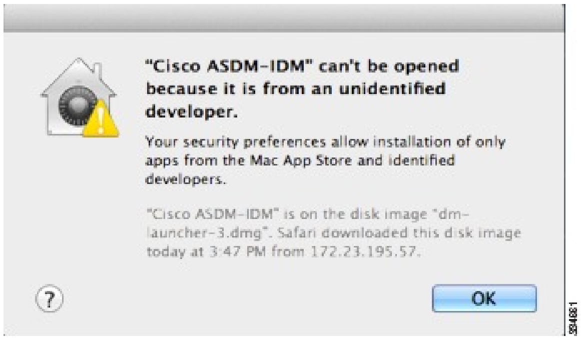
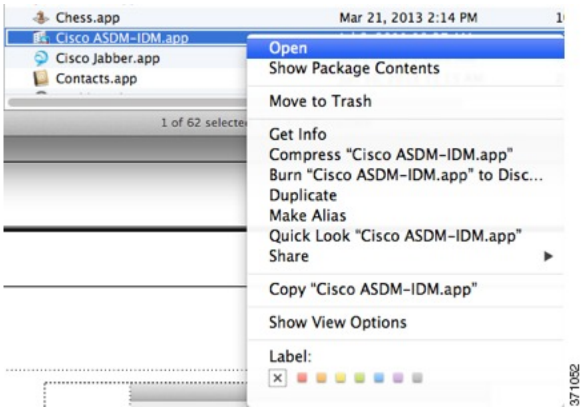
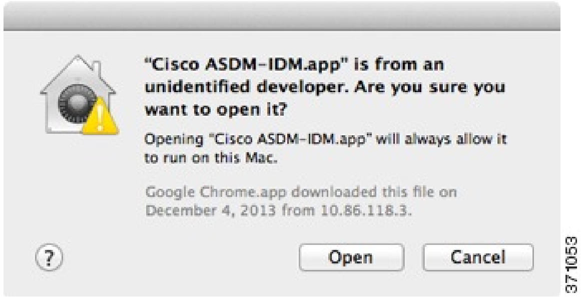
Operating System	Browser			Oracle JRE	OpenJRE
	Firefox	Safari	Chrome		
Microsoft Windows (English and Japanese): • 10 **Note** See Windows 10 in ASDM Compatibility Notes, on page 3 if you have problems with the ASDM shortcut. • 8 • 7 • Server 2016 and Server 2019 (ASA management only; ASDM management of the FirePOWER module is not supported. You can alternatively use the FMC to manage the FirePOWER module when using ASDM for ASA management.) • Server 2012 R2 • Server 2012 • Server 2008	Yes	No support	Yes	8.0 version 8u261 or later	1.8 **Note** No support for Windows 7 or 10 32-bit
Apple OS X 10.4 and later	Yes	Yes	Yes (64-bit version only)	8.0 version 8u261 or later	1.8

ASDM Compatibility Notes

The following table lists compatibility caveats for ASDM.

Conditions	Notes
ASDM Launcher compatibility with ASDM version	"**Unable to Launch Device Manager**" error message. If you upgrade to a new ASDM version and then get this error, you may need to re-install the latest Launcher. 1. Open the ASDM web page on the ASA: https://<asa_ip_address>. 2. Click **Install ASDM Launcher**. *Figure 1: Install ASDM Launcher*  Cisco ASDM 7.20(2) Cisco ASDM 7.20(2) provides an intuitive graphical user interface that makes it easy to set up, configure and manage your Cisco security appliances. Cisco ASDM can run as a local application. Run Cisco ASDM as a local application When you run Cisco ASDM as a local application, it connects to your security appliance from your desktop using SSL. Running Cisco ASDM as an application has these advantages: • You can invoke ASDM from a desktop shortcut. No browser is required. • One desktop shortcut allows you to connect to *multiple* security appliances. Copyright © 2006-2022 Cisco Systems, Inc. All rights reserved. 3. Leave the username and password fields empty (for a new installation), and click **OK**. With no HTTPS authentication configured, you can gain access to ASDM with no username and the **enable** password, which is blank by default. When you enter the **enable** command at the CLI for the first time, you are prompted to change the password; this behavior is not enforced when you log into ASDM. We suggest that you change the enable password as soon as possible so that it does not remain blank. **Note**: If you enabled HTTPS authentication, enter your username and associated password. Even without authentication, if you enter a username and password at the login screen (instead of leaving the username blank), ASDM checks the local database for a match.
Windows Active Directory directory access	In some cases, Active Directory settings for Windows users may restrict access to program file locations needed to successfully launch ASDM on Windows. Access is needed to the following directories: • Desktop folder • C:\Windows\System32C:\Users\<username>\.asdm • C:\Program Files (x86)\Cisco Systems If your Active Directory is restricting directory access, you need to request access from your Active Directory administrator.

Conditions	Notes
Windows 10	"**This app can't run on your PC**" error message. When you install the ASDM Launcher, Windows 10 might replace the ASDM shortcut target with the Windows Scripting Host path, which causes this error. To fix the shortcut target: **1.** Choose **Start** > **Cisco ASDM-IDM Launcher**, and right-click the **Cisco ASDM-IDM Launcher** application. **2.** Choose **More** > **Open file location**. Windows opens the directory with the shortcut icon. **3.** Right click the shortcut icon, and choose **Properties**. **4.** Change the **Target** to: **C:\Windows\System32\wscript.exe invisible.vbs run.bat** **5.** Click **OK**.
OS X	On OS X, you may be prompted to install Java the first time you run ASDM; follow the prompts as necessary. ASDM will launch after the installation completes.

Conditions	Notes
OS X 10.8 and later	You need to allow ASDM to run because it is not signed with an Apple Developer ID. If you do not change your security preferences, you see an error screen.  **“Cisco ASDM-IDM” can't be opened because it is from an unidentified developer.** Your security preferences allow installation of only apps from the Mac App Store and identified developers. “Cisco ASDM-IDM” is on the disk image “dm-launcher-3.dmg”. Safari downloaded this disk image today at 3:47 PM from 172.23.195.57. 1. To allow ASDM to run, right-click (or Ctrl-Click) the Cisco ASDM-IDM Launcher icon, and choose **Open**.  Chess.app Mar 21, 2013 2:14 PM Cisco ASDM-IDM.app Cisco Jabber.app Contacts.app 1 of 62 selecte Open Show Package Contents Move to Trash Get Info Compress “Cisco ASDM-IDM.app” Burn “Cisco ASDM-IDM.app” to Disc... Duplicate Make Alias Quick Look “Cisco ASDM-IDM.app” Share Copy “Cisco ASDM-IDM.app” Show View Options Label: 371052 2. You see a similar error screen; however, you can open ASDM from this screen. Click **Open**. The ASDM-IDM Launcher opens.  **“Cisco ASDM-IDM.app” is from an unidentified developer. Are you sure you want to open it?** Opening “Cisco ASDM-IDM.app” will always allow it to run on this Mac. Google Chrome.app downloaded this file on December 4, 2013 from 10.86.118.3.

Conditions	Notes
Requires Strong Encryption license (3DES/AES) on ASA **Note** Smart licensing models allow initial access with ASDM without the Strong Encryption license.	ASDM requires an SSL connection to the ASA. You can request a 3DES license from Cisco: 1. Go to www.cisco.com/go/license. 2. Click **Continue to Product License Registration**. 3. In the Licensing Portal, click **Get Other Licenses** next to the text field. 4. Choose **IPS, Crypto, Other...** from the drop-down list. 5. Type **ASA** in to the **Search by Keyword** field. 6. Select **Cisco ASA 3DES/AES License** in the **Product** list, and click **Next**. 7. Enter the serial number of the ASA, and follow the prompts to request a 3DES/AES license for the ASA.
• Self-signed certificate or an untrusted certificate • IPv6 • Firefox and Safari	When the ASA uses a self-signed certificate or an untrusted certificate, Firefox and Safari are unable to add security exceptions when browsing using HTTPS over IPv6. See https://bugzilla.mozilla.org/show_bug.cgi?id=633001. This caveat affects all SSL connections originating from Firefox or Safari to the ASA (including ASDM connections). To avoid this caveat, configure a proper certificate for the ASA that is issued by a trusted certificate authority.
• SSL encryption on the ASA must include both RC4-MD5 and RC4-SHA1 or disable SSL false start in Chrome. • Chrome	If you change the SSL encryption on the ASA to exclude both RC4-MD5 and RC4-SHA1 algorithms (these algorithms are enabled by default), then Chrome cannot launch ASDM due to the Chrome "SSL false start" feature. We suggest re-enabling one of these algorithms (see the **Configuration** > **Device Management** > **Advanced** > **SSL Settings** pane); or you can disable SSL false start in Chrome using the **--disable-ssl-false-start** flag according to Run Chromium with flags.

Install an Identity Certificate for ASDM

When using Java 7 update 51 and later, the ASDM Launcher requires a trusted certificate. An easy approach to fulfill the certificate requirements is to install a self-signed identity certificate.

See Install an Identity Certificate for ASDM to install a self-signed identity certificate on the ASA for use with ASDM, and to register the certificate with Java.

Increase the ASDM Configuration Memory

ASDM supports a maximum configuration size of 512 KB. If you exceed this amount you may experience performance issues. For example, when you load the configuration, the status dialog box shows the percentage of the configuration that is complete, yet with large configurations it stops incrementing and appears to suspend operation, even though ASDM might still be processing the configuration. If this situation occurs, we recommend that you consider increasing the ASDM system heap memory. To confirm that you are experiencing memory exhaustion, monitor the Java console for the "java.lang.OutOfMemoryError" message.

Increase the ASDM Configuration Memory in Windows

To increase the ASDM heap memory size, edit the **run.bat** file by performing the following procedure.

Procedure

Step 1 Go to the ASDM installation directory, for example C:\Program Files (x86)\Cisco Systems\ASDM.

Step 2 Edit the **run.bat** file with any text editor.

Step 3 In the line that starts with “start javaw.exe”, change the argument prefixed with “-Xmx” to specify your desired heap size. For example, change it to -Xmx768M for 768 MB or -Xmx1G for 1 GB.

Step 4 Save the **run.bat** file.

Increase the ASDM Configuration Memory in Mac OS

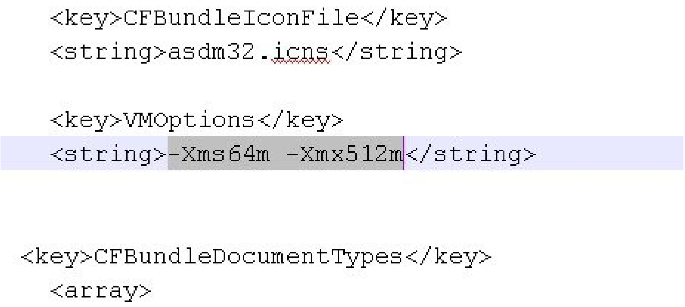
To increase the ASDM heap memory size, edit the **Info.plist** file by performing the following procedure.

Procedure

Step 1 Right-click the **Cisco ASDM-IDM** icon, and choose **Show Package Contents**.

Step 2 In the **Contents** folder, double-click the **Info.plist** file. If you have Developer tools installed, it opens in the **Property List Editor**. Otherwise, it opens in **TextEdit**.

Step 3 Under **Java** > **VMOptions**, change the string prefixed with “-Xmx” to specify your desired heap size. For example, change it to -Xmx768M for 768 MB or -Xmx1G for 1 GB.

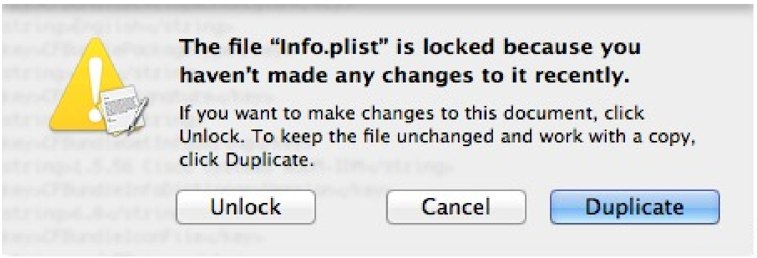


```
    <key>CFBundleIconFile</key>
    <string>asdm32.icns</string>

    <key>VMOptions</key>
    <string>-Xms64m -Xmx512m</string>


  <key>CFBundleDocumentTypes</key>
    <array>
```

Step 4 If this file is locked, you see an error such as the following:



The file “Info.plist” is locked because you haven’t made any changes to it recently.

If you want to make changes to this document, click Unlock. To keep the file unchanged and work with a copy, click Duplicate.

Step 5 Click **Unlock** and save the file.

If you do not see the **Unlock** dialog box, exit the editor, right-click the **Cisco ASDM-IDM** icon, choose **Copy Cisco ASDM-IDM**, and paste it to a location where you have write permissions, such as the Desktop. Then change the heap size from this copy.

ASA and ASDM Compatibility

For information about ASA/ASDM software and hardware requirements and compatibility, including module compatibility, see Cisco ASA Compatibility.

VPN Compatibility

For VPN compatibility, see Supported VPN Platforms, Cisco ASA 5500 Series.

New Features

This section lists new features for each release.

Note New, changed, and deprecated syslog messages are listed in the syslog message guide.

New Features in ASA 9.16(4)

Released: October 13, 2022

There are no new features in this release.

New Features in ASA 9.16(3)

Released: April 6, 2022

There are no new features in this release.

New Features in ASA 9.16(2)

Released: August 18, 2021

There are no new features in this release.

New Features in ASDM 7.16(1.150)

Released: June 15, 2021

There are no new features in this release.

New Features in ASA 9.16(1)/ASDM 7.16(1)

Released: May 26, 2021

Feature	Description
Firewall Features	
New Section 0 for system-defined NAT rules.	A new Section 0 has been added to the NAT rule table. This section is exclusively for the use of the system. Any NAT rules that the system needs for normal functioning are added to this section, and these rules take priority over any rules you create. Previously, system-defined rules were added to Section 1, and user-defined rules could interfere with proper system functioning. You cannot add, edit, or delete Section 0 rules, but you will see them in **show nat detail** command output.
The default SIP inspection policy map drops non-SIP traffic.	For SIP-inspected traffic, the default is now to drop non-SIP traffic. The previous default was to allow non-SIP traffic on ports inspected for SIP. We changed the default SIP policy map to include the **no traffic-non-sip** command.
Ability to specify the IMSI prefixes to be dropped in GTP inspection.	GTP inspection lets you configure IMSI prefix filtering, to identify the Mobile Country Code/Mobile Network Code (MCC/MNC) combinations to allow. You can now do IMSI filtering on the MCC/MNC combinations that you want to drop. This way, you can list out the unwanted combinations, and default to allowing all other combinations. We changed the following screens: The Drop option was added to the IMSI Prefix Filtering tab for GTP inspection maps.
Configure the maximum segment size (MSS) for embryonic connections	You can configure a service policy to set the server maximum segment size (MSS) for SYN-cookie generation for embryonic connections upon reaching the embryonic connections limit. This is meaningful for service policies where you are also setting embryonic connection maximums. New/Modified screens: **Connection Settings** in the Add/Edit Service Policy wizard.
Improved CPU usage and performance for many-to-one and one-to-many connections.	The system no longer creates local host objects and locks them when creating connections, except for connections that involve dynamic NAT/PAT and scanning threat detection and host statistics. This improves performance and CPU usage in situations where many connections are going to the same server (such as a load balancer or web server), or one endpoint is making connections to many remote hosts. We changed the following commands: **clear local-host** (deprecated), **show local-host**
Platform Features	
ASAv support for VMware ESXi 7.0	The ASAv virtual platform supports hosts running on VMware ESXi 7.0. New VMware hardware versions have been added to the vi.ovf and esxi.ovf files to enable optimal performance and usability of the ASAv on ESXi 7.0. No modified commands. No modified screens.

Feature	Description
Intel QuickAssist Technology (QAT) on ASAv	The ASAv supports hardware crypto acceleration for ASAv deployments that use the Intel QuickAssist (QAT) 8970 PCI adapter. Hardware crypto acceleration for the ASAv using QAT is supported on VMware ESXi and KVM only. No modified commands. No modified screens.
ASAv on OpenStack	The ASAv virtual platform has added support for OpenStack. No modified commands. No modified screens.
High Availability and Scalability Features	
Improved PAT port block allocation for clustering on the Firepower 4100/9300	The improved PAT port block allocation ensures that the control unit keeps ports in reserve for joining nodes, and proactively reclaims unused ports. To best optimize the allocation, you can set the maximum nodes you plan to have in the cluster using the **cluster-member-limit** command. The control unit can then allocate port blocks to the planned number of nodes, and it will not have to reserve ports for extra nodes you don't plan to use. The default is 16 nodes. You can also monitor syslog 747046 to ensure that there are enough ports available for a new node. New/Modified screens: **Configuration** > **Device Management** > **High Availability and Scalability** > **ASA Cluster** > **Cluster Configuration** > **Cluster Member Limit** field
show cluster history command improvements	We have added additional outputs for the **show cluster history** command. New/Modified commands: **show cluster history brief**, **show cluster history latest**, **show cluster history reverse**, **show cluster history time**
Firepower 1140 maximum contexts increased from 5 to 10	The Firepower 1140 now supports up to 10 contexts.
Certificate Features	
Enrollment over Secure Transport (EST) for certification	ASA supports certificate enrollment using the Enrollment over Secure Transport (EST). However, you can configure to use EST enrollments only with RSA and ECDSA keys. You cannot use EdDSA keypair for a trustpoint configured for EST enrollment. New/Modified screens: **Configuration** > **Device Management** > **Certificate Management** > **Identity Certificate** > **Advanced**.
Support for new EdDSA key	The new key option, EdDSA, was added to the existing RSA and ECDSA options. New/Modified screens: **Configuration** > **Device Management** > **Certificate Management** > **Identity Certificate** > **Add Identity Certificates** > **Add Key Pair**.

Feature	Description
Command to override restrictions on certificate keys	Support to use SHA1with RSA Encryption algorithm for certification and support for certificates with RSA key sizes smaller than 2048 were removed. You can use **crypto ca permit-weak-crypto** command to override these restrictions. New/Modified screens: **Configuration** > **Device Management** > **Certificate Management** > **Identity Certificate**, **Configuration** > **Remote Access VPN** > **Certificate Management** > **Identity Certificate**, and **Configuration** > **Remote Access VPN** > **Certificate Management** > **Code Signer**
Administrative and Troubleshooting Features	
SSH security improvements	SSH now supports the following security improvements: • Host key format—**crypto key generate** {**eddsa** | **ecdsa**}. In addition to RSA, we added support for the EdDSA and ECDSA host keys. The ASA tries to use keys in the following order if they exist: EdDSA, ECDSA, and then RSA. If you explicitly configure the ASA to use the RSA key with the **ssh key-exchange hostkey rsa** command, you must generate a key that is 2048 bits or higher. For upgrade compatibility, the ASA will use smaller RSA host keys only when the default host key setting is used. RSA support will be removed in a later release. • Key exchange algorithms—**ssh key-exchange group** {**ecdh-sha2-nistp256** | **curve25519-sha256**} • Encryption algorithms—**ssh cipher encryption chacha20-poly1305@openssh.com** • SSH version 1 is no longer supported—The **ssh version** command is removed. New/Modified screens: • **Configuration** > **Device Management** > **Management Access** > **ASDM/HTTPS/Telnet/SSH** • **Configuration** > **Device Management** > **Certificate Management** > **Identity Certificates** • **Configuration** > **Device Management** > **Advanced** > **SSH Ciphers**
Monitoring Features	
SNMPv3 Authentication	You can now use SHA-224 and SHA-384 for user authentication. You can no longer use MD5 for user authentication. You can no longer use DES for encryption. New/Modified screens: **Configuration** > **Device Management** > **Management Access** > **SNMP**
VPN Features	

Feature	Description
Support for IPv6 on Static VTI	ASA supports IPv6 addresses in Virtual Tunnel Interfaces (VTI) configurations. A VTI tunnel source interface can have an IPv6 address, which you can configure to use as the tunnel endpoint. If the tunnel source interface has multiple IPv6 addresses, you can specify which address to be used, else the first IPv6 global address in the list is used by default. The tunnel mode can be either IPv4 or IPv6, but it must be the same as IP address type configured on VTI for the tunnel to be active. An IPv6 address can be assigned to the tunnel source or the tunnel destination interface in a VTI.
Support for 1024 VTI interfaces per device	The number of maximum VTIs to be configured on a device has been increased from 100 to 1024. Even if a platform supports more than 1024 interfaces, the VTI count is limited to the number of VLANs configurable on that platform. For example, ASA 5510 supports 100 VLANs, the tunnel count would be 100 minus the number of physical interfaces configured. New/Modified screens: None
Support for DH group 15 in SSL	Support has been added for DH group 15 for SSL encryption. New/Modified commands: **ssl dh-group group15**
Support for DH group 31 for IPsec encryption	Support has been added for DH group 31 for IPsec encryption. New/Modified commands: **set pfs**
Support to limit the SA in IKEv2 queue	Support has been added to limit the number of queues in SA-INIT packets. New/Modified commands: **crypto ikev2 limit queue sa_init**
Option to clear IPsec statistics	CLIs have been introduced to clear and reset IPsec statistics. New/Modified commands: **clear crypto ipsec stats** and **clear ipsec stats**

Upgrade the Software

This section provides the upgrade path information and a link to complete your upgrade.

ASA Upgrade Path

To view your current version and model, use one of the following methods:

- ASDM: Choose **Home** > **Device Dashboard** > **Device Information**.
- CLI: Use the **show version** command.

This table provides upgrade paths for ASA. Some older versions require an intermediate upgrade before you can upgrade to a newer version. Recommended versions are in **bold**.

Note Be sure to check the upgrade guidelines for each release between your starting version and your ending version. You may need to change your configuration before upgrading in some cases, or else you could experience an outage.

Note For guidance on security issues on the ASA, and which releases contain fixes for each issue, see the ASA Security Advisories.

Note ASA 9.14 was the final version for the ASA 5525-X, 5545-X, and 5555-X.

ASA 9.12 was the final version for the ASA 5512-X, 5515-X, 5585-X, and ASASM.

ASA 9.2 was the final version for the ASA 5505.

ASA 9.1 was the final version for the ASA 5510, 5520, 5540, 5550, and 5580.

Current Version	Interim Upgrade Version	Target Version
9.15	—	Any of the following: → **9.16**
9.14	—	Any of the following: → **9.16** → 9.15
9.13	—	Any of the following: → **9.16** → 9.15 → 9.14
9.12	—	Any of the following: → **9.16** → 9.15 → 9.14

Current Version	Interim Upgrade Version	Target Version
9.10	—	Any of the following: → **9.16** → 9.15 → 9.14 → 9.12
9.9	—	Any of the following: → **9.16** → 9.15 → 9.14 → 9.12
9.8	—	Any of the following: → **9.16** → 9.15 → 9.14 → 9.12
9.7	—	Any of the following: → **9.16** → 9.15 → 9.14 → 9.12 → 9.8
9.6	—	Any of the following: → **9.16** → 9.15 → 9.14 → 9.12 → 9.8

Current Version	Interim Upgrade Version	Target Version
9.5	—	Any of the following: → **9.16** → 9.15 → 9.14 → 9.12 → 9.8
9.4	—	Any of the following: → **9.16** → 9.15 → 9.14 → 9.12 → 9.8
9.3	—	Any of the following: → **9.16** → 9.15 → 9.14 → 9.12 → 9.8
9.2	—	Any of the following: → **9.16** → 9.15 → 9.14 → 9.12 → 9.8
9.1(2), 9.1(3), 9.1(4), 9.1(5), 9.1(6), or 9.1(7.4)	—	Any of the following: → 9.14 → **9.12** → 9.8 → 9.1(7.4)

Current Version	Interim Upgrade Version	Target Version
9.1(1)	→ 9.1(2)	Any of the following: → 9.14 → **9.12** → 9.8 → 9.1(7.4)
9.0(2), 9.0(3), or 9.0(4)	—	Any of the following: → 9.14 → **9.12** → 9.8 → 9.6 → 9.1(7.4)
9.0(1)	→ 9.0(4)	Any of the following: → 9.14 → **9.12** → 9.8 → 9.1(7.4)
8.6(1)	→ 9.0(4)	Any of the following: → 9.14 → **9.12** → 9.8 → 9.1(7.4)
8.5(1)	→ 9.0(4)	Any of the following: → **9.12** → 9.8 → 9.1(7.4)
8.4(5+)	—	Any of the following: → **9.12** → 9.8 → 9.1(7.4) → 9.0(4)

Current Version	Interim Upgrade Version	Target Version
8.4(1) through 8.4(4)	→ 9.0(4)	→ **9.12** → 9.8 → 9.1(7.4)
8.3	→ 9.0(4)	Any of the following: → **9.12** → 9.8 → 9.1(7.4)
8.2 and earlier	→ 9.0(4)	Any of the following: → **9.12** → 9.8 → 9.1(7.4)

Upgrade Link

To complete your upgrade, see the ASA upgrade guide.

Open and Resolved Bugs

The open and resolved bugs for this release are accessible through the Cisco Bug Search Tool. This web-based tool provides you with access to the Cisco bug tracking system, which maintains information about bugs and vulnerabilities in this product and other Cisco hardware and software products.

Note You must have a Cisco.com account to log in and access the Cisco Bug Search Tool. If you do not have one, you can register for an account. If you do not have a Cisco support contract, you can only look up bugs by ID; you cannot run searches.

For more information about the Cisco Bug Search Tool, see the Bug Search Tool Help & FAQ.

Open Bugs

This section lists open bugs in each version.

Open Bugs in Version 7.16(1.150)

The following table lists select open bugs at the time of this Release Note publication.

Caveat ID Number	Description
CSCvu01215	Appliance mode : checksum does not match issue while downloading asa image from CCO
CSCvu60781	ASDM: Need support for MAC in Launcher 1.9.1
CSCvv17403	Check box not available for disable delete tunnel with no delay in simultaneous connection prempt
CSCvv83043	Cipher changes require in VPN wizard according to 9161/7161 CLIs

Open Bugs in Version 7.16(1)

The following table lists select open bugs at the time of this Release Note publication.

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Resolved Bugs

This section lists resolved bugs per release.

Resolved Bugs in Version 7.16(1.150)

The following table lists select resolved bugs at the time of this Release Note publication.

Caveat ID Number	Description
CSCvx31769	ASDM session being abruptly terminated when switching between different admin and system contexts
CSCvy44376	SSH cipher (aes128-gcm@openssh.com and chacha20-poly1305@openssh.com) is missing on ASDM GUI
CSCvy50917	ssh key-exchange group options should be disabled in MC mode - User context

Resolved Bugs in Version 7.16(1)

The following table lists select resolved bugs at the time of this Release Note publication.

Caveat ID Number	Description
CSCvr82737	ASDM 7.12.2 doesn't send client certificate during SSL handshake

Caveat ID Number	Description
CSCvt34517	ASDM Fails to Launch with error - invalid SHA1 signature file digest for LZMA/LzmaInputStream.class
CSCvt88739	Not able to configure Split tunneling on group policy on ASDM v7.14.1.46
CSCvu54682	Power over Ethernet dialog has incorrect label for checkbox
CSCvu67773	ASDM creates wrong outside identity NAT rule during creation of connection profile for s2s vpn
CSCvu69664	dns-class inside of DNS Class-Map gets incorrect value
CSCvu82820	Remove the engineID field from ASDM UI - ASA Traceback
CSCvu90263	ASDM - ACL on management can't be added even interface configured with "no management-only"
CSCvv12123	NSF Wait Interval in ASDM OSPF Process Advanced Properties should not be mandatory
CSCvv27284	Unable to edit AnyConnect Custom Attribute Name value
CSCvv39481	Start-up configuration cannot be resotred when using ASDM
CSCvv87029	When you click next to the checkbox in ASDM then the checkbox is selected anyway
CSCvw39124	NSF wait interval warning popup is not showing when configuring wrong value
CSCvw61817	ASDM Display "n/a" for "Peak Usage (KB)" Under Tab "Context Usage" of Memory Status
CSCvw86103	ASA Cluster ASDM real-time log viewer showing same events on Master and Slave
CSCvx40955	ASDM does not recognize SCTP port as per the parser Errors

End-User License Agreement

For information on the end-user license agreement, go to http://www.cisco.com/go/warranty.

Related Documentation

For additional information on the ASA, see Navigating the Cisco ASA Series Documentation.