

# Release Notes for Cisco Secure Firewall ASDM, 7.20(x)

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# Release Notes for Cisco Secure Firewall ASDM, 7.20(x)

This document contains release information for ASDM version 7.20(x) for the Secure Firewall ASA.



Note

ASA 9.20(1) is only supported on the Secure Firewall 4200. Later releases are supported on the other models.

# **Important Notes**

- ASA 9.20(2) supports all current models.
- OSPF redistribute commands that specify a route-map that matches a prefix-list will be removed in 9.20(2)—When you upgrade to 9.20(2), OSPF redistribute commands where the specified route-map uses a match ip address prefix-list will be removed from the configuration. Although prefix lists have never been supported, the parser still accepted the command. Before upgrading, you should reconfigure OSPF to use route maps that specify an ACL in the match ip address command.
- **ASA version 9.20(1) only supports the Secure Firewall 4200**—ASDM 7.20(1) supports the Secure Firewall 4200 on 9.20(1), but is also backwards-compatible with earlier releases on other platforms.
- ASDM's self-signed certificate not valid due to a time and date mismatch with ASA—ASDM validates the self-signed SSL certificate, and if the ASA's date is not within the certificate's **Issued On** and **Expires On** date, ASDM will not launch. See ASDM Compatibility Notes, on page 2 for more information.

# 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**).

Table 1: ASDM Operating System and Browser Requirements

Operating System		Browser		Oracle JRE	OpenJ	IRE	
		Firefox	Safari	Chrome			
Microsoft v • 11 • 10 Note	Windows (English and Japanese):  See Windows 10 in ASDM Compatibility	Yes	No support	Yes	8.0 version 8u261 or later	1.8 Note	No support for Windows
	Notes, on page 2 if you have problems with the ASDM shortcut.						7 or 10 32-bit
• 8							
• 7							
• Serve	r 2016 and Server 2019						
• Server 2012 R2							
• Server 2012							
• Serve	r 2008						
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.

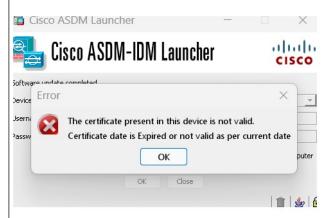
## **Conditions Notes** "Unable to Launch Device Manager" error message. ASDM Launcher compatibility with ASDM version If you upgrade to a new ASDM version and then get this error, you may need to re-install the latest Launcher. 1. Open the ASDM web page on the ASA: https://<asa\_ip\_address>. 2. Click Install ASDM Launcher. Figure 1: Install ASDM Launcher Cisco ASDM 7.20(2) altalta 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. Install ASDM Launcher 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.

#### Conditions Notes

Self-signed certificate not valid due to a time and date mismatch with ASA

ASDM validates the self-signed SSL certificate, and if the ASA's date is not within the certificate's **Issued On** and **Expires On** date, ASDM will not launch. If there is a time and date mismatch, you will see the following error:

Figure 2: Certificate Not Valid

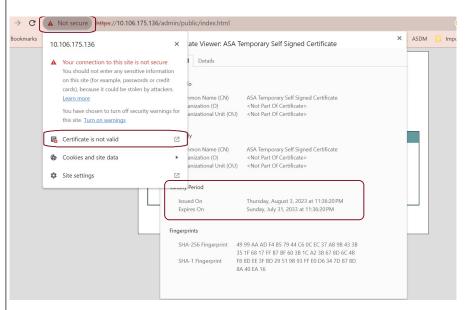


To fix the issue: Set the correct time on the ASA and reload.

To check the certificate dates, (example shown is Chrome):

- **1.** Go to https://device\_ip.
- 2. Click the **Not secure** text in the menu bar.
- 3. Click **Certificate is not valid** to open the Certificate Viewer.
- 4. Check the Validity Period.

Figure 3: Certificate Viewer

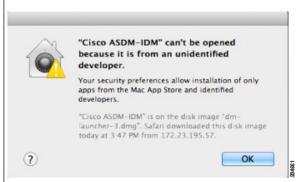


Conditions	Notes	
Windows Active Directory directory access	In some cases, Active Directory settings for Windows users may restrict access to program file locations needed to successfully launch ASDM on Windows. Access is needed to the following directories:	
	Desktop folder	
	• C:\Windows\System32C:\Users\ <username>\.asdm</username>	
	• C:\Program Files (x86)\Cisco Systems	
	If your Active Directory is restricting directory access, you need to request access from your Active Directory administrator.	
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 <b>Properties</b> .	
	4. Change the <b>Target</b> 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.	

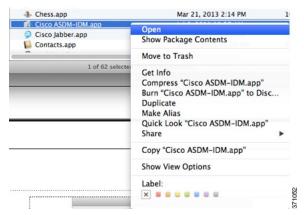
#### Conditions Notes

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.



1. To allow ASDM to run, right-click (or Ctrl-Click) the Cisco ASDM-IDM Launcher icon, and choose **Open**.



**2.** You see a similar error screen; however, you can open ASDM from this screen. Click **Open**. The ASDM-IDM Launcher opens.



Conditions	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.		
Requires Strong Encryption license (3DES/AES) on ASA  Note Smart licensing models allow initial access with ASDM without the Strong Encryption license.			
<ul> <li>Self-signed certificate or an untrusted certificate</li> <li>IPv6</li> <li>Firefox and Safari</li> </ul>	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 <a href="https://bugzilla.mozilla.org/show_bug.cgi?id=633001">https://bugzilla.mozilla.org/show_bug.cgi?id=633001</a> . 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 falso start in Chrome.      Chrome			

## **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.
- 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:



**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 Secure Firewall 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 9.20(2)/ASDM 7.20(2)**

#### Released: December 13, 2023

Feature	Description	
Platform Features		
100GB network module support for the Secure Firewall 3100	You can now use the 100GB network module for the Secure Firewall 3100. This module is also supported for the Secure Firewall 4200.	
Increased connection limits for the Secure Firewall 4200	Connection limits have been increased:  • 4215: 15M → <b>40M</b> • 4225: 30M → <b>80M</b> • 4245: 60M → <b>80M</b>	
ASAv on OCI: Additional instances	ASA Virtual instances on OCI now supports additional shapes to achieve the highest performance and throughput level.	
High Availability and Scalability Features		

Feature	Description		
ASAv on Azure: Clustering with Gateway Load Balancing	We now support the ASA virtual clustering deployment on Azure using the Azure Resource Manager (ARM) template and then configure the ASAv clusters to use the Gateway Load Balancer (GWLB) for load balancing the network traffic.  New/Modified screens:		
ASAv on AWS: Resiliency for clustering with Gateway Load Balancing	You can configure the Target Failover option in the Target Groups service of AWS, which helps GWLB to forward existing flows to a healthy target in the event of virtual instance failover. In the ASAv clustering, each instance is associated with a Target Group, where the Target Failover option is enabled. It helps GWLB to identify an unhealthy target and redir or forward the network traffic to a healthy instance identified or registered as a target node the target group.		
Configurable delay to rejoin cluster after chassis heartbeat failure (Firepower 4100/9300)	By default, if the chassis heartbeat fails and then recovers, the node rejoins the cluster immediately. However, if you configure the <b>health-check chassis-heartbeat-delay-rejoin</b> command, it will rejoin according to the settings of the <b>health-check system auto-rejoin</b> command.		
	New/Modified screens: Configuration > Device Management > High Availability and Scalability > ASA Cluster > Auto Rejoin		
show failover statistics includes client statistics	The failover client packet statistics are now enhanced to improve debuggability. The <b>show failover statistics</b> command is enhanced to display <b>np-clients</b> (data-path clients) and <b>cp-clients</b> (control-plane clients) information.		
	Modified commands: show failover statistics cp-clients, show failover statistics np-clients		
	Also in 9.18(4).		
show failover statistics events includes new events	The <b>show failover statistics events</b> command is now enhanced to identify the local failures notified by the App agent: failover link uptime, supervisor heartbeat failures, and disk full issues.		
	Modified commands: show failover statistics events		
	Also in 9.18(4).		

# New Features in ASA 9.20(1)/ASDM 7.20(1)

Released: September 7, 2023



Note

This release is only supported on the Secure Firewall 4200.

Feature	Description
Platform Features	

Feature	Description
Secure Firewall 4200	We introduced the ASA for the Secure Firewall 4215, 4225, and 4245. The Secure Firewall 4200 supports up to 8 units for Spanned EtherChannel clustering. You can hot swap a network module of the same type while the firewall is powered up without having to reboot; making other module changes requires a reboot. Secure Firewall 4200 25 Gbps and higher interfaces support Forward Error Correction as well as speed detection based on the SFP installed. The SSDs are self-encrypting drives (SEDs), and if you have 2 SSDs, they form a software RAID. There are two Management interfaces.
Firewall Features	
ASDM support for the <b>sysopt</b> connection tcp-max-unprocessed-seg command	You can set the maximum number of TCP unprocessed segments, from 6 to 24. The default is 6. If you find that SIP phones are not connecting to the call manager, you can try increasing the maximum number of unprocessed TCP segments.
	New/Modified screens: Configuration > Firewall > Advanced > TCP Options.
ASP rule engine compilation offloaded to the data plane.	By default, ASP rule engine compilation is offloaded to the data plane (instead of the control plane) when any rule-based policy (for example, ACL, NAT, VPN) has more than 100 rule updates. The offload leaves more time for the control plane to perform other tasks.
	We added or modified the following commands: <b>asp rule-engine compile-offload</b> , <b>show asp rule-engine</b> .
High Availability and Scalability F	Features
Reduced false failovers for ASA high availability	We now introduced an additional heartbeat module in the data plane of the ASA high availability. This heartbeat module helps to avoid false failovers or split-brain scenarios that can happen due to traffic congestion in the control plain or CPU overload.
	Also in 9.18(4).
Configurable cluster keepalive interval for flow status	The flow owner sends keepalives (clu_keepalive messages) and updates (clu_update messages) to the director and backup owner to refresh the flow state. You can now set the keepalive interval. The default is 15 seconds, and you can set the interval between 15 and 55 seconds. You may want to set the interval to be longer to reduce the amount of traffic on the cluster control link.
	New/Modified screens: Configuration > Device Management > High Availability and Scalability > ASA Cluster > Cluster Configuration
<b>Routing Features</b>	
EIGRPv6	You can now configure EIGRP for IPv6 and manage them separately. You must explicitly enable IPv6 when configuring EIGRP on each interface.
	New/Modified screens: Configuration > Device Setup > Routing > EIGRPv6, Setup, Filter Rules, Interface, Passive Interface, Redistribution, Static Neighbor tabs.

Feature	Description		
Path monitoring through HTTP client	PBR can now use the performance metrics (RTT, jitter, packet-lost, and MOS) collected by path monitoring through HTTP client on the application domain rather than the metrics on a specific destination IP. HTTP-based application monitoring option is enabled by default for the interface. HTTP based path-monitoring can be configured on the interface using Network Service Group objects. You can configure a PBR policy with match ACL having the monitored applications and interface ordering for path determination.		
	New/Modified screens: Configuration > Device Setup > Interface Settings > Path Monitoring		
Interface Features			
VXLAN VTEP IPv6 support	You can now specify an IPv6 address for the VXLAN VTEP interface. IPv6 is not supported for the ASA virtual cluster control link or for Geneve encapsulation.		
	New/Modified screens:		
	• Configuration > Device Setup > Interface Settings > VXLAN		
	• Configuration > Device Setup > Interface Settings > Interfaces > Add > VNI Interface		
Loopback interface support for DNS,	You can now add a loopback interface and use it for:		
HTTP, ICMP, and IPsec Flow Offload	• DNS		
Official	• HTTP		
	• ICMP		
	• IPsec Flow Offload		
License Features			
IPv6 for Cloud services such as Smart Licensing and Smart Call Home	ASA now supports IPv6 for Cloud services such as Smart Licensing and Smart Call Home.		
Certificate Features			
IPv6 PKI for OCSP and CRL	ASA now supports both IPv4 and IPv6 OCSP and CRL URLs. When using IPv6 in the URLs, it must be enclosed with square brackets.		
	New/Modified screens: Configuration > Site-to-Site VPN > Certificate Management > CA Certificates > Add		
Administrative, Monitoring, and T	Troubleshooting Features		
Rate limiting for SNMP syslogs	If you do not set system-wide rate limiting, you can now configure rate limiting separately for syslogs sent to an SNMP server.		
	New/Modified commands: logging history rate-limit		

Description		
You can now configure to capture egress and ingress traffic packets for a switch. This option is applicable only for Secure Firewall 4200 model devices.		
New/Modified screens: Wizards > Packet Capture Wizard > Ingress Traffic Selector and Wizards > Packet Capture Wizard > Egress Traffic Selector		
Following are the enhancements for crypto debugging:		
Crypto archive is now available in two formats: text and binary format.		
Additional SSL counters.		
• Stuck encrypt rules can be removed from the ASP table without rebooting the device.		
ASA supports multiple key exchanges in IKEv2 to secure the IPsec communication from quantum computer attacks.		
In a DNS load balancing cluster, when SAML authentication is configured on ASAs, you can specify a local base URL that uniquely resolves to the device on which the configuration is applied.		
New/Modified screens: Configuration > Remote Access VPN > Network (Client) Access > Secure Client Connection Profiles > Add/Edit > Basic > SAML Identity Provider > Manage > Add/Edit		
ASDM has been verified to operate on Windows 11.		

# **Upgrade the Software**

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

## **Upgrade Link**

To complete your upgrade, see the ASA upgrade guide.

# **Upgrade Path: ASA Appliances**

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**.

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.

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



Note

ASA 9.18 was the final version for the Firepower 4110, 4120, 4140, 4150, and Security Modules SM-24, SM-36, and SM-44 for the Firepower 9300.

ASA 9.16 was the final version for the ASA 5506-X, 5508-X, and 5516-X.

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.

#### Table 2: Upgrade Path

Current Version	Interim Upgrade Version	Target Version
9.19	_	Any of the following:
		→ <b>9.20</b>
9.18	_	Any of the following:
		<b>→ 9.20</b>
		→ <b>9.19</b>
9.17	_	Any of the following:
		<b>→ 9.20</b>
		<b>→ 9.19</b>
		→ <b>9.18</b>
9.16	_	Any of the following:
		<b>→ 9.20</b>
		<b>→ 9.19</b>
		<b>→ 9.18</b>
		→ 9.17

9.15  Any of the following:  - 9.20 - 9.19 - 9.18 - 9.17 - 9.16  9.14  Any of the following:  - 9.20 - 9.19 - 9.18 - 9.17 - 9.16 - 9.15 - 9.18 - 9.17 - 9.16 - 9.19 - 9.18 - 9.17 - 9.16 - 9.15 - 9.14  9.12  Any of the following:  - 9.20 - 9.19 - 9.18 - 9.17 - 9.16 - 9.15 - 9.14  9.12  Any of the following: - 9.20 - 9.19 - 9.18 - 9.17 - 9.16 - 9.19 - 9.18 - 9.17 - 9.16 - 9.19 - 9.18 - 9.17 - 9.16 - 9.15 - 9.14	Current Version	Interim Upgrade Version	Target Version
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	9.15	_	Any of the following:
9.18  → 9.17  → 9.16  9.14  — Any of the following:  → 9.20  → 9.19  → 9.18  → 9.17  → 9.16  → 9.15  9.13  — Any of the following:  → 9.20  → 9.19  → 9.18  → 9.17  → 9.16  → 9.19  → 9.18  → 9.17  → 9.16  → 9.15  9.11  9.12  — Any of the following:  → 9.20  → 9.19  → 9.18  → 9.17  → 9.16  → 9.19  → 9.19  → 9.19  → 9.19  → 9.19  → 9.19  → 9.11  → 9.16  → 9.17  → 9.16  → 9.17  → 9.16  → 9.17  → 9.16  → 9.15			<b>→ 9.20</b>
9.14			→ <b>9.19</b>
9.14  - 9.16  9.14  - Any of the following: - 9.20 - 9.19 - 9.18 - 9.17 - 9.16 - 9.15  9.13  - Any of the following: - 9.20 - 9.19 - 9.18 - 9.17 - 9.16 - 9.15 - 9.15 - 9.11  9.12  - Any of the following: - 9.20 - 9.19 - 9.18 - 9.17 - 9.16 - 9.19 - 9.18 - 9.17 - 9.16 - 9.19 - 9.18 - 9.17 - 9.16 - 9.15			<b>→ 9.18</b>
9.14 — Any of the following:  - 9.20  - 9.19  - 9.18  - 9.17  - 9.16  - 9.15  9.13 — Any of the following:  - 9.20  - 9.19  - 9.19  - 9.18  - 9.17  - 9.16  - 9.15  - 9.14  9.12 — Any of the following:  - 9.20  - 9.19  - 9.14  9.12 — Any of the following:  - 9.20  - 9.19  - 9.18  - 9.17  - 9.16  - 9.17  - 9.16  - 9.15			→ 9.17
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9.18			<b>→ 9.20</b>
9.17 $-9.16$ $-9.15$ 9.13  Any of the following: $-9.20$ $-9.19$ $-9.18$ $-9.17$ $-9.16$ $-9.15$ $-9.14$ 9.12  Any of the following: $-9.20$ $-9.19$ $-9.19$ $-9.18$ $-9.17$ $-9.16$ $-9.15$			<b>→ 9.19</b>
9.13  Any of the following:  9.20  9.19  9.18  9.17  9.16  9.15  9.11  9.12  Any of the following:  9.12  Any of the following:  9.12  9.12  9.12			<b>→ 9.18</b>
9.13  Any of the following: $9.20$ $9.19$ $9.18$ $9.17$ $9.16$ $9.15$ Any of the following: $9.17$ $9.18$ $9.19$ $9.19$ $9.19$ $9.19$ $9.19$ $9.19$ $9.19$ $9.19$ $9.19$ $9.19$ $9.16$ $9.17$ $9.16$ $9.15$			→ 9.17
9.13  Any of the following:			<b>→ 9.16</b>
9.20  → 9.19  → 9.18  → 9.17  → 9.16  → 9.15  → 9.14  9.12  Any of the following:  → 9.20  → 9.19  → 9.18  → 9.17  → 9.16  → 9.17  → 9.16  → 9.15			→ 9.15
9.19  → 9.18  → 9.17  → 9.16  → 9.15  → 9.14    Any of the following:  → 9.20  → 9.19  → 9.18  → 9.17  → 9.16  → 9.15	9.13	_	Any of the following:
9.18 $ \rightarrow 9.17 $ $ \rightarrow 9.16$ $ \rightarrow 9.15 $ $ \rightarrow 9.14 $ 9.12  Any of the following: $ \rightarrow 9.20$ $ \rightarrow 9.19$ $ \rightarrow 9.18$ $ \rightarrow 9.17$ $ \rightarrow 9.16$ $ \rightarrow 9.15$			<b>→ 9.20</b>
9.17 $ \rightarrow 9.16 $ $ \rightarrow 9.15 $ $ \rightarrow 9.14 $ 9.12  Any of the following: $ \rightarrow 9.20 $ $ \rightarrow 9.19 $ $ \rightarrow 9.18 $ $ \rightarrow 9.17 $ $ \rightarrow 9.16 $ $ \rightarrow 9.15$			<b>→ 9.19</b>
9.16 $ \rightarrow 9.16 $ $ \rightarrow 9.15 $ $ \rightarrow 9.14 $ 9.12  Any of the following: $ \rightarrow 9.20 $ $ \rightarrow 9.19 $ $ \rightarrow 9.18 $ $ \rightarrow 9.17 $ $ \rightarrow 9.16 $ $ \rightarrow 9.15$			<b>→ 9.18</b>
9.12  Any of the following:			→ 9.17
9.12  Any of the following:			<b>→ 9.16</b>
9.12  Any of the following:			→ 9.15
$ \begin{array}{c} \rightarrow 9.20 \\ \rightarrow 9.19 \\ \rightarrow 9.18 \\ \rightarrow 9.17 \\ \rightarrow 9.16 \\ \rightarrow 9.15 \end{array} $			→ 9.14
$ \begin{array}{c} \rightarrow 9.19 \\ \rightarrow 9.18 \\ \rightarrow 9.17 \\ \rightarrow 9.16 \\ \rightarrow 9.15 \end{array} $	9.12	_	Any of the following:
$ \begin{array}{c} \rightarrow 9.18 \\ \rightarrow 9.17 \\ \rightarrow 9.16 \\ \rightarrow 9.15 \end{array} $			<b>→ 9.20</b>
$ \begin{array}{c} \rightarrow 9.17 \\ \rightarrow 9.16 \\ \rightarrow 9.15 \end{array} $			→ <b>9.19</b>
→ <b>9.16</b> → 9.15			<b>→ 9.18</b>
→ 9.15			→ 9.17
			<b>→ 9.16</b>
$\rightarrow 9.14$			→ 9.15
			→ 9.14

Current Version	Interim Upgrade Version	Target Version
9.10	_	Any of the following:
		→ <b>9.20</b>
		→ <b>9.19</b>
		<b>→ 9.18</b>
		→ 9.17
		→ <b>9.16</b>
		→ 9.15
		→ 9.14
		→ 9.12
9.9	_	Any of the following:
		<b>→ 9.20</b>
		→ <b>9.19</b>
		<b>→ 9.18</b>
		→ 9.17
		<b>→ 9.16</b>
		→ 9.15
		→ 9.14
		→ 9.12
9.8	_	Any of the following:
		<b>→ 9.20</b>
		→ <b>9.19</b>
		<b>→ 9.18</b>
		→ 9.17
		<b>→ 9.16</b>
		→ 9.15
		→ 9.14
		→ 9.12

Current Version	Interim Upgrade Version	Target Version
9.7	_	Any of the following:
		<b>→ 9.20</b>
		<b>→ 9.19</b>
		<b>→ 9.18</b>
		→ 9.17
		<b>→ 9.16</b>
		→ 9.15
		→ 9.14
		→ 9.12
		→ 9.8
9.6	_	Any of the following:
		<b>→ 9.20</b>
		<b>→ 9.19</b>
		<b>→ 9.18</b>
		→ 9.17
		<b>→ 9.16</b>
		→ 9.15
		→ 9.14
		→ 9.12
		→ 9.8
9.5	_	Any of the following:
		<b>→ 9.20</b>
		<b>→ 9.19</b>
		<b>→ 9.18</b>
		→ 9.17
		<b>→ 9.16</b>
		→ 9.15
		→ 9.14
		→ 9.12
		→ 9.8

<b>Current Version</b>	Interim Upgrade Version	Target Version
9.4	_	Any of the following:
		<b>→ 9.20</b>
		<b>→ 9.19</b>
		<b>→ 9.18</b>
		→ 9.17
		<b>→ 9.16</b>
		→ 9.15
		→ 9.14
		→ 9.12
		→ 9.8
9.3	_	Any of the following:
		<b>→ 9.20</b>
		<b>→ 9.19</b>
		<b>→ 9.18</b>
		→ 9.17
		<b>→ 9.16</b>
		→ 9.15
		→ 9.14
		→ 9.12
		→ 9.8
9.2	_	Any of the following:
		<b>→ 9.20</b>
		<b>→ 9.19</b>
		<b>→ 9.18</b>
		→ 9.17
		<b>→ 9.16</b>
		→ 9.15
		→ 9.14
		→ 9.12
		$\rightarrow$ 9.8

Current Version	Interim Upgrade Version	Target Version
9.1(2), 9.1(3), 9.1(4), 9.1(5), 9.1(6),	_	Any of the following:
or 9.1(7.4)		→ 9.14
		<b>→ 9.12</b>
		→ 9.8
		→ 9.1(7.4)
9.1(1)	→ 9.1(2)	Any of the following:
		→ 9.14
		<b>→ 9.12</b>
		→ 9.8
		→ 9.1(7.4)
9.0(2), 9.0(3), or 9.0(4)	_	Any of the following:
		→ 9.14
		<b>→ 9.12</b>
		→ 9.8
		→ 9.6
		→ 9.1(7.4)
9.0(1)	→ 9.0(4)	Any of the following:
		→ 9.14
		<b>→ 9.12</b>
		→ 9.8
		→ 9.1(7.4)
8.6(1)	→ 9.0(4)	Any of the following:
		→ 9.14
		<b>→ 9.12</b>
		→ 9.8
		$\rightarrow 9.1(7.4)$
8.5(1)	→ 9.0(4)	Any of the following:
		→ <b>9.12</b>
		→ 9.8
		→ 9.1(7.4)

Current Version	Interim Upgrade Version	Target Version
8.4(5+)	_	Any of the following:
		<b>→ 9.12</b>
		→ 9.8
		→ 9.1(7.4)
		→ 9.0(4)
8.4(1) through 8.4(4)	→ 9.0(4)	→ <b>9.12</b>
		→ 9.8
		→ 9.1(7.4)
8.3	→ 9.0(4)	Any of the following:
		<b>→ 9.12</b>
		→ 9.8
		→ 9.1(7.4)
8.2 and earlier	→ 9.0(4)	Any of the following:
		<b>→ 9.12</b>
		→ 9.8
		→ 9.1(7.4)

## **Upgrade Path: ASA on Firepower 2100 in Platform Mode**

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 the ASA on the Firepower 2100 in Platform mode. Some versions require an intermediate upgrade before you can upgrade to a newer version. Recommended versions are in **bold**.

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.

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

Table 3: Upgrade Path

Current Version	Interim Upgrade Version	Target Version
9.19	_	Any of the following:
		<b>→ 9.20</b>
9.18	_	Any of the following:
		<b>→ 9.20</b>
		→ <b>9.19</b>
9.17	_	Any of the following:
		<b>→ 9.20</b>
		<b>→ 9.19</b>
		<b>→ 9.18</b>
9.16	_	Any of the following:
		<b>→ 9.20</b>
		→ <b>9.19</b>
		<b>→ 9.18</b>
		→ 9.17
9.15	_	Any of the following:
		<b>→ 9.20</b>
		→ <b>9.19</b>
		<b>→ 9.18</b>
		→ 9.17
		<b>→ 9.16</b>
9.14	_	Any of the following:
		<b>→ 9.20</b>
		→ <b>9.19</b>
		→ <b>9.18</b>
		→ 9.17
		→ <b>9.16</b>
		→ 9.15

Current Version	Interim Upgrade Version	Target Version
9.13	→ 9.18	Any of the following:
		<b>→ 9.20</b>
		→ <b>9.19</b>
9.13	_	Any of the following:
		<b>→ 9.18</b>
		→ 9.17
		<b>→ 9.16</b>
		→ 9.15
		→ 9.14
9.12	→ 9.18	Any of the following:
		<b>→ 9.20</b>
		→ <b>9.19</b>
9.12	_	Any of the following:
		<b>→ 9.18</b>
		→ 9.17
		<b>→ 9.16</b>
		→ 9.15
		→ 9.14
9.10	→ 9.17	Any of the following:
		<b>→ 9.20</b>
		<b>→ 9.19</b>
		<b>→ 9.18</b>
9.10	_	Any of the following:
		→ 9.17
		→ <b>9.16</b>
		→ 9.15
		→ 9.14
		→ 9.12

Current Version	Interim Upgrade Version	Target Version
9.9	→ 9.17	Any of the following:
		<b>→ 9.20</b>
		<b>→ 9.19</b>
		→ <b>9.18</b>
9.9	_	Any of the following:
		→ 9.17
		<b>→ 9.16</b>
		→ 9.15
		→ 9.14
		→ 9.12
9.8	→ 9.17	Any of the following:
		<b>→ 9.20</b>
		<b>→ 9.19</b>
		<b>→ 9.18</b>
9.8	_	Any of the following:
		→ 9.17
		<b>→ 9.16</b>
		→ 9.15
		→ 9.14
		→ 9.12

## **Upgrade Path: ASA Logical Devices for the Firepower 4100/9300**

For upgrading, see the following guidelines:

- FXOS—For 2.2.2 and later, you can upgrade directly to a higher version. When upgrading from versions earlier than 2.2.2, you need to upgrade to each intermediate version. Note that you cannot upgrade FXOS to a version that does not support your current logical device version. You will need to upgrade in steps: upgrade FXOS to the highest version that supports your current logical device; then upgrade your logical device to the highest version supported with that FXOS version. For example, if you want to upgrade from FXOS 2.2/ASA 9.8 to FXOS 2.13/ASA 9.19, you would have to perform the following upgrades:
  - 1. FXOS  $2.2 \rightarrow$  FXOS 2.11 (the highest version that supports 9.8)
  - 2. ASA  $9.8 \rightarrow ASA 9.17$  (the highest version supported by 2.11)
  - **3.** FXOS 2.11→FXOS 2.13

#### **4.** ASA 9.17→ASA 9.19

• ASA—ASA lets you upgrade directly from your current version to any higher version, noting the FXOS requirements above.

Table 4: ASA or Threat Defense, and Firepower 4100/9300 Compatibility

FXOS Version	Model	ASA Version	Threat Defense Version
2.14(1)	Firepower 4112	9.20 (recommended)	<b>7.4</b> (recommended)
		9.19	7.3
		9.18	7.2
		9.17	7.1
		9.16	7.0
		9.15	6.7
		9.14	6.6
	Firepower 4145	9.20 (recommended)	7.4 (recommended)
	Firepower 4125	9.19	7.3
	Firepower 4115	9.18	7.2
	Firepower 9300 SM-56	9.17	7.1
	Firepower 9300 SM-48	9.16	7.0
	Firepower 9300 SM-40	9.15	6.7
		9.14	6.6
2.13	Firepower 4112	9.19 (recommended)	7.3 (recommended)
		9.18	7.2
		9.17	7.1
		9.16	7.0
		9.15	6.7
		9.14	6.6
	Firepower 4145	9.19 (recommended)	7.3 (recommended)
	Firepower 4125	9.18	7.2
	Firepower 4115	9.17	7.1
	Firepower 9300 SM-56	9.16	7.0
	Firepower 9300 SM-48	9.15	6.7
	Firepower 9300 SM-40	9.14	6.6

FXOS Version	Model	ASA Version	Threat Defense Version
2.12	Firepower 4112	9.18 (recommended)	7.2 (recommended)
		9.17	7.1
		9.16	7.0
		9.15	6.7
		9.14	6.6
	Firepower 4145	9.18 (recommended)	7.2 (recommended)
	Firepower 4125	9.17	7.1
	Firepower 4115	9.16	7.0
	Firepower 9300 SM-56	9.15	6.7
	Firepower 9300 SM-48	9.14	6.6
	Firepower 9300 SM-40	9.12	6.4
	Firepower 4150	9.18 (recommended)	7.2 (recommended)
	Firepower 4140	9.17	7.1
	Firepower 4120	9.16	7.0
	Firepower 4110	9.15	6.7
	Firepower 9300 SM-44	9.14	6.6
	Firepower 9300 SM-36	9.12	6.4
	Firepower 9300 SM-24		

FXOS Version	Model	ASA Version	Threat Defense Version
2.11	Firepower 4112	9.17 (recommended)	<b>7.1</b> (recommended)
		9.16	7.0
		9.15	6.7
		9.14	6.6
	Firepower 4145	9.17 (recommended)	<b>7.1</b> (recommended)
	Firepower 4125	9.16	7.0
	Firepower 4115	9.15	6.7
	Firepower 9300 SM-56	9.14	6.6
	Firepower 9300 SM-48	9.12	6.4
	Firepower 9300 SM-40		
	Firepower 4150	9.17 (recommended)	<b>7.1</b> (recommended)
	Firepower 4140	9.16	7.0
	Firepower 4120	9.15	6.7
	Firepower 4110	9.14	6.6
	Firepower 9300 SM-44	9.12	6.4
	Firepower 9300 SM-36	9.8	
	Firepower 9300 SM-24		

FX0S	Version	Model	ASA Version	Threat Defense Version
2.10		Firepower 4112	9.16 (recommended)	7.0 (recommended)
Note	For compatibility with 7.0.2+ and 9.16(3.11)+, you need FXOS		9.15	6.7
			9.14	6.6
	2.10(1.179)+.	Firepower 4145	9.16 (recommended)	7.0 (recommended)
		Firepower 4125	9.15	6.7
		Firepower 4115	9.14	6.6
		Firepower 9300 SM-56	9.12	6.4
		Firepower 9300 SM-48		
		Firepower 9300 SM-40		
		Firepower 4150	9.16 (recommended)	7.0 (recommended)
		Firepower 4140	9.15	6.7
		Firepower 4120	9.14	6.6
		Firepower 4110	9.12	6.4
		Firepower 9300 SM-44	9.8	
		Firepower 9300 SM-36		
		Firepower 9300 SM-24		
2.9		Firepower 4112	9.15 (recommended)	<b>6.7</b> (recommended)
			9.14	6.6
		Firepower 4145	9.15 (recommended)	<b>6.7</b> (recommended)
		Firepower 4125	9.14	6.6
		Firepower 4115	9.12	6.4
		Firepower 9300 SM-56		
		Firepower 9300 SM-48		
		Firepower 9300 SM-40		
		Firepower 4150	9.15 (recommended)	<b>6.7</b> (recommended)
		Firepower 4140	9.14	6.6
		Firepower 4120	9.12	6.4
		Firepower 4110	9.8	
		Firepower 9300 SM-44		
		Firepower 9300 SM-36		
		Firepower 9300 SM-24		

FX0S	Version	Model	ASA Version	Threat Defense Version
2.8		Firepower 4112	9.14	6.6  Note 6.6.1+ requires FXOS 2.8(1.125)+.
		Firepower 4145 Firepower 4125	<b>9.14</b> (recommended) 9.12	<b>6.6</b> (recommended) <b>Note</b> 6.6.1+ requires FXOS
		Firepower 4115	Note Firepower 9300 SM-56 requires ASA 9.12(2)+	2.8(1.125)+.
		Firepower 9300 SM-56 Firepower 9300 SM-48 Firepower 9300 SM-40	requires ASA 9.12(2)+	6.4
		Firepower 4150	9.14 (recommended)	6.6 (recommended)
		Firepower 4140 Firepower 4120	9.12 9.8	Note 6.6.1+ requires FXOS 2.8(1.125)+.
Firepower 4110		6.4		
		Firepower 9300 SM-44 Firepower 9300 SM-36 Firepower 9300 SM-24		0.2.5
2.6(1.	157)	Firepower 4145	9.12	6.4
Note You can no 9.12+ and 1 separate me	You can now run ASA 9.12+ and FTD 6.4+ on separate modules in the same Firepower 9300 chassis	Firepower 4125 Firepower 4115 Firepower 9300 SM-56 Firepower 9300 SM-48	Note Firepower 9300 SM-56 requires ASA 9.12.2+	
		Firepower 9300 SM-40		
		Firepower 4150 Firepower 4140 Firepower 4120 Firepower 4110 Firepower 9300 SM-44 Firepower 9300 SM-36 Firepower 9300 SM-24	9.12 (recommended) 9.8	<b>6.4</b> (recommended) 6.2.3

FXOS Version	Model	ASA Version	Threat Defense Version
2.6(1.131)	Firepower 9300 SM-48	9.12 Not supported	Not supported
	Firepower 9300 SM-40		
	Firepower 4150	9.12 (recommended)	
	Firepower 4140	9.8	
	Firepower 4120		
	Firepower 4110		
	Firepower 9300 SM-44		
	Firepower 9300 SM-36		
	Firepower 9300 SM-24		
2.3(1.73)	Firepower 4150	9.8	<b>6.2.3</b> (recommended)
	Firepower 4140	<b>Note</b> 9.8(2.12)+ is requ	
	Firepower 4120	for flow offload when running FXOS 2.3(1.130)+.	when FXOS 2.3.1.157+
	Firepower 4110		
	Firepower 9300 SM-44		
	Firepower 9300 SM-36		
	Firepower 9300 SM-24		
2.3(1.66)	Firepower 4150	9.8	
2.3(1.58)	Firepower 4140	Note 9.8(2.12)+ is required for flow offload when running FXOS 2.3(1.130)+.	
	Firepower 4120		when
	Firepower 4110		
	Firepower 9300 SM-44		
	Firepower 9300 SM-36		
	Firepower 9300 SM-24		
2.2	Firepower 4150	9.8	Threat Defense versions are EoL
	Firepower 4140		
	Firepower 4120		
	Firepower 4110		
	Firepower 9300 SM-44		
	Firepower 9300 SM-36		
	Firepower 9300 SM-24		

### **Note on Downgrades**

Downgrade of FXOS images is not officially supported. The only Cisco-supported method of downgrading an image version of FXOS is to perform a complete re-image of the device.

# **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 7.20(2)

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

Identifier	Headline
CSCwh18177	ASDM backup restore replaces custom policy-map with default class inspect options
CSCwh50291	Checkbox of Enable autogeneration of MAC addresses not working properly
CSCwi11925	Unable to use 'any' keyword as an object when editing object-group through ASDM

#### Open Bugs in Version 7.20(1)

There are no open bugs in this release.

## **Resolved Bugs**

This section lists resolved bugs per release.

#### **Resolved Bugs in Version 7.20(2)**

There are no resolved bugs in this release.

#### Resolved Bugs in Version 7.20(1)

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

Identifier	Headline	
CSCwc48458	Anyconnect authenticated user not showing in GET results for /api/monitoring/authusers	
CSCwd23375	ASDM - SSL cert verification vulnerability	
CSCwe00348	Unable to update hostscan file from ASDM ,Unable to edit the DAP if we install hostscan image	
CSCwe34665	Unable to Edit the ACL objects if it is already in use, getting the exception.	
CSCwf11170	Post Quantum key validation needs to be handled properly.	
CSCwf71723	ASDM losing configured objects/object groups	

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# **Related Documentation**

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

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