Troubleshoot ASDM Launch Problems

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References

Introduction

This document describes the troubleshooting process for Adaptive Security Appliance Device Manager

Background

The document is part of the ASDM troubleshoot series along with these documents:

- <u>Troubleshoot ASDM Configuration, Authentication and Other Problems</u>
- <u>Troubleshoot ASDM License, Upgrade and Compatibility Problems</u>
- <u>Troubleshoot ASDM TLS Security, Certificate and Vulnerability Problems</u>

Troubleshoot ASDM Launch Problems

Problem 1. "Unable to launch device manager from" message is shown on ASDM

One or more of these symptoms are observed when attempting to connected to the firewall using ASDM:

• The error "Unable to launch device manager from" message is shown on ASDM:

💿 Cisco AS	DM-IE	OM Launcher v1.9(9)	-		×
🛃 Cis	sco /	ASDM-IDM Launcher		ul ci	sco
Contacting the	Error			×	
Device IP Ad Username: Password:	\bigotimes	Unable to launch device manager from 10.6 OK	52.184.1	41	<u> </u>
		Remember the username of the specified	d device	on this co	mputer
		OK Close			
					ے 🕹

• The Java debug logs show one of the these exceptions:

<#root>

 $\verb"java.net.ConnectException: Connection timed out: connect"$

```
at java.net.DualStackPlainSocketImpl.waitForConnect(Native Method)
```

java.net.ConnectException: Connection refused: connect

at java.net.DualStackPlainSocketImpl.waitForConnect(Native Method)

```
Trying for ASDM Version file; url = https://192.0.2.1/admin/
```

```
java.io.FileNotFoundException: https://192.0.2.1/admin/version.prop
```

java.net.SocketException: Connection reset

```
at java.net.SocketInputStream.read(Unknown Source)
at java.net.SocketInputStream.read(Unknown Source)
at sun.security.ssl.SSLSocketInputRecord.read(Unknown Source)
```

To verify this symptom, enable Java console logs:

Cisco ASDM-IDM L	-		×	
🖳 Cisco ASE		ןיי כו	sco	
Device IP Address / Name:	192.0.2.1			*
Username: Password:				
	Remember the username of the spec	ified device	e on this co	mputer
	OK Close			
				۵ 🎕

Troubleshoot – Recommended Actions

- 1. Ensure that the ASA, ASDM and operating system versions are compatible. Refer to the <u>Cisco</u> <u>Secure Firewall ASA Release Notes</u>, <u>Cisco Secure Firewall ASDM Release Notes</u>, <u>Cisco Secure Firewall ASA Compatibility</u>.
- 2. On the ASDM-hosted operating system (OS), ensure that the OS firewall and other security software allow packets of ASDM connections in both (ingress and egress) directions.
- 3. On the ASDM-hosted operating system (OS), ensure that the security software (for example,

antivirus) and security policies, allow running the ASDM and Java software.

4. Ensure HTTP server is enabled, and correct hosts/interfaces are configured:

<#root>

#

show run http

http server enable

http 192.0.2.0 255.255.255.0 management

The **http server enable** command can disappear from the running configuration due to Cisco bug ID <u>CSCwc67687</u> "ASA HA failover triggers HTTP server restart failure and ASDM outage".



Note: This defect has been fixed in recent ASDM software releases. Check the defect details for more information.

5. Ensure the ASDM image is available on the local flash and configured:

<#root>

#

dir flash:

Directory of disk0:/ 150 drwx 4096 05:55:01 Nov 14 2024 log 1074037795 -rw- 123665740 23:30:37 Oct 17 2024 asdm.bin

#

show run asdm

asdm image disk0:/asdm.bin

no asdm history enable

6. Ensure that the 3DES/AES licenses are available, if you are connecting to the ASA via the data interface:

<#root>

#
show ver | grep Encryption
Encryption hardware device : Cisco ASA Crypto on-board accelerator (revision 0x1)
Encryption-DES : Enabled
Encryption-3DES-AES : Enabled

7. If WebVPN is enabled on the same interface, ensure different ports are configured for WebVPN and ASDM. Either change the WebVPN port or change the HTTPS server port. In this example, both WebVPN and ASDM access are configured. The WebVPN service is running on the default HTTPS port 443, and the HTTPS port for ASDM is configured as 8443:

<#root>

#

webvpn

enable outside <-- default HTTPS port 443

```
#
```

show run http

http server enable 8443 <-- custom HTTPS port 8443

http 192.0.2.0 255.255.255.0 outside

8. Ensure that connections from the host with ASDM and the firewall is allowed by intermediary devices in the network.

Potential problems:

- Incorrect routing
- Incorrect NAT/port forwarding
- Traffic is blocked in the transit path

From the firewall perspective, to confirm connectivity you can configure packet captures on specific interfaces:

<#root>

#

```
show run http
```

http server enable

```
http 192.0.2.0 255.255.255.0 management
```

cap capm interface management match tcp any any eq https

show capture capm

138 packets captured

1:	14:20:44.355526	192.0.2.35.50590 > 198.51.100.141.443: s 3649403547:3649403547(0) win 64240
2:	14:20:44.356152	198.51.100.141.443 > 192.0.2.35.50590: S 0:0(0) ack 3649403548 win 32768 <ms< td=""></ms<>
3:	14:20:44.357388	192.0.2.35.50590 > 198.51.100.141.443: . ack 1 win 64240
4: 5: 6:	14:20:44.384715 14:20:44.384806 14:20:44.385829	192.0.2.35.50590 > 198.51.100.141.443: P 3649403548:3649403918(370) ack 1 w 198.51.100.141.443 > 192.0.2.35.50590: . ack 3649403918 win 32398 198.51.100.141.443 > 192.0.2.35.50590: P 1:760(759) ack 3649403918 win 3276

9. Ensure the ASDM current resource usage does not exceed the limit:



Use the **show conn all protocol tcp port** <**port**> command to check the list of active ASDM connections. Ensure to provide the correct port that the HTTP server servers on (**show run http**).

```
<#root>
#
show
conn all protocol tcp port 443
2 in use, 8 most used
TCP management 192.0.2.35:50620 NP Identity Ifc 198.51.100.141:443, idle 0:00:08, bytes 119188, flags
```

Alternatively, the show asp table socket command can used for the verification of active ASDM

connections. Ensure to check only the connections with the port that the HTTP server is running on (**show run http**).

<#root>									
#									
show asp ta	able socket	t							
Protocol SSL	Socket 0027eb28	State LISTEN	Local Address 198.51.100.141:443	Foreign Address 0.0.0.0:*					
SSL	00305798	ESTAB							
198.51.100	.141								
:443									
192.0.2.35									
:50620									

The **clear conn all protocol tcp port <port>** command can be used to clear connections.

10. If the **management-access** <**interface**> command is configured and ASDM connects to the <**interface**> IP via a Virtual Private Network connection (VPN), remove and re-add the

management-access <**interface**>. This is the workaround for the Cisco bug ID <u>CSCvu60373</u> "ASA - Management-access does not work over Tunnel Interface".



"ASA: ASDM sessions stuck in CLOSE_WAIT causing lack of MGMT". Due to this defect, the

ASDM session can terminate with the "Lost connection to firewall" message and further connection to the firewall be unsuccessful. The workaround is to reload the firewall.



"ASDM management-sessions quota reached due to HTTP sessions stuck in CLOSE_WAIT". Due to this defect, the ASDM management-sessions quota reaches due to HTTP sessions stuck in the CLOSE_WAIT state. The workaround steps:

• Check the current and limit resource usage for ASDM:

<#root>				
#				
show resource usage reso	urce ASDM			
Resource ASDM	Current	Peak	Limit	Denied Context
1				
1				
5				
0 admin				

• If the current value is the same as the limit, check the state of the HTTPS sessions:

<#root>

debug menu npshim -w

Handle State Intf ... 720108b6 CLOSE_WAIT 57835276 CLOSE_WAIT 58068272 CLOSE_WAIT 6ae93b92 CLOSE_WAIT

- If there are multiple entries in the CLOSE_WAIT state, use **debug menu pdm 3** command to clear all these sessions.
- 13. Check the symptoms of block depletion in the output of the **show blocks** command, specifically the lowest values in the LOW and CNT columns:
- 256- and 1550-byte block sizes have been exhausted and recovered:

```
<#root>
#
show blocks
  SIZE
          MAX
LOW
    CNT
         5700
     0
                 5608
                         5700
     4
          900
                  899
                         899
    80
         5000
                 4575
                         5000
   256 13568
0
  13563
  1550 50000
0
  49974
   • 256- and 1550-byte block sizes have been exhausted and not recovered:
<#root>
#
```

```
show blocks
```

SIZE MAX

LOW

```
0 5700 5608

4 900 899

80 5000 4575

256 13568

0

1550 50000

0

0
```

5700

899

5000

Refer to the Cisco bug ID <u>CSCvv71435</u> "ASA 256 and/or 1550 block depletion causes DMA Memory unreleased allocation".

The workaround options:

1. Rate limit syslog messages being created at a high rate. Most common messages IDs that would create a high rate of messages are the messages for connection creation and teardown, such as:

<#root>

```
%ASA-6-302013: Built {inbound|outbound} TCP connection_id for interface:real-address/real-port (mapped-a
```

%ASA-6-302014: Teardown TCP connection id for interface :real-address /real-port [(idfw_user)] to inte

In this case, a possible rate limit configuration would look like:

<#root>

logging rate-limit 1 10000 message 302013

logging rate-limit 1 10000 message 302014

Other potential messages are: 302015 / 302016 / 302017 / 302018 / 302020 / 302036 / 302303 / 302304 / 302305 / 302306. Reference: logging rate-limit command reference.

2. Disable the log messages being created at a high rate:

CNT

<#root>

no logging message 302013

no logging message 302014

- 3. Reactive option is to reload the device to release the allocated DMA memory. Consider using one of the preventive measures to avoid this issue recurrence.
- 14. Check if logs like these lines are shown in the ASA console. In this case, ASDM or SSH connections fail to establish:

ERROR: FAIL to ALLOC the stack page 0xfffffffffffffffffffffsize 36864] to 0x00007fa3b0c29000 errno (mmap:um First MMAP Req/Updated 36864/45056 Front 0x00007fa3b0c28000 rtn 0x00007fa3b0c29000 back 0x00007fa3b0c32 Message #11 : process_create: out of stack memory for name accept/ssh_2 size 32768 prio 3 Message #12 : _listen_ssh: failed to create thread for interface 2 port 22

Refer to the Cisco bug ID <u>CSCwc23844</u> "ASAv high CPU and stack memory allocation errors despite over 30% free memory". The temporary workaround is to reboot the firewall.



Note: This defect has been fixed in recent ASDM software releases. Check the defect details for more information.

References

- <u>Cisco Secure Firewall ASA Release Notes</u>
- <u>Cisco Secure Firewall ASDM Release Notes</u>
- <u>Cisco Secure Firewall ASA Compatibility</u>
- logging rate-limit command reference

Problem 2. ASDM user interface is inaccessible via the Java Web Launch-Starting

To verify the symptoms, enable Java console logs:

Cisco ASDM-IDM L	auncher v1.9(9)	—		×
🐴 Cisco ASE		1. CI	iniļi. Isco	
Device IP Address / Name:	192.0.2.1			_
Username:				
Password:	Remember the username of the spec	ified device	e on this co	omputer
	OK Close			
			1	۵ 🎃

The Java console logs show messages like these lines:

<#root>

```
NLPException[category: Download Error : Exception: java.io.FileNotFoundException: https://192.0.2.1/adm
at com.sun.javaws.Main.launchApp(Unknown Source)
at com.sun.javaws.Main.continueInSecureThread(Unknown Source)
at com.sun.javaws.Main.access$000(Unknown Source)
at com.sun.javaws.Main$1.run(Unknown Source)
at java.lang.Thread.run(Unknown Source)
Caused by: java.io.FileNotFoundException: https://10.75.32.2/admin/public/asdm.jnlp
at sun.net.www.protocol.http.HttpURLConnection.getInputStream0(Unknown Source)
at sun.net.www.protocol.http.HttpURLConnection$9.run(Unknown Source)
at sun.net.www.protocol.http.HttpURLConnection$9.run(Unknown Source)
at java.security.AccessController.doPrivileged(Native Method)
at java.security.AccessController.doPrivilegedWithCombiner(Unknown Source)
at sun.net.www.protocol.http.HttpURLConnection.getInputStream(Unknown Source)
at java.security.AccessController.doPrivilegedWithCombiner(Unknown Source)
at sun.net.www.protocol.http.HttpURLConnection.getInputStream(Unknown Source)
at java.security.AccessController.doPrivilegedWithCombiner(Unknown Source)
at sun.net.www.protocol.http.HttpURLConnection.getInputStream(Unknown Source)
```

Troubleshoot – Recommended Actions

ASDM 7.18 ending support for Java Web Launch-Starting with ASDM 7.18, ASDM no longer supports Java Web Start due to Oracle's end of support for JRE 8 and Java Network Launching Protocol (JNLP). You must install the ASDM Launcher to launch ASDM. Refer to the <u>Release Notes for Cisco Secure Firewall</u> <u>ASDM, 7.18(x)</u>.

• <u>Release Notes for Cisco Secure Firewall ASDM, 7.18(x)</u>

Problem 3. ASDM gets stuck in 'Please wait while ASDM is loading the current configuration from your device'

The error shown on ASDM UI is:

•		Status
,	₽	Please wait while ASDM is loading the current configuration from your device.
		0%

Troubleshoot – Recommended Actions



This is a known defect tracked by Cisco bug ID <u>CSCvv14818</u> Misleading popup: Please wait while ASDM is loading the current configuration from your device.



Note: This defect has been fixed in recent ASDM software releases. Check the defect details for more information.

Problem 4. ASDM launch error: JAR resources in JNLP file are not signed by the same certificate

The error shown on ASDM UI is: 'Unable to launch the application.'



The ASDM Java logs show: 'JAR resources in JNLP file are not signed by same certificate'





This is a known defect tracked by Cisco bug ID <u>CSCwc13294</u> ASA: Cannot connect to ASA using ASDM with Java Web Launch



Note: This defect has been fixed in recent ASDM software releases. Check the defect details for more information.



Note: The ASDM Java Web Launch support ended in 7.18 release code. Starting with ASDM 7.18, ASDM no longer supports Java Web Start due to Oracle's end of support for JRE 8 and Java Network Launching Protocol (JNLP). You must install the ASDM Launcher to launch ASDM.

Reference

https://www.cisco.com/c/en/us/td/docs/security/asdm/7 17/release/notes/rn717.html

Problem 5. ASDM hangs at 77% loading the device configuration

The ASDM gets stuck at 77% while parsing running configuration.



Troubleshoot – Recommended Actions



This is a known defect tracked by Cisco bug ID <u>CSCvh02586</u> ASDM hangs at 77% loading the device configuration



Note: This defect has been fixed in recent ASDM software releases. Check the defect details for more information.

Problem 6. Unable to access ASDM on the standby firewall

Troubleshoot – Recommended Actions

Ensure that both firewalls have:

The same ASA software images, for example:

<#root>

asa#

show run boot

boot system disk0:/cisco-asa-fp1k.9.22.1.1.SPA

The same ASDM software images, for example:

<#root> asa# show asdm image Device Manager image file, disk0:/asdm-7221.bin

Problem 7. ASDM hangs at 'Software update completed.'

The ASDM UI gets stuck at 'Software update completed.' phase

Cisco ASDM Launch	ner – 🗆 🗙
🖳 Cisco ASD	M-IDM Launcher
Software update completed	1.
Device IP Address / Name:	10.62.148.30
Username:	test
Password:	••••••
	$\hfill\square$ Remember the username of the specified device on this computer
	OK Close
	1 🗊 🐼 6

In the ASDM Java logs you see:

Cisco ASDM-IDM La	uncher v1.9(9)	_		×
🐴 Cisco ASDI		() ()	sco	
De las TD Address (Norma)				_
Device IP Address / Name: 1	92.0.2.1			
Username:				
Password:				
(Remember the username of the spec	ified device	on this co	mputer
	OK Close			
			1	۵ 🎃

java.lang.NullPointerException at vk.cz(vk.java:780) at vk.b(vk.java:609) at vk.<init>(vk.java:409) at com.cisco.pdm.PDMApplet.start(PDMApplet.java:170) at com.cisco.nm.dice.loader.Loader\$1.run(Loader.java:416) Exception in Starting Main window Exception in thread "SGZ Loader: launchSgzApplet" java.lang.NullPointerException at com.cisco.pdm.PDMApplet.start(PDMApplet.java:177) at com.cisco.nm.dice.loader.Loader\$1.run(Loader.java:416)

Note that the vk,cz, and so on. can be whatever characters, for example:

1PointerException
at t6.cr(t6.java:742)
at t6.b(t6.java:573)
at t6. <init>(t6.java:386)</init>
at com.cisco.pdm.PDMApplet.start(PDMApplet.java:168)
at com.cisco.nm.dice.loader.Loader\$1.run(Unknown Source)
Starting Main window
<pre>thread "SGZ Loader: launchSgzApplet" java.lang.NullPointerException at com.cisco.pdm.PDMApplet.start(PDMApplet.java:175) at com.cisco.nm.dice.loader.Loader\$1.run(Unknown Source)</pre>

Ensure that your ASDM user has privilege level 15:

<#root>
asa#
show run username
username test password ***** pbkdf2 privilege 3 <- this cannot work
While this works:
<#root>
asa#
show run username
username test password ***** pbkdf2 privilege 15

Problem 8. ASDM on ASA multiple context hangs at 57% while parsing running configuration

The ASDM UI gets stuck at 57%. The UI shows: Please wait while ASDM is loading the current configuration from your device.



Troubleshoot – Recommended Actions

This is typically seen when all of these conditions are being met:

1. ASA is in multiple context mode

2. There is an aaa-server group that contains more than 4 servers.

Solution

Reduce the number of aaa-server in the group, for example:

Before:

```
<#root>
aaa-server ACS protocol tacacs+
aaa-server ACS (management) host 192.0.2.1
key *****
aaa-server ACS (management) host 192.0.2.2
key *****
aaa-server ACS (management) host 192.0.2.3
key *****
aaa-server ACS (management) host 192.0.2.4
key *****
aaa-server ACS (management) host 192.0.2.5
key *****
aaa-server ACS (management) host 192.0.2.6
key *****
Change:
```

<#root>

asa(config)#

```
no aaa-server ACS (management) host 192.0.2.5
```

```
asa(config)#
```

```
no aaa-server ACS (management) host 192.0.2.6
```

```
After:
```

```
<#root>
```

```
aaa-server ACS protocol tacacs+
```

```
aaa-server ACS (management) host 192.0.2.1
```

key *****

```
aaa-server ACS (management) host 192.0.2.2
```

key *****

```
aaa-server ACS (management) host 192.0.2.3
```

key *****

```
aaa-server ACS (management) host 192.0.2.4
```

key *****

Reference

https://www.cisco.com/c/en/us/td/docs/security/asa/asa72/configuration/guide/conf_gd/aaa.html#wp1039757

Problem 9. Unable to access ASDM on vASA

Many messages like these are shown:

Other symptoms:

- 1. High CPU utilization in the 'show cpu' output despite 'show cpu core' showing a low amount of utilization
- 2. Stack memory allocation errors in the console
- 3. Inability to SSH to the device
- 4. SNMP polling fails



This is a known defect tracked by Cisco bug ID <u>CSCwc23844</u> ASAv high CPU and stack memory allocation errors despite over 30% free memory



Note: This defect has been fixed in recent ASDM software releases. Check the defect details for more information.

Troubleshoot ASDM-Related Problems on Windows OS

Problem 1. ASDM does not load the firewall configuration when using ASA + SFR

The error shown on ASDM UI is:

'ASDM was unable to load the firewall's configuration. Please check connectivity to the device or try again later.'



Troubleshoot – Recommended Actions

Check the ASDM release notes. They mention which OS is supported:

https://www.cisco.com/c/en/us/support/security/adaptive-security-device-manager/products-release-noteslist.html

The related section:

Table 1. 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 if you have problems with the ASDM shortcut. 8 7 Server 2016 and Server 2019 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		

The screenshot is from the ASDM 7.18 release notes:

https://www.cisco.com/c/en/us/td/docs/security/asdm/7_18/release/notes/rn718.html

As it can be seen, Windows 11 and 2022 are not in the list.

Also, as from ASDM 7.16, on Windows Server 2016 and Server 2019, 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.

Troubleshooting Tip: Check the Java console logs on ASDM:

Cisco ASDM-IDM L	auncher v1.9(9)	-		×
🛃 Cisco ASD		u) ci	sco	
Device IP Address / Name: Username:	192.0.2.1			*
Password:				
	Remember the username of the spe	cified device	e on this co	mputer
	OK Close			
			1	🍻 🔒

In case of an unsupported OS you see something like:

<#root>

Caused by: java.lang.ExceptionInInitializerError: Exception com.teamdev.jxbrowser.chromium.internal.Env Unsupported operating system. Supported OS: Windows XP (SP2), 7, 8, 10, Vista, 2003 (SP1), 2008, 2012,

at com.teamdev.jxbrowser.chromium.internal.Environment.checkEnvironment(Unknown Source)

Solutions

Thus, in order to be able to manage the ASA using ASDM the options you have are:

Option 1: Manage the ASA and FirePOWER module from another, older host (for example, Windows 2010, Windows Server 2012, and so on.)

Option 2: Manage the FirePOWER module using FMC and keep managing the ASA using ASDM.

SFR module managed by FMC (DC)	SFR module managed by ASDM		
<#root>	<#root>		
asa# show module sfr details	asa# show module sfr details		
Getting details from the Service Module, please wait	Getting details from the Service Mod		

Card Type: FirePOWER Servi	ces Software Module	Card Type: FirePOWER Servi	ices Softwa
Model:	ASA5508	Model:	ASA
Hardware version:	N/A	Hardware version:	N/A
Serial Number:	JAD123456AB	Serial Number:	JAI
Firmware version:	N/A	Firmware version:	N/#
Software version:	7.0.6-236	Software version:	7.0
MAC Address Range:	006b.f18e.1111 to 006b.	f18e.2222 MAC Address Range:	006
App. name:	ASA FirePOWER	App. name:	ASA
App. Status:	Up	App. Status:	Up
App. Status Desc:	Normal Operation	App. Status Desc:	Noi
App. version:	7.0.6-236	App. version:	7.0
Data Plane Status:	Up	Data Plane Status:	Up
Console session:	Ready	Console session:	Rea
Status:	Up	Status:	Up
DC addr:	192.0.2.100	DC addr:	No
< The ASDM is registered	d to this FMC	< No FMC registration	
Mgmt IP addr:	192.0.2.12	Mgmt IP addr:	192
Mgmt Network mask:	255.255.255.128	Mgmt Network mask:	255
Mgmt Gateway:	192.0.2.1	Mgmt Gateway:	192
Mgmt web ports:	443	Mgmt web ports:	443
Mgmt TLS enabled:	true	Mgmt TLS enabled:	trı
1			

Option 3: Shutdown the Firepower module:

<#root>

ASA5508#

sw-module module sfr shutdown

Shutdown module sfr? [confirm] Shutdown issued for module sfr.



Note: The module shutdown is not a permanent solution. If you reboot the firewall, the SFR module comes UP again.

Option 4: In case you don't plan to use the Firepower module any more, you can uninstall it:

<#root>

ASA5508#

sw-module module sfr uninstall

Option 5: Work with Cisco TAC to apply the workaround from the Cisco bug ID CSCwj51536

to manually replace the jxbrowser.jar files. Note though that this workaround still might not resolve the problem. In that case, you need to consider the previous options.

Problem 2. ASDM gets stuck while Downloading FirePOWER packages

Cisco ASDM Launch	er	_		×
Sisco ASDM-IDM Launcher			ران دره	ili ico
Downloading FirePOWER pa	ackages		<mark>52</mark> %	
Device IP Address / Name:	10.62.148.30			-
Username:	admin			
Password:	•••••			
	Remember the username of the specifie	d device or	n this com	nputer
	OK Close			
				🏭 🔒

Troubleshoot – Recommended Actions

According to the Firepower compatibility guides, ASDM is not supported for FirePOWER module management with ASA 9.8(4.45)+, 9.12(4.50)+, 9.14(4.14)+, and 9.16(3.19)+; you have to use FMC to manage the module with these releases. These ASA releases require ASDM 7.18(1.152) or later, but ASDM support for the ASA FirePOWER module ended with 7.16.

Solution

Thus, in order to be able to manage the ASA using ASDM the options you have are:

Option 1: Manage the ASA and FirePOWER module from another, older host (for example, Windows 2010, Windows Server 2012, and so on.)

Option 2: Manage the FirePOWER module using FMC and keep managing the ASA using ASDM.

Option 3: Shutdown the Firepower module:

ASA5508# sw-module module sfr shutdown

Shutdown module sfr? [confirm]

Shutdown issued for module sfr.

Option 4: In case you don't plan to use the Firepower module any more, you can uninstall it:

ASA5508# sw-module module sfr uninstall

Reference

https://www.cisco.com/c/en/us/td/docs/security/firepower/compatibility/firepower-classiccompatibility.html#id_60529

Problem 3. "This app can't run on your PC" error message shown on Windows hosts



Troubleshoot – Recommended Actions

When you install the ASDM Launcher, Windows can 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 (leave the invisible.vbs run.bat on the end as these scripts are used to open up ASDM).

General S	Shortcut	Security	Details	Previous Version	s
	Cisco ASDM-IDM Launcher				
Target type	e: A	pplication			
Target loca	ation: S	ystem32			
Target	:1	Windows\S	system32\v	vscript.exe invisible	.vbs run.ba
Start in:	2	C:\Program	n Files (x86)∖Cisco Systems∖A	SDM\"
Start in: Shortcut ke	ey: N	C:\Program	n Files (x86)∖Cisco Systems∖A	SDM\"
Start in: Shortcut ke Run:	ey: N	C:\Program Ione Iormal wine	n Files (x86 dow)∖Cisco Systems∖A	SDM\"
Start in: Shortcut ke Run: Comment	ey: N F	C:\Program Ione Iormal wine Run Cisco A	dow)\Cisco Systems\A Launcher	SDM\"
Start in: Shortcut ke Run: Comment Open	ey: N File Loca	C:\Program Ione Normal wine Run Cisco A	dow SDM-IDM Change)\Cisco Systems\A Launcher Icon Adv	SDM\"

5. Click OK.

Reference

https://www.cisco.com/c/en/us/td/docs/security/asdm/7_22/release/notes/rn722.html

Problem 4. Windows cannot find 'javaw.exe'. Make sure you typed the name correctly, and then try again.



Troubleshoot – Recommended Actions

• Typically, this error is related to Java missing on the computer. Ensure you have a compatible Java version installed on your Windows host: <u>https://www.java.com/en/download/help/windows_manual_download.html</u>

https://www.cisco.com/c/en/us/td/docs/security/asdm/7_22/release/notes/rn722.html#id_25472

- Ensure you have the exact path of the Java program in the Windows Environment Variable path.
- In case the problem occurred after a Java upgrade, consider rolling back the Java version.
- Ensure that your ASDM Desktop icon point to the proper installation path. If not, delete it and create a new shortcut.

Problem 5. Problem with Shortcut 'C:\Windows\system32\invisible.vbs' in the Target box is not valid

Error shown: The name 'C:\Windows\system32\invisible.vbs' specified in the Target box is not valid. Make sure the path and file name are correct.



In some cases, the error is: Can not find script file 'C:\Windows\system32\invisible.vgs'.

Troubleshoot – Recommended Actions

- Ensure you have administrator permissions when you install ASDM on the Windows host. In some cases, Active Directory settings for Windows users can restrict access to program file locations needed to successfully launch ASDM on Windows. Access is needed to these 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.

• Try installing a different version of Java on the Windows host.

References

https://www.cisco.com/c/en/us/td/docs/security/asdm/7_18/release/notes/rn718.html#id_25476

Problem 6. Windows Script Host Can not find script file "C:\WINDOWS\system32\invisible.vbs"

When trying to start the ASDM launcher, these error appears:



Troubleshoot – Recommended Actions

Follow these steps:

- 1. Reboot the Windows host and delete/uninstall all instances of the ASDM launcher.
- 2. Reinstall a newer, but still compatible version of the ASDM launcher. If there is no newer version install the same ASDM launcher you had before.
- 3. Ensure the correct Java version has been installed.

Alternatively, you can try to use the OpenJRE-based ASDM installer since it does not need Oracle Java to be installed on the local PC.

Troubleshoot – Recommended Actions

Follow these steps:

- 1. Reboot the Windows host and delete/uninstall all instances of the ASDM launcher.
- 2. Reinstall a newer, but still compatible version of the ASDM launcher. If there is no newer version install the same ASDM launcher you had before.

3. Ensure the correct Java version has been installed.

Alternatively, you can try to use the OpenJRE-based ASDM installer since it does not need Oracle Java to be installed on the local PC.

Problem 7. ASDM does not work on Windows Server 2022

Troubleshoot – Recommended Actions

At the time of this writing, Windows Server 2022 is not supported. Check the latest ASDM release notes from <u>https://www.cisco.com/c/en/us/support/security/adaptive-security-appliance-asa-software/products-release-notes-list.html</u> and if Windows Server 2022 is not listed consider using a different OS from the supported list.

Problem 8. ASDM UI font size is too small

Troubleshoot – Recommended Actions

Try these steps:

1. Find javaw.exe you installed (C:\ProgramData\Oracle\Java\javapath) or when having ASDM running open Task Manager and locate the service running:

PC > Local Disk (C:) > Program Files (x86) > Cisco Systems > ASDM > jre > bin					
Name	Date modified	Туре	Size		
server	4/20/2021 12:44 P	File folder			
🖻 attach.dll	1/24/2019 12:36 A	Application extens	23 KB		
🖻 awt.dll	1/24/2019 12:36 A	Application extens	1,483 KB		
🗟 dt_shmem.dll	1/24/2019 12:36 A	Application extens	30 KB		
💁 dt_socket.dll	1/24/2019 12:37 A	Application extens	25 KB		
🗟 fontmanager.dll	1/24/2019 12:37 A	Application extens	281 KB		
s freetype.dll	1/24/2019 12:37 A	Application extens	625 KB		
🖻 hprof.dll	1/24/2019 12:37 A	Application extens	156 KB		
💁 instrument.dll	1/24/2019 12:37 A	Application extens	122 KB		
j2pcsc.dll	1/24/2019 12:37 A	Application extens	20 KB		
j2pkcs11.dll	1/24/2019 12:37 A	Application extens	63 KB		
🖻 jaas_nt.dll	1/24/2019 12:37 A	Application extens	21 KB		
jabswitch.exe	1/24/2019 12:37 A	Application	35 KB		
🖻 java.dll	1/24/2019 12:37 A	Application extens	156 KB		
🛃 java.exe	1/24/2019 12:37 A	Application	198 KB		
🗟 java_crw_demo.dll	1/24/2019 12:37 A	Application extens	30 KB		
JavaAccessBridge-64.dll	1/24/2019 12:37 A	Application extens	141 KB		
java-rmi.exe	1/24/2019 12:37 A	Application	16 KB		
🛃 javaw.exe	1/24/2019 12:37 A	Application	199 KB		
🖻 jawt.dll	1/24/2019 12:37 A	Application extens	15 KB		
JAWTAccessBridge-64.dll	1/24/2019 12:37 A	Application extens	17 KB		

2. Right click -> Properties

- 3. Go to Compatibility tab
- 4. Click on 'Change high DPI settings'
- 5. Enable the 'Use this setting to fix scaling problems for this program instead of the one in Settings' checkbox
- 6. Enable the 'Override high DPI scaling behavior' checkbox and select 'System (Enhanced)':

Before:

🛓 javaw.	exe Properti	25					\times
General	Compatibility	Digital Signatu	ires Se	curity	Details	Previous Vers	ions
If this pro running th	gram isn't wor le compatibili	king correctly o y troubleshoote	n this ver er.	rsion o	fWindow	/s. try	
Run	High DPI s	ettings for jav	aw.exe			\times	
<u>How do I</u>	Choose the	high DPI setting	s for this	progra	am.		
Compa	Program D	PI					
Windo	Use thi	s setting to fix s of the one in S	caling pr ettings	oblem	s for this	program	
	Open Adv	inced scaling se	ttings	D.D.T. (In disclose	
Setting	A program changes a	fter you sign in ter you sign in	rry if the to Windo	WS. W	r your ma indows ca	an try to fix	
Red	set for you	ir main display	when you	i open	this prog	ram.	
8-bit (2	Use the D	I that's set for	my main	display	y when		
Rur	I signed i	n to Windows			\sim		
Dis	Learn mor	e					
	High DPI s	caling override					
	Overric Scaling	le high DPI scali performed by:	ing behav	ior.			
	Applicatio	n			\sim		
Ch				ОК		Cancel	
		_					
			ОК		Cancel	App	oly

After:

🔬 javaw.exe P	roperties			>	<
General Compa	atibility Digital Sign	natures Sec	urity Details	Previous Versions	
If this program i running the con	isn't working correct npatibility troublesh	ly on this vers ooter.	ion of Windo	ws. try	
Run High	h DPI settings for	javaw.exe		×	
How do I Cho	ose the high DPI set	tings for this p	rogram.		
Compa Rur Windd	ogram DPI Use this setting to t instead of the one pen Advanced scalin	fix scaling pro in Settings <u>g settings</u>	blems for this	program	
A Setting: A thi Rec se 8-bit (2 Us Rur I Dis: Le Rur Hid	program might look anges after you sign is scaling problem fo at for your main displ se the DPI that's set signed in to Window carn more	blurry if the D in to Window or this program lay when you for my main d s	PI for your m rs. Windows on by using the open this prog isplay when	ain display can try to fix e DPI that's gram.	
□ Re(□ Use	Override high DPI scaling overri Override high DPI s Scaling performed System (Enhanced)	ce scaling behavi by:	or.		
Ch			ок	Cancel	
		ок	Cance	Apply	

Problem 9. Java errors

The ASDM UI can show one or more of these Java errors: Error: could not find java.dll



And/or:

Error: Could not find Java SE Runtime Environment.



And/or:

 $\label{eq:constraint} \mbox{Error: Registry key `Software\JavaSoft\Java Runtime Environment'\CurrentVersion' has value `x.x', but `x.x' is required.$



Troubleshoot – Recommended Actions

- 1. Check if other versions of Java are installed.
- 2. If other versions are installed, uninstall all versions of Java. Make sure to also uninstall Java 8.

Tip: You can review this key in the registry: **HKEY_LOCAL_MACHINE\SOFTWARE\JavaSoft\Java Runtime Environment** to determine the installed versions.

You can also confirm that all versions are completely uninstalled through this key.

Registry Editor			
File Edit View Favorites Help			
Computer\HKEY_LOCAL_MACHINE\SOFTWARE\JavaSoft\Java Ru	ntime Environment		
SOFTWARE SOFTWARE Arellia Cisco Cisco Internal Cisco Spark Native Cisco Spark Na	Name (Default) BrowserJavaVersi CurrentVersion	Type REG_SZ REG_SZ REG_SZ	Data (value not set) 11.431.2 1.8

Warning: Be careful when working with Windows registry!

4. Reinstall a compatible Java version.

Problem 10. ASDM version 7.19.1.94 openJRE version file in the backend still showing OracleJRE version

Normal Behavior with openJRE

Normally, when you install and openJRE-based ASDM image, the Java version reflects it:

🔤 ASDM-IDM Java Console

Using JRE version 1.8.0 392 OpenJDK 64-Bit Server VM

And there is a 'jre' folder created under this path: C:\Program Files (x86)\Cisco Systems\ASDM\jre

There, you can find a release file that contains information about Azul Zulu:

<#root> IMPLEMENTOR="Azul Systems, Inc."

IMPLEMENTOR_VERSION="Zulu8.74.0.17-CA-win64"

JAVA_VERSION="1.8.0_392" OS_NAME="Windows" OS_VERSION="5.2" OS_ARCH="amd64" SOURCE=".:git:51a769a8708c"

Incorrect Behavior with openJRE

Now, the problem is that in some ASDM versions (for example, 7.19.1.94) the UI shows:



And the C:\Program Files (x86)\Cisco Systems\ASDM\jre\release file shows something like:

JAVA_VERSION="1.8.0_351" OS_NAME="Windows" OS_VERSION="5.2" OS_ARCH="amd64" SOURCE=".:git:c72692150ec4+" BUILD_TYPE="commercial"

Troubleshoot – Recommended Steps

This is a known Cisco bug ID CSCwf74697



ASDM version 7.19.1.94 openJRE version file in the backend still showing OracleJRE version



Note: This defect has been fixed in recent ASDM software releases. Check the defect details for more information.

Workaround:

Use >= 7.18.1.161 or >= 7.19.1.95 OpenJRE version bin.

Problem 11. ASDM java errors "[ERROR] CLI-PASSTHROUGH-DEBUG Inside doInitialProcessing"

Symptoms (both must be true):

- ASDM operates with no problems.
- ASDM Java logs show

0 [SGZ Loader: launchSgzApplet] ERROR com.cisco.pdm.headless.startup - CLI-PASSTHROUGH-DEBUG Inside doI [ERROR] CLI-PASSTHROUGH-DEBUG Inside doInitialProcessing messenger: cqq@la3c930 46 [SGZ Loader: launchS CLI-PASSTHROUGH-DEBUG Inside doInitialProcessing messenger: cqq@la3c930 CLI-PASSTHROUGH-DEBUG Inside do No CSD version

Troubleshoot – Recommended Actions





Note: This defect has been fixed in recent ASDM software releases. Check the defect details for

Troubleshoot ASDM Connectivity Problems

Problem 1. ASDM launch fails due to reaching maximum number of sessions

The "The maximum number of management session for protocol http or user already exist. Please try again later" error message is shown on the ASDM:



A similar error can be shown when switching between the contexts on ASDM.

Troubleshoot – Recommended Actions

Refer to the Cisco bug ID <u>CSCwd04210</u>: ASA: ASDM sessions stuck in CLOSE_WAIT causing lack of MGMT". Due to this defect, the ASDM session can terminate with the "Lost connection to firewall" message and further connection to the firewall be unsuccessful.



Note: This defect has been fixed in recent ASDM software releases. Check the defect details for more information.

Problem 2. Increase load/connection time in ASDM

The ASDM initial connection/load time increases in versions running the fix for the Cisco bug ID <u>CSCvw79912</u> "Cisco Adaptive Security Device Manager Remote Code Execution Vulnerability".

Troubleshoot – Recommended Actions

Refer to the Cisco bug ID CSCwd58653 "ASDM initial connection/load time increased".



Note: This defect has been fixed in recent ASDM software releases. Check the defect details for more information.

Troubleshoot ASDM Memory-Related Problems

Problem 1. Unresponsive and/or sluggish ASDM user interface during configuration load

One or more of these symptoms are observed when running ASDM:

- ASDM UI becomes unresponsive and/or sluggish while loading the configuration.
- The "ASDM was unable to load the firewall's configuration. Please check connectivity to the device and try again later" error message is shown:



- The "Retrieval of Data (validating running configuration)" message is shown for an extended amount of time, for example, several hours.
- In the Java console logs these lines are shown:

<#root>

```
Exception in thread "AWT-EventQueue-0" java.lang.OutOfMemoryError: Java heap space
Exception in thread "LoadConfigThread" java.lang.OutOfMemoryError: GC overhead limit exceeded
```

or

<#root>

```
Caused by: java.lang.OutOfMemoryError: Java heap space
```

To verify this symptom, enable Java console logs:

Cisco ASDM-IDM L	auncher v1.9(9)	-		×
🐴 Cisco ASD	M-IDM Launcher		() ()	sco
Device IP Address / Name: Username:	192.0.2.1			*
Password:	Remember the username of the spec	cified device	e on this co	mputer
	OK Close			S

Troubleshoot – Recommended Actions

- 1. Ensure that the ASA, ASDM and operating system versions are compatible. Refer to the <u>Cisco</u> <u>Secure Firewall ASA Release Notes</u>, <u>Cisco Secure Firewall ASDM Release Notes</u>, <u>Cisco Secure Firewall ASA Compatibility</u>.
- 2. Increase the ASDM Configuration Memory on operating systems:

Windows

- Go to the ASDM installation directory, for example C:\Program Files (x86)\Cisco Systems\ASDM.
- 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.
- Save the **run.bat** file.

Mac OS

- Right-click the **Cisco ASDM-IDM** icon and choose **Show Package Contents**.
- 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**.
- 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.
- If this file is locked, you see an error such as this message:



• 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.

References

- <u>Cisco Secure Firewall ASA Release Notes</u>
- <u>Cisco Secure Firewall ASDM Release Notes</u>
- <u>Cisco Secure Firewall ASA Compatibility</u>

Problem 2. ASDM is unable to contact the firewall

The error "ASDM is temporarily unable to contact the firewall." or "Unable to launch device manager" is shown when launching ASDM:





• Some of the packets of the ASDM HTTPS Connection are dropped with the (**ctm-error**) **CTM returned error** drop reason in the Accelerated Security Path (ASP):

<#root>

#

capture asp type asp-drop all buffer 33554432 match ip host 192.0.2.1 host 192.0.2.1 eq https

<#root>

#

show capture

```
capture asp type asp-drop all buffer 33554432 [Capturing - 587 bytes]
match ip host 192.0.2.1 host 192.0.2.2 eq https
```

<#root>

#

```
show cap asp
```

1 packet captured

- 1: 10:41:04.850648 192.0.2.1.56667 > 192.0.2.2.443: P 758423982:758424499(517) ack 2534033991 v
- The number of failed blocks is for 256 and 1550-size blocks is non-zero and the FAILED counter increases:

<#root>

#

SIZE	MAX	LOW	CNT	FAILED
0	2950	2865	2950	0
4	400	398	399	0
80	2500	2369	2500	0
256	6302	0	6274	50693
1550	22147	0	22111	769896
2048	8848	8844	8848	0
2560	2964	2962	2964	0
4096	100	99	100	0
8192	100	99	100	0
9344	100	99	100	0
16384	154	153	154	0
65664	16	16	16	0

• The amount of the **Free memory** in the **MEMPOOL_DMA** memory pool is significantly low, typically around a couple of bytes or kilobytes:

<#root>

#

show memory detail | begin MEMPOOL_DMA

MEMPOOL_DMA POOL STATS:		
Non-mmapped bytes allocated	=	230686720
Number of free chunks	=	175
Number of mmapped regions	=	0
Mmapped bytes allocated	=	0
Max memory footprint	=	230686720
Keepcost	=	336
Max contiguous free mem	=	21136
Allocated memory in use	=	230548640
Free memory	=	138080

Troubleshoot – Recommended Actions

1. Check the Cisco bug ID <u>CSCvv71435</u> "ASA 256 and/or 1550 block depletion causes DMA Memory unreleased allocation". The defect symptoms are observed at elevated rate of syslogs messages like 302013 or 302014.

Follow the steps from the **Workaround** section.

Check the Cisco bug ID <u>CSCwd58653</u> "ASDM initial connection/load time increased". The ASDM initial connection/load time increased after ASDM upgrade to fix version of Cisco bug ID <u>CSCvw79912</u> "Cisco Adaptive Security Device Manager Remote Code Execution Vulnerability".



Note: Cisco bug ID <u>CSCwd58653</u>





References

- <u>ASDM Configuration Guides</u>
 <u>Cisco ASA and ASDM Compatibility per Model</u>