

# Cisco Firepower 4100/9300 FXOS Release Notes, 2.4(1)

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## Cisco Firepower 4100/9300 FXOS Release Notes, 2.4(1)

This document contains release information for Cisco Firepower eXtensible Operating System (FXOS) 2.4(1).

Use this release note as a supplement with the other documents listed in the documentation roadmap:

- <http://www.cisco.com/go/firepower9300-docs>
- <http://www.cisco.com/go/firepower4100-docs>



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**Note** The online versions of the user documentation are occasionally updated after the initial release. As a result, the information contained in the documentation on Cisco.com supersedes any information contained in the context-sensitive help included with the product.

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## Introduction

The Cisco Firepower security appliance is a next-generation platform for network and content security solutions. The Firepower security appliance is part of the Cisco Application Centric Infrastructure (ACI) Security Solution and provides an agile, open, secure platform that is built for scalability, consistent control, and simplified management.

The Firepower security appliance provides the following features:

- Modular chassis-based security system—Provides high performance, flexible input/output configurations, and scalability.
- Firepower Chassis Manager—Graphical user interface provides a streamlined, visual representation of the current chassis status and allows for simplified configuration of chassis features.
- FXOS CLI—Provides command-based interface for configuring features, monitoring chassis status, and accessing advanced troubleshooting features.
- FXOS REST API—Allows users to programmatically configure and manage their chassis.

## What's New

### New Features in FXOS 2.4.1.249

Cisco FXOS 2.4.1.249 introduces the following new features in addition to the features included in earlier releases:

- Fixes for various problems (see [Resolved Bugs in FXOS 2.4.1.249, on page 8](#)).

### New Features in FXOS 2.4.1.244

Cisco FXOS 2.4.1.244 introduces the following new features in addition to the features included in earlier releases:

- Fixes for various problems (see [Resolved Bugs in FXOS 2.4.1.244, on page 9](#)).

### New Features in FXOS 2.4.1.238

Cisco FXOS 2.4.1.238 introduces the following new features in addition to the features included in earlier releases:

- Fixes for various problems (see [Resolved Bugs in FXOS 2.4.1.238](#)).

### New Features in FXOS 2.4.1.234

Cisco FXOS 2.4.1.234 introduces the following new features in addition to the features included in earlier releases:

- Fixes for various problems (see [Resolved Bugs in FXOS 2.4.1.234](#)).

### New Features in FXOS 2.4.1.222

Cisco FXOS 2.4.1.222 introduces the following new features in addition to the features included in earlier releases:

- Fixes for various problems (see [Resolved Bugs in FXOS 2.4.1.222](#)).

### New Features in FXOS 2.4.1.214

Cisco FXOS 2.4.1.214 introduces the following new features in addition to the features included in earlier releases:

- Support for Firepower Threat Defense version 6.3.
- Multi-instance capability for Firepower Threat Defense (see [Multi-instance capability for Firepower Threat Defense](#)).



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**Note** Requires Firepower Threat Defense Version 6.3 or later.

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- Fixes for various problems (see [Resolved Bugs in FXOS 2.4.1.214](#)).

## New Features in FXOS 2.4.1.101

Cisco FXOS 2.4.1.101 introduces the following new features:

- Support for ASA 9.10(1).
- Support for transparent mode deployment for an ASA logical device.

You can now specify transparent or routed mode when you deploy the ASA.

New/Modified FXOS commands: **enter bootstrap-key FIREWALL\_MODE, set value routed, set value transparent**

New/modified Firepower Chassis Manager screens:

**Logical Devices > Add Device > Settings**

New/Modified options: **Firewall Mode drop-down list**

- Cluster control link customizable IP Address.

By default, the cluster control link uses the 127.2.0.0/16 network. You can now set the network when you deploy the cluster in FXOS. The chassis auto-generates the cluster control link interface IP address for each unit based on the chassis ID and slot ID: 127.2.chassis\_id.slot\_id. However, some networking deployments do not allow 127.2.0.0/16 traffic to pass. Therefore, you can now set a custom /16 subnet for the cluster control link in FXOS except for loopback (127.0.0.0/8) and multicast (224.0.0.0/4) addresses.

New/Modified commands: **set cluster-control-link network**

New/modified screens:

**Logical Devices > Add Device > Cluster Information**

New/Modified options: **CCL Subnet IP field**




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**Note** The **CCL Subnet IP field** option is supported with ASA 9.9.2 and later and Firepower Threat Defense 6.3.0 and later

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- Support for data EtherChannels in On mode.

You can now set data and data-sharing EtherChannels to either Active LACP mode or to On mode. Other types of EtherChannels only support Active mode.

New/Modified screens:

**Interfaces > All Interfaces > Edit Port Channel > Mode**

New/Modified commands: **set port-channel-mode**

- You can now enable Radware DefensePro (vDP) with ASA on Firepower 4110 devices.
- The Radware DefensePro (vDP) application can be deployed in a standalone configuration in an inter-chassis cluster scenario.
- You now have the option to not send hostname data to Cisco Smart Licensing on Firepower 4100 series devices.
- You can now acknowledge multiple faults at one time.

- Firepower Chassis Manager now shows the upload percentage uploading images.
- Fixes for various problems (see [Resolved Bugs in FXOS 2.4.1.101](#)).

### Multi-instance capability for Firepower Threat Defense



**Note** Requires FTD Version 6.3 or later.

You can now deploy multiple logical devices, each with a Firepower Threat Defense container instance, on a single security engine/module. Formerly, you could only deploy a single native application instance. Native instances are still also supported. For the Firepower 9300, you can use a native instance on some modules, and container instances on the other modules.

To provide flexible physical interface use, you can create VLAN subinterfaces in FXOS and also share interfaces between multiple instances. When you deploy a container instance, you must specify the number of CPU cores assigned; RAM and disk space are dynamically allocated according to the number of cores. This resource management lets you customize performance capabilities for each instance.

You can use High Availability using a container instance on two separate chassis; for example, if you have two chassis, each with ten instances, you can create ten High Availability pairs. Clustering is not supported.



**Note** Multi-instance capability is similar to ASA multiple context mode, although the implementation is different. Multiple context mode partitions a single application instance, while multi-instance capability allows independent container instances. Container instances allow hard resource separation, separate configuration management, separate reloads, separate software updates, and full Firepower Threat Defense feature support. Multiple context mode, due to shared resources, supports more contexts on a given platform. Multiple context mode is not available on the Firepower Threat Defense.

See the following maximum container instances per model:

- Firepower 4110—3
- Firepower 4120—3
- Firepower 4140—7
- Firepower 4150—7
- Firepower 9300 SM-24 security module—7
- Firepower 9300 SM-36 security module—11
- Firepower 9300 SM-44 security module—14

New/Modified Firepower Chassis Manager screens:

**Overview > Devices**

**Interfaces > All Interfaces > Add New drop-down menu > Subinterface**

**Interfaces > All Interfaces > Type**

**Logical Devices > Add Device**

**Platform Settings > Mac Pool****Platform Settings > Resource Profiles**

New/Modified FXOS commands:

**connect ftd name, connect module telnet, create bootstrap-key PERMIT\_EXPERT\_MODE, create resource-profile, create subinterface, scope auto-macpool, set cpu-core-count, set deploy-type, set port-type data-sharing, set prefix, set resource-profile-name, set vlan, scope app-instance ftd name, show cgroups container, show interface, show mac-address, show subinterface, show tech-support module app-instance, show version**

New/Modified Firepower Management Center screens:

**Devices > Device Management > Edit icon > Interfaces tab**

**FXOS CLI Changes for ASA Applications**

FXOS CLI commands used when working with ASA logical devices have been modified.

New/Modified FXOS commands:

**connect asa name, create app-instance asa name, scope app-instance asa name, show app-instance asa name**

## Software Download

You can download software images for FXOS and supported applications from one of the following URLs:

- Firepower 9300 — <https://software.cisco.com/download/type.html?mdfid=286287252>
- Firepower 4100 — <https://software.cisco.com/download/navigator.html?mdfid=286305164>

For information about the applications that are supported on a specific version of FXOS, see the *Cisco FXOS Compatibility* guide at this URL:

<http://www.cisco.com/c/en/us/td/docs/security/firepower/fxos/compatibility/fxos-compatibility.html>

## Important Notes

- If you are utilizing the hardware bypass feature, you must upgrade to FXOS 2.4.1.238. In FXOS releases prior to 2.4.1.238, ports may go to bypass state without a failure event. If this happens, you must use Firepower Management Center to bring the ports back to standby mode.
- In FXOS 2.4(1), if you are using an IPsec secure channel in FIPS mode, the IPsec peer entity must support RFC 7427.
- If you reinitialize a security module after upgrading to FXOS 2.4(1), you might receive an error message about disk partitions on that security module being incompatible if you later downgrade to an earlier FXOS release. To resolve this issue, you need to reinitialize the security module again after downgrading.
- When you configure Radware DefensePro (vDP) in a service chain on a currently running Firepower Threat Defense application on a Firepower 4110 or 4120 device, the installation fails with a fault alarm. As a workaround, stop the Firepower Threat Defense application instance before installing the Radware DefensePro application. Note that this issue and workaround apply to all supported releases of Radware DefensePro service chaining with Firepower Threat Defense on Firepower 4110 and 4120 devices.

- Firmware Upgrade—We recommend upgrading your Firepower 4100/9300 security appliance with the latest firmware. For information about how to install a firmware update and the fixes included in each update, see <https://www.cisco.com/c/en/us/td/docs/security/firepower/fxos/firmware-upgrade/fxos-firmware-upgrade.html>.
- When upgrading a network or security module, certain faults are generated and then cleared automatically. These include a “hot swap not supported” fault or a “module removed when in online state” fault. If you have followed the appropriate procedures, as described in the [Cisco Firepower 9300 Hardware Installation Guide](#) or [Cisco Firepower 4100 Series Hardware Installation Guide](#), the fault(s) are cleared automatically and no additional action is required.

## Adapter Bootloader Upgrade

FXOS 2.4(1) contains additional testing to verify the security module adapters on your security appliance. After installing FXOS 2.4.1.101 or later, you might receive a critical fault similar to the following indicating that you should update the firmware for your security module adapter:

*Critical F1715 2017-05-11T11:43:33.121 339561 Adapter 1 on Security Module 1 requires a critical firmware upgrade. Please see Adapter Bootloader Upgrade instructions in the FXOS Release Notes posted with this release.*

If you receive the above message, use the following procedure to update the boot image for your adapter:

1. Connect to the FXOS CLI on your Firepower security appliance. For instructions, see the “Accessing the FXOS CLI” topic in the [Cisco Firepower 4100/9300 FXOS CLI Configuration Guide, 2.4\(1\)](#) or [Cisco Firepower 4100/9300 FXOS Firepower Chassis Manager Configuration Guide, 2.4\(1\)](#).

2. Enter the adapter mode for the adapter whose boot image you are updating:

```
fxos-chassis# scope adapter 1/security_module_number/adapter_number
```

3. Enter **show image** to view the available adapter images and to verify that fxos-m83-8p40-cruzboot.4.0.1.62.bin is available to be installed:

```
fxos-chassis /chassis/server/adapter # show image
Name Type Version
```

```
-----
```

```
fxos-m83-8p40-cruzboot.4.0.1.62.bin Adapter Boot 4.0(1.62)
```

```
fxos-m83-8p40-vic.4.0.1.51.gbin Adapter 4.0(1.51)
```

4. Enter **update boot-loader** to update the adapter boot image to version 4.0.1.62:

```
fxos-chassis /chassis/server/adapter # update boot-loader 4.0(1.62)
Warning: Please DO NOT reboot blade or chassis during upgrade, otherwise, it may cause
adapter to become UNUSABLE!
After upgrade has completed, blade will be power cycled automatically
fxos-chassis /chassis/server/adapter* # commit-buffer
```

5. Enter **show boot-update status** to monitor the update status:

```
fxos-chassis /chassis/server/adapter # show boot-update status
State: Updating
fxos-chassis /chassis/server/adapter # show boot-update status
State: Ready
```

6. Enter **show version detail** to verify that the update was successful:



**Note** Your **show version detail** output might differ from the following example. However, verify that Bootloader-Update-Status is “Ready” and that Bootloader-Vers is 4.0(1.62).

```

fxos-chassis /chassis/server/adapter # show version detail
Adapter 1:
Running-Vers: 5.2(1.2)
Package-Vers: 2.2(2.17)
Update-Status: Ready
Activate-Status: Ready
Bootloader-Update-Status: Ready
Startup-Vers: 5.2(1.2)
Backup-Vers: 5.0(1.2)
Bootloader-Vers: 4.0(1.62)

```

## System Requirements

You can access the Firepower Chassis Manager using the following browsers:

- Mozilla Firefox—Version 42 and later
- Google Chrome—Version 47 and later
- Microsoft Internet Explorer—Version 11 and later

We tested FXOS 2.4(1) using Mozilla Firefox version 42, Google Chrome version 47, and Internet Explorer version 11. Other versions of these browsers are expected to work. However, if you experience any browser-related issues, we suggest you revert to one of the tested versions.

## Upgrade Instructions

You can upgrade your Firepower 9300 or Firepower 4100 series security appliance to FXOS 2.4(1.214) if it is currently running any FXOS 2.0(1) or later build.

For upgrade instructions, see the [Cisco Firepower 4100/9300 Upgrade Guide](#).

### Installation Notes

- Upgrade to FXOS 2.4(1) can take up to 45 minutes. Please plan your upgrade activity accordingly.
- If you are upgrading a Firepower 9300 or Firepower 4100 series security appliance that is running a standalone logical device or if you are upgrading a Firepower 9300 security appliance that is running an intra-chassis cluster, traffic does not traverse through the device while it is upgrading.
- If you are upgrading a Firepower 9300 or a Firepower 4100 series security appliance that is part of an inter-chassis cluster, traffic does not traverse through the device being upgraded while it is upgrading. However, the other devices in the cluster continue to pass traffic.
- 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](#).

For more information about the Cisco Bug Search Tool, see the [Bug Search Tool Help & FAQ](#).

## Open Bugs

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

**Table 1: Open Bugs Affecting FXOS 2.4(1)**

Identifier	Description
CSCUw31077	Filter applied to a interface should be validated
CSCCx63101	All memory(s) under Memory array shows as unknown in operable column
CSCCx77947	Pcap file size not updated properly when data sent at high rate
CSCCx98517	Un-decorating data port for VDP should be allowed from Chassis Manager
CSCUz93180	AAA LDAP configuration does not preserve information if validation fails
CSCVc03494	Radware vDP cannot be added into APSolute Vision. As a workaround, you must manually download the device driver and install it into Vision.
CSCVc44522	Log Capacity on Management controller Server1/1 is very low Warning
CSCVd90177	Blade went to fault state after doing a MIO reload on QP-D with FXOS 2.2.1.57
CSCVj96380	SAM Coupler should force FTW bypass if switch bypass enable fails
CSCVk46399	svc_sam_bladeAG_log core seen after MIO reboot
CSCVk61563	On KP ASA, /root/.ssh is not created after reboot
CSCVm66013	MIO got hung during reboot. Kernel Panic issue seen
CSCVm84592	Filter configs are lost when "Edit Session" is done for a capture session
CSCVo64240	"Service profile ssp-sprof-2 is not associated" warning alarm cannot be acknowledged.
CSCVo68997	FXOS ip-block unable to be recovered sam.configure

## Resolved Bugs in FXOS 2.4.1.249

The following table lists the previously release-noted and customer-found bugs that were resolved in FXOS 2.4.1.249:



**Table 2: Resolved Bugs in FXOS 2.4.1.249**

Identifier	Description
<a href="#">CSCvh68895</a>	extra "Local Disk 3" displayed on FPR9300
<a href="#">CSCvk70849</a>	FCM GUI authentication fails with "Unable to Login. Authentication failed" if the password >32 chars
<a href="#">CSCvm76266</a>	Lina traceback in Thread Name: cli_xml_server
<a href="#">CSCvm87556</a>	Firmware auto-install state failed while upgrading 92.5(1.232)
<a href="#">CSCvm96265</a>	Disable HTTP OPTIONS enabled
<a href="#">CSCvn24594</a>	add NTPDATE update of blade sysclock from the supervisor before starting NTPD
<a href="#">CSCvn45138</a>	FTD gets unregistered after a bootstrap change from the Chassis Manager UI
<a href="#">CSCvo40340</a>	FPR4100: serial, model and vendor are black after FAN OIR
<a href="#">CSCvo79145</a>	FTD is not coming up when upgraded from k9.2.4.1.222.SPA to k9.2.6.1.118.SPA (Disk quota issue)
<a href="#">CSCvp35769</a>	[ciam] Apache HTTP Server URL Normalization Denial of Service Vulnerability
<a href="#">CSCvq17910</a>	Multicast MAC not programmed on chassis upon app reboot or cluster rejoin
<a href="#">CSCvq19641</a>	Evaluation of Firepower 4k/9k Supervisor for TCP_SACK
<a href="#">CSCvq33916</a>	Linkdown between FP 4100 and switch when using 40gb bidi to 40/100 bidi

## Resolved Bugs in FXOS 2.4.1.244

The following table lists the previously release-noted and customer-found bugs that were resolved in FXOS 2.4.1.244:

**Table 3: Resolved Bugs in FXOS 2.4.1.244**

Identifier	Description
<a href="#">CSCvn77125</a>	FXOS: copy command should allow for wildcards to transfer multiple files
<a href="#">CSCvo85861</a>	Propagate link-state not shown in FTD CLI
<a href="#">CSCvo90987</a>	Enhancement for debugging link down/flap issues for bcm_usd.log files on customer units
<a href="#">CSCvp10674</a>	FTD may not become online after installing vDP and upgrading FXOS to version 2.4.1
<a href="#">CSCvp15176</a>	Apps installed on firepower devices may report comm failure and assume itself as active/master.

Identifier	Description
<a href="#">CSCvp21561</a>	Cruz Adaptor crash due to kernel patch incompatible with cruz kernel version
<a href="#">CSCvp40260</a>	Prevent STP and FC frames from being sent to SUP CPU
<a href="#">CSCvp56801</a>	'show tech-support module 1 app-instance <appname> <identifier>' fails when only 1x instance on 4100
<a href="#">CSCvp83437</a>	serial console login using local account succeeds but immediately returns to login prompt

## Resolved Bugs in FXOS 2.4.1.238

The following table lists the previously release-noted and customer-found bugs that were resolved in FXOS 2.4.1.238:

**Table 4: Resolved Bugs in FXOS 2.4.1.238**

Identifier	Description
<a href="#">CSCvk47441</a>	FXOS 4100/9300: icmp redirect get stuck in FXOS OOB management routing table forever
<a href="#">CSCvk60985</a>	Machine Check events logged. Possible hardware issue. FXOS Blade: mcelog support
<a href="#">CSCvm72541</a>	Speed is 0 in interfaceMapping message if a port-channel's status is down
<a href="#">CSCvn46577</a>	Some SSH sessions to FXOS are not timed out by absolute/session timeout
<a href="#">CSCvn98401</a>	Many 0-byte files in /opt/cisco/platform/logs/corruptConfigs causes LACP problems and instability
<a href="#">CSCvo29067</a>	FXOS upgrade hangs and started generating DME corefiles
<a href="#">CSCvo31071</a>	Traffic drops when a unit is re-joining the cluster.
<a href="#">CSCvo56910</a>	ASA subinterfaces allocated to contexts will stop responding after failover intermittently
<a href="#">CSCvo58998</a>	FXOS Cruz Adapter doesn't validate data sent by logical device causing dropped offloaded packets
<a href="#">CSCvo64091</a>	SSP:Cluster Slave FTD Provisioning failing because "Required external ports not available"
<a href="#">CSCvo75349</a>	FXOS Blade CRUZ FW coredump due to a memory corruption
<a href="#">CSCvo87116</a>	MTS messages stuck in AppAG recv_q
<a href="#">CSCvp09791</a>	FXOS/FTD multi-instance deployments multicast traffic outage

## Resolved Bugs in FXOS 2.4.1.234

The following table lists the previously release-noted and customer-found bugs that were resolved in FXOS 2.4.1.234:

**Table 5: Resolved Bugs in FXOS 2.4.1.234**

Identifier	Description
<a href="#">CSCvn31390</a>	Computing Processor PortSmash Side-Channel Information Disclosure Vuln
<a href="#">CSCvn42582</a>	FXOS "Reminder to trigger an export" is changed from disable to enable after reboot
<a href="#">CSCvn48162</a>	NTP communication errors may cause duplicate entries in iptables resulting in HB errors
<a href="#">CSCvn56156</a>	Silent packet drops may occur on FXOS platforms due to classifier table entry corruption
<a href="#">CSCvn77641</a>	SSP fail to wire ports cannot recover
<a href="#">CSCvn78014</a>	Graceful shutdown is not working on data port.
<a href="#">CSCvn90677</a>	During FTD install, setting the disk partition size can silently fail
<a href="#">CSCvn90701</a>	Errors that occur during FTD install are not logged
<a href="#">CSCvn93793</a>	Failover does not occur in the event of an SSD failure
<a href="#">CSCvo10712</a>	SMA creates a new file every minute if cspCfgXml is corrupted
<a href="#">CSCvo28623</a>	ssp_admin_status.sh detects left over metadata json file after failed upgrade
<a href="#">CSCvo28634</a>	MIO reports incorrect status to the app-instance
<a href="#">CSCvo30356</a>	Port-channels are in suspended state after upgrade
<a href="#">CSCvo44029</a>	Fail to wire port pair got into bypass state when the FTD was still up and running

## Resolved Bugs in FXOS 2.4.1.222

The following table lists the previously release-noted and customer-found bugs that were resolved in FXOS 2.4.1.222:

**Table 6: Resolved Bugs in FXOS 2.4.1.222**

Identifier	Description
<a href="#">CSCvm53282</a>	FTD: Routing tables added by ICMP redirects gets stuck in routing table cache forever
<a href="#">CSCvn23221</a>	Cruz ASIC crash due to ecpmgr assertion panic
<a href="#">CSCvn36413</a>	upgrade-recovery corner case for specific versioning format/naming

## Resolved Bugs in FXOS 2.4.1.214

The following table lists the previously release-noted and customer-found bugs that were resolved in FXOS 2.4.1.214:

**Table 7: Resolved Bugs in FXOS 2.4.1.214**

Identifier	Description
<a href="#">CSCvg72548</a>	Double VLAN headers observed in Maverick front and backplane packet captures
<a href="#">CSCvj06276</a>	FXOS: Cannot retrieve correct disk usage value (/dev/sdaX) by snmpwalk

Identifier	Description
<a href="#">CSCvk09976</a>	Packets are not captured when same filter is applied to both phy-port & app-port for same interface
<a href="#">CSCvm21278</a>	Evaluation of ssp for CVE-2018-5391 (FragmentSmack)
<a href="#">CSCvm33545</a>	Clock drift in the system causes ndmain to report the service down status
<a href="#">CSCvm73853</a>	Firepower Chassis Reloads on License Manager running in FXOS 2.2.2.26
<a href="#">CSCvm02840</a>	Port type for sdExternalPortLink is unknown when upgrading from 2.2.2 to 2.4.1
<a href="#">CSCvm08869</a>	FCM: Image version fetching hang in Logical Devices page
<a href="#">CSCvm11768</a>	Application CSP should not be deleted if application instance references it
<a href="#">CSCvm17585</a>	FXOS: Unexpected reload due to dcosAG crash

## Resolved Bugs in FXOS 2.4.1.101

The following table lists the previously release-noted and customer-found bugs that were resolved in FXOS 2.4.1.101:

**Table 8: Resolved Bugs in FXOS 2.4.1.101**

Identifier	Description
<a href="#">CSCuy21573</a>	Chassis Manager: Sorting Broken in Updates Page
<a href="#">CSCvf70180</a>	FCM is sending the DNS search domain list to ASDM instead of just one domain
<a href="#">CSCvg57022</a>	Chassis Mgr: Incorrect timezone on login detail information
<a href="#">CSCvg57037</a>	Chassis Mgr: Password “Set: Yes” or No appears at incorrect place (Japanese language)
<a href="#">CSCvg62443</a>	Chassis Manger UI (Logical Devices page) doesn't show correct IP of FTD device
<a href="#">CSCvg67730</a>	put cap on blade core files so as to avoid incomplete blade tech-support due to low disk space
<a href="#">CSCvg71168</a>	asa is started even on a failed security module
<a href="#">CSCvg72559</a>	Enabling packet capture with IPv6 filter failed

## Related Documentation

For additional information on the Firepower 9300 or 4100 series security appliance and FXOS, see [Navigating the Cisco FXOS Documentation](#).

## Online Resources

Cisco provides online resources to download documentation, software, and tools, to query bugs, and to open service requests. Use these resources to install and configure Firepower software and to troubleshoot and resolve technical issues.

- Cisco Support & Download site: <https://www.cisco.com/c/en/us/support/index.html>
- Cisco Bug Search Tool: <https://tools.cisco.com/bugsearch/>

- Cisco Notification Service: <https://www.cisco.com/cisco/support/notifications.html>

Access to most tools on the Cisco Support & Download site requires a Cisco.com user ID and password.

## Contact Cisco

If you cannot resolve an issue using the online resources listed above, contact Cisco TAC:

- Email Cisco TAC: [tac@cisco.com](mailto:tac@cisco.com)
- Call Cisco TAC (North America): 1.408.526.7209 or 1.800.553.2447
- Call Cisco TAC (worldwide): [Cisco Worldwide Support Contacts](#)

## Communications, Services, and Additional Information

- To receive timely, relevant information from Cisco, sign up at [Cisco Profile Manager](#).
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