

# Cisco Expressway and Cisco Expressway Select Release Note for X15.0.x release

(Includes X15.0 and X15.0.1 releases)

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# Contents

About the Documentation .....	4
Change History .....	4
Supported Platforms .....	4
<b>ESXi Requirements</b> .....	5
Change Notices .....	6
<b>Smart Licensing – Unrestricted Distribution (Capped Version)</b> .....	6
<b>Signaling to no more than 2500 endpoints</b> .....	6
<b>Smart Licensing Export Compliance – Restricted Distribution (Uncapped Version)</b> .....	6
<b>Upgrade Approach (Applicable for all X14.3.x and later releases)</b> .....	6
<b>Deploying OVA with vSphere ESXi 7.0 U2</b> .....	7
<b>VCS Product Support</b> .....	7
Hardware Support for CE1x00 Appliances .....	7
Interoperability and Compatibility .....	8
<b>Product Compatibility Information</b> .....	8
<b>Which Expressway Services Can Run Together?</b> .....	8
Summary of Features and Bugs Fixed .....	8
<b>X15.0.1 release</b> .....	8
<b>X15.0 release</b> .....	8
Withdrawn or Deprecated Features and Software .....	9
No Support for Ray Baum's Act .....	10
Related Documentation .....	10
Features and Changes .....	11
<b>Security Enhancement</b> .....	11
<b>X15.0.1 release</b> .....	11
<b>X15.0 release</b> .....	12
<b>Management Enhancement</b> .....	13
<b>X15.0.1 release</b> .....	13
<b>X15.0 release</b> .....	13
<b>Mobile Remote Access Enhancement</b> .....	14
<b>X15.0.1 release</b> .....	14
<b>X15.0 release</b> .....	14
Preview Features .....	14
REST API Changes .....	15
Other Changes in this Release .....	15

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<b>X15.0 release</b> .....	<b>15</b>
Software Downloads Folder Path .....	16
<b>Smart Licensing Export Compliance – Restricted Distribution (Uncapped Version)</b>	<b>16</b>
Limitations.....	17
Open and Resolved Issues.....	17
Notable Issue Resolved .....	17
<b>X15.0.1 release</b> .....	<b>17</b>
Notable Issue .....	18
<b>X15.0.1 release</b> .....	<b>18</b>
Using the Bug Search Tool.....	18
Appendix 1: Ordering Information .....	19
<b>PID Details</b>	<b>19</b>
<b>Ordering Guide</b>	<b>19</b>
Appendix 2: Accessibility and Compatibility Features .....	20
Appendix 3: Upgrade Path.....	21

## About the Documentation

- To find out what's new and changed for this release, refer to the [Features and Changes](#).
- For information on the documentation that is available for this release, refer to [Related Documentation](#).

## Change History

Date	Change	Reason
March 2024	First publication for Cisco Expressway and Cisco Expressway Select - X15.0.1	X15.0.1 release
December 2023	First publication for Cisco Expressway and Cisco Expressway Select - X15.0	X15.0 release

## Supported Platforms

Platform Name	Serial Number	Scope of Software Version Support
Virtual Machine - Small Scale Deployment	(Auto-generated)	Supported (X8.1 onwards)
Virtual Machine - Medium Scale Deployment	(Auto-generated)	Supported (X8.1 onwards)
Virtual Machine - Large Scale Deployment	(Auto-generated)	Supported (X8.1 onwards)
CE1300 Hardware (5 <sup>th</sup> gen: Expressway pre-installed on UCS C220 M6S)	52E5####	X14.3.1 onwards
CE1200 Hardware Revision 2 (4 <sup>th</sup> gen: pre-installed on UCS C220 M5L)	52E1####	Supported (X12.5.5 onwards) End of Life Announcement: <a href="#">Link</a>
CE1200 Hardware Revision 1 (4 <sup>th</sup> gen: pre-installed on UCS C220 M5L)	52E0####	Supported (X8.11.1 onwards) End of Life Announcement: <a href="#">Link</a>
CE1100 (3 <sup>rd</sup> gen: Expressway pre-installed on UCS C220 M4L)	52D#####	Not Supported End of Life Announcement: <a href="#">Link</a>

Platform Name	Serial Number	Scope of Software Version Support
CE1000 (2 <sup>nd</sup> gen: Expressway pre-installed on UCS C220 M3L)	52B#####	Not Supported End of Life Announcement: <a href="#">Link</a>
CE500 (2 <sup>nd</sup> gen: Expressway pre-installed on UCS C220 M3L)	52C#####	Not Supported End of Life Announcement: <a href="#">Link</a>
<p><b>Note:</b> This is applicable for appliances that have reached the end-of-life and end-of-support. For Hardware that has reached the last day of support: There is no support for either Hardware or Software issues (which includes the Hardware embedded Software like BIOS, firmware, and drivers).</p>		

## ESXi Requirements

The following are the ESXi-supported versions.

- From X14.2 release and later versions, ESXi 6.5 Update 2a, ESXi 7.0 Update 3, ESXi 7.0 Update 3c, and ESXi 7.0 Update 3d are supported.
- From X14.2.6 release and later versions, ESXi 6.5 Update 2a, ESXi 7.0 Update 3c, ESXi 7.0 Update 3d, and ESXi 8.0 Update 1 are supported.

### Note:

- VMware withdrew the following supported versions: ESXi 7.0 Update 3, 3a, and 3b due to critical issues identified with those builds. (Reference: [Link](#)).
- The End of General Support for ESXi 7.0 is 02-Apr-2025.

### Important:

The following are the ESXi-end-of-support versions.

- ESXi 6.5 Update 2
  - ESXi 6.5 release is the End of Technical Guidance.
  - The End of Technical Guidance for vSphere/ESXi 6.5 is 15-Nov-2023.
- ESXi 6.7 Update 3
  - ESXi 6.7 release is the End of Technical Guidance.
  - The End of Technical Guidance for vSphere/ESXi 6.7 is 15-Nov-2023.

There is no phone support or web support available from VMware.

There are no more bug/security fixes (so if the Application layer has a problem isolated to the ESXi driver or ESXi software, there is no fix). For more information, see [VMware Product Lifecycle Matrix](#).

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## Change Notices

### Smart Licensing – Unrestricted Distribution (Capped Version)

#### Signaling to no more than 2500 endpoints

Expressway is a media gateway and must provide media encryption or encrypted signaling to **no more than 2500** endpoints. *This restriction is effective from X14.2 release of the Cisco Expressway.*

Encrypted signaling to endpoints refers to SIP registrations or SIP calls, H.323 registrations or calls, WebRTC calls, and XMPP registrations.

#### Important:

- Ensure that the limited number of encrypted signaling is **not** more than 2500 endpoints per instance of Expressway. A customer that needs to exceed this limit may deploy additional peers/clusters if entitled, to provide additional capacity.
- CCO does not perform a “license determination check.” So existing customers will only have access to the limited/capped version.

### Smart Licensing Export Compliance – Restricted Distribution (Uncapped Version)

Cisco is committed to maintaining strict compliance with all global export laws and regulations.

Cisco Expressway Select is an export-restricted image that can exceed 2,500 encrypted signaling sessions.

Every software release must comply with all relevant Export Control legislation – the US and local country regulations that control the conditions under which certain software and technology may be exported or transferred to other countries and parties.

**Note:** There is no encrypted session limit/capping on the number of registrations/calls/sessions (hardware limit still applies). For more information, see [Cisco Expressway Administrator Guide](#).

**Important:** CCO does not perform a “license determination check”. So existing customers will only have access to the Export Unrestricted image. Users must order a special \$0 Product Identifier (PID) for [Expressway Select](#)<sup>1</sup> (see [Appendix 1: Ordering Information](#)).

### Upgrade Approach (Applicable for all X14.3.x and later releases)

The following upgrades are allowed.

- Expressway → Expressway Select  
Or
- Expressway Select → Expressway

For more information, see [Appendix 3: Upgrade Path](#).

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<sup>1</sup> Export-restricted image exceeding 2,500 encrypted signaling sessions.

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## Deploying OVA with vSphere ESXi 7.0 U2

**Note:** This is a known issue in the current release. Deploying X14.2 OVA shows “Invalid Certificate” on the vCenter 7.0 U2 version of vSphere ESXi, though it shows “Trusted Certificate” in older versions. For more information about the issue, refer to the Knowledge Article.

## VCS Product Support

Cisco has announced **end-of-sale** and **end-of-life** dates for the Cisco TelePresence Video Communication Server (VCS) (1<sup>st</sup> Generation) product. Details are available at the following [Link/Link](#).

This notice does not affect the Cisco Expressway Series product.

## Hardware Support for CE1x00 Appliances

This section applies to hardware support services only.

### CE1300 Appliance

X14.3.1 is the first factory-loaded and supported release on this appliance. It also supports the Cisco Expressway X15.0 and X15.0.1 releases. For more information, see [Virtualization for Cisco Expressway](#).

### CE1200 Appliance

The Cisco Expressway X15.0 and X15.0.1 releases are supported on CE1200.

The last date of support (Hardware) is October 31, 2028 (as per the [End-of-Life bulletin](#)).

### CE1100 Appliance - End-of-Life and Advance Notice of Hardware Service Support withdraw

The Cisco Expressway X15.x release is **not** supported on CE1100.

For more information, see the [End-of-Life bulletin](#). This is in line with the last date of support, for those customers with a valid service contract.

Although customers may run this software release on the Expressway CE1100 and benefit from security improvements/vulnerability fixes, many new features require newer, more powerful hardware. As a result, new features/functionality added in this release of the Expressway software are not supported for use on the CE1100 platform.

### CE500 and CE1000 Appliances - End-of-Sale and End-of-Life Notice

The Cisco Expressway X15.x release is **not** supported on CE500 and CE1000.

Cisco no longer supports the Cisco Expressway CE500 and CE1000 appliance hardware platforms. For more details, see the [End-of-Life bulletin](#).

# Interoperability and Compatibility

## Product Compatibility Information

### Detailed matrices

Cisco Expressway is standards-based and interoperates with standards-based SIP and H.323 equipment both from Cisco and third parties. For specific device interoperability questions, contact your Cisco representative.

### Mobile and Remote Access (MRA)

Information about compatible products for MRA, specifically, is provided in version tables for endpoints and infrastructure products in the [Mobile and Remote Access Through Cisco Expressway Deployment Guide](#).

For MRA, to access the latest features and functionality, it's recommended that Expressway is deployed in conjunction with the latest version of UCM. However, Expressway is backward compatible with earlier UCM releases as well.

### Which Expressway Services Can Run Together?

The [Cisco Expressway Administrator Guide](#) details which Expressway services can coexist on the same Expressway system or cluster. See the “Services That Can be Hosted Together” table in the **Introduction** chapter. For example, if you want to know if MRA can coexist with CMR Cloud (it can), the table will tell you.

## Summary of Features and Bugs Fixed

### X15.0.1 release

Feature(s) / Bug(s)	Status
<b>Bug Fixed</b>	
taa-chkpasswd randomly consuming high CPU beyond the normal duration while interacting with LDAP for user authentication	Supported from X15.0.1

### X15.0 release

Feature(s) / Bug(s)	Status
<b>Feature Enhancements</b>	
LDAP TLS support for different ports other than 636 or 3269	Supported from X15.0
Removal of Banned Ciphers	
Cross Site Request Forgery Protection Header	



Feature(s) / Bug(s)	Status
Webex Unified CM Calling Support Auto-extend Refresh Token	
WebRTC session counter on Web User Interface for Expressway-E	
<b>Bug Fixed</b>	
Log rotation stops in the Expressway	Supported from X15.0

## Withdrawn or Deprecated Features and Software

The Expressway product set is under continuous review and features are sometimes withdrawn from the product or deprecated to indicate that support for them will be withdrawn in a subsequent release. This table lists the features that are currently in deprecated status or have been withdrawn since X12.5.

Feature / Software	Status
Support for Microsoft Lync Server	Withdrawn For more information, see <a href="#">link</a> .
Hardware Security Module (HSM) Support	Withdrawn from X14.2
Support for Microsoft Internet Explorer browser	Deprecated from X14.0.2
VMware ESXi 6.0 (VM-based deployments)	Deprecated
Cisco Jabber Video for TelePresence (Movi) <b>Note: Relates to Cisco Jabber Video for TelePresence (works in conjunction with Cisco Expressway for video communication) and not to the Cisco Jabber soft client that works with Unified CM.</b>	Deprecated
FindMe device/location provisioning service - Cisco TelePresence FindMe/Cisco TelePresence Management Suite Provisioning Extension (Cisco TMSPE)	Deprecated
Expressway Starter Pack	Deprecated
Smart Call Home preview feature	Withdrawn X12.6.2
Expressway built-in forward proxy	Withdrawn X12.6.2
Cisco Advanced Media Gateway	Withdrawn X12.6
VMware ESXi 5.x (VM-based deployments)	Withdrawn X12.5

## No Support for Ray Baum's Act

Expressway is not a Multiline Telephone System (MLTS). Customers who comply with the requirements of [Ray Baum's Act](#) should use Cisco Unified Communication Manager in conjunction with Cisco Emergency Responder.

## Related Documentation

Resource	Description
<b>Support Videos</b>	Videos provided by Cisco TAC engineers about certain common Expressway configuration procedures are available on the <a href="#">Expressway/VCS Screencast Video</a> List page (search for “Expressway videos”).
<b>Installation - Virtual Machines</b>	Cisco Expressway Virtual Machine Installation Guide on the <a href="#">Expressway Installation Guides</a> page.
<b>Installation - Physical Appliances</b>	Cisco Expressway CE1300 Appliance Installation Guide on the <a href="#">Expressway Installation Guides</a> page.
<b>Basic Configuration for single-box systems</b>	Cisco Expressway Registrar Deployment Guide on the <a href="#">Expressway Configuration Guides</a> page.
<b>Basic Configuration for Paired box Systems (firewall traversal)</b>	Cisco Expressway-E and Expressway-C Basic Configuration Deployment Guide on the <a href="#">Expressway Configuration Guides</a> page.
<b>Administration and Maintenance</b>	Cisco Expressway Administrator Guide on the <a href="#">Expressway Maintain and Operate Guides</a> page (includes Serviceability information).
<b>Clustering</b>	Cisco Expressway Cluster Creation and Maintenance Deployment Guide on the <a href="#">Expressway Configuration Guides</a> page.
<b>Certificates</b>	Cisco Expressway Certificate Creation and Use Deployment Guide on the <a href="#">Expressway Configuration Guides</a> page.
<b>Ports</b>	Cisco Expressway IP Port Usage Configuration Guide on the <a href="#">Expressway Configuration Guides</a> page.
<b>Mobile and Remote Access</b>	Mobile and Remote Access Through Cisco Expressway Deployment Guide on the <a href="#">Expressway Configuration Guides</a> page.
<b>Open Source Documentation</b>	Open Source Documentation Cisco TelePresence Video Communication Server and Expressway Series Open Source Documentation on the <a href="#">Licensing Information</a> page.

Resource	Description
<b>Cisco Meeting Server</b>	<p>Cisco Meeting Server with Cisco Expressway Deployment Guide on the <a href="#">Expressway Configuration Guides</a> page.</p> <p>Cisco Meeting Server API Reference Guide on the <a href="#">Cisco Meeting Server Programming Guides</a> page.</p> <p>Other Cisco Meeting Server Guides are available on the <a href="#">Cisco Meeting Server Configuration Guides</a> page.</p>
<b>Cisco Webex Hybrid Services</b>	<a href="#">Hybrid services knowledge base</a>
<b>Microsoft Infrastructure</b>	<p>Cisco Expressway with Microsoft Infrastructure Deployment Guide on the <a href="#">Expressway Configuration Guides</a> page.</p> <p>Cisco Jabber and Microsoft Skype for Business Infrastructure Configuration Cheatsheet on the <a href="#">Expressway Configuration Guides</a> page.</p>
<b>Rest API</b>	<p>Cisco Expressway REST API Summary Guide on the <a href="#">Expressway Configuration Guides</a> page (high-level information only as the API is self-documented).</p> <p>This guide is no longer updated and published.</p>
<b>Multiway Conferencing</b>	Cisco TelePresence Multiway Deployment Guide on the <a href="#">Expressway Configuration Guides</a> page.
<b>Virtualization for Cisco Expressway Series</b>	<a href="#">Virtualization for Cisco Expressway</a>
<b>Cisco Collaboration Systems Release Compatibility Matrix</b>	<a href="#">Compatibility Matrix</a>
<b>Upgrade of Video Communication Server (VCS) / Expressway X14.x - Guide &amp; FAQ</b>	<a href="#">Guide and FAQ</a>
<b>Interoperability Database</b>	<a href="#">Interoperability Database</a>

## Features and Changes

### Security Enhancement

Various security-related improvement(s) apply in this release as part of ongoing security enhancements. Much of this is behind the scenes, but some changes affect the user interfaces or configuration.

### X15.0.1 release

There are no new features and changes in this release.

## X15.0 release

### LDAP TLS support for different ports other than 636 or 3269

Expressway supports LDAPS for port 636 and LDAP over TLS (START\_TLS)/LDAP Over TCP for port 389 or any other non-standard port.

While using SRV records, the LDAP communication port is assigned through DNS.

Presently, the Administrator can only select Encryption as TLS or OFF from the Web User Interface. Expressway uses "START\_TLS" functionality on any non-standard port defined for LDAP over TLS. Expressway first checks for "START\_TLS" functionality even when Encryption is set to OFF. Otherwise, it proceeds with "LDAP Over TCP."

In the previous versions,

Port	Encryption	Server Certificate	Notes
636	TLS	Installed under the Trusted CA list at both ends	Communication in such case start by establishing TLS session towards LDAP and after successful TLS negotiation, the communication is encrypted.
389	OFF	--	Communication in such cases starts with Expressway establishing a TCP session towards the LDAP server and then checks for "START_TLS" functionality support from the LDAP side.  If the response for "START_TLS" is a success, TLS is negotiated between the parties, and the session is encrypted.
			Communication is encrypted by "START_TLS" negotiation.  If the session cannot be established using "START_TLS" functionality over TCP port 389 or a non-standard port, the LDAP session would be negotiated over TCP with "No Encryption." For example, the session fails to establish due to "Unknown CA" even after "START_TLS" is negotiated successfully.  Communication with LDAP is established over TCP.

The following are the limitations with this behavior.

- Expressway used LDAP(S) only with well-defined LDAP port 636.
- For any other port, for example, 389 or a non-standard port, Expressway is hard-coded to always use the "Start\_TLS" feature even if the encryption is set to OFF.
- Customers might not be aware that Expressway is using the "Start\_TLS" feature in the background.

From X15.0 release,

Expressway supports LDAP port customization and administrators will be able to setup desired encryption.

Administrator will be able to select Encryption as TLS, STARTTLS or OFF from the Web User Interface.

After upgrading to X15.0 release, you must manually select an appropriate setting depending on the LDAP server configuration.

**Note:** Before upgrading to X15.0 release, you must manually set the “administration authentication source” as “Both” to avoid accidental locking out after upgrade.

Expressway is set up to use the following ports listed in the table.

Port	Encryption	Server Certificate	Notes
389	TLS	Installed under Trusted CA list on both the ends	Earlier it was only possible with default LDAP(S) port 636. Communication in such cases start by establishing TLS session towards LDAP. After successful TLS negotiation, the communication is encrypted.
636	STARTTLS	Installed under Trusted CA list on both the ends	TCP session towards LDAP is established on port 636 (which is a well-known LDAP(S) port) but here used for LDAP over TLS. After successful negotiation for “START_TLS”, the communication is encrypted.
Custom LDAP port 3636	OFF	--	When compared with the earlier implementation, Expressway uses TCP and does not look for “START_TLS” negotiation anymore. Communication with LDAP is established over TCP.
3389	TLS	Installed under Trusted CA list on both the ends	Earlier it was only possible with default LDAP(S) port 636. Communication in such a case start by establishing TLS session towards LDAP and after successful TLS negotiation, the communication is encrypted

For more information, see [Cisco Expressway Administrator Guide](#).

### Removal of Banned Ciphers

Expressway supports the following banned ciphers by default. From the X15.0 release, it is recommended to remove these ciphers from the **Maintenance > Security > Ciphers** page.

TLS\_DHE\_RSA\_WITH\_AES\_128\_CCM

TLS\_RSA\_WITH\_AES\_256\_CCM

TLS\_RSA\_WITH\_AES\_128\_CCM

For more information, see [Cisco Expressway Administrator Guide](#).

## Management Enhancement X15.0.1 release

There are no new features and changes in this release.

## X15.0 release

### Cross Site Request Forgery Protection Header

A new header has been included to prevent such attacks and must now be sent with XML Put, SOAP, and CDB Rest API requests whenever CSRF Protection is enabled. For the commands to enable or disable CSRF Header: X-CSRF-Header.

The CSRF Protection Header is introduced for CDB, XMLPut, and SOAP APIs.

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**Disabling or Enabling the Cross-Site Request Forgery Protection:** CSRF Protection is Disabled by default.

The following CLI commands are introduced to enable or disable the custom header.

- xConfiguration Security CSRFProtection Status: "Disabled"
- xConfiguration Security CSRFProtection Status: "Enabled"

For more information, see [Cisco Expressway Administrator Guide](#) (see the chapter "Reference Material - xConfiguration Commands").

## Mobile Remote Access Enhancement X15.0.1 release

There are no new features and changes in this release.

### X15.0 release

#### Webex Unified CM Calling Support Auto-extend Refresh Token

The Webex App (Unified CM Registered) prompts users to log in every 60 days to maintain phone service. Administrators can configure the periodicity of these prompts. The default timing is 60 days.

Users can cancel their login to the Webex App. However, they will still have access to messaging, meetings, and internal calls. If the calls are not properly authenticated, then users will experience phone service disconnects and missed calls. Additionally, the User Experience can become confusing where internal (Call on Webex) calls may work, but PSTN calls will fail.

Set up the automatic Webex Application Refresh Token renewal for improved user calling experience. This feature is available since November 2023, along with Unified CM 15. The Expressway X15 and Webex App 6.8 also support this feature.

The **benefits** of this feature include end users not missing calls on the Webex App and experiencing calls on Webex only with PSTN calls failing.

## Preview Features

Some features in this release are provided in "preview" status only, because they have known limitations or incomplete software dependencies. Cisco reserves the right to disable preview features at any time without notice.

Preview features should not be relied on in your production environment. Cisco Technical Support will provide limited assistance (Severity 4) to customers who want to use preview features.

#### Headset Capabilities for Cisco Contact Center - MRA Deployments

This feature applies if you deploy Expressway with Mobile and Remote Access. It is currently provided in Preview status only.

New demonstration software now provides some Cisco Contact Center functions on compatible Cisco headsets. From X12.6, Expressway automatically supports these new headset capabilities as a preview feature, if the involved endpoint, headset, and Unified CM are running the necessary software versions.

The feature is enabled from the Unified CM interface, and you do not need to configure anything on Expressway.

More information is available in the white paper [Cisco Headset and Finesse Integration for Contact Center](#).

### KEM Support for Compatible Phones - MRA Deployments

We have not officially tested and verified support over MRA for the Key Expansion Module (KEM) accessory for Cisco IP Phone 8800 Series devices. However, we have observed under lab conditions that KEMs with multiple DNs work satisfactorily over MRA. These are not official tests, but in view of the COVID-19 crisis, this may be useful information for customers who are willing to use an unsupported preview feature.

SIP path headers must be enabled on Expressway, and you need a Unified CM software version that supports path headers (release 11.5(1)SU4 or later is recommended).

## REST API Changes

The REST API for Expressway is available to simplify remote configuration. For example, by third party systems such as Cisco Prime Collaboration Provisioning. We add REST API access to configuration, commands, and status information as new features are added, and also selectively retrofit the REST API to some features that were added in earlier versions of Expressway.

The API is self-documented using RAML, and you can access the RAML definitions at <https://<ipaddress>/api/raml>.

Configuration APIs	API Introduced in Version
NA	X15.0.1
NA	X15.0

## Other Changes in this Release

### X15.0 release

- You can only enable **PreRoutedRouteHeader (PRRH)** on the Expressway Select image. In the Expressway image, PRRH is disabled, and the Command Line Interface (CLI) option is unavailable.
- A new parameter “Webrtc Sessions” is added to the Expressway-E **Overview** page.
- **Log rotation stops in the Expressway**

**Issue Description:** Developer/Network/Sensors/Messages/Kernel logs stop rotating whenever there is a crash on the Expressway.

**Cause:** This is caused due to the creation of new crash log files (which are hard linked to existing log files) under /mnt/harddisk/log. The size of the logs increases and fails to rotate.

**Example of files created:**

- crash-XXXX-XX-XXXX-messages

- crash-XXXX-XX-XXXX-developer\_log
- crash-XXXX-XX-XXXX-network\_log

**Solution:** Delete all files of the form  
**crash-XXXX-XX-XXXX-messages/developer\_log/network\_log/sensors/kernel**

## Software Downloads Folder Path

The software downloads folder and path **apply** to both Unrestricted Distribution (Capped Version) and Restricted Distribution (Uncapped Version). This was implemented from X14.2.6, X14.2.7, and applies to all X14.3.x releases.

### Important:

Cisco Expressway is available in the software download folder on [software.cisco.com](https://software.cisco.com).

### Path:

1. From the **Downloads Home** -> **Unified Communications** -> **Communications Gateways** -> **Expressway Series** -> **Expressway**.

Or

From the **Downloads Home** -> **Unified Communications** -> **Communications Gateways** -> **Expressway Series** -> **Expressway Select**.

2. Select a **Software Type** -> **Expressway Core and Edge**.

For more information, see [Cisco Expressway Administrator Guide](#).

## Smart Licensing Export Compliance – Restricted Distribution (Uncapped Version)

### Note:

- Product Activation Keys (PAK) Licensing (Option Keys) are removed from Cisco Expressway X14.2 release.
- Smart License is default and the only licensing mode for Expressway-C and Expressway-E.

	Cisco Expressway Select	Cisco TelePresence Video Communication Server (VCS)	Notes
<b>CAP of 2500 No secured/crypto sessions</b>	No	X14.3.1 and Expressway Select X14.3.1 is not supported on the Cisco TelePresence Video Communication Server (VCS) series. The end of the software maintenance release date was 29-December 2022. Cisco has	
<b>Support Advanced Account Security (AAS) and FIPS140-2 Cryptographic Mode</b>	Yes		AAS and FIPS140-2 feature(s) is enabled by default in Expressway Select.
<b>Smart Licensing</b>	Yes		



	Cisco Expressway Select	Cisco TelePresence Video Communication Server (VCS)	Notes
		announced end-of-sale and end-of-life dates for the Cisco TelePresence Video Communication Server (VCS) product. Details are available at the following link.	

For more information, see [Cisco Expressway Administrator Guide](#).

## Limitations

### Some Expressway Features are Preview or Have External Dependencies

We aim to provide new Expressway features as speedily as possible. Sometimes it is not possible to officially support a new feature because it may require updates to other Cisco products which are not yet available, or known issues or limitations affect some deployments of the feature. If customers might still benefit from using the feature, we mark it as “preview” in the release notes. Preview features may be used, **but you should not rely on them in production environments (see Preview Features Disclaimer)**.

Occasionally we may recommend that a feature is not used until further updates are made to Expressway or other products.

## Open and Resolved Issues

Follow the links below to read the most recent information about the open and resolved issues in this release.

- [All open issues, sorted by date modified \(recent first\)](#)
- [Issues resolved in X15.0.1](#)
- [Issues resolved in X15.0](#)

## Notable Issue Resolved

### X15.0.1 release

The following notable issue is resolved.

**taa-chkpasswd** randomly consuming high CPU beyond the normal duration while interacting with LDAP for user authentication

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## Notable Issue

### X15.0.1 release

#### **taa-chkpasswd randomly consuming high CPU beyond the normal duration while interacting with LDAP for user authentication**

Earlier, taa-chkpasswd randomly consumed a high CPU beyond the normal duration while interacting with LDAP for user authentication.

This behavior was observed while connecting to the Active Directory (AD). Connectivity issues must generate error responses and not lead to high CPU utilization.

After Fix, CPU consumption is in the minimal range, even if connectivity issues persist.

This refers to bug ID [CSCwh76084](#).

## Using the Bug Search Tool

The Bug Search Tool contains information about open and resolved issues for this release and previous releases, including descriptions of the problems and available workarounds. The identifiers listed in these release notes will take you directly to a description of each issue.

#### **To look for information about a specific problem mentioned in this document:**

1. Using a web browser, go to the [Bug Search Tool](#).
2. Sign in with a cisco.com username and password.
3. Enter the bug identifier in the **Search** field and click **Search**.

#### **To look for information when you do not know the identifier:**

1. Type the product name in the **Search** field and click **Search**.
2. From the list of bugs that appears, use the **Filter** drop-down list to filter on either *Keyword*, *Modified Date*, *Severity*, *Status*, or *Technology*.

Use **Advanced Search** on the Bug Search Tool home page to search on a specific software version. The Bug Search Tool help pages have further information on using the Bug Search Tool.

## Appendix 1: Ordering Information

You can access additional resources to get help and find more information.

### PID Details

**Note:**

- The list of PIDs in the table below applies to both Unrestricted Distribution (Capped Version) and Restricted Distribution (Uncapped Version).
- The following PIDs A-SW-EXPWY-15X-K9 and A-SW-EXPWY-15XU-K9 are found under A-FLEX-3 PID.

Product Identifier (PID)	Description	Path on CCO
<b>A-SW-EXPWY-15X-K9</b>	Restricted, can exceed 2500 signaling sessions	Products > Cisco Products > Unified Communications > Communications Gateways > Cisco Expressway Series > Cisco Expressway Select
<b>A-SW-EXPWY-15XU-K9</b>	Unrestricted has a cap of 2500 signaling sessions. This is applicable for new customers who want to purchase Expressway Select.	Products > Cisco Products > Unified Communications > Communications Gateways > Cisco Expressway Series > Cisco Expressway
<b>L-EXPWY-15.X-K9=</b>	\$0 Product Identifier (PID) for <a href="#">Expressway Select</a> <sup>2</sup> This is applicable for existing customers who want to upgrade to Expressway Select image.	Products > Cisco Products > Unified Communications > Communications Gateways > Cisco Expressway Series > Cisco Expressway Select
<b>L-EXPWY-PLR-K9=</b>	PLR for Expressway	Products > Cisco Products > Unified Communications > Communications Gateways > Cisco Expressway Series > Cisco Expressway Select

### Ordering Guide

For details, see [Cisco Collaboration Flex Plan 3.0 \(Flex 3.0\) Ordering Guide](#).

**Note:**

- On CSSM, in the **Create Registration Token** page, the **Allow export-controlled functionality on the products registered with this token**. The check box does not apply to Expressway images.
- Ensure the Quantity of 0\$ PID should equal the number of nodes.

<sup>2</sup> Restricted, can exceed 2500 signaling sessions for existing customers who need to upgrade to uncapped images.

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## Appendix 2: Accessibility and Compatibility Features

A Voluntary Product Accessibility Template (VPAT®) is a document that explains how information and communication technology (ICT) products such as software, hardware, electronic content, and support documentation meet (conform to) the Revised 508 Standards for IT accessibility.

For details, see [Current VPAT Documents → TelePresence](#).

## Appendix 3: Upgrade Path

**Purpose** - This section is to guide you through the Expressway upgrade process.

The following table lists the various upgrade path(s) for Cisco Expressway and Cisco Expressway Select.

Expressway Core and Edge Releases	
<b>From X14.0 restricted to X14.3.1/X14.3.2/X14.3.3/X15.0/X15.0.1 unrestricted</b>	
<b>Option 1:</b>	X14.0 restricted → 0\$ PID → X14.3.1/X14.3.2/X14.3.3/X15.0/X15.0.1 unrestricted
<b>Option 2:</b>	X14.0 restricted → 0\$ PID → X14.0 unrestricted → X14.3.1/X14.3.2/X14.3.3/X15.0/X15.0.1 unrestricted
<b>From X12.x to any X15.x upgrade</b>	
Any version of X15.x can be migrated to both restricted and unrestricted images.	
<b>From X12.x to any X14.x or later release upgrade / From X12.x restricted to any X15.x unrestricted or later upgrade</b>	
There is no restriction on upgrading from X12.x to X15.x. However, the customer should convert the licensing method (from the legacy PAK license method to the Smart Licensing method) prior to the X15.x upgrade to avoid any Smart Licensing registration/account/license issues after the upgrade.	
<b>Two stage upgrades</b>	
Upgrade from X8.x to X12.x - It is a two-stage upgrade approach. <b>Path:</b> X8.10 → X8.11 → X12.x → X14.x → X15.x or later versions.	
<b>Compatibility</b>	
<b>Note:</b>	
<ol style="list-style-type: none"><li>1. Upgrade from any version prior to X8.11.4 - Requires an intermediate upgrade to X8.11.4.</li><li>2. You can directly upgrade from version X8.11.4 or later to X15.x. No intermediate version is required.</li></ol>	

For more information, see [Upgrade of Video Communication Server \(VCS\) / Expressway X15.x - Guide & FAQ](#).

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