# What's changed

<table>
<thead>
<tr>
<th>Version</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 09, 2020</td>
<td>2.9.0 added</td>
</tr>
<tr>
<td>April 01, 2020</td>
<td>2.8.2 added</td>
</tr>
<tr>
<td>February 20, 2020</td>
<td>2.8.1 added</td>
</tr>
<tr>
<td></td>
<td>2.5.x moved to end of software maintenance releases.</td>
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<tr>
<td>December 12, 2019</td>
<td>2.6.4 added.</td>
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<tr>
<td></td>
<td>2.6.3 corrected to show updated browser support (documentation omission).</td>
</tr>
<tr>
<td>December 02, 2019</td>
<td>2.7.1 added.</td>
</tr>
<tr>
<td>November 20, 2019</td>
<td>First published.</td>
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</tbody>
</table>
New features/changes summary

This document gives a brief summary overview of the new features and changes in each published version of Meeting Server software. For full details for each release and Resolved Issues, see the relevant release note:


For full details of browser support for each software version, see Cisco Meeting App WebRTC Important Information.

Version 2.9.0
(Release April 2020)

- Cisco Meeting Server web app (Web bridge 3.0)* is a new meeting join and user portal. Web app will eventually supersede Cisco Meeting App WebRTC.
- Custom email invites for use with the new Cisco Meeting Server web app.
- an additional lock mode that allows meetings to be locked so all participants are held in a lobby to prevent them joining a meeting until either they are admitted through the API or the meeting is unlocked by any one who has privileges to do so (not necessarily the host). (The existing lock mode allows certain participants to bypass the lock.)
- a method to admit participants from the lobby into a meeting using a new API command.
- support for configuration of a third party SIP recorder – when recording is started a SIP URI is called instead of using the Meeting Server recorder component.
- support for panoramic video layout experience in two participant meetings. This feature supports the new panorama endpoints. In version 2.9, this is beta support.
- support for 4K content* on any endpoint that supports 4K content.
- improved video/content quality for Chromium browsers*.
- increased security with support for stronger ciphers.
- support to allow far end camera control (FECC) on remote systems' cameras to be initiated using the Meeting Server API.
- simplified API user interface available on the Meeting Server web interface.
- Ability to enable Automatic Gain Control (AGC), introduced in 2.8 as a beta feature is now fully supported.
- support for creating and applying coSpace templates using the API.

Note: Features marked with an asterisk (*) are not supported on Acano X-Series in version 2.9.
Version 2.8.2
(Release April 2020)
  - Resolved issues only – no feature changes. See section 4.1 Resolved Issues of 2.8.2 release note for more information.

Version 2.8.1
(Release February 2020)
  - Default behavior for H.264 for Chromium browsers changed to allow 1080p main and content streams to be decoded using Chrome’s software decoder, thereby improving the quality and user experience of the meeting.
  - Resolved Issues

Version 2.8.0
(Release November 2019)
  - Customizable layouts to allow Administrators more flexibility to create and apply custom layouts that suit their specific needs.
  - Far end camera control (FECC) support to all SIP endpoints that support FECC, allowing administrators to remotely control the camera at the far end.
  - Audio prompts for lock/unlock meeting status and how many participants are in the meeting.
  - Ability to enable Automatic Gain Control (AGC). This is a beta feature only in this release.
  - ESXi support improvements on M4 and specs-based servers for ESXi 6.7 and ESXi6.5 Update 2 and later builds.
  - Ability to disable peer to peer ICE negotiation.
  - Increase in the maximum size of packet capture to 1GB.

Version 2.7.1
(Release November 2019)
  - Beta support for Yandex browser in WebRTC app
  - Beta support for Chromium-based Microsoft Edge browser in WebRTC app
  - New joining options with no microphone or camera for WebRTC app
Version 2.7.0
(Release August 2019)
- Enhancements to the pane placement feature first introduced in version 2.4
- Performance improvements in content sharing between Lync/Skype for Business clients and non-Lync clients (SIP endpoints and Cisco Meeting App users)
- Enforces the use of certificates on database clients and database servers within a database cluster
- Utilization statistics added to syslog to aid understanding of Meeting Server utilization
- ICE tracing added to the Detailed tracing page of the Web Admin Interface

End of Software Maintenance Releases

Version 2.6.4
(Release December 2019)
- Beta support for Chromium-based Microsoft Edge browser in WebRTC app.

Version 2.6.3
(Release October 2019)
- Beta support for Yandex browser in WebRTC app
- New joining options with no microphone or camera for WebRTC app

Version 2.6.2
(Release August 2019)
- Resolved issues only – no feature changes. See section 4.1 Resolved Issues of 2.6.2 release note for more information.

Version 2.6.1
(Release May 2019)
- Additional browser support for WebRTC app
- X-series support (not supported in 2.6.0)
Version 2.6.0
(Release April 2019)

- Change to PMP Plus license usage and changes to license reporting
- Support for Skype for Business 2019
- Ability to move a participant between conferences
- Increase call capacity on Cisco Meeting Server 2000s within Call Bridge Groups
- Support for ESXi 6.7 on the Cisco Meeting Server 1000 M5.
- Two new features to improve serviceability to help Cisco Support in diagnosing Meeting Server issues
- ESXi 5.5 and earlier are no longer supported versions of VMware for Cisco Meeting Server.
- Dual screen endpoints are enabled by default.
- Support for more video streams over distribution links, first previewed in version 2.3, is still a preview feature.

Note: regarding chat message board: For existing deployments that use chat message boards, chat will remain enabled when you upgrade to 2.6. Otherwise, you will need to use the API to create a callProfile with parameter messageBoardEnabled set to true.

Version 2.5.4
(Release Sept 2019)

- Beta support for Yandex browser in WebRTC app
- New joining options with no microphone or camera for WebRTC app

Version 2.5.3
(Release April 2019)

- Additional browser support for WebRTC app

Version 2.5.2
(Release March 2019)

- Additional browser support for WebRTC app
Version 2.5.1
(Release January 2019)
- Additional browser support for WebRTC app
- New Media Module Status field in the Web Admin interface

Version 2.5.0
(Release December 2018)
- Host branding files locally on Meeting Server, rather than using a separate web server
- Additional browser support for the WebRTC app
- New features improving serviceability to help Cisco Support in diagnosing Meeting Server issues
- New MMP command that allows specific pre-release features to be switched on and off
- Support for more video streams over distribution links, first previewed in version 2.3, is still a preview feature

Version 2.4.7
(Release June 2019)
No new functionality introduced. Resolved issues only.

Version 2.4.6
(Release April 2019)
- Additional browser support for WebRTC app

Version 2.4.5
(Release April 2019)
- Safari on iOS for iPhones now fully supported

Version 2.4.4
(Release March 2019)
- Additional browser support for WebRTC app
Version 2.4.3
(Release January 2019)
- Additional browser support for WebRTC app
- New Media Module Status field in the Web Admin interface
- WebRTC App support using Safari on iOS.

Version 2.4.2
(Release November 2018)
- Additional browser support for WebRTC App.
- Office 365 PSTN Audio support

Version 2.4.1
(Release October 2018)
No new functionality introduced. Resolved issues only.

Version 2.4.0
(Release September 2018)
- Improved mute and unmute meeting controls for Lync, Skype for Business and O365 meetings and a visual indicator on SIP endpoints to show when the endpoints have been muted/unmuted on the AVMCU server (dual homed and gateway calls).
- Facility to control which participant appears in which pane on an endpoint connected to the Meeting Server
- Increase in call capacity on the Cisco Meeting Server 2000
- Load balancing in Expressway deployments
- Support for the WebRTC version of the Cisco Meeting App on more web browsers
- Uploader tool to simplify uploading Meeting Server recordings to the video content manager, Vbrick, from a configured NFS. (Fully released feature from version 2.4.0.)
- Ability to configure the recording resolution of the Recorder
- Activation key for unencrypted media
- Support for notifying "events clients" in real-time, of changes that are occurring on the Meeting Server
- Support for use of DTMF key sequences in clustered Call Bridge deployments
- Trust stores on the Call Bridge and Web Bridge. The trust stores can hold a certificate whitelist for XMPP server verification. In addition the Call Bridge trust store can hold a certificate white list of Call Bridges in a cluster, increasing the security of the cluster.

- Support for more video streams over distribution links creating a more consistent video experience from remote single, dual and three screen end point systems. (Still a preview feature.)

- Call diagnostic information for active calls added to the Meeting Server log bundle (includes the syslog and live.json files).

- Additional MMP commands

- New API functionality

- New CDR indicates that a conference has been recorded by an endpoint such as a Lync client at any given time.

- No longer need to purchase a branding license to apply branding to the WebRTC app login page, IVR messages, SIP or Lync call messages or invitation text.

- From version 2.4, Meeting Server software no longer supports Microsoft Hyper-V.

- From version 2.4, the Web Bridge correctly validates the XMPP Server’s TLS certificate. If WebRTC app users have difficulty logging in after you upgrade the Meeting Server, then check that the uploaded XMPP certificate follows the advice in the Certificate Guidelines. Specifically, that the SAN field holds the domain name of the XMPP server. Prior to version 2.4 there were issues in XMPP certificate validation.

**Note about incoming calls:** By default incoming calls are not allowed. To allow incoming calls to Cisco Meeting App users, set parameter `canReceiveCalls=true` for API object `/user/profiles/<user profile id>`.

**Version 2.3.11**

(2.3.0 release December 2017 – 2.3.11 release March 2019)

As 2.3.x release is end of software maintenance, all new features and important information for all 2.3.x versions are rolled up into this single list:

- support introduced for the WebRTC app using Google Chrome version 72 (introduced in version 2.3.10).

- Office 365 PSTN audio support for participants joining an AVMCU conferences (introduced in version 2.3.9).

- improved guest join behavior when web link access is disabled (introduced in version 2.3.3).

- an improved meeting experience for Lync and Skype for Business participants. The Meeting Server sends a high resolution and a low resolution H.264 video stream per video participant.
to the AVMCU. These dual streams overcome the poor video quality experienced by participants when a Lync client that can only receive a lower resolution joins the call.

- you can choose the behavior of the Call Bridge when connecting SIP participants to Lync conferences.
- support for the new Cisco Meeting Apps, version 1.10, which have an improved, more intuitive user interface, including the facility to lock and unlock conferences through the user interface, rather than use a DTMF keypad. For more information, see the Cisco Meeting App version 1.10 release notes.
- a new WebRTC app with an improved, more intuitive, user interface in keeping with the new Cisco Meeting Apps, version 1.10. There are also changes to customizing the WebRTC sign in.
- support for load balancing Cisco Meeting App calls to spaces using Call Bridge Goups.
- you can prevent incoming audio-only calls from creating video streams for outgoing calls to a new destination when the Meeting Server acts as a gateway.
- syslog messages from a Cisco Meeting Server 2000 now indicate which media blade was the source of the error message.
- support for ESXi 6.5 Update 1 and also ESX 6.0 Update 3 on the Cisco Meeting Server 1000 and on generic Cisco Meeting Server VM deployments.
- support for dual screen endpoints now enabled by default.
- support for TLS 1.2.
- support for more video streams over distribution links creating a more consistent video experience from remote single, dual and three screen end point systems. This is a preview feature.
- an Uploader tool to simplify the work flow for uploading Meeting Server recordings to the video content manager, Vbrick, from a configured NFS. This is a preview feature.
- additional MMP commands.
- new API functionality
- a few miscellaneous improvements

**Version 2.2.14**

(2.2.0 release May 2017 – 2.2.14 release December 2018)

As 2.2.x release is end of software maintenance, all new features and important information for all 2.2.x versions are rolled up into this single list:

- capability to determine whether to display security icons on endpoints
- support for Office 365 dual homed experience with OBTP scheduling
• enhanced support for dual screen endpoints
• load balancing for outbound calls to SIP endpoints
• support for setting the maximum quality levels for main video and content
• improved DTMF comma handling
• layout and screen changes to improve user experience, including support for important person in main video
• more control over UDP signaling for SIP
• diagnostic tools to help Cisco Support troubleshoot issues
• additional API objects and parameters to support these new features
• additional CDR support for new features.

Note about rebranding the background image to the login page for the WebRTC app: From Meeting Server 2.1.2 the Meeting Server no longer supports the redesigned Web Bridge 2.0. Instead it supports Web Bridge 1.9 which does support rebranding the background image for the login page to the WebRTC app.

Version 2.1.12

(2.1.0 release December 2016 – 2.1.12 release Sept 2018)

As 2.1.x release is end of software maintenance, all new features and important information for all 2.1.x versions are rolled up into this single list:

• support for Call Bridge Groups and load balancing calls
• support for ActiveControl
• support for streaming meetings
• improved join options for meetings
• improved meeting experience for Lync and Skype for Business participants
• support for Cisco Expressway X8.9
• a few miscellaneous new features
• additional MMP commands
• additional API objects and parameters to support these new features
• additional CDR support for new features
• some Cisco endpoints no longer supported
Note about incoming calls: From Meeting Server version 2.1, there is a change to the way the Cisco Meeting App handles incoming calls. By default incoming calls are not allowed. To allow incoming calls to Cisco Meeting App users, see the full 2.1.12 release note. To allow incoming calls to Cisco Meeting App users, set parameter `canReceiveCalls=true` for API object `/user/profiles/<user profile id>`.

Version 2.0.16

(2.0.0 first release August 2016 – 2.0.16 release August 2017)

As 2.0.x release is end of software maintenance, all new features and important information for all 2.0.x versions are rolled up into this single list:

- support for the Cisco Meeting Server 1000.
- support for Cisco Multiparty Licensing (personal and shared).
- rebranding of the Meeting Server to reflect it is now a Cisco product, this includes a new product name, a new Cisco Lobby screen, rebranded Web Admin Interface, new voice prompts, modified name label behavior, and new default background images, and Join pane for the Web Bridge.
- ability to escalate a 2-way call on Cisco Unified Communications Manager (CUCM) to a conference on the Meeting Server via ad hoc call escalation.
- ability to control the bandwidth for sharing content on Lync and Skype for Business calls.
- support for TMS to schedule calls on the Meeting Server, see the TMS release notes for further information.
- addition of a “onePlusN” layout which automatically changes the screen layout on SIP endpoints as more participants join the meeting.
- ability to set the maximum duration for a call.
- ability to restrict audio, video, and presentation sharing for users of the Cisco Meeting App. For example, people just using the Cisco Meeting App for pairing, to share a presentation or to control a meeting, do not need media. These restrictions do not apply to dialing directly into the call via SIP, or slaving to a SIP endpoint.
- ability to control non-member access to a space, for example allow or prevent joining via a SIP endpoint, and controlling guest access.
- an increase in supported cores from 64, to accommodate the Cisco Meeting Server 1000. To take advantage of this increase in cores, you will also need to upgrade to ESXi 6 and VM hardware version 11.
- ability to monitor the number of active database connections. A new syslog message will be generated every minute on each (database-enabled) server reporting the number of
connections in use on the database master, and its configured maximum number of connections (from release 2.0.1).

- from 2.0.4, the default configuration of the TURN server has changed. By default, the TURN server now listens on port 3478 for TCP communication from the Call Bridge, instead of port 443 as in previous releases.

- additional API objects and parameters to:
  - support Cisco User Licensing
  - control non-member access to a space (known as coSpace in the API)
  - disconnect a call after a set time
  - control whether additional parameters that are present in the destination URI of an incoming call, are forwarded to the destination URI of the outbound call
  - select onePlusN screen layout for SIP endpoints
  - restrict audio, video, and presentation sharing for users of the Cisco Meeting App
  - determine whether a Call Bridge is currently operating with clustering enabled
  - support bulk creation of spaces, for Cisco TelePresence Management Suite and other management tools

- Message board chat is disabled by default from version 2.0 if not used in previous versions. If this is a new deployment or your existing version does not use Cisco Meeting Apps or Acano clients, and you decide to deploy the Cisco Meeting Apps and want to allow users to use chat, then you need to enable chat via the API. This can be done before upgrading to version 2.0. The setting will then be retained when you upgrade.

  For existing version 1.9 deployments that use message board chat, chat will remain enabled when you upgrade to 2.0.

- The SIP and Lync Call Traversal feature first introduced in Acano Server release 1.8, is still a beta feature in version 2.0.x, and is not intended for a production environment. You are encouraged to use Cisco Expressway between remote Lync deployments and the Meeting Server, see the [Cisco Expressway with Cisco Meeting Server and Microsoft Federation deployment guide](https://www.cisco.com/c/en/us/support/docs/collaboration/collaboration-products/software/5668916078.html).
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