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CISCO
The bridge to possible

Cisco Meeting Server, Web App, Meeting Management

Contents

Product overview

Cisco® Meeting Server is a scalable, secure, on-premises meetings solution. Its default experience is aligned to Cisco Webex® and it also provides extensive configurability to customize video, audio, and web communication to meet the unique collaboration needs of any customer.

The Cisco Meeting Server web app allows anyone to create, join, and run meetings easily from a supported browser. Using browsers that support WebRTC, users can quickly join a meeting without the need to download an application simply by clicking a link. Once in the meeting, the web app provides a complete meeting experience with roster lists and in-meeting controls. The web app is also the user's portal to create meeting spaces, which they can then modify (for example, change the space's name, add PINs, etc.) and share meeting join information.

Cisco Meeting Management is a mandatory component for Cisco Meeting Server; it connects to Cisco Smart licensing to simplify purchasing, registering, and monitoring licenses. In addition, it enables administrators to provision conference templates for users as well as for operators to monitor and manage meetings on Cisco Meeting Server. Operators can easily monitor all active meetings with controls, such as add, drop, or mute participants; change layouts; start or stop recording or streaming; and more.

Prominent features

High Scalability and Geographic Distribution

Meetings scale easily:

- Up to 24 Call Bridges can be deployed per cluster to offer scale (up to 21,000 concurrent HD calls), resiliency, and multiple geographical points of presence. A review by Cisco engineering is required in designs that require eight or more servers. Call Bridges can be deployed on a mixture of hardware platforms, enabling customers to scale as required. Models include:
  - The Cisco Meeting Server 1000 M6, which is a low-cost virtualized Cisco UCS® server for entry-level deployments, supporting up to **160** HD ports
  - The Cisco Meeting Server 2000 M6, which is the industry's highest-capacity single server, supporting up to **1296** HD ports
  - Specification-based servers, which support up to 2.5 HD ports per physical core (further details can be found [on cisco.com)](on cisco.com)
- Clusters can be separated into call bridge groups to optimize load balancing and resource allocation based on proximity
- Call Bridge clusters support up to 40 calls per second. (This is inclusive of participants calling in as well as internal calls required to load balance, move participants, etc.)
- A meeting on a single Call Bridge supports up to 450 participants or up to 2,600 participants across multiple Call Bridges in a single cluster.
  - When meetings span multiple Call Bridge instances, intelligent distribution links are automatically maintained between Call Bridge instances to create a seamless, single meeting experience for all participants.
  - Conference recording and streaming are supported when you need to archive or to scale beyond the physical servers capabilities.

- Synchronize up to 300,000 Lightweight Directory Access Protocol (LDAP) users across a 24-node cluster, with a total of up to 500,000 spaces (number of users and spaces depend of the specification of the servers deployed, refer to deployment guides for specific details)

- The Cisco Meeting Server web app scales to the same limits as Session Initiation Protocol (SIP) video calls

  ◦ Audio over WebRTC is limited to 24,000 calls

  ◦ Cisco Meeting Server edge can support up to SIP capacity for external HD WebRTC calls, a Cisco Expressway™ cluster supports up to 800 external HD WebRTC calls.

- Cisco Meeting Management supports up to 10,000 meetings per week

  ◦ A cluster of 24 call bridges is supported with licensing only mode

  ◦ Small instances of Cisco Meeting Management support up to 10 call legs per second (peak usage) and 15 concurrent users (operators)

  ◦ Large instances of Cisco Meeting Management support up to 20 call legs per second (peak usage) and 25 concurrent users (operators)

User Experience

The default meeting experience is aligned to Webex and optimized for Cisco collaboration endpoints, allowing end users to concentrate on collaborating without worrying about how the technology works. Additionally, the meetings are fully customizable to support specific use cases:

- Specific meeting settings / experiences, participants permissions, etc. can all be pre-configured

- Which participants are seen on the screen and where they are displayed can be controlled through importance levels or through pane placement

- The ability to create and use unique custom layouts is also available via a separate license

  Cisco Meeting server is optimized to work with Cisco Webex Room, Board, Panorama and desk endpoints as well as Cisco Jabber®. These devices all get roster lists and in-meeting controls to enhance the meeting experience. Specific endpoints also support unique Cisco experiences with single, dual screen and panoramic layouts.

  Unlike most soft clients, the Cisco Meeting Server web app is not restricted to a fixed 16:9 aspect ratio. It will optimize the layout to the window size that is available. A simple example is providing a different layout if the devices are in portrait or landscape mode. If the user changes the window size or aspect ratio, the web app will optimize the layout (change the number and location of participants shown) in order to give the best view of participants and minimize wasted space.

  The web app also allows for the content to be displayed in a separate window to the video. This gives users more control over how they use their screen, as well as enabling a dual-screen experience with video on one screen and content on the other.

Meeting Management

Cisco Meeting Management displays active meeting information with controls for managing the Cisco Meeting Server deployment, without requiring the operator to understand the complexities of the underlying video bridge configuration and call setup. In addition it reports on license usage and allows admins to provision conference templates to simplify end-users' creation of spaces. Supported functions include:

- The ability to list active and upcoming meetings for a 24-hour period across Cisco Meeting Server cluster(s), as well as the ability to sort, filter, and search

- The ability to list participants in an active meeting

  ◦ See who is speaking in the conference

  ◦ Sort, filter, and search participants

  ◦ Mute and unmute audio for individuals, all, or groups of selected people or new participants

  ◦ Mute and unmute video

  ◦ Make participants important

  ◦ Change the layout (meeting wide or individually)

  ◦ Configure where specified participants appear on screen (both on Standard and Custom Layouts)

  ◦ Add or drop participants

  ◦ View call statistics (audio, video, or presentation)

  ◦ Start a recording or streaming session of the meeting

  ◦ Move participants between meetings

  ◦ Move participants to/from lobby

  ◦ Take Snapshots

- Display a dashboard of license usage

- LDAP import and daily sync for users with the ability to provision conference templates

- Configuration of blast dial conferences

- A meeting events log, which is retained for seven days

Simple, Predictable, All-in-One Commercial Model

Get users up and running easily, with licensing that:

- Enables customers to purchase subscription licenses that entitle them to the entire Meetings portfolio (cloud, hybrid, or on premises) or just on premises. Alternatively, perpetual licenses for the on-premises solution are also available

- Includes spaces (virtual meeting room environments), Cisco Meeting Server web app, Cisco Meeting Management, scheduling, Microsoft Skype for Business interoperability, and firewall traversal in one license

- Refer to the release notes of the Cisco Meeting Management for the latest supported licensing mode

Platform support

Cisco Meeting Server software is optimized to run on **Cisco Meeting Server** 1000 and 2000 appliances. In terms of scale, Table 1 shows the capacity a call bridge on **Cisco Meeting Server** can support on each server. It assumes call rates up to 2.5Mbps, 720p for content and G.711 for audio, other codecs and higher content resolution/framerate will reduce capacity (See the [installation guides](#) for more details). When meetings span multiple call bridges, distribution links are automatically created and also count against a server's call count and capacity.

One of the key benefits of Cisco Meeting Server is its ability to scale flexibly. Although Table 3 shows what can be achieved in certain scenarios, individual servers can be configured to allow more participants to join meetings by incrementally changing the quality experienced by existing participants. Alternatively, in larger deployments, conferences can be load-balanced to maximize effective capacity.

Table 1. Call Bridge capacity on supported servers

Type of call	Cisco Meeting Server 1000 M6[*]	Cisco Meeting Server 2000 M6[**]
Full HD calls **1080p60 video**	40	324
Full HD calls **1080p30 video**	80	648
HD calls **720p30 video**	160	1296
SD calls **448p30 video**	320	1875
Audio calls (G.711)	3000	3200

[*] Cisco Meeting Server 1000 M6 is a preconfigured version of the Cisco UCS C220 M6 Rack Server. Full specifications can be found at: https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-c-series-rack-servers/ucs-c220-m6-rack-server-ds.html. For Cisco Meeting Server 1000, Cisco Meeting Server runs on top of VMware, and a separate VMware license is required, which should be purchased directly from VMWare.

[**] Cisco Meeting Server 2000 M6 is a preconfigured Cisco UCS 5108 Blade Server Chassis with eight Cisco UCS B200 M6 Blade Servers. Full specifications can be found at: https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-5100-series-blade-server-chassis/data_sheet_c78-526830.html and https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/datasheet-c78-2368888.html. For Cisco Meeting Server 2000 M6, Cisco Meeting Server runs directly on the server and does not require VMware.

Cisco Meeting Server requirements for specifications-based servers can be found at: https://www.cisco.com/c/en/us/td/docs/conferencing/ciscoMeetingServer/Installation/virtualization-cisco-meeting-server.html

Cisco Meeting Management requirements for specification-based servers can be found at:

https://www.cisco.com/c/en/us/td/docs/conferencing/Cisco-Meeting-Management/Installation/virtualization-cisco-meeting-management.html

Product specifications

Table 2 lists the specifications for Cisco Meeting Server.

Table 2.   Specifications

Video standards	- H.261 - H.263 (+, ++) - H.264 AVC (baseline and high profile) - H.264 SVC - AV1 (for web app screen sharing) - WebM, VP8 - Microsoft RTV - HTML5/WebRTC - SIP, H.323, TIP - BFCP - RDP - Far End Camera Control (FECC) passthrough - RTMP and RTMPS
Audio standards	- AAC-LD - Speex - Opus - G.722, G.722.1, G.722.1c, G.728, G.729a, G.711a/u - Audio Gain Control (AGC)
Bandwidth	Up to 6000 kbps
Resolution and frame rate	- Up to 1080p at 60 fps for main video and up to 1080p30 / 4K 7 fps for content - Recordings can be configured between voice, 720p30, or 1080p30 - Streaming can be configured between 720p30 and 1080p30
Management	- Server management - LDAP-driven scripting language for configuration - Representational State Transfer (REST) API for assets, monitoring, and diagnostics - Call Detail Record (CDR) streaming for auditing - Syslog for diagnostics - Multitenancy support - Simple Network Management Protocol (SNMP) - Backup and restore
Account management and permissions	- Supports role-based permissions by integrating with Microsoft Active Directory (AD) or Open Lightweight Directory Access Protocol (OpenLDAP) - Daily synchronization with the enterprise directory provides for automatic user account creation and maintenance - Single Sign On (SSO) via SAML2 for users logging onto Cisco Meeting Server web app

Security and auditing	- IP media (video and audio) is Advanced Encryption Standard (AES) encrypted (industry-standard Secure Real-Time Transport Protocol [SRTP]) - All control data is authenticated and encrypted (industry-standard TLS and Secure Sockets Layer [SSL]) - Domain Name System Security Extensions (DNSSEC) - Security code or PIN option for spaces - On-screen visual indication of audio-only participants and encryption status - Field industry-standard strong cryptography protection of communications - JITC certified - FIPS-140-2 - Network Time Protocol (NTP) authentication key support - Support for integrated application audit logging to monitor system changes
Diagnostics and troubleshooting	- Syslog – local and remote - Crash logs - Log bundle - System log - Audit log - System configuration - Application configuration - System information - Configuration backup and restore
High availability	- Cisco Meeting Management supports an active-active high-availability model. - Each Cisco Meeting Management node builds its own view of the ongoing meetings on the Meeting Server clusters. As such, no information is shared between Meeting Management nodes.
Cisco Meeting Management client requirements	The browser needs to support and have enabled the following technologies: - WebSocket - HTML5 - JavaScript Cisco Meeting Management has been tested with the latest version of the following browsers: - Mozilla Firefox - Microsoft Edge - Google Chrome - Safari
Cisco Meeting Server web app device compatibility	Windows, Mac OS X, Apple iOS, and Android via WebRTC-capable browsers (Chrome, Firefox, Safari, Edge, and Yandex). Refer to the release notes for the Cisco Meeting Server web app for the latest supported operating systems and browser versions.

Ordering information

Following are the four main steps for ordering Cisco Meeting Server. Refer to the ordering guide at https://www.cisco.com/c/en/us/products/conferencing/meeting-server/sales-resources-listing.html for more information.

1. Customers should select their chosen platform. Cisco Meeting Server software has been optimized to run on the Cisco Meeting Server 1000 and 2000 appliances. Third-party servers are also supported.

2. For Cisco Meeting Server 1000 or third-party services VMWare virtualization is required. Contact VMware directly for subscription information.

3. Flexible-capacity licensing options enable customers to deploy Cisco Meeting Server capabilities in the way that best suits their needs. Cisco Meeting Server is licensed on a per-meeting basis with Cisco Multiparty licenses. These licenses are available in the form of Personal Multiparty (named host) and Shared Multiparty (shared host) licenses. Visit https://cisco.com/go/meetingserver for more information.

4. Cisco Meeting Server is available with as a subscription, using A-CMS top level SKU with monthly or yearly billing, and includes Cisco Software Support Services (SWSS) bundled together.

5. Optional recording and streaming can be added. If you need to manage, transform, or distribute recordings or streams across the organization, solutions such as Rev and DME are available from our solutions partner, VBrick. Contact VBrick directly for subscription information.

6. Cisco Multiparty licensing includes entitlement for hosting meetings, connecting with Cisco Jabber to Cisco Meeting Server, use of Cisco Meeting Server web app, and Cisco Meeting Management. Software for these products can be downloaded from https://www.cisco.com/go/software with an active Cisco Support Contract.

7. Cisco recommends Solutions Plus partner VQ Communications Conference Manager for Meeting Server configuration & reporting and for device management including meeting scheduling

Table 3 provides ordering information for Cisco Meeting Server.

Table 3.   Ordering information

Platform (step 1)	Description
CTI-CMS-1K-M6-K9	Cisco Meeting Server 1000 M6
CTI-CMS-2K-M6-K9	Cisco Meeting Server 2000 M6
R-CMS-K9	Call Bridge Activation key for a third-party server or CMS 1K, only if not using Smart Licensing
R-CMS-2K-K9	Call Bridge Activation key for CMS 2K, only if not using Smart Licensing

License subscription (step 2)	Description
A-CMS (top level SKU)	Cisco Meeting Server Subscription plan for Meetings with yearly, monthly, or pre-payment and one- to five-year duration. The subscription includes Software Support Services
A-CMS-EA-EC	Enterprise Agreement per host for all knowledge workers within the enterprise; unlimited Meetings includes recording, streaming, and Cisco Expressway Rich Media Services
A-CMS-PMP	Personal Multiparty Meetings per host, which includes Expressway Rich Media Services
A-CMS-SMP	Shared Multiparty (concurrent Meeting) includes Expressway Rich Media Services

Options (step 3)	Description
Subscription options	
A-CMS-CUSTOM	Add the ability to create and use custom layouts
A-CMS-RECORDING	Add recording or streaming on a per-port subscription basis
A-CMS-JABBER*	Optionally add Jabber for Cisco Meeting Server with a Meetings subscription
A-CMS-JABBER-ADDON	Optionally add Jabber for Cisco Meeting Server for existing Cisco Meeting Server customers with a current support contract
A-CMS-SNAPSHOT	Add the ability to take snapshots

Third-party platforms are also supported, in which case the Cisco Meeting Server software activation key must be ordered separately only if not using Smart Licensing (R-CMS-K9).

* Cisco Jabber for Cisco Meeting Server is included with a Meeting Server License, allowing for calling into meetings. Cisco Unified Communications Manager 12.5 minimum is required, point-to-point, ad-hoc escalation or IM&P services require a Cisco Unified Communications Manager (UCM) Calling subscription

Table 4 shows the number of participants who are entitled to join a meeting by license type.

Table 4.   Meeting capacity by license type

Type of call	Participants per shared Multiparty license	Participants per Personal Multiparty license	Participants per Cisco Meeting Server capacity unit
Full HD calls (1080p60)	Unrestricted	Unrestricted	0.25
Full HD calls (1080p30)	Unrestricted	Unrestricted	0.5
HD calls (720p30)	Unrestricted	Unrestricted	1
SD calls (448p30)	Unrestricted	Unrestricted	2
Audio calls	6 audio-only meetings per SMP; unrestricted participants per meeting (no content is allowed)	Unrestricted	12
Microsoft gateway calls	6 gateway calls per SMP+ license	1	Dependent on resolution (same as a standard call)

Note that although the licensing does not restrict the number of participants, there may be hardware or software limitations that restrict the number of participants per meeting or per server.

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