Monitor Conferences

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Monitor Conferences

For Cisco Prime Collaboration Release 11.5 and later

Cisco Prime Collaboration tracks the lifecycle of video collaboration conferences in your network. It correlates conference data received from various sources and provides end-to-end details on the conference.

Cisco Prime Collaboration receives conference events from call and conference control components, such as Cisco Unified CM and Cisco TelePresence Video Communication Server (VCS). It also retrieves conference details from applications, such as management applications, call and conference control components, conferencing components, and endpoints.

The number of conferences that can be monitored in Cisco Prime Collaboration Assurance depends on the deployment model, such as small, and medium. For information on supported active conferences, see the System Capacity for Cisco Prime Collaboration wiki page.

The conference data retrieved from the video collaboration applications includes both scheduled and unscheduled conferences. Cisco Prime Collaboration differentiates conferences in the following ways:

- Ad hoc—An end user dials the extension of the Cisco TelePresence system at the other end. There is no scheduling involved.

- Scheduled—Scheduled before the conference through the company's groupware application, such as Microsoft Exchange, Outlook, and so on. You can also schedule the conference directly, using Cisco TelePresence Management Suite (TMS).

- Static—Preconfigured Cisco TelePresence conference available all the time. Each static meeting has its own associated meeting number. On some applications, such as Cisco TelePresence MSE, Multipoint Control Unit (MCU), Cisco TelePresence Server (TS), these meetings are called permanent meetings.

Cisco Prime Collaboration classifies the conferences structure as follows:

- Point-to-point— Conference between two endpoints.

- Multipoint— Conference with more than two endpoints. Between endpoints, you may have MCU.

- MultiSite— Conference with more than two endpoints, without MCU. The endpoints are connected directly. Any endpoint can participate in a MultiSite call with the center endpoint being MultiSite capable.

The center endpoint acts as a conferencing device (like MCU). This type of conference structure is supported for MultiSite capable endpoints such as Cisco Codec C and EX Series TelePresence Systems, Cisco TelePresence MX Series, and Cisco Profile Series with a MultiSite license.

The conferences status can be:

- In-progress

- Scheduled

- Completed

- No Show, a scheduled conference without any participants joining the conference until the end time. The scheduled conferences are moved to No show only after the scheduled end time and after Cisco Prime Collaboration is synchronized with Cisco TMS, after the scheduled end time.

If an endpoint did not join an In-Progress conference, a no-show icon is displayed on the endpoint. This status is shown even after the conference moves to completed state

If an endpoint joins a conference, but later disconnects from the call before the conference is over, a disconnect icon is visible on this endpoint in the conference topology. Disconnected could mean that there was a problem, or the caller had to leave the conference early.

Prerequisites for Conference Diagnostics

The following are required for conference diagnostics:

- Unified CM and Cisco VCS must be in the Managed state.

- Endpoints and controllers, such as MCU must be in the Managed state.

- JTAPI must be configured on Unified Communications Manager. For information on how to enable JTAPI on Unified Communications Manager, see the Configure Devices for Prime Collaboration Assurance wiki.

- Cisco Prime Collaboration Assurance server must be registered as a feedback server in Cisco VCS.

Note   Cisco Prime Collaboration does not support Conference Monitoring for Cisco Jabber endpoints that are registered with Unified Communications Manager. You can view the utilization report and usage statistics of Cisco Jabber Video for TelePresence (Movi) endpoints only.

For information on data collection for video conference, importing conferences, conference workflows, and the Conference Diagnostic dashboard, see:

Data Collection for Video Conferences

Cisco Prime Collaboration periodically polls the following video service infrastructure devices to get information on the conferences:

- Management devices (Cisco TMS)—Cisco Prime Collaboration gets information on the scheduled point-to-point and multipoint conferences. For Cisco TMS, if an unscheduled endpoint is added when the conference is in progress, Cisco Prime Collaboration shows the conference details for the newly added endpoint.

Cisco Prime Collaboration collects scheduled conferences data for five days (for the past one day, the current day, and for three days ahead).

Note If you are using Cisco TMS 13.0 or 13.1 configure the Booking API feature. For Cisco TMS 13.2 and above, you need not configure the Booking API feature.

- Multipoint Switches—Cisco Prime Collaboration gets information on the multipoint conferences. It also identifies and supports cascading of multipoint conferences.

- Multipoint Control Units (MCU and Cisco TS)—Conferences that are scheduled using these systems are always listed as ad hoc conferences in Cisco Prime Collaboration. These types of conferences are listed on the Conference Monitoring page only after the conference is started. Cisco Prime Collaboration polls these systems after receiving an event from the endpoints.

  Cisco Prime Collaboration polls MCU and Cisco TS whenever these systems receive a call. Cisco Prime Collaboration polls MCUs that are not managed by Cisco TelePresence Conductor directly.

  For conferences that are hosted by MCUs controlled by Cisco TelePresence Conductor, Cisco Prime Collaboration polls only the Cisco TelePresence Conductor.

  Cisco Prime Collaboration does not support cascading of MCU conferences. Only Cisco TelePresence Conductor controlled MCU cascading is supported.

- Call and Conference Controls (Cisco Unified CM and Cisco VCS)—Cisco Prime Collaboration gets information on the participants using call processors. It collects details, such as when a user joins the conference or disconnects from it. Cisco Prime Collaboration polls call and conference controllers periodically.

  Cisco Prime Collaboration receives Connect or Disconnect events in real time from Cisco Unified CM and Cisco VCS. Whenever Connect or Disconnect events are missed, as a backup mechanism, Cisco Prime Collaboration polls Cisco Unified CM and Cisco VCS periodically for all In Progress calls. Hence, they are synchronized.

Note The following browsers are supported for the conference monitoring windows:

- Internet Explorer- versions 10, 11
- Mozilla Firefox- versions 31, 38
- Google Chrome- versions 39, 40

Cisco Unified CM

All endpoints must be added as JTAPI controlled devices in Cisco Unified CM. Otherwise, call detection for the endpoints does not happen in Cisco Prime Collaboration. The configured JTAPI user must have permission to access all endpoints that are managed in Cisco Prime Collaboration.

Cisco Prime Collaboration listens to the JTAPI events from the Cisco Unified CM. The endpoints are polled once the call is In Progress. Cisco Prime Collaboration depends on the JTAPI event to move the conference to the completed status.

Cisco Prime Collaboration manages multiple Cisco Unified CM clusters. Configure unique cluster IDs as it monitors conferences within a cluster and among clusters (intracluster and intercluster conferences).

Cisco Prime Collaboration must manage the cluster publisher to monitor a cluster. The JTAPI must be configured on the cluster publisher and the Computer Telephony Integration (CTI) service must be running in at least one node in a cluster . The CTI control limits depend on the visibility (Full and Limited) that you have set on the devices. For the visibility limits, see the System Capacity for Prime Collaboration wiki page.

If JTAPI is not configured on Cisco Unified CM, then the endpoints registered to it are not shown as part of conferences. In this case, set the JTAPI configuration.

Note To view the correct Usage Status details of endpoints that are added as JTAPI controlled devices, and to make the endpoints visible in the controlled list in Cisco Unified CM, you must reset the visibility of the endpoints. Use the **Edit Visibility** option under **Diagnose** > **Endpoint Diagnostics** to change the visibility of the endpoint from Full Visibility to Off, and then to Full Visibility again.

You can also rediscover Cisco Unified CM to make the endpoints visible and to display the correct Usage Status on Cisco Prime Collaboration servers.

Cisco VCS

Cisco Prime Collaboration listens to HTTP feedback events from the Cisco VCS. The endpoints are polled once the call is In Progress. Cisco Prime Collaboration depends on the HTTP feedback event to move the conference to the completed status.

Cisco Prime Collaboration manages multiple Cisco VCS clusters.You must configure unique cluster names as it monitors conferences within a cluster and among clusters (intracluster and intercluster conferences).

Cisco Prime Collaboration identifies and supports Cisco VCS Expressway traversal calls. For these calls, the media signal flows through Cisco VCS Control and Cisco VCS Expressway and the call details are displayed in the conference topology.

See the Cisco TelePresence Video Communication Server Control online help for details on traversal calls.

If there is a call outside the enterprise firewall, Cisco VCS Expressway is used. This device is configured to the Cisco VCS Control device. The Cisco VCS Control and Cisco VCS Expressway are displayed in the conference topology. However, the endpoints that are registered to the Cisco VCS Expressway are displayed as Unknown endpoints.

If Cisco Prime Collaboration is not subscribed to VCS through feedback subscription, VCS does not notify the PCA when a registered endpoint joins or leaves a conference, or registers or unregisters to VCS. In this case, set the visibility of those endpoint(s) to full or limited as required, and contact your network administrator to check PC's feedback subscription to VCS.

Note Cisco Prime Collaboration ignores Cisco VCS Expressway Connect/Disconnect events.

Import Conferences from Cisco TMS

The Cisco TMS contain details on the scheduled conferences. Cisco Prime Collaboration periodically polls these devices to retrieve the conference details. You can configure the frequency of the periodic polling based on your business needs.

To enable uninterrupted monitoring of the conferences, you can manage a Cisco TMS cluster using the Manage Clusters option (**Inventory** > **Inventory Management** > **Manage TMS Clusters**).

For Cisco TMS, if an unscheduled endpoint is added when the scheduled conference is in progress, Cisco Prime Collaboration shows the conferences details of that endpoint.

Cisco Prime Collaboration imports scheduled conferences data for five days (for the past one day, the current day, and for the next three days).

Note the following points when importing conferences from Cisco TMS:

- Cisco Prime Collaboration supports only the default email template for the Booking Confirm email in Cisco TMS. Conferences are not imported from Cisco TMS if the default email template is not used.

- "Reservation Only" meeting details are not imported from Cisco TMS. Cisco Prime Collaboration does not support this type of meeting because resources are not allocated for it while scheduling.

In addition to the periodic polling, if you want to import the conference details immediately, you can choose (**Diagnose** > **Conference Diagnostics** > **Import Conferences**).

Note The Import Conferences task impacts Cisco Prime Collaboration System performance. Use Import Conferences only if it is required.

One job is created for the Import Conferences task. You can monitor this job at **System Administration** > **Job Management**. The job type is displayed as Synch_TMS-MEETING_UniqueJobID on the Job Management page.

TMS_Conference_Import regular jobs run periodically and poll complete details of all conferences.

However, the TMS_Frequent_Conference_Import job runs frequently and retrieves only the changes in conferences after the previous polling. (You can change the frequency of polling on System Setup page).

Conference Workflow and Scenarios

The following chart shows the end-to-end scheduled conference workflow.

Figure 1: Scheduled Conference Workflow
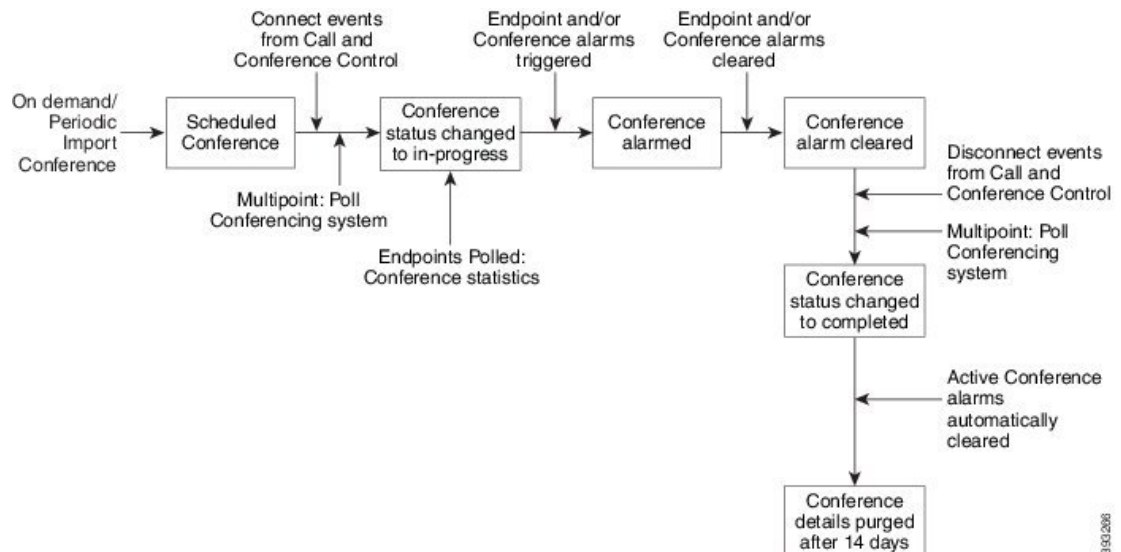
The following are a few scenarios where Cisco Prime Collaboration does not contain up-to-date details on conferences or display different conference structure data:

- Cisco Prime Collaboration shows a scheduled conference (point-to-point, multipoint, or multisite) as an ad hoc conference if the conference gets scheduled and was In Progress after the last Cisco TMS poll and before the next scheduled or on-demand polling of the Cisco TMS takes place.

- For scheduled multipoint conferences, if Cisco Prime Collaboration is not synchronized with the management applications, the conference is shown as an ad hoc conference and it collects information from the participating Cisco MCU after Cisco Prime Collaboration receives a Connect event.

- If a conferencing system has moved either to the Unmanaged or Unknown state from the Managed state, then the multipoint conferences are displayed as multiple point-to-point conferences.

- Cisco TMS and Cisco MCU displays the conference status as Active immediately after the scheduled time is passed. However, Cisco Prime Collaboration does not change the conference status to In Progress until an endpoint joins the conference.

- Cisco Prime Collaboration displays conferences that include Unmanaged endpoints. However:

  ◦ For point-to-point conferences, one of the endpoints must be managed in Cisco Prime Collaboration.

  ◦ For multisite conferences, the endpoints that conference the other endpoints must be managed in Cisco Prime Collaboration.

  ◦ For multipoint conferences, the conferencing devices must be managed in Cisco Prime Collaboration.

- If you have used Cisco TMS to reserve only TelePresence rooms, then Cisco Prime Collaboration does not display these conferences. (In Cisco TMS, this conference call type is identified as *Reservation Only*.)

- If Cisco VCS Expressway is in the Inaccessible state, Cisco Prime Collaboration can still monitor the conferences. However, the endpoints are displayed as Unknown endpoints.

- The conference diagnostic feature does not support endpoints, which are configured with multiple lines in Cisco Unified CM. However, you can manage these endpoints in the Cisco Prime Collaboration inventory database.

> **Note** The conference monitoring feature is supported only on Cisco Unified CM 8.5 and later.

- If there is a conference between a TelePresence and one or more WebEx participants, the Conference Diagnostics page does not display the details of the WebEx participants available in the call.

- Only the Cisco TelePresence Conductor with Cisco VCS (Policy Service) Deployment is supported. Cisco TelePresence Conductor with Cisco VCS (B2BUA) and Cisco TelePresence Conductor with Cisco Unified CM Deployment is not supported.

Conference Scenarios

The various conference scenarios that are monitored in Cisco Prime Collaboration are as follows:

Table 1: Conference Scenarios

Conference Classification	Conference Type	Conference Structure	Conference Topology Elements
Cisco Unified CM *intracluster* and *intercluster* conferences	Ad hoc, Scheduled	Point-to-point	Cisco TelePresence System 500, 1000, 3000, TX9000 Series.
Cisco Unified CM *intracluster* and *intercluster* conferences	Ad hoc, Scheduled Static	Multipoint	Cisco TelePresence System 500, 1000, 3000, TX9000 Series, and .
Cisco VCS *intracluster* and *intercluster* conferences	Ad hoc, Scheduled	Point-to-point	Cisco C series, EX Series, Cisco MX series, Cisco MXP Series, Cisco IP Video Phone E20, Cisco Cius, and Cisco Jabber. If a call is identified as a traversal call, Cisco VCS Control or Cisco VCS Expressway is displayed in the conference topology.

Conference Classification	Conference Type	Conference Structure	Conference Topology Elements
Cisco VCS *intracluster* and *intercluster* conferences (with MCU)	Ad hoc, Scheduled Permanent (displayed as static)	Multipoint	Cisco C series, EX Series, Cisco MCU, Cisco MSE[1], or Cisco TelePresence Server. If a call is identified as a traversal call, Cisco VCS Control or Cisco VCS Expressway is displayed in the conference topology.
Cisco VCS *intracluster* and *intercluster* conferences (without MCU)	Ad hoc,Scheduled	Multisite	Cisco C series, EX Series, Cisco MX, Cisco MXP Series, Cisco IP Video Phone E20. If a call is identified as a traversal call, Cisco VCS Control or Cisco VCS Expressway is displayed in the conference topology.
Conferences between Cisco Unified CM and Cisco VCS clusters [2]	Ad hoc	Point-to-point Multipoint	• Cisco C series, EX Series, Cisco MX series, Cisco MXP Series, Cisco IP Video Phone E20 • Cisco TelePresence System 500, 1000, 3000, and TX9000 Series • Cisco TelePresence Server • IX 5000 series TelePresence endpoints

Conference Classification	Conference Type	Conference Structure	Conference Topology Elements
Cisco Unified CM (8.6(1), 8.6(2), and 9.0) *intracluster* conferences	Ad hoc	Point-to-point	• Cisco C series, EX Series, Cisco MX series • Cisco TelePresence System 500, 1000, 3000, and TX9000 Series • IX 5000 series TelePresence endpoints
Cisco Unified CM (8.6(1), 8.6(2), and 9.0) *intracluster* conferences	Ad hoc, Scheduled **Note** Scheduler must be 1.7, 1.8, or 1.9.	Multipoint	• Cisco C series, EX Series, Cisco MX series, Cisco IP Video Phone E20 • Cisco TelePresence System 500, 1000, 3000, and TX9000 Series • 1.8 or Cisco TelePresence Server
Conferences outside the enterprise firewall - Cisco VCS Expressway	Ad hoc Permanent (displayed as static)	Point-to-point, Multipoint , Multisite	• Cisco C series, EX Series, Cisco MX series, Cisco MXP Series, Cisco IP Video Phone E20 • Cisco MCU or Cisco TelePresence Server • Cisco VCS Control and Cisco VCS Expressway

Conference Classification	Conference Type	Conference Structure	Conference Topology Elements
Endpoints in a call (with an MCU in the call) work as a conferencing bridge in Cisco Unified CM.	Ad hoc	Point-to-point When a call is put in a conference mode or when merged with another call, it becomes Multipoint. The conference does not show the MCU. When the first participant leaves the call, the conference shows it is connected to the MCU, while the second and third participants continue in the same call as a point-to-point call. **Note** This scenario is applicable when in-built video bridge capability is not present in the endpoint.	Multipoint conferencing devices and video endpoints. For a list of the supported endpoints, see Supported Devices for Cisco Prime Collaboration Assurance.
Conferences between MRA endpoints- Cisco Jabber or Cisco TelePresence MX Series or Cisco TelePresence System EX Series or Cisco TelePresence SX Series	Ad hoc, Scheduled	Point-to-point, Multipoint, Multisite **Note** Cisco Prime Collaboration does not monitor a Multisite conference where an MRA endpoint acts as a conference bridge.	Cisco Jabber, Cisco TelePresence MX Series, Cisco TelePresence System EX Series, and Cisco TelePresence SX Series.

1 The codian software must be running on Cisco MSE.

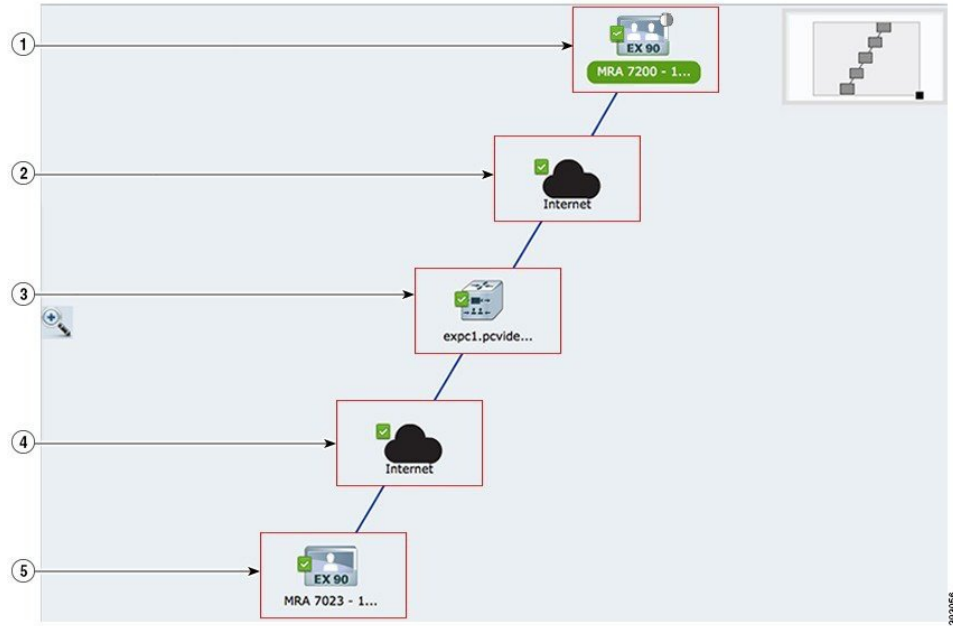2 This scenario is supported on CTS 1.7.4, and TC 4.1 to 7.0.

Note • Cisco Cius and Cisco Jabber devices support only ad hoc conferences.

The following image describes the conference topology between two MRA endpoints.

Figure 2: Conference Topology Between MRA Endpoints

1, 5	MRA endpoints that connect with each other through cloud server. **Note** You cannot view the conference statistics for MRA endpoints.
2, 4	Internet cloud servers that connect the MRA endpoints. The MRA endpoints can connect only with the help of cloud servers. You cannot view the conference statistics since the system cannot get the IP addresses of the endpoints from the cloud servers.
3	Cisco VCS Expressway Core that acts as the call controller device. The topology displays the Cisco VCS Expressway Core and the associated endpoints.

The various Collaboration Edge conferences involving MRA endpoints and VCS Expressway Core are as follows:

- Point-to-point: Conference between two MRA endpoints that are connected with each other through cloud servers and Cisco VCS Expressway Core

- Multipoint: Conference with more than two MRA endpoints that are connected through cloud servers, Cisco VCS Expressway Core, and TPS or MCU

- Multisite: Conference with more than two MRA endpoints that are connected without TPS or MCU

Note   Each of the above conferences may also have one non-MRA endpoint connected at either end.

Table 2: Conference Scenarios for MSP Mode

Conference Classification	Conference Type	Conference Structure	Conference Topology Elements
Customer calls in a NAT environment.	Ad hoc	Point-to-point	Conference Border Controller (SBC) and video endpoints. For a list of the supported endpoints, see Supported Devices for Cisco Prime Collaboration Assurance.

Conference Diagnostics Dashboard

To access the Conference Diagnostic dashboard, choose **Diagnose** > **Conference Diagnostics**.
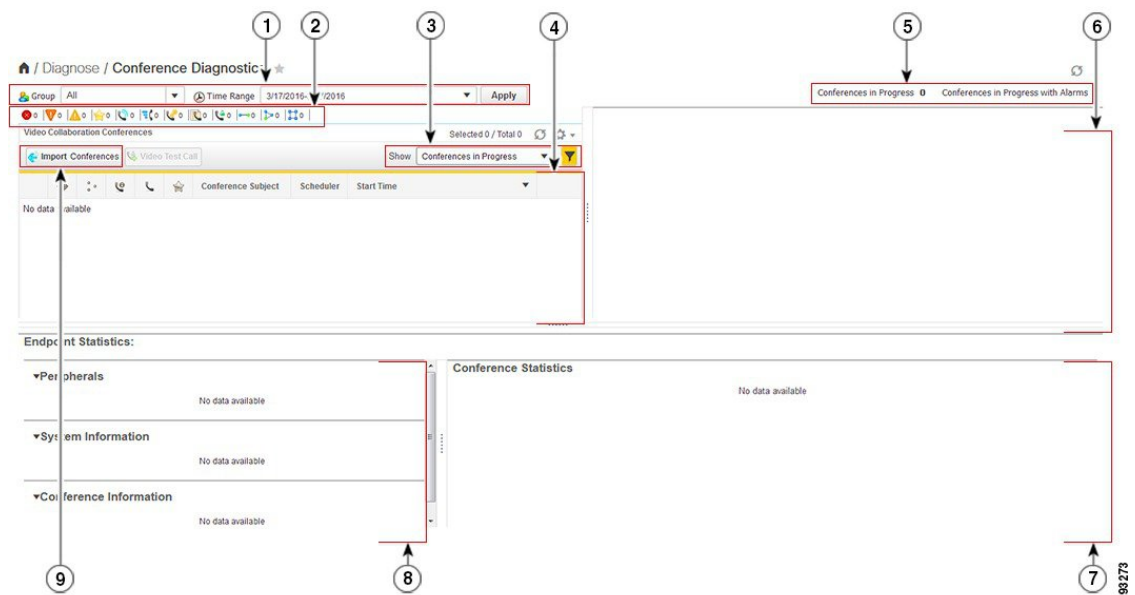
The Conference Diagnostic dashboard provides details on a conference and the endpoints that are involved in that conference.

You can monitor conferences based on device type, by selecting the desired group from the Group drop-down filter. You can further filter based on the conference type using the Show filter in the Video Collaboration Conferences pane.

By default, the All Video Collaboration Conferences table contains information for the current date (24 hours). You can view conferences for the last 30 days. Rest your mouse pointer over the Import Conferences button to see details of when the data was last imported into the Cisco Prime Collaboration database.

The following image shows the Conference Diagnostics Dashboard.

Figure 3: Conference Diagnostics Dashboard

1	Predefined Group filter drop-down list. Also includes a launch point for a calendar. By default, the All Video Collaboration Conferences table contains information for the current date (24 hours). You can view conferences for the past 30 days and the next 3 days.	2	Quick summary pane for alarms and conferences.
3	Predefined filters drop-down list. Also, includes Refresh icon and Table setting icon. Using the Table setting icon, you can customize the table column and fix any row to either the top or bottom.	4	Video Collaboration Conferences
5	Count for total number of in-progress conferences (normal and alarmed) and in-progress alarmed conferences for the specified date.	6	Conference topology pane.
7	Conference statistics pane.	8	Endpoint statistics pane. This pane contains details on peripherals, system, and conferences.
9	Launch point for the import conference task. Rest your mouse pointer over the Import Conferences button to see details on when the data was last imported into the Cisco Prime Collaboration database.		

The summary pane displays the conference details for the current day (00:00:00 hours to 23:59:00 hours). You can view the icon-based summary of the data available in the Video Collaboration Conferences table. You can view the DSCP value for Cisco Unified IP Phones 8941 and 8945, Cisco DX Series, and Cisco TelePresence TX Series. Select the conference (**Diagnose** > **Conference Diagnostics**) with the preceding endpoint (s). In the Conference Statistics pane, the DSCP In field displays the DSCP value received from the endpoint in the conference.

The Video Collaboration Conferences table displays the details of in-progress conferences for the current date (00:00:00 hours to 23:59:59 hours). The latest conference detail is listed at top of the table.

If you want to view details for the previous or the next day, you can choose the date, using the calendar. You can choose any of the filters from the Show drop-down list to view other conference details.

Cisco Prime Collaboration keeps conference details for the last 30 days.

Apart from video collaboration conferences, you can see conferences between an IP Phone or Software Client and TelePresence Endpoint in the Conference Diagnostics Dashboard. Ensure that you set the visibility of these devices to Full Visibility. To know more about visibility, see Realtime Visibility of an Endpoint.

If you have deployed Cisco Prime Collaboration in MSP mode, you see the In-progress conferences shown as Ad Hoc Conferences when the call was scheduled in TMS was made by selecting MCU as a conferencing device.

If you have deployed Cisco Prime Collaboration in MSP mode, you see the details of a point-to-point call between two customers (through phones registered to different Unified CMs) using Conference Border Controller(s). Ensure that the Conference Border Controller(s) is or are in managed state in Inventory Management to get the details of such calls.

Support for a New Method of Conferencing - Ad hoc Calls

This feature provides monitoring of new ad hoc conference calls on the Conference Diagnostics page (**Diagnose** > **Conference Diagnostics**).

Prerequisite - The Multipoint Control Unit (MCU) and endpoints must be in a Managed state in Cisco Prime Collaboration.

When a call is put in a conference mode (by pressing the conference button) or when merged with another call, it becomes a Multipoint ad hoc call. Cisco Unified CM allocates the MCU that behaves as a conferencing device for the call. In this case, the conference topology displays the MCU. When the first participant leaves the call, the second and third participant continues in the same call which becomes a Point-to-Point ad hoc call. In this case, the conference topology does not display the MCU.

When the Multipoint Control Unit (MCU) is in Suspended state in Cisco Prime Collaboration and a conference is made, instead of a single ad hoc call, Cisco Prime Collaboration shows two Point-to-Point calls with the second call leg between the endpoint and Multipoint Control Unit (MCU). After a few minutes, the call is connected between the endpoint that triggered the call and the Multipoint Control Unit (MCU). Other endpoints are not shown in the topology. This scenario is applicable when inbuilt video bridge capability is not present in the endpoint.

Monitoring of Cisco Unified Communications Manager—Cisco TelePresence Conductor Integrated Conferences

This feature enables you to monitor conferences that are created by a Cisco Unified CM that is integrated with a Cisco TelePresence Conductor.

Prerequisites:

- Cisco TelePresence Conductor, and Multipoint Control Unit (MCU) should be in Managed state in Cisco Prime Collaboration.

- The conference bridges on the Cisco TelePresence Conductor should be discovered as part of the Logical discovery of the conductor. If you are using the Add Device or Import feature to discover the Cisco TelePresence Conductor, ensure that you perform a subsequent rediscovery using the Rediscover feature with the Enable Logical discovery check box selected.

- Configure Cisco Unified CM to use a Cisco TelePresence Conductor to manage the conference bridge resources for ad hoc and rendezvous conferences. For information, see Cisco TelePresence Conductor with Cisco Unified CM Deployment Guide (XC2.3).

Note   Logical Discovery is not supported in MSP mode.

For a call that includes conferencing device - Multipoint Control Unit (MCU), you can view the details of the associated conductor from the Endpoints Quick View of the conferencing device (MCU) under the Conference topology pane on the Conference Diagnostics page (**Diagnose** > **Conference Diagnostics**).

Cascading of Cisco TelePresence Server

This feature allows you to monitor Cisco TelePresence servers during ad hoc conference calls on the Conference Diagnostics page (**Diagnose** > **Conference Diagnostics**).

Prerequisite -

- The Cisco TelePresence Server (TPS), Cisco TelePresence Conductor, and endpoints should be in a Managed state in Cisco Prime Collaboration.

- Ensure that you set the visibility of the devices to Full Visibility.

During an ad hoc conference, when a primary TPS server is unable to respond to a call over a Cisco TelePresence Conductor, it cascades the call to a secondary TPS server. Cascading occurs when multiple TPS servers share the load during a conference call. The conference topology creates link between the primary and secondary TPS servers with associated participants and displays all the cascaded TPS servers as conference bridges.

> **Note**   Conference troubleshooting is not supported in Cisco Prime Collaboration Assurance.

Realtime Visibility of an Endpoint

The visibility feature for a managed endpoint determines to what level Cisco Prime Collaboration monitors the operations of the endpoint. Only endpoints in the Managed state can be edited for visibility. If you edit the visibility settings for endpoints whose visibility level exceeds the maximum visibility, the changes are not updated. Visibility setting controls the polling of endpoints in addition to conference monitoring. Polling is performed only for devices that are configured for real-time full visibility and not all devices.

Cisco Prime Collaboration supports the following types of visibility:

- Full Visibility—Call detection using JTAPI/ HTTP feedback and realtime monitoring information such as conference statistics, and conference information is supported.

- Limited Visibility—Automatic call detection using JTAPI/ HTTP feedback takes place, but realtime monitoring information such as conference statistics, and conference information is not supported. Endpoints with limited visibility are indicated with a half-dimmed icon in the Conference Topology.

- Off—Call detection using JTAPI/ HTTP feedback and realtime monitoring information are not supported. These endpoints are displayed on the Conference Monitoring page with a fully dimmed icon.

The following table lists the default and maximum visibility details for the endpoints:

Endpoint Type	Default Visibility	Maximum Visibility
• CTS 500, 1000, and 3000 Series • Cisco Codec • Cisco TelePresence SX20 • Cisco TelePresence MXP Series • Cisco IP Video Phone E20	Full	Full
• Cisco Jabber Video for TelePresence (Movi) • Polycom	Limited	Limited
Cisco Cius	Off	Full
Cisco IP Phones (89xx, 99xx)	Off	Full
Cisco Desktop Collaboration Experience DX650 and DX630	Off	Full
• Cisco SX80 and Cisco SX10 • • Cisco MX200 G2, Cisco MX300 G2, Cisco MX700, and Cisco MX800	Full	Full
Cisco DX70 and DX80	Off	Full
For Cisco Prime Collaboration Release 11.6 and later Cisco TelePresence DX70 and DX80	Off	Full

Endpoint Type	Default Visibility	Maximum Visibility
MRA Endpoints: • Cisco Jabber • Cisco TelePresence MX Series • Cisco TelePresence System EX Series • Cisco TelePresence System SX Series	Limited	Limited

There is full visibility (default and maximum) for Total Endpoints (except Polycom). There is no visibility for IP Phones and Software Clients by default. The maximum visibility for IP Phones and Software Clients is full.

For a point-to-point ad hoc conference, if visibility is Off for one endpoint and Limited or Full for the other, the endpoint with Off visibility is shown with a fully dimmed icon in the conference topology.

For a Multipoint conference, an endpoint with Off visibility is not displayed in the conference topology.

For scheduled point-to-point or multipoint conferences, endpoints with Off visibility are shown with a fully dimmed icon in the conference topology.

To view the visibility of an endpoint, choose **Inventory** > **Inventory Management** and then view the Visibility column in the inventory table for the corresponding endpoint.

Note If you are not able to view this column, click the Settings button, click **Columns**, and then click **Visibility** in the list that appears.

To change the visibility of an endpoint, choose **Inventory** > **Inventory Management** and select an endpoint, and then click **Edit**. You can see the current visibility of the endpoint. If you have any made any changes, click **Save**.

Note If you select more than one endpoint, you cannot view the current visibility of the endpoints.

Any changes to the visibility settings are implemented from the next conference onward.

The visibility feature is applied on the Conference Diagnostics page only. That is, even if you have set visibility to either Limited or Off, the endpoint is listed in the Endpoint Diagnostics and Inventory pages.

360° Conference View

The 360° Conference View provides a complete view of pertinent data about endpoint, infrastructure devices, alarms, and call records. It also enables you to cross launch other Cisco Prime Collaboration features. To see the 360° conference View for a conference, rest your mouse pointer over the Conference Subject column in the Video Collaboration Conferences table and click the 360° Conference View icon.

The 360° Conference View contains the following tabs:

- Alarms—Displays the alarm severity, the source that triggered the alarm, the description of the generated alarm, and the time stamp.

- Endpoints—Displays the endpoint name, IP address, physical location, conference duration, and device model.

- Infrastructure—Displays the details of the infrastructure devices in use. You can launch the Infrastructure Devices login page using the IP address link. You can also launch the Inventory page to view the inventory details of the device by clicking the Device Name.

You can perform the following actions in the 360° Conference View:

- Click the See Alarms icon to launch the Alarm browser. The Alarm browser lists all alarms for the selected conference (includes both conference and endpoints alarms).

- Click the Monitor Endpoint icon to launch the Endpoint Diagnostics page.

- Click the Add to Watch list icon to add a conference to the watch list. It is enabled for scheduled and in-progress conferences.

- If you have scheduled a recurring conference, add each instance of the recurring conference to the watch list. For example, if you have scheduled a recurring conference for every day over 5 days, add the conference to the watch list for every day (5 days).

Note   Adding conference to the watch list does not trigger the troubleshooting workflow.

Conference Topology

The conference topology displays the endpoints that are part of a conference. If it is a multipoint conference, the conferencing devices are displayed along with the endpoints. Also, if the call is a traversal call, Cisco VCS is displayed.

To launch the conference topology, select a conference in the Video Collaboration Conferences table.

The alarm badge displayed on the link and endpoints indicates a fault in the delivery of packets and the peripherals, respectively.

The following figure shows the different statuses displayed in the conference topology.

Figure 4: Conference Topology
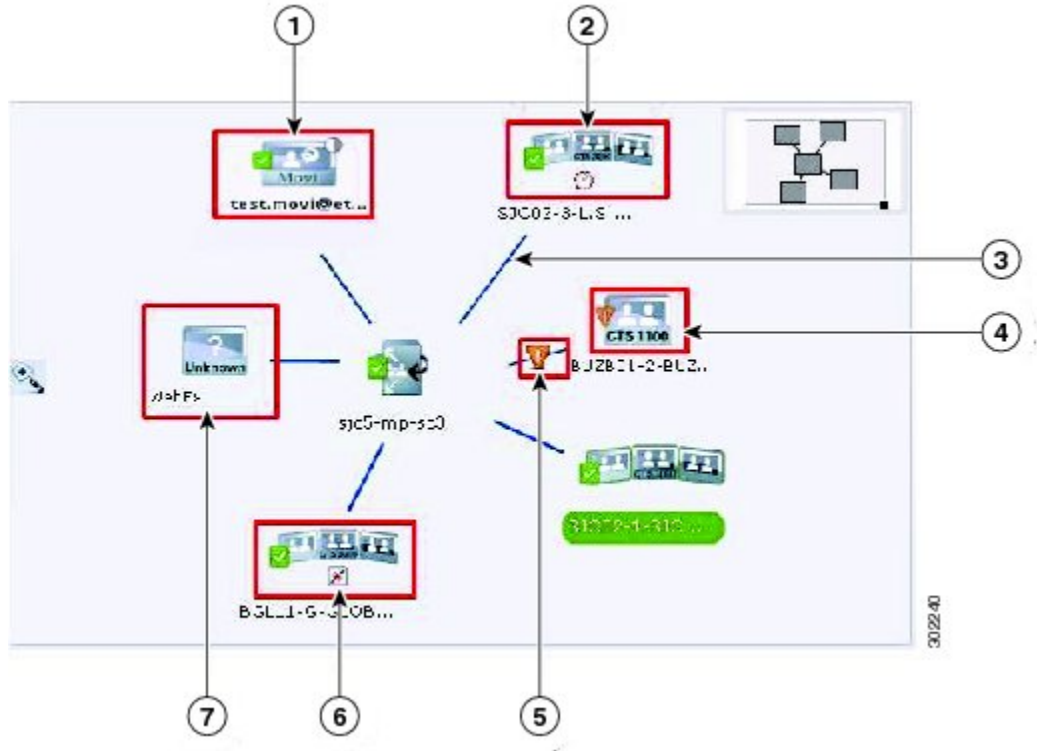
1	An endpoint with a limited visibility icon that participates in the conference.	2	A No-Show icon associated with an endpoint.
3	An active link between an endpoint and a Multipoint Switch without alarms.	4	An endpoint with a major alarm that participates in the conference. The problem is in peripheral devices.
5	An active link between an endpoint and a Multipoint Switch with a major alarm.	6	A Disconnect icon associated with an endpoint.

7	Unknown endpoint; an endpoint that is not currently managed in Cisco Prime Collaboration. The inventory details for these endpoints may not be available in the Cisco Prime Collaboration database. The endpoints and controllers must be in the Managed state also the registration status should be available in the Device 360° view. The endpoints that are registered to the Cisco VCS Expressway are also displayed as Unknown endpoints. A managed endpoint in Cisco Prime Collaboration can make a call to an unsupported endpoint.	—	—

If there is a fault in the network, the alarm badge is displayed on the network line. You can launch a quick view on the topology to identify the network link direction where the fault has occurred.

Network Link Quick View

To launch the quick view, rest your mouse pointer over the alarm badge and click the quick view icon. The network link quick view contains the following tabs:

- Link Summary—Displays the alarm status between the endpoints for point-to-point conferences and between an endpoint and Multipoint Switch for multipoint conferences.

- Alarms Summary—Displays the alarm severity, the source that triggered the alarm, and the description of the generated alarm.

- Call Details—Displays the endpoint name, phone number, and protocol. These details are displayed for the endpoints connected through the selected network link.

Endpoints Quick View

You can launch a quick view for endpoints in the Managed and Unknown states. To launch the quick view, rest your mouse pointer over an endpoint and click the quick view icon.

For devices in Managed state, the following details are displayed:

- Endpoint Summary—Displays the endpoint details such as system type, IP address (IPv4 or IPv6), physical location, usage status, directory number (SIP URI or H323 ID), cluster ID, and so on.

  If you have deployed Cisco Prime Collaboration in MSP mode, you can see the customer to which that endpoint belongs to, and the Private IP and Public IP addresses respectively. You can click the Public IP address to launch the endpoint's Management Application.

- Alarms Summary—Displays the Alarm Severity, the Category of the alarm, and the Description of the generated alarm.

From the quick view, you can add an endpoint to the watch list, launch the Endpoint Diagnostics page, and view the alarms for the selected endpoint.

Conferencing Resource - Cisco Prime Collaboration also lets you view information about the region that the MCU belongs to.

Endpoint Statistics

You can monitor the Quality of Service (QoS) of the endpoints in this pane. Endpoint statistics are displayed for in-progress and past conferences. Also, the peripheral status and system information are available for the scheduled conferences.

This page displays information on the peripheral status, endpoint system details, conference details, and conference statistics for a selected endpoint in the conference topology pane.

In a Multisite conference, the conference statistics (audio and video) and conference information are displayed for each connected endpoint when the center endpoint (conferencing device) is selected.

Note Conference statistics details (present and past) are not displayed for Cisco Cius and Cisco IP Phones.

Conference Statistics

The Conference Statistics pane displays the statistics information, such as packet loss, latency, jitter, and so forth, for:

- Audio—Primary codec, secondary codec 1 and 2, auxiliary and primary legacy.

- Video—Primary codec and secondary codec 1 and 2.

The information displayed varies, based on the endpoint type that you have selected.

A black vertical line indicates the threshold value. You can define the threshold value for Rx packet loss, average period jitter, and average period latency using the **Alarm & Report Administration** > **Event Customization** > **Threshold Rules** option.

Red indicates that the value has exceeded the defined threshold. Gray indicates the current value. This color is used for those parameters that do not contain threshold values.

An alarm badge indicates the actual fault in the network. For past conferences, Cisco Prime Collaboration does not display the threshold value or alarm badge-in conference statistics.

All conference and endpoint statistics data older than one day are purged.