



## IX Software Features

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This chapter includes an overview of, and configuration information for, IX5000 software features. This chapter also includes information about the features that require an overview or detailed configuration steps. For a description of all features that are introduced in a specific IX software release, see the *Release Notes for Cisco TelePresence Release IX 8 Software*.

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## Ad Hoc Conferencing for the IX System

The IX system supports ad hoc conferencing, in which an existing point-to-point call is escalated into a conference by adding more video and audio participants. The ad hoc conference does not require scheduling the meeting beforehand using a meeting scheduler such as TelePresence Management Suite.

Ad hoc conferencing support is configured using Unified CM. For more information about configuration tasks and support limitations, see the “Ad Hoc Conferencing” section of the *Configuring Cisco Unified Communications Manager for the IX System* document.

## TMS Phone Books Support on the IX System

The IX 5000 supports using the directory from the Cisco TelePresence Management Suite (TMS) as an alternative to using the directory in Unified CM. The IX user accesses the directory when tapping the **Contacts** icon on the Touch device.

When configuring the IX in Unified CM, set the Alternate Directory Type and Alternate Directory Server fields in the Product Specific Configuration Layout Area to TMS. For more information, see the “[Product Specific Configuration Layout Area](#)” section of *Configuring Cisco Unified Communications Manager for the IX System*.

This feature requires that Phone Books are configured in TMS 15.3 and later. When configuring TMS for the IX system, set the TMS to medium security mode.

For more information, see the “Creating and Managing Phone Books” section of the *Cisco TelePresence Management Suite Administrator Guide* for TMS 15.3 or later.

## Configurable Number of Presentation Streams

The IX 5000 supports two presentation streams on point-to-point calls from one IX system to another. The two streams can be single direction (from presenting participant to receiving participant), or both directions (each participant presents to the other participant simultaneously).

When configuring the IX in Unified CM, you can set the maximum number of presentation streams to either one or two. Using this feature, setting the number of presentation streams to one can reduce the bandwidth required for the IX system.

This setting is configured in the Presentation Stream Count field in the Product Specific Configuration Layout Area. For more information, see the “[Product Specific Configuration Layout Area](#)” section of *Configuring Cisco Unified Communications Manager for the IX System*.



**Note**

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This feature only applies to point-to-point calls from one IX system to another. Multipoint calls and calls to non-IX systems support only one presentation stream.

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## TMMBR Support

The IX system supports dynamic rate adaption using TMMBR (Temporary Maximum Media Bitrate Request) for flow control purposes. This implementation is based on RFC5104, but only implements a subset of the recommendations in the RFC. TMMBR is a media resiliency mechanism used to help maintain real-time video when the network is impaired. It is a Request-Response mechanism for point-to-point and multipoint scenarios to adjust to network congestion for an improved user experience.

The TMMBR mechanism is triggered when packet loss of 10 percent or more is detected. Once packet loss is detected, the local endpoint sends a TMMBR request to the remote endpoint to down-speed the video bit rate. In turn, the bandwidth used to maintain the user experience is reduced. The remote endpoint responds with a TMMBN message and reduces the bit rate of the transmitting video. Packet loss below 10 percent does not trigger the TMMBR mechanism.

A TMMBR request is sent from the endpoint experiencing packet loss to the endpoint or node transmitting the video. The TMMBR request helps in down-speeding the video bit rate of the receiving video until one of the following occurs:

- The next media negotiation
- The next TMMBR request
- The call is dropped

TMMBR down-speeding happens for both Main and Secondary media bandwidth for the following call scenarios:

- IX system to IX system
- IX system to Native Interoperability endpoints
- IX system to Multipoint systems such as the TelePresence Server, which supports TMMBR

No user configuration is required.

## H.265 Support

In addition to H.264 support, systems running IX software also support the H.265 video compression standard. H.265 provides an average 40% bit rate reduction under ideal network conditions compared to H.264.

H.265 is supported for point-to-point calls between an IX5000 and IX5200 and the following systems:

- Another Cisco TelePresence IX5000 or IX5200
- Cisco TelePresence MX700
- Cisco TelePresence MX800
- Cisco TelePresence SX80



### Note

H.265 requires that your IX system is registered to a Cisco Unified Communications Manager (Unified CM) running release 10.5 or later software. For more information, refer to the “[Product Specific Configuration Layout Area](#)” section of the [Configuring Cisco Unified Communications Manager for the IX System](#) document.

# 3rd Party CA Signed Certificate Support

## Secure Web Service

The IX system supports secure web communication using 3rd party CA signed IX certificates. The CA signed certificate can be uploaded to the IX system using the web UI under the Service Certificates section.

## Secure SIP Service

The IX system supports secure SIP communication using 3rd party CA signed Cisco Unified CM certificates. The CA certificate used for signing the Cisco Unified CM certificate can be uploaded to the IX system using the web UI under the Certificate Authorities section.

For more information, see the *Release Notes for Cisco Telepresence System Software Release IX 8*, located here:

<https://www.cisco.com/c/en/us/support/collaboration-endpoints/ix5000-series/products-release-notes-list.html>