



Support for H.239

H.239 is an extension to the H.323 family of specifications to allow a second video stream in parallel with the primary live video stream to share any type of content such as slides and spreadsheets. This second stream is one-way and considered important in video-conferencing where a viewer can see the speaker and in parallel, the presentation slides. This mode of the conference is controlled by an Multipoint Control Unit (MCU).

Cisco Unified Border Element (SP Edition) was earlier known as Integrated Session Border Controller, and is referred to as SBC in this document.

For a complete description of the commands used in this chapter, refer to the *Cisco Unified Border Element (SP Edition) Command Reference: Unified Model* at http://www.cisco.com/en/US/docs/ios/sbc/command/reference/sbcu_book.html.

For information about all the Cisco IOS commands, use the Command Lookup Tool at <http://tools.cisco.com/Support/CLILookup> or the Cisco IOS master commands list.

Feature History of Support for H.239 on the Cisco Unified Border Element (SP Edition)

Release	Modification
Cisco IOS XE Release 3.3S	The Support for H.239 feature was introduced on the Cisco ASR 1000 Series Routers.

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Information on Support for H.239

H.245-based systems provide for multiple channels of video, while H.320 systems provide for only a single video channel. However, neither of these define a one-way transmission method, methods to label a video channel's content as a presentation video stream, or methods to control presentation video in a multipoint conference. H.239 provides these extensions, along with the ability to add an additional video channel to H.320.

It defines new capabilities, such as H239ControlCapability and H239ExtendedVideoCapability, which a terminal can advertise in its Terminal Capability Set (TCS) message. These capabilities indicate that the terminal can support H.239, and the roles, presentation with slides or live video, that the terminal can support. The SBC passes these capabilities between the H.323 endpoints without requiring to understand them.

The Support for H.239 feature defines a number of H.239 messages that can be carried within H.245 generic messages. These messages are used to negotiate tokens and general flow control. The MCU provides the token on request by a terminal to send a slide-set. This process ensures that at any point only one terminal within the conference is sending a slide-set because a terminal has to wait until the MCU provides the token before initiating the new video channel.

Once a terminal has a token, it can open an additional video channel to carry the presentation stream. This can be done using the standard H.245 messages such as OpenLogicalChannel. However, the OpenLogicalChannel message for the presentation stream has an additional h239ExtendedVideoCapability block, indicating the role of this video stream. The SBC is enhanced to understand the h239ExtendedVideoCapability block.

**Note**

An endpoint can choose to originate multiple additional video channels.

Restriction for Support for H.239

The Support for H.239 feature has the following restrictions:

- Interworking SIP-H.323 Video calls using H.239 is not supported.
- Redundancy for H.323 calls is not supported.
- A fast-start request cannot include a request to open an H.239 additional video channel as it is not supported.
- H.239 systems based on H.235 is not supported.
- The SBC does not support call transfer for H.323 calls. When an H.323 endpoint is placed on hold, it closes its media as well as video channels.