



## Early Media

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The early media feature is supported for SIP and H.323 calls. Early Media is the ability of two user agents to communicate before a call is actually established. Support for early media is important both for interoperability with the Public Switched Telephone Network (PSTN) and Billing Purposes.

Early Media is defined when media begins to flow before the call is officially connected. Media channels are set up prior to the call connection. These channels are used to provide the ring tone that the caller hears and are not generated by the caller's endpoint or other queuing services, for example hold music.

### Feature History for Early Media

Release	Modification
Release 3.4.1	This feature was introduced on the Cisco XR 12000 Series Router.
Release 3.5.0	No modification.
Release 3.6.0	No modification.

## Contents

This module contains the following sections:

- [Restrictions for the Early Media Support, page SBC-331](#)
- [Information About Early Media, page SBC-332](#)
- [Additional References, page SBC-332](#)

## Restrictions for the Early Media Support

- SBC offers support for the gateway of early media (as defined in RFC 3960).
- Early media does not work with end points which send late SDP.
- SBC does not currently support RFC 3312

## Information About Early Media

Current implementations support early media through the 183 response code. When the called party wishes to send early media to the caller, it sends a 183 response to the caller. This response contains the SDP. When the caller receives the response, it suppresses any local alerting of the user, (for example, audible ring tones or a pop-up window), and begins playing out the media that it receives. The SDP in the 183 response provides an address, to which the RTCP packets can be sent.

Some implementations take media from the caller, and send it to the callee as well. If the call is ultimately rejected, the called party generates a non-2xx final response. When this response is received by the caller, it ceases playing out, or sending media. However, if the call is accepted, the called party generates a 2xx response (generally, with the same SDP as in the 183 response), and sends it to the caller. The media transmission continues as before.

In addition, the SBC supports the following for Early media:

- Renegotiation of the media after early media is flowing (before and after the call is connected). Media renegotiation is supported on the SBC using the PRACK and UPDATE methods
- Optional SIP UPDATE support by SIP endpoints (including early media without UPDATE support)
- RFC 3312 preconditions
- Configurable SIP support of Required, Supported and Proxy-Require headers.
- A per-adjacency flag to allow interoperability with the Cisco Gateway's non-standard PRACK behavior

## Additional References

The following sections provide references related to the early media support.

## Related Documents

Related Topic	Document Title
Cisco IOS XR master command reference	Cisco IOS XR Master Commands List
Cisco IOS XR SBC interface configuration commands	<i>Cisco IOS XR Session Border Controller Command Reference</i>
Initial system bootup and configuration information for a router using the Cisco IOS XR Software	<i>Cisco IOS XR Getting Started Guide</i>
Cisco IOS XR command modes	<i>Cisco IOS XR Command Mode Reference</i>

## Standards

Standards	Title
No new or modified standards are supported by this feature, and support from existing standards has not been modified by this feature.	—

## MIBs

MIBs	MIBs Link
—	To locate and download MIBs using Cisco IOS XR software, use the Cisco MIB Locator found at the following URL and choose a platform under the Cisco Access Products menu: <a href="http://cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml">http://cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml</a>

## RFCs

RFCs	Title
RFC 2833	<i>RTP Payload for DTMF Digits, Telephony Tones and Telephony Signals</i>
RFC 3261	<i>SIP: Session Initiation Protocol</i>
RFC 3262	Reliability of Provisional Responses in the Session Initiation Protocol (SIP)
RFC 3311	The Session Initiation Protocol (SIP) UPDATE Method
RFC 3960	Early Media and Ringing Tone Generation in the Session Initiation Protocol (SIP)

## Technical Assistance

Description	Link
The Cisco Technical Support website contains thousands of pages of searchable technical content, including links to products, technologies, solutions, technical tips, and tools. Registered Cisco.com users can log in from this page to access even more content.	<a href="http://www.cisco.com/techsupport">http://www.cisco.com/techsupport</a>

