



## Early Media

The Early Media feature is supported for Session Initiation Protocol (SIP) 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.



### Note

For Cisco IOS XR Software Release and later, this feature is supported in the unified model only.

Cisco Unified Border Element (SP Edition) was formerly known as Integrated Session Border Controller and may be commonly referred to in this document as the session border controller (SBC).

### Feature History for Early Media

Release	Modification
Cisco IOS XR Software Release	This feature was introduced on the Cisco IOS XR along with support for the unified model.

## Contents

This module contains the following sections:

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## Restrictions for the Early Media Support

The restrictions for Early Media Support are:

- Cisco Unified Border Element (SP Edition) offers support for the gateway model of early media (as defined in RFC 3960).
- Early media does not work with endpoints which send late SDP.
- Cisco Unified Border Element (SP Edition) 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 Session Description Protocol (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 real-time control protocol (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, Cisco Unified Border Element (SP Edition) 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 Cisco Unified Border Element (SP Edition) 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.