



## H.248 Segmentation Package Support

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When an H.248 association is established over the User Datagram Protocol (UDP), the H.248 message can be too big to fit within one User Datagram Protocol (UDP) packet, causing traffic congestion. As a result, H.248-based segmentation is required to ensure that the DBE returns the data in smaller packets and the traffic flows smoothly.

The H.248 Segmentation (seg) package, defined in H.248.1v3 Annex E, defines the following four properties to use when performing this segmentation:

- MGSegmentationTimerValue
- MGCSegmentationTimerValue
- MGMaxPDUSize
- MGCMMaxPDUSize

### Feature History for H.248 Segmentation Package Support

Release	Modification
Release 3.5.1	This feature was introduced on Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.6.0	No modification.

## Contents

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## Restrictions for Implementing H.248 Segmentation Package

The following restrictions and limitations apply to H.248 segmentation package support:

- In addition to this package, the DBE needs to support the segmentation package.

- The DBE only supports the sending of segmented messages; it won't receive segmented messages from the Media Gateway Controller.
- The DBE only supports the sending of segmented messages over UDP. If the DBE receives segmented messages over Transmission Control Protocol (TCP) connections from MGCs, it generates an error.
- If the MGC does not receive all the message segments of a message, then MGC sends the error code: Error 459.
- This feature is not available with H.248 versions 1 and 2.

## How to Implement H.248 Segmentation Package Support

This section contains the steps for enabling the H.248 segmentation package by configuring the DBE to set the maximum PDU size. By default, this package is disabled.

### Implementing H.248 Segmentation Package

#### SUMMARY STEPS

1. **configure**
2. **sbc** *service-name*
3. **dbe**
4. **vdbe**
5. **max-pdu-size** *maximum PDU size*
6. **commit**
7. **end**
8. **show services sbc** *service-name* **dbe controllers**

#### DETAILED STEPS

	Command or Action	Purpose
Step 1	<b>configure</b>  <b>Example:</b> RP/0/0/CPU0:router# <b>configure</b>	Enables global configuration mode.
Step 2	<b>sbc</b> <i>service-name</i>  <b>Example:</b> RP/0/0/CPU0:router(config)# <b>sbc</b> mysbc	Enters the mode of an SBC service. <ul style="list-style-type: none"> <li>• Use the <i>service-name</i> argument to define the name of the service.</li> </ul>
Step 3	<b>dbe</b>  <b>Example:</b> RP/0/0/CPU0:router(config-sbc)# <b>dbe</b>	Enters the mode of a DBE entity within an SBC service.

	Command or Action	Purpose
Step 4	<b>vdbe</b>  <b>Example:</b> RP/0/0/CPU0:router(config-sbc-dbe)# vdbe	Enters the mode for configuring virtual DBE parameters.
Step 5	<b>max-pdu-size</b> <i>maximum PDU size</i>  <b>Example:</b> RP/0/0/CPU0:router(config-sbc-dbe-vdbe)# <b>max-pdu-size 64000</b>	Sets the maximum PDU size in bytes that the UDP must use for H.248 control signaling. The <b>no</b> version of this command disables the segmentation package feature. <ul style="list-style-type: none"> <li>maximum PDU size—Specifies the maximum PDU size in bytes. The range of accepted values is 0-4294967295 bytes. A value of 0 disables the segmentation package.</li> </ul>
Step 6	<b>commit</b>  <b>Example:</b> RP/0/0/CPU0:router(config-sbc-dbe-vdbe)# <b>commit</b>	Saves configuration changes. Use the <b>commit</b> command to save the configuration changes to the running configuration file and remain within the configuration session.
Step 7	<b>end</b>  <b>Example:</b> RP/0/0/CPU0:router(config-sbc-dbe-vdbe)# <b>exit</b>	Exits the configuration session.
Step 8	<b>show services sbc</b> <i>service-name</i> <b>dbe controllers</b>  <b>Example:</b> RP/0/0/CPU0:router# show services sbc mySbc dbe controllers	Displays the statistics for the H.248 controller on the DBE.

## Examples of Show Commands

```
# show services sbc mySbc dbe controllers
vDBE in DBE location 1
DBE Admin Status: Active
Media gateway controller in use:
H.248 controller address
192.10.2.2:2955
Status:          Attached
Sent      Received      Failed      Retried
Requests  2                4           1           13
Replies   4                1           0           0

Segmentation
MG Segmentation Timer 0 ms
MGC Segmentation Timer 0 ms
MG Segmentation Max PDU Size 4294967295 bytes
MGC Segmentation Max PDU Size 512 bytes
Segmentation Packets Sent 0
Segmentation Packets Received 0
T-Max Value:
T-Max Value = 50000

Configured controllers:
H.248 controller 1:
Remote address:      192.11.2.1.2944 (using default port)
```

Transport: UDP (with IAH)  
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## Additional References

The following sections provide references related to H.248 Segmentation Package Support on the SBC.

## 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>

## 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>

