



## Configurable Base Root Package

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The new feature enables the DBE to configure maximum terminations per context using the base root package. The base root package defines the capabilities of the media gateway (MG) which may be modified and audited by the media gateway controller (MGC). Before this feature was introduced, the value of the maximum terminations per context was a non-configurable property of the base root package. The configurable base root package feature allows you to audit and configure the MG capabilities.

### Feature History for Configurable Base Root Package

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

## Contents

This module contains the following sections:

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## Information About Configurable Base Root Package

The DBE can now have maximum terminations per context configured, using base root package. During the Audit, the DBE returns the configured value to the MGC. The MGC cannot override the configured maximum terminations per context value.

The following properties are read-only:

- `maxTerminationsPerContext` value is configurable using the CLI command
- `maxNrOfContexts`

# How to Configure Base Root Package

The new command, **h248-max-terms-per-context**, is used to configure maximum terminations per context for the DBE.

## Configuring Base Root Package

### SUMMARY STEPS

1. **configure**
2. **sbc** *service-name*
3. **dbe**
4. **vdbe**
5. **h248-max-terms-per-context** *max-contexts*
6. **commit**
7. **exit**

### DETAILED STEPS

	Command or Action	Purpose
Step 1	<b>configure</b>  <b>Example:</b> RP/0/0/CPU0:router# configure	Enables the global configuration mode.
Step 2	<b>sbc</b> <i>service-name</i>  <b>Example:</b> RP/0/0/CPU0:router(config)# sbc mysbc	Enters the mode of an SBC service.  Use the <i>service-name</i> argument to define the name of the SBC.
Step 3	<b>dbe</b>  <b>Example:</b> RP/0/0/CPU0:router(config-sbc)# dbe	Enters the mode of the data border element (DBE) function of the SBC.
Step 4	<b>vdbe</b>  <b>Example:</b> RP/0/0/CPU0:router(config-sbc-dbe)# vdbe	Enters the mode for configuring virtual DBE (vDBE) parameters.
Step 5	<b>h248-max-terms-per-context</b> <i>max-contexts</i>  <b>Example:</b> RP/0/0/CPU0:router(config-sbc-dbe-vdbe)# h248-max-terms-per-context 8	Configures the H.248 maximum terminations per context for DBE (vDBE in this example).  The <b>no</b> version of this command does not set this configuration.  <i>max-contexts</i> —Maximum number of terminations per context. Value range is 2-32. Default is 32.

	Command or Action	Purpose
Step 6	<b>commit</b>  <b>Example:</b> RP/0/0/CPU0:router(config-sbc-dbe-vdbe)# commit	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>exit</b>  <b>Example:</b> RP/0/0/CPU0:router(config-sbc-dbe-vdbe)# exit	Exits the current mode of the configuration.

## Configuring Base Root Package: Example

The following example shows how to configure base root package:

```
RP/0/RP0/CPU0:SBC-CRS-16(config-sbc-dbe)#vdbe
RP/0/RP0/CPU0:SBC-CRS-16(config-sbc-dbe-vdbe)#no attach-controllers
RP/0/RP0/CPU0:SBC-CRS-16(config-sbc-dbe-vdbe)#commit
RP/0/RP0/CPU0:SBC-CRS-16(config-sbc-dbe-vdbe)#h248-max-terms-per-context 32
RP/0/RP0/CPU0:SBC-CRS-16(config-sbc-dbe-vdbe)#commit
RP/0/RP0/CPU0:SBC-CRS-16(config-sbc-dbe-vdbe)#attach-controllers
RP/0/RP0/CPU0:SBC-CRS-16(config-sbc-dbe-vdbe)#commit
RP/0/RP0/CPU0:SBC-CRS-16(config-sbc-dbe-vdbe)#exit
RP/0/RP0/CPU0:SBC-CRS-16(config-sbc-dbe)#act
RP/0/RP0/CPU0:SBC-CRS-16(config-sbc-dbe)#commit

RP/0/RP0/CPU0:SBC-CRS-16(config-sbc-dbe)#do sh run
sbc crs16
service-location preferred-active 0/7/CPU0
dbe
vdbe
control-address h248 ipv4 1.116.1.1
local-port 2945
controller h248 1
transport udp
remote-address ipv4 200.200.200.136
remote-port 2945
!
h248-tmax 50000
h248-version 3
h248-napt-package napt
max-pdu-size 512
h248-max-terms-per-context 32 <===== Max terms is set
attach-controllers
congestion-cleared 80
congestion-threshold 90
!
media-address ipv4 88.116.1.101 managed-by dbe
port-range 16000 32000 any
!
media-address ipv6 2001:88:116:1::101 managed-by dbe
port-range 16000 32000 any
!
deact-mode abort
location-id 1
activate
media-timeout 3600
```

```

=====Create up to 32 termination
RP/0/RP0/CPU0:SBC-CRS-16(config-sbc-dbe)#do sh serv sbc crs16 dbe media-flow-s$
SBC Service "crs16"
Media Flow:
  State of Media Flow:           Allocated
  Call Established time:         Tue Sep 4 15:34:55.784 2007
  Call Priority:                 Unspecified
  ContextID:                     5 <===== Same context
  StreamID:                      1
  Class of service:             Voice
  Side A:
    Name:                        cisco/voice/gn/0/1/0/1/ac/1 <===== Termination#
    No media timeout remaining: 3363 s
    Reserved Bandwidth:         12600 (bytes/second)
    Status:                      In Service
    VRF Name:
    Local Address:              88.116.1.101
    Local Port:                 16000
    Remote Address:             100.116.31.101
    Remote Port:                32000
    RTP Packets Received:       0
    RTP Packets Sent:           0
    RTP Packets Discarded:      0
    RTP Data Received:          0 (bytes)
    RTP Data Sent:              0 (bytes)
    RTP Data Discarded:         0 (bytes)
    RTCP Packets Sent:          Not known
    RTCP Packets Received:      Not known
    RTCP Packets Lost:          Not known
    Gm Discarded Packets:       0
    DTMF Interworking:          No
    Media Flowing:              No
    Affected by Routing Error:  No
    Unexpected SrcAddr Packets: No
    Billing ID:                  0x0000000000000000000000000000000000000000000000000000000000000000
    Media directions allowed:    sendrecv
  Side B:
    Name:                        cisco/voice/gn/0/1/0/1/bb/2 <===== Termination#
    No media timeout remaining: 3363 s
    Reserved Bandwidth:         12600 (bytes/second)
    Status:                      In Service
    VRF Name:
    Local Address:              88.116.1.101
    Local Port:                 16004
    Remote Address:             100.116.41.101
    Remote Port:                32004
    RTP Packets Received:       0
    RTP Packets Sent:           0
    RTP Packets Discarded:      0
    RTP Data Received:          0 (bytes)
    RTP Data Sent:              0 (bytes)
    RTP Data Discarded:         0 (bytes)
    RTCP Packets Sent:          Not known
    RTCP Packets Received:      Not known
    RTCP Packets Lost:          Not known
    Gm Discarded Packets:       0
    DTMF Interworking:          No
    Media Flowing:              No
    Affected by Routing Error:  No
    Unexpected SrcAddr Packets: No
    Billing ID:                  0x0000000000000000000000000000000000000000000000000000000000000000
    Media directions allowed:    sendrecv
Media Flow:
  State of Media Flow:           Allocated

```

```

Call Established time:      Tue Sep 4 15:34:58.211 2007
Call Priority:             Unspecified
ContextID:                5      <===== Same context
StreamID:                 2
Class of service:         Voice
Side A:
  Name:                    cisco/voice/gn/0/1/0/1/ac/3      <===== Termination#
  No media timeout remaining: 3365 s
  Reserved Bandwidth:      12600 (bytes/second)
  Status:                  In Service
  VRF Name:
  Local Address:           88.116.1.101
  Local Port:              16008
  Remote Address:          100.116.31.101
  Remote Port:             32008
  RTP Packets Received:    0
  RTP Packets Sent:        0
  RTP Packets Discarded:   0
  RTP Data Received:       0 (bytes)
  RTP Data Sent:           0 (bytes)
  RTP Data Discarded:      0 (bytes)
  RTCP Packets Sent:       Not known
  RTCP Packets Received:   Not known
  RTCP Packets Lost:       Not known
  Gm Discarded Packets:    0
  DTMF Interworking:       No
  Media Flowing:           No
  Affected by Routing Error: No
  Unexpected SrcAddr Packets: No
  Billing ID:               0x0000000000000000000000000000000000000000000000000000000000000000
  Media directions allowed: sendrecv
Side B:
  Name:                    cisco/voice/gn/0/1/0/1/bb/4      <===== Termination#
  No media timeout remaining: 3365 s
  Reserved Bandwidth:      12600 (bytes/second)
  Status:                  In Service
  VRF Name:
  Local Address:           88.116.1.101
  Local Port:              16012
  Remote Address:          100.116.41.101
  Remote Port:             32012
  RTP Packets Received:    0
  RTP Packets Sent:        0
  RTP Packets Discarded:   0
  RTP Data Received:       0 (bytes)
  RTP Data Sent:           0 (bytes)
  RTP Data Discarded:      0 (bytes)
  RTCP Packets Sent:       Not known
  RTCP Packets Received:   Not known
  RTCP Packets Lost:       Not known
  Gm Discarded Packets:    0
  DTMF Interworking:       No
  Media Flowing:           No
  Affected by Routing Error: No
  Unexpected SrcAddr Packets: No
  Billing ID:               0x0000000000000000000000000000000000000000000000000000000000000000
  Media directions allowed: sendrecv
.....
  Media directions allowed: sendrecv
Media Flow:
  State of Media Flow:     Allocated
  Call Established time:   Tue Sep 4 15:35:03.413 2007
  Call Priority:           Unspecified
  ContextID:              5      <===== Same context

```

```

StreamID:                               16
Class of service:                         Voice
Side A:
  Name:                                    cisco/voice/gn/0/1/0/1/ac/31 <===== Termination#
  No media timeout remaining:              3282 s
  Reserved Bandwidth:                      12600 (bytes/second)
  Status:                                   In Service
  VRF Name:
  Local Address:                           88.116.1.101
  Local Port:                               16120
  Remote Address:                          100.116.31.101
  Remote Port:                              32120
  RTP Packets Received:                    0
  RTP Packets Sent:                        0
  RTP Packets Discarded:                   0
  RTP Data Received:                       0 (bytes)
  RTP Data Sent:                           0 (bytes)
  RTP Data Discarded:                      0 (bytes)
  RTCP Packets Sent:                       Not known
  RTCP Packets Received:                   Not known
  RTCP Packets Lost:                       Not known
  Gm Discarded Packets:                    0
  DTMF Interworking:                       No
  Media Flowing:                           No
  Affected by Routing Error:               No
  Unexpected SrcAddr Packets:              No
  Billing ID:                               0x0000000000000000000000000000000000000000000000000000000000000000
  Media directions allowed:                 sendrecv
Side B:
  Name:                                    cisco/voice/gn/0/1/0/1/bb/32 <===== Termination#
  No media timeout remaining:              3282 s
  Reserved Bandwidth:                      12600 (bytes/second)
  Status:                                   In Service
  VRF Name:
  Local Address:                           88.116.1.101
  Local Port:                               16124
  Remote Address:                          100.116.41.101
  Remote Port:                              32124
  RTP Packets Received:                    0
  RTP Packets Sent:                        0
  RTP Packets Discarded:                   0
  RTP Data Received:                       0 (bytes)
  RTP Data Sent:                           0 (bytes)
  RTP Data Discarded:                      0 (bytes)
  RTCP Packets Sent:                       Not known
  RTCP Packets Received:                   Not known
  RTCP Packets Lost:                       Not known
  Gm Discarded Packets:                    0
  DTMF Interworking:                       No
  Media Flowing:                           No
  Affected by Routing Error:               No
  Unexpected SrcAddr Packets:              No
  Billing ID:                               0x0000000000000000000000000000000000000000000000000000000000000000
  Media directions allowed:                 sendrecv

```

## Additional References

The following sections provide references related to configuring base root package.

## 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>

