



Media Address Pools

You can configure the SBC with a single media address or a range of media addresses. In addition you can define one or more permissible port ranges for the configured addresses. This feature allows the administrator to configure or restrict the DBE address by address pool with or without port range, and define CoS affinity for each port range.

Feature History for Media Address Pools

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

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Restrictions for Configuring Media Address Pools

- The ending address must be numerically higher than the starting address.
- The minimum port must be numerically lower than the maximum port.
- Port ranges may not overlap.
- Address ranges may not overlap.
- Address ranges and single addresses may not overlap.
- Where a range of addresses are defined in a single command, they will share any port ranges assigned. If there is a requirement to have different port ranges for different media addresses, then the addresses must be configured separately.

- Media addresses and address ranges may only be deleted before the DBE is activated. After DBE activation, the DBE must be de-activated in order to delete addresses and address ranges.
- After you configure media addresses and pools of addresses, you cannot delete them unless you delete the DBE.

Information About Media Address Pools

If you do not specify a port range, all possible VoIP port numbers are valid. The full VoIP port range extends from 16384 to 32767 inclusive.

You can define a CoS affinity for each port range. The set of classes of service (CoS) is consistent with those used for QoS packet marking, and consists of voice and video. If you do not define an associated CoS affinity, then the affinity is for all call types.

You can modify the extent of existing port ranges or the CoS affinities of existing port ranges or delete an existing port range. Any configuration changes do not apply to existing calls but apply to calls being set up after the configuration has been committed.

How to Configure Media Address Pools

This section contains the steps for configuring media address pools.

Configuring Media Address Pools

SUMMARY STEPS

1. **configure**
2. **sbc** *service-name*
3. **dbe**
4. **media-address ipv4** *ipv4 media address*
5. **media-address pool ipv4** *<starting address> <ending address>*
6. **port range** *<min-port> <max-port> <class-of-service>*
7. **commit**
8. **end**
9. **show services sbc** *service-name* **dbe addresses**
10. **show services sbc** *service-name* **dbe media-flow-stats vrf** *vrf-name* **ipv4** *ipv4 media address*
port *port number*

DETAILED STEPS

	Command or Action	Purpose
Step 1	configure Example: RP/0/0/CPU0:router# configure	Enables the global configuration mode.
Step 2	sbc service-name Example: 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	dbe Example: RP/0/0/CPU0:router(config-sbc)# dbe	Enters the mode of the data border element (DBE) function of the SBC.
Step 4	media-address ipv4 IPv4 media address Example: RP/0/0/CPU0:router(config-sbc-dbe)# media-address ipv4 10.0.1.1	Enters the submode for configuring a DBE media address pool and creates an IPv4 address within a DBE media address pool. Note Media addresses and pools of addresses may not be deleted once they have been configured, unless the DBE is deleted as a whole.
Step 5	media-address pool ipv4 <starting address> <ending address> Example: RP/0/0/CPU0:router(config-sbc-dbe)# media-address pool ipv4 10.10.10.1 10.10.10.20	Enters the submode for configuring a DBE media address pool and adds the address range to the address pool. The parameters include any valid IPv4 addresses. The ending address must be numerically higher than the starting address. Note Media addresses and pools of addresses may not be deleted once they have been configured, unless the DBE is deleted as a whole.
Step 6	port range <min-port> <max-port> <class-of-service> Example: RP/0/0/CPU0:router(config-sbc-dbe-media-address-ipv4) port range 10000 20000 voice	Creates a port range associated with the media address or range of addresses. <ul style="list-style-type: none"> min-port—Starting port number of the range. Value range starts at 1 and must be less than the max-port value. Default is 16384. max-port—Ending port number of the range which must be greater than the min-port. Maximum value is 65535. Default is 32767. (optional) class-of-service—Class of service affinity for the point range. Options are <i>any</i>, <i>voice</i>, <i>video</i>. Default is <i>any</i>.

	Command or Action	Purpose
Step 7	commit Example: RP/0/0/CPU0:router(config-sbc-dbe-media-address-ipv4)# commit	Saves configuration changes. Use the commit command to save the configuration changes to the running configuration file and remain within the configuration session.
Step 8	end Example: RP/0/0/CPU0:router(config-sbc-dbe-media-address-ipv4)# exit	Exits the configuration session.
Step 9	show services sbc dbe addresses Example: RP/0/0/CPU0:router# show services sbc dbe addresses	Lists the addresses configured on DBEs.
Step 10	show services sbc service-name dbe media-flow-stats vrf vrf-name ipv4 ipv4 media address port port number Example: RP/0/0/CPU0:router# show services sbc mysbc dbe media-flow-stats vrf vpn3 ipv4 10.1.1.1 port 24000	<p>Displays the statistics about one or more media flows collected on the DBE. The example shows the reported fields. The statistics that begin with Rtp are maintained and collected in real time when you issue the command.</p> <p>The endpoint statistics (beginning with EndPoint) are collected from RTCP packets transmitted by endpoints and are updated when the RTCP packets are received.</p> <ul style="list-style-type: none"> <i>vrf-name</i>—(optional) Only displays media flows to/from this VPN <i>ipv4 media address</i>—(optional) Only displays media flows to/from this IPv4 media address <i>port-number</i>—(optional) Only displays media flows to/from this port

Configuring Media Address Pools: Example

This section provides a sample configuration for media address pools.

The following sample script adds a single address (10.10.10.1), and two ranges of addresses (10.10.11.1 through 10.10.11.10 and 10.10.11.21 through 10.10.11.30) to the default media address pool.

Two port ranges are configured on the single address. The first port range is for voice traffic, and runs from port 16384 to 20000 inclusively. The second one is for video traffic, and runs from port 20001 to 65535 inclusively.

The first range of addresses also has two similar port ranges configured that apply to all ten addresses within the range.

The second range of addresses has a single port range defined, and no service class associated with it.

```
(config)# sbc mySbc dbe media-address
(config-sbc-dbe-media-address)# ipv4 10.10.10.1
(config-sbc-dbe-media-address-ipv4)# port-range 16384 20000 voice
(config-sbc-dbe-media-address-ipv4)# port-range 20001 65535 video
```

```
(config-sbc-dbe-media-address-ipv4)# exit
(config-sbc-dbe-media-address)# pool ipv4 10.10.11.1 10.10.11.10
(config-sbc-dbe-media-address-pool-ipv4)# port-range 16384 30000 voice
(config-sbc-dbe-media-address-pool-ipv4)# port-range 30001 40000 video
(config-sbc-dbe-media-address-pool-ipv4)# exit
(config-sbc-dbe-media-address)# pool ipv4 10.10.11.21 10.10.11.30
(config-sbc-dbe-media-address-pool-ipv4)# port-range 20000 40000
```

Additional References

The following sections provide references related to configuring media address pools.

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: http://cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml

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>

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.	http://www.cisco.com/techsupport