



## CHAPTER 4

# Media Address Pools

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You can configure the distributed model of the Cisco Unified Border Element (SP Edition) with a single media address or a range of sequential 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 data border element (DBE) address by address pool with or without port range, and define class of service (CoS) affinity for each port range.

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).

For a complete description of commands used in this chapter, see the *Cisco Unified Border Element (SP Edition) Command Reference: Distributed Model* at [http://www.cisco.com/en/US/docs/ios/sbc/command/reference/sbc\\_book.html](http://www.cisco.com/en/US/docs/ios/sbc/command/reference/sbc_book.html).

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## Prerequisites for Implementing Media Address Pools

The following prerequisites are required to implement media address pools:

- Before implementing media address pools, the Cisco Unified Border Element (SP Edition) must already be created. See the procedures described in the “[Configuring Cisco Unified Border Element \(SP Edition\) DBE Deployment](#)” section on page 2-2.

## Restrictions for Configuring Media Address Pools

- The ending address must be greater than or equal to 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 is defined in a single command, the addresses 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 port ranges may only be deleted before the DBE is activated. After DBE activation, the DBE must be deactivated in order to delete addresses and port ranges.

## Information About Media Address Pools

A media address is one of a pool of IP addresses on the DBE that is used for media relay functionality. Addresses assigned by the media pool are the destination addresses used by packets that arrive at the DBE.

After you have configured a local media address or port range, the media address or port range cannot be modified while the DBE service is active. Deactivate the DBE with the **no activate** command before modifying the IPv4 or IPv6 media addresses or port ranges.

If you do not specify a port range, all possible VoIP port numbers are valid. The full VoIP port range extends from 1 to 65535 (inclusive).

You can define a class of service (CoS) affinity for each port range. The set of classes of service is consistent with those used for QoS packet marking, and consists of voice, video, signaling, fax, or any. 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.

## Configuring Media Address Pools

This section contains steps for configuring media address pools on a DBE.

### SUMMARY STEPS

1. **configure terminal**
2. **interface sbc**
3. **sbc {sbc-name} dbe**
4. **media-address pool ipv4 {A.B.C.D} {E.F.G.H}**
5. **port-range {min-port} {max-port} [any | voice | video | signaling | fax]**
6. **exit**
7. **end**
8. **show sbc {sbc-name} dbe addresses**
9. **show sbc {sbc-name} dbe media-flow-stats ipv4 A.B.C.D port port-number**

## DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>configure terminal</code>  <b>Example:</b> Router# <code>configure terminal</code>	Enters global configuration mode.
Step 2	<code>interface sbc</code>  <b>Example:</b> Router(config)# <code>interface sbc 1</code>	Enters into interface configuration mode.  In the example, an SBC virtual interface called “1” is configured.
Step 3	<code>sbc {sbc-name} dbe</code>  <b>Example:</b> Router(config)# <code>sbc mySbc dbe</code>	Enters into SBC-DBE configuration mode.
Step 4	<code>media-address pool ipv4 {A.B.C.D} {E.F.G.H}</code>  <b>Example:</b> Router(config-sbc-dbe)# <code>media-address pool ipv4 10.0.2.1 10.0.2.10</code>	Creates a pool of sequential IPv4 media addresses that can be used by the DBE as local media addresses. Enters into SBC-DBE media address configuration mode.
Step 5	<code>port-range {min-port} {max-port} [any   voice   video   signaling   fax]</code>  <b>Example:</b> Router(config-sbc-dbe-media-address)# <code>port-range 16384 30000 any</code>	Creates a port range for the configured media addresses in the pool and specifies a class of service such as any, voice, video, signaling, and fax for the port range.  In the example, a port range of 16384 to 30000 is created where the class of service for the port range is any class of service.
Step 6	<code>exit</code>  <b>Example:</b> Router(config-sbc-dbe-media-address)# <code>exit</code>	Exits SBC-DBE media address configuration mode.
Step 7	<code>end</code>  <b>Example:</b> Router(config-sbc-dbe)# <code>end</code>	Exits SBC-DBE configuration mode and returns to privileged EXEC mode.

	Command or Action	Purpose
Step 8	<pre>show sbc {sbc-name} dbe addresses</pre> <p><b>Example:</b> Router# <code>show sbc mySbc dbe addresses</code></p>	Lists the media addresses and H.248 control addresses configured on DBEs.
Step 9	<pre>show sbc {sbc-name} dbe media-flow-stats ipv4 A.B.C.D port port-number</pre> <p><b>Example:</b> Router# <code>show sbc mySbc dbe media-flow-stats ipv4 10.0.1.1 port 20000</code></p>	<p>Displays the statistics about one or more media flows collected on the DBE and shows, as an example, the following reported fields:</p> <ul style="list-style-type: none"> <li><i>A.B.C.D</i>—(Optional) Only displays media flows to and from this IPv4 media address.</li> <li><i>port-number</i>—(Optional) Only displays media flows to and from this port.</li> </ul> <p>The RTCP packet statistics are collected from RTCP packets transmitted by endpoints and are updated when the RTCP packets are received.</p>

## 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.

```
Router(config)# interface sbc 1
Router(config)# sbc mySBC dbe
Router(config-sbc-dbe)# media-address ipv4 10.10.10.1
Router(config-sbc-dbe-media-address)# port-range 16384 20000 voice
Router(config-sbc-dbe-media-address)# port-range 20001 65535 video
Router(config-sbc-dbe-media-address)# exit
Router(config-sbc-dbe)# media-address pool ipv4 10.10.11.1 10.10.11.10
Router(config-sbc-dbe-media-address)# port-range 16384 30000 voice
Router(config-sbc-dbe-media-address)# port-range 30001 40000 video
Router(config-sbc-dbe-media-address)# exit
Router(config-sbc-dbe)# media-address pool ipv4 10.10.11.21 10.10.11.30
Router(config-sbc-dbe-media-address)# port-range 20000 40000 any
```