



Remote Source-Route Bridging Commands

Use the commands in this chapter to configure remote source-route bridging (RSRB) networks. For RSRB configuration information and examples, refer to the “Configuring Remote Source-Route Bridging” chapter in the *Cisco IOS Bridging and IBM Networking Configuration Guide*.

locaddr-priority

To assign a remote source-route bridging (RSRB) priority group to an input interface, use the **locaddr-priority** interface configuration command. To remove the RSRB priority group assignment from the interface, use the **no** form of this command.

locaddr-priority *list-number*

no locaddr-priority *list-number*

Syntax Description

list-number Priority list number of the input interface.

Defaults

No RSRB priority group is assigned.

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.

Usage Guidelines

You must use the **priority-list protocol** command to assign priorities to the ports as shown in Table 28.

Table 28 Common RSRB Services and Their Port Numbers

Service	Port
RSRB high priority	1996
RSRB medium priority	1987
RSRB normal priority	1988
RSRB low priority	1989

Examples

In the following example, Token Ring interface 0 is assigned the RSRB priority group 1; LU 01 is assigned a medium priority and maps to TCP port 1996; LU 02 has been assigned a normal priority and maps to TCP port 1987; LU 03 has been assigned a low priority and maps to TCP port 1988; LU 04 has been assigned high priority and maps to TCP port 1989:

```
source-bridge ring-group 2624
source-bridge remote-peer 2624 tcp 1.0.0.1
source-bridge remote-peer 2624 tcp 1.0.0.2 local-ack priority
locaddr-priority-list 1 01 medium
locaddr-priority-list 1 02 normal
locaddr-priority-list 1 03 low
locaddr-priority-list 1 04 high
!
priority-list 1 protocol ip low tcp 1996
priority-list 1 protocol ip high tcp 1987
priority-list 1 protocol ip medium tcp 1988
priority-list 1 protocol ip normal tcp 1989
!
interface tokenring 0
 source-bridge 2576 8 2624
 locaddr-priority 1
```

Related Commands

Command	Description
locaddr-priority-list	Maps LUs to queuing priorities as one of the steps to establishing queuing priorities based on LU addresses.
priority-list protocol	Establishes queuing priorities based on the protocol type.

locaddr-priority-list

To map logical units (LUs) to queueing priorities as one of the steps to establishing queueing priorities based on LU addresses, use the **locaddr-priority-list** global configuration command. To remove that priority queueing assignment, use the **no** form of this command. You use this command in conjunction with the **priority list** command.

locaddr-priority-list *list-number address-number queue-keyword* [**dsap** *ds*] [**dmac** *dm*]
[**ssap** *ss*] [**smac** *sm*]

no locaddr-priority-list *list-number address-number queue-keyword* [**dsap** *ds*] [**dmac** *dm*]
[**ssap** *ss*] [**smac** *sm*]

Syntax Description	
<i>list-number</i>	Arbitrary integer between 1 and 10 that identifies the LU address priority list selected by the user.
<i>address-number</i>	Value of the LOCADDR= parameter on the LU macro, which is a one-byte address of the LU in hexadecimal.
<i>queue-keyword</i>	Enables a priority queue type: Valid queue-keyword values and their equivalent priority queue type level are: <ul style="list-style-type: none"> • high—Priority queue type is high. • medium—Priority queue type is medium. • normal—Priority queue type is normal. • low—Priority queue type is low.
dsap <i>ds</i>	(Optional) Indicates that the next argument, <i>ds</i> , represents the destination service access point address. The argument <i>ds</i> is a hexadecimal value.
dmac <i>dm</i>	(Optional) Indicates that the next argument, <i>dm</i> , is the destination MAC address. The argument <i>dm</i> is written as a dotted triple of four-digit hexadecimal numbers.
ssap <i>ss</i>	(Optional) Indicates that the next argument, <i>ss</i> , is the source service access point address. If this is not specified, the default is all source service access point addresses.
smac <i>sm</i>	(Optional) Indicates that the next argument, <i>sm</i> , is the source MAC address, written as a dotted triple of four-digit hexadecimal numbers. If this is not specified, the default is all source MAC addresses.

Defaults No mapping.

Command Modes Global configuration

Command History

Release	Modification
10.0	This command was introduced.
11.0	The following keywords were added: <ul style="list-style-type: none"> • ssap • smac

Usage Guidelines

Use this command to map LUs to queuing priorities. Once you establish the priority for each LU, you can assign a priority to a TCP port. Hence you establish a mapping between the LUs and queuing priorities, and queuing priorities and TCP ports.

It is preferable to prioritize NetBIOS traffic below SNA traffic, but by default NetBIOS traffic is assigned the high priority on TCP port 1996.

Examples

In the following example, Token Ring interface 0 is assigned the RSRB priority group 1; LU 01 is assigned a medium priority and maps to TCP port 1996; LU 02 has been assigned a normal priority and maps to

TCP port 1987; LU 03 has been assigned a low priority and maps to TCP port 1988; LU 04 has been assigned high priority and maps to TCP port 1989:

```
source-bridge ring-group 2624
source-bridge remote-peer 2624 tcp 1.0.0.1
source-bridge remote-peer 2624 tcp 1.0.0.2 local-ack priority
locaddr-priority-list 1 01 medium
locaddr-priority-list 1 02 normal
locaddr-priority-list 1 03 low
locaddr-priority-list 1 04 high
!
priority-list 1 protocol ip low tcp 1996
priority-list 1 protocol ip high tcp 1987
priority-list 1 protocol ip medium tcp 1988
priority-list 1 protocol ip normal tcp 1989
!
interface tokenring 0
 source-bridge 2576 8 2624
 locaddr-priority 1
```

The following example shows how to establish queuing priorities based on the address of the serial link on a STUN connection. Note that you must use the **priority-group** interface configuration command to assign a priority group to an input interface.

```
stun peer-name 131.108.254.6
stun protocol-group 1 sdlc
locaddr-priority-list 1 02 high
locaddr-priority-list 1 03 high
locaddr-priority-list 1 04 medium
locaddr-priority-list 1 05 low
!
interface serial 0
 no ip address
 encapsulation stun
 stun group 1
 stun route address 4 interface serial 0 direct
 locaddr priority 1
 priority-group 1
```

■ **locaddr-priority-list**

Related Commands	Command	Description
	locaddr-priority	Assigns an RSRB priority group to an input interface.
	priority-list protocol	Establishes queuing priorities based on the protocol type.

priority-list protocol

To establish queueing priorities based upon the protocol type as one of the steps to establishing queueing priorities based on logical unit (LU) addresses, use the **priority-list protocol** global configuration command. To remove the priority list, use the **no** form of this command.

priority-list *list-number* **protocol** *protocol-name* *queue-keyword*

no priority-list *list-number* **protocol** *protocol-name* *queue-keyword*

Syntax Description		
<i>list-number</i>	Arbitrary integer between 1 and 10 that identifies the LU address priority list selected by the user.	
<i>protocol-name</i>	Protocol you are using. In most cases, this will be ip .	
<i>queue-keyword</i>	Priority queue name; one of high , medium , normal , or low .	

Defaults No queueing priorities are established.

Command Modes Global configuration

Command History	Release	Modification
	10.0	This command was introduced.

Usage Guidelines Use this command to assign the priority level defined to TCP segments originating from or destined to a specified TCP port. Assign priorities to the ports as shown in Table 29.

Table 29 Common RSRB Services and Their Port Numbers

Service	Port
RSRB high priority	1996
RSRB medium priority	1987
RSRB normal priority	1988
RSRB low priority	1989

Once you establish the priority for each LU using the **locaddr-priority-list** command, you can assign a priority to a TCP port using the **priority-list** command. By using both commands you establish a mapping between the LUs and queueing priorities, and between the queueing priorities and TCP ports.

It is preferable to prioritize NetBIOS traffic below SNA traffic, but by default NetBIOS traffic is assigned the high priority on TCP port 1996.

Use this command in conjunction with the **locaddr-priority-list** command.

Examples

In the following example, LU 01 has been assigned a medium priority and maps to TCP port 1996; LU 02 has been assigned a normal priority and maps to TCP port 1987; LU 03 has been assigned a low priority and maps to TCP port 1988; LU 04 has been assigned high priority and maps to TCP port 1989.

```
locaddr-priority-list 1 01 medium
locaddr-priority-list 1 02 normal
locaddr-priority-list 1 03 low
locaddr-priority-list 1 04 high

priority-list 1 protocol ip low tcp 1996
priority-list 1 protocol ip high tcp 1987
priority-list 1 protocol ip medium tcp 1988
priority-list 1 protocol ip normal tcp 1989
```

Related Commands

Command	Description
locaddr-priority	Assigns an RSRB priority group to an input interface.
locaddr-priority-list	Maps LUs to queueing priorities as one of the steps to establishing queueing priorities based on LU addresses.

rsrb remote-peer lsap-output-list

To define service access point (SAP) filters by local SAP (LSAP) address on the remote source-route bridging WAN interface, use the **rsrb remote-peer lsap-output-list** global configuration command. To remove a SAP filter on the RSRB WAN interface, use the **no** form of this command.

```
rsrb remote-peer ring-group {tcp ip-address | fst ip-address | interface name} lsap-output-list
access-list-number
```

```
no rsrb remote-peer ring-group {tcp ip-address | fst ip-address | interface name}
lsap-output-list access-list-number
```

Syntax Description

<i>ring-group</i>	Virtual ring number of the remote peer.
tcp	TCP encapsulation.
fst	FST encapsulation.
<i>ip-address</i>	IP address.
interface	Direct encapsulation.
<i>name</i>	Interface name.
<i>access-list-number</i>	Number of the access list.

Defaults

No filters are assigned.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.

Examples

The following example specifies SAP filters by LSAP address:

```
rsrb remote-peer 1000 tcp 131.108.2.30 lsap-output-list 201
```

Related Commands

Command	Description
priority-list protocol	Establishes queueing priorities based on the protocol type.
sap-priority	Defines a priority list on an interface.
sap-priority-list	Defines a priority list.

rsrb remote-peer netbios-output-list

To filter packets by NetBIOS station name on a remote source-route bridging WAN interface, use the **rsrb remote-peer netbios-output-list** global configuration command. To remove a filter on an RSRB WAN interface, use the **no** form of this command.

```
rsrb remote-peer ring-group {tcp ip-address | fst ip-address | interface type} netbios-output-list
host name
```

```
no rsrb remote-peer ring-group {tcp ip-address | fst ip-address | interface type}
netbios-output-list host name
```

Syntax Description

<i>ring-group</i>	Virtual ring number of the remote peer.
tcp	TCP encapsulation.
fst	FST encapsulation.
<i>ip-address</i>	IP address.
interface	Direct encapsulation.
<i>type</i>	Interface name.
<i>name</i>	Name of a NetBIOS access filter previously defined with one or more netbios access-list host global configuration commands.

Defaults

No filter is assigned.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.

Examples

The following example filters packets by NetBIOS station name:

```
rsrb remote-peer 1000 tcp 131.108.2.30 netbios-output-list host engineering
```

Related Commands

Command	Description
netbios access-list host	Assigns the name of the access list to a station or set of stations on the network. The NetBIOS station access list contains the station name to match, along with a permit or deny condition.
priority-list protocol	Establishes queuing priorities based on the protocol type.
sap-priority	Defines a priority list on an interface.
sap-priority-list	Defines a priority list.

sap-priority

To define a priority list on an interface, use the **sap-priority** interface configuration command. To remove a priority list on an interface, use the **no** form of this command.

sap-priority *list-number*

no sap-priority *list number*

Syntax Description	<i>list-number</i>	Priority list number you specified in the sap-priority-list command.						
Defaults	No priority list is defined.							
Command Modes	Interface configuration							
Command History	<table><thead><tr><th>Release</th><th>Modification</th></tr></thead><tbody><tr><td>10.0</td><td>This command was introduced.</td></tr></tbody></table>	Release	Modification	10.0	This command was introduced.			
Release	Modification							
10.0	This command was introduced.							
Examples	The following example specifies priority list number 1: <pre>sap-priority 1</pre>							
Related Commands	<table><thead><tr><th>Command</th><th>Description</th></tr></thead><tbody><tr><td>sap-priority-list</td><td>Defines a priority list.</td></tr><tr><td>source-bridge</td><td>Configures an interface for SRB.</td></tr></tbody></table>	Command	Description	sap-priority-list	Defines a priority list.	source-bridge	Configures an interface for SRB.	
Command	Description							
sap-priority-list	Defines a priority list.							
source-bridge	Configures an interface for SRB.							

sap-priority-list

To define a priority list, use the **sap-priority-list** global configuration command. To remove a priority list, use the **no** form of this command.

sap-priority-list *list-number queue-keyword* [**dsap** *ds*] [**ssap** *ss*] [**dmac** *dm*] [**smac** *sm*]

no sap-priority-list *list-number queue-keyword* [**dsap** *ds*] [**ssap** *ss*] [**dmac** *dm*] [**smac** *sm*]

Syntax Description

<i>list-number</i>	Arbitrary integer between 1 and 10 that identifies the priority list.
<i>queue-keyword</i>	Priority queue name or a remote source-route bridge TCP port name.
dsap <i>ds</i>	(Optional) Destination service access point address. The argument <i>ds</i> is a hexadecimal number.
ssap <i>ss</i>	(Optional) Source service access point address. The argument <i>ss</i> is a hexadecimal number.
dmac <i>dm</i>	(Optional) Destination MAC address. The argument <i>dm</i> is written as a dotted triple of four-digit hexadecimal numbers.
smac <i>sm</i>	(Optional) Source MAC address. The argument <i>sm</i> is written as a dotted triple of four-digit hexadecimal numbers.

Defaults

No priority list is defined.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.

Usage Guidelines

To give precedence to traffic on a particular LLC2 session, you must specify all four keywords (**dsap**, **ssap**, **dmac**, and **smac**) to uniquely identify the LLC2 session.

Examples

The following example defines priority list 1 and specifies SSAP and DSAP addresses:

```
sap-priority-list 1 high dsap 04 ssap 04
```

show local-ack

To display the current state of any current local acknowledgment for both LLC2 and SDLLC connections, and for any configured passthrough rings, use the **show local-ack** privileged EXEC command.

show local-ack

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values.

Command Modes Privileged EXEC

Command History	Release	Modification
	10.0	This command was introduced.

Examples The following is sample output from the **show local-ack** command:

```
Router# show local-ack

local 1000.5a59.04f9, lsap 04, remote 4000.2222.4444, dsap 04
llc2 = 1798136, local ack state = connected
Passthrough Rings: 4 7
```

Table 30 describes significant fields shown in the display.

Table 30 *show local-ack Field Descriptions*

Field	Description
local	MAC address of the local Token Ring station with which the route has the LLC2 session.
lsap	Local service access point (LSAP) value of the Token Ring station with which the router has the LLC2 session.
remote	MAC address of the remote Token Ring on whose behalf the router is providing acknowledgments. The remote Token Ring station is separated from the device via the TCP backbone.
dsap	Destination SAP value of the Token Ring station on whose behalf the router is providing acknowledgments.
llc2	Pointer to an internal data structure used by the manufacturer for debugging.

Table 30 *show local-ack Field Descriptions (continued)*

Field	Description
local ack state	State of the local acknowledgment for both LLC2 and SDLC connections. The possible states are as follows: <ul style="list-style-type: none">• disconnected—No session between the two end nodes.• connected—Full data transfer possible between the two.• awaiting connect—Cisco IOS software is waiting for the other end to confirm a session establishment with the remote host.
Passthrough Rings	Ring numbers of the virtual rings that have been defined as passthroughs using the source-bridge passthrough command. If a ring is not a passthrough, it is locally terminated.

source-bridge cos-enable

To force the Cisco IOS software to read the contents of the format identification (FID) frames to prioritize traffic when using TCP, use the **source-bridge cos-enable** global configuration command. To disable prioritizing, use the **no** form of this command.

source-bridge cos-enable

no source-bridge cos-enable

Syntax Description This command has no arguments or keywords.

Defaults Enabled

Command Modes Global configuration

Command History	Release	Modification
	10.0	This command was introduced.

Usage Guidelines Use this command to prioritize your SNA traffic across the backbone network. All your important FEP traffic can flow on high-priority queues. This is useful only between FEP-to-FEP (PU 4-to-PU 4) communications (across the non-SNA backbone).



Note

LLC2 local acknowledgment must be turned on for the class of service (CoS) feature to take effect, and the **source-bridge remote-peer tcp** command with the **priority** keyword must be issued.

Examples The following example enables class-of-service for prioritization of SNA traffic across a network:

```
source-bridge cos-enable
```

Related Commands	Command	Description
	source-bridge remote-peer tcp	Identifies the IP address of a peer in the ring group with which to exchange source-bridge traffic using TCP.

source-bridge fst-peername

To set up a Fast-Sequenced Transport (FST) peer name, use the **source-bridge fst-peername** global configuration command. To disable the IP address assignment, use the **no** form of this command.

source-bridge fst-peername *local-interface-address*

no source-bridge fst-peername *local-interface-address*

Syntax Description

<i>local-interface-address</i>	IP address to assign to the local router.
--------------------------------	---

Defaults

Disabled

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.

Usage Guidelines

This command is the first step to configuring a remote source-route bridge to use FST.

Examples

The following example sets up an FST peer name:

```
source-bridge fst-peername 150.136.64.98
```

Related Commands

Command	Description
source-bridge remote-peer fst	Specifies an FST encapsulation connection.

source-bridge keepalive

To assign the keepalive interval of the remote source-bridging peer, use the **source-bridge keepalive** interface configuration command. To cancel previous assignments, use the **no** form of this command.

source-bridge keepalive *seconds*

no source-bridge keepalive

Syntax Description	<i>seconds</i>	Keepalive interval in seconds. The valid range is 10 to 300. The default value is 30 seconds.										
Defaults	30 seconds											
Command Modes	Interface configuration											
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>10.0</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	10.0	This command was introduced.							
Release	Modification											
10.0	This command was introduced.											
Examples	<p>The following example sets the keepalive interval to 60 seconds:</p> <pre>source-bridge keepalive 60</pre>											
Related Commands	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>show interfaces</td> <td>Displays statistics for the interfaces configured on a router or access server.</td> </tr> <tr> <td>source-bridge</td> <td>Configures an interface for SRB.</td> </tr> <tr> <td>source-bridge remote-peer fst</td> <td>Specifies an FST encapsulation connection.</td> </tr> <tr> <td>source-bridge remote-peer tcp</td> <td>Identifies the IP address of a peer in the ring group with which to exchange source-bridge traffic using TCP.</td> </tr> </tbody> </table>	Command	Description	show interfaces	Displays statistics for the interfaces configured on a router or access server.	source-bridge	Configures an interface for SRB.	source-bridge remote-peer fst	Specifies an FST encapsulation connection.	source-bridge remote-peer tcp	Identifies the IP address of a peer in the ring group with which to exchange source-bridge traffic using TCP.	
Command	Description											
show interfaces	Displays statistics for the interfaces configured on a router or access server.											
source-bridge	Configures an interface for SRB.											
source-bridge remote-peer fst	Specifies an FST encapsulation connection.											
source-bridge remote-peer tcp	Identifies the IP address of a peer in the ring group with which to exchange source-bridge traffic using TCP.											

source-bridge largest-frame

To configure the largest frame size that is used to communicate with any peers in the ring group, use the **source-bridge largest-frame** global configuration command. To cancel previous assignments, use the **no** form of this command.

source-bridge largest-frame *ring-group size*

no source-bridge largest-frame *ring-group*

Syntax Description	<i>ring-group</i>	Ring group number. This ring group number must match the number you have specified with the source-bridge ring-group command. The valid range is 1 to 4095.
	<i>size</i>	Maximum frame size. The default is that no frame size is assigned.

Defaults No frame size is assigned.

Command Modes Global configuration

Command History	Release	Modification
	10.0	This command was introduced.

Usage Guidelines The Cisco IOS software negotiates all transit routes down to the specified size or lower. Use the *size* argument with this command to prevent timeouts in end hosts by reducing the amount of data they have to send in a fixed interval. For example, in some networks containing slow links, it would be impossible to send an 8K frame and receive a response within a few seconds. These are standard defaults for an application on a 16-Mb Token Ring. If the frame size is lowered to 516 bytes, then only 516 bytes must be sent and a response received in 2 seconds. This feature is most effective in a network with slow links. The legal values for this argument are 516, 1500, 2052, 4472, 8144, 11407, and 17800 bytes.

Examples The following example sets the largest frame that can be sent through a ring group to 1500 bytes:

```
source-bridge largest-frame 8 1500
```

Related Commands	Command	Description
	source-bridge ring-group	Defines or removes a ring group from the configuration.

source-bridge passthrough

To configure some sessions on a few rings to be locally acknowledged and the remaining to passthrough, use the **source-bridge passthrough** global configuration command. To disable passthrough on all the rings and allow the session to be locally acknowledged, use the **no** form of this command.

source-bridge passthrough *ring-group*

no source-bridge passthrough *ring-group*

Syntax Description	<i>ring-group</i>	Ring group number. This ring is either the start ring or destination ring of the two IBM end machines for which the passthrough feature is to be configured. This ring group number must match the number you specified with the source-bridge ring-group command. The valid range is 1 to 4095.
Defaults	Disabled	
Command Modes	Global configuration	
Command History	Release	Modification
	10.0	This command was introduced.

Usage Guidelines

Use this command in conjunction with the **source-bridge remote-peer tcp** command that has the **local-ack** keyword specified, which causes every new LLC2 session to be locally terminated. If a machine on the Token Ring attempts to start an LLC2 session to an end host that exists on the *ring-number* specified in the **source-bridge passthrough** command, the session will “pass through” and not use local acknowledgment for LLC2.

If you specify passthrough for a ring, LLC2 sessions will never be locally acknowledged on that ring. This is true even if a remote peer accessing the ring has set the **local-ack** keyword in the **source-bridge remote-peer tcp** command. The **source-bridge passthrough** command overrides any setting in the **source-bridge remote-peer tcp** command.

You can define more than one **source-bridge passthrough** command in a configuration.

Examples

The following example configures the router to use local acknowledgment on remote peer at 1.1.1.2 but passthrough on rings 9 and 4:

```
source-bridge ring-group 100
source-bridge remote-peer 100 tcp 1.1.1.1
source-bridge remote-peer 100 tcp 1.1.1.2 local-ack
source-bridge passthrough 9
source-bridge passthrough 4
```

Related Commands	Command	Description
	source-bridge remote-peer tcp	Identifies the IP address of a peer in the ring group with which to exchange source-bridge traffic using TCP.
	source-bridge ring-group	Defines or removes a ring group from the configuration.

source-bridge remote-peer frame-relay

To specify a point-to-point direct encapsulation connection, use the **source-bridge remote-peer frame-relay** global configuration command. To disable previous interface assignments, use the **no** form of this command.

```
source-bridge remote-peer ring-group frame-relay interface name [mac-address] [dci-number]
[if size]
```

```
no source-bridge remote-peer ring-group frame-relay interface name
```

Syntax Description		
<i>ring-group</i>		Ring group number. This ring group number must match the number you specified with the source-bridge ring-group command. The valid range is 1 to 4095.
interface <i>name</i>		Name of the interface over which to send source-route bridged traffic.
<i>mac-address</i>		(Optional) MAC address for the interface on the other side of the virtual ring. This argument is required for nonserial interfaces. You can obtain the value of this MAC address by using the show interface command, and then scanning the display for the interface specified by <i>name</i> .
<i>dci-number</i>		(Optional) Data-link connection identifier (DLCI) number for Frame Relay encapsulation.
if <i>size</i>		(Optional) Maximum-sized frame to be sent to this remote peer. The Cisco IOS software negotiates all transit routes down to this size or lower. This argument is useful in preventing timeouts in end hosts by reducing the amount of data they have to send in a fixed interval. The legal values for this argument are 516, 1500, 2052, 4472, 8144, 11407 and 17800 bytes.

Defaults No point-to-point direct encapsulation connection is specified.

Command Modes Global configuration

Command History	Release	Modification
	11.2	This command was introduced.

Usage Guidelines

Use this command to identify the interface over which to send source-route bridged traffic to another router in the ring group. A serial interface does not require that you include a MAC-level address; all other types of interfaces do require MAC addresses.

You must specify one **source-bridge remote-peer** command for each peer router that is part of the virtual ring. You must also specify one **source-bridge remote-peer** command to identify the IP address of the local router.

It is possible to mix all types of transport methods within the same ring group.

**Note**

The two peers using the serial-transport method will only function correctly if there are routers at the end of the serial line that have been configured to use the serial transport. The peers must also belong to the same ring group.

Examples

The following example sends source-route bridged traffic over serial interface 0 and Ethernet interface 0:

```
! send source-route bridged traffic over serial 0
source-bridge remote-peer 5 frame-relay interface serial 0
! specify MAC address for source-route bridged traffic on Ethernet 0
source-bridge remote-peer 5 interface Ethernet 0 0000.0c00.1234
```

Related Commands

Command	Description
show interfaces	Displays statistics for the interfaces configured on a router or access server.
source-bridge	Configures an interface for SRB.
source-bridge remote-peer fst	Specifies an FST encapsulation connection.
source-bridge remote-peer tcp	Identifies the IP address of a peer in the ring group with which to exchange source-bridge traffic using TCP.

source-bridge remote-peer fst

To specify a Fast-Sequenced Transport (FST) encapsulation connection, use the **source-bridge remote-peer fst** global configuration command. To disable the previous assignments, use the **no** form of this command.

source-bridge remote-peer *ring-group* **fst** *ip-address* [**if** *size*]

no source-bridge remote-peer *ring-group* **fst** *ip-address*

Syntax Description

<i>ring-group</i>	Ring group number. This ring group number must match the number you specified with the source-bridge ring-group command. The valid range is 1 to 4095.
<i>ip-address</i>	IP address of the remote peer with which the router will communicate.
if <i>size</i>	(Optional) Maximum-sized frame to be sent to this remote peer. The Cisco IOS software negotiates all transit routes down to this size or lower. Use this argument to prevent timeouts in end hosts by reducing the amount of data they have to send in a fixed interval. The legal values for this argument are 516, 1500, 2052, 4472, 8144, 11407, and 17800 bytes.

Defaults

No FST encapsulation connection is specified.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.

Usage Guidelines

The two peers using the serial-transport method will only function correctly if there are routers at the end of the serial line that have been configured to use the serial transport. The peers must also belong to the same ring group.

You must specify one **source-bridge remote-peer** command for each peer router that is part of the virtual ring. You must also specify one **source-bridge remote-peer** command to identify the IP address of the local router.

Examples

In the following example, the **source-bridge-fst-peername** command specifies an IP address of 150.136.64.98 for the local router. The **source-bridge ring-group** command assigns the device to a ring group. The **source-bridge remote-peer fst** command specifies ring group number 100 for the remote peer at IP address 150.136.64.97.

```
source-bridge fst-peername 150.136.64.98
source-bridge ring-group 100
source-bridge remote-peer 100 fst 150.136.64.97
```

source-bridge remote-peer tcp

To identify the IP address of a peer in the ring group with which to exchange source-bridge traffic using TCP, use the **source-bridge remote-peer tcp** global configuration command. To remove a remote peer for the specified ring group, use the **no** form of this command.

```
source-bridge remote-peer ring-group tcp ip-address [if size] [tcp-receive-window wsize]
[local-ack] [priority]
```

```
no source-bridge remote-peer ring-group tcp ip-address
```

Syntax Description		
	<i>ring-group</i>	Ring group number. This ring group number must match the number you specified with the source-bridge ring-group command. The valid range is 1 to 4095.
	<i>ip-address</i>	IP address of the remote peer with which the router will communicate. The default is that no IP address is identified.
	if size	(Optional) Maximum-sized frame to be sent to this remote peer. The Cisco IOS software negotiates all transit routes down to this size or lower. Use this argument to prevent timeouts in end hosts by reducing the amount of data they have to send in a fixed interval. The valid values for this argument are 516, 1500, 2052, 4472, 8144, 11407, and 17800 bytes.
	tcp-receive-window wsize	(Optional) The TCP receive window size in bytes. The range is 10240 to 65535 bytes. The default window size is 10240 bytes.
	local-ack	(Optional) LLC2 sessions destined for a specific remote peer are locally terminated and acknowledged. Use local acknowledgment for LLC2 sessions going to this remote peer.
	priority	(Optional) Enables prioritization over a TCP network. You must specify the keyword local-ack earlier in the same source-bridge remote-peer command. The keyword priority is a prerequisite for features such as System Network Architecture (SNA) class of service and SNA LU address prioritization over a TCP network.

Defaults	
	No IP address is identified.
	The default window size is 10240 bytes.

Command Modes	
	Global configuration

Command History	Release	Modification
	10.0	This command was introduced.
	11.1	This keyword tcp-receive-window was added.

Usage Guidelines

If you change the default TCP receive window size on one peer, you must also change the receive window size on the other peer. Both sides of the connection should have the same window size.

If you configure one peer for LLC2 local acknowledgment, you need to configure both peers for LLC2 local acknowledgment. If only one peer is so configured, unpredictable results occur.

You must specify one **source-bridge remote-peer** command for each peer router that is part of the virtual ring. You must also specify one **source-bridge remote-peer** command to identify the IP address of the local router.

The two peers using the serial-transport method will only function correctly if there are routers at the end of the serial line that have been configured to use the serial transport. The peers must also belong to the same ring group.

Examples

In the following example, the remote peer with IP address 131.108.2.291 belongs to ring group 5. It also uses LLC2 local acknowledgment, priority, and RSRB protocol version 2:

```
! identify the ring group as 5
source-bridge ring-group 5
! remote peer at IP address 131.108.2.291 belongs to ring group 5, uses
! tcp as the transport, is set up for local acknowledgment, and uses priority
source-bridge remote-peer 5 tcp 131.108.2.291 local-ack priority
```

The following example shows how to locally administer and acknowledge LLC2 sessions destined for a specific remote peer:

```
! identify the ring group as 100
source-bridge ring-group 100
! remote peer at IP address 1.1.1.1 does not use local acknowledgment
source-bridge remote-peer 100 tcp 1.1.1.1
! remote peer at IP address 1.1.1.2 uses local acknowledgment
source-bridge remote-peer 100 tcp 1.1.1.2 local-ack
!
interface tokenring 0
  source-bridge 1 1 100
```

Sessions between a device on Token Ring 0 that must go through remote peer 1.1.1.2 use local acknowledgment for LLC2, but sessions that go through remote peer 1.1.1.1 do *not* use local acknowledgment (that is, they “pass through”).

Related Commands

Command	Description
source-bridge	Configures an interface for SRB.
source-bridge remote-peer fst	Specifies an FST encapsulation connection.
source-bridge remote-peer frame-relay	Specifies a point-to-point direct encapsulation connection.

source-bridge tcp-queue-max

To modify the size of the backup queue for remote source-route bridging, use the **source-bridge tcp-queue-max** global configuration command. This backup queue determines the number of packets that can wait for transmission to a remote ring before packets start being thrown away. To return to the default value, use the **no** form of this command.

source-bridge tcp-queue-max *number*

no source-bridge tcp-queue-max

Syntax Description	<i>number</i>	Number of packets to hold in any single outgoing TCP queue to a remote router. The default is 100 packets.
---------------------------	---------------	--

Defaults	The default number of packets is 100.
-----------------	---------------------------------------

Command Modes	Global configuration
----------------------	----------------------

Command History	Release	Modification
	10.3	This command was introduced.

Examples	If, for example, your network experiences temporary bursts of traffic using the default packet queue length, the following command raises the limit from 100 to 150 packets:
-----------------	--

```
source-bridge tcp-queue-max 150
```