Cisco Router Configuration Commands Modeled

This appendix lists the Cisco router configuration commands that are currently modeled by the Connectivity Tools. The commands are divided into IP, IPX, SRB, SNA, and STUN categories. For complete descriptions of the following commands, refer to the Cisco documents listed in *About This Manual*.

IP Commands

This section describes the IP router configuration commands that are currently modeled by the Connectivity Tools.

access-list (standard)

This global configuration command is used to create or remove a standard access list.

Syntax

The command syntax is as follows:

access-list *access-list-number* {**permit | deny**} *source source-mask*

To remove the specified access list, use the **no** form of this command as follows:

no access-list *access-list-number*

Syntax Description

The command parameters are described as follows:

access-list-number

An integer assigned to identify one or more permit/deny conditions as an access list. Valid standard access list values range from 1 through 99. Access list zero is predefined. It permits any address and is the default for all interfaces.

permit

Permits access if the conditions are matched.

deny

Denies access if the conditions are matched.

source

Compares the source address being tested to this value. It is a 32-bit number written in dotted decimal format.

source-mask

Address bits corresponding to wildcard mask bits set to one are ignored in comparisons.

access-list (extended)

This global configuration command is used to create or remove an extended access list.

Syntax

The command syntax is as follows:

access-list *access-list-number* **{permit | deny}** *protocol source source-mask destination destination-mask [operator operand]* **[established]**

To remove the specified extended access list, use the **no** form of this command as follows:

no access-list *access-list-number*

Syntax Description

The command parameters are described as follows:

access-list-number

An integer assigned to identify one or more permit/deny conditions as an access list. Valid extended access list values range from 100 through 199.

permit

Permits access if the conditions are matched.

deny

Denies access if the conditions are matched.

protocol

The protocol value can be one of: **ip**, **tcp**, **udp**, **icmp**. The **ip** value is used to match any Internet protocol, including TCP, UDP, and ICMP.

source

Compares the source address being tested to this value. It is a 32-bit number written in dotted decimal format.

source-mask

Address bits corresponding to wildcard mask bits set to one are ignored in comparisons.

destination

Compares the destination address being tested to this value. It is a 32-bit number written in dotted decimal format.

destination-mask

Address bits corresponding to wildcard mask bits set to one are ignored in comparisons.

operator

The operator value can be one of: **lt**, **gt**, **eq**, **neq** when using the TCP or UDP protocols. The IP and ICMP protocols do not allow port distinctions.

operand

The decimal destination port for the specified protocol.

established

Used by TCP to determine whether a connection is established.

auto-summary

This global router configuration command is used to automatically summarize subnet information into a single network advertisement.

Syntax

The command syntax is as follows:

auto-summary

To disable this function, use the **no** form of this command as follows:

no auto-summary

bandwidth

This interface configuration command is used to set a bandwidth value for an interface. This is a routing parameter only; it does not affect the physical interface.

Syntax

The command syntax is as follows:

bandwidth *kilobits*

To restore the default values, use the **no** form of this command as follows:

no bandwidth

Syntax Description

The command parameter is described as follows:

kilobits

The intended bandwidth value specified in kilobits per second.

default-metric

This router configuration command is used to set a default metric value for the BGP, EGP, OSPF, and RIP routing protocols which use scalar, single valued metrics.

Syntax

The command syntax is as follows:

default-metric *number*

To remove the metric value and return to the default state, use the **no** form of this command as follows:

no default-metric *number*

Syntax Description

The command parameter is described as follows:

number

Default metric value appropriate for the specified routing protocol.

default-metric (IGRP and EIGRP)

This global configuration command is used to set metrics for the IGRP and EIGRP protocols.

Syntax

The command syntax is as follows:

default-metric *bandwidth delay reliability loading mtu*

To remove the metric value and return to the default state, use the **no** format of this command as follows:

no default-metric *bandwidth delay reliability loading mtu*

Syntax Description

The command parameters are described as follows:

bandwidth

Minimum bandwidth of the route in kilobits per second.

delay

Route delay in tens of microseconds

reliability

Likelihood of a successful packet transmission expressed as a number between 0 and 255, where 255 is 100 percent reliability.

loading

Effective bandwidth of the route expressed as a number between 0 and 255, where 255 is 100 percent loading.

mtu

Minimum Maximum Transmission Unit (MTU) size for the route.

delay

This interface configuration command is used to set a delay value for an interface.

Syntax

The command syntax is as follows:

delay *tens_of_microseconds*

To restore the default delay value, use the **no** form of this command as follows:

no delay

Syntax Description

The command parameter is described as follows:

tens_of_microseconds

The intended delay value specified in tens of microseconds.

distance

This router configuration command is used to define an administrative distance. In general, the higher the value, the lower the trust rating. An administrative distance of 255 means the routing information source cannot be trusted at all and should be ignored.

Syntax

The command syntax is as follows:

distance *weight* [*address mask*] [*access-list-number*] [**ip**]

To remove an administrative distance definition, use the **no** format of this command, with the appropriate arguments, as follows:

no distance *weight* [*address mask* [*access-list-number*]] [**ip**]

Syntax Description

The command parameters are described as follows:

weight

Administrative distance integer from 10 through 255. Used alone, the argument specifies a default administrative distance that the router uses when no other specification exists for a routing information source.

address

IP address. This is an optional parameter.

mask

In dotted decimal format, corresponds to the bits, if any, to ignore in the address value. A bit set in the mask argument instructs the router to ignore the corresponding bit in the address value. This is an optional parameter.

access-list-number

Standard IP access list number to be applied to incoming routing updates. This is an optional parameter.

ip

IP-derived routes for IS-IS. Can be applied independently for IP routes and ISO CLNS routes. This is an optional parameter.

distribute-list (in)

This router configuration command is used to filter networks received in updates.

Syntax

The command syntax is as follows:

distribute-list *access-list-number* **in** [*interface-name*]

To disable this function, use the **no** format of this command as follows:

no distribute-list *access-list-number* **in** [*interface-name*]

Syntax Description

The command parameters are described as follows:

access-list-number

Standard IP access list number. The list explicitly specifies which networks are to be received and which are to be suppressed.

interface-name

Interface on which the access list should be applied to incoming updates. If no interface is specified, the access list is applied to all incoming updates. This is an optional parameter.

distribute-list (out)

This router configuration command is used to suppress networks from being advertised in updates.

Syntax

The command syntax is as follows:

distribute-list *access-list-number* **out** [*interface-name* | *routing-process*]

To disable this function, use the **no** format of this command as follows:

no distribute-list *access-list-number* **out** [*interface-name* | *routing-process*]

Syntax Description

The command parameters are described as follows:

access-list-number

Standard IP access list number. The list explicitly specifies which networks are to be sent and which are to be suppressed in routing updates.

interface-name

Name of a particular interface.

routing-process

Name of a particular routing process, or **static**, or **connected**.

encapsulation

This interface configuration command is used to set the encapsulation type for an interface.

Syntax

The command syntax is as follows:

encapsulation *encapsulation-type*

Syntax Description

The command parameter is described as follows:

encapsulation-type

The type of encapsulation, for example frame-relay, sap, ppp, x25.

frame-relay map

This interface configuration command is used to define the mapping between an address and the DLCI used to connect to the destination address. The Frame Relay map tells the router how to get from a specific protocol and address pair to the correct DLCI.

Syntax

The command syntax is as follows:

frame-relay map *protocol protocol-address dlci* [*broadcast*] [**ietf** | **cisco**]

To disable this function, use the **no** format of this command as follows:

no frame-relay map *protocol protocol-address*

Syntax Description

The command parameters are described as follows:

protocol

The supported protocol: **ip**, **decnet**, **appletalk**, **xns**, **novell**, **vines**, or **clns**. The Connectivity Tools support the **ip**, **appletalk**, and **novell** frame-relay map protocols in this release.

protocol-address

The address for the protocol.

dlci

The DLCI number used to connect to the specified protocol address on the interface.

broadcast

Broadcasts should be forwarded to this address when multicast is not enabled. This is an optional parameter.

[**ietf** | **cisco**]

The IETF form or Cisco Frame Relay encapsulation to be used. Used when the router is connected to another vendor's equipment across a Frame Relay network. This is an optional parameter.

interface

This interface configuration command is used to configure an interface type and enter interface configuration mode.

Syntax

The command syntax is as follows:

interface *type number*

interface *type slot/port* (for the Cisco 7000 series)

interface *type slot/port:channel-group* (for channelized T1)

Syntax Description

The command parameters are described as follows:

type

The type of interface to be configured.

number

The port, connector, or interface card number.

slot

On the Cisco 7000 series, specifies the backplane slot number.

port

On the Cisco 7000 series, specifies the port number of the interface.

channel-group

On the Cisco 7000 series on a MIP/CxCT1 card, specifies the T1 channel group number in the range of 0 to 23.

ip access-group

This interface configuration command is used to apply an access list to an interface.

Syntax

The command syntax is as follows:

ip access-group *access-list-number* [**in** |**out**]

To remove the specified access group, use the **no** form of this command as follows:

no ip access-group *access-list-number* [**in** |**out**]

Syntax Description

The command parameters are described as follows:

access-list-number

Standard Access list number from 1 through 99 or an extended access list number from 100 through 199.

in

Filters on inbound packets.

out

Filters on outbound packets. This is the default.

ip address

This interface configuration command is used to set an IP address for an interface.

Syntax

The command syntax is as follows:

ip address *ip-address mask* [**secondary**]

To remove the specified address, use the **no** form of this command as follows:

no ip address *ip-address mask* [**secondary**]

Syntax Description

The command parameters are described as follows:

ip-address

The IP address (in dotted decimal) to be set.

mask

Mask for the associated IP subnet.

secondary

Address to be added as a secondary address. This is an optional parameter.

ip default-network

This global configuration command is used to select a network as a candidate route for computing the gateway of last resort.

Syntax

The command syntax is as follows:

ip default-network *network-number*

To remove this route, use the **no** format of this command as follows:

no ip default-network *network-number*

Syntax Description

The command parameter is described as follows:

network-number

Number of the network.

ip route

This global configuration command is used to establish static routes.

Syntax

The command syntax is as follows:

ip route *network* [*mask*] [*address* | *interface*] [*distance*]

To remove the static routes, use the **no** format of this command as follows:

no ip route *network* [*mask*] [*address* | *interface*] [*distance*]

Syntax Description

The command parameters are described as follows:

network

Internet address of the target network or subnet.

mask

Network mask for masking off network and subnetwork bits. This is an optional parameter.

address

Internet address of the next hop that can be used to reach the destination network.

interface

Network interface to use.

distance

An administrative distance. This is an optional parameter.

ip routing

This global configuration command is used to enable IP routing.

Syntax

The command syntax is as follows:

ip routing

To disable IP routing, use the **no** form of this command as follows:

no ip routing

ip split-horizon

This interface configuration command is used to enable the split-horizon mechanism.

Syntax

The command syntax is as follows:

ip split-horizon

To turn off the split-horizon mechanism, use the **no** format of this command as follows:

no ip split-horizon

ip unnumbered

This interface subcommand is used to enable IP processing on a serial interface but does not assign an explicit IP address to the interface.

Syntax

The command syntax is as follows:

ip unnumbered *interface-name*

To disable IP routing, use the **no** form of this command as follows:

no ip unnumbered *interface-name*

Syntax Description

The command parameter is described as follows:

interface-name

Specifies the name of another interface on which the router has an assigned IP address.

metric maximum-hops

This router configuration command causes the IP routing software to advertise as unreachable routes with a hop count higher than specified by this command (IGRP only).

Syntax

The command syntax is as follows:

metric maximum-hops *hops*

To reset the value to the default (100 hops), use the **no** format of this command as follows:

no metric maximum-hops *hops*

Syntax Description

The command parameter is described as follows:

hops

Maximum hop count, in decimal. The default value is 100 hops. The maximum number of hops is 255.

metric weights

This router configuration command is used to allow the tuning of IGRP metric calculations.

Syntax

The command syntax is as follows:

metric weights *tos k1 k2 k3 k4 k5*

To reset the values to their defaults, use the **no** format of this command as follows:

no metric weights

Syntax Description

The command parameters are described as follows:

tos

Type of service. Currently this must be set to zero.

k1-k5

Constants that convert IGRP metric vector into a scalar quantity.

network

This router configuration command is used to specify the list of networks for the IGRP, EIGRP, and RIP routing processes.

Syntax

The command syntax is as follows:

network *network-number*

To remove a network from the list, use the **no** format of this command as follows:

no network *network-number*

Syntax Description

The command parameter is described as follows:

network-number

IP address of network to be advertised.

passive-interface

This router configuration command is used to disable sending routing updates on an interface.

Syntax

The command syntax is as follows:

passive-interface *interface*

To allow routing updates to be sent on an interface again, use the **no** format of this command as follows:

no passive-interface *interface*

Syntax Description

The command parameter is described as follows:

interface

The interface through which you want to send no routing updates.

redistribute

This router configuration command is used to redistribute routes from one routing domain into another routing domain.

Syntax

The command syntax is as follows:

redistribute *protocol* [*process-id*] [**metric** *metric-value*]

To stop redistribution of information or to disable a specified keyword, use the **no** format of this command as follows:

no redistribute protocol [*process-id*] [**metric** *metric-value*]

Syntax Description

The command parameters are described as follows:

protocol

The source protocol from which routes are being redistributed. It can be one of the following keywords: **bgp**, **egp**, **eigrp**, **igrp**, **isis**, **ospf**, **static** [ip], **connected**, and **rip**. The Connectivity Tools support the **rip**, **igrp**, and **eigrp** protocols.

process-id

For **eigrp** and **igrp**, this is an autonomous system id number. It is a 16-bit decimal number. For **rip**, no *process-id* value is necessary.

metric *metric-value*

Metric used for the redistributed route. Use a value consistent with the destination protocol. This is an optional parameter.

router igrp

This global configuration command is used to configure the Interior Gateway Routing Protocol (IGRP) routing process.

Syntax

The command syntax is as follows:

router igrp *autonomous-system*

To shut down the routing process on the specified autonomous system, use the **no** format of this command as follows:

no router igrp *autonomous-system*

Syntax Description

The command parameter is described as follows:

autonomous-system

Identifies the routes to the other IGRP routers and is used to tag the routing information.

router rip

This global configuration command is used to configure the Routing Information Protocol (RIP) routing process.

Syntax

The command syntax is as follows:

router rip

To turn off the RIP routing process, use the **no** format of this command as follows:

no router rip

shutdown

This command disables all functions on the specified interface. On serial interfaces, this command causes the DTR signal to be dropped. On Token Ring interfaces, this command causes the interface to be de-inserted from the ring.

This command also marks the interface as unavailable. To check whether an interface is disabled, use the EXEC command **show interfaces**. An interface that has been shut down is shown as administratively down in the display from this command.

EIGRP IP (not in IP)

This section describes the EIGRP IP router configuration commands that are currently modeled by the Connectivity Tools.

default-information allowed

This router configuration command is used to control the redistribution of routing information between EIGRP and IGRP processes.

Syntax

The command syntax is as follows:

default-information allowed [**in** | **out**]

To suppress IGRP or EIGRP exterior or default routes when received by an EIGRP process, use the **no** format of this command with the **in** parameter specified. To suppress IGRP or EIGRP exterior routes in updates, use the **no** format of this command with the **out** parameter specified as follows:

no default-information allowed [**in** | **out**]

Syntax Description

The command parameters are described as follows:

in

Allows EIGRP exterior or default routes to be received by an EIGRP process.

out

Allows EIGRP exterior routes to be advertised in updates.

distance eigrp

This router configuration command is used to define internal and external administrative distances.

Syntax

The command syntax is as follows:

distance eigrp *internal-distance external-distance*

Syntax Description

The command parameters are described as follows:

internal-distance

Administrative distance for EIGRP internal routes. Internal routes are routes that are learned from another EIGRP entity within the same autonomous system. Valid values range from 1 through 255. The default value is 90.

external-distance

Administrative distance for EIGRP external routes. External routes are those for which the path is learned from a neighbor external to the autonomous system. Valid values range from 1 through 255. The default value is 170.

ip summary-address eigrp

This interface configuration command is used to configure a summary aggregate address for a specified interface. Multiple groups of addresses can be summarized for a given level. Routes learned from other routing protocols can also be summarized. This command helps reduce the size of the routing table.

Syntax

The command syntax is as follows:

ip summary-address eigrp *autonomous-system-number address mask*

To disable a configuration, use the **no** format of this command as follows:

no ip summary-address eigrp *autonomous-system-number address mask*

Syntax Description

The command parameters are described as follows:

autonomous-system-number

The autonomous system number.

address

IP summary aggregate address to apply to an interface.

mask

IP subnet mask.

IPX Commands

This section describes the Novell IPX router configuration commands that are currently modeled by the Connectivity Tools. The commands in this chapter are used to configure and monitor Novell IPX networks.

access-list (standard)

This global configuration command is used to define a standard IPX access list.

Syntax

The command syntax is as follows:

access-list *access-list-number* {**deny** | **permit**} *source-network*[.*source-node* [*source-node-mask*]] [*destination-network*[.*destination-node* [*destination-node-mask*]]]

To remove a standard access list, use the **no** form of this command as follows:

no access-list *access-list-number* {**deny** | **permit**} *source-network*[.*source-node* [*source-node-mask*]] [*destination-network*[.*destination-node* [*destination-node-mask*]]]

Syntax Description

The command parameters are described as follows:

access-list-number

Number of the standard access list. Valid values are decimal numbers from 800 to 899, inclusive.

deny

Denies access if the conditions are matched.

permit

Permits access if the conditions are matched.

source-network

Number of the network from which the packet is being sent. This is an eight digit hexadecimal number uniquely identifying a network cable segment. Valid values range from 1 through FFFFFFFE. A network number of 0 matches the local network. A network number of -1 matches all networks.

source-node

Node on the source network from which the packet is being sent. This 48-bit value is represented by a dotted triplet of four-digit hexadecimal numbers (xxxx.xxxx.xxxx). This is an optional parameter.

source-node-mask

Mask to be applied to the source node. This 48-bit value is represented by a dotted triplet of four-digit hexadecimal numbers (xxxx.xxxx.xxxx). Ones are placed in the bit positions to be masked. This is an optional parameter.

destination-network

Number of the network to which the packet is being sent. This is an eight digit hexadecimal number uniquely identifying a network cable segment. Valid values range from 1 through FFFFFFFE. A network number of 0 matches the local network. A network number of -1 matches all networks. This is an optional parameter.

destination-node

Node on the destination network from which the packet is being sent. This 48-bit value is represented by a dotted triplet of four-digit hexadecimal numbers (xxxx.xxxx.xxxx). This is an optional parameter.

destination-node-mask

Mask to be applied to the destination-node. This 48-bit value is represented by a dotted triplet of four-digit hexadecimal numbers (xxxx.xxxx.xxxx). Ones are placed in the bit positions to be masked. This is an optional parameter.

access-list (extended)

This global configuration command is used to define an extended IPX access list.

Syntax

The command syntax is as follows:

access-list *access-list-number* {**deny** | **permit**} *protocol* [*source-network*][[[.*source-node*] *source-node-mask* | .*source-node source-network-mask.source-node-mask*]] [*source-socket*] [*destination-network*][[[.*destination-node*] *destination-node-mask* | .*destination-node destination-network-mask.destination-node-mask*]] [*destination-socket*]

To remove an extended access list, use the **no** form of this command as follows:

no access-list *access-list-number* {**deny** | **permit**} *protocol* [*source-network*][[[.*source-node*] *source-node-mask* | .*source-node source-network-mask.source-node-mask*]] [*source-socket*] [*destination-network*][[[.*destination-node*] *destination-node-mask* | .*destination-node destination-network-mask.destination-node-mask*]] [*destination-socket*]

Syntax Description

The command parameters are described as follows:

access-list-number

Number of the extended access list. Valid values are decimal numbers from 900 to 999, inclusive.

deny

Denies access if the conditions are matched.

permit

Permits access if the conditions are matched.

protocol

Number of an IPX protocol type (also referred to as a packet type), in decimal.

source-network

Number of the network from which the packet is being sent. This is an eight digit hexadecimal number uniquely identifying a network cable segment. Valid values range from 1 through FFFFFFFE. A network number of 0 matches the local network. A network number of -1 matches all networks. This is an optional parameter.

source-node

Node on the source network from which the packet is being sent. This 48-bit value is represented by a dotted triplet of four-digit hexadecimal numbers (xxxx.xxxx.xxxx). This is an optional parameter.

source-network-mask

Mask to be applied to the source network. This is an eight digit hexadecimal mask. Ones are placed in the bit positions to be masked. The mask must be immediately followed by a period, which must in turn immediately be followed by the *source-node-mask* value. This is an optional parameter.

source-node-mask

Mask to be applied to the source node. This 48-bit value is represented by a dotted triplet of four-digit hexadecimal numbers (xxxx.xxxx.xxxx). Ones are placed in the bit positions to be masked. This is an optional parameter.

source-socket

Socket number from which the packet is being sent, in hexadecimal.

destination-network

Number of the network to which the packet is being sent. This is an eight digit hexadecimal number uniquely identifying a network cable segment. Valid values range from 1 through FFFFFFFD. A network number of 0 matches the local network. A network number of -1 matches all networks. This is an optional parameter.

destination-node

Node on the destination network from which the packet is being sent. This 48-bit value is represented by a dotted triplet of four-digit hexadecimal numbers (xxxx.xxxx.xxxx). This is an optional parameter.

destination-network-mask

Mask to be applied to the destination network. This is an eight digit hexadecimal mask. Ones are placed in the bit positions to be masked. The mask must be immediately followed by a period, which must in turn immediately be followed by the *destination-node-mask* value. This is an optional parameter.

destination-node-mask

Mask to be applied to the destination-node. This 48-bit value is represented by a dotted triplet of four-digit hexadecimal numbers (xxxx.xxxx.xxxx). Ones are placed in the bit positions to be masked. This is an optional parameter.

destination-socket

Socket number to which the packet is being sent, in hexadecimal. This is an optional parameter.

ipx access-group

This interface configuration command is used to apply an output filter to an interface.

Syntax

The command syntax is as follows:

ipx access-group *access-list-number*

To remove the access list, use the **no** form of this command as follows:

no ipx access-group *access-list-number*

Syntax Description

The command parameter is described as follows:

access-list-number

Number of the access list. All outgoing packets defined with either standard or extended access lists and forwarded through the interface are filtered by the entries in this access list. Valid standard access list values are decimal numbers from 800 through 899. Valid extended access list values are decimal numbers from 900 through 999. Extended IPX access lists are not currently supported by the Connectivity Tools.

ipx input-network-filter

This interface configuration command is used to control which networks are added to the router's routing table.

Syntax

The command syntax is as follows:

ipx input-network-filter *access-list-number*

To remove the filter from the interface, use the **no** form of this command as follows:

no ipx input-network-filter *access-list-number*

Syntax Description

The command parameter is described as follows:

access-list-number

Number of the access list. All incoming packets defined with either standard or extended access lists are filtered by the entries in this access list. Valid standard access list values are decimal numbers from 800 through 899. Valid extended access list values are decimal numbers from 900 through 999. Extended IPX access lists are not currently supported by the Connectivity Tools.

ipx input-sap-filter

This interface configuration command is used to control which services are added to the router's SAP table.

Syntax

The command syntax is as follows:

ipx input-sap-filter *access-list-number*

To remove the filter from the interface, use the **no** form of this command as follows:

no ipx input-sap-filter *access-list-number*

Syntax Description

The command parameter is described as follows:

access-list-number

Number of the SAP access list. All incoming packets are filtered by the entries in this access list. Valid SAP access list values are decimal numbers from 1000 through 1099.

ipx network

This interface configuration command is used to enable IPX routing on a particular interface and to optionally select the type of encapsulation (framing).

Syntax

The command syntax is as follows:

ipx network *number* [**encapsulation** *encapsulation-type* [**secondary**]]

To disable IPX routing, use the **no** format of this command as follows:

no ipx network *number* [**encapsulation** *encapsulation-type*]

Syntax Description

The command parameters are described as follows:

number

Network number. This is an eight-digit hexadecimal number uniquely identifying a network cable segment. Valid values range from 1 through FFFFFFFE.

encapsulation

Type of encapsulation to be used. This is an optional parameter.

encapsulation-type

Specifies the type of encapsulation to be used. Valid values are **arpa** (for Ethernet interfaces only), **hdlc** (for serial interfaces only), **novell-ether** (for Ethernet interfaces only), **sap** (for Ethernet, Token Ring, and FDDI interfaces), and **snap** (for Ethernet, Token Ring, and FDDI interfaces.)

secondary

Indicates an additional network configured after the first (primary) network.

ipx output-network-filter

This interface configuration command is used to control the list of networks included in routing updates sent out on an interface.

Syntax

The command syntax is as follows:

ipx output-network-filter *access-list-number*

To remove the filter from the interface, use the **no** format of this command as follows:

no ipx output-network-filter *access-list-number*

Syntax Description

The command parameters are described as follows:

access-list-number

Number of the access list. All outgoing packets defined with either standard or extended access lists are filtered by the entries in this access list. Valid standard access list values are decimal numbers from 800 through 899. Valid extended access list values are decimal numbers from 900 through 999. Extended access list numbers are not currently supported by the Connectivity Tools.

ipx output-sap-filter

This interface configuration command is used to control which services are included in Service Advertisement Protocol (SAP) updates sent by the router.

Syntax

The command syntax is as follows:

ipx output-sap-filter *access-list-number*

To remove the filter, use the **no** format of this command as follows:

no ipx output-sap-filter *access-list-number*

Syntax Description

The command parameter is described as follows:

access-list-number

Number of the SAP access list. All outgoing service advertisements are filtered by the entries in this access list. Valid access list values are decimal numbers from 1000 through 1099.

ipx route

This global configuration command is used to add a static route to the routing table.

Syntax

The command syntax is as follows:

ipx route *network network.node*

To remove a route from the routing table, use the **no** format of this command as follows:

no ipx route

Syntax Description

The command parameters are described as follows:

network

Network to establish a static route to. This is an eight-digit hexadecimal number uniquely identifying a network cable segment. Valid values range from 1 through FFFFFFFE. A network number of 0 matches the local network. A network number of -1 matches all networks.

network.node

Router to which to forward packets destined for the specified network. The argument *network* is an eight-digit hexadecimal number uniquely identifying a network cable segment. See *network* description above.

The argument *node* is the node number of the target router. This is a 48-bit value represented by a dotted triplet of four-digit hexadecimal numbers (xxxx.xxxx.xxxx).

ipx routing

This global configuration command is used to enable IPX routing.

Syntax

The command syntax is as follows:

ipx routing [*node*]

To disable IPX routing, use the **no** format of this command as follows:

no ipx routing

Syntax Description

The command parameter is described as follows:

node

Node number of the router. This is a 48-bit value represented by a dotted triplet of four-digit hexadecimal numbers (xxxx.xxxx.xxxx). It must not be a multicast address. If the node parameter is omitted, the router uses the hardware MAC address currently assigned to it as its node address. This is the first MAC address of the first Ethernet, Token Ring, or FDDI interface card.

AppleTalk Commands

This section describes the AppleTalk interface subcommands that are currently modeled by the Connectivity Tools.

appletalk address

This interface subcommand is used to assign AppleTalk addresses for nonextended networks. This command must be done prior to assigning zone names.

Syntax

The command syntax is as follows:

appletalk address *address*

To disable nonextended AppleTalk processing on the interface, use the **no** format of this command as follows:

no appletalk address

Syntax Description

The command parameter is described as follows:

address

The AppleTalk address to be assigned to the interface that will be used for the AppleTalk protocol.

appletalk cable-range

This interface subcommand is used to designate an interface to be on an extended AppleTalk network.

Syntax

The command syntax is as follows:

appletalk cable-range *start-end [network.node]*

To disable extended AppleTalk processing on the interface, use the **no** format of this command as follows:

no appletalk cable-range *start-end [network.node]*

Syntax Description

The command parameter is described as follows:

start-end

Specifies the range of network numbers. These are decimal numbers ranging from 1 through 65,279. The starting network number should be less than or equal to the ending network number. Specifying a cable range of **0-0** places the interface into discovery mode, which attempts to determine cable range information from another router on that network.

network.node

Specifies the suggested network and node number that will be used first when selecting the AppleTalk address for this interface. The suggested network number must fall within the specified range of network numbers. This is an optional parameter.

appletalk zone

This interface subcommand is used to assign a zone name to an AppleTalk interface. Interfaces that are configured for seed routing or that have discovery mode disabled *must* have a zone name assigned before AppleTalk processing can begin. This command is used with both extended and nonextended configurations.

Syntax

The command syntax is as follows:

appletalk zone *zonename*

To delete a zone name from a zone list or the entire zone list if none is specified, use the **no** format of this command as follows:

no appletalk zone [*zonename*]

Syntax Description

The command parameter is described as follows:

zonename

Specifies the name of the zone for the connected AppleTalk network.

Source Route Bridging (SRB) Commands

This section describes the SRB router configuration commands that are currently modeled by the Connectivity Tools.

source-bridge fst-peername

This global configuration command is used to configure a remote source-route bridge to use Fast Sequenced Transport (FST).

Syntax

The command syntax is as follows:

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

To disable the IP address assignment, use the **no** format of this command as follows:

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

Syntax Description

The command parameter is described as follows:

local-interface-address

The IP address to assign to the local router.

source-bridge remote-peer interface

This global configuration command is used to identify the interface source-route bridged traffic is sent on to another router/bridge in a point-to-point direct encapsulation connection. A serial connection does not require a MAC-level address to be included; all other types of interfaces do require MAC addresses.

Syntax

The command syntax is as follows:

source-bridge remote-peer *ring-group* **interface** *interface-name* [*mac-address*] [**lf** *size*]

To disable previous interface assignments, use the **no** format of this command as follows:

no source-bridge remote-peer *ring-group* **interface** *interface-name*

Syntax Description

The command parameters are described as follows:

ring-group

The ring group number which must match the ring group number specified with the **source-bridge ring-group** command. Valid values are 1 through 4095.

interface-name

Name of the router's serial interface over which source-route bridged traffic is sent.

mac-address

MAC address for the interface specified using the *interface-name* argument. This argument is required for non-serial interfaces. This is an optional parameter.

lf *size*

Maximum frame size to be sent to this remote peer. This argument is useful in preventing time-outs in end hosts by reducing the amount of data they have to transmit in a fixed interval. Valid values for this argument are 516, 1500, 2052, 4472, 8144, 11407, and 17800 bytes. This is an optional parameter.

source-bridge ring-group

This global configuration command is used to define or remove a ring group from the router's configuration. A ring group is a collection of Token Ring interfaces in one or more routers that are collectively treated as a virtual ring.

Syntax

The command syntax is as follows:

source-bridge ring-group *ring-group*

To disable previous assignments, use the **no** format of this command as follows:

no source-bridge ring-group *ring-group*

Syntax Description

The command parameter is described as follows:

ring-group

The unique ring group number of the network. Valid values are 1 through 4095.

SNA Topology Commands

This section describes the SNA commands that are currently modeled by the Connectivity Tools.

sdlc address

This command is used to assign an address to a secondary station attached to the serial link.

Syntax

The command syntax is as follows:

sdlc address *hexbyte*

To remove a secondary station attached to the serial link, use the **no** format of this command as follows:

no sdlc address

Syntax Description

The command parameter is described as follows:

hexbyte

Specify the secondary station address in hexadecimal.

sdllc partner

This interface configuration command is used enable device-initiated connections for SDLLC. This command must be specified for the serial interface that links to the serial line device.

Syntax

The command syntax is as follows:

sdllc partner *mac-address sdlc-address*

To cancel the original instruction, use the **no** format of this command as follows:

no sdllc partner *mac-address sdlc-address*

Syntax Description

The command parameter is described as follows:

mac-address

Specifies the 48-bit MAC address of the Token Ring host.

sdlc-address

Specifies the SDLC address of the serial device that will communicate with the Token Ring host.

sdllc traddr

This interface configuration command enables the use of SDLLC Media Translation on this serial interface.

Syntax

The command syntax is as follows:

sdllc traddr *mac-address lr bn tr*

To disable SDLLC Media Translation on this interface, use the **no** format of this command as follows:

no sdllc traddr *mac-address lr bn tr*

Syntax Description

The command parameters are described as follows:

mac-address

Specifies the MAC address to be assigned to the serial interface. The MAC address has the following format: xxxx.xxxx.xx00.

lr

Specifies the SDLLC virtual ring number.

bn

Specifies the SDLLC bridge number.

tr

Specifies the SDLLC target (destination) ring number.

source bridge

This interface subcommand is used to configure an interface for local source-route bridging.

Syntax

The command syntax is as follows:

source bridge *local-ring bridge-number target-ring*

To disable source bridging on a particular interface, use the **no** format of this command as follows:

no source bridge

Syntax Description

The command parameters are described as follows:

local-ring

Specifies the ring number for this interface's Token Ring. A ring number is a decimal number ranging from 1 through 4095 that uniquely identifies a network segment or ring within the bridged Token Ring network.

bridge-number

Specifies the bridge connecting two rings. Valid values are decimal numbers ranging from 1 through 15 that are unique within the bridged Token Ring network.

target-ring

Specifies the unique destination ring on this router/bridge. Valid values are decimal numbers that are unique within the bridged Token Ring network.

STUN Commands

This section describes the STUN (Serial Tunneling) commands that are currently modeled by the Connectivity Tools. STUN allows two devices using SDLC- or HDLC-compliant protocols that are normally connected by a direct serial link, to be connected through one or more Cisco routers.

stun peer-name

This global configuration command is used to enable the STUN (Serial Tunneling) function on IP addresses.

Syntax

The command syntax is as follows:

stun peer-name *ip-address*

To disable the STUN function, use the **no** format of this command as follows:

no stun peer-name *ip-address*

Syntax Description

The command parameter is described as follows:

ip-address

Specifies the IP address by which this STUN peer is known to other STUN peers that are using the TCP transport.

stun route (address)

This global configuration command is used to specify TCP encapsulation and optionally establishes SDLC local acknowledgment (SDLC Transport) for STUN.

Syntax

The command syntax is as follows:

stun route address *address-number* **tcp** *ip-address* **[local-ack] [priority] [tcp-queue-max]**

To disable the STUN function, use the **no** format of this command as follows:

no stun route address *address-number* **tcp** *ip-address*

Syntax Description

The command parameters are described as follows:

address

Specifies how a serial frame that contains a particular address is to be propagated.

address-number

This address value varies depending on the protocol being used. It can be an octal, decimal, or hexadecimal number in the range allowed by the protocol. For example, SDLC uses hexadecimal digits and a one-byte address field. Therefore, the valid addresses for the SDLC protocol range from 00 through FF.

tcp

Causes TCP/IP encapsulation to be used to propagate frames that match the entry.

ip-address

Specifies the address that identifies the remote STUN peer that is connected to the far serial link.

local-ack

Specifies that SDLC sessions are locally terminated. This is an optional parameter.

priority

Used in conjunction with the **local-ack** parameter to enable priority queuing for the SDLC frames. This is an optional parameter.

tcp-queue-max

Sets the maximum size of the outbound TCP queue for the SDLC link. This is an optional parameter.

stun route (all tcp)

This TCP interface configuration command is used for TCP encapsulation and to forward all STUN traffic on an interface regardless of what address is contained in the serial frame.

Syntax

The command syntax is as follows:

stun route all tcp *ip-address*

To disable the TCP encapsulation function, use the **no** format of this command as follows:

no stun route all tcp *ip-address*

Syntax Description

The command parameter is described as follows:

all

Specifies that all STUN traffic received on the input interface will be propagated regardless of what address is contained in the serial frame.

tcp

Causes TCP/IP encapsulation to be used to propagate frames that match the entry.

ip-address

Specifies the address that identifies the remote STUN peer that is connected to the far serial link.