XNS Commands

This chapter describes the function and displays the syntax of each XNS command. For more information about defaults and usage guidelines, see the corresponding chapter of the *Router Products Command Reference* publication.

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

To define a standard XNS access list, use the standard version of the **access-list** global configuration command. To remove a standard access list, use the **no** form of this command.

access-list-number	Number of the access list. This is a decimal number from 400 to 499.
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 a 32-bit decimal number. You can omit leading zeros. A network number of –1 matches all networks.
	Note that you enter the network number in decimal, and this number is expressed in decimal format in our configuration files and routing tables. However, the router internally converts the network number into hexadecimal. Network analyzers also display the network number in hexadecimal.
source-address	(Optional) Host on *source-network* from which the packet is being sent. This is a 48-bit hexadecimal value represented as a dotted triplet of four-digit hexadecimal numbers (*xxxx.xxxx.xxxx*).
source-address-mask	(Optional) Mask to be applied to *source-address*. This is a 48-bit value represented as a dotted triplet of four-digit hexadecimal numbers (*xxxx.xxxx.xxxx*). Place ones in the bit positions you want to mask.

destination-network	(Optional) Number of the network to which the packet is being sent. This is a 32-bit decimal number. A network number of –1 matches all networks.
	You can omit leading zeros from the network number.
	Note that you enter the network number in decimal, and this number is expressed in decimal format in our configuration files and routing tables. However, the router internally converts the network number into hexadecimal. Network analyzers also display the network number in hexadecimal.
destination-address	(Optional) Host on *destination-network* to which the packet is being sent. This is a 48-bit hexadecimal value represented as a dotted triplet of four-digit hexadecimal numbers (*xxxx.xxxx.xxxx*).
destination-address-mask	(Optional) Mask to be applied to *destination-address*. This is a 48-bit value represented as a dotted triplet of four-digit hexadecimal numbers (*xxxx.xxxx.xxxx*). Place ones in the bit positions you want to mask.

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

To define an extended XNS access list, use the extended version of the
access-list global configuration command. To remove an extended
access list, use the **no** form of this command.

access-list-number	Number of the access list. This is a decimal number from 500 to 599.
deny	Denies access if the conditions are matched.
permit	Permits access if the conditions are matched.
protocol	Number of an XNS protocol, in decimal. See the documentation accompanying your host's XNS implementation for a list of protocol numbers.
source-network	(Optional) Number of the network from which the packet is being sent. This is a 32-bit decimal number. A network number of –1 matches all networks.
	You can omit leading from the network number.
	Note that you enter the network number in decimal, and this number is expressed in decimal format in our configuration files and routing tables. However, the router internally converts the network number into hexadecimal. This means, for instance, that a network analyzer will display the network number in hexadecimal.

source-host	(Optional) Host on *source-network* from which the packet is being sent. This is a 48-bit hexadecimal value represented as a dotted triplet of 4-digit hexadecimal numbers (*xxxx.xxxx.xxxx*).
source-network-mask	(Optional) Mask to be applied to *source-network*. This is an eight-digit hexadecimal mask. Place ones in the bit positions you want to mask.
	The mask must immediately be followed by a period, which must in turn immediately be followed by *source-host-mask*.
source-host-mask	(Optional) Mask to be applied to *source-host*. This is a 48-bit value represented as a dotted triplet of four-digit hexadecimal numbers (*xxxx.xxxx.xxxx*). Place ones in the bit positions you want to mask.
source-socket	Number of the socket from which the packet is being sent. This is a 16-bit decimal value. See the documentation accompanying your host's XNS implementation for a list of socket numbers.

destination-network	(Optional) Number of the network to which the packet is being sent. This is a 32-bit decimal number. A network number of –1 matches all networks.
	You can omit leading zeros from the network number.
	Note that you enter the network number in decimal, and this number is expressed in decimal format in our configuration files and routing tables. However, the router internally converts the network number into hexadecimal. This means, for instance, that a network analyzer will display the network number in hexadecimal.
destination-host	(Optional) Host on *destination-network* to which the packet is being sent. This is a 48-bit hexadecimal value represented as a dotted triplet of four-digit hexadecimal numbers (*xxxx.xxxx.xxxx*).
destination-network-mask	(Optional) Mask to be applied to *destination-network*. This is an eight-digit hexadecimal mask. Place ones in the bit positions you want to mask.
	The mask must immediately be followed by a period, which must in turn immediately be followed by *destination-host-mask*.
destination-host-mask	(Optional) Mask to be applied to *destination-host*. This is a 48-bit value represented as a dotted triplet of four-digit hexadecimal numbers (*xxxx.xxxx.xxxx*). Place ones in the bit positions you want to mask.

destination-socket	(Optional) Number of the socket to which the packet is being sent. This is a 16-bit decimal value. See the documentation accompanying your host's XNS implementation for a list of socket numbers.
pep	(Optional) Packet Exchange Protocol type. PEP is a connectionless-oriented protocol that uses XNS Type 4 IDP frames.

ping xns *address*

To check host reachability and network connectivity, use the **ping** user EXEC command.

xns	Specifies the XNS protocol.
address	Address of system to ping.

ping

To check host reachability and network connectivity, use the **ping** privileged EXEC command.

show xns cache

To display the contents of the XNS fast-switching cache, use the **show xns cache** EXEC command.

show xns interface [*type number*]

To display the status of the XNS interfaces configured in the router and the parameters configured on each interface, use the **show xns interface** EXEC command.

type	(Optional) Interface type. It can be one of the following types: asynchronous, dialer, Ethernet (IEEE 802.3), loopback, null, serial, or tunnel.
number	(Optional) Interface number.

show xns route [*network*]

To display the contents of the XNS routing table, use the **show xns route** EXEC command.

network	(Optional) Number of the network that the route is to. This is a 32-bit decimal number. You can omit leading zeros.

show xns traffic

To display information about the number and type of XNS packets transmitted and received by the router, use the **show xns traffic** EXEC command.

[**no**] **xns access-group** *access-list-number*

To apply a generic filter to an interface, use the **xns access-group** interface configuration command. To remove the access list, use the **no** form of this command.

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. For standard access lists, *access-list-number* is a decimal number from 400 to 499. For extended access lists, *access-list-number* is a decimal number from 500 to 599.

[**no**] **xns encapsulation** {**snap** | **ub** | **3com**}

To select the type of encapsulation used on a Token Ring interface, use the **xns encapsulation** interface configuration command. To disable the encapsulation, use the **no** form of this command.

snap	802.2 LLC encapsulation. This is the default encapsulation type. Use this encapsulation type with IBM Token Ring networks.
ub	Ungermann-Bass encapsulation.
3com	3Com encapsulation. Use this encapsulation type when older 3Com Corporation products are present on the network.

[**no**] **xns flood broadcast allnets**

To flood broadcast packets whose destination address is –1.FFFF.FFFF.FFFF, use the **xns flood broadcast allnets** interface configuration command. To disable this type of flooding, use the **no** form of this command.

[no] xns flood broadcast net-zero

To flood packets whose destinations address is 0.FFFF.FFFF.FFFF, use the **xns flood broadcast net-zero** interface configuration command. To disable this type of flooding, use the **no** form of this command.

[no] xns flood specific allnets

To flood packets whose destination address is –1.*specific-host*, use the **xns flood specific allnets** interface configuration command. To disable this type of flooding, use the **no** form of this command.

[no] xns forward-protocol *protocol*

To forward packets of a specific XNS protocol to a helper address, use the **xns forward-protocol** global configuration command. To disable the forwarding of these packets, use the **no** form of this command.

> *protocol* Number of an XNS protocol, in decimal. See the documentation accompanying your host's XNS implementation for a list of protocol numbers.

xns hear-rip [*access-list-number*]
no xns hear-rip

To receive RIP updates, use the **xns hear-rip** interface configuration command. To disable the receipt of RIP updates, use the **no** form of this command.

> *access-list-number* (Optional) Number of the access list. This list defines the routes the router is to learn through standard RIP. The list is applied to individual routes within the RIP packet, not to the address of the packet's sender. For standard access lists, *access-list-number* is a decimal number from 400 to 499. For extended access lists, *access-list-number* is a decimal number from 500 to 599.

[**no**] **xns helper-address** *network***.***host*

To forward broadcast packets to a specified server, use the **xns helper-address** interface configuration command. To disable this function, use the **no** form of this command.

network	Network on which the target XNS server resides. This is a 32-bit decimal number.
host	Host number of the target XNS server. This is a 48-bit hexadecimal value represented as a dotted triplet of four-digit hexadecimal numbers (*xxxx.xxxx.xxxx*). The host must be directly connected to one of the router's directly attached networks. A number of FFFF.FFFF.FFFF indicates all hosts on the specified network.

[**no**] **xns input-network-filter** *access-list-number*

To control which networks are added to the routing table, use the **xns input-network-filter** interface configuration command. To remove the filter from the interface, use the **no** form of this command.

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. For standard access lists, *access-list-number* is a decimal number from 400 to 499. For extended access lists, it is a decimal number from 500 to 599.

xns maximum-paths *number*
no xns maximum-paths

To set the maximum number of paths the router uses when sending packets, use the **xns maximum-paths** global configuration command. To restore the default value, use the **no** form of this command.

number	Maximum number of equal-cost paths from which the router chooses. It can be a number from 1 to 512. The default is 1.

xns network *number*
no xns network

To enable XNS routing on a particular interface by assigning a network number to the interface, use the **xns network** interface configuration command. To disable XNS routing on an interface, use the **no** form of this command.

number	Network number. This is a 32-bit decimal number. You can omit leading zeros.

[**no**] **xns output-network-filter** *access-list-number*

To control the list of networks included in routing updates sent out an interface, use the **xns output-network-filter** interface configuration command. To remove the filter from the interface, use the **no** form of this command.

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. For standard access lists, *access-list-number* is a decimal number from 400 to 499. For extended access lists, it is a decimal number from 500 to 599.

[**no**] **xns route** *network network***.***host*

To add a static route to the XNS routing table, use the **xns route** global configuration command. To remove a route from the routing table, use the **no** form of this command.

network	Network to which you want to establish a static route. This is a 32-bit decimal number. You can omit leading zeros.
*network***.***host*	Router to which to forward packets destined for the specified network.
	The argument *network* is a 32-bit decimal number. You can omit leading zeros.
	The argumen*t host* is the host number of the target router. This is a 48-bit value represented by a dotted triplet of four-digit hexadecimal numbers (*xxxx.xxxx.xxxx*).

[**no**] **xns route-cache**

To enable XNS fast switching, use the **xns route-cache** interface configuration command. To disable fast switching, use the **no** form of this command.

[**no**] **xns router-filter** *access-list-number*

To control the routers from which packets are accepted, use the **xns router-filter** interface configuration command. To remove the filters from the interface, use the **no** form of this command.

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. For standard access lists, *access-list-number* is a decimal number from 400 to 499. For extended access lists, it is a decimal number from 500 to 599.

xns routing [*address*]
no xns routing

To enable XNS routing, use the **xns routing** global configuration
command. To disable XNS routing, use the **no** form of this command.

address   (Optional) Host 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 you omit *address*, the router uses the address of
the first IEEE-compliant (Token Ring, FDDI, or
Ethernet) interface MAC address it finds in its
interface list. The router uses the address
0123.4567.abcd for non-IEEE–compliant
interfaces.

[**no**] **xns ub-emulation**

To enable Ungermann-Bass Net/One routing, use the **xns ub-emulation**
global configuration command. To disable Net/One routing and restore
standard routing mode, use the **no** form of this command.

xns update-time *interval*
no xns update-time

To set the XNS routing update timers, use the **xns update-time** interface
configuration command. To restore the default value, use the **no** form of
this command.

interval   Interval, in seconds, at which XNS routing updates
are sent. The minimum interval is 10 seconds, and
the maximum is 2,493,644 seconds, which is about
29 days. The default is 30 seconds.