

IPX Initial Configuration

Access the IPX configuration process from the `Config>` prompt.
Syntax: `p ipx`
 All commands are now entered from the `IPX config>` prompt.

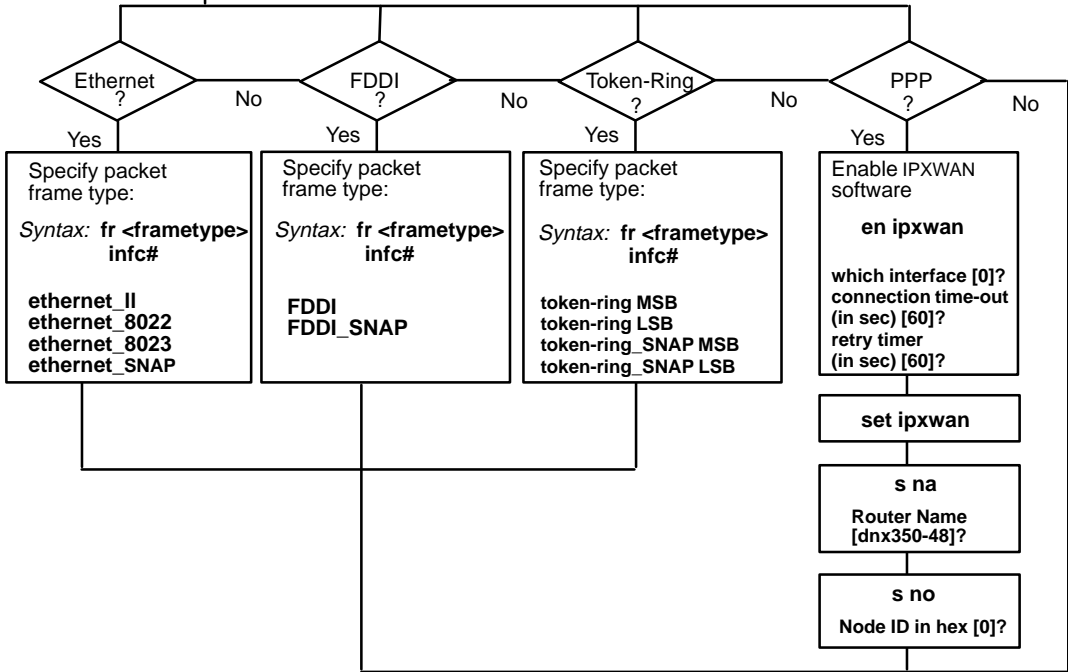
Globally enable the IPX software.
Syntax: `en ipx`

Enable all interfaces running IPX.
Syntax: `en in interface#`

NOTE
 This is a basic configuration. Depending on the type of network, additional configuration steps may be required.
 For detailed information on how to access the configuration and monitoring prompts, see the back of this card.

Assign each connected network the same network number (address) as used by all other routers and file servers on this LAN.
Syntax: `s ne interface# ipx-net#`

If there is a serial line configured, a unique host number must be assigned to the router.
Syntax: `s h host#`



A

If necessary, specify the size of the IPX RIP routing table.

Syntax: s m n #-of-nets

If necessary, specify the size of the IPX SAP services table.

Syntax: s m s #-of-services

If necessary, specify the RIP update interval.
The Novell and Digital Router default is 1 minute.

Syntax: s RIP interface# #-of-minutes

Note: This option is not presented in the quick configuration process.

If necessary, specify the SAP update interval.
The Novell and Digital Router default is 1 minute.

Syntax: s SAP interface# #-of-minutes

Note: This option is not presented in the quick configuration process.

Configure any other protocols for your router by returning to the `Config>` prompt. If all protocols are configured, do the following:

1. Enter **exit** at the `IPX config>` prompt.
2. Press **<ctrl-p>** to display the OPCON prompt(*)
3. Enter **restart** and respond **yes** to the prompt.

IPX Configuration Commands

This quick reference card summarizes the IPX configuration and console commands. The front panel of this card provides the initial configuration steps for this protocol. See "Accessing the CONFIG Process" for information on how to display the `Config>` prompt.

Enter the following configuration commands at the `IPX config>` prompt. To list the configuration commands and their options, enter a `?`.

After you have configured all of the protocols, enter **restart** at the `OPCON` prompt (*), and respond **yes** after the following prompt:

```
Are you sure you want to restart the router? (Yes or No): yes
```

add

```
access-control type dest-net dest-host  
dest-socket-range src-net src-host  
src-socket-range
```

Adds the access control feature. Determines whether IPX packets are dropped or forwarded.

```
filter hops service-type service-name
```

Adds IPX filtering. Prevents NetWare bindery overflows on large networks by letting you determine the reasonable number of hops for a given service.

```
ip-tunnel-address ip-address
```

Construct the IPX IP address peer list. Assign IP unicast or multicast address at a time to form the list.

delete

```
access-control line#
```

Deletes the access control feature for the desired line number.

```
filter hops service-type service-name
```

Removes IPX filtering.

```
ip-tunnel-address ip-address
```

Deletes an IP address from the IP peer list.

disable

```
interface interface#
```

Disables specific interfaces from sending IPX packets.

```
ip-tunnel
```

Disables IPX on the IP network.

```
ipx
```

Disables all interfaces from sending IPX packets.

```
ipxwan interface#
```

Prevents IPX from functioning over an interface supporting the Point-to-Point Protocol (PPP).

```
reply-to-get-nearest-server
```

Prevents the router from responding to GET NEAREST SERVER requests from workstations that are attempting to locate a server.

enable

```
interface interface#
```

Enables specific interfaces to send IPX packets.

```
ip-tunnel
```

Enables IPX on the IP network.

```
ipx
```

Allows the router to send IPX packets over all enabled interfaces.

```
ipxwan
```

Allows the router to send IPX packets over configured PPP interfaces.

```
reply-to-get-nearest-server
```

Lets the router respond to GET NEAREST SERVER requests from workstations that are attempting to locate a server.

frame

Specifies the packet format for IPX interfaces.

```
ethernet_type interface#
```

Selects the Ethernet encapsulation format (ethernet_II, ethernet_8022, ethernet_8023(default), ethernet_SNAP)

```
token-ring_type interface#
```

Selects the Token-Ring encapsulation format (token_ring_SNAP, token-ring MSB, token_ring LSB, token_ring_SNAP MSB (default), token_ring_SNAP LSB)

IPX Configuration Commands (*continued*)

FDDI interface#

Selects the FDDI encapsulation format.

FDDI_SNAP (default) interface#

Selects the FDDI encapsulation format.

list

Displays the current IPX configuration.

move

access-control *line# line#*

Changes the line numbers for the access controls. After you move the lines, they are immediately re-numbered to reflect the new order.

set

access-control *toggle*

Turns access controls on or off. Enter **on** or **off** as the *toggle* value.

filter *toggle*

Turns the IPX SAP filter on or off. Enter **on** or **off** as the *toggle* value.

host-number *host#*

Specifies that each IPX router with serial line support must have a unique host number. This is required because the serial lines do not have hardware node addresses from which to build a host number. The host number is a 12-digit hexadecimal number.

ipxwan *interface timeout retry-timer #*

Sets up an interface to support the routing of IPX traffic over a WAN interface supporting the Point-to-Point Protocol (PPP). The command also sets up the connection timer and the retry timer.

local-cache-size

Specifies the size of the local cache routing table. The range is 1–10000. The default size is 64.

maximum *alternate-routes-per-destination #*

Specifies the number of alternate routes that you want to assign to a given destination network. The range is 1–64. The default value is 3.

maximum networks

Specifies the size of IPX's RIP routing table. This reflects the number of networks in the internet on which IPX operates. There is no maximum size limit; however, it is possible for the router to run out of memory. The default is 32.

maximum services

Specifies the size of IPX's SAP service table. This reflects the number of services (such as file servers or SNA gateways) on the internet on which IPX operates. There is no maximum size limit. The default is 32.

maximum *total-alternate-route-entries #*

Specifies the actual number of entries available for alternate routes.

name

Assigns a symbolic name. The name can be between 1 and 47 characters in length and can contain the characters "A" through "Z".

net-number *host# ipx-net#*

Assigns an IPX network number to the associated directly-connected network. Every IPX interface must have a unique network number. The only exception is that serial lines can be assigned network numbers of zero. (Serial lines without network numbers do not pass IPX NETBIOS emulation packets.) The interface number is decimal and the net number is hexadecimal.

node-id *primary-net#*

Assigns a primary network number. The node-id is the primary network number for the router and must be assigned before the exchange of IPXWAN packets can begin.

remote-cache *size*

Specifies the size of the remote cache routing table. The range is 1–10000. The default size is 64.

rip-interval *delay*

Specifies the delay in minutes between complete RIP updates given on an interface. The range is 1 through 1440. The default is 1.

sap-interval *delay*

Specifies the delay in minutes between complete SAP updates given on an interface. The range is 1 through 1440. The default is 1.

exit

Returns to the previous prompt level.

IPX Console Commands

Enter these commands after the `IPX>` prompt. See “Accessing the GWCON Process” for information on how to display the GWCON prompt.

To list the IPX console commands and their options, enter a `?` after the `IPX>` prompt.

access controls

Lists the status of IPX access controls, the IPX access control statements, and a count of how many times each control statement has been followed.

cache

Displays the contents of the IPX routing cache.

configuration

Lists the network numbers of all the router interfaces on which the IPX protocol is enabled.

counters

Displays the number of routing errors and packet overflows that have occurred.

disable

Interactively disables specific IPX interfaces from sending IPX packets over the specified interface (*interface #*).

dump routing tables

Displays the contents of the current IPX RIP network routing tables.

enable *network#*

Returns to the GWCON (+) prompt. Returns to the GWCON (+)

prompt. Interactively enables IPX on an interface. To enable IPX, the interface must be up (i.e., has passed the self-test).

filters

Lists the current filters and the state of these filters.

ipxwan

Lists the current configuration information for IPX running over a WAN interface via the Point-to-Point Protocol (PPP). Detailed for specific interface or summary of all ipxwan interfaces.

sizes

Lists the current size and contents of the local node and remote network caches.

shutdown

Performs an orderly shutdown of IPX functions on all router interfaces,

slist

Displays the contents of the current IPX SAP routing tables. This command is similar to the NetWare **slist** command.

exit

Returns to the GWCON (+) prompt.

Accessing the CONFIG Process

Use the CONFIG process to display and change the current configuration in static RAM (SRAM).
To display the CONFIG prompt (`Config>`):

1. After the router boots, the console displays the * prompt. Enter **status** to display the pid (process ID) of CONFIG.
2. Enter **talk** and the pid for CONFIG. This displays the following information:

```
Gateway user configuration
Config>
```

If the `Config>` prompt does not appear, press **RETURN** again. You can now enter the configuration commands.

3. When you are done entering the configuration commands, do the following to load the new configuration:
 - a. Press **CTRL-P** after the `Config>` prompt.

```
Config> ^p
*
```

- b. Enter **restart** after the * prompt.
- c. Respond **yes** to the following prompt:

```
Are you sure you want to restart the gateway? (Yes
or No): yes
```

The new configuration is loaded when the console displays the following information:

```
Copyright Notices:
Copyright 1996 Digital Equipment Corp.
Copyright 1985-1994 Proteon, Inc.
Copyright 1984-1987, 1989 by J. Noel Chiappa
```

```
MOS Operator Control
*
```

Accessing the GWCON Process

Use the GWCON process to monitor protocols, network interfaces, and system messages. You cannot access the GWCON process if the router is in configuration-only mode (the prompt is `Config> only`). To display the GWCON prompt (+):

1. After the router boots, the console displays the * prompt. Enter **status** to display the pid (process ID) of GWCON.
2. Enter **talk** and the pid for CGWCON. This displays the GWCON prompt (+). You can now enter the monitoring commands.

To return to the * prompt, press **CTRL-P**.

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