

Preparing for Configuration

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Chapter 1 Preparing for Configuration

This Document describes the information necessary for the first configuration of router, including the port number, the work that needs to be done before starting router and the introduction of command line interface.

1.1 Router Port Number

Router's physical Port Number shall be arranged in the form of <type><slot>/<port>. The comparison table of type and name is as follows:

Type of Port	Type Name	Type for Short
Serial Port	Serial	s
Synchronization Port	Serial	s
Asynchronous /Aux	Async	a
10M Ethernet	Ethernet	e
100M High-Speed Ethernet	FastEthernet	f
ISDN BRI	BRI	b

The fixed number is distributed to the value of Slot according to expansion slot of WIC/VIC from right to left in transverse direction and from the bottom up longitudinal direction. The fixed number for standard configuration is 0, WIC expansion slots or VIC expansion slots are numbered in the aforementioned order commencing from 1.

The value of port is numbered from right to left, starting from 0. If there is only one port, the port is numbered 0.

Notes:

The various compound card and modules are numbered in turn from right to left. The numbering rule for the compatible modules of NM, WIC, FIC slot or types of interface card can be referred to the description of hardware.

1.2 Preparatory Works Before Starting Router

The following steps shall be confirmed before starting the Router for Configuration

- (1) The hardware of routes are put in right places on the requirements specified in the manual.
- (2) The simulated program is installed at the terminal of PC.
- (3) Based on IP protocol, the following items is determined:
 - IP Address Allocation Planning.
 - Which kind of WAN Protocol that is to run at the port (such as Frame Relay, HDLC, X.25, etc) .

1.3 How to Get Help

the command can be entered by inputting question mark (?) and using direction key:

- When a question mark is entered, the list of current usable commands will be available immediately.

```
Router> ?
```

- Enter some already known characters, then enter question mark closely (no blank) the command starting with already known characters will be shown.

```
Router> s?
```

- Enter command, followed closely by spacebar and question mark, list of command parameter will be available. Router> show ?

- Press “Up” direction key, the entered commands will be displayed, and continue to press “Up” direction key, the more entered commands before will be shown.

1.4 Command Mode

Router’s command line interface is classified into multiple models. Each command model permits the different components to be configured with the router. The current usable commands depends on the chosen command model. The list of current usable commands will be displayed by entering question mark (?) under each command model. The following table lists the frequently-used command models:

Command Model	Mode of Entry	Interface Prompt	Mode of Quit
Model of System Monitoring and Control	When power is on, user enter “aaa”	monitor#	Use the command “Quit”
User Model	Log on	router>	Use command “Exit or Quit”
Management Model	Input command “enter or enable” under user model	router#	Use command “Exit or Quit”
Overall Configuration Model	Enter command “config” under management model	router_config#	Use command “exit” or “quit” or “Ctrl-Z” to restore management model directly.
Interface Configuration Model	Under overall configuration model, enter command “interface”, such as interface s1/0.	router_config_s1/0#	Use command “exit” or “quit” or “Ctrl-Z” to restore management model directly.
Port Configuration Model	Under global configuration model, enter command “interface”, such as “interface s1/0”	router_config_s1/0#	Restore to management model by using command “exit” or “quit” or “Ctrl-Z” directly.

Each command model prevents using some command subensembles. If trouble occurs after command is entered, the interface prompt shall be checked and the question mark (?) shall be input for getting the list of usable commands. Maybe a mistake is made in command model or syntax.

In the following examples, the new command model indicated by the changes in the "Notice" interface prompt shall be observed.

```
router> enter
Password: <enter password>
router# config
router_config# interface s1/0
router_config_s1/0# quit
router_config# quit
router#
```

1.5 Cancelling Command

If a command needs to be cancelled or default attribute needs to be restored, it can be done by adding key word "no" before most of commands

such as, no ip routing

1.6 Saving Configuration

In order to restore the original configuration quickly after the system is restarted or accidental power down, the changes in the configurations shall be saved. By using the command "write" under Management Model or Global Configuration Model, the changes in the configuration can be saved.