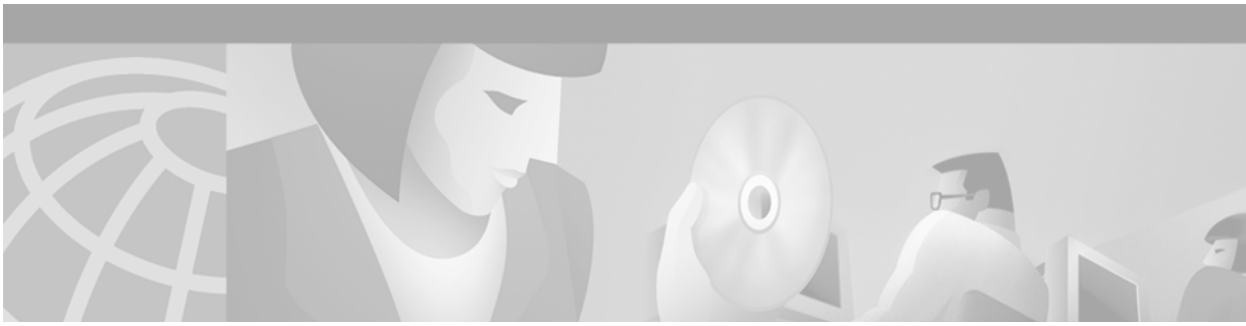

Cisco IOS Command Modes

This appendix contains summaries of the command and configuration modes used in the Cisco IOS Command-Line Interface (CLI). The availability of configuration modes will depend on the feature set found in your system image and on which router platform you are using. For specific information on any particular configuration mode, see the documentation references given in the mode summaries.

This appendix lists command modes in the following categories:

- Base Command Modes
- Configuration Modes and Submodes

These lists include short summaries of the modes.

Following the configuration mode and configuration submodes summary list, Table 22 on page 403 presents the configuration mode summaries organized by router prompt, and includes examples of entering each mode.

Base Command Modes

Base command modes are used for navigating the CLI and performing basic router startup, configuration, and monitoring tasks. For more information on the base command modes, see the "Using the Command-Line Interface (CLI)" chapter of this document. For details about setup mode, see the "Using Configuration Tools" chapter.

User EXEC Mode

The default command mode for the CLI is user EXEC mode. The EXEC commands available at the user EXEC level are a subset of those available at the privileged EXEC level. In general, the user EXEC commands allow you to connect to remote devices, change terminal settings on a temporary basis, perform basic tests, and list system information. The prompt for user EXEC mode is the name of the device followed by an angle bracket: `Router>`.

Privileged EXEC Mode

Privileged EXEC mode is password protected, and allows the use of all EXEC mode commands available on the system. To enter privileged EXEC mode from user EXEC mode, use the **enable** command. Privileged EXEC mode allows access to global configuration mode through the use of the **enable** command. The privileged EXEC mode prompt consists of the devices's host name followed by the pound sign: `Router#` .

Global Configuration Mode

Global configuration commands generally apply to features that affect the system as a whole, rather than just one protocol or interface. You can also enter any of the specific configuration modes listed in the following section from global configuration mode.

To enter global configuration mode, use the **configure terminal** privileged EXEC command. The router prompt for global configuration mode is indicated by the term *config* in parenthesis: `Router(config)#`.

ROM Monitor Mode

If your router or access server does not find a valid system image to load, the system will enter read-only memory (ROM) monitor mode. ROM monitor (ROMMON) mode can also be accessed by interrupting the boot sequence during startup. From ROM monitor mode, you can boot the device or perform diagnostic tests.

To enter ROM monitor mode, use the Break key (Cntl-C) during the first 60 seconds of start-up. The router prompt is indicated by an angle bracket by itself or the term ROMMON followed by a number and an angle bracket: `>` or `rommon1>`.

Setup Mode

Setup mode is not, strictly speaking, a command mode. Setup mode is rather an interactive facility that allows you to perform first-time configuration and other basic configuration procedures on all routers. The facility prompts you to enter basic information needed to start a router functioning. Setup mode uses the System Configuration Dialog, which guides you through the configuration process. It prompts you first for global parameters and then for interface parameters. The values shown in brackets next to each prompt are the default values. For more information on setup mode, see the "Using Configuration Tools" chapter of this book.

To enter setup mode after the router has been configured for the first time, use the **setup** command in privileged EXEC mode. The router prompt for setup mode is indicated by a configuration question, followed by the default answer in brackets and a colon (:), as shown in the following example:

```
Continue with configuration dialog? [yes]:
Enter host name [Router]:
```

Configuration Modes and Submodes

Configuration modes are entered from global configuration mode. Configuration submodes are entered from other configuration modes. Configuration subsubmodes are configuration modes entered from configuration submodes.

The following configuration mode short summaries list the basic characteristics of each mode and where you can find details on the configuration tasks associated with each mode. Configuration modes and configuration submodes are listed here alphabetically.

Access-List Configuration Mode

See the descriptions for "Standard Named Access List (NACL) Configuration Mode" and "Extended Named Access List (NACL) Configuration Mode".

Address Family Configuration Submode

Prompt ID: (config-router-af)

To enter address family configuration submode from router configuration mode, use the **address-family** command. Within this submode, you can configure address-family specific parameters for routing protocols, such as BGP, RGP, and static routing, that can accommodate multiple Layer 3 address families. The address family configuration submode commands include the **neighbor-activate** command and the **neighbor as-override** command. To exit address family configuration submode, use the **exit-address-family** command.

For details, see the "Configuring Multiprotocol Label Switching" chapter of the Release 12.1 *Cisco IOS Switching Services Configuration Guide*.

ALPS Circuit Configuration Mode

Prompt ID: (config-alps-circ)

To enter Airline Product Set (ALPS) circuit configuration mode from global configuration mode, use the **alps circuit** command. Within ALPS circuit configuration mode, you can configure the tunneling mechanism that transports airline protocol data across a Cisco router-based TCP/IP network to an X.25-attached mainframe. This feature provides connectivity between agent set control units (ASCUs) and a mainframe host that runs the airline reservation system database.

For details, see the "Configuring the Airline Product Set" chapter of the *Cisco IOS Bridging and IBM Networking Configuration Guide.*

ALPS ASCU Configuration Submode

Prompt ID: (config-alps-ascu)

To enter Airline Product Set (ALPS) Agent Set Control Unit (ASCU) configuration mode from interface configuration mode, use the **apls ascu** command. In ALPS ASCU configuration submode, you can configure ASCU characteristics on the specified interface.

For details, see the "Configuring the Airline Product Set" chapter of the *Cisco IOS Bridging and IBM Networking Configuration Guide.*

APPN Configuration Modes

Prompt ID: (appn)

The Advanced Peer-to-Peer Networking (APPN) configuration modes and configuration submodes have been removed from the software in Cisco IOS Release 12.1. The configuration functionality that was previously provided by the APPN configuration modes has been replaced with SNA Switching Services (SNASw) functionality. SNA Switching uses existing configuration modes.

For details, see the "Configuring SNA Switching Services" chapter of the Release 12.1 *Cisco IOS Bridging and IBM Networking Configuration Guide*.

ATM Bundle Configuration Subsubmode

Prompt ID: (atm-bundle-config) or (config-subif-bundle)

To enter ATM bundle configuration subsubmode from subinterface configuration submode, use the **bundle** command. Use ATM bundle configuration subsubmode to assign attributes and parameters to the bundle and all of its member virtual circuits (VCs). This mode is related to Virtual Circuit (VC) Class Configuration Submode.

The following configuration submodes are accessible through ATM bundle configuration subsubmode:

- ATM Bundle Member Configuration Subsubmode

For details, see the 12.0(3)T "IP to ATM Class of Service" feature module. For additional information, see the "Configuring IP to ATM Class of Service" chapter of the Release 12.1 *Cisco IOS Quality of Service Solutions Configuration Guide*.

ATM Bundle Member Configuration Subsubmode

Prompt ID: (atm-bm-config) or (config-subif-bundle-mem)

To enter ATM bundle member configuration subsubmode from ATM bundle configuration subsubmode, use the **pvc-bundle** command. Use ATM bundle member configuration subsubmode to apply ATM traffic class and ATM traffic parameters to each VC bundle member individually.

For details, see the 12.0(3)T "IP to ATM Class of Service" feature module. For additional information, see the "Configuring IP to ATM Class of Service" chapter of the Release 12.1 *Cisco IOS Quality of Service Solutions Configuration Guide*.

Called-Group Configuration Mode

See the "DNIS Group Configuration Mode" section on page 390.

CASA Configuration Mode

Prompt ID: (config-casa)

To enter CASA configuration mode from global configuration mode, use the **ip casa** command. Use CASA configuration mode to configure CASA listen ports, such as the MNLB forwarding agent.

For details, see the "Configuring IP Services" chapter in the "IP Addressing and Services" part of the Release 12.1 *Cisco IOS IP and IP Routing Configuration Guide*. For further background information, see the *MultiNode Load Balancing Feature Set for LocalDirector User Guide*.

CAS Custom Configuration Submode

Prompt ID: (config-ctrl-cas)

To enter CAS custom configuration mode from controller configuration mode, use the **cas-custom** command. Use CAS custom configuration mode to customize E1 R2 signaling parameters for a particular E1 channel group on a channelized E1 line.

Some switches require you to fine tune your R2 settings. However, do not tamper with these special signaling commands unless you understand exactly how your switch will be effected.

For details, see the "Configuring ISDN PRI and Other Signalling on E1 and T1 Lines" chapter in the "ISDN and Signalling Configuration" part of the *Cisco IOS Dial Services Configuration Guide: Terminal Services* document.

Certificate Authority (CA) Identity Configuration Mode

Prompt ID: (ca-identity)

To enter Certificate Authority (CA) identity configuration mode from global configuration mode, use the **crypto ca identity** command. Use CA identity configuration mode to specify characteristics for certificate authorities.

For details, see the "Configuring Certification Authority Interoperability " chapter in the "IP Security and Encryption" part of the *Cisco IOS Security Configuration Guide*.

Certificate Chain Configuration Mode

Prompt ID: (config-cert-chain)

To enter certificate chain configuration mode from global configuration mode, use the **crypto ca certificate chain** command. Use certificate chain configuration mode to delete certificates using the **certificate** command.

For details, see the "Configuring Certification Authority Interoperability " chapter in the "IP Security and Encryption" part of the *Cisco IOS Security Configuration Guide*.

Controller Configuration Mode

Prompt ID: (config-controller)

To enter controller configuration mode from global configuration mode, use the **controller** command. Use controller configuration mode to configure channelized T1 or E1.

The following submodes are entered through controller configuration mode:

- CAS Custom Configuration Submode

For details, see the "Configuring ISDN PRI and Other Signalling on E1 and T1 Lines" chapter in the "ISDN and Signalling Configuration" part of the *Cisco IOS Dial Services Configuration Guide: Terminal Services* document.

Crypto Map Configuration Mode

Prompt ID: (config-crypto-map)

To enter crypto map configuration mode from global configuration mode, use the **cypto map** command. Use crypto map configuration mode to create or alter the definition of a crypto-map. Crypto-maps are part of an authentication and encryption router configuration.

For details, see the "Configuring Cisco Encryption Technology" chapter in the *Cisco IOS Security Configuration Guide*.

Crypto Transform Configuration Mode

Prompt ID: (config-crypto-trans)

To enter crypto transform configuration mode from global configuration mode, use the **crypto ipsec transform-set** command. Use crypto transform configuration mode to change the initialization vector length for the esp-rfc1829 transform, or you can change the mode to tunnel or transport.

For details, see the "Configuring IPSec Network Security" chapter in the *Cisco IOS Security Configuration Guide*.

Customer Profile Configuration Mode

Prompt ID: (config-customer) or (config-customer-pro)

To enter customer profile configuration mode from global configuration mode, use the **resource-pool profile customer** command. Use the customer profile configuration mode to include a group of DNIS numbers in a customer profile.

For details, see the "Configuring Resource Pool Management" chapter in the "Telco Solutions" part of the *Cisco IOS Dial Services Configuration Guide: Network Services* document.

DHCP Pool Configuration Mode

Prompt ID: (config-dhcp)

To enter DHCP pool configuration mode from global configuration mode, use the **ip dhcp pool** command. Use DHCP pool configuration mode to configure DHCP pool parameters, such as the IP subnet number and the default router list.

For details, see the 12.0(1)T feature module "Cisco IOS DHCP Server," or the "Configuring DHCP" chapter in the *Cisco IOS IP and IP Routing Configuration Guide*.

Dial Peer Voice Configuration Mode

Prompt ID: (config-dialpeer)

To enter dial peer voice configuration mode from global configuration mode, use the **dial peer voice** command. Use dial-peer configuration mode to configure dial peers for Voice over IP, Voice over ATM, Voice over Frame Relay, and Voice over HDLC. This mode is related to "Voice-port configuration mode."

For details, see the chapters on the above technologies in the "Voice" part of the *Cisco IOS Multiservice Applications Configuration Guide*.

DNIS Group Configuration Mode

Prompt ID: (config-called-group)

To enter Dialed Number Information Service (DNIS) group configuration mode from global configuration mode, use the **dialer dnis group** command. Cisco Resource Pool Management (RPM) gives data network service providers the capability to accept or reject a call based on the incoming DNIS number before answering the call. Use the DNIS group configuration mode to add a DNIS number to a dialer DNIS group (called group).

For details, see the "Configuring Resource Pool Management" chapter in the "Telco Solutions" part of the *Cisco IOS Dial Services Configuration Guide: Network Services* book.

Extended Named Access List (NACL) Configuration Mode

Prompt ID: (config-ext-nacl)

To enter extended named access list configuration mode from global configuration mode, use the **ip access-list** or **ipx access list** command. Use access-list configuration mode to create a named IP or IPX access list.

For information on creating a named IP access list, see the "Configuring IP Services" chapter in the "IP Addressing and Services" part of the *Cisco IOS IP and IP Routing Configuration Guide*. For information on creating a named IPX access list, see the "Configuring Novell IPX" chapter in the *Cisco IOS AppleTalk and Novell IPX Configuration Guide*.

Frame Relay DLCI Configuration Mode

Prompt ID: (config-fr-dlci)

To enter Frame Relay DLCI configuration mode from interface configuration mode, use the **frame-relay interface-dlci** command. Use Frame Relay DLCI configuration mode to assign a Voice over Frame Relay (VoFR) FRF.11 encapsulation to a Frame Relay DLCI using the **vofr** Frame Relay DLCI configuration command.

For details, see the **frame-relay interface-dlci**, **frame-relay interface-dlci switched**, and **vofr** command documentation in the *Cisco IOS Wide-Area Networking Command Reference* and the *Multiservice Applications Command Reference*

Gatekeeper Configuration Mode

Prompt ID: (config-gk)

Use gatekeeper configuration mode to configure a Cisco 2500 series, Cisco 3620, Cisco 3640, or Cisco MC3810A router as a multimedia conference manager Gatekeeper. On these platforms, use the **gatekeeper** command in global configuration mode to enter gatekeeper configuration mode.

For details, see the "Configuring Gatekeepers (Multimedia Conference Manager)" chapter in the "Voice" part of the *Cisco IOS Multiservice Applications Configuration Guide*. For additional details, see the 12.0(3)T "Multimedia Conference Manager" feature module.

Gateway Configuration Mode

Prompt ID: (config-gateway)

To enter gateway configuration mode from global configuration mode, use the **gateway** command. Use gateway configuration mode to configure gateway operating characteristics, such as security.

For details, see the "Configuring Voice over IP" chapter in the "Voice" part of the *Cisco IOS Multiservice Applications Configuration Guide*.

Hex Input Mode

See the "Public-Key Hex Input Configuration Subsubmode" section on page 397.

Hub Configuration Mode

Prompt ID: (config-hub)

To enter hub configuration mode from global configuration mode, use the **hub** command. Use hub configuration mode to configure hub functionality for an Ethernet interface on the Cisco 2500 series.

For details, see the the "Configuring LAN Interfaces" chapter in the *Cisco IOS Interface Configuration Guide*.

IBM Channel Attach Configuration Modes

See the following configuration mode summaries:

- Interface Channel Configuration Mode
- Internal LAN Interface Configuration Submode
- Internal Adapter Configuration Subsubmode

Interface Configuration Mode

Prompt ID: (config-if)

To enter interface configuration mode from global configuration mode, use an **interface** command. Many features are enabled on a per-interface basis. For a complete list of interface commands, see the *Cisco IOS Command Reference Master Index* or the *Cisco IOS Software Command Summary.*

The following submodes are accessible through interface configuration mode:

- Subinterface Configuration Submode
  - ATM Bundle Configuration Subsubmode
  - ATM Bundle Member Configuration Subsubmode
- Interface ATM VC Configuration Submode
- IP Host Backup Submode
- Internal LAN Interface Configuration Submode
  - Internal Adapter Configuration Subsubmode
- RLM Group Configuration Submode
  - RLM Device Configuration Subsubmode
- Virtual Circuit (VC) Class Configuration Submode

Interface ATM VC Configuration Submode

Prompt ID: (config-if-atm-vc)

To enter interface-ATM-Virtual Circuit (VC) configuration mode from interface configuration mode, use the **pvc** command or the **svc nsap** command. Use interface-ATM-VC configuration submode to configure VC characteristics for an ATM PVC or ATM SVC.

For details, see the "Configuring ATM" chapter of the *Cisco IOS Wide-Area Networking Configuration Guide*.

Interface ATM VC Bundle Configuration Submode

Prompt ID: (config-atm-bundle)

To enter Interface ATM VC bundle configuration submode from interface configuration mode or subinterface configuration mode, use the **bundle** command. Use interface ATM bundle configuration mode to create and assign attributes and parameters to a bundle and all of its member virtual circuits (VCs).

The following configuration submodes are accessible from interface ATM bundle configuration submode:

- Interface ATM VC Bundle-Member Configuration Subsubmode

For details, see the "Configuring IP to ATM Class of Service" chapter in the "Quality of Service Solutions" part of the Release 12.1 *Cisco IOS Quality of Service Solutions Configuration Guide*.

Interface ATM VC Bundle-Member Configuration Subsubmode

Prompt ID: (config-if-atm-member)

To enter interface ATM VC bundle-member configuration subsubmode from interface ATM bundle configuration mode, use the **pvc-bundle** command. Use interface ATM VC bundle-member configuration subsubmode to add a Virtual Circuit (VC) to a bundle as a bundle member, and configure the characteristics of that bundle member.

For details, see the "Configuring IP to ATM Class of Service" chapter in the "Quality of Service Solutions" part of the Release 12.1 *Cisco IOS Quality of Service Solutions Configuration Guide*.

Interface Channel Configuration Mode

Interface channel configuration mode is the same as interface configuration mode. Enter interface channel configuration mode from global configuration mode by using the **interface channel** form of the interface command.

Internal Adapter Configuration Subsubmode

Prompt ID: (cfg-adap-*type n-m*)

To enter internal adapter configuration subsubmode from internal LAN interface configuration mode, use the **adapter** command. Use internal adapter configuration subsubmode to configure the link characteristics for the internal LAN adapter and name the internal LAN adapter. To configure an internal adapter interface, you must first use the **bridge-group** internal LAN configuration command or the **source-bridge** internal LAN configuration command to configure bridging type.

For details, see the **adapter** command documentation in the "Cisco Mainframe Channel Connection (CMCC) Commands" chapter in the "IBM Networking" part of the Release 12.1 *Cisco IOS Bridging and IBM Networking Command Reference, Volume II*.

Internal LAN Interface Configuration Submode

Prompt ID: (cfg-lan-*type n*)

To enter internal LAN configuration submode from interface configuration mode, use the **lan ethernet** command. Use the IBM channel internal LAN configuration mode to configure an internal LAN on a CIP interface and configure Cisco Systems Network Architecture (CSNA) parameters.

The following configuration subsubmode is accessible through internal LAN configuration submode:

- Internal Adapter Configuration Subsubmode

For details, see the "Configuring Cisco Systems Network Architecture (CSNA) and Cisco Multipath Channel (CMPC)" chapter in the "IBM Networking" part of the *Cisco IOS Bridging and IBM Networking Configuration Guide.*

IP Host Backup Submode

Prompt ID: (config-if-path)

To enter IP host backup configuration submode from interface configuration mode, use the **path** command. IP host backup submode is used to configure the IP host backup paths on an interface.

For details, see the descriptions of the **path**, **claw**, and **offload** commands in the "CLAW and TCP/IP Offload Commands" chapter in the "IBM Networking" part of the *Cisco IOS Bridging and IBM Networking Command Reference, Volume II*.

IPX-Router Configuration Mode

Prompt ID: (config-ipx-router)

To enter Novell Internet Packet Exchange (IPX) router configuration mode from global configuration mode, use the **ipx router** command. Use IPX router configuration mode to configure IPX routing characteristics, such as route distribution. Note that IPX must first be enabled using the **ipx routing** command.

For details, see the "Configuring Novell IPX" chapter in the *Cisco IOS AppleTalk and Novell IPX Configuration Guide.*

ISAKMP Policy Configuration Mode

Prompt ID: (config-isakmp)

To enter Internet Security Association and Key Management Protocol (ISAKMP) policy configuration mode from global configuration mode, use the **crypto isakmp policy** command. Use ISAKMP to define an Internet Key Exchange (IKE) policy (ISAKMP is a security protocol implemented by IKE). IKE policies define a set of parameters to be used during the IKE negotiation.

For details, see the "Configuring Internet Key Exchange Security Protocol" chapter of the "IP Security and Encryption" part of the *Cisco IOS Security Configuration Guide.*

Key-Chain Configuration Mode

Prompt ID: (config-keychain)

To enter key-chain configuration mode from global configuration mode, use the **keychain** command. Use key-chain configuration mode to configure authentication keys.

The following submode is accessible though key-chain configuration mode:

- Key-Chain Key Configuration Submode

For details, see the "Managing Authentication Keys" section in the "Configuring IP Routing Protocol-Independent Features" chapter of the *Cisco IOS IP and IP Routing Configuration Guide*.

Key-Chain Key Configuration Submode

Prompt ID: (config-keychain-key)

To enter key-chain key configuration submode from key-chain configuration mode, use the **key** command. Use key-chain key configuration mode to configure a specific authentication key in a key-chain.

For details, see the "IP Routing Protocol-Independent Commands" chapter in the "IP Routing Protocols" part of the *Cisco IOS IP and IP Routing Command Reference*.

LANE Database Configuration Mode

Prompt ID: (lane-config-dat) or (lane-config-datab)

To enter LAN Emulation (LANE) database configuration mode from global configuration mode, use the **lane database** command.

A LANE database contains entries that bind an emulated LAN name to the ATM address of the LANE server, bind LANE client MAC addresses to an emulated LAN name, and bind LANE client ATM address templates to an emulated LAN name.

Use LANE database configuration mode to create entries for a specified database using the **client-atm-address name**, **default name**, **mac-address name**, and **name server-atm-address** commands. When you are finished creating entries, type **^Z** or **exit** to return to global configuration mode.

For details, see the "Configuring LAN Emulation" chapter of the *Cisco IOS Switching Services Configuration Guide*.

Line Configuration Mode

Prompt ID: (config-line)

To enter line configuration mode from global configuration mode, use a form of the **line** command. Use line configuration mode to modify the operation of an auxiliary, console, physical, or virtual terminal line. Line configuration commands always follow a **line** command, which defines a line number. These commands are generally used to connect to remote routers or access servers, change terminal parameter settings either on a line-by-line basis or for a range of line, and set up the auxiliary port modem configuration to support dial-on-demand routing (DDR).

For details, see the chapters in the "Preparing for Dial Access" part and "Modem Configuration and Management" part of the *Cisco IOS Dial Services Configuration Guide: Terminal Services* publication.

MRM Manager Configuration Mode

Prompt ID: (config-mrm-manager)

To enter Multicast Routing Monitor (MRM) manager configuration mode from global configuration mode, use the **ip mrm manager** command. Use MRM manager configuration mode to configure a router interface to be a Manager for a MRM test. MRM manager configuration mode commands also configure beacon message characteristics, Test Sender parameters, and Test Receiver parameters.

For details, see the 12.0(5)T "Multicast Routing Monitor" Feature Module. For additional information, see the "Using IP Multicast Tools" chapter of the *Cisco IOS IP and IP Routing Configuration Guide.*

Map-Class Configuration Mode

Prompt ID: (config-map-clas) or (config-map-class)

To enter map-class configuration mode from global configuration mode, use the map-class. Use map-class configuration mode to configure parameters for Frame Relay, ATM, or Dialer encapsulation protocols.

The **map-class dialer** command allows you to specify different characteristics for different types of calls on a per-call-destination basis. For example, you can specify higher priority and a lower wait-for-carrier time for an ISDN-calls map class than for a modem-calls map class. You can also specify a different speed for some ISDN calls than for other ISDN calls. For details, see the chapters in the "Cost Control Solutions" part of the *Cisco IOS Dial Services Configuration Guide: Network Services* document.

The **map-class frame-relay** command allows you to specify parameters that control the traffic that the source router will send over a switched virtual circuit (SVC). For details, see the "Configuring Frame Relay" chapter of the *Cisco IOS Wide-Area Networking Configuration Guide.*

The **map-class atm** command allows you to execute specific ATM commands. For examples of ATM map-class configuration commands, see the "ATM Commands for the LightStream 1010 ATM Switch" chapter in the *LightStream 1010 ATM Switch Command Reference*.

Map-List Configuration Mode

Prompt ID: (config-map-list)

To enter map-list configuration mode from global configuration mode, use the **map-list** command. Use map-list configuration mode to define the protocol addresses and associate each protocol address with a specific map class.

For details, see the documents referenced above under "Map-Class Configuration Mode."

Modem Pool Configuration Mode

Prompt ID: (config-modem-pool)

To enter modem pool configuration mode from global configuration mode, use the **modem-pool** command. A modem pool is a group of modems inside an access server that are assigned a single dialed number identification service number (DNIS). Use modem pool configuration mode to create multiple pools of physical modems, assign unique DNIS numbers to each modem pool, and set maximum simultaneous connect limits.

For details, see the "Managing Modems" chapter in the *Cisco IOS Dial Services Configuration Guide: Terminal Services.*

MPOA Client (MPC) Configuration Mode

Prompt ID: (mpoa-client-config)

To enter Multiprotocol over ATM (MPOA) client (MPC) configuration mode from global configuration mode, use the **mpoa client config name** command. Use MPOA client configuration mode to optionally change MPOA client operating parameters.

For details, see the "Configuring the MPOA Client" chapter in the "LAN Emulation" section of the Release 12.1 *Cisco IOS Switching Services Configuration Guide.*

MPOA Server (MPS) Configuration Mode

Prompt ID: (mpoa-server-config)

To enter Multiprotocol over ATM server (MPS) configuration mode from global configuration mode, use the **mpoa server config name** command. Use MPOA server configuration mode to optionally change MPOA server operating parameters.

For details, see the "Configuring the MPOA Server" chapter in the "LAN Emulation" section of the Release 12.1 *Cisco IOS Switching Services Configuration Guide*.

Poll-Group Configuration Mode

See the "System Controller Poll-Group Configuration Mode" section on page 401.

Public-Key Chain Configuration Submode

Prompt ID: (config-pubkey-chain)

To enter public key chain configuration submode from global configuration mode, use the **crypto key pubkey-chain rsa** command. Use public key chain configuration submode to manually specify other IPSec peers' RSA or DSS public keys.

From public key chain configuration mode, you can enter the following submodes:

- Public-Key Key Configuration Submode
  - Public-Key Hex Input Configuration Subsubmode

For details, see the "Internet Key Exchange Security Protocol Commands" chapter in the "IP Security and Encryption" part of the *Cisco IOS Security Command Reference*.

Public-Key Key Configuration Submode

Prompt ID: (config-pubkey-key)

To enter public-key key configuration submode from public-key chain configuration mode, use the **addressed-key** or **named-key** public key chain configuration commands puts you into public key configuration mode. In this mode you can specify RSA or DSS public keys. The following subsubmode is accessible through public-key key configuration submode:

- Public-Key Hex Input Configuration Subsubmode

For details, see the "Internet Key Exchange Security Protocol Commands" chapter in the "IP Security and Encryption" part of the *Cisco IOS Security Command Reference*.

Public-Key Hex Input Configuration Subsubmode

Prompt ID: (config-pubkey)

To enter public-key hex input configuration subsubmode from public-key key configuration mode, use the **key-string** command. Use public-key hex input configuration subsubmode to manually specify a remote peer's RSA public key for an encrypting peer router. The public key data is entered in hexadecimal form, and it will take more than one command line to enter. To continue entering the public key data on a new line, press Return. When the public key hex data is completely entered, press Return to get a new line, then type **quit** to return to public-key key configuration mode.

For details, see the "Internet Key Exchange Security Protocol Commands" chapter in the "IP Security and Encryption" part of the *Cisco IOS Security Command Reference*.

RADIUS Server Group Configuration Mode

See the "Server Group RADIUS Configuration Mode" section on page 399.

RED Group Configuration Mode

Prompt ID: (config-red-group)

To enter Random Early Detection (RED) configuration mode from global configuration mode, use the **random-detect-group** command. Use RED configuration mode to define the Weighted Random Early Detection (WRED) parameter group. (Note that the **service-policy output** and **random-detect-group** commands are mutually exclusive; before you can configure one command, you must disable the other if it is configured.)

For details, see the "Configuring IP to ATM CoS" chapter in the "Quality of Service Solutions" part of the *Cisco IOS Quality of Service Solutions Configuration Guide*, and the **random-detect-group** command documentation in the Release 12.1 *Cisco IOS Quality of Service Solutions Command Reference*.

RLM Group Configuration Submode

Prompt ID: (config-rlm-group)

To enter Redundant Link Manager (RLM) group configuration submode from interface configuration mode, use the **rlm group** command. Use RLM group configuration mode to configure the RLM group (network access server).

The following configuration submode is accessible through RLM group configuration mode:

- RLM Device Configuration Subsubmode

For details, see the "Configuring Cisco SS7/C7 Dial Access Solutions" chapter in the "Telco Services" part of the *Cisco IOS Dial Services Configuration Guide: Network Services* book.

RLM Device Configuration Subsubmode

Prompt ID: (config-rlm-group-sc)

To enter Redundant Link Manager (RLM) device configuration subsubmode from RLM group configuration submode, use the **server** command. Use RLM device configuration mode to specify configuration options for the RLM network access server, such as link addresses and weighting preferences.

For details, see the "Configuring Cisco SS7/C7 Dial Access Solutions" chapter in the "Telco Services" part of the *Cisco IOS Dial Services Configuration Guide: Network Services* book.

Resource Group Configuration

Prompt ID: (config-resource-group)

To enter resource group configuration mode from global configuration mode, use the **resource-pool group** command. Use resource group configuration mode to associate a range of modems or other physical resources with a resource group for Resource Pool Management.

For details, see the "Configuring Resource Pool Management" chapter in the *Cisco IOS Dial Services Configuration Guide: Network Services*.

Route-Map Configuration Mode

Prompt ID: (config-route-map)

To enter route-map configuration mode from global configuration mode, use the **route-map** (IP) command. Use the route-map configuration mode to configure routing table source and destination information. For details, see the "Configuring IP Routing Protocol-Independent Features" chapter in the "IP Routing Protocols" part of the *Cisco IOS IP and IP Routing Configuration Guide*.

Router Configuration Mode

Prompt ID: (config-router)

Router configuration commands configure an IP routing protocol and always follow a **router** command.

The following submodes are accessible from router configuration mode:

- Address Family Configuration Submode

For details, see the relevant protocol chapter in the "IP Routing Protocols" part of the *Cisco IOS IP and IP Routing Configuration Guide*.

RTR Configuration Mode

Prompt ID: (config-rtr)

To enter RTR configuration mode from global configuration mode, use the **rtr** command. Use RTR configuration mode to configure Cisco Service Assurance Agent (SA Agent) operations for the measurement of response times and availability.

The following submode is accessible from RTR configuration mode:

- RTR HTTP Raw Configuration Submode

For details, see the "Network Monitoring Using Cisco Service Assurance Agent" chapter in the Release 12.1 *Cisco IOS Configuration Fundamentals Configuration Guide*.

RTR HTTP Raw Configuration Submode

Prompt ID: (config-rtr-http)

To enter RTR HTTP raw configuration submode from RTR configuration mode, use the **http-raw-request** command. Use RTR HTTP raw configuration submode to explicitly specify the parameters for an HTTP GET operation using HTTP 1.0 commands.

For details, see the "Network Monitoring Using Cisco Service Assurance Agent" chapter in the Release 12.1 *Cisco IOS Configuration Fundamentals Configuration Guide*.

Server Group RADIUS Configuration Mode

Prompt ID: (config-sg-radius)

To enter server group RADIUS configuration mode from global configuration mode, use the **aaa group server radius** command.

For details on the **aaa group server radius** command, see the "RADIUS Commands" chapter in the "Security Server Protocols" part of the *Cisco IOS Security Command Reference*. For additional information, see the corresponding chapter in the *Cisco IOS Security Configuration Guide*.

Server Group TACACS+ Configuration Mode

Prompt ID: (config-sg-tacacs+)

To enter server group RADIUS configuration mode from global configuration mode, use the **aaa group server tacacs+** command.

For details on the **aaa group server tacacs+** command, see the "TACACS+ Commands" chapter in the "Security Server Protocols" part of the *Cisco IOS Security Command Reference*. For additional information, see the corresponding chapter in the *Cisco IOS Security Configuration Guide*.

Service Profile Configuration

Prompt ID: (config-service-prof)

To enter service profile configuration mode from global configuration mode, use the resource-pool profile service command. Use service profile configuration mode to configure modem service parameters for devices used by the Resource Pool Manager (RPM).

For details, see the "Configuring Resource Pool Management" chapter in the *Cisco IOS Dial Services Configuration Guide: Network Services* document.

Standard Named Access List (NACL) Configuration Mode

Prompt ID: (config-std-nacl)

All IP and IPX access lists can be identified by a number. Alternatively, some IP and IPX access lists can be identified by a name. Use access-list configuration mode when you are creating a named IP or IPX access list.

For information on creating a named IP access list, see the "Configuring IP Services" chapter in the *Cisco IOS IP and IP Routing Configuration Guide*. For information on creating a named IPX access list, see the "Configuring Novell IPX" chapter in the *Cisco IOS AppleTalk and Novell IPX Configuration Guide*.

Subinterface Configuration Submode

Prompt ID: (config-subif)

To enter subinterface configuration mode from interface configuration mode, use an **interface** command. Use subinterface configuration mode to configure multiple virtual interfaces (called subinterfaces) on a single physical interface.

Subinterfaces appear to be distinct physical interfaces to the various protocols. For example, Frame Relay networks provide multiple point-to-point links called permanent virtual circuits (PVCs). PVCs can be grouped under separate subinterfaces that in turn are configured on a single physical interface. From a bridging spanning-tree viewpoint, each subinterface is a separate bridge port, and a frame arriving on one subinterface can be sent out on a another subinterface.

For details on how to configure subinterfaces, see the appropriate documentation module for a specific protocol in the Cisco IOS software documentation.

System Controller Poll-Group Configuration Mode

Prompt ID: (config-poll-gr)

To enter system controller poll-group configuration mode from global configuration mode, use the **syscon poll-group** command. Use system controller poll-group configuration mode to configure data collection for a specific poll group using a system controller. The poll-group configuration mode is required for Performance Data Collection, which allows a system controller to collect and store SNMP MIB data from its managed router and dial shelves.

For details, see the "System Management Using System Controllers" chapter in this book and the "System Controller Commands" chapter in the *Cisco IOS Configuration Fundamentals Command Reference*.

Time Range Configuration Mode

Prompt ID: (config-time-range)

To enter time range configuration mode from global configuration mode, use the **time-range** command. Use time range configuration mode to define a time range, which specifies specific times of the day and week. Apply the time range to a function that accepts time ranges to control when that function will occur. For example, you can apply time ranges to IP and IPX extended access lists.

The time range that you define can be referenced in IP extended access lists and IPX extended access lists.

TN3270 Server Configuration Mode

Prompt ID: (cfg-tn3270) or (tn3270-server)

The TN3270 server provides a set of configuration modes and submodes for configuring the TN3270 Server feature on a CMCC adapter. The TN3270 server is configured on the virtual interface of a CIP adapter, which is always port 2. The TN3270 server feature is always configured on port 0 of a CPA adapter.

Many of the TN3270 server commands can be entered in multiple command modes. The scope of the TN3270 server command is based upon where the command is entered in the hierarchy of the TN3270 server configuration modes and submodes.

The following configuration submodes are available to configure the TN3270 server:

- TN3270 DLUR configuration mode
- TN3270 DLUR SAP configuration mode
- TN3270 DLUR PU configuration mode
- TN3270 Listen-point configuration mode
- TN3270 Listen-point PU configuration mode
- TN3270 server Response-time configuration mode
- TN3270 PU configuration submode

For details, see the "Configuring the TN3270 Server" chapter of the *Cisco IOS Bridging and IBM Networking Configuration Guide* and the "TN3270 Server Commands" chapter of the *Cisco IOS Bridging and IBM Networking Command Reference, Volume II*.

Virtual Circuit (VC) Class Configuration Submode

Prompt ID: (config-vc-class) or (config-if-vc-class)

To enter VC class configuration submode from interface configuration mode or subinterface configuration mode, use the **vc-class atm** command.

Use VC class configuration mode to configure a set of VC parameters that will apply to an ATM main interface, subinterface, PVC, or SVC. For example, you can create a VC class that contains VC parameter configurations that you will apply to a particular PVC or SVC. You might create another VC class that contains VC parameter configurations that you will apply to all VCs configured on a particular ATM main interface or subinterface. The command mode is related to the Interface ATM VC Configuration Submode and the ATM Bundle Configuration Subsubmode.

For details, see the Cisco IOS Release 12.0(3)T Feature Module titled "IP to ATM Class of Service."

For additional information, see the "Configuring ATM" chapter of the Release 12.1 *Cisco IOS Wide-Area Networking Configuration Guide* and the **vc-class atm** command documentation in the "ATM Commands" chapter of the Release 12.1 *Cisco IOS Wide-Area Networking Command Reference*.

Voice-Port Configuration Mode

Prompt ID: (config-voiceport)

To enter voice-port configuration mode from global configuration mode, use the **voice-port** command. Use voice-port configuration mode to configure voice port settings for voice over ATM, voice over Frame Relay, and other related protocols.

For details, see the **voice-port** command description in the *Cisco IOS Multiservice Applications Command Reference*.

VoIP Dial Peer Configuration Mode

See the "Dial Peer Voice Configuration Mode" section on page 390.

VPDN Group Mode and Submodes

Prompt ID: (config-vpdn)

The VPDN group configuration mode is used to configure VPDN services on Cisco routers. To enter VPDN group configuration mode, first enable VPDN by using the **vpdn enable** command, and then use the **vpdn-group** *number* command. In VPDN group configuration mode, you can configure generic information for the entire VPDN group. You can also enter the VPDN subgroups, and configure specific information for the VPDN services. Each of the four VPDN services now have VPDN subgroups.

See the "Configuring Virtual Private Networks" chapter in the *Cisco IOS Dial Services Configuration Guide: Network Services* for information on the following VPDN group configuration submodes:

- VPDN Accept-dialin group configuration submode (config-vpdn-acc-in)
- VPDN Accept-dialout group configuration submode (config-vpdn-acc-ou)
- VPDN Request-dialin group configuration submode (config-vpdn-req-in)
- VPDN Request-dialout group configuration submode (config-vpdn-req-ou)

X.25 Profile Configuration Mode

Prompt ID: (config-x25)

To enter X.25 configuration mode from global configuration mode, use the **x25 profile** command. X.25 profiles streamline X.25 and LAPB configuration. X.25 profiles can contain existing X.25 and LAPB commands and, once created and named, can be simultaneously associated with more than one DLCI connection, using just the profile name. X.25 Layers 2 and 3 are transparently supported over Annex G. LAPB treats the Frame Relay network like an X.25 network link and passes all of the data and control messages over the Frame Relay network.

For details, see the **x25 profile** command documentation in the *Cisco IOS Wide-Area Networking Configuration Guide* and the *Cisco IOS Wide-Area Networking Command Reference* for more information.

Configuration Modes Summary Table

Table 22 lists the configuration modes available using the Cisco IOS CLI. The availability of any particular mode will depend on the features in your system software image and which platform you are using. For example, some configuration modes are specifically for configuring access servers, and will not be available on most routers.

Configuration modes are listed alphabetically by router prompt. Configuration submodes are listed under the configuration mode they are accessed from.

Unless otherwise indicated, the **exit** command will bring you back to the mode you were in before you entered the current mode. For example, using the **exit** command in *subinterface configuration submode* will bring you back to *interface configuration mode*, using the **exit** command in *interface configuration mode* will bring you back to *global configuration mode*, and using the **exit** command in *global configuration mode* will bring you back to *privileged EXEC mode*.

The prompts listed assume that the default device name of “Router” is in use.

Table 22 Configuration Mode and Configuration Submode Summaries

Prompt	Command Mode Name	Access Method	Example
`Router(ca-identity)#`	CA-identity configuration mode	From global configuration mode, use the **crypto ca identity** command.	`Router(config)# crypto ca identity` `Router(ca-identity)#`
`Router(config-alps-ascu)#`	See Interface configuration mode (below).		

`Router(config-alps-cir)#`
or
`Router(config-alps-circ)#`
or
`Router(config-alps-circuit)#`
	Airline Product Set (ALPS) circuit configuration mode	From global configuration mode, use the **alps circuit** command.	`Router(config)# alps circuit CKT_NAME`
			`Router(config-alps-circuit)#`

Table 22 Configuration Mode and Configuration Submode Summaries (continued)

Prompt	Command Mode Name	Access Method	Example
`Router(config-called-group)#`	DNIS group configuration mode	From global configuration mode, use the **dialer dnis group** command.	`Router(config)# dialer dnis group dnis_isp_1` `Router(config-called-group)# number 1234`
`Router(config-casa)#`	CASA configuration mode	From global configuration mode, use the **ip casa** command.	`Router(config)# ip casa 10.10.4.1 224.0.1.2` `Router(config-casa)#`
`Router(config-cert-chain)#`	Certificate chain configuration mode	From global configuration mode, use the **crypto ca certificate** chain command.	`Router(config)# crypto ca certificate` `Router(config-cert-chain)#`
`Router(config-controller)#`	Controller configuration mode	From global configuration mode, use the **controller** command.	`Router(config)# controller t1 0/0` `Router(config-controller)#`
`Router(config-ctrl-cas)#`	CAS custom configuration submode	From controller configuration mode, use the **cas-custom** command.	`Router(config-controller)# cas-custom 1` `Router(config-ctrl-cas)#`
`Router(config-customer-profile)#`	Customer profile configuration mode	From global configuration mode, use the **resource-pool profile customer** command.	`Router(config)# resource-pool profile customer isp_1` `Router(config-customer-pro)#`
`Router(config-crypto-map)#`	Crypto map configuration mode	From global configuration mode, use the **crypto map** command.	`Router(config)# crypto map Research 10` `Router(config-crypto-map)#`
`Router(config-crypto-trans)#`	Crypto transform configuration mode	From global configuration mode, use the **crypto ipsec transform-set** command.	`Router(config)#crypto ipsec transform-set` `Router(config-crypto-trans)#`
`Router(config-dhcp)#`	DHCP pool configuration mode	From global configuration mode, use the **ip dhcp pool** command.	`Router(config)# ip dhcp pool pname1` `Router(config-dhcp)#`
`Router(config-dialpeer)#`	Dial peer voice configuration mode	From global configuration mode, use the **dial peer voice** command.	`Router(config)# dial peer voice 1 pots` `Router(config-dialpeer)#`

Table 22 Configuration Mode and Configuration Submode Summaries (continued)

Prompt	Command Mode Name	Access Method	Example
`Router(config-ext-nacl)#`	Extended named access list configuration mode	From global configuration mode, use the **ip access-list** or **ipx access-list** command.	`Router(config)# ip access-list extended flag` `Router(config-ext-nacl)#`

`Router(config-fr-dlci)#`	Frame Relay DLCI configuration mode	From interface configuration mode, use the **frame-relay interface-dlci [switched]** command.	`Router(config)# interface serial 1/1`
			`Router(config-if)# frame-relay interface-dlci 100`
			`Router(config-fr-dlci)# vofr`
			`Router(config-fr-dlci)#`

`Router(config-gateway)#`	Gateway configuration mode	From global configuration mode, use the **gateway** command.	`Router(config )# gateway` `Router(config-gateway)#`
`Router(config-gk)#`	Gatekeeper configuration mode	From global configuration mode, use the **gatekeeper** command.	`Router(config)# gatekeeper` `Router(config-gk)#`
`Router(config-hub)#`	Hub configuration mode	From global configuration mode, use **hub** command.	`Router(config)#hub ethernet 0 1 3` `Router(config-hub)#`
`Router(config-if)#`	Interface configuration mode	From global configuration mode, enter by specifying an interface with an **interface** command.	`Router(config)# interface serial 2` `Router(config-if)#`
`Router(config-alps-ascu)#`	ALPS ASCU configuration submode	From interface configuration mode, use the **alps ascu** command.	`Router(config-if)# alps ascu 4B` `Router(config-alps-ascu)#`

`Router(config-if-atm-vc)#`	Interface ATM-VC configuration submode	From interface configuration mode, use the **pvc** or **svc nsap** command.	`Router(config-if)# pvc 0/33`
			`Router(config-if-atm-vc)#`
			or
			`Router(config-if)# svc nsap AB.CDEF.01.234567.890A.BCDE.F012.3456.7890.1234.12`
			`Router(config-if-atm-vc)#`

`Router(atm-bundle-config)#`	Interface ATM bundle configuration submode	From interface or subinterface configuration mode, use the **bundle** command.	`Router(config-subif)# bundle newyork` `Router(config-atm-bundle)#`

Table 22 Configuration Mode and Configuration Submode Summaries (continued)

Prompt	Command Mode Name	Access Method	Example
Router(config-if-atm-member)#	• Interface ATM bundle-member configuration subsubmode	From ATM bundle configuration submode, use the **pvc-bundle** command.	Router(config-if)# **bundle chicago** Router(config-atm-bundle)# **pvc-bundle chicago-control 207** Router(config-if-atm-member)# **class control-class** Router(config-atm-bundle)# **pvc-bundle chicago-premium 206** Router(config-if-atm-member)# **class premium-class**
Router(config-if-path)#	IP host backup configuration submode	From interface configuration mode, use the **path** command.	Router(config)# **interface channel 3/1** Router(config-if)# **ip address 198.92.5.1 255.255.255.128** Router(config-if)# **path c010 c110 c210** Router(config-if-path)# **claw 30 198.92.5.2 lpar1 cip1 tcpip tcpip** . . .
Router(config-rlm-group)#	RLM group configuration submode	From interface configuration mode, use the **rlm group** command.	Router(config-if)# **rlm group 1** Router(config-rlm-group)#
Router(config-rlm-group-sc)#	• RLM device configuration subsubmode	From RLM group configuration mode, use the **server** command.	Router(config-rlm-group)# **server rl-server** Router(config-rlm-group-sc)#
Router(config-subif)#	Subinterface configuration submode	From interface configuration mode, specify a subinterface with an **interface** command.	Router(config-if)# **interface serial 2.1** Router(config-subif)#
Router(cfg-lan-*type n*)#	Internal LAN configuration submode	From interface configuration mode, use the **lan** command. In the router prompt syntax, *type* is the specified internal LAN type and *n* is the specified lan-id.	Router(config-if)# **lan ethernet 10** Router(cfg-lan-Ether 10)#

Table 22 Configuration Mode and Configuration Submode Summaries (continued)

Prompt	Command Mode Name	Access Method	Example
Router(cfg-adap-*type n-m*)#	• Internal adapter configuration subsubmode	From internal LAN configuration mode, enter the **adapter** command. In the router prompt syntax, *type* is the specified internal LAN type, *n* is the specified lan-id, and *m* is the adapter number.	Router(config)# **lan ethernet 10** Router(cfg-lan-Ether 10)# **adapter 1 4.5.6** Router(cfg-adap-Ether 10-1)#
Router(config-vc-class)#	Virtual Circuit (VC) class configuration submode	From interface configuration mode or subinterface configuration submode, use the **vc-class atm** command.	Router(config-if)# **vc-class atm pvc1** Router(config-vc-class)#
Router(config-ipx-router)#	IPX-router configuration mode	From global configuration mode, use the **ipx router** command. (IPX must first be enabled using the **ipx routing** command.)	Router(config)# **ipx routing** Router(config)# **ipx router rip** Router(config-ipx-router)#
Router(config-isakmp)#	ISAKMP policy configuration mode	From global configuration mode, use the **crypto isakmp policy** command.	Router(config)# **crypto isakmp policy** Router(config-isakmp)#
Router(config-keychain)#	Keychain configuration mode	From global configuration mode, use the **keychain** command.	Router(config)# **keychain blue** Router(config-keychain)#
Router(config-keychain-key)#	Keychain key configuration submode	From keychain configuration mode, use the **key** command.	Router(config-keychain)# **key 10** Router(config-keychain-key)#
Router(config-line)#	Line configuration mode	From global configuration mode, enter by specifying a line with a **line** {**aux** | **con** | **tty** | **vty**} *line-number* [*ending-line-number*] command.	Router(config)# **line vty 0 4** Router(config-line)#
Router(config-mrm-manager)#	MRM Manager configuration mode	From global configuration mode, use the **ip mrm manager** command.	Router(config)#**ip mrm manager test1** Router(config-mrm-manager)#

Table 22 Configuration Mode and Configuration Submode Summaries (continued)

Prompt	Command Mode Name	Access Method	Example
`Router(config-map-class)#`	Map-class configuration	From global configuration mode, use the **map-class** *encapsulation class-name* command.	`Router(config)# map-class atm aaa` `Router(config-map-class)#`
`Router(config-map-list)#`	Map-list configuration	From global configuration mode, use the **map-list** *name* command.	`Router(config)# map-list atm` `Router(config-map-list)#`

`Router(config-modem-pool)#`	Modem pool configuration	From global configuration mode, use the **modem-pool** *name* command.	`Router(config)# modem-pool v90service`
			`Router(config-modem-pool)# pool-range 30-50`
			`Router(config-modem-pool)# called-number 2000`
			`Router(config-modem-pool)# exit`
			`Router(config)#`

`Router(config-mpoa-client)`
See
`Router(mpoa-client-config)#`
	See MPOA Client configuration mode (below)		

`Router(config-mpoa-server)`
See
`Router(mpoa-server-config)#`
	See MPOA Server configuration mode (below)		

`Router(config-poll-gr)#`	System controller poll-group configuration mode	From global configuration mode, enter poll-group configuration mode with the **syscon poll-group** command.	`Router(config)# syscon poll-group cmlineinfo` `Router(config-poll-gr)#`
`Router(config-pubkey-chain)#`	Public-key chain configuration mode	From global configuration mode, use the **crypto key pubkey-chain {dss | rsa}** command.	`Router(config)# crypto key pubkey-chain rsa` `Router(config-pubkey-chain)#`
`Router(config-pubkey-key)#`	Public-key key configuration submode	From public-key chain configuration mode, use the **addressed-key** command or **named-key** command .	`Router(config-pubkey-chain)# named-key otherpeer.domain.com` `Router(config-pubkey-key)#`

`Router(config-pubkey)#`	• Public-key hex input configuration subsubmode	From public-key key configuration mode, use the **key-string** command.	`Router(config-pubkey-key)# address 10.5.5.1`
			`Router(config-pubkey-key)# key-string 005C300D 06092A86`
			`Router(config-pubkey)# 4886F70D 01010105`
			`. . .`

Table 22 Configuration Mode and Configuration Submode Summaries (continued)

Prompt	Command Mode Name	Access Method	Example
`Router(config-red-group)#`	Random Early Detection (RED) group configuration mode	From global configuration mode, use the **random-detect-group** command.	`Router(config)#` **`random-detect-group sanjose`** `Router(config-red-group)#`
`Router(config-resource-group)#`	Resource group configuration mode	From global configuration mode, use the **resource-pool group resource** command.	`Router(config)#` **`resource-pool group resource hdlc1`** `Router(config-resource-group)#` **`range limit 48`**
`Router(config-route-map)#`	Route-map configuration mode	From global configuration mode, enter by specifying the **route-map** [*map-tag*] command.	`Router(config)#` **`route-map arizona`** `Router(config-route-map)#`
`Router(config-router)#`	Router configuration mode	From global configuration mode, enter by issuing the **router** [*keyword*] command (such as **router igrp)**.	`Router(config)#` **`router rip`** `Router(config-router)#`
`Router(config-router-af)#`	Address family configuration submode	From router configuration mode, use the **address-family** command. To exit, use the **exit-address-family** command.	`Router(config)#` **`router bgp 100`** `Router(config-router)#` **`address-family vpnv4`** `Router(config-router-af)#`
`Router(config-rtr)#`	RTR (SA Agent) configuration mode	From global configuration mode, use the **rtr** *number* command.	`Router(config)#` **`rtr 1`** `Router(config-rtr)#`
`Router(config-rtr-http)#`	RTR HTTP raw configuration submode	From RTR configuration mode, use the **http-raw-request** command.	`Router(config-rtr)#` **`type http operation raw url http://www.cisco.com`** `Router(config-rtr)#` **`http-raw-request`** `Router(config-rtr-http)#` **`GET /index.html HTTP/1.0\r\n`** `Router(config-rtr-http)#` **`\r\n`** `Router(config-rtr-http)#` **`exit`** `Router(config-rtr)#`
`Router(config-service-prof)#`	Service profile configuration mode	From global configuration mode, use the **resource-pool profile service** command.	`Router(config)#` **`resource-pool profile service user1sample`** `Router(config-service-prof)#`

Table 22 Configuration Mode and Configuration Submode Summaries (continued)

Prompt	Command Mode Name	Access Method	Example

`Router(config-sg)#`
or
`Router(config-sg-radius)#`
	Server group RADIUS configuration mode	From global configuration mode or interface configuration mode, use the **aaa group server radius** command.	`Router(config-if )# aaa group server radius sg1`
			`Router(config-sg-radius)#`

`Router(config-sg)#`
or
`Router(config-sg-tacacs)#`
	Server group TACACS configuration mode	From global configuration mode or interface configuration mode, use the **aaa group server tacacs+** command.	`Router(config-if )# aaa group server tacacs+ sg1`
			`Router(config-sg-tacacs+)#`

`Router(config-std-nacl)#`	Standard access-list configuration mode	From global configuration mode, use the **ip access-list** or **ipx access-list** command.	`Router(config)#ip access-list standard Internetfilter`
			`Router(config-std-nacl)#permit 192.5.34.0 0.0.0.255`
			`Router(config-std-nacl)#permit 128.88.0.0 0.0.255.255`
			`Router(config-std-nacl)#exit`
			`Router(config)#`

`Router(config-time-range)#`	Time-range configuration mode	From global configuration mode, use the **time-range** *time-range-name* command.	`Router(config)# time-range no-http` `Router(config-time-range)#`

`Router(cfg-tn3270)#`
or
`Router(tn3270-server)#`
	TN3270 server configuration mode	From global configuration mode, use the **tn3270-server** command.	`Router(config)# tn3270-server`
			`Router(cfg-tn3270)#`

`Router(tn3270-dlur)#`	TN3270 DLUR configuration submode	From TN3270 configuration mode, use the **dlur** command.
		To exit to TN3270 configuration mode, use the **exit** command.
			`Router(config)# tn3270-server`
			`Router(tn3270-server)# dlur`
			`Router(tn3270-dlur)#`

`Router(tn3270-dlur-lsap)#`	• TN3270 DLUR SAP configuration subsubmode	From DLUR configuration submode, use the **lsap** command.	`Router(config)# tn3270-server`
			`Router(tn3270-server)# dlur`
			`Router(tn3270-dlur)# lsap`
			`Router(tn3270-dlur-lsap)#`

`Router(tn3270-dlur-pu)#`	• TN3270 DLUR PU configuration subsubmode	From DLUR configuration submode, use the **pu** (DLUR) command.	`Router(tn3270-dlur)#pu P0 05D99001 192.195.80.40` `Router(tn3270-dlur-pu)#`

Table 22 Configuration Mode and Configuration Submode Summaries (continued)

Prompt	Command Mode Name	Access Method	Example
`Router(tn3270-lpoint)#`	TN3270 listen-point configuration submode	From TN3270 server configuration mode, use the **listen-point** command.	`Router (cfg-tn3270)#` **`listen-point`** `Router (tn3270-lpoint)#`
`Router(tn3270-lpoint-pu)#`	• TN3270 listen-point PU configuration subsubmode	From TN3270 listen-point configuration mode, use the **pu** (listen-point) command or **pu dlur** command.	`Router(tn3270-lpoint)#` **`pu PU1 94223456 tok 1 08`** `Router(tn3270-lpoint-pu)#` or `Router(tn3270-lpoint)#` **`pu P0 05D99001 dlur`** `Router(tn3270-lpoint-pu)#`
`Router(tn3270-pu)#`	TN3270 PU configuration submode	From TN3270 server configuration mode, use the **pu** (tn3270) command.	`Router(config)#` **`tn3270-server`** `Router(cfg-tn3270)#` **`pu PU1 05d00001 10.0.0.1 token-adapter 1 8 rmac 4000.0000.0001 rsap 4`** `Router(tn3270-pu)#`
`Router(tn3270-resp-time)#`	TN3270 Response-time configuration submode	From TN3270 server configuration mode, use the **response-time group** command.	`Router(cfg-tn3270)#` **`response-time group MYSUBNET bucket boundaries 15 25 60 120 multiplier 35`** `Router(tn3270-resp-time)#`
`Router(config-vc-class)#`	See Interface configuration mode (above).		
`Router(config-voiceport)#`	Voice-port configuration mode	From global configuration mode, enter by issuing the **voice port** *slot/sub-unit/port* command for the Cisco 3600 series, or **voice port** *slot/port* for the Cisco MC3810.	`Router(config)#` **`voice port 1/1/2`** `Router(config-voiceport)#`
`Router(config-vpdn)#`	VPDN group configuration mode	From global configuration mode, use the **vpdn-group** *number* command.	`Router(config)#` **`vpdn-group 1`** `Router(config-vpdn)#`
`Router(config-vpdn-acc-in)#`	VPDN Accept-dialin configuration submode	From VPDN group mode, use the **accept-dialin** command.	`Router(config-vpdn)#` **`accept-dialin`** `Router(config-vpdn-acc-in)#`
`Router(config-vpdn-acc-ou)#`	VPDN Accept-dialout configuration submode	From VPDN group mode, use the **accept-dialout** command.	`Router(config-vpdn)#` **`accept-dialout`** `Router(config-vpdn-acc-ou)#`

Table 22 Configuration Mode and Configuration Submode Summaries (continued)

Prompt	Command Mode Name	Access Method	Example
`Router(config-vpdn-req-in)#`	VPDN Request-dialin configuration submode	From VPDN group mode, use the **request-dialin** command.	`Router(config-vpdn)#` **`request-dialin`** `Router(config-vpdn-req-in)#`
`Router(config-vpdn-req-ou)#`	VPDN Request-dialout configuration submode	From VPDN group mode, use the **request-dialout** command.	`Router(config-vpdn)#` **`request-dialout`** `Router(config-vpdn-req-ou)#`
`Router(config-x25)#`	X.25 profile configuration mode	From global configuration mode, use the **x25 profile** command.	`Router(config)#` **`x25 profile NetworkNodeA dce`** `Router(config-x25)#` **`x25 htc 128`**
`Router(lane-config-datab)#`	LAN Emulation (LANE) database configuration mode	From global configuration mode, use the **lane database** command.	`Router(config)#` **`lane database red`** `Router(lane-config-datab)#`
`Router(mpoa-client-config)#`	MPOA Client (MPC) configuration mode	From global configuration mode, use the **mpoa client config name** command.	`Router(config)#` **`mpoa client config name ip_mpc`** `Router(mpoa-client-config)#`
`Router(mpoa-server-config)#`	MPOA Server (MPS) configuration	From global configuration mode, use the **mpoa server config name** command.	`Router(config)#` **`mpoa server config name ip_mps`** `Router(mpoa-server-config)#`