

CISCO IOS

Internetwork Operating
System

Security

Routing

QoS

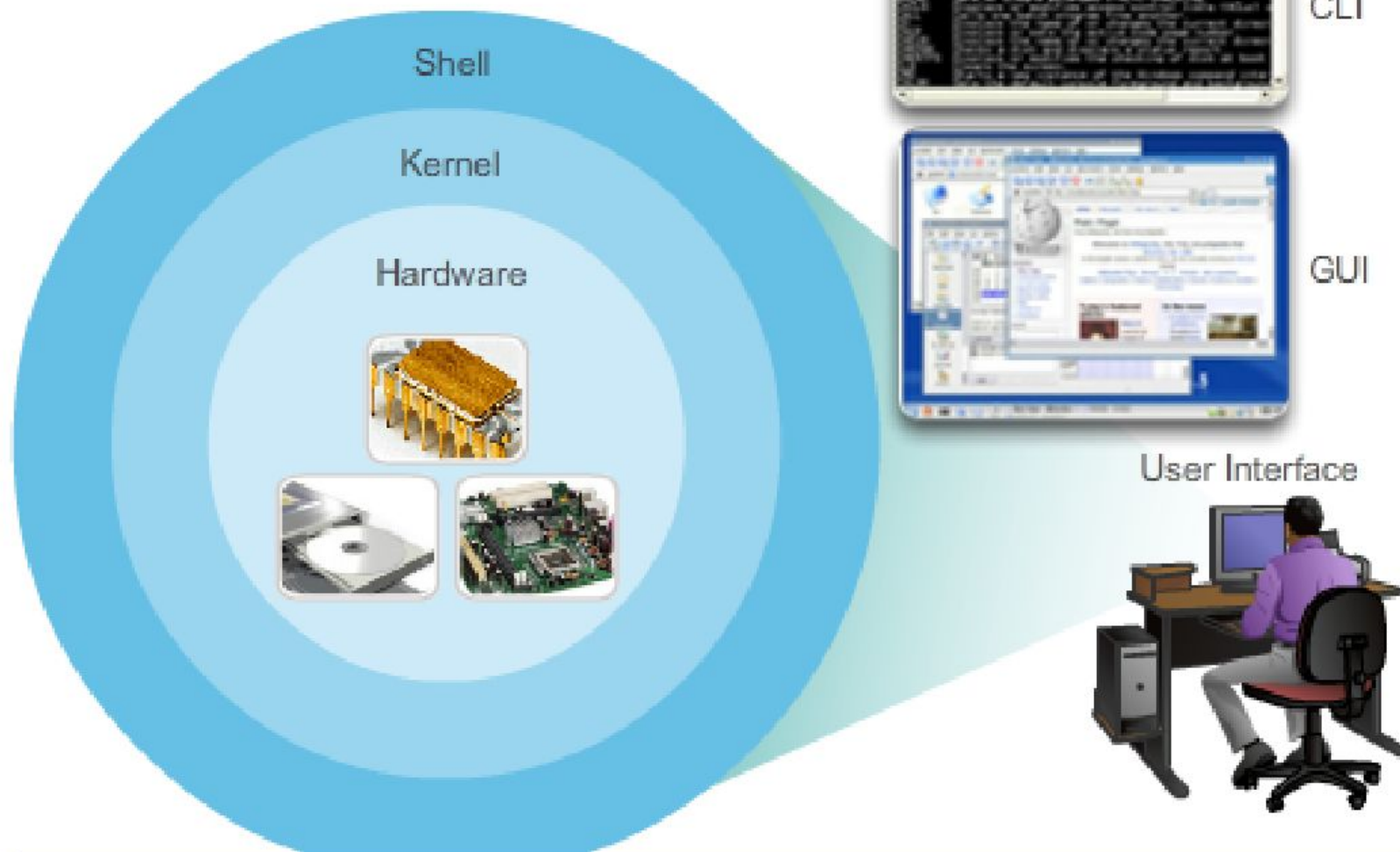


Addressing

Managing Resources

Interface

Operating System



Shell: The user interface that allows users to request specific tasks from the computer. These requests can be made either through the CLI or GUI interfaces.



Console Port

There are several ways to access the CLI environment. The most common methods are:

- Console
- Telnet or SSH
- AUX port



The image shows the rear panel of a Cisco 1941 Series router. The panel is silver and features the Cisco logo on the left. On the right side, the text "Cisco 1941 Series" is visible. The panel includes a power jack, a power button, a power supply fan, and various ports including Ethernet, USB, and FireWire. A red box highlights the Ethernet port labeled "Ethernet 0/0".

Category:

- Session
 - Logging
- Terminal
 - Keyboard
 - Bell
 - Features
- Window
 - Appearance
 - Behaviour
 - Translation
 - Selection
 - Colours
- Connection
 - Data
 - Proxy
 - Telnet
 - Rlogin
 - SSH**
 - Serial

Basic options for your PuTTY session

Specify the destination you want to connect to

Host Name (or IP address) Port

Connection type:

☐ Raw
 ☐ Telnet
 ☐ Rlogin
 ☒ SSH
 ☐ Serial

Load, save or delete a stored session

Saved Sessions

Close window on exit:

☐ Always
 ☐ Never
 ☒ Only on clean exit

IOS Иерархическая структура режимов

User EXEC Command-Router>

ping
show (limited)
enable
etc.

Privileged EXEC Commands-Router#

all User EXEC commands
debug commands
reload
configure
etc.

Global Configuration Commands-Router(config)#

hostname
enable secret
ip route

interface ethernet
serial
dsl
etc.

Interface Commands-Router(config-if)#

ip address
ipv6 address
encapsulation
shutdown/no shutdown
etc.

router rip
ospf
eigrp
etc.

Routing Engine Commands-Router(config-router)#

network
version
auto summary
etc.

line vty
console
etc.

Line Commands-Router(config-line)#

password
login
modem commands
etc.

Пользовательский и привилегированный режимы

User EXEC Mode

Limited examination of router.
Remote access.

```
Switch>  
Router>
```

The **User EXEC** mode allows only a limited number of basic monitoring commands and is often referred to as view-only mode.

The **Privileged EXEC** mode, by default, allows all monitoring commands, as well as execution of configuration and management commands.

Privileged EXEC Mode

Detailed examination of router. Debugging and testing. File manipulation. Remote access.

```
Switch#  
Router#
```


Режимы конфигурации

Privileged EXEC Mode

Privileged EXEC Mode

Detailed examination of router, Debugging and testing. File manipulation. Remote access.

Switch#

Router#



Global Configuration Mode

Global configuration commands.

Switch(config)#

Router(config)#



Other Configuration Modes

Specific service or interface configurations.

Switch(config-mode)#

Router(config-mode)#

Режимы глобальной и частной конфигурации

IOS Prompt Structure

```
Router>ping 192.168.10.5
```

```
Router#show running-config
```

```
Router (config) #Interface FastEthernet 0/0
```

```
Router (config-if) #ip address 192.168.10.1 255.255.255.0
```

The prompt changes to denote the current CLI mode.

```
Switch>ping 192.168.10.9
```

```
Switch#show running-config
```

```
Switch (config) #Interface FastEthernet 0/1
```

```
Switch (config-if) #Description connection to WEST LAN4
```

Переключение между режимами (Switch)

Switch con0 is now available.

Press RETURN to get started.

User Access Verification

Password:

Switch>

User EXEC Mode Prompt

Switch>**enable**

Password:

Switch#

Privileged EXEC Mode Prompt

Switch#**disable**

Switch>

User EXEC Mode Prompt

Switch>**exit**

Переключение между режимами (Router)

Router con0 is now available.

Press RETURN to get started.

User Access Verification

Password:

Router>

User EXEC Mode Prompt

Router>**enable**

Password:

Router#

Privileged EXEC Mode Prompt

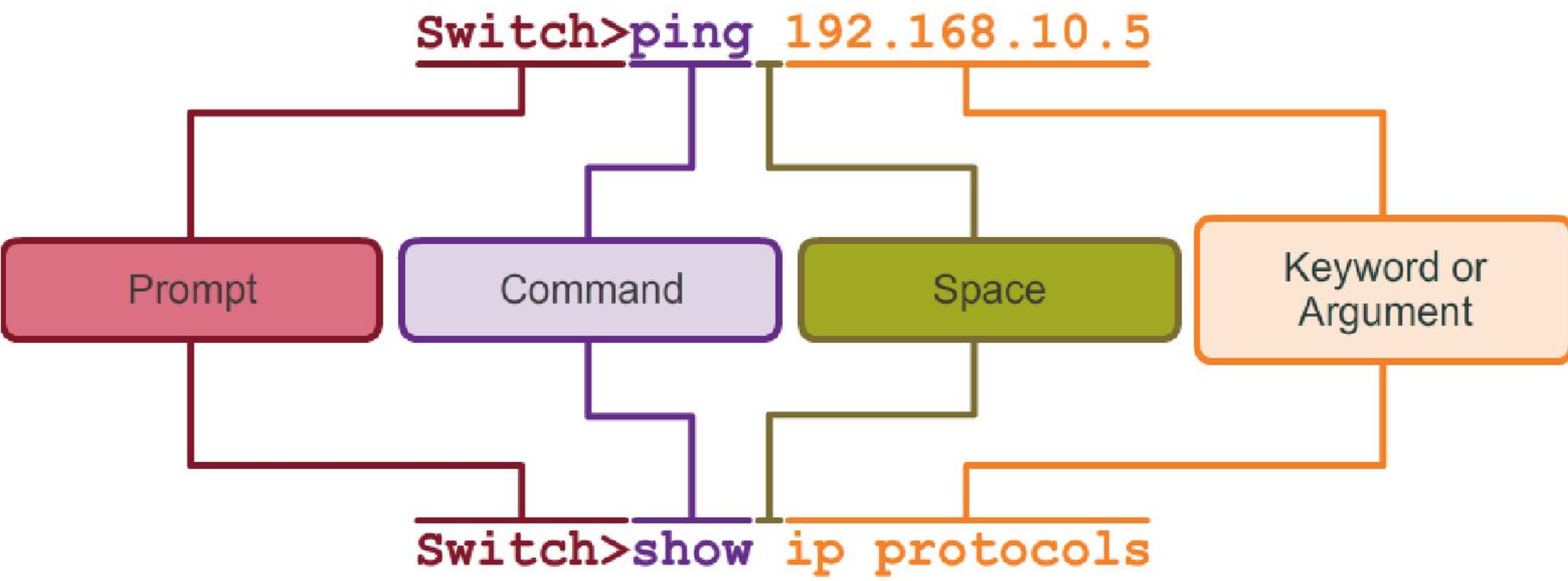
Router#**disable**

Router>

User EXEC Mode Prompt

Router>**exit**

Структура команды IOS



Контекстная помощь

```
Switch#cl?  
clear  clock
```

Command options -
display a list of commands
or keywords that start with
the characters **cl**

```
Switch#clock set ?  
hh:mm:ss  Current Time
```

Command explanation -
the IOS displays what
command arguments or
variables can be next, and
provides an explanation of
each

```
Switch#clock set 19:50:00 ?  
<1-31>  Day of the month  
MONTH   Month of the year
```

Command explanation
with more than one
argument or variable option

```
Switch#clock set 19:50:00 25 June 2012  
Switch#
```


Команды проверки конфигурации

