

ROUTER 0

```
Router>
Router>en
Router#config t
Router(config)#hostname Router0
Router0(config)#int fa0/0
Router0(config-if)#ip address 192.168.1.1 255.255.255.0
Router0(config-if)#no shut
Router0(config-if)#exit
Router0(config)#int s0/0/0
Router0(config-if)#ip address 10.0.0.1 255.255.255.252
Router0(config-if)#clock rate 64000
Router0(config-if)#no shut
Router0(config-if)#exit
Router0(config)#ip route 192.168.2.0 255.255.255.0 10.0.0.2
Router0(config)#exit
Router0#write
Building configuration...
[OK]
Router0#
```

The screenshot shows the Cisco IOS Command Line Interface (CLI) running on a device named 'Router0'. The interface has tabs at the top: Physical, Config, CLI (which is selected), and Attributes. Below the tabs is a status bar indicating '245850K Bytes of RAM System CompactFlash 0 (Read/Write)'. The main window displays the configuration commands entered by the user. The configuration starts with 'Router#config t' to enter global configuration mode, followed by setting the hostname to 'Router0'. It then configures interface 'fa0/0' with IP address '192.168.1.1' and subnet mask '255.255.255.0', and enables it with 'no shut'. It also configures interface 's0/0/0' with IP address '10.0.0.1' and subnet mask '255.255.255.252', and enables it with 'no shut'. A route is then added from '192.168.2.0' to '10.0.0.2'. Finally, the configuration is saved with 'Router#write'.

```
Router0
Physical Config CLI Attributes
IOS Command Line Interface
245850K Bytes of RAM System CompactFlash 0 (Read/Write)

--- System Configuration Dialog ---
Would you like to enter the initial configuration dialog? [yes/no]:
Press RETURN to get started!

Router>
Router>en
Router#config t
Router(config)#hostname Router0
Router0(config)#int fa0/0
Router0(config-if)#ip address 192.168.1.1 255.255.255.0
Router0(config-if)#no shut

Router0(config-if)#exit
Router0(config)#int s0/0/0
Router0(config-if)#ip address 10.0.0.1 255.255.255.252
Router0(config-if)#clock rate 64000(only on DCE side)
Router0(config-if)#no shut

% Invalid input detected at '^' marker.

Router0(config-if)#clock rate 64000
This command applies only to DCE interfaces
Router0(config-if)#no shut

%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router0(config-if)#exit
Router0(config)#int s0/0/0
Router0(config-if)#ip address 10.0.0.1 255.255.255.252
Router0(config-if)#clock rate 64000(only on DCE side)
Router0(config-if)#no shut

% Invalid input detected at '^' marker.

Router0(config-if)#clock rate 64000
This command applies only to DCE interfaces
Router0(config-if)#no shut

%LINK-5-CHANGED: Interface Serial0/0/0, changed state to down
Router0(config-if)#exit
Router0(config)#ip route 192.168.2.0 255.255.0 10.0.0.2
Router0(config)#no shut

% Invalid input detected at '^' marker.

Router0(config)#ip route 192.168.2.0 255.255.255.0 10.0.0.2
Router0(config)#exit
Router0#
%SYS-5-CONFIG_I: Configured from console by console

Router0#write
Building configuration...
[OK]
Router0#
```

Copy Paste

ROUTER 1

```
Router>en
Router#config t
Router(config)#hostname Router1
Router1(config)#int f0/0
Router1(config-if)#ip address 192.168.2.1 255.255.255.0
Router1(config-if)#no shut
Router1(config-if)#int s0/0/1
Router1(config-if)#ip address 10.0.0.2 255.255.255.252
Router1(config-if)#no shut
Router1(config)#ip route 192.168.1.0 255.255.255.0 10.0.0.1
Router1(config)#exit
Router1#write
Building configuration...
[OK]
Router1#
```

The screenshot shows the Cisco IOS CLI interface for Router1. The title bar says "Router1". Below it is a navigation bar with tabs: Physical, Config, **CLI**, and Attributes. The main area is titled "IOS Command Line Interface". It displays the system configuration and the command history for Router1.

```
cisco 2811 (MPC860) processor (revision 0x200) with 60416K/5120K bytes of memory
Processor board ID JAD05190MTZ (4292891495)
2 FastEthernet interfaces
2 Low-speed serial (sync/async) network interface(s)
DRAM configuration is 64 bits wide with parity disabled.
255K bytes of non-volatile configuration memory.
249856K bytes of ATA System CompactFlash 0 (Read/Write)

--- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: no

Press RETURN to get started!

Router>en
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname Router1
Router1(config)#int f0/0
Router1(config-if)#ip address 192.168.2.1 255.255.255.0
Router1(config-if)#no shut
Router1(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
Router1(config-if)#int s0/0/1
Router1(config-if)#ip address 10.0.0.2 255.255.255.252
Router1(config-if)#no shut
Router1(config-if)#
%LINK-5-CHANGED: Interface Serial0/0/1, changed state to up
exit
Router1(config)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/1, changed state to up
Router1(config)#ip route 192.168.1.0 255.255.255.0 10.0.0.1
Router1(config)#exit
Router1#
$SYS-5-CONFIG_I: Configured from console by console

Router1#write
Building configuration...
[OK]
Router1#
```

SWITCH 0

```
Switch>en
Switch#config t
Switch(config)#hostname Switch0
Switch0(config)#int vlan 1
Switch0(config-if)#ip address 192.168.1.2 255.255.255.0
Switch0(config-if)#no shut
Switch0(config-if)#exit
Switch0(config)#ip default-gateway 192.168.1.1
Switch0(config)#exit
Switch0#write
Building configuration...
[OK]
Switch0#
```

The screenshot shows a terminal window titled "Switch0". The tab bar at the top includes "Physical", "Config", "CLI" (which is selected), and "Attributes". Below the tabs is the "IOS Command Line Interface". The interface displays system information, including the version ID (V02), CLEI code number (COM3L00BRA), and hardware board revision (0x01). It also lists switch ports (1-26) and their corresponding SW Version (15.0(2)SE4) and SW Image (C2960-LANBASEK9-M). The window then shows the configuration commands entered by the user, followed by system logs indicating link state changes for FastEthernet0/2 and 0/1. Finally, it shows the completed configuration being written and saved.

```
Version ID          : V02
CLEI Code Number   : COM3L00BRA
Hardware Board Revision Number : 0x01

Switch Ports Model      SW Version        SW Image
-----  -----  -----
* 1 26    WS-C2960-24TT-L  15.0(2)SE4  C2960-LANBASEK9-M

Cisco IOS Software, C2960 Software (C2960-LANBASEK9-M), Version 15.0(2)SE4, RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
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Compiled Wed 26-Jun-13 02:49 by mnnguyen

Press RETURN to get started!

%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

Switch>en
Switch#config t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname Switch0
Switch0(config)#int vlan 1
Switch0(config-if)#ip address 192.168.1.2 255.255.255.0
Switch0(config-if)#no shut
Switch0(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
Switch0(config-if)#exit
Switch0(config)#ip default-gateway 192.168.1.1
Switch0(config)#exit
Switch0#
%SYS-5-CONFIG_I: Configured from console by console

Switch0#write
Building configuration...
[OK]
Switch0#
```

Copy Paste

SWITCH 1

```
Switch>en
Switch#config t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname Switch1
Switch1(config)#int vlan 1
Switch1(config-if)#ip address 192.168.2.2 255.255.255.0
Switch1(config-if)#no shut
Switch1(config-if)#exit
Switch1(config)#ip default-gateway 192.168.2.1
Switch1(config)#exit
Switch1#write
Building configuration...
[OK]
Switch1#
```

The screenshot shows the Cisco IOS CLI interface for 'Switch1'. The top navigation bar includes tabs for Physical, Config, CLI (which is selected), and Attributes. Below the tabs is a sub-header 'IOS Command Line Interface'. The main area displays the configuration commands entered by the user, along with system information like version ID, ports, and copyright details. At the bottom of the interface, there are 'Copy' and 'Paste' buttons.

```
Switch1
Physical Config CLI Attributes
IOS Command Line Interface
Version ID : V02
CLEI Code Number : COM3L00BRA
Hardware Board Revision Number : 0x01
Switch Ports Model SW Version SW Image
----- -----
* 1 26 WS-C2960-24TT-L 15.0(2)SE4 C2960-LANBASEK9-M
Cisco IOS Software, C2960 Software (C2960-LANBASEK9-M), Version 15.0(2)SE4, RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2013 by Cisco Systems, Inc.
Compiled Wed 26-Jun-13 02:49 by mnnguyen

Press RETURN to get started!

%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

Switch>en
Switch#config t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname Switch1
Switch1(config)#int vlan 1
Switch1(config-if)#ip address 192.168.2.2 255.255.255.0
Switch1(config-if)#no shut
Switch1(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
Switch1(config-if)#exit
Switch1(config)#ip default-gateway 192.168.2.1
Switch1(config)#exit
Switch1#
%SYS-5-CONFIG_I: Configured from console by console

Switch1#write
Building configuration...
[OK]
Switch1#
```

Copy Paste

Configuring secure remote access(ssh)on Switch 0

```
Switch0>en
Switch0#config t
Enter configuration commands, one per line. End with CNTL/Z.
Switch0(config)#ip domain-name isbat.com
Switch0(config)#crypto key generate rsa
How many bits in the modulus [512]: 1024
Switch0(config)#username admin secret isbat
Switch0(config)#line vty 0 15
Switch0(config-line)#transport input ssh
Switch0(config-line)#login local
Switch0(config-line)#exit
Switch0(config)#enable secret class123
Switch0(config)#ip ssh version 2
Switch0(config)#exit
Switch0#write
Building configuration...
[OK]
```

```
Switch0
Physical Config CLI Attributes
IOS Command Line Interface
Press RETURN to get started.

Switch0>en
Switch0#config t
Enter configuration commands, one per line. End with CNTL/Z.
Switch0(config)#ip domain-name isbat.com
Switch0(config)#crypto key generate rsa
^
% Invalid input detected at '^' marker.

Switch0(config)#crypto key generate rsa
The name for the keys will be: Switch0.isbat.com
Choose the size of the key modulus in the range of 360 to 4096 for your
General Purpose Keys. Choosing a key modulus greater than 512 may take
a few minutes.

How many bits in the modulus [512]: 1024
% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

Switch0(config)#username admin secret isbat
*Mar 1 0:39:17.657: %SSH-5-ENABLED: SSH 1.99 has been enabled
Switch0(config)#line vty 0 15
Switch0(config-line)#transport input ssh
Switch0(config-line)#login local
Switch0(config-line)#exit
Switch0(config)#enable secret class123
% Ambiguous command: "enable secret class123"
Switch0(config)#ip ssh version 2
Switch0(config)#exit
Switch0#
%SYS-5-CONFIG_I: Configured from console by console

Switch0#write
Building configuration...
[OK]
Switch0#
```

Switch0#

Ping

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=2ms TTL=253
Reply from 192.168.1.2: bytes=32 time=1ms TTL=253
Reply from 192.168.1.2: bytes=32 time=1ms TTL=253
Reply from 192.168.1.2: bytes=32 time=1ms TTL=253

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 2ms, Average = 1ms

C:\>
```

Verification

```
C:\>ssh -l admin 192.168.1.2
Invalid Command.

C:\>isbat
Invalid Command.

C:\>isbat
Invalid Command.

C:\>|
```

