

## **Router 0:**

```
Router>en
```

```
Router#config
```

```
Configuring from terminal, memory, or network [terminal]?
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
Router(config)#interface fa 0/0
```

```
Router(config-if)#ip address 101.0.0.1 255.0.0.0
```

```
Router(config-if)#no shutdown
```

```
Router(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
```

```
Router(config-if)#exit
```

```
Router(config)#interface fa 1/0
```

```
Router(config-if)#ip address 192.101.2.5 255.255.255.252
```

```
Router(config-if)#no shutdown
```

```
Router(config-if)#
```

```
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up
```

```
Router(config-if)#exit
```

```
Router(config)#interface se 2/0
```

```
Router(config-if)#ip address 192.101.0.1 255.255.255.252
```

```
Router(config-if)#no shutdown
```

```
%LINK-5-CHANGED: Interface Serial2/0, changed state to down
```

```
Router(config-if)#exit
```

```
Router(config)#interface se 3/0
```

```
Router(config-if)#ip address 192.101.1.2 255.255.255.252
```

```
Router(config-if)#no shutdown
```

```
%LINK-5-CHANGED: Interface Serial3/0, changed state to down
```

```
Router(config-if)#exit
```

```
Router(config)#exit
```

```
Router#
```

```
%SYS-5-CONFIG_I: Configured from console by console
```

```
Router#copy run start
```

```
Destination filename [startup-config]?
```

```
Building configuration...
```

[OK]

Router#

%LINK-5-CHANGED: Interface Serial3/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up

?Bad filename

%Error parsing filename (Bad file number)

Router#

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface FastEthernet1/0

Router(config-if)#

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up

?Bad filename

%Error parsing filename (Bad file number)

Router(config-if)#

Router(config-if)#exit

Router(config)#interface Serial2/0

Router(config-if)#

%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

?Bad filename

%Error parsing filename (Bad file number)

Router(config-if)#router ospf 1

Router(config-router)#network 101.0.0.0 0.255.255.255 area 3

Router(config-router)#exit

Router(config)#exit

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#copy run start

Destination filename [startup-config]?

Building configuration...

[OK]

Router#config

Configuring from terminal, memory, or network [terminal]?

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#router ospf 1

Router(config-router)#network 192.101.1.0 0.0.0.3 area 1

Router(config-router)#network 192.101.1.0 0.0.0.3 area 1

02:08:44: %OSPF-5-ADJCHG: Process 1, Nbr 192.101.1.5 on Serial3/0 fexit

:

```
Router(config)#
Router(config)#network 192.101.0.0 0.0.0.3 area 0
^
% Invalid input detected at '^' marker.
Router(config)#network 192.101.0.0 0.0.0.3 area 0
^
% Invalid input detected at '^' marker.
Router(config)#router ospf 1
Router(config-router)#network 192.101.1.0 0.0.0.3 area 1
Router(config-router)#network 192.101.0.0 0.0.0.3 area 0
Router(config-router)#network 192.101.2.4 0.0.0.3 area 2
Router(config-router)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

```
Router#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
02:11:08: %OSPF-5-ADJCHG: Process 1, Nbr 192.101.2.6 on FastEthernet1/0 from
LOADING to FULL, Loading Done

02:12:28: %OSPF-5-ADJCHG: Process 1, Nbr 192.101.0.5 on Serial2/0 from LOADING to
FULL, Loading Done
```

```
?Bad filename
%Error parsing filename (Bad file number)
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface Serial3/0
Router(config-if)#
?Bad filename
%Error parsing filename (Bad file number)
Router(config-if)#
```

## **Router 1**

Router>en

Router#config

Configuring from terminal, memory, or network [terminal]?

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface se 3/0

Router(config-if)#ip address 192.101.1.1 255.255.255.252

Router(config-if)#no shutdown

Router(config-if)#

%LINK-5-CHANGED: Interface Serial3/0, changed state to up

Router(config-if)#exit

Router(config)#interfac

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up

% Incomplete command.

Router(config)#interface se 2/0

Router(config-if)#ip address 192.101.1.5 255.255.255.252

Router(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial2/0, changed state to down

Router(config-if)#

Router(config-if)#exit

Router(config)#exit

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#copy run start

Destination filename [startup-config]?

Building configuration...

[OK]

Router#

?Bad filename

%Error parsing filename (Bad file number)

Router#

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface Serial2/0

Router(config-if)#

%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

:

```
?Bad filename
%Error parsing filename (Bad file number)
Router(config-if)#exit
Router(config)#router ospf 1
Router(config-router)#network 192.101.1.0 0.0.0.3 area 1
Router(config-router)#network 192.101.1.4 0.0.0.3 area 1
Router(config-router)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

```
Router#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
```

## **Router 2**

```
Router>en
Router#comfig
Translating "comfig"...domain server (255.255.255.255)
% Unknown command or computer name, or unable to find computer address
```

```
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface se 2/0
Router(config-if)#ip address 192.101.1.6 255.255.255.252
Router(config-if)#no shutdown
```

```
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
```

```
Router(config-if)#exit
Router(config)#interface se
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
```

```
% Incomplete command.
Router(config)#interface se 3/0
Router(config-if)#ip address 192.101.1.9 255.255.255.252
Router(config-if)#no shutdown
```

```
%LINK-5-CHANGED: Interface Serial3/0, changed state to down
```

```
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

```
Router#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
?Bad filename
%Error parsing filename (Bad file number)
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface Serial3/0
Router(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up
```

Router con0 is now available

Press RETURN to get started.

:

Router con0 is now available

Press RETURN to get started.

```
Router>en
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router ospf 1
Router(config-router)#network 192.101.1.4 0.0.0.3 area 1
Router(config-router)#network 192.101.1.8 0.0.0.3 area 1
02:14:49: %OSPF-5-ADJCHG: Process 1, Nbr 192.101.1.5 on Serial2/0 from LOADING to
FULL, Loading Done

Router(config-router)#network 192.101.1.8 0.0.0.3 area 1
Router(config-router)#exit
Router(config)#exit
Router#
```

%SYS-5-CONFIG\_I: Configured from console by console

Router#copy run start

Destination filename [startup-config]?

Building configuration...

[OK]

Router#

02:15:43: %OSPF-5-ADJCHG: Process 1, Nbr 192.101.2.9 on Serial3/0 from LOADING to FULL, Loading Done

## **Router 3**

Cisco Internetwork Operating System Software

IOS (tm) PT1000 Software (PT1000-I-M), Version 12.2(28), RELEASE SOFTWARE (fc5)

Technical Support: <http://www.cisco.com/techsupport>

Copyright (c) 1986-2005 by cisco Systems, Inc.

Compiled Wed 27-Apr-04 19:01 by miwang

PT 1001 (PTSC2005) processor (revision 0x200) with 60416K/5120K bytes of memory

.

Processor board ID PT0123 (0123)

PT2005 processor: part number 0, mask 01

Bridging software.

X.25 software, Version 3.0.0.

4 FastEthernet/IEEE 802.3 interface(s)

2 Low-speed serial(sync/async) network interface(s)

32K bytes of non-volatile configuration memory.

63488K bytes of ATA CompactFlash (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

Configuring from terminal, memory, or network [terminal]?

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface se 2/0



:

```
Router(config-if)#ip address 192.101.0.2 255.255.255.252
```

```
Router(config-if)#no shutdown
```

```
Router(config-if)#
```

```
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
```

```
Router(config-if)#exit
```

```
Router(config)#interface se 3/0
```

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

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up  
s
```

```
% Incomplete command.
```

```
Router(config-if)#ip address 192.101.0.5 255.255.255.252
```

```
Router(config-if)#no shutdown
```

```
Router(config-if)#
```

```
%LINK-5-CHANGED: Interface Serial3/0, changed state to up
```

```
Router(config-if)#exit
```

```
Router(config)#exit
```

```
Router#
```

```
%SYS-5-CONFIG_I: Configured from console by console
```

```
Router#cop
```

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up
```

```
% Incomplete command.
```

```
Router#copy run start
```

```
Destination filename [startup-config]?
```

```
Building configuration...
```

```
[OK]
```

```
Router#config
```

```
Configuring from terminal, memory, or network [terminal]?
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
Router(config)#router ospf 1
```

```
Router(config-router)#network 192.101.0.0 0.0.0.3 area 0
```

```
Router(config-router)#network 192.101.0.4 0.0.0.3 area 0
```

```
02:12:15: %OSPF-5-ADJCHG: Process 1, Nbr 192.101.2.5 on Serial2/0 from LOADING to  
FULL, Loading Done
```

```
Router(config-router)#exit
```

```
Router(config)#exit
```

```
Router#
```

```
%SYS-5-CONFIG_I: Configured from console by console
```

```
Router#copy run start
```

Destination filename [startup-config]?  
Building configuration...  
[OK]  
Router#  
02:16:15: %OSPF-5-  
ADJCHG: Process 1, Nbr  
192.101.2.9 on Serial3/0  
from LOADING to FULL,  
Loading Done

## **Router 4:**

Router>en  
Router#config  
Configuring from terminal, memory, or network [terminal]?  
Enter configuration commands, one per line. End with CNTL/Z.  
Router(config)#interface se 3/0  
Router(config-if)#ip address 192.101.1.10 255.255.255.252  
Router(config-if)#no shutdown  
  
Router(config-if)#  
%LINK-5-CHANGED: Interface Serial3/0, changed state to up  
  
Router(config-if)#exit  
Router(config)#interface se 2/0  
Router(config-if)#ip add  
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up  
% Incomplete command.  
Router(config-if)#ip address 192.101.0.6 255.255.255.252  
Router(config-if)#no shutdown  
  
%LINK-5-CHANGED: Interface Serial2/0, changed state to down  
Router(config-if)#exit  
Router(config)#interface fa 1/0  
Router(config-if)#ip address 192.101.2.9 255.255.255.252  
Router(config-if)#no shutdown  
  
Router(config-if)#

:

%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up

Router(config-if)#exit

Router(config)#exit

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#copy run start

Destination filename [startup-config]?

Building configuration...

[OK]

Router#

?Bad filename

%Error parsing filename (Bad file number)

Router#

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface Serial3/0

Router(config-if)#

Router(config-if)#exit

Router(config)#interface Serial2/0

Router(config-if)#

%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router con0 is now available

Press RETURN to get started.

Router con0 is now available

Press RETURN to get started.

```
Router>en
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router ospf 1
Router(config-router)#network 192.101.1.8 0.0.0.3 area 1
```

:

```
Router(config-router)#network 192.101.1.8 0.0.0.3 area 0
00:41:58: %OSPF-5-ADJCHG: Process 1, Nbr 192.101.1.9 on Serial3/0 f
Router(config-router)#network 192.101.0.4 0.0.0.3 area 0
Router(config-router)#network 192.101.0.4 0.0.0.3 area 0
00:42:33: %OSPF-5-ADJCHG: Process 1, Nbr 192.101.0.5 on Serial2/0 from LOADING to
FULL, Loading Done
```

```
Router(config-router)#network 192.101.2.8 0.0.0.3 area 2
Router(config-router)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

```
Router#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
00:43:01: %OSPF-5-ADJCHG: Process 1, Nbr 192.101.2.10 on FastEthernet1/0 from
LOADING to FULL, Loading Done
```

## **Router 5**

Cisco Internetwork Operating System Software  
IOS (tm) PT1000 Software (PT1000-I-M), Version 12.2(28), RELEASE SOFTWARE (fc5)  
Technical Support: <http://www.cisco.com/techsupport>  
Copyright (c) 1986-2005 by cisco Systems, Inc.  
Compiled Wed 27-Apr-04 19:01 by miwang

PT 1001 (PTSC2005) processor (revision 0x200) with 60416K/5120K bytes of memory

.

Processor board ID PT0123 (0123)  
PT2005 processor: part number 0, mask 01  
Bridging software.  
X.25 software, Version 3.0.0.  
4 FastEthernet/IEEE 802.3 interface(s)  
2 Low-speed serial(sync/async) network interface(s)  
32K bytes of non-volatile configuration memory.

63488K bytes of ATA CompactFlash (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

Configuring from terminal, memory, or network [terminal]?

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface fa 0/0

Router(config-if)#ip address 192.101.2.6 255.255.255.252

Router(config-if)#no shutdown

Router(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

Router(config-if)#exit

Router(config)#interface se 2/0

Router(config-if)#ip address 192.101.2.1 255.255.255.252

Router(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial2/0, changed state to down

Router(config-if)#exit

Router(config)#exit

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#copy run start

Destination filename [startup-config]?

Building configuration...

[OK]

Router#

%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

:

Router con0 is now available

Press RETURN to get started.

```
Router>en
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router ospf 1
Router(config-router)#network 192.101.2.4 0.0.0.3 area 2
Router(config-router)#network 192.101.2.0 0.0.0.3 area 2
Router(config-router)#e
00:37:10: %OSPF-5-ADJCHG: Process 1, Nbr 192.101.2.5 on FastEthernet0/0 from
LOADING to FULL, Loading Done
```

```
Router(config)#router ospf 1
Router(config-router)#network 192.101.2.4 0.0.0.3 area 2
Router(config-router)#network 192.101.2.0 0.0.0.3 area 2
Router(config-router)#exit
Router(config)#exit
Router#
```

%SYS-5-CONFIG\_I: Configured from console by console

Router#copy run start

Destination filename [startup-config]?

Building configuration...

[OK]

Router#

00:39:49: %OSPF-5-ADJCHG: Process 1, Nbr 192.101.2.10 on Serial2/0 from LOADING to FULL, Loading Done

## **Router 6**

IOS (tm) PT1000 Software (PT1000-I-M), Version 12.2(28), RELEASE SOFTWARE (fc5)

Technical Support: <http://www.cisco.com/techsupport>

Copyright (c) 1986-2005 by cisco Systems, Inc.

Compiled Wed 27-Apr-04 19:01 by miwang

PT 1001 (PTSC2005) processor (revision 0x200) with 60416K/5120K bytes of memory

.

Processor board ID PT0123 (0123)

PT2005 processor: part number 0, mask 01

Bridging software.

X.25 software, Version 3.0.0.

4 FastEthernet/IEEE 802.3 interface(s)

2 Low-speed serial(sync/async) network interface(s)

32K bytes of non-volatile configuration memory.

63488K bytes of ATA CompactFlash (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

Configuring from terminal, memory, or network [terminal]?

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface se 2/0

Router(config-if)#ip address 192.101.2.2 255.255.255.252



:

Router(config-if)#no shutdown

Router(config-if)#

%LINK-5-CHANGED: Interface Serial2/0, changed state to up

Router(config-if)#exit

Router(config)#interface fa 0/0

Router(config-if)#

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router(config-if)#ip address 192.101.2.10 255.255.255.252

Router(config-if)#no shutdown

Router(config-if)#

%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

Router(config-if)#exit

Router(config)#exit

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#copy run start

Destination filename [startup-config]?

Building configuration...

[OK]

Router#

?Bad filename

%Error parsing filename (Bad file number)

Router#

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface FastEthernet0/0

Router(config-if)#

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

Router con0 is now available

Press RETURN to get started.

Router con0 is now available

Press RETURN to get started.

:

```
Router>en
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router ospf 1
Router(config-router)#network 192.101.2.0 0.0.0.3 area 2
Router(config-router)#network 192.101.2.0 0.0.0.3 area 2
00:39:46: %OSPF-5-ADJCHG: Process 1, Nbr 192.101.2.6 on Serial2/0 from LOADING to
FULL, Loading Done

Router(config-router)#network 192.101.2.8 0.0.0.3 area 2
Router(config-router)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
00:42:54: %OSPF-5-ADJCHG: Process 1, Nbr 192.101.2.9 on FastEthernet0/0 from
LOADING to FULL, Loading Done
```