



IQRA NATIONAL UNIVERSITY  
Phase II, Hayatabad Peshawer

Student: Hayat ahmad khan

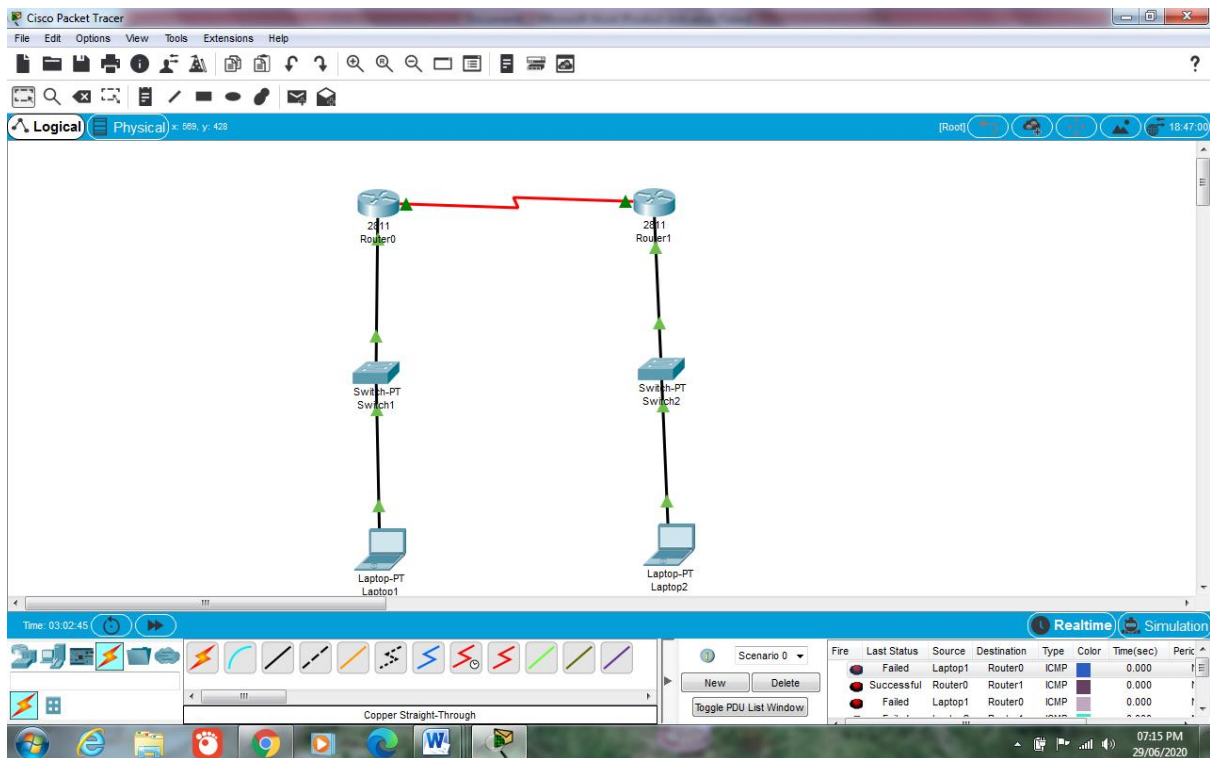
ID# 14486

Dept: BS (CS)

Final Term Lab Exam

Subject: Data communication & Network

### Task 1:





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Dept: BS (CS)

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The screenshot shows the Cisco Packet Tracer interface with a CLI window for Router0. The configuration commands entered are:

```
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router (config)#ho INU
INU (config)#int ser
INU (config)#int serial 0/3/0
INU (config-if)#ip add
INU (config-if)#ip address 192.168.10.1 255.255.255.0
INU (config-if)#clock rate 64000
This command applies only to DCE interfaces
INU (config-if)#no sh
INU (config-if)#no shutdown
%LINK-5-CHANGED: Interface Serial0/3/0, changed state to down
INU (config-if)#exit
INU (config)#ip route 0.0.0.0 0.0.0.0 se0/3/0
INU (config)#exit
INU#
%SYS-5-CONFIG_I: Configured from console by console

INU#conf t
Enter configuration commands, one per line. End with CNTL/Z.
INU (config)#int fast
INU (config)#int fastEthernet 0/0
INU (config-if)#ip add
INU (config-if)#ip address 192.168.14.1 255.255.255.0
```

The screenshot shows a Microsoft Word document with a CLI window for Router0. The configuration commands entered are:

```
Router0>en
Router0#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router0 (config)#int fast
Router0 (config)#int fastEthernet 0/0
Router0 (config-if)#ip add
Router0 (config-if)#ip address 192.168.14.1 255.255.255.0
Router0 (config-if)#no sh
Router0 (config-if)#no shutdown
Router0 (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
Router0 (config-if)#exit
Router0 (config)#exit
Router0#
%SYS-5-CONFIG_I: Configured from console by console
```



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The screenshot shows the Cisco Packet Tracer interface with a terminal window for Router1. The terminal displays the following commands and output:

```
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ho UOP
UOP(config)#int ser
UOP(config)#int serial 0/0/0
UOP(config-if)#ip add
UOP(config-if)#ip address 192.168.16.1 255.255.255.0
UOP(config-if)#clock rate 64000
UOP(config-if)#no sh
UOP(config-if)#no shutdown

UOP(config-if)#
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up

UOP(config-if)#exit
UOP(config)#ip
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed
state to up

% Incomplete command.
UOP(config)#ip route 0.0.0.0 0.0.0.0 se0/0/0
UOP(config)#exit
UOP#
```

The screenshot shows the Microsoft Word application with a terminal window for Router1. The terminal displays the following commands and output:

```
% Incomplete command.
UOP(config)#ip route 0.0.0.0 0.0.0.0 se0/0/0
UOP(config)#exit
UOP#
%SYS-5-CONFIG_I: Configured from console by console

UOP#conf t
Enter configuration commands, one per line. End with CNTL/Z.
UOP(config)#int fas
UOP(config)#int fastEthernet 0/1
UOP(config-if)#ip add
UOP(config-if)#ip address 192.168.11.5 255.255.255.0
UOP(config-if)#no sh
UOP(config-if)#no shutdown

UOP(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up

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

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

UOP#
```



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Time: 03:06:40

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Peric
	Failed	Laptop1	Router0	ICMP		0.000	
	Successful	Router0	Router1	ICMP		0.000	
	Failed	Laptop1	Router0	ICMP		0.000	

07:19 PM  
29/06/2020

Time: 03:07:21

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Peric
	Failed	Laptop1	Router0	ICMP		0.000	
	Successful	Router0	Router1	ICMP		0.000	
	Failed	Laptop1	Router0	ICMP		0.000	

07:20 PM  
29/06/2020



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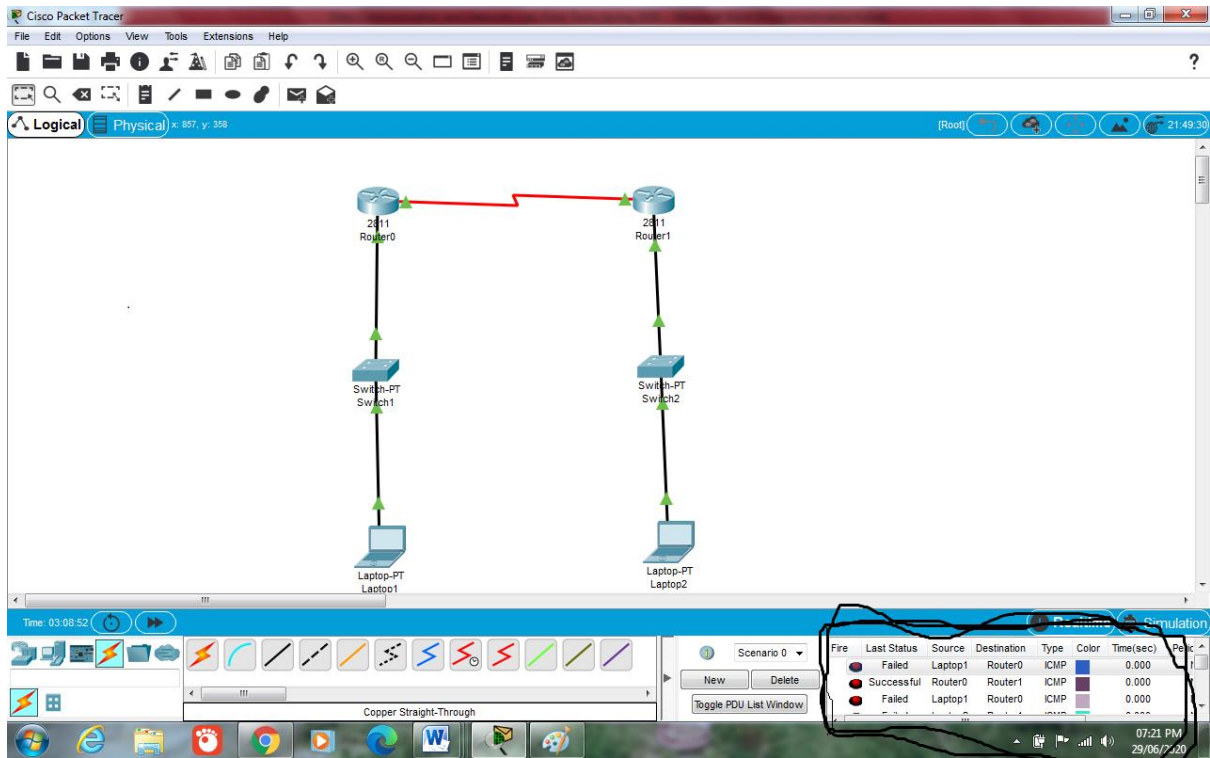
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**Task 2:**

**Construction:**



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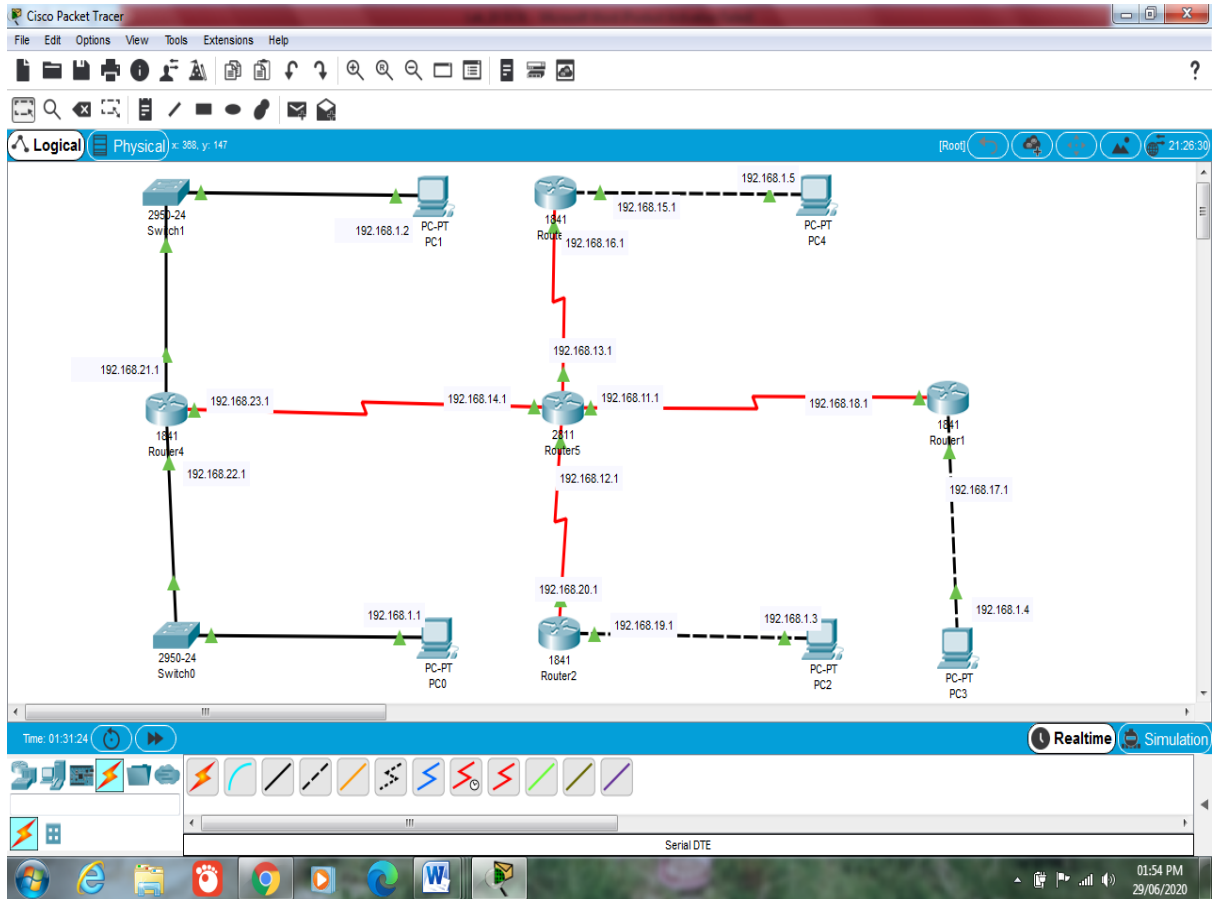
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The screenshot shows the Cisco Packet Tracer interface. On the left, a network diagram displays a central Router5 (1841) connected to two 2950-24 switches (Switch1 and Switch0) and a PC-PT (PC3). IP addresses are assigned to various interfaces: 192.168.21.1 for Switch1, 192.168.23.1 for Router5, 192.168.22.1 for Switch0, and 192.168.17.1 for PC3. A central CLI window for Router5 shows the following output:

```
IOS Command Line Interface
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 06:21 by pt_tel_team

Press RETURN to get started!

%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up
%LINK-5-CHANGED: Interface Serial0/1/0, changed state to up
%LINK-5-CHANGED: Interface Serial0/2/0, changed state to up
%LINK-5-CHANGED: Interface Serial0/3/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed
state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/2/0, changed
state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/3/0, changed
state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/0, changed
state to up

Ctrl+F6 to exit CLI focus
```

The screenshot shows a Microsoft Word document titled "Document1 - Microsoft Word (Product Activation Failed)". The document contains a configuration script for Router5, which is also displayed in a CLI window overlaid on the document. The script is as follows:

```
Router5
Peshavar>en
Peshavar#config t
Enter configuration commands, one per line. End with CNTL/Z.
Peshavar(config)#int ser
Peshavar(config-if)#ip add
Peshavar(config-if)#ip address 192.168.11.1 255.255.255.0
Peshavar(config-if)#clock rate 56000
Peshavar(config-if)#no shut
Peshavar(config-if)#no shutdown
Peshavar(config-if)#exit
Peshavar(config)#ip route 0.0.0.0 0.0.0.0 se0/0/0
Peshavar(config)#exit
Peshavar#
%SYS-5-CONFIG_I: Configured from console by console

Peshavar#
```



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Phase II, Hayatabad peshawer

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Final Term Lab Exam

Subject: Data communication & Network

Cisco Packet Tracer - C:\Users\MAK\Desktop\Task 1.pkt

Router4

Physical Config CLI Attributes

IOS Command Line Interface

```
Processor board ID FTX0947Z18E
M860 processor: part number 0, mask 49
2 FastEthernet/IEEE 802.3 interface(s)
1 Low-speed serial(sync/async) network interface(s)
191K bytes of NVRAM.
63488K bytes of ATA CompactFlash (Read/Write)
Cisco IOS Software, 1841 Software (C1841-ADVIPSERVICESK9-M), Version
12.4(15)T1, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 04:52 by pt_team

Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to up
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed
state to up

Ctrl+F6 to exit CLI focus
```

Time: 00:04:33

Router-PT

07:29 PM 29/06/2020

Cisco Packet Tracer - C:\Users\MAK\Desktop\Task 1.pkt

Router3

Physical Config CLI Attributes

IOS Command Line Interface

```
Cisco 1841 (revision 5.0) with 114688K/16384K bytes of memory.
Processor board ID FTX0947Z18E
M860 processor: part number 0, mask 49
2 FastEthernet/IEEE 802.3 interface(s)
1 Low-speed serial(sync/async) network interface(s)
191K bytes of NVRAM.
63488K bytes of ATA CompactFlash (Read/Write)
Cisco IOS Software, 1841 Software (C1841-ADVIPSERVICESK9-M), Version
12.4(15)T1, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 04:52 by pt_team

Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed
state to up

Ctrl+F6 to exit CLI focus
```

Time: 00:05:01

Router-PT

07:30 PM 29/06/2020





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Subject: Data communication & Network

Cisco Packet Tracer - C:\Users\MAK\Desktop\Task 1.pkt

Router2

Physical Config CLI Attributes

IOS Command Line Interface

```
Cisco 1841 (revision 5.0) with 114688K/16384K bytes of memory.
Processor board ID FTX0947Z18E
M860 processor: part number 0, mask 49
2 FastEthernet/IEEE 802.3 interface(s)
1 Low-speed serial(sync/async) network interface(s)
191K bytes of NVRAM.
63488K bytes of ATA CompactFlash (Read/Write)
Cisco IOS Software, 1841 Software (C1841-ADVIPSERVICESK9-M), Version
12.4(15)T1, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 04:52 by pt_team

Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed
state to up

Ctrl+F6 to exit CLI focus
```

Time: 00:05:45

Realtime Simulation

Cisco Packet Tracer - C:\Users\MAK\Desktop\Task 1.pkt

Router1

Physical Config CLI Attributes

IOS Command Line Interface

```
Cisco 1841 (revision 5.0) with 114688K/16384K bytes of memory.
Processor board ID FTX0947Z18E
M860 processor: part number 0, mask 49
2 FastEthernet/IEEE 802.3 interface(s)
1 Low-speed serial(sync/async) network interface(s)
191K bytes of NVRAM.
63488K bytes of ATA CompactFlash (Read/Write)
Cisco IOS Software, 1841 Software (C1841-ADVIPSERVICESK9-M), Version
12.4(15)T1, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 04:52 by pt_team

Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed
state to up

Ctrl+F6 to exit CLI focus
```

Time: 00:06:20

Realtime Simulation



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Subject: Data communication & Network

PC0 Configuration:

- IP Configuration:  DHCP,  Static
- IP Address: 192.168.1.1
- Subnet Mask: 255.255.255.0
- Default Gateway: 192.168.1.10
- DNS Server: 0.0.0.0
- IPv6 Configuration:  DHCP,  Auto Config,  Static
- IPv6 Address: [Empty]
- Link Local Address: FE80::209:7CFF:FE19:8550
- IPv6 Gateway: [Empty]
- IPv6 DNS Server: [Empty]
- 802.1X:  Use 802.1X Security
- Authentication: MD5
- Username: [Empty]
- Password: [Empty]

PC1 Configuration:

- IP Configuration:  DHCP,  Static
- IP Address: 192.168.1.2
- Subnet Mask: 255.255.255.0
- Default Gateway: 192.168.1.10
- DNS Server: 0.0.0.0
- IPv6 Configuration:  DHCP,  Auto Config,  Static
- IPv6 Address: [Empty]
- Link Local Address: FE80::2E0:A3FF:FE97:E16E
- IPv6 Gateway: [Empty]
- IPv6 DNS Server: [Empty]
- 802.1X:  Use 802.1X Security
- Authentication: MD5
- Username: [Empty]
- Password: [Empty]



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Subject: Data communication & Network

Cisco Packet Tracer - C:\Users\MAK\Desktop\Task 1.pkt

PC2 Configuration:

- IP Configuration:  DHCP,  Static
- IP Address: 192.168.1.3
- Subnet Mask: 255.255.255.0
- Default Gateway: 192.168.1.10
- DNS Server: 0.0.0.0
- IPv6 Configuration:  DHCP,  Auto Config,  Static
- IPv6 Address: [Empty]
- Link Local Address: FE80::20A:41FF:FEA1:1DE
- IPv6 Gateway: [Empty]
- IPv6 DNS Server: [Empty]
- 802.1X:  Use 802.1X Security
- Authentication: MD5
- Username: [Empty]
- Password: [Empty]

Time: 00:07:47

Realtime Simulation

07:32 PM 29/06/2020

Cisco Packet Tracer - C:\Users\MAK\Desktop\Task 1.pkt

PC3 Configuration:

- IP Configuration:  DHCP,  Static
- IP Address: 192.168.1.4
- Subnet Mask: 255.255.255.0
- Default Gateway: 192.168.1.10
- DNS Server: 0.0.0.0
- IPv6 Configuration:  DHCP,  Auto Config,  Static
- IPv6 Address: [Empty]
- Link Local Address: FE80::202:16FF:FE50:B20A
- IPv6 Gateway: [Empty]
- IPv6 DNS Server: [Empty]
- 802.1X:  Use 802.1X Security
- Authentication: MD5
- Username: [Empty]
- Password: [Empty]

Time: 00:08:19

Realtime Simulation

07:33 PM 29/06/2020



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The screenshot displays the Cisco Packet Tracer interface with a network diagram on the left and a configuration window for PC4 in the center. The network diagram shows a central Router (1941) connected to two switches (2950-24) and a PC (2911). The configuration window for PC4 is open, showing the following settings:

- IP Configuration:**
  - Static IP Address: 192.168.1.5
  - Subnet Mask: 255.255.255.0
  - Default Gateway: 192.168.1.10
  - DNS Server: 0.0.0.0
- IPv6 Configuration:**
  - Static Link Local Address: FE80::2D0:BCFF:FE19:2126
- 802.1X:**
  - Use 802.1X Security:
  - Authentication: MD5
  - Username: [Empty]
  - Password: [Empty]

The bottom of the window shows the taskbar with various application icons and the system clock indicating 07:33 PM on 29/06/2020.