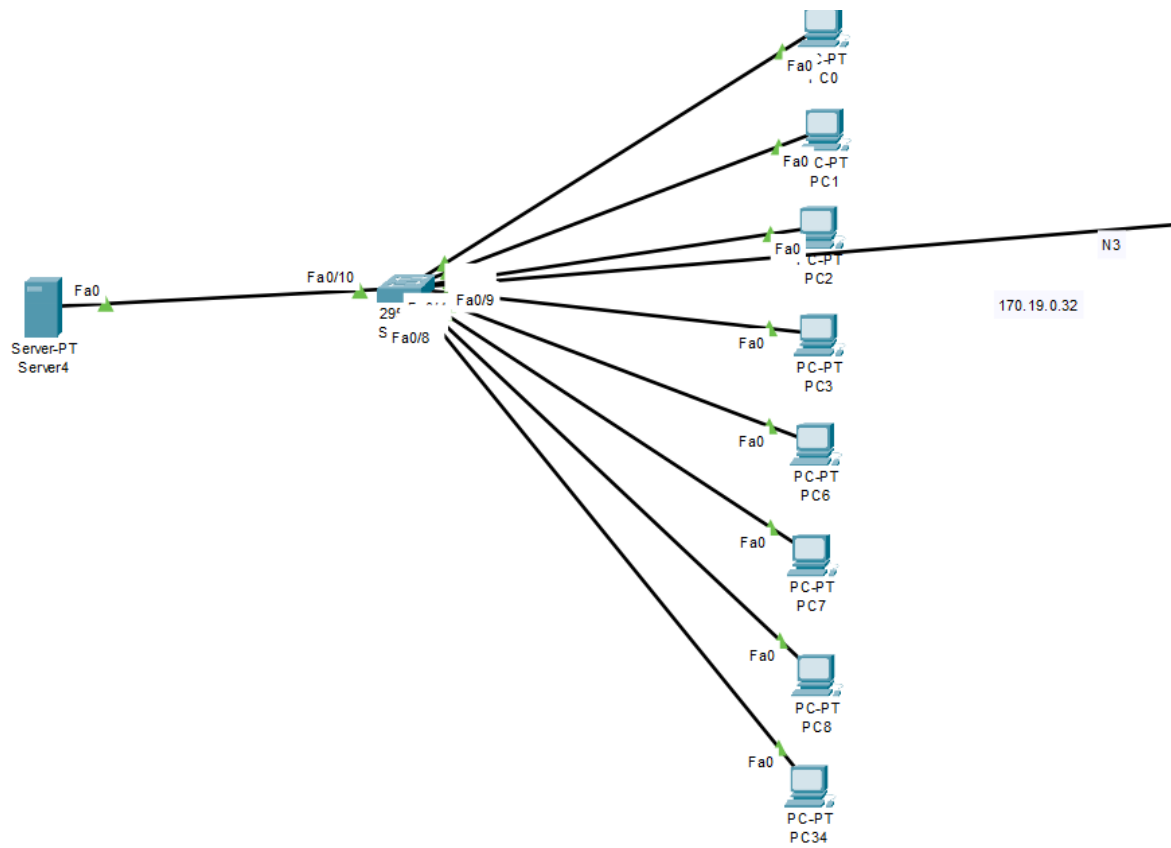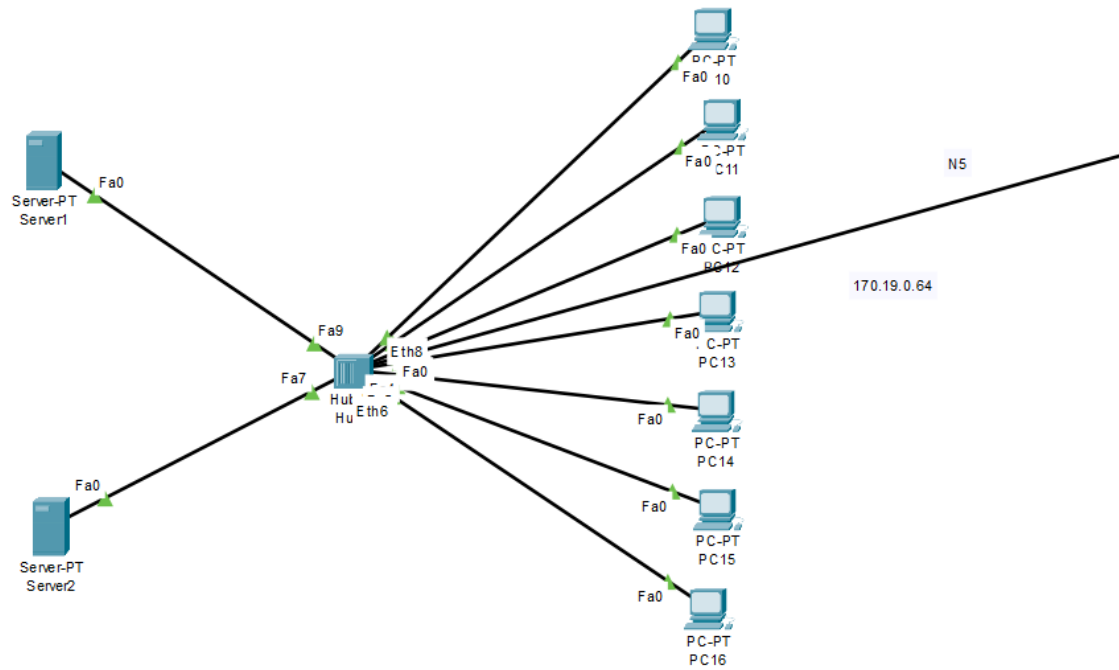## Physical scenario for the 7 buildings:
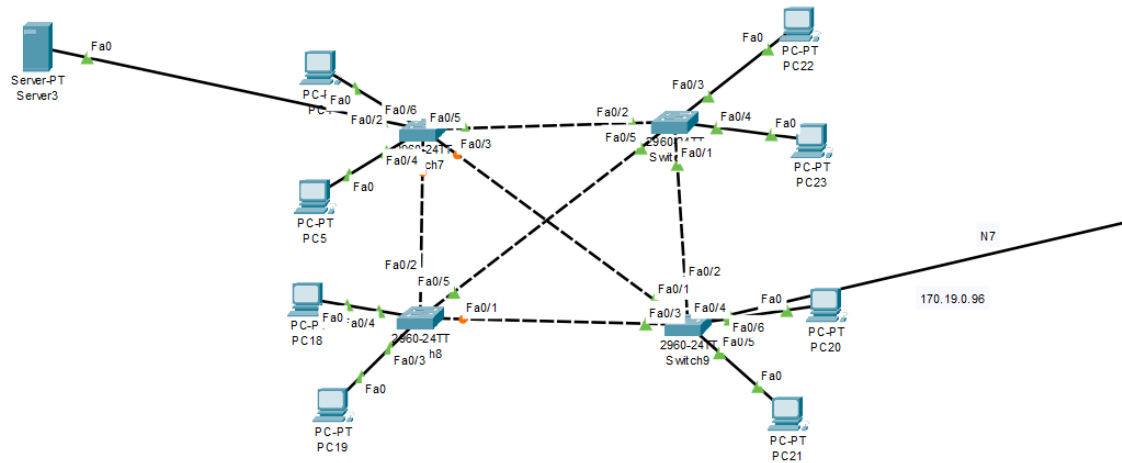
BUILDING 1:

Building 1 has star topology with 8 computers using switch.

BUILDING 2:

Building 2 has star topology with 8 computers using hub.

BUILDING 3:

Building 3 has a mesh topology with 8 computers using switch.

BUILDING 4:

Building 4 has a hybrid topology(mesh and bus topology) with 10 computers using switches and hubs.
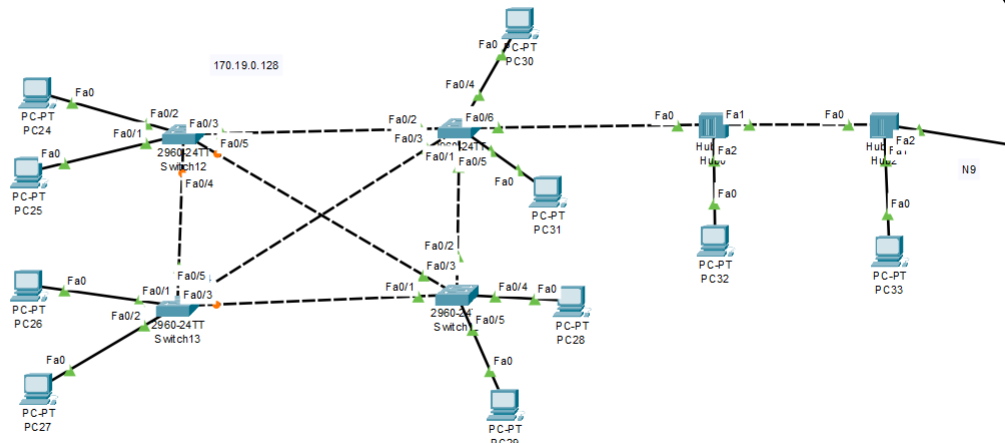
BUILDING 5:
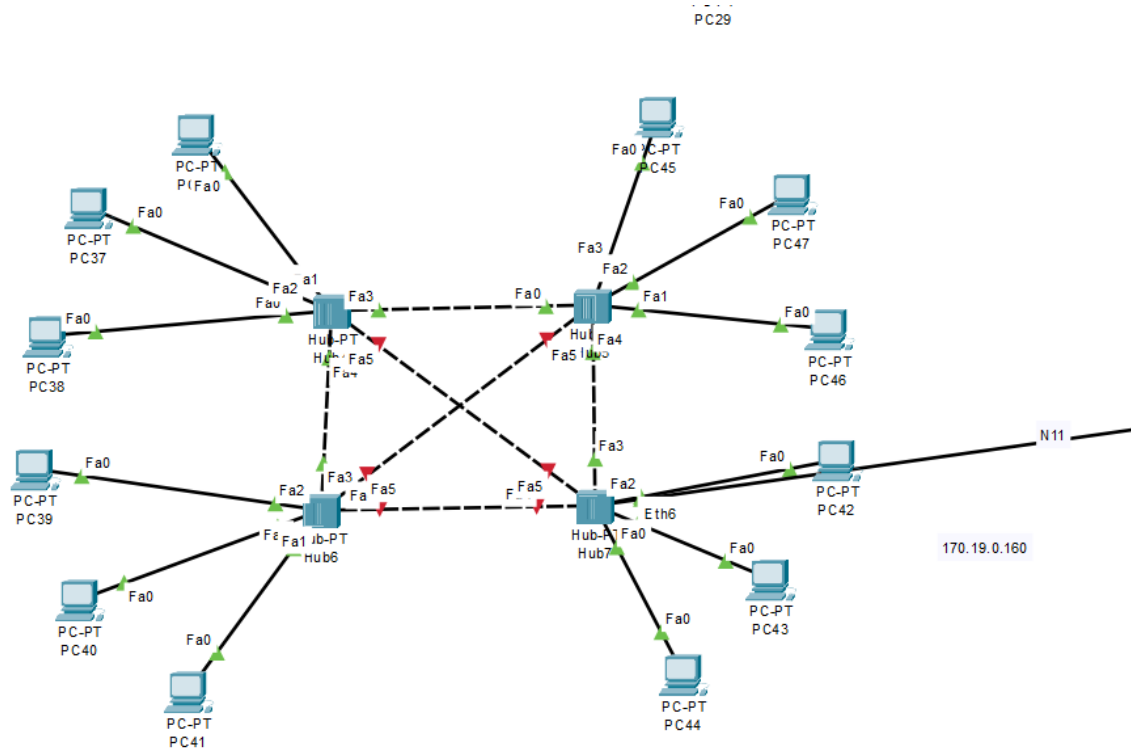
Building 5 has mesh topology with 12 computers using hubs.

BUILDING 6:

Building 5 has mesh topology with 12 computers using switches.
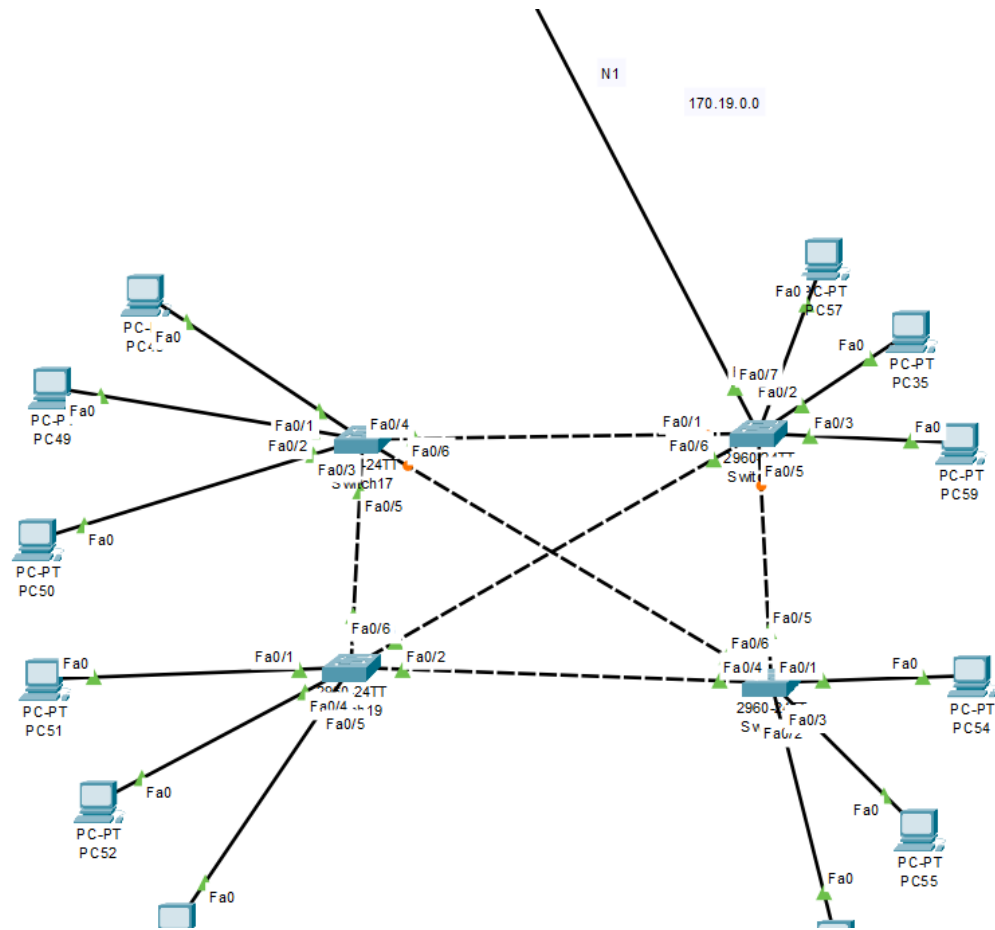
BUILDING 7:
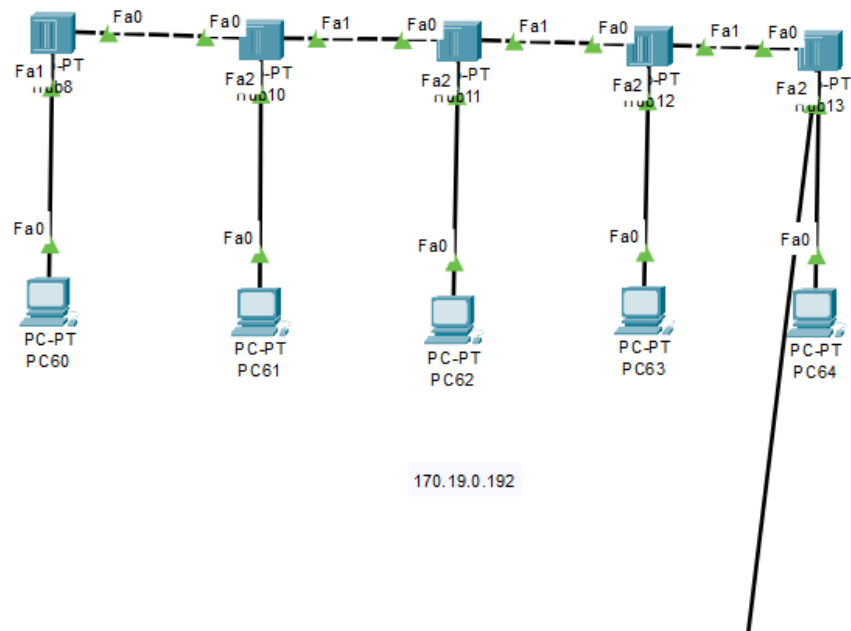
Building 7 has bus topology with 5 computers using hubs.

Assignment of IP's:

For building 1 IP address are for 170.19.0.32 network ID.
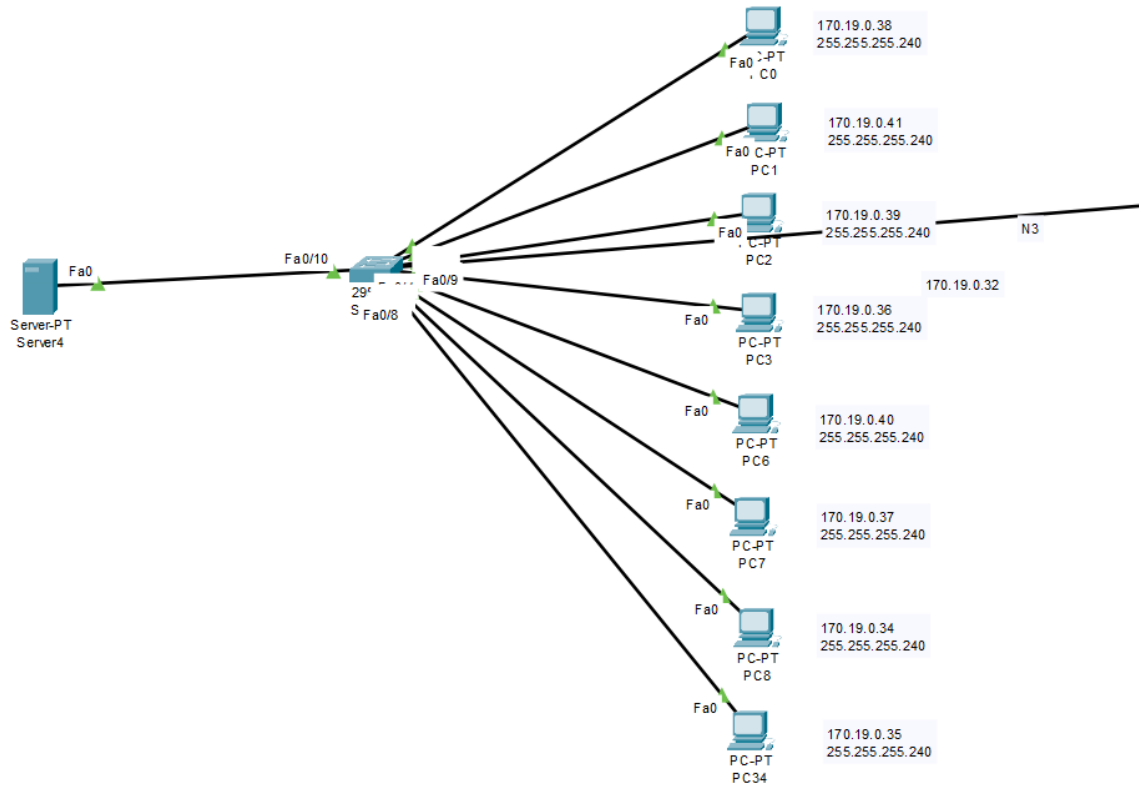
For building 2 IP address are for 170.19.0.64 network ID.
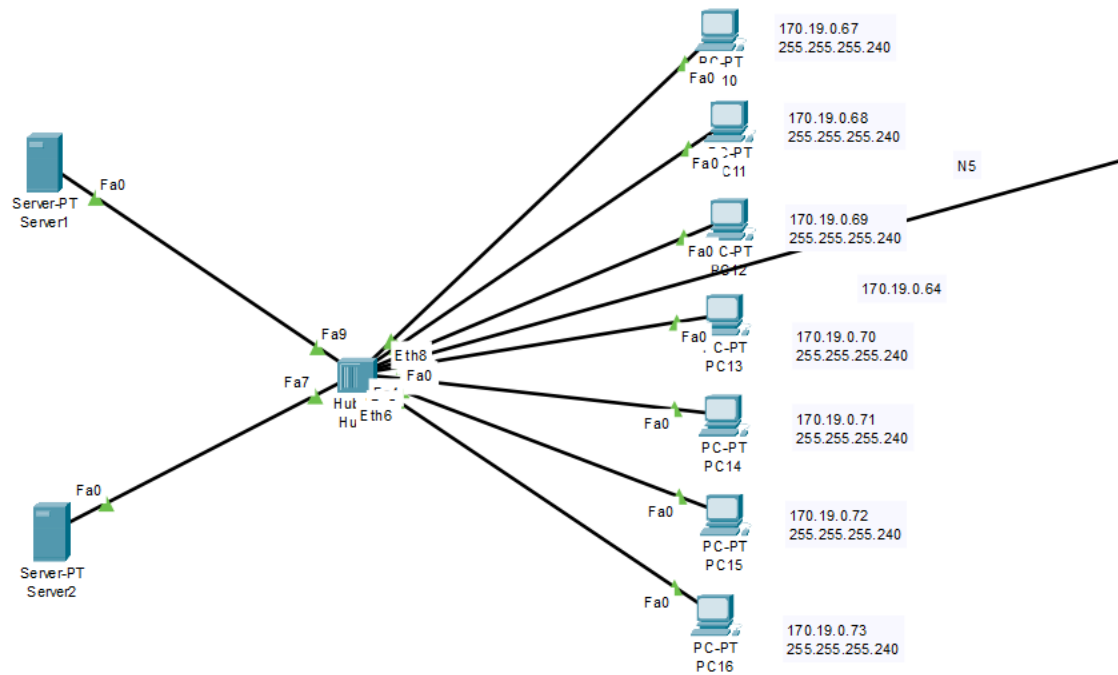
For building 3 IP address are for 170.19.0.96 network ID.
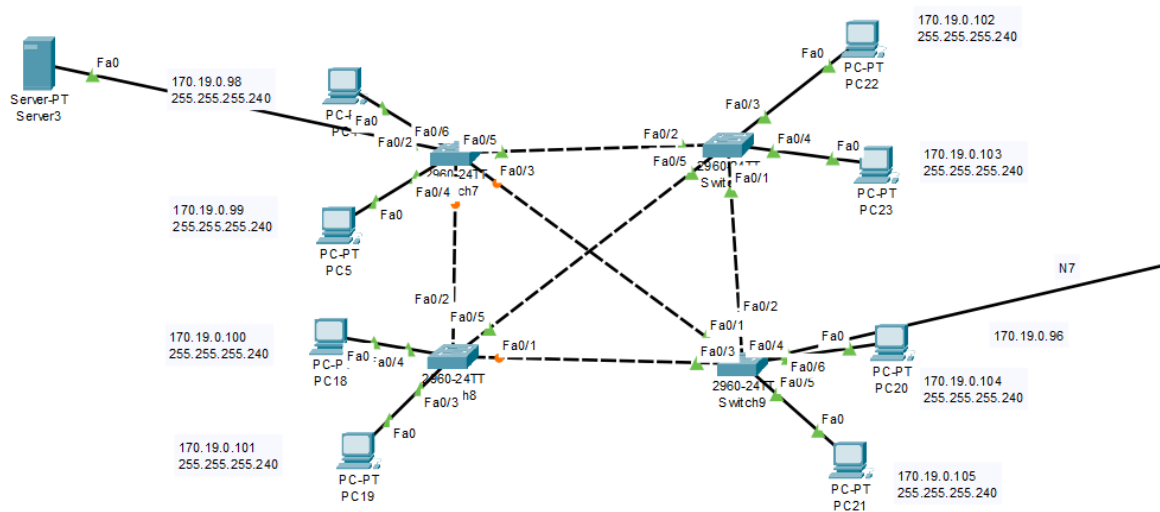
For building 4 IP address are for 170.19.0.128 network ID.
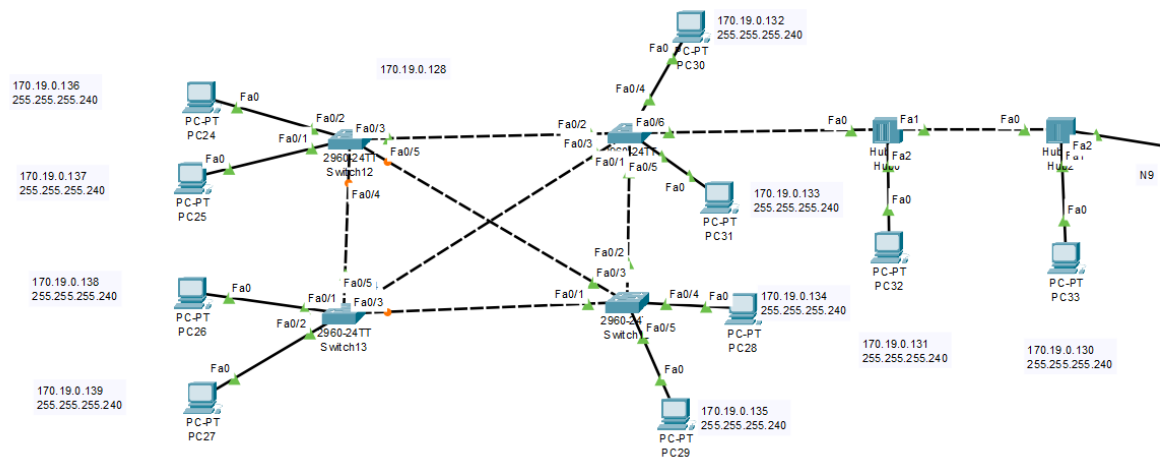
For building 5 IP address are for 170.19.0.160 network ID.
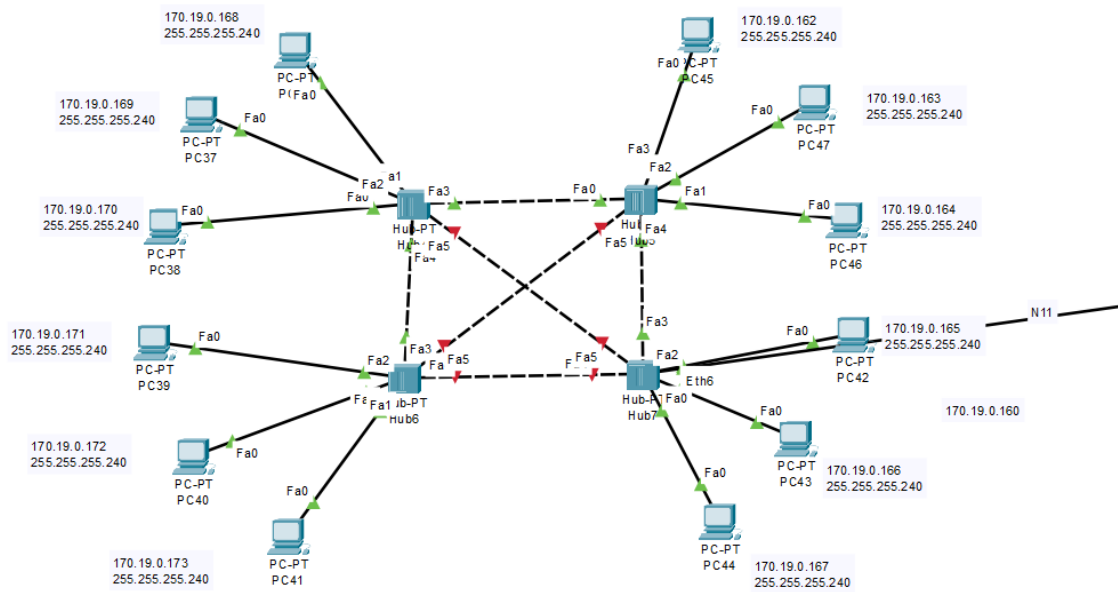
For building 6 IP address are for 170.19.0.0 network ID.
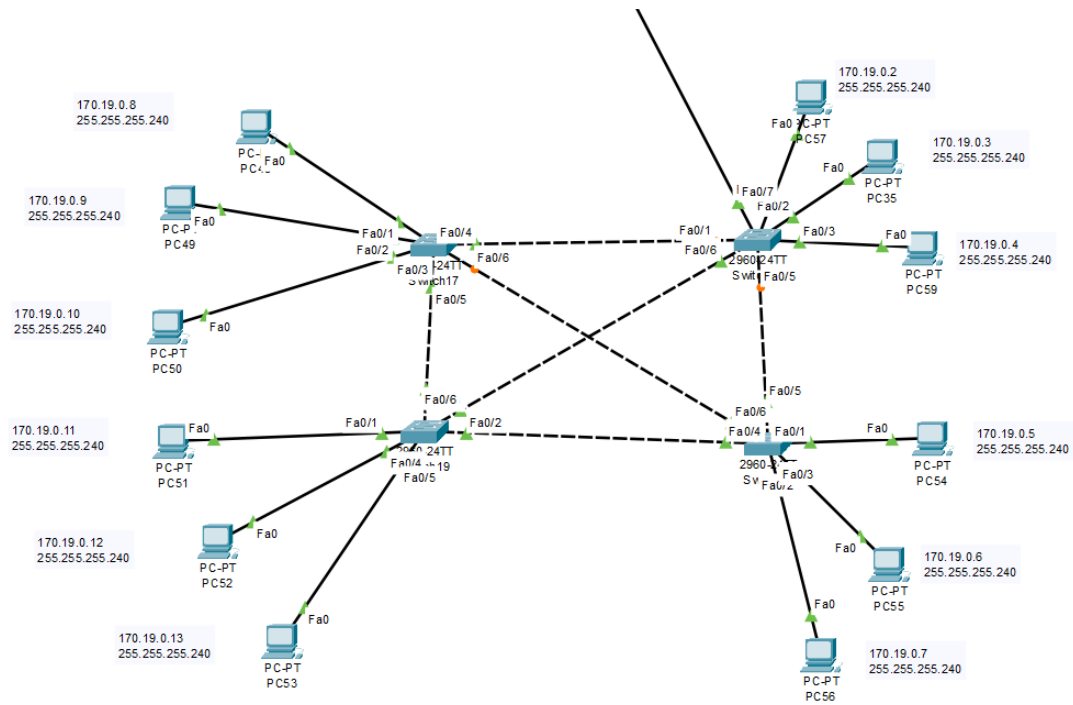
For building 7 IP address are for 170.19.0.192 network ID.
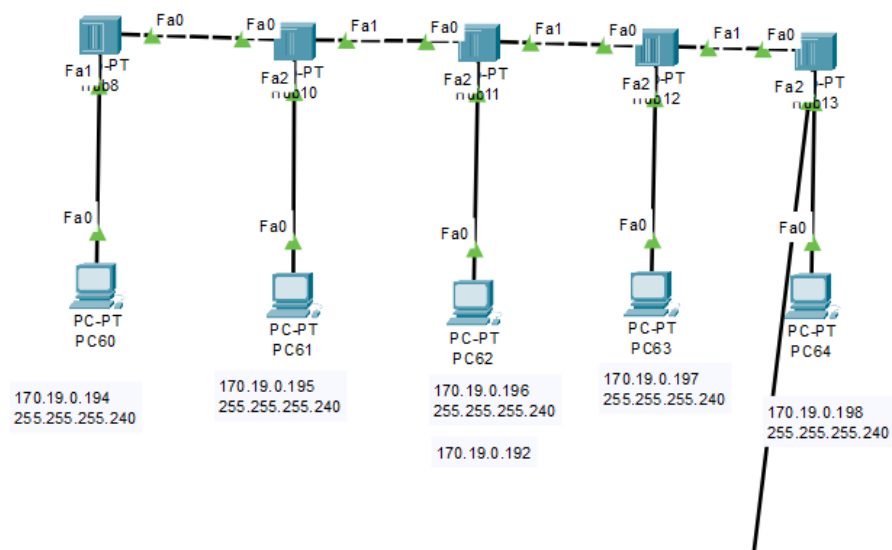
Dynamic routing:

Router 1:

```
Fa0/1                                                                                    R1
                                                                                    2811 Fa0/0
                                                                                    outer6

Device Name: Router6
Custom Device Model: 2811 IOS15
Hostname: Router

Port            Link   VLAN   IP Address        IPv6 Address              MAC Address
FastEthernet0/0 Up     --     170.19.0.1/28     <not set>                 00E0.A3DA.2201
FastEthernet0/1 Up     --     170.19.0.18/28    <not set>                 00E0.A3DA.2202
Ethernet0/0/0   Down   --     <not set>         <not set>                 00D0.BA35.0A41
Ethernet0/1/0   Down   --     <not set>         <not set>                 000A.F3B7.6D63
Ethernet0/2/0   Down   --     <not set>         <not set>                 0002.16D8.6A05
Ethernet0/3/0   Down   --     <not set>         <not set>                 00D0.BA87.B7DA
Vlan1           Down   1      <not set>         <not set>                 0003.E49C.E3E4

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router6
```

Router 2:


```
Device Name: Router5
Custom Device Model: 2811 IOS15
Hostname: Router

Port              Link   VLAN   IP Address        IPv6 Address        MAC Address
FastEthernet0/0   Up     --     170.19.0.17/28    <not set>           0006.2ADD.ED01
FastEthernet0/1   Up     --     170.19.0.33/28    <not set>           0006.2ADD.ED02
Ethernet0/0/0     Down   --     <not set>         <not set>           00E0.8F81.52D3
Ethernet0/1/0     Down   --     <not set>         <not set>           0001.6384.2663
Ethernet0/2/0     Down   --     <not set>         <not set>           00E0.A3DE.DA90
Ethernet0/3/0     Up     --     170.19.0.49/28    <not set>           0002.4A84.BC0D
Vlan1             Down   1      <not set>         <not set>           0006.2A35.702C

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router5
```

GLOBAL	
Settings	
Algorithm Settings	
ROUTING	
Static	
RIP	
SWITCHING	
VLAN Database	
INTERFACE	
FastEthernet0/0	
FastEthernet0/1	
Ethernet0/0/0	
Ethernet0/1/0	
Ethernet0/2/0	
Ethernet0/3/0	

RIP Routing

Network

Add

Network Address

170.19.0.0

Remove

Equivalent IOS Commands

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

%LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/3/0, changed state to up


Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router rip
Router(config-router)#
```

Router 3:


```
170.19.0.10
255.255.255.240                              Fa0

Device Name: Router4
Custom Device Model: 2811 IOS15
Hostname: Router

Port             Link   VLAN   IP Address        IPv6 Address        MAC Address
FastEthernet0/0  Up     --     170.19.0.50/28    <not set>           0001.63D9.4E01
FastEthernet0/1  Up     --     170.19.0.74/28    <not set>           0001.63D9.4E02
Ethernet0/0/0    Down   --     <not set>         <not set>           00E0.F79A.A852
Ethernet0/1/0    Down   --     <not set>         <not set>           0060.4765.84EC
Ethernet0/2/0    Down   --     <not set>         <not set>           0006.2A71.7B36
Ethernet0/3/0    Up     --     170.19.0.81/28    <not set>           0001.6456.D4B6
Vlan1            Down   1      <not set>         <not set>           00E0.8F64.53C5

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router4
```

Router 4:


```
Device Name: Router3
Custom Device Model: 2811 IOS15
Hostname: Router

Port              Link   VLAN   IP Address         IPv6 Address      MAC Address
FastEthernet0/0   Up     --     170.19.0.82/28     <not set>         0001.64AB.0C01
FastEthernet0/1   Up     --     170.19.0.106/28    <not set>         0001.64AB.0C02
Ethernet0/0/0     Down   --     <not set>          <not set>         0090.2197.9CDD
Ethernet0/1/0     Down   --     <not set>          <not set>         0001.C9D7.3D18
Ethernet0/2/0     Down   --     <not set>          <not set>         0010.11E5.A3C8
Ethernet0/3/0     Up     --     170.19.0.113/28    <not set>         00D0.589E.5802
Vlan1             Down   1      <not set>          <not set>         0090.2BA7.846D

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router3
```

Physical   Config   CLI   Attributes

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
Ethernet0/0/0
Ethernet0/1/0
Ethernet0/2/0
Ethernet0/3/0

RIP Routing

Network

Add

Network Address

170.19.0.0

Remove

Equivalent IOS Commands

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

%LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/3/0, changed state to up


Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router rip
Router(config-router)#
```

Router 5:

```
Device Name: Router2
Custom Device Model: 2811 IOS15
Hostname: Router

Port              Link    VLAN    IP Address        IPv6 Address      MAC Address
FastEthernet0/0   Up      --      170.19.0.114/28   <not set>         0009.7C00.C301
FastEthernet0/1   Up      --      170.19.0.129/28   <not set>         0009.7C00.C302
Ethernet0/0/0     Up      --      170.19.0.209/28   <not set>         00D0.BC97.240D
Ethernet0/1/0     Down    --      <not set>         <not set>         0001.42E3.9420
Ethernet0/2/0     Down    --      <not set>         <not set>         0030.F231.40DE
Ethernet0/3/0     Up      --      170.19.0.145/28   <not set>         0060.3EC5.4737
Vlan1             Down    1       <not set>         <not set>         0040.0BBA.09D4

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router2
```

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
Ethernet0/0/0
Ethernet0/1/0
Ethernet0/2/0
Ethernet0/3/0

RIP Routing

Network [   ]   [Add]

Network Address

170.19.0.0

[Remove]

Equivalent IOS Commands

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/3/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/0/0, changed state to up


Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router rip
Router(config-router)#
```

Router 6:

Eth0/3/0 /0

Fa0/1 1
Route

```
Device Name: Router1
Custom Device Model: 2811 IOS15
Hostname: Router

Port              Link   VLAN   IP Address        IPv6 Address      MAC Address
FastEthernet0/0   Up     --     170.19.0.146/28   <not set>         000C.85D4.3E01
FastEthernet0/1   Up     --     170.19.0.161/28   <not set>         000C.85D4.3E02
Ethernet0/0/0     Down   --     <not set>         <not set>         0002.16B5.E4DC
Ethernet0/1/0     Down   --     <not set>         <not set>         0000.0CB8.A1DB
Ethernet0/2/0     Down   --     <not set>         <not set>         00D0.9777.4979
Ethernet0/3/0     Up     --     170.19.0.177/28   <not set>         0001.42CC.EB75
Vlan1             Down   1      <not set>         <not set>         000A.4180.DBCA

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router1
```

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
Ethernet0/0/0
Ethernet0/1/0
Ethernet0/2/0
Ethernet0/3/0

RIP Routing

Network

Add

Network Address

170.19.0.0

Remove

Equivalent IOS Commands

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

%LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/3/0, changed state to up


Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router rip
Router(config-router)#
```

Router 7:

```
Device Name: Router7
Custom Device Model: 2811 IOS15
Hostname: Router

Port              Link    VLAN    IP Address         IPv6 Address      MAC Address
FastEthernet0/0   Up      --      170.19.0.178/28    <not set>         0060.47E3.5C01
FastEthernet0/1   Up      --      170.19.0.193/28    <not set>         0060.47E3.5C02
Ethernet0/0/0     Down    --      <not set>          <not set>         00D0.BA44.AB1B
Ethernet0/1/0     Down    --      <not set>          <not set>         0090.215A.015A
Ethernet0/2/0     Down    --      <not set>          <not set>         0050.0FC6.0779
Ethernet0/3/0     Down    --      <not set>          <not set>         0030.F2A2.D8D8
Vlan1             Down    1       <not set>          <not set>         00D0.BCE1.9B28

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router7
```

N10
N11
N12

Physical   Config   CLI   Attributes

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
Ethernet0/0/0
Ethernet0/1/0
Ethernet0/2/0
Ethernet0/3/0

RIP Routing

Network

Add

Network Address

170.19.0.0

Remove

Equivalent IOS Commands

```
%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


Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router rip
Router(config-router)#
```

DHCP configuration for building 1:

DNS configuration for building 2:

Physical · Config · Desktop · Programming · Attributes

Web Browser [X]

< | > | URL http://hech.com | Go | Stop

welcome to hech's page

HTTP configuration for building 3:

Physical · Config · Desktop · Programming · Attributes

Web Browser [X]

< | > | URL http://170.19.0.97 | Go | Stop

HECH

Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.

Quick Links:
A small page
Copyrights
Image page
Image
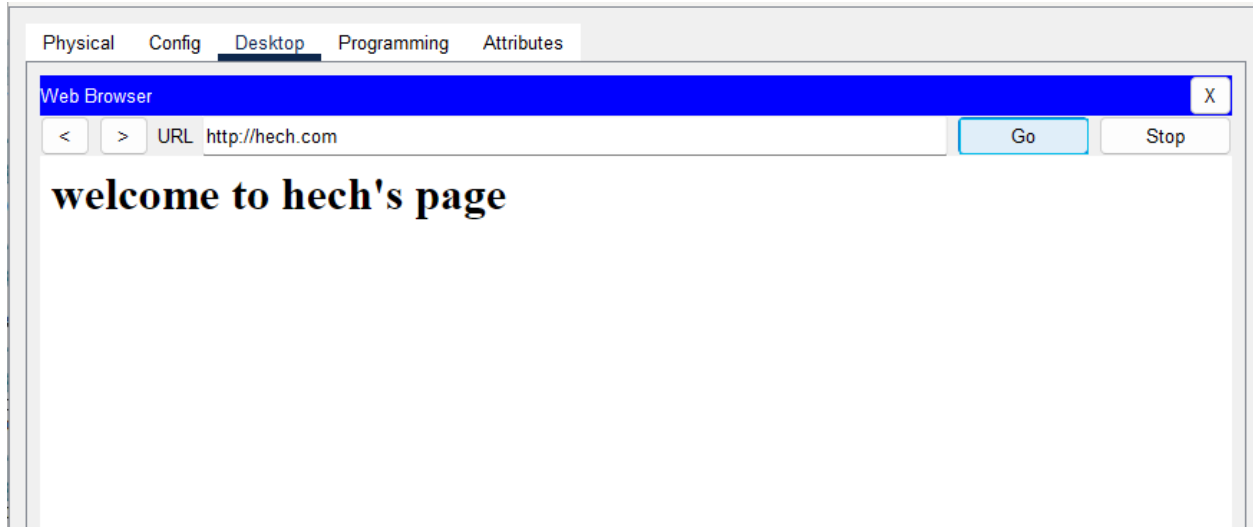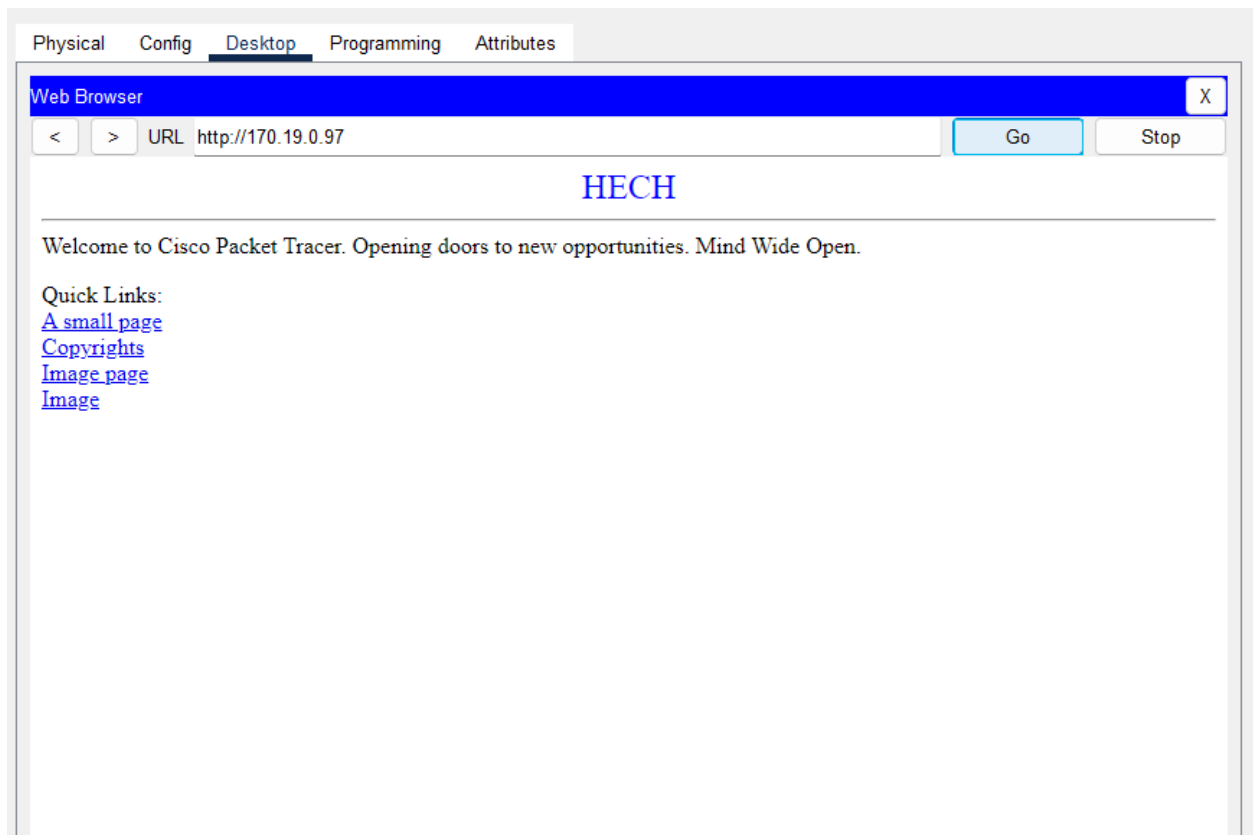
Email configuration for building 4:

	Physical	Config	Desktop	Programming	Attributes

MAIL BROWSER [X]

Mails

Compose	Reply	Receive	Delete	Configure Mail

	From	Subject	Received
1	user10@gmail.com	mhhh	Wed Apr 16 202500:56:07
2	user9@gmail.com	mhhh	Wed Apr 16 202500:54:18
3	user3@gmail.com	mambo	Wed Apr 16 202500:34:57
4	user2@gmail.com	hello	Wed Apr 16 202500:30:19
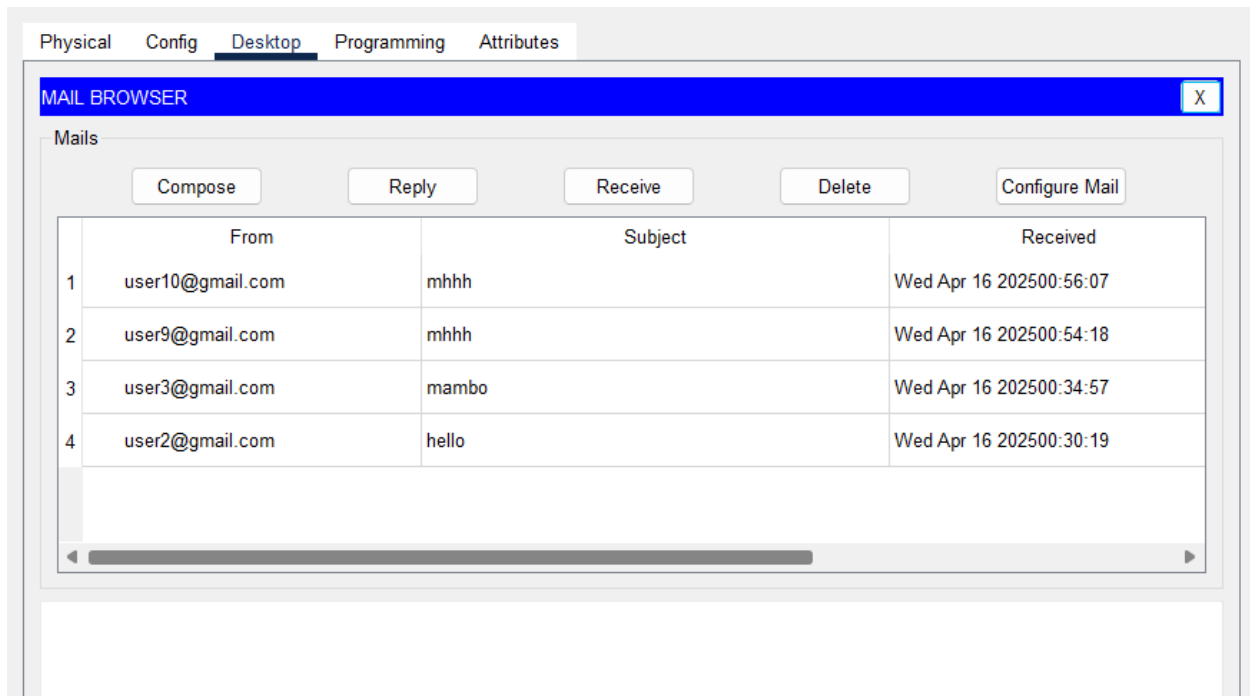
Communication across different networks:

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete	
	Successful	PC1	PC6	ICMP		0.000	N	0	(edit)		(delete)
	Successful	PC7	PC10	ICMP		0.000	N	1	(edit)		(delete)
	Successful	PC10	PC22	ICMP		0.000	N	2	(edit)		(delete)

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete	
	Successful	PC1	PC64	ICMP		0.000	N	0	(edit)		(delete)
	Successful	PC1	PC46	ICMP		0.000	N	1	(edit)		(delete)
	Successful	PC47	PC57	ICMP		0.000	N	2	(edit)		(delete)