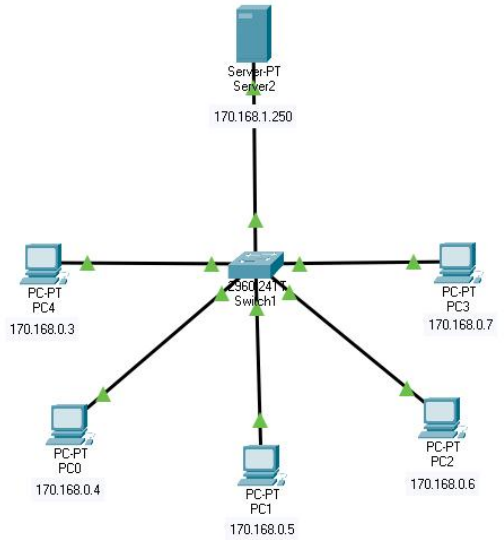
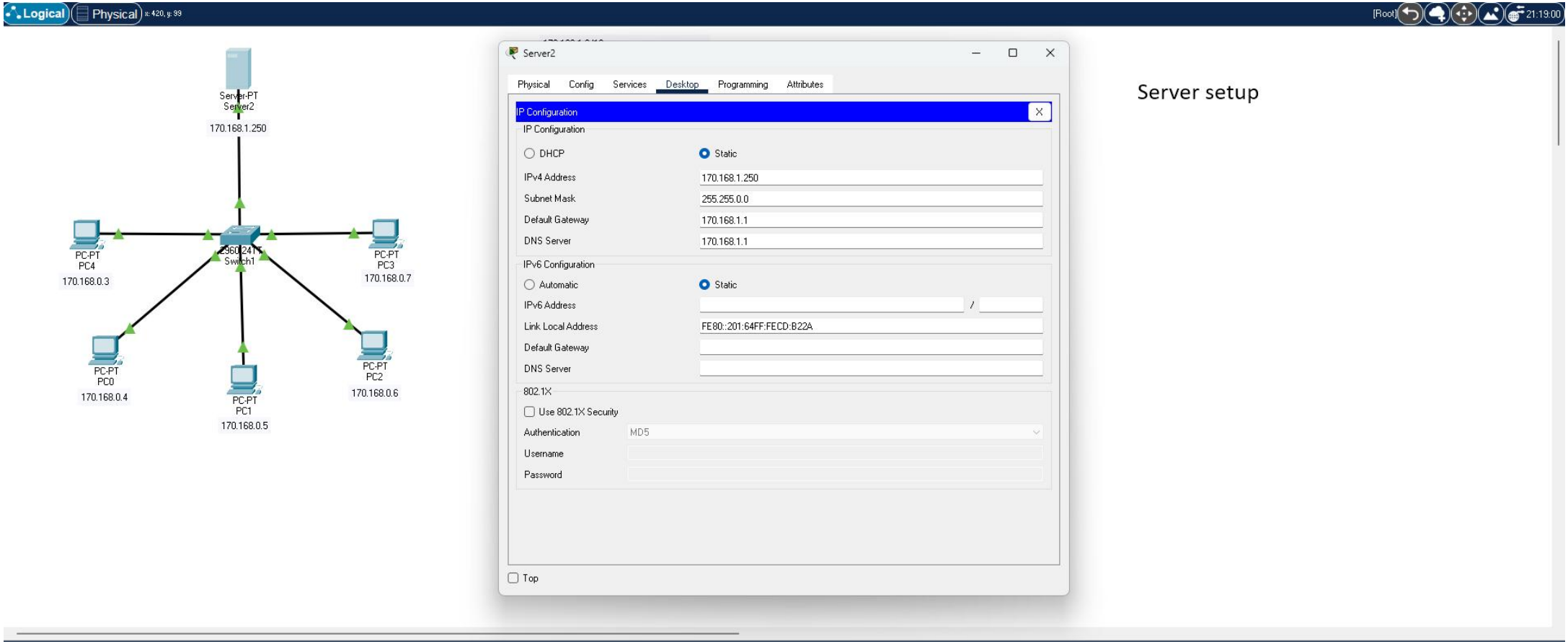


170.168.1.0/16
11111111.11111111.00000000.00000000

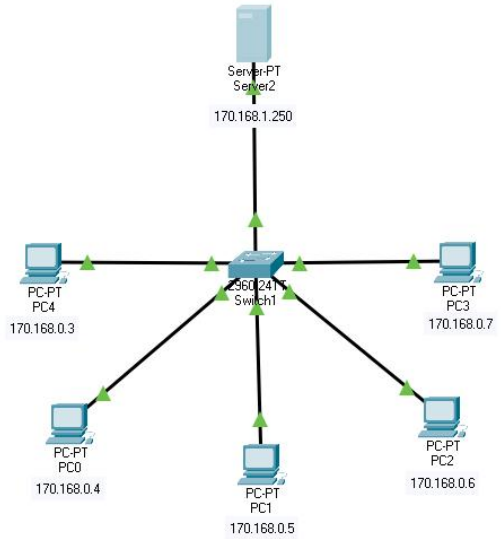
Gateway: 170.168.1.1
Dns: 170.168.1.1

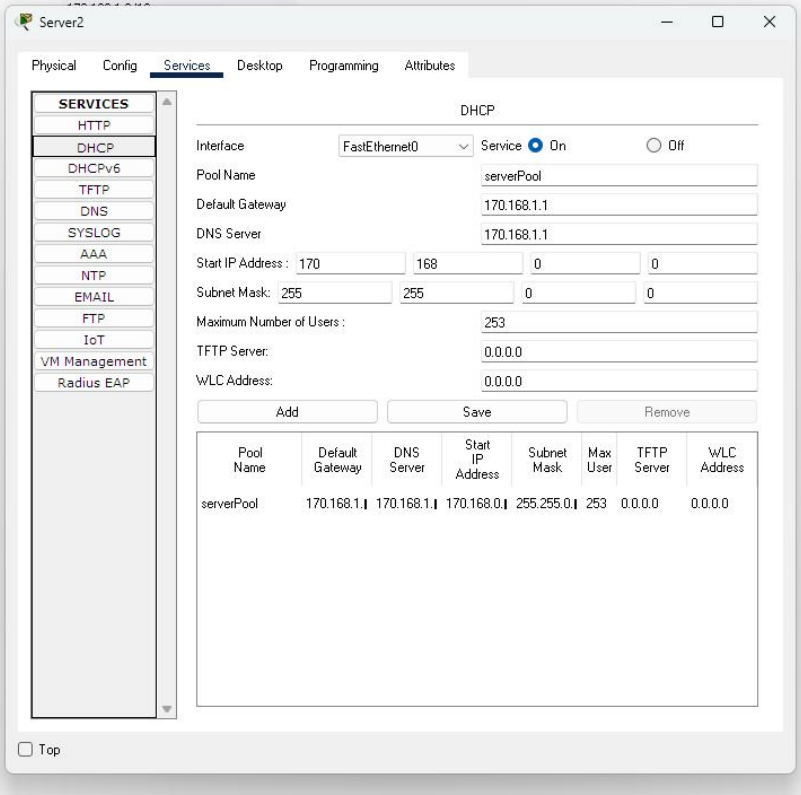
Overview

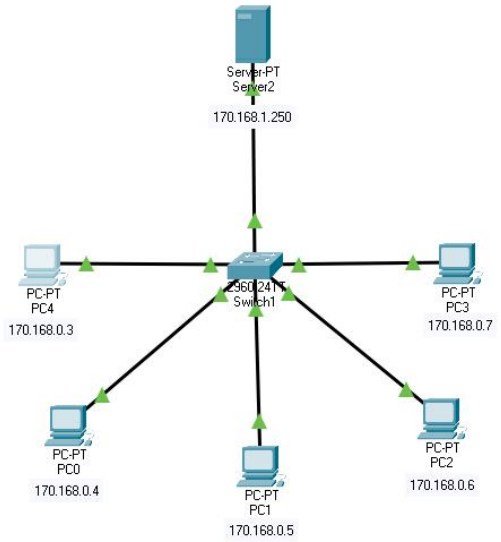


Server setup

Server setup 2







170.168.1.0/16
11111111.11111111.00000000.00000000

Gateway: 170.168.1.1
Dns: 170.168.1.1

PC4

Physical | Config | Desktop | Programming | Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

DHCP | Static | DHCP request successful.

IPv4 Address: 170.168.0.3
Subnet Mask: 255.255.0.0
Default Gateway: 170.168.1.1
DNS Server: 170.168.1.1

IPv6 Configuration

Automatic | Static

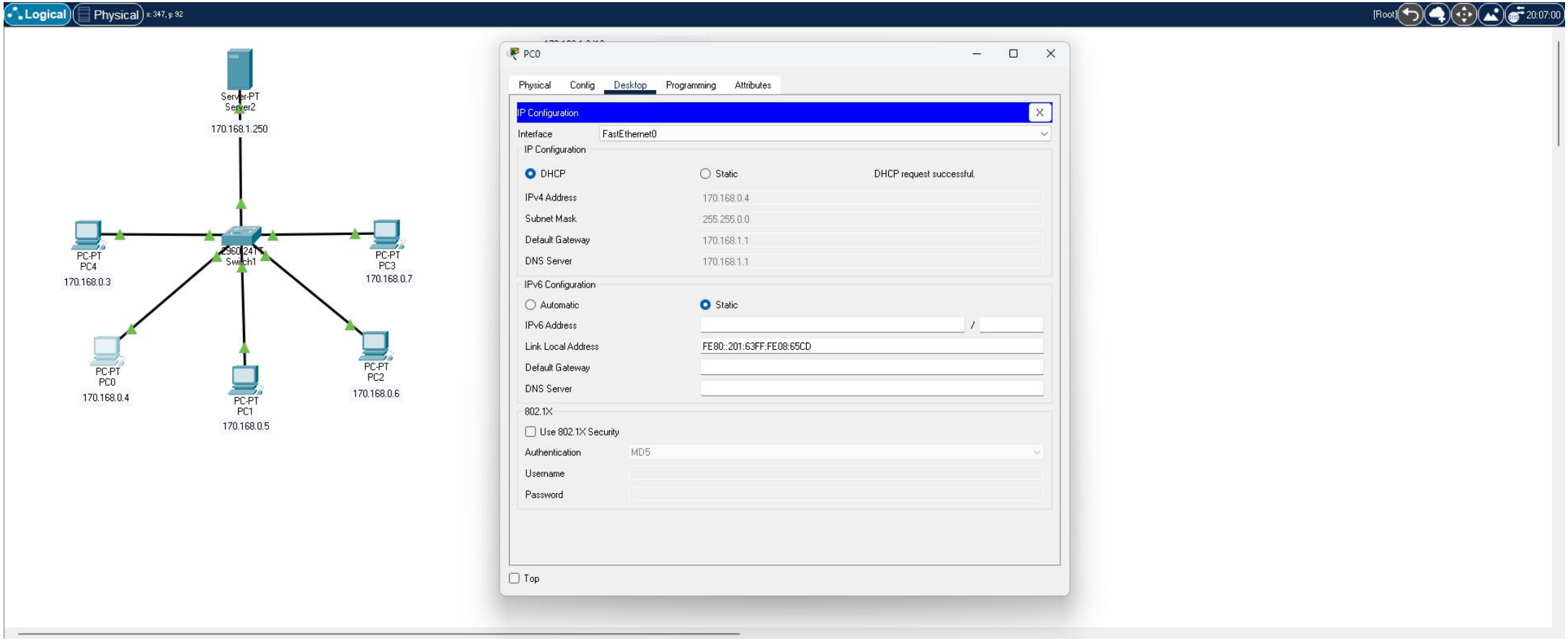
IPv6 Address: /
Link Local Address: FE80::2D0:58FF:FE26:D15B
Default Gateway:
DNS Server:

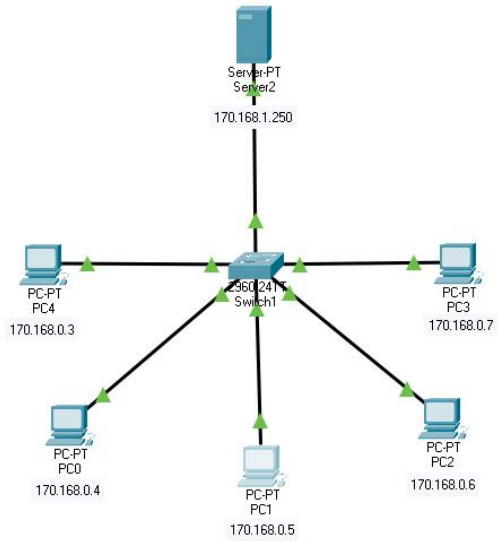
802.1X

Use 802.1X Security

Authentication: MD5
Username:
Password:

Top


Logical
Physical
x: 347, y: 92
[Root]
20:07:00
Server-PT
Server2
170.168.1.250
2960-24TT
Switch1
PC-PT
PC4
170.168.0.3
PC-PT
PC3
170.168.0.7
PC-PT
PC0
170.168.0.4
PC-PT
PC1
170.168.0.5
PC-PT
PC2
170.168.0.6
PC0
Physical
Config
Desktop
Programming
Attributes
IP Configuration
Interface
FastEthernet0
IP Configuration
DHCP
Static
DHCP request successful.
IPv4 Address
170.168.0.4
Subnet Mask
255.255.0.0
Default Gateway
170.168.1.1
DNS Server
170.168.1.1
IPv6 Configuration
Automatic
Static
IPv6 Address
Link Local Address
FE80::201:63FF:FE08:65CD
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password
Top



170.168.1.0/16
11111111.11111111.00000000.00000000

Gateway: 170.168.1.1
Dns: 170.168.1.1

PC1

Physical | Config | Desktop | Programming | Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

DHCP | Static | DHCP request successful.

IPv4 Address: 170.168.0.5
Subnet Mask: 255.255.0.0
Default Gateway: 170.168.1.1
DNS Server: 170.168.1.1

IPv6 Configuration

Automatic | Static

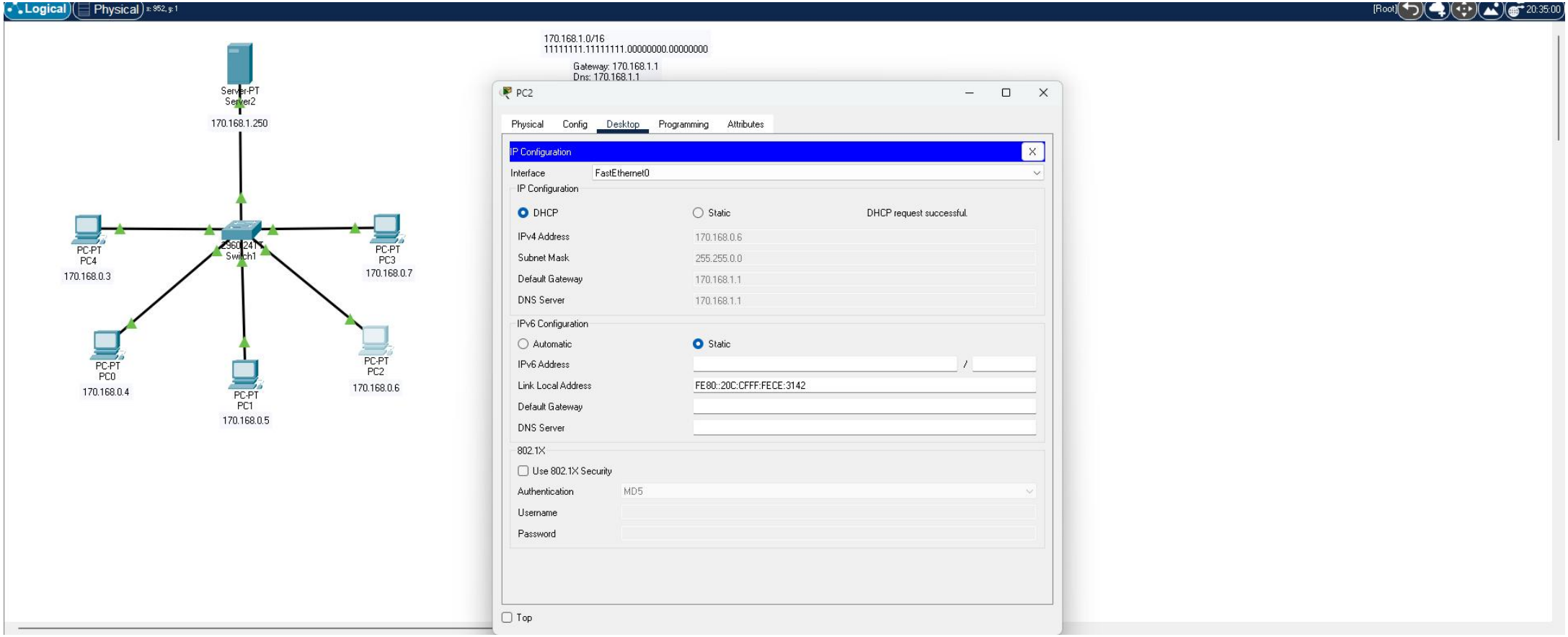
IPv6 Address: /
Link Local Address: FE80::201:43FF:FE29:1ADB
Default Gateway:
DNS Server:

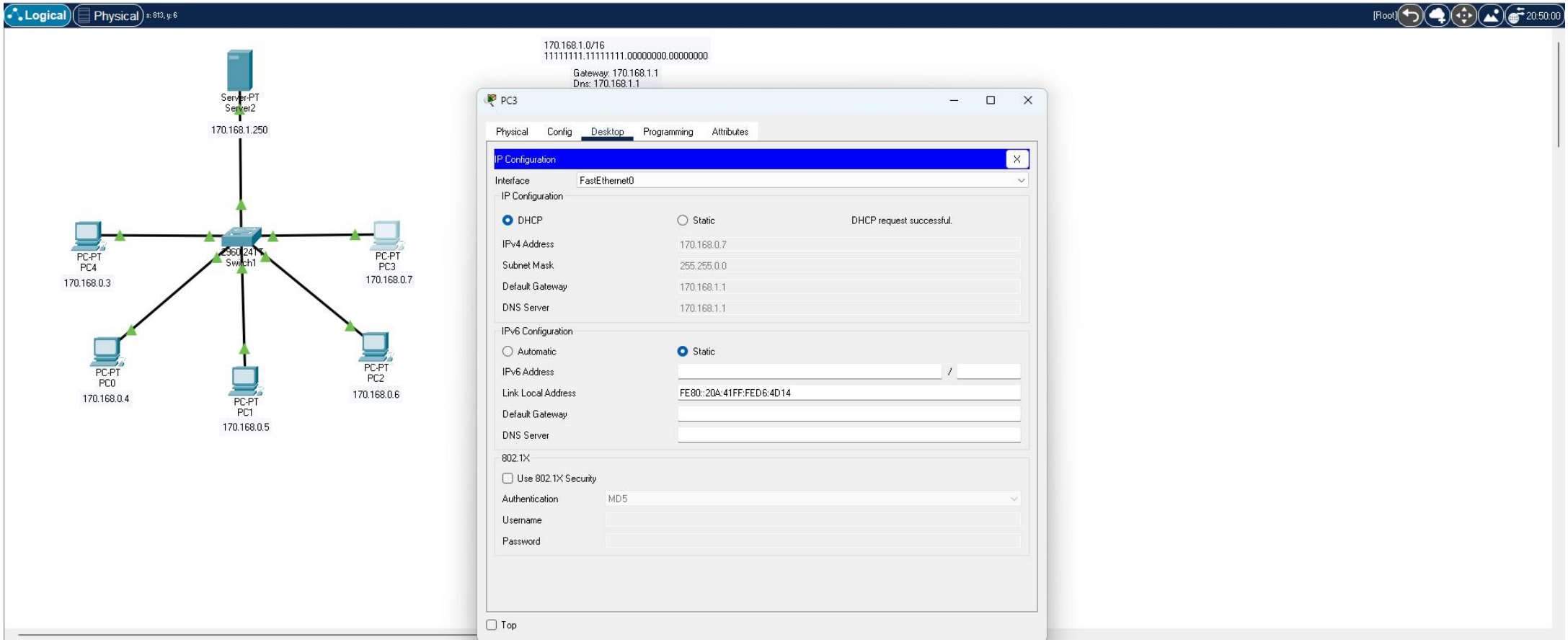
802.1X

Use 802.1X Security

Authentication: MD5
Username:
Password:

Top


Logical
Physical
x: 952, y: 1
[Root]
20:35:00
Server-PT
Server2
170.168.1.250
PC-PT
PC4
170.168.0.3
2960-24TT
Switch1
PC-PT
PC3
170.168.0.7
PC-PT
PC0
170.168.0.4
PC-PT
PC1
170.168.0.5
PC-PT
PC2
170.168.0.6
170.168.1.0/16
11111111.11111111.00000000.00000000
Gateway: 170.168.1.1
Dns: 170.168.1.1
PC2
Physical
Config
Desktop
Programming
Attributes
IP Configuration
Interface
FastEthernet0
IP Configuration
DHCP
Static
DHCP request successful.
IPv4 Address
170.168.0.6
Subnet Mask
255.255.0.0
Default Gateway
170.168.1.1
DNS Server
170.168.1.1
IPv6 Configuration
Automatic
Static
IPv6 Address
Link Local Address
FE80::20C:CFFF:FECE:3142
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password
Top


Logical
Physical
x: 813, y: 6
[Root]
20:50:00
170.168.1.0/16
11111111.11111111.00000000.00000000
Gateway: 170.168.1.1
Dns: 170.168.1.1
Server-PT
Server2
170.168.1.250
2960-24TT
Switch1
PC-PT
PC4
170.168.0.3
PC-PT
PC3
170.168.0.7
PC-PT
PC0
170.168.0.4
PC-PT
PC1
170.168.0.5
PC-PT
PC2
170.168.0.6
PC3
Physical
Config
Desktop
Programming
Attributes
IP Configuration
Interface
FastEthernet0
IP Configuration
DHCP
Static
DHCP request successful.
IPv4 Address
170.168.0.7
Subnet Mask
255.255.0.0
Default Gateway
170.168.1.1
DNS Server
170.168.1.1
IPv6 Configuration
Automatic
Static
IPv6 Address
Link Local Address
FE80::20A:41FF:FED6:4D14
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password
Top

Spiegazione del DHCP Teorico e applicativo.

Il DHCP è un protocollo di rete Che assegna dinamicamente gli indirizzi IP e tutto il necessario per potersi collegare alla rete (Gateway/DNS/SM). Permette di non rimanere mai senza IP Locali disponibili ed inoltre facilita la gestione della rete evitando configurazioni manuali. Ma fa anche in modo che non ci siano due dispositivi con la stessa configurazione evitando conflitti. Questi indirrizzi assegnati hanno un lease e vengono riassegnati dopo un determinato tempo massimo.

Quando un dispositivo si connette partono le 4 fasi principali del DHCP, Per iniziare invia un messaggio di broadcast per cercare un server DHCP disponibile (Discovery).
Dopodichè Il server Propone una configurazione adatta (Offer) Che viene nuovamente controllata dal client se non già presente sulla linea inviando un ping all'indirizzo proposto dal server.
Se l'ip è libero Il client risponde per accettare l'offerta, Richiedendo in lease l'indirizzo ip (Request) e il server conferma l'assegnazione specificando al client quando dovrà essere rinnovato/scade, Asseggnando la configurazione stabilita (acknowledgement).