

Sommario

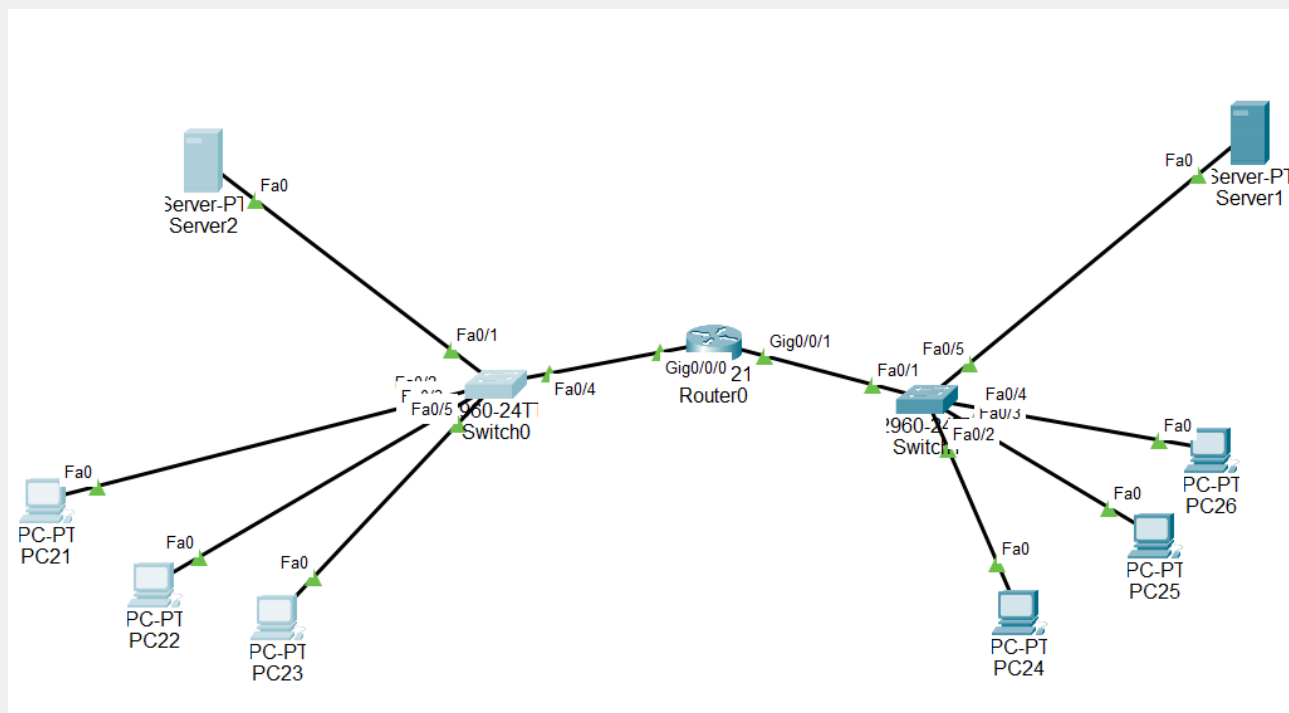
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1. Progetto

Esercizio di oggi: Configurazione di un Server DHCP su Cisco Packet Tracer Obiettivo: Configurare un server DHCP per la distribuzione automatica degli indirizzi IP. Attività:

- Installare e configurare un server DHCP (Cisco Packet Tracer).
- Configurare il server per assegnare indirizzi IP in un range specifico.

2. Svolgimento



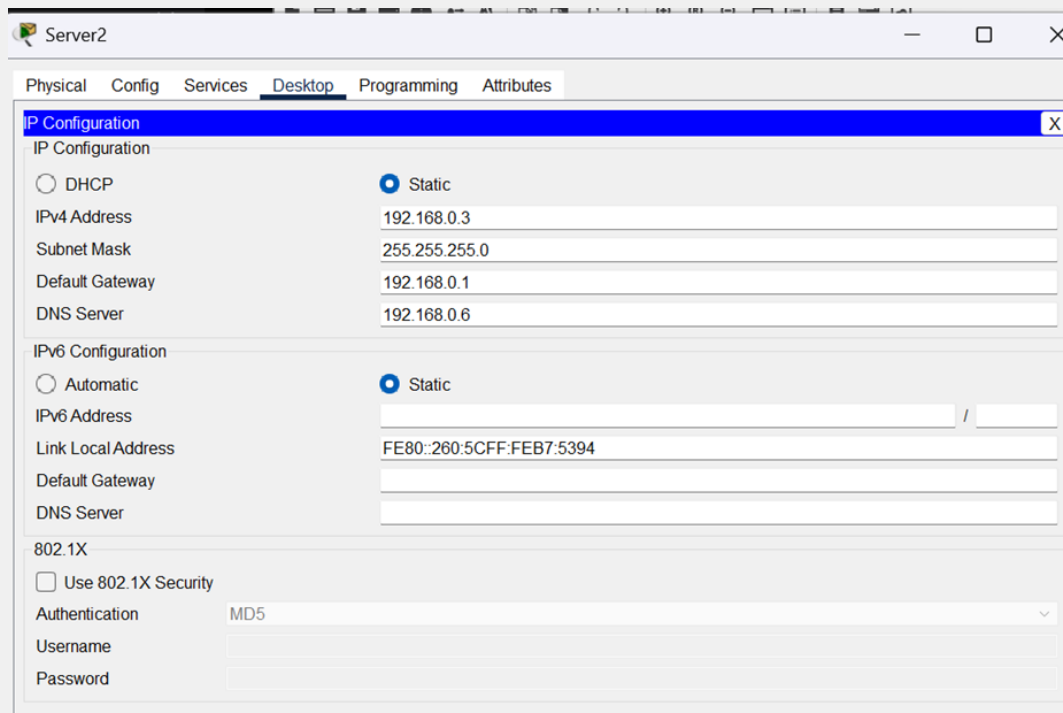
Sono state create due reti collegate tramite un router centrale. Le due reti sono composte da tre PC e un server che gestirà la configurazione del Dynamic Host Configuration Protocol (DHCP).

- **Rete a destra:**
 - Indirizzo di rete: 192.168.0.0
 - Indirizzo del gateway: 192.168.0.1
 - Maschera di sottorete: 255.255.255.0
- **Rete a sinistra:**
 - Indirizzo di rete: 192.168.1.0
 - Indirizzo del gateway: 192.168.1.1
 - Maschera di sottorete: 255.255.255.0

2.1 Configurazione Server

Il server è stato configurato per assegnare indirizzi IP in un intervallo specifico.

Configurazione server 2 (rete a sinistra)



Server2

Physical Config Services **Desktop** Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IPv4 Address: 192.168.0.3

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.0.1

DNS Server: 192.168.0.6

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address: /

Link Local Address: FE80::260:5CFF:FE7B:5394

Default Gateway:

DNS Server:

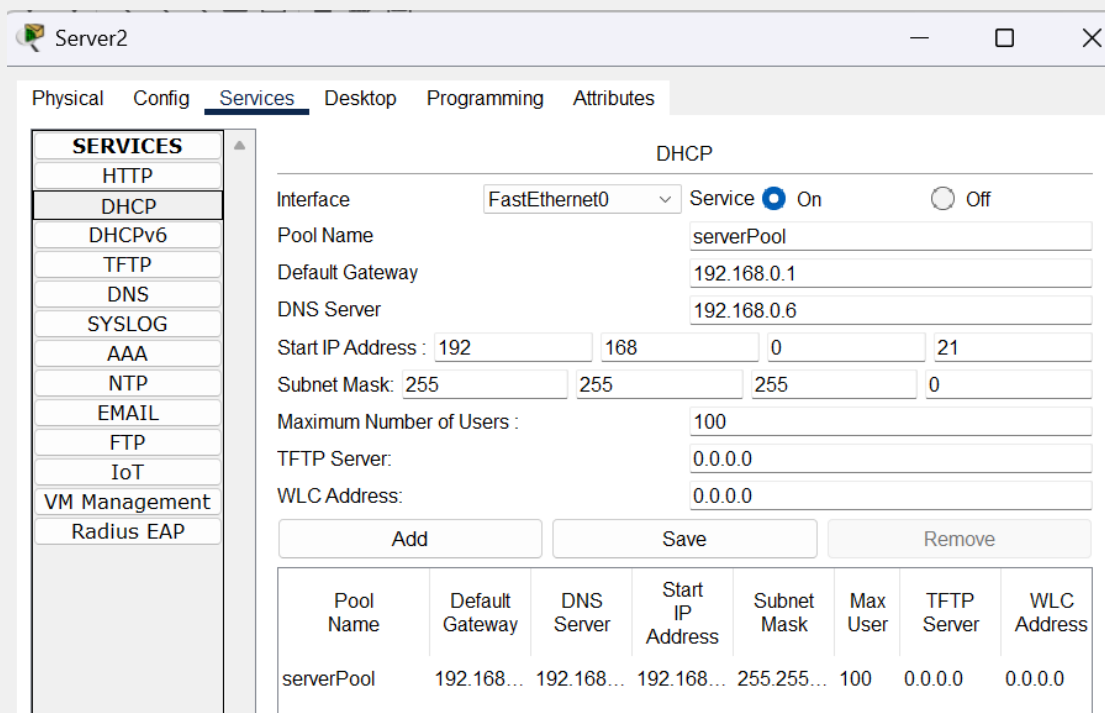
802.1X

☐ Use 802.1X Security

Authentication: MD5

Username:

Password:



Server2

Physical Config **Services** Desktop Programming Attributes

SERVICES

HTTP

DHCP

DHCPv6

TFTP

DNS

SYSLOG

AAA

NTP

EMAIL

FTP

IoT

VM Management

Radius EAP

DHCP

Interface: FastEthernet0 Service: ☒ On ☐ Off

Pool Name: serverPool

Default Gateway: 192.168.0.1

DNS Server: 192.168.0.6

Start IP Address: 192 168 0 21

Subnet Mask: 255 255 255 0

Maximum Number of Users: 100

TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

Add Save Remove

| Pool Name | Default Gateway | DNS Server | Start IP Address | Subnet Mask | Max User | TFTP Server | WLC Address |
|------------|-----------------|------------|------------------|-------------|----------|-------------|-------------|
| serverPool | 192.168... | 192.168... | 192.168... | 255.255... | 100 | 0.0.0.0 | 0.0.0.0 |

Configurazione server 1 (rete a destra)

Server1

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP**
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

DHCP

Interface: FastEthernet0 Service: ☒ On ☐ Off

Pool Name: serverPool

Default Gateway: 192.168.1.1

DNS Server: 0.0.0.0

Start IP Address: 192 168 1 21

Subnet Mask: 255 255 255 0

Maximum Number of Users: 100

TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

Add Save Remove

| Pool Name | Default Gateway | DNS Server | Start IP Address | Subnet Mask | Max User | TFTP Server | WLC Address |
|------------|-----------------|------------|------------------|---------------|----------|-------------|-------------|
| serverPool | 192.168.1.1 | 0.0.0.0 | 192.168.1.21 | 255.255.255.0 | 100 | 0.0.0.0 | 0.0.0.0 |

Server1

Physical Config Services **Desktop** Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IPv4 Address: 192.168.1.2

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.1

DNS Server: 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address: /

Link Local Address: FE80::260:3EFF:FE89:72AA

Default Gateway:

DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

Username:

Password:

Configurazione PC

Impostare in IP Configuration la voce DHCP, invece di 'Static'

PC21

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address: 192.168.0.21

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.0.1

DNS Server: 192.168.0.6

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address: /

Link Local Address: FE80::20C:85FF:FE1C:7E0A

Default Gateway:

DNS Server:

802.1X

☐ Use 802.1X Security

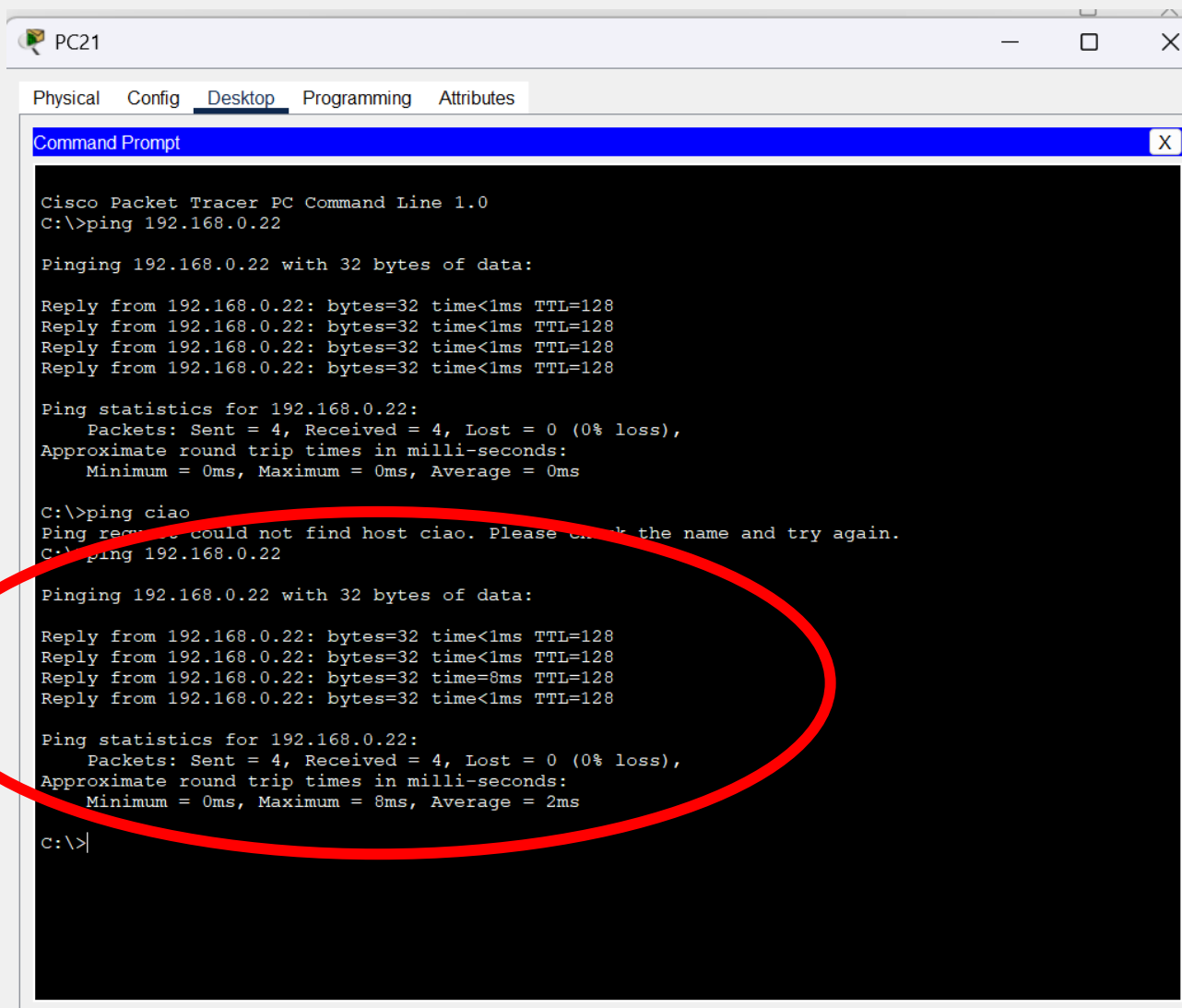
Authentication: MD5

Username:

Password:

Solito gius

Ping da PC21 (IP 192.168.0.21, rete a sinistra) a PC22 (IP 192.168.0.22, stessa rete):
I PC risultano collegati.



```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.22

Pinging 192.168.0.22 with 32 bytes of data:

Reply from 192.168.0.22: bytes=32 time<1ms TTL=128
Reply from 192.168.0.22: bytes=32 time<1ms TTL=128
Reply from 192.168.0.22: bytes=32 time<1ms TTL=128
Reply from 192.168.0.22: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.22:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping ciao
Ping request could not find host ciao. Please check the name and try again.
C:\>ping 192.168.0.22

Pinging 192.168.0.22 with 32 bytes of data:

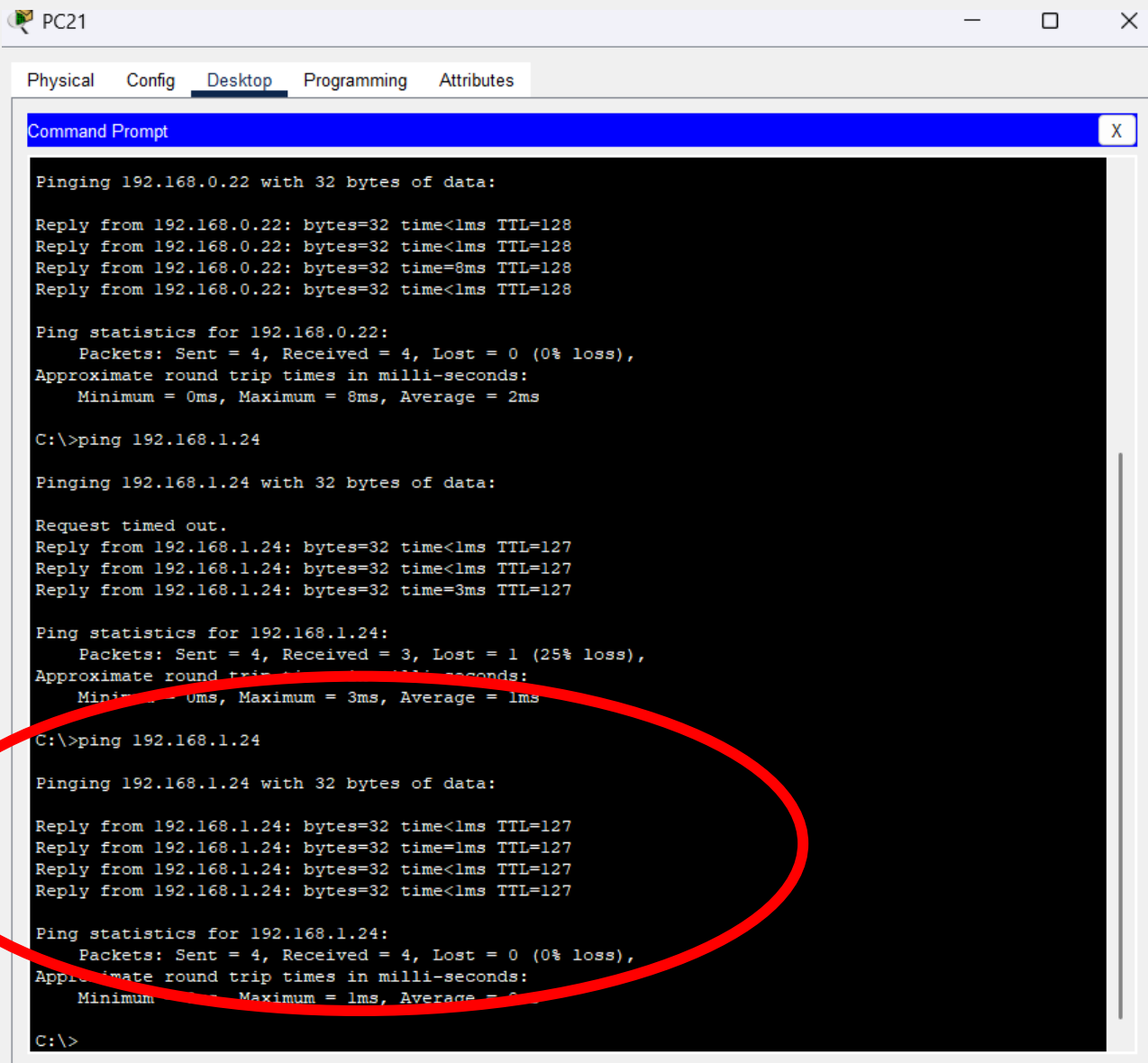
Reply from 192.168.0.22: bytes=32 time<1ms TTL=128
Reply from 192.168.0.22: bytes=32 time<1ms TTL=128
Reply from 192.168.0.22: bytes=32 time=8ms TTL=128
Reply from 192.168.0.22: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.22:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 8ms, Average = 2ms

C:\>|
```

Solito g. f.

Ping da PC21 (IP 192.168.0.21, rete a sinistra) a PC26 (IP 192.168.1.24, rete a destra):
I PC risultano collegati.



```
PC21
Physical Config Desktop Programming Attributes
Command Prompt
Pinging 192.168.0.22 with 32 bytes of data:
Reply from 192.168.0.22: bytes=32 time<1ms TTL=128
Reply from 192.168.0.22: bytes=32 time<1ms TTL=128
Reply from 192.168.0.22: bytes=32 time=8ms TTL=128
Reply from 192.168.0.22: bytes=32 time<1ms TTL=128
Ping statistics for 192.168.0.22:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 8ms, Average = 2ms
C:\>ping 192.168.1.24
Pinging 192.168.1.24 with 32 bytes of data:
Request timed out.
Reply from 192.168.1.24: bytes=32 time<1ms TTL=127
Reply from 192.168.1.24: bytes=32 time<1ms TTL=127
Reply from 192.168.1.24: bytes=32 time=3ms TTL=127
Ping statistics for 192.168.1.24:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 1ms
C:\>ping 192.168.1.24
Pinging 192.168.1.24 with 32 bytes of data:
Reply from 192.168.1.24: bytes=32 time<1ms TTL=127
Reply from 192.168.1.24: bytes=32 time<1ms TTL=127
Reply from 192.168.1.24: bytes=32 time<1ms TTL=127
Reply from 192.168.1.24: bytes=32 time<1ms TTL=127
Ping statistics for 192.168.1.24:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
C:\>
```