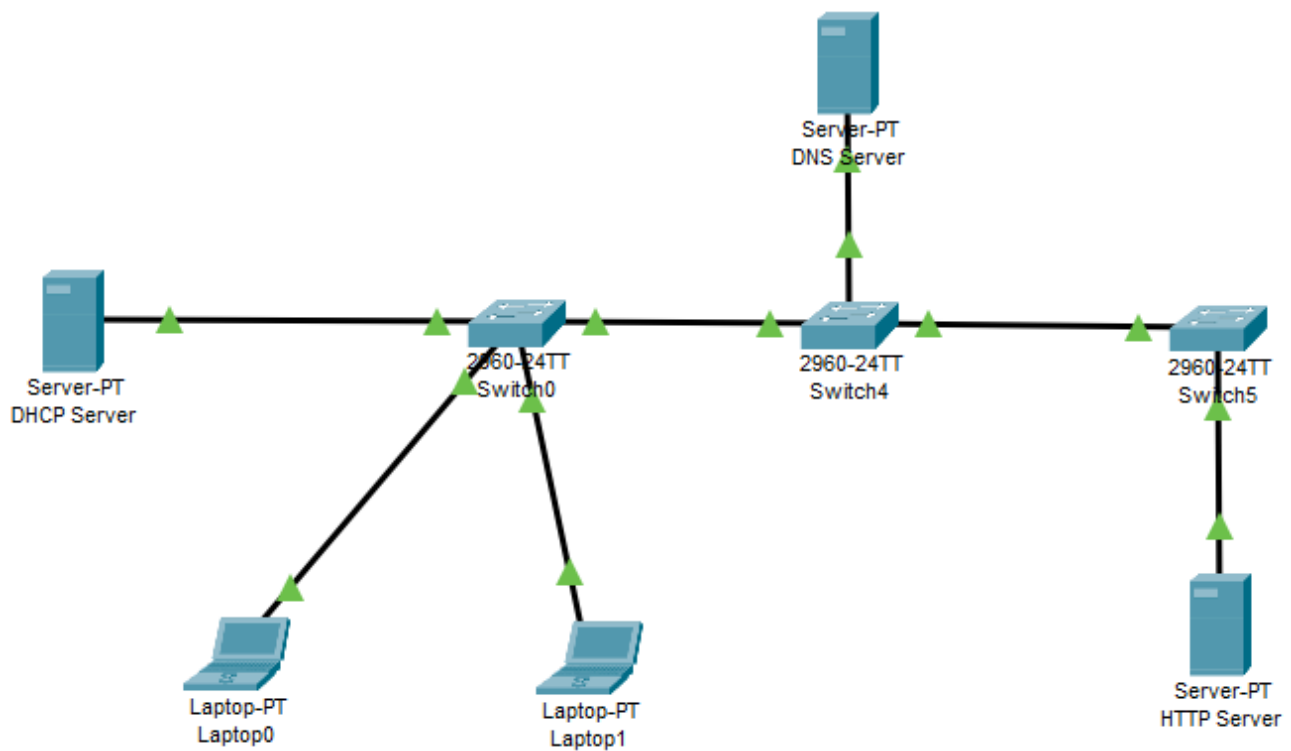


Configurazione di una rete con server DNS, HTTP e DHCP



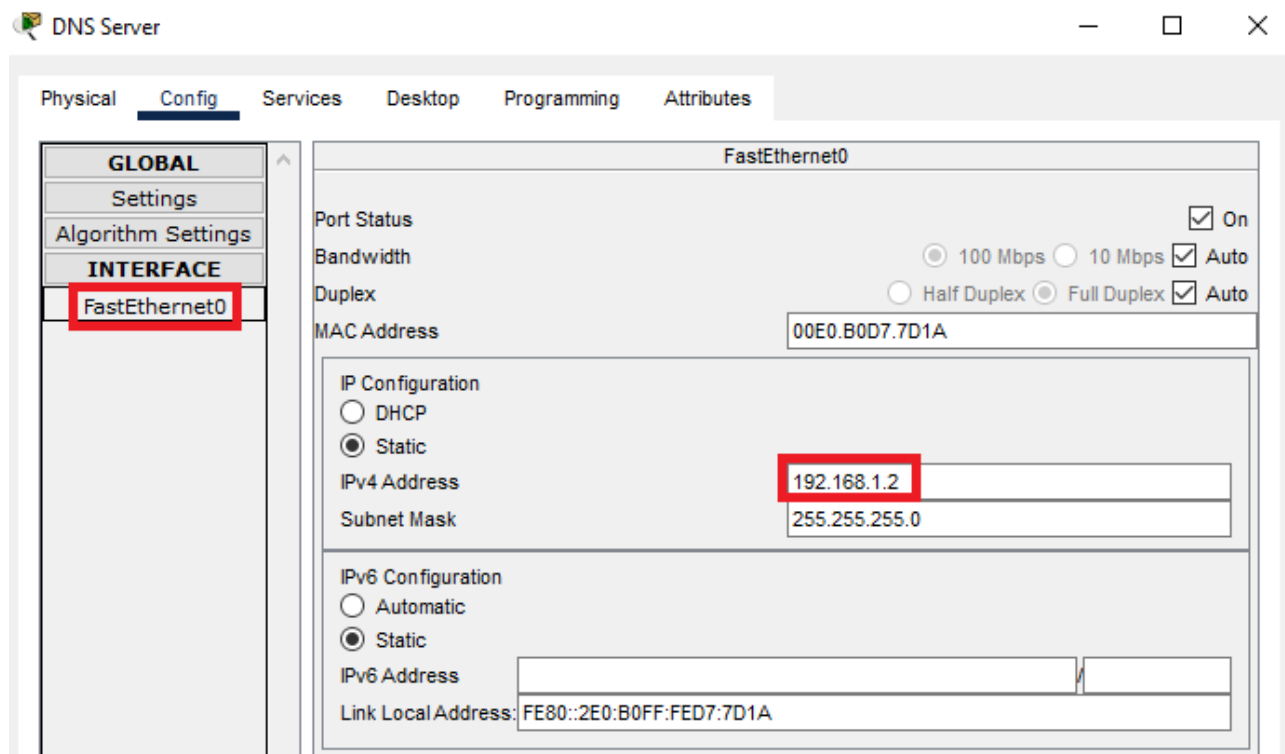
Software utilizzato: Cisco Packet Tracer

Composizione rete:

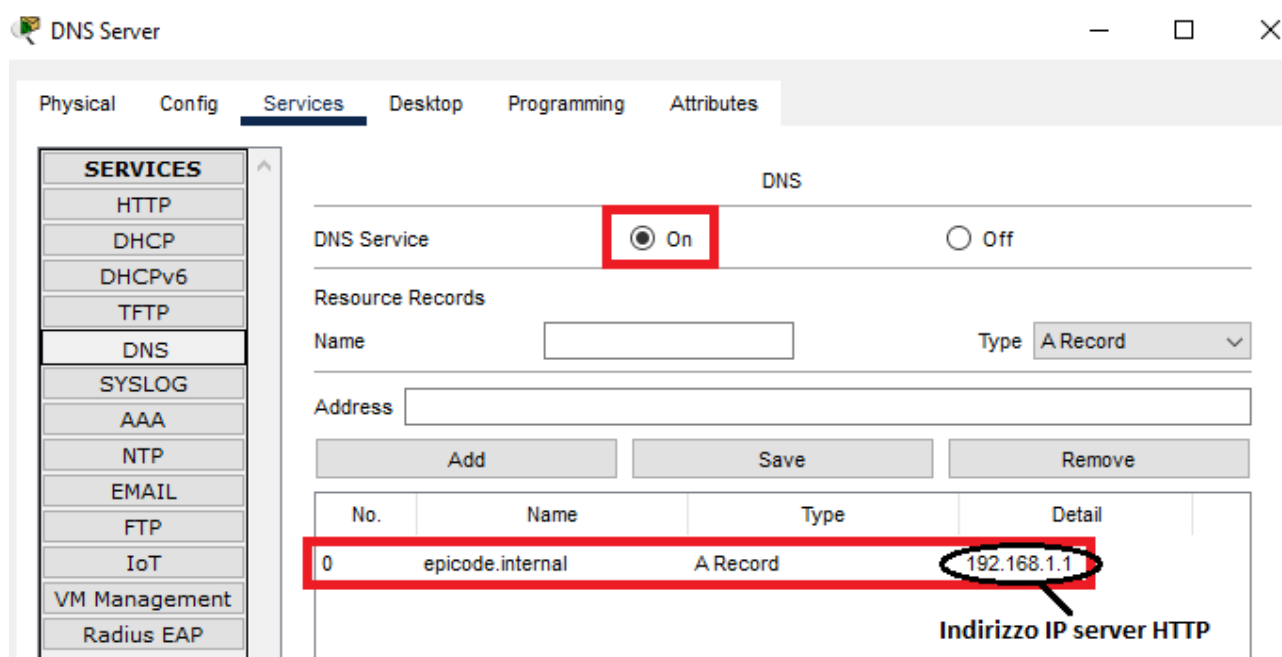
- 1 Server HTTP
- 1 Server DNS
- 1 Server DHCP
- 2 PC Laptop
- 3 Switch 2960-24TT

1. Configurazione dei Server con indirizzi IP statici

1.1 Configurazione Server DNS



1.1.1 Configurazione di un "Record A" con nome **epicode.internal** associato all'indirizzo IP del server HTTP



1.2 Configurazione Server HTTP

HTTP Server

Physical **Config** Services Desktop Programming Attributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

FastEthernet0

FastEthernet0

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 000C.858A.9ACC

IP Configuration

☐ DHCP

☒ Static

IPv4 Address 192.168.1.1

Subnet Mask 255.255.255.0

IPv6 Configuration

☐ Automatic

☒ Static

IPv6 Address

Link Local Address: FE80::20C:85FF:FE8A:9ACC

HTTP Server

Physical **Config** Services Desktop Programming Attributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

FastEthernet0

Global Settings

Display Name HTTP Server

Gateway/DNS IPv4

☐ DHCP

☒ Static

Default Gateway

DNS Server 192.168.1.2

Gateway/DNS IPv6

☐ Automatic

☒ Static

Default Gateway

DNS Server

1.3 Configurazione Server DHCP

DHCP Server

Physical **Config** Services Desktop Programming Attributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

FastEthernet0

FastEthernet0

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 00D0.976B.2A05

IP Configuration

☐ DHCP

☒ Static

IPv4 Address 192.168.1.3

Subnet Mask 255.255.255.0

IPv6 Configuration

☐ Automatic

☒ Static

IPv6 Address

Link Local Address: FE80::2D0:97FF:FE6B:2A05

DHCP Server

Physical **Config** Services Desktop Programming Attributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

FastEthernet0

Global Settings

Display Name DHCP Server

Gateway/DNS IPv4

☐ DHCP

☒ Static

Default Gateway

DNS Server 192.168.1.2

Gateway/DNS IPv6

☐ Automatic

☒ Static

Default Gateway

DNS Server

indirizzo IP server DNS

DHCP Server

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: 0.0.0.0

DNS Server: **indirizzo IP server DNS** 192.168.1.2

Start IP Address: 192 168 1 0

Subnet Mask: 255 255 255 0

Maximum Number of Users: 255

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	0.0.0.0	192.168....	192.168....	255.255....	255	0.0.0.0	0.0.0.0

- Attivazione del protocollo DHCP sui due Client (*Laptop0* e *Laptop1*), affinché venga loro assegnato un indirizzo IP dal Server DHCP.

Laptop0

Physical **Config** Desktop Programming Attributes

GLOBAL

- Settings
- Algorithm Settings
- INTERFACE**
- FastEthernet0
- Bluetooth

Display Name: Laptop0

Interfaces: FastEthernet0

Gateway/DNS IPv4: ☒ DHCP ☐ Static

Default Gateway: 0.0.0.0

DNS Server: 192.168.1.2

Laptop1

Physical **Config** Desktop Programming Attributes

GLOBAL

- Settings
- Algorithm Settings
- INTERFACE**
- FastEthernet0
- Bluetooth

Display Name: Laptop0

Interfaces: FastEthernet0

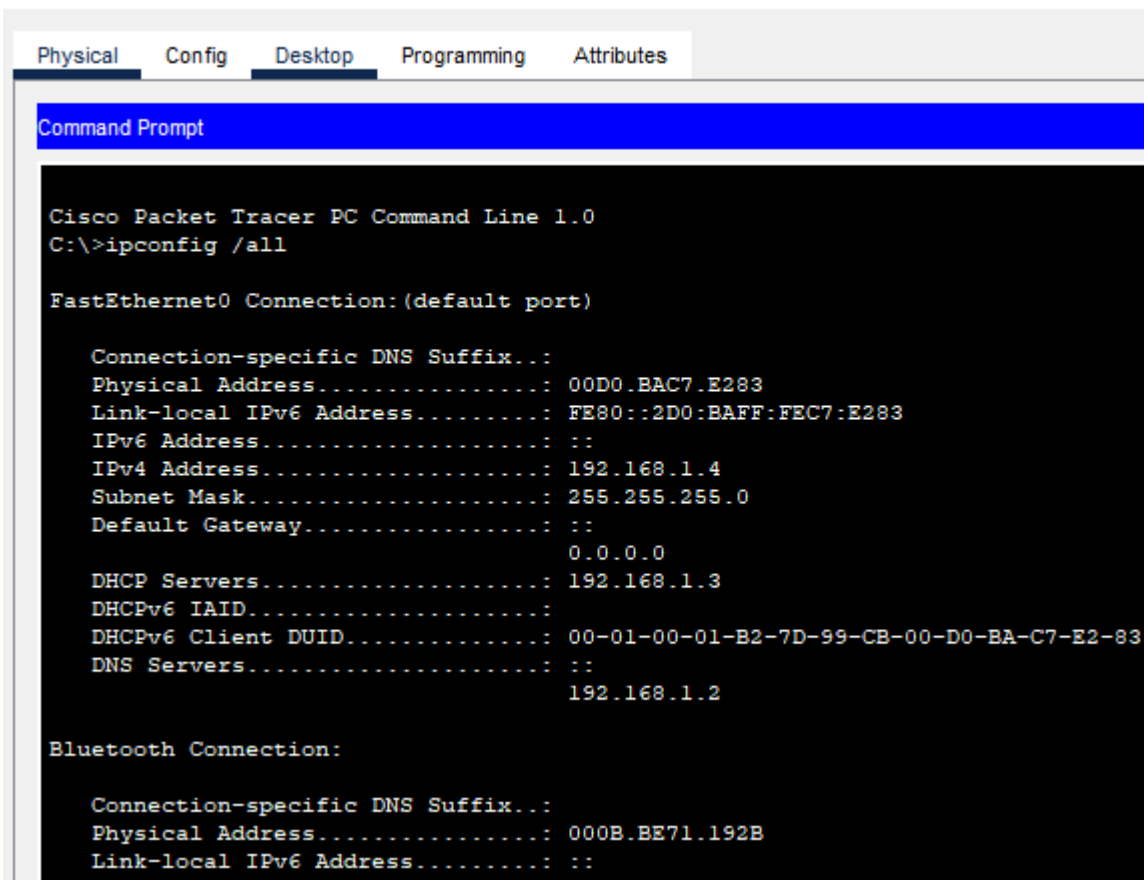
Gateway/DNS IPv4: ☒ DHCP ☐ Static

Default Gateway: 0.0.0.0

DNS Server: 192.168.1.2

3. Verifica della configurazione delle interfacce di rete sui due Client, eseguendo il comando **ipconfig /all**

 Laptop0



The screenshot shows the Cisco Packet Tracer interface for Laptop0. The 'Desktop' tab is selected, and a Command Prompt window is open. The command 'ipconfig /all' has been executed, displaying the network configuration for both FastEthernet0 and Bluetooth connections.


```
Cisco Packet Tracer PC Command Line 1.0
C:\>ipconfig /all

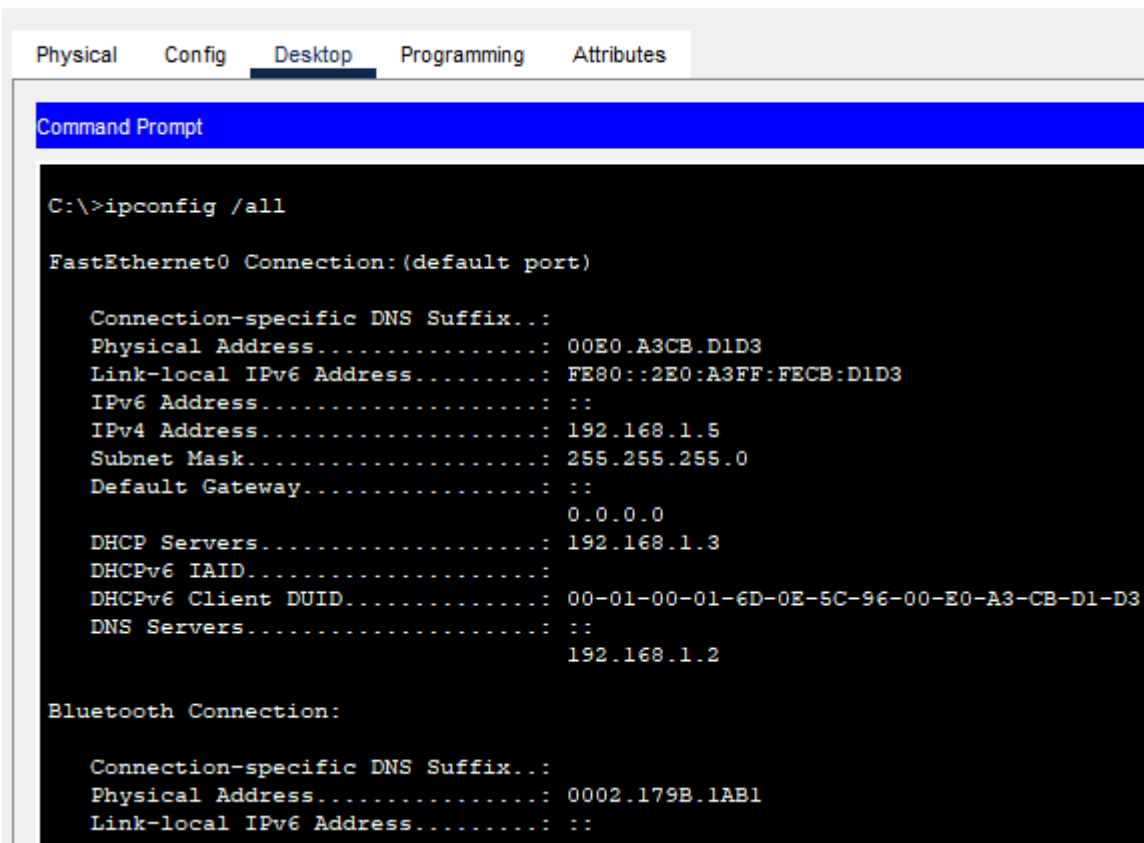
FastEthernet0 Connection: (default port)

    Connection-specific DNS Suffix...: 
    Physical Address...                : 00D0:BAC7:E283
    Link-local IPv6 Address...         : FE80::2D0:BAFF:FEC7:E283
    IPv6 Address...                   : ::
    IPv4 Address...                   : 192.168.1.4
    Subnet Mask...                    : 255.255.255.0
    Default Gateway...                : ::
                                         0.0.0.0
    DHCP Servers...                  : 192.168.1.3
    DHCPv6 IAID...                   : 
    DHCPv6 Client DUID...            : 00-01-00-01-B2-7D-99-CB-00-D0-BA-C7-E2-83
    DNS Servers...                   : ::
                                         192.168.1.2

Bluetooth Connection:

    Connection-specific DNS Suffix...: 
    Physical Address...                : 000B:BE71:192B
    Link-local IPv6 Address...         : ::
```

 Laptop1



The screenshot shows the Cisco Packet Tracer interface for Laptop1. The 'Desktop' tab is selected, and a Command Prompt window is open. The command 'ipconfig /all' has been executed, displaying the network configuration for both FastEthernet0 and Bluetooth connections.

```
C:\>ipconfig /all

FastEthernet0 Connection: (default port)

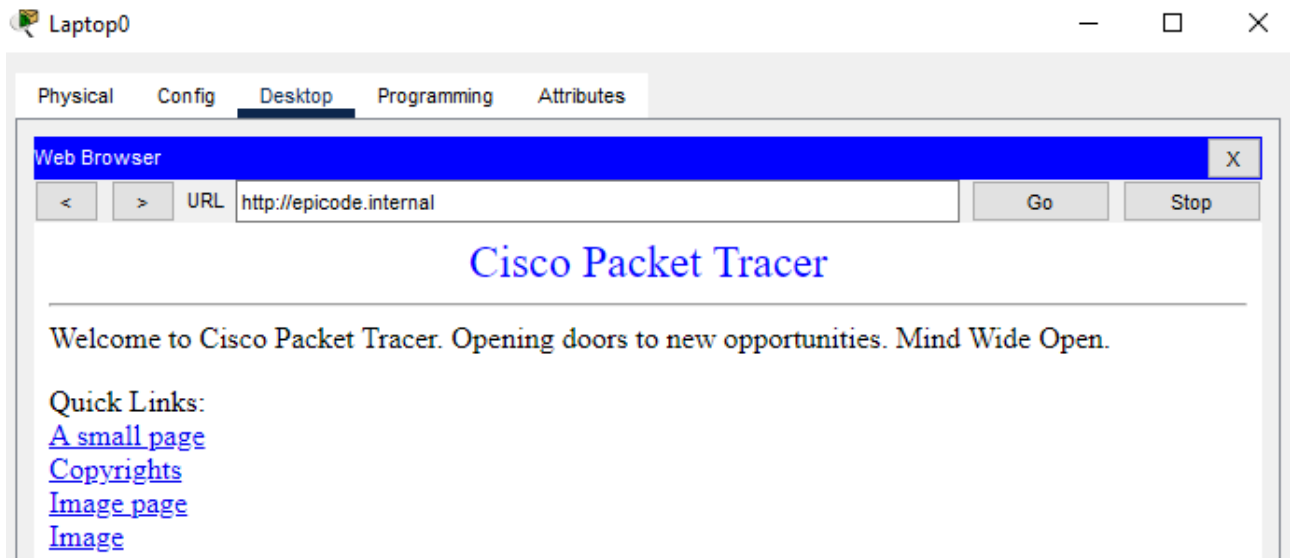
    Connection-specific DNS Suffix...: 
    Physical Address...                : 00E0:A3CB:D1D3
    Link-local IPv6 Address...         : FE80::2E0:A3FF:FECB:D1D3
    IPv6 Address...                   : ::
    IPv4 Address...                   : 192.168.1.5
    Subnet Mask...                    : 255.255.255.0
    Default Gateway...                : ::
                                         0.0.0.0
    DHCP Servers...                  : 192.168.1.3
    DHCPv6 IAID...                   : 
    DHCPv6 Client DUID...            : 00-01-00-01-6D-0E-5C-96-00-E0-A3-CB-D1-D3
    DNS Servers...                   : ::
                                         192.168.1.2

Bluetooth Connection:

    Connection-specific DNS Suffix...: 
    Physical Address...                : 0002:179B:1AB1
    Link-local IPv6 Address...         : ::
```

4. Verifica su Client della corretta risoluzione dell'indirizzo **epicode.internal** da parte del server DNS

4.1 Tramite browser:



4.2 Tramite prompt dei comandi:

```
C:\>nslookup epicode.internal

Server: [192.168.1.2]
Address: 192.168.1.2

Non-authoritative answer:
Name:   epicode.internal
Address: 192.168.1.1
```