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COMPUTER NETWORK ASSIGNMENT

DNS server confguration in Packet Tracer

A Domain Name System (**DNS**) server resolves host names into IP addresses. Although we can access a network host using its IP address, DNS makes it easier by allowing us use domain names which are easier to remember. For example its much easier to access google website by typing http://www.google.com as compared to typing http://208.117.229.214. In either case, you'll access google website, but using domain name is obviously easier.

Now, before any host can use a DNS service, we must confgure a DNS server frst. For example, when you type the URL http://www.google.com in your browser, the host will query the DNS server for the IP address of http://www.google.com. The DNS server will resolve http://www.google.com into an IP address then answer back the host with the IP address.

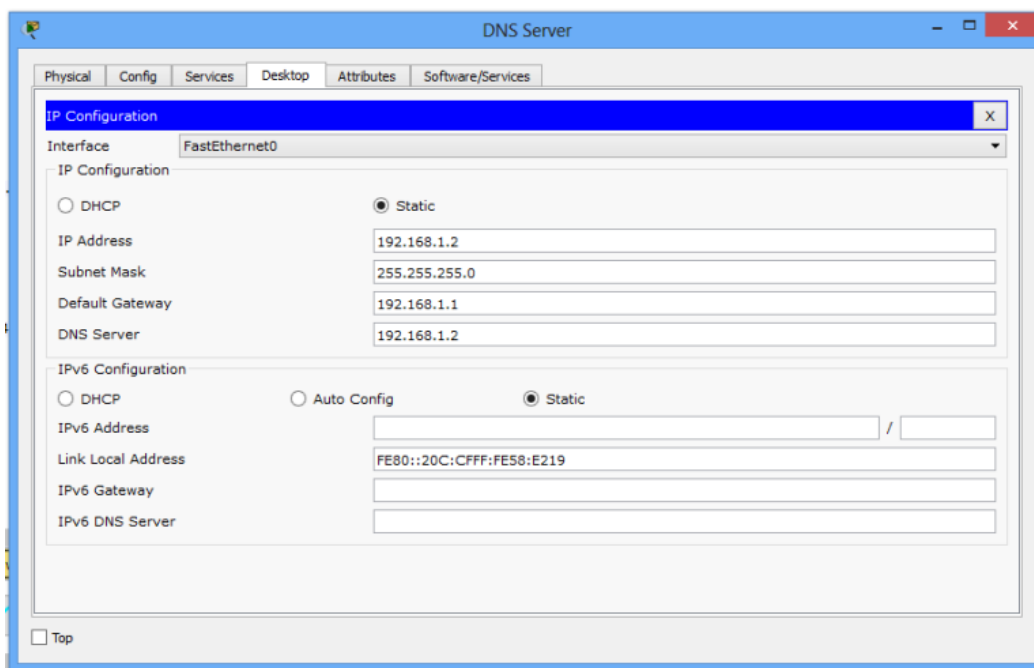Now let's confgure a DNS server in Packet Tracer.

1.Build the network topology.
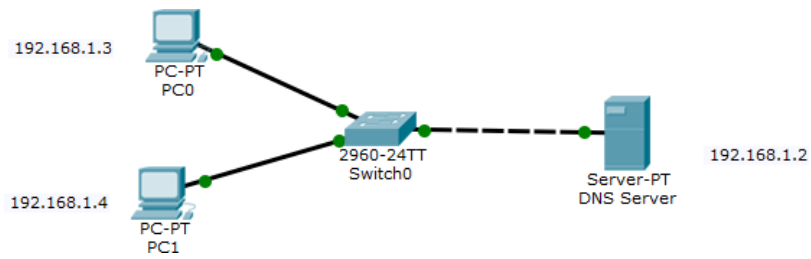
2. Confgure static IP addresses on the PCs and the server.

Server

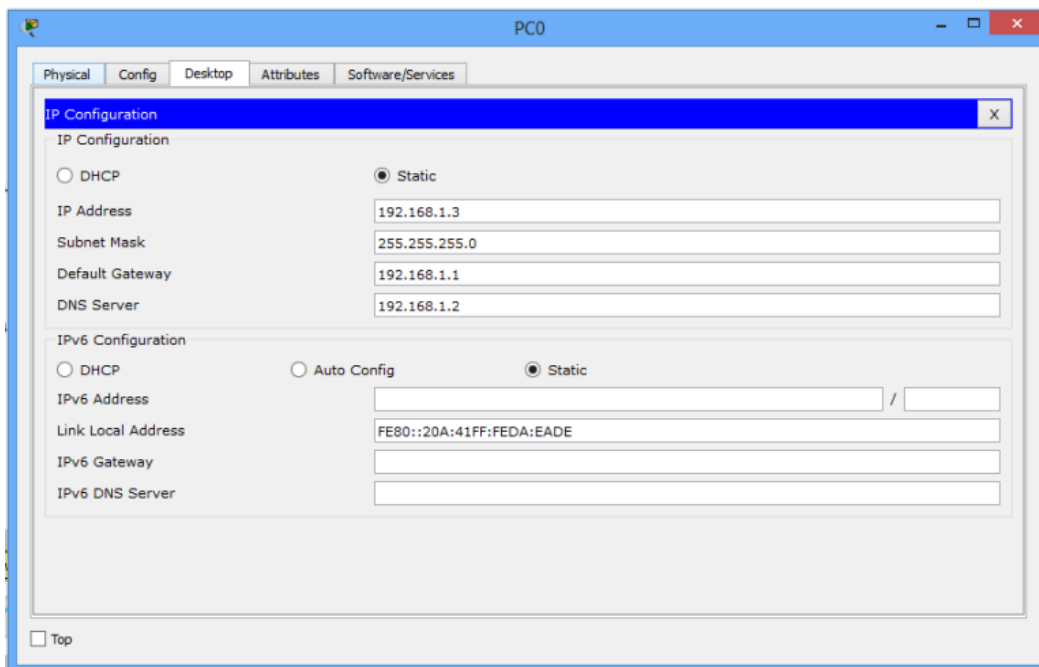**IP address**: 192.168.1.2 **Subnet mask**: 255.255.255.0 **Default gateway:** 192.168.1.1
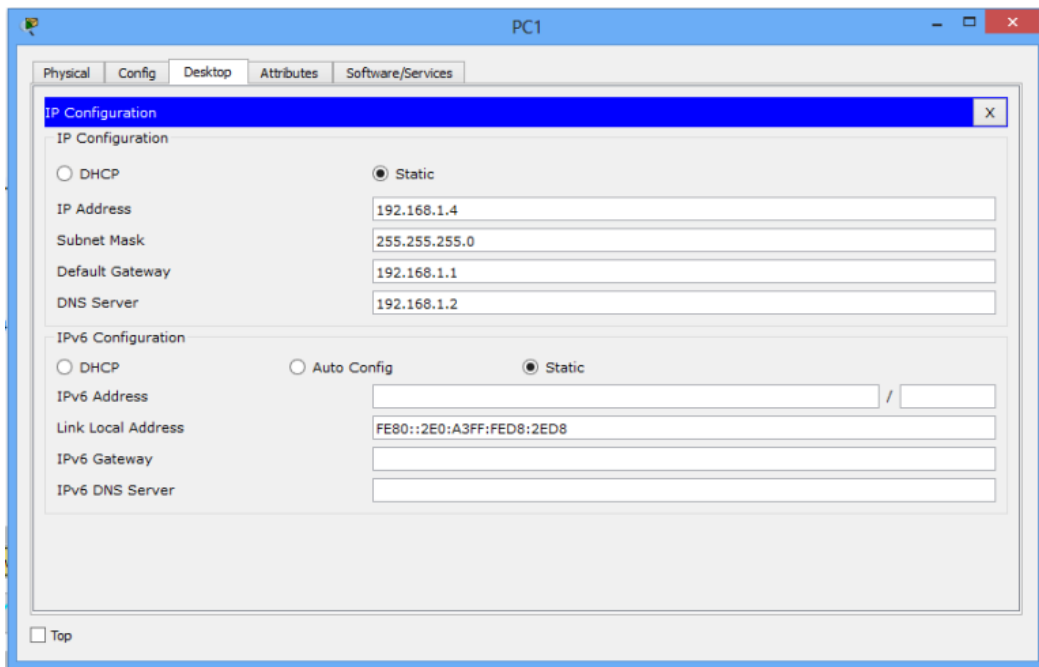**DNS Server**: 192.168.1.2

PC0

IP add: 192.168.1.3   **Subnet mask:** 255.255.255.0 **Default gateway:** 192.168.1.1 **DNS
server:** 192.168.1.2

PC1

IP address: 192.168.1.4 **Subnet mask:** 255.255.255.0 **Default gateway:** 192.168.1.1
DNS Server: 192.168.1.2


3. **Configure DNS service on the generic server.**

To do this, click on the server, then Click on **Services** tab. Click on **DNS server** from the menu. First turn **ON** the DNS service, then defne **names** of the hosts and their corresponding **IP addresses.**

For example, to specify the DNS entry for PCO: In the **name** and **address** felds, type:

Name: PC0   **Address:** 192.168.1.3

Click on **add** then **save**. Repeat this for the PC1 and the server.

Once you're done, your DNS entries will look like this:
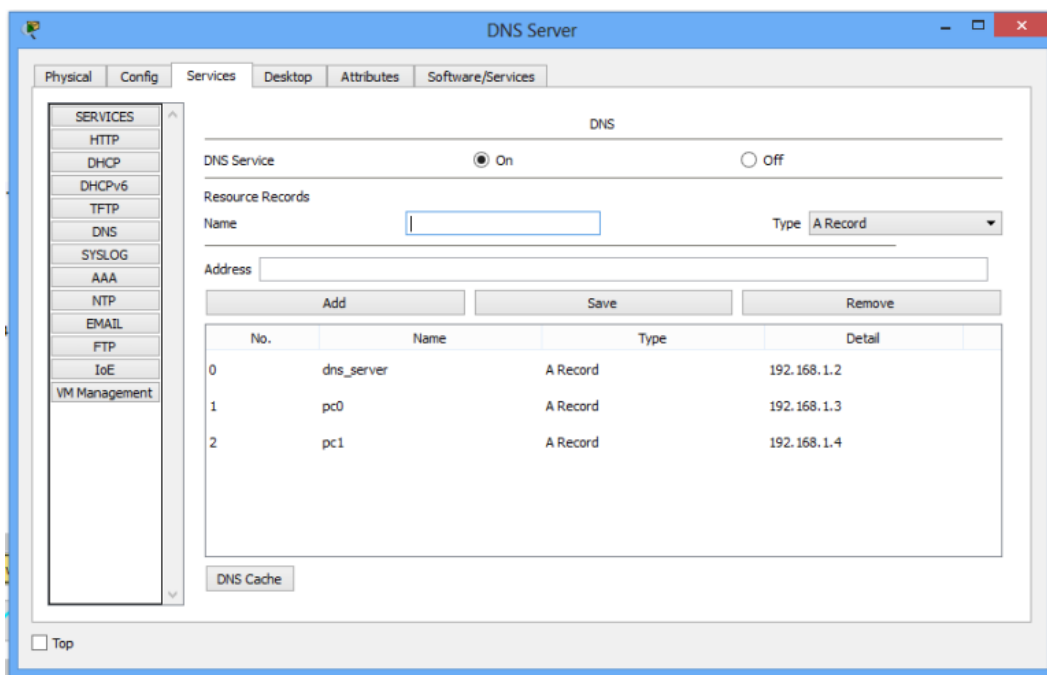
Finally,

4. Test **domain name – IP resolution**. Ping the hosts from one another using their names instead of their IP addresses. If the DNS service is turned on and all IP confgurations are okay, then ping should work.

For example, ping PC1 from PC0. Ping should be successful.

PC0

Physical | Config | Desktop | Attributes | Software/Services

Command Prompt   X

```
Packet Tracer PC Command Line 1.0
C:\>ping pc1
Ping request could not find host pc1. Please check the name and try again.
C:\>ping pc1

Pinging 192.168.1.4 with 32 bytes of data:

Reply from 192.168.1.4: bytes=32 time=77ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 77ms, Average = 19ms

C:\>
```

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