**Lab 4**

**Different Servers Configuration**

**(DNS – DHCP – HTTP - Email – FTP)**

**What is DNS server?**

DNS is an acronym for **Domain Name Server**, it is a system used to translate word-based addresses of systems (such as WWW.EXAMPLE.COM) to the numerical IP (Internet Protocol) address such as 10.0.0.1) of the computer or system and vice-versa.

**What is DHCP server?**

DHCP is an acronym for Dynamic Host Configuration Protocol, Which is a server that automatically assigns IP addresses to any new host that joins the network.

**What is HTTP/Web server?**

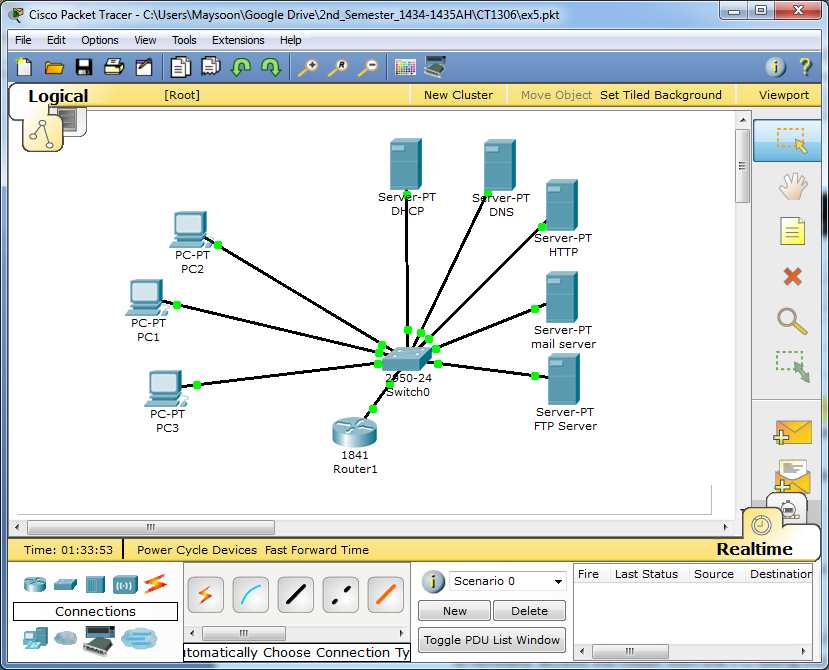
A server running at a website which sends out web pages in response to HTTP requests from remote browsers (From client computers).

**What is Email server?**

A server in the network who stores incoming mail for distribution to local users and sends out outgoing messages. This uses a client-server application model to send and receive messages using Simple Mail Transfer Protocol (SMTP).

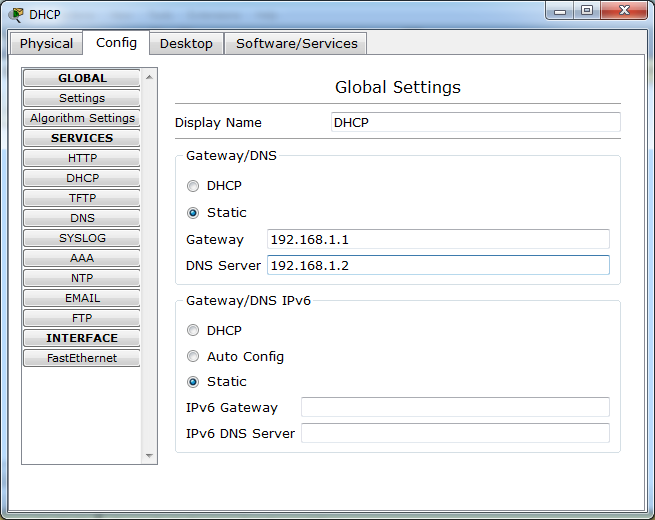
**What is FTP server?**

A server in the network who is responsible for exchanging files in the network using File Transfer Protocol (FTP).

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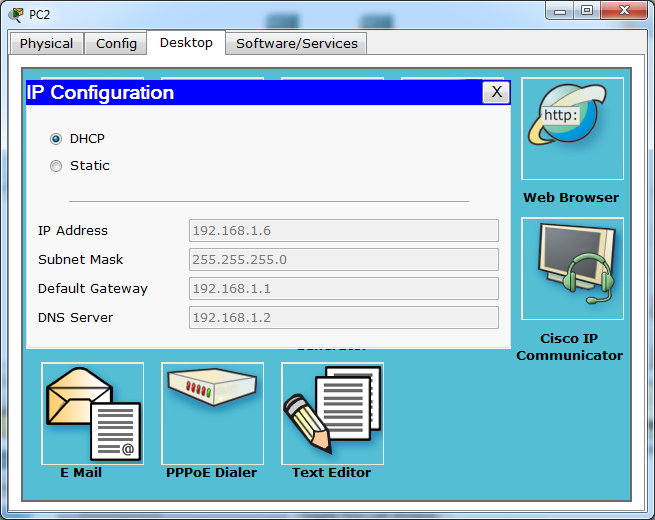
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Device** | **Interface** | **IP Address** | **Subnet Mask** | **Default Gateway** | **DNS** |
| **Router1** | **Fa0/0** | 192.168.1.1 | /24 | - |  |
| **DNS** | **Fa0/0** | 192.168.1.2 | /24 | 192.168.1.1 | - |
| **DHCP** | **Fa0/0** | 192.168.1.3 | /24 | 192.168.1.1 | 192.168.1.2 |
| **HTTP** | **Fa0/0** | 192.168.1.4 | /24 | 192.168.1.1 | 192.168.1.2 |
| **Mail** | **Fa0/0** | 192.168.1.5 | /24 | 192.168.1.1 | 192.168.1.2 |
| **FTP** | **Fa0/0** | 192.168.1.6 | /24 | 192.168.1.1 | 192.168.1.2 |

1. Draw the above network
2. Configure the router and the servers (DHCP-DNS-HTTP-Mail-FTP) with the addresses in the above able
3. **DHCP Configuration:**

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1. **PCs Configuration**

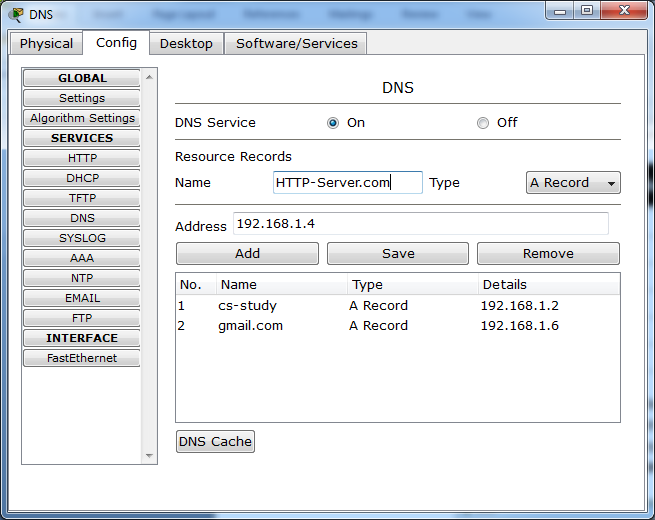
Configure all the PCs automatically by requesting a DHCP address:

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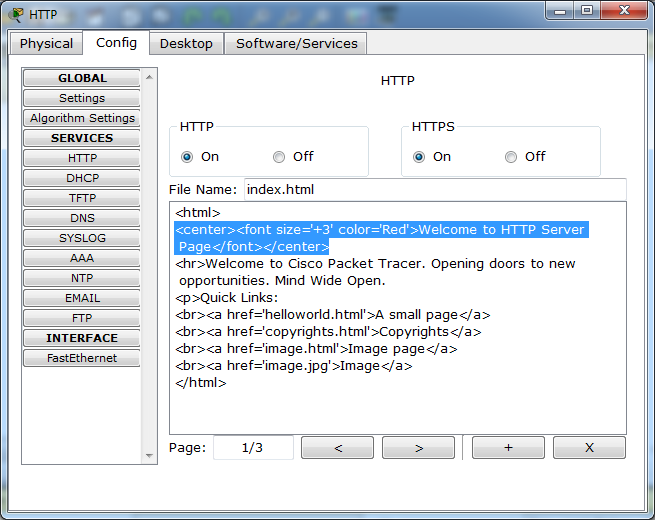
1. **DNS Configuration:**

Add the HTTP – Mail – FTP servers to the DNS table as follows:

|  |  |
| --- | --- |
| Name | IP Address |
| HTTP-Serevr.com | 192.168.1.4 |
| Gmail.com | 192.168.1.5 |
| File-Serevr.com | 192.168.1.6 |

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1. **Configuring HTTP Server:**



1. **Testing DNS & HTTP Server:**

Open PC1's web browser and request the following URLs:

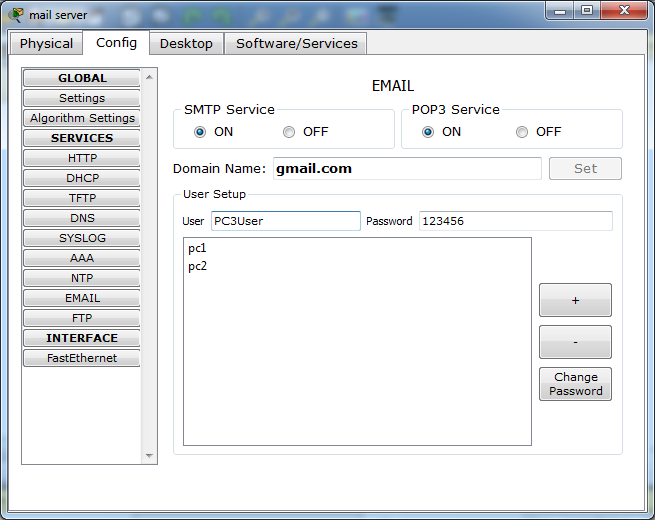
URL: 192.168.1.4

URL: HTTP-Serevr.com

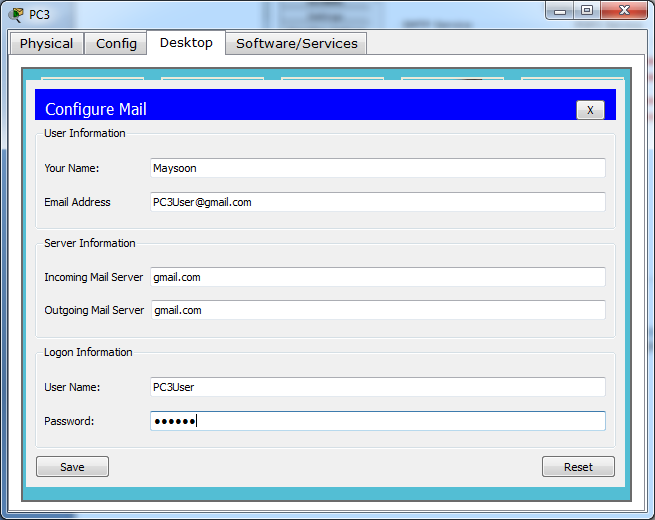
URL: 192.168.1.5

URL: Gmail.com

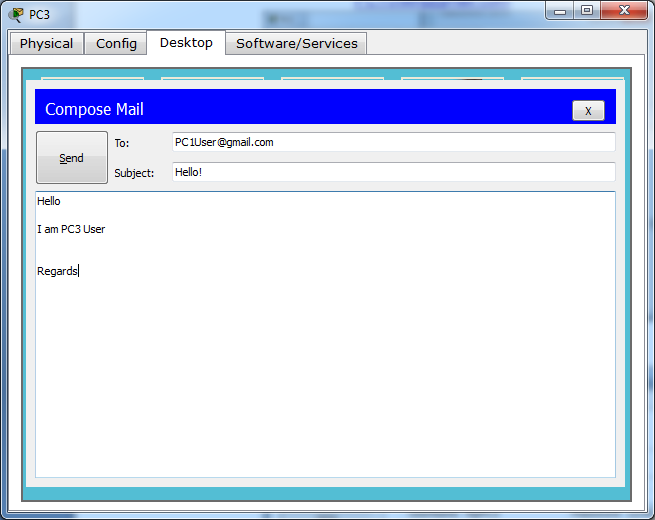
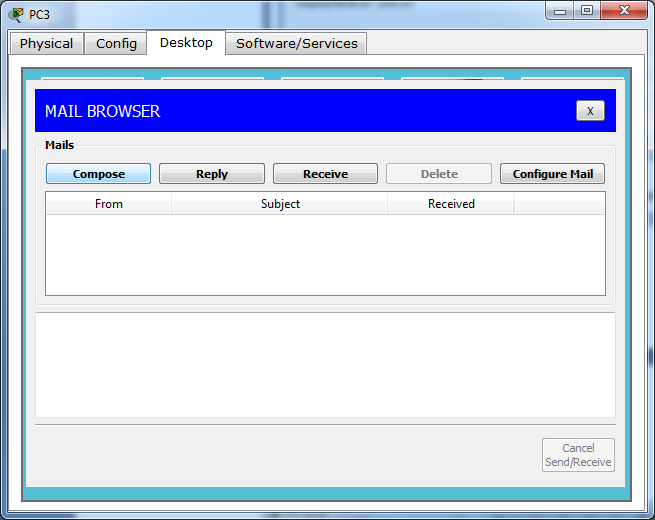
1. **Configuring The Mail-Server**
   1. First create users in the Email Server Config Page:

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* 1. Then configure the user in the PCs!

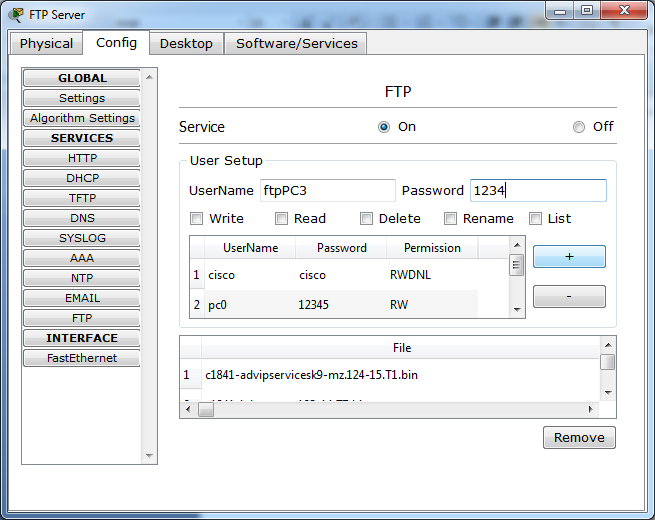


* 1. After Configuring all the mails create (Compose) a new email and send it from PC3 to PC1: From: [PC3User@gmail.com](mailto:PC3User@gmail.com) – To: [PC1User@gmail.com](mailto:PC1User@gmail.com)



1. **FTP Configuration:**

Add FTP User and assign it proper permissions:

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**Files available on the FTP server**

1. **Using FTP Server**
   1. Go to PC1's Text Editor and create file and save it in the name of (readme)
   2. Then Open PC1's command prompt and write the following commands:

PC1> ftp 192.168.1.6

Username: cisco

Password: cisco

ftp> dir

ftp> put readme.txt

ftp> dir

FTP Commands:

dir: a command that shows all the available files in the ftp server

put: a command that upload a file to the ftp server

get: a command that download a file from the ftp server.

Quit: a command to exit from the ftp service.