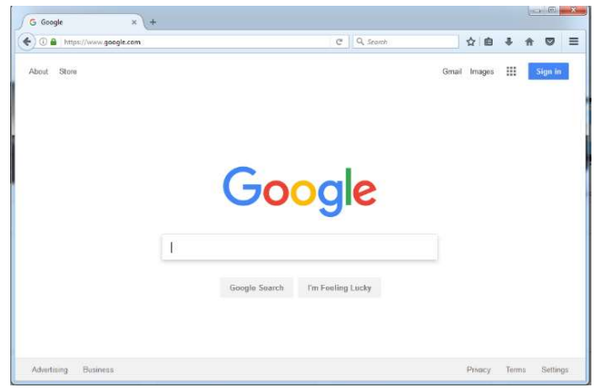
Networking, Services and System Updates

System Updates and Repos

- yum (CentOS), apt-get (other Linux)
- rpm (Redhat Package Manager)

Download Files or Apps

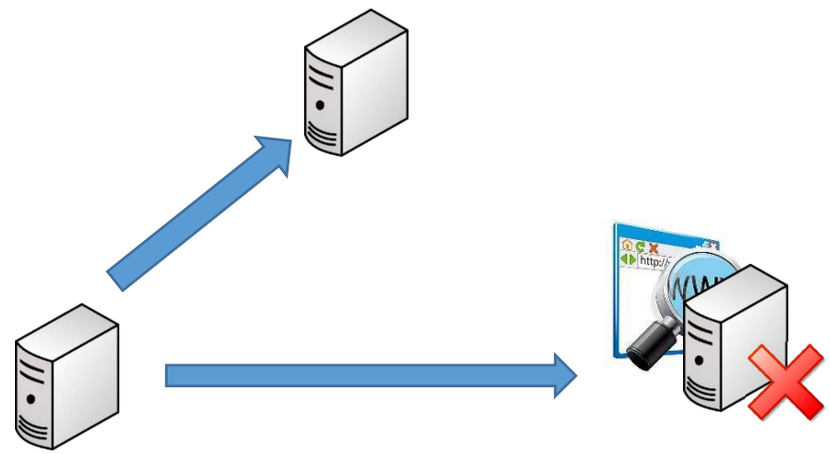
- Example of Windows browser



- Linux = **`wget`**

- Example in Linux:

`wget` **`http://website.com/filename`**

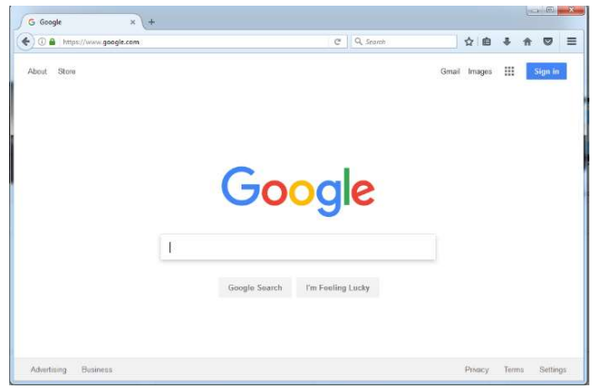


- **Why???**

Most of the servers in corporate environment do **NOT** have internet access

curl and ping Commands

- Example of Windows browser



- Linux = **`curl`**
- **Linux = `ping`**

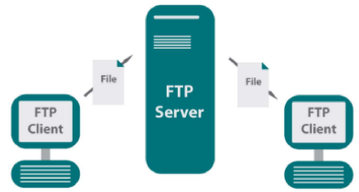
- Example in Linux:

```
curl http://website.com/filename
curl -O http://website.com/filename

ping www.google.com
```

FTP – File Transfer Protocol

- The File Transfer Protocol is a standard network protocol used for the transfer of computer files between a client and server on a computer network. FTP is built on a client-server model architecture using separate control and data connections between the client and the server. *(Wikipedia)*

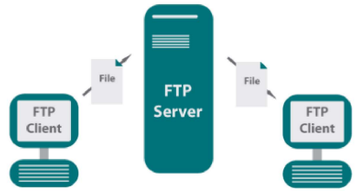


- Protocol = Set of rules used by computers to communicate

- Default FTP Port = 21

- For this lecture we need 2 Linux machines
  - **`Client = MyFirstLinuxVM`**
  - **`Server = LinuxCentOS7`**

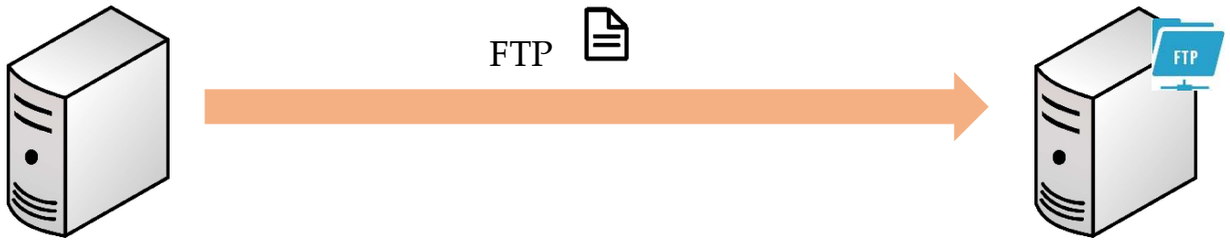
FTP – File Transfer Protocol



Client = A

FTP

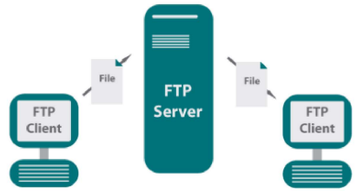
Server = B



ftpd = 21

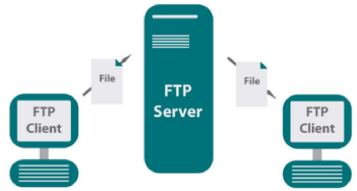
FTP – File Transfer Protocol

- **Install and Configure FTP on the remote server**
  - `# Become root`
  - `# rpm -qa | grep ftp`
  - `# ping www.google.com`
  - `# yum install vsftpd`
  - `# vi /etc/vsftpd/vsftpd.conf` ***(make a copy first)***



  - Find the following lines and make the changes as shown below:
  - ## Disable anonymous login ##
    - ***anonymous_enable=NO***
  - ## Uncomment ##
    - ***ascii_upload_enable=YES***
    - ***ascii_download_enable=YES***
  - ## Uncomment - Enter your Welcome message - This is optional ##
    - ***ftpd_banner=Welcome to UNIXMEN FTP service.***
  - ## Add at the end of this file ##
    - ***use_localtime=YES***
  - `# systemctl start vsftpd`
  - `# systemctl enable vsftpd`
  - `# systemctl stop firewalld`
  - `# systemctl disable firewalld`
  - `# useradd iafzal` *(if the user does not exist).*

FTP – File Transfer Protocol



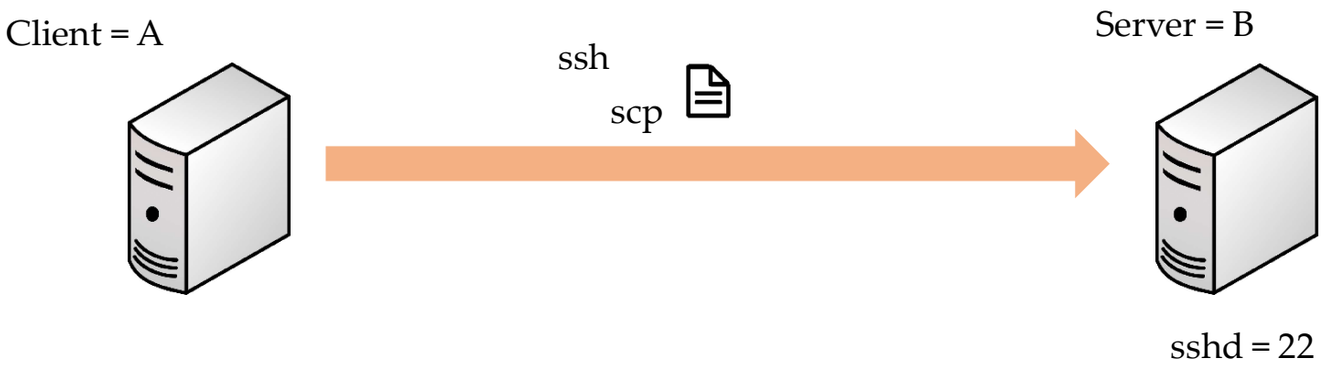
- **Install FTP client on the client server**
  - `# Become root`
  - `# yum install ftp`
  - `# su – iafzal`
  - `$ touch kruger`

  - **Commands to transfer file to the FTP server:**
  - `ftp 192.168.1.x`
  - `Enter username and password`
  - `bi`
  - `hash`
  - `put kruger`
  - `bye.`

SCP – Secure Copy Protocol

- The Secure Copy Protocol or “SCP” helps to transfer computer files securely from a local to a remote host. It is somewhat similar to the File Transfer Protocol “FTP”, but it adds security and authentication
- Protocol = Set of rules used by computers to communicate
- Default SCP Port = 22 (same as SSH)
- For this lecture we need 2 Linux machines
  - **`Client = MyFirstLinuxVM`**
  - **`Server = LinuxCentOS7`**

SCP – Secure Copy



SCP – Secure Copy

- **SCP commands to transfer file to the remote server:**
  - `Login as yourself (iafzal)`
  - `touch jack`
  - `scp jack iafzal@192.168.1.x:/home/iafzal`
  - `Enter username and password`

System Upgrade/Patch Management

- Two type of upgrades
  - Major version = 5, 6, 7
  - Minor version = 7.3 to 7.4

Major version = yum command 

Minor version = yum update 

Example:
`yum update -y`

`yum update vs. upgrade`

`upgrade` = delete packages 

`update` = preserve