Hello everyone!

In this video we will learn the basic of networking commands

Networking commands are used to troubleshoot networking problems along with the display of some important information related to networks.

The First Networking command we talk about is the ping command, ping command is a command prompt command which is used to test the ability of the source computer to reach a specified destination address.

For using this command, we require windows operating system go to the windows operating system

type cmd into the search box and select the command prompt from the displayed programs.

To check the availability of a machine the ping command can be used with an IP address or computer name.

Type ping with the respective IP Address e.g., ping 172.31.103.2 or

Type ping command with the respective computer name.

Ping Command to Identify the Operating System of the remote host.

The TTL value mentioned in the Echo Reply packets may be used to determine the Operating system of the remote host. The default initial TTL value for Linux/Unix is 64, and for Windows, it is 128. To view the TTL value of a Linux/Windows host, simply ping the host, for pinging the loopback address, for pinging the local host

Type ping 127.0.0.1

The TTL value of 128 determines this is a windows operating system.

Ping command to find Hostname

Ping command can also be used to find the hostname corresponding to a known IP address using the -a option.

Second networking command is the route command

The route is a very important networking command for network administrators.

Displaying the routing table

To display the routing table (both IPv4 and IPv6) in Windows, route command with print option may be used.

each entry in the routing table, five items of information are listed:

a. The destination IP address:

b. The subnet mask must be applied to the destination address to determine the destination subnet.

c. The IP address of the gateway to which traffic intended for the destination subnet will be sent.

d. The IP address of the interface through which the traffic will be sent to the destination subnet.

e. The metric indicates the number of hops required to reach destinations via the gateway.

route command in Linux with Examples

Here is an example of a Linux system.

Type route command to display the routing table

To display the routing table in full numeric form.

Type route -n

To add a default gateway.

Type sudo route add default gw 172.31.100.2(IP address)

To list kernel's routing cache information.

Type route -Cn

To reject routing to a particular host or network.

Type sudo route add -host 172.31.103.2 reject (IP address of rejected host)

To get details of the kernel/IP routing table using the IP command.

Type ip route

Each line in the output represents an entry in the routing table.

delete the default gateway.

route del default is the command

To get the details of the local table with destination addresses assigned to the local host.

The command is ip route show table local

To get output related to IPv4 only.

Type ip -4 route

Third networking command is ipconfig

The ipconfig command is used to display information about network configuration and refresh DHCP and DNS Settings in Windows systems. By default, the ipconfig command displays your IP Address, Subnet Mask, and default gateway.

Using ipconfig command to display network configuration of the systems.

Type ipconfig and press Enter. The output displays the list of active network adapters/interfaces, whether they're connected or disconnected, and their IP addresses.

Adding a /all switch to the ipconfig command, a new level of details such as DNS information, the MAC (Media Access Control) (in the Physical Address field), and other information about each network component may be obtained.

ipconfig /all

Renewing the IP address of a network adapter.

When the network connection doesn't work as it should, the network adapter might not have the correct IP address assigned. A quick way of solving this issue is to renew its IP address. It can be done using the Ipconfig command.

a. The first one – use the command ipconfig /release to force the network adapter to drop its assigned IP address,

the command is ipconfig /release

Use the ipconfig /renew command to renew the IP address.

Thankyou!