

# Commonly used Network Commands

Tuesday, January 11 2022 2:34 PM

## ① ping:

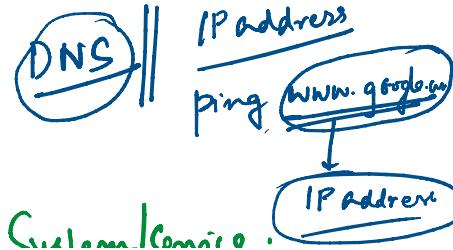
- Uses Internet Control Message Protocol (ICMP).  
\$ ping (IP Addr) \$ ping (name or URI)
- Allows echo <sup>request</sup> packet to be sent to the destination host and listens.  
ICMP echo request → remote host.
- If the destination host reply to the requesting host (echo response packet) — destination host is reachable.  
ICMP echo response packets
- Utility: to check if the Internet connection is available or not.

## ② ifconfig:

- Used to configure network interface.  
\$ ifconfig  
Network Interface Controller  
MAC address  
unique device identifier  
Wired.  
Wireless  
Bluetooth  
IPv4 (32-bit)  
IPv6 (128-bit)  
Hardware address (MAC address)
- Can be used with a number of arguments and flags.
- Gives both logical (IP address) and physical (MAC address) addresses for all active network interfaces.

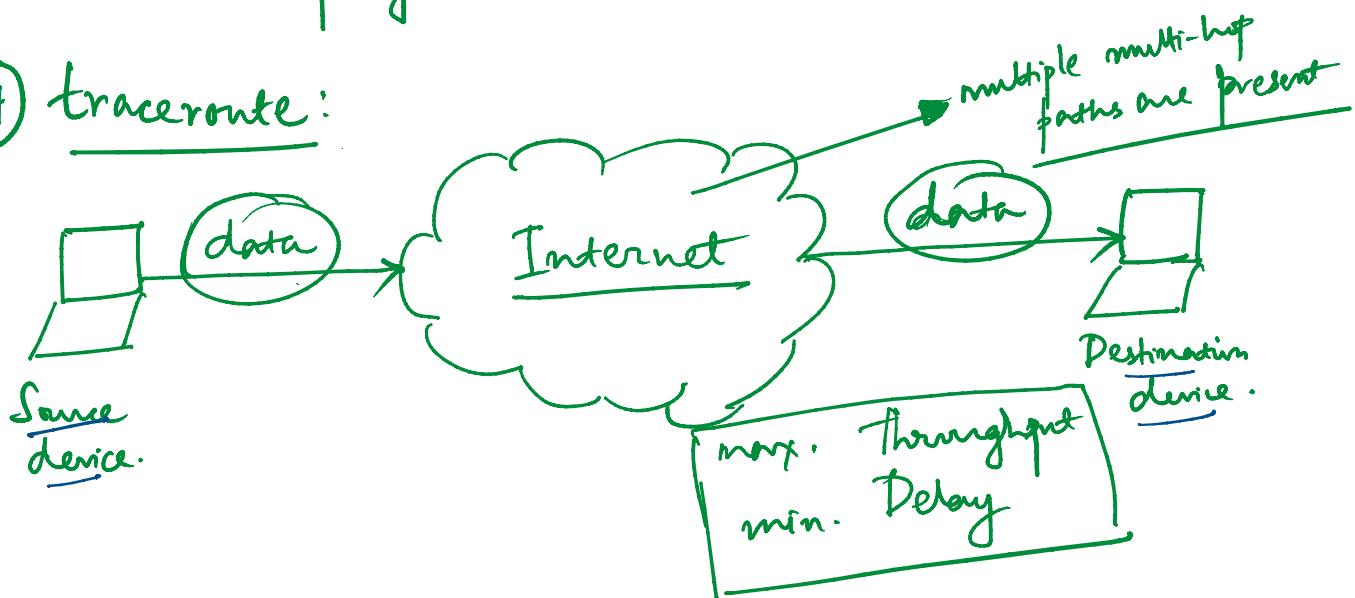
## ③ dig: (Domain Information Groper)

Domain Name System | Command .



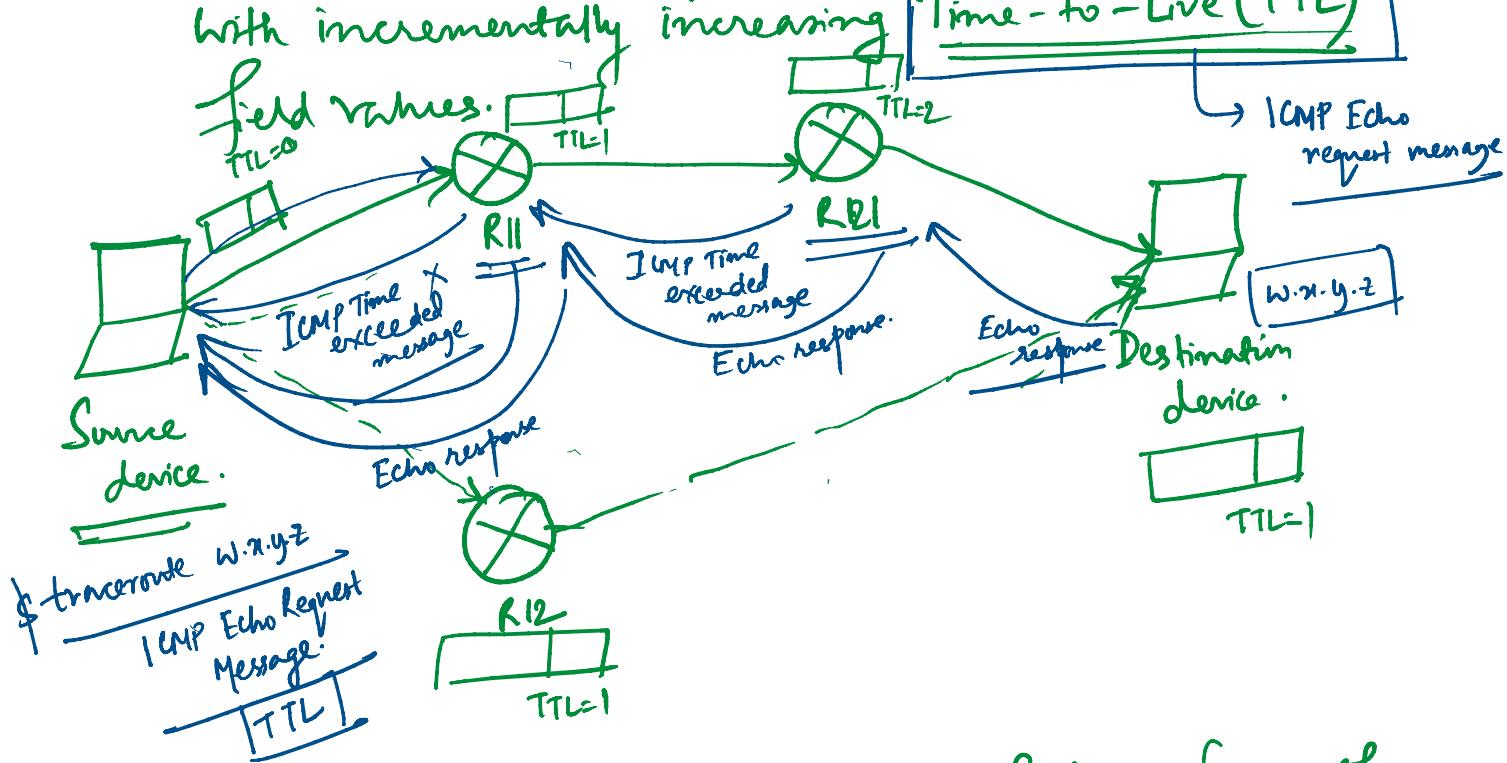
- (3) dig: (Domain Information Groper)
- Domain Name System Service.
- DNS lookup utility.
- tool for integrating DNS name servers.
- performs DNS lookup and displays the answers that are returned.
- `$ dig google.com` → this command causes dig to look up the "A" records for the domain name google.com.
- returns the IP address of the URI
- Sending a query to the local DNS server for address resolution.
- dig command reads the /etc/resolv.conf file and query the DNS servers listed here.
- The response from the DNS server is what dig displays.

(4) traceroute:



- used to trace the route to a destination host.

- Sends ICMP Echo Request messages to the destination with incrementally increasing field values.

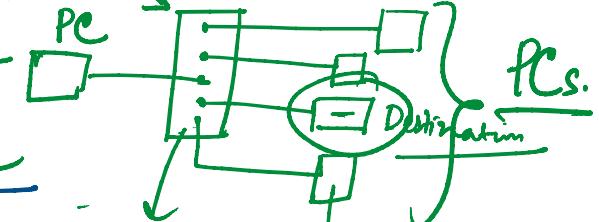
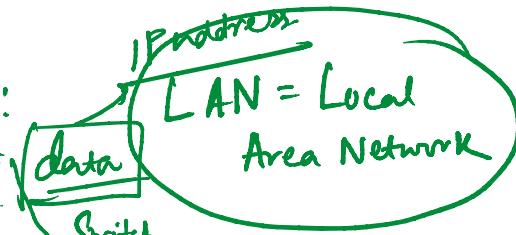


- The path displayed is the list of interfaces of the intermediate network devices between a source and a destination.
- The path is determined by examining the ICMP Time Exceeded messages returned by intermediate network devices and the Echo Reply message returned by the destination.
- Some devices do not return the Time Exceeded messages for the packets with expired TTL and are invisible in the traceroute.

messages for the process  
 Values and are invisible in the traceroute  
 command (\*)

## ⑤ ARP (Address Resolution Protocol):

- Queries the ARP table and finds out the mapping b/w the IP address and the MAC Address.
- finds out the hosts present in a LAN segment.



ARP table	
IPaddr	MAC addr.
—	—

