**Lesson 15 – Networking commands**

Networking commands are not the same across all Operating Systems. (E.g., ipconfig vs. ifconfig, ip vs. route)  
This is a list of Linux networking command line tools.

**ifconfig [OPTIONS] [interface] [property] [newValue]** view or change the configuration of the network interfaces.

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|  | List information about the active network interfaces |
| -a | List information about all network interfaces (active and not active) |
| -v | Verbose mode; display additional information for certain error conditions. |

[interface] – eth[n] (Ethernet interface), lo (loopback interface), wlan (wireless interface), etc  
[properties] – address (IP address), broadcast, netmask, up, down, etc.

**netstat [OPTIONS]** display network status information.

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|  | Displays a list of open sockets |
| -r | Display the kernel's routing tables. |
| -i | Display a table of all network interfaces. |
| -g | Display multicast group membership information for IPv4 and IPv6. |
| -s | Display summary statistics for each protocol. |
| -n | Show numerical addresses instead of trying to determine symbolic host, port or user names. |
| -a | Show both listening and non-listening sockets. |
| -p | Show the PID (process identifier) and name of the program to which each socket belongs. |

**arp [OPTIONS]** display andmanipulate the kernel's IPv4 network neighbor cache.

**nslookup [-option] [name | -] [server]** query internet name servers for information..

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|  | Display related IP address of a domain name, or vice versa. |
| - | Enter interactive mode. Use exit to exit interactive mode. |
| -type=any | Display particular types of information from DNS servers; (a, ns, mx, soa, cname, …) |
| -all | Display all of the options and their current settings. |
| -debug | Display debugging information on the query. |

**host [OPTIONS]** Convert a host name to an IP address and vice versa.

**dig [name] [OPTIONS]** DNS lookup utility.

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| -h | Display all of the search options for dig. |

**ping [OPTIONS]** Send ICMP ECHO\_REQUEST packets to network hosts.

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| -c count | Send count number of ICMP packets |
| -v | Verbose output |

**traceroute [OPTIONS] serverName** Display the routers along the path to a destination server.

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| --help | Display all of the traceroute options. |

Other possible topics that the cadets were interested in:

* nmap
* netcat
* ifnetcat