CHEATSHEET v0.2

- You <u>do not</u> always <u>need</u> to enter a <u>full</u> command. If there is no ambiguity, it will understand it. (**conf t** == **configure terminal**, **copy running-config startup-config** == **copy r s** etc)
- If you do not know the command, you can always use "**?**" question mark to see available commands and their brief explanation. Long and difficult ones become easier with using "**?**".
- To cancel any command you can use "<u>no</u>" (no hostname, no ip address etc). (Does not work for some commands)
- Use the Question Mark (?) to Display On-Screen Command Help
- Complete a Partial Command with the Tab Key (conf<Tab> -> configure)
- UP arrow and DOWN arrow keys are available (see previous commands as in terminal of Ubuntu or cmd)
- **Ctrl-A** to return directly to the beginning of the line. **Ctrl-E** Move cursor to the end of the line
- **Ctrl-U** to Delete the whole line. **Ctrl-W** to Delete the word to the left from the cursor.
- **Ctrl-K** Erase characters from the cursor to end of the line. **Ctrl-X** Erase characters from the cursor to beginning of the line. **Ctrl+Shift+6** disturb redirecting, networking or any other process that takes much time.

The short hand commands are shown in the brackets. **Angle brackets are not included to the command**.

Enable (en) – move from User Exec mode to Priv Exec mode

Configure terminal (conf t) – move from Priv Exec mode to global configuration mode

Exit – move one step back to previous mode

End – move two steps back (like from interface mode to Priv Exec mode)

copy running-config startup-config (copy r s) – save current configuration to NVRAM (a device will boot with our configs)

hostname <name> - Assign a name of a device

banner motd "….." - Configure a message of the day (MOTD) banner (Showed when accessing device's configurations)

enable secret <…> - Configure an encrypted password to secure access to privileged mode.

interface gigabitEthernet 0/0 (g0/0) or **fastEthernet 0/13 (f0/13)** – selecting an interface to configure

ip address (ip add) <x.x.x.x> <y.y.y.y> - setting an ip address(x.x.x.x) with a subnet mask y.y.y.y (in interface mode)

no shutdown – turn on the interface (change status to up) (in interface mode)

description <….> - set up a specific description for an interface (in interface mode)

line console 0 (lin con 0) – entering a primary terminal (console) line

password <…> - set a password to a console line (in console line mode and vty interfaces)

login – enable password checking for a console line (in console line mode and vty interfaces)

line vty 0 15 – enters a VirtualTeletYpe interface (for remote connection) (range is 0-15, usually we will need 0-5)

login local - require the local user profiles when connecting remotely

transport input ssh – activate connection on ssh protocol (in vty interface)

transport input telnet – activate connection on telnet protocol (in vty interface)

service password-encryption – encrypt system passwords (global configuration mode)

show running-config (show run) – show detailed current configuration operations (priv exec mode)

show interfaces – show detailed information about statuses of the interfaces

show ip interface brief (show ip int br) – brief summary of IP status and configuration of interfaces

ip default-gateway <…> - configure the default gateway address on switch

ipv6 address <…>/64 – configure Ipv6 address on an interface

ipv6 address <> link local – configure link local address for an interface (used as a gateway address in IPv6 addressing and for neighbor discovery) (this address is usually taken from FE80::/10 range)

ip dhcp excluded-address <start ip> <end ip> - range of ip addresses that are not distributed by the DHCP server

ip dhcp pool <name> - creates a pool with specified name. Also enters to dhcp-config mode.

network <network address> <subnet mask> - identify the range of available ip addresses that DHCP server can distribute (available from dhcp-config mode)

default-router <ip address> - define the default gateway router. Typically, the gateway is the LAN interface of the router closest to the client devices

dns-server <ip address> - address of the DNS server that is available to a DHCPv4 client

vlan <n> || <n1>-<n2> - creates a vlan with number n or in range of n1 and n2 (global configuration mode)

name <s> - set a name for this vlan (in vlan config mode)

interface g0/0.10 – entering a ".10 subinterface" of gigabitEthernet 0/0

interface range f0/1-15 – used to configure or write commands to multiple interfaces (from 0/1 to 0/15)

switchport mode access – set an interface to access mode (An access port can have only one VLAN configured on the interface; it can carry traffic for only one VLAN) (in interface configuration mode)

switchport mode trunk – set an interface to trunk mode (A trunk port can have two or more VLANs configured on the interface; it can carry traffic for several VLANs simultaneously) (in interface configuration mode)

switchport access vlan - Sets the access mode of the interface to the specified VLAN (in interface configuration mode)

encapsulation dot1q <n> - Defines the encapsulation format as IEEE 802.1Q (dot1q), and specifies the VLAN identifier (n). (To correctly deliver the traffic on a trunk port with several VLANs, the device uses the IEEE 802.1Q encapsulation (tagging) method that uses a tag that is inserted into the frame header. This tag carries information about the specific VLAN to which the frame and packet belong)

switchport trunk allowed vlan <n> - Sets allowed VLANs for the trunk interface (separated by comma, range uses dash) (in interface configuration mode). (By default, a trunk port sends traffic to and receives traffic from all VLANs. All VLAN IDs are allowed on each trunk. However, you can remove VLANs from this inclusive list to prevent traffic from the specified VLANs from passing over the trunk. You can add any specific VLANs later that you may want the trunk to carry traffic for back to the list.)