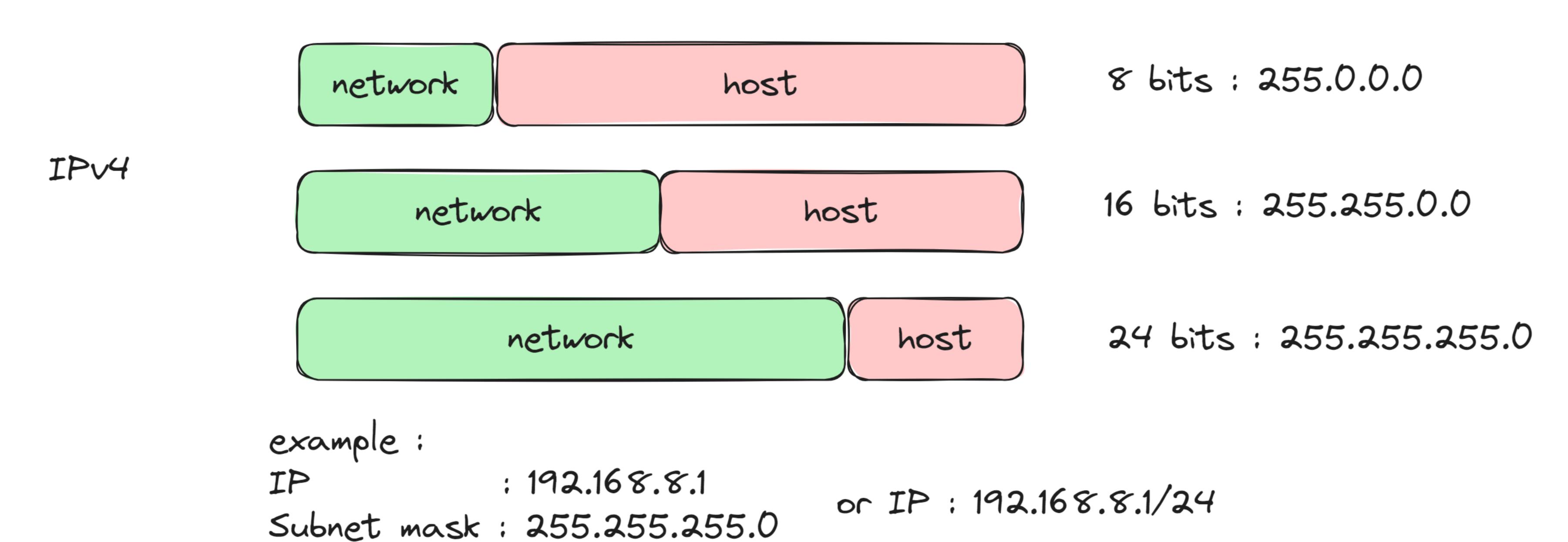
Cisco Packet Tracer

Commonly used devices Common used connections - Router-PT & Router-PT empty - Serial DCE/DTE: router-router - Switch-PT & Switch-PT empty - Copper Straight Through: router-switch / switch-pc - Hub-PT - Copper Cross-over : pc-pc - PC-PT * show port labels in diagram : options > preferences > "Always Show Port Labels" * Do not use auto connection type * Rename devices to exact name mentioned in assignment * Connect to exact ports as mentioned in assignment * multi-add shortcut: hold Ctrl when selecting & release Ctrl before adding * reset cursor : Esc Router Commands * enter "no" to "Continue with configuration dialog? Lyes/no]:" * if stuck after wrong command: Ctrl + Shift + 6 1 Help in Router > <command> ? - list all available commands - list all available sub commands of a command - depend on current mode Modes in Router Router> user-mode > enable - enter privileged mode privilege mode Router# # configure terminal -enter configuration mode Router(config)# privilege mode > Configuration mode # exit -exit current mode/execution # disable -exit privileged mode Basic Router Configuration (configuration mode) - add/change privilege mode password # enable password <password> - password is stored in plain text (less secure) - add/change privilege mode password # enable secret <password> - password is stored with hashing (more secure) # hostname <name> - change router name * exit configure mode: Ctrl+Z or type # exit * view the current configuration (privilege mode): # show running-config - router configuration are initially stored in RAM (temporary) # copy running-config startup-config - save configuration to flash memory (permanent) # write - does same thing as above but not used now Show Commands - display version, router platform type, operating system revision, operating system... > show version - display any routing protocols currently configured on the router > show protocol - display statistics about router flash memory > show flash # show running-config - display current router configurations # show startup-config - display startup router configurations > show history - display command history > show clock - display current time in router > show hosts - display DNS host names - display users connected to router > show users - display information all interfaces (ports) > show interfaces

Subnet Mask

- Subnet mask define the number of bits used to identify networks bits in an IP address



168

(0 to 255)

Lets take class C ip address for a network

192.168.8.0/24

then Network address : 192.168.8.0

Host address : 192.168.8.1 to 192.168.8.254

Broadcast Address: 192.168.8.255

Default gateway

- A router in a network that provide access to other networks

Setting up Static Routing in Cisco Packet Tracer

- connect all the devices as needed
- decide on IP address and subnet mask used for each network
- configure IP address for all host devices manually click a PC > Desktop > IP configuration
- configure the router (configuration mode)

clock rate <clock_rate>

- enter configuration for specific interface # interface <interface type> <interface number>
- # ip address <ip address> <subnet mask> - enter ip & subnet for the interface
- add clock rate only for serial DCE cable
- enable interface # no shutdown
- # ip route <destination network ip> <destination subnet> <next hop> setup static route
- verify network operation by sending ICMP messages between PCs