**Networking 1A - Router CLI Commands**

**Router Prompts** **MISC Commands**

1. User Mode – Router> 1. ENABLE SECRET CLASS – Sets a password between user and privileged.
2. Privileged Mode – Router# 2. COPY RUN START – This saves the config file from RAM to NVRAM.
3. Global Configuration – Router(config)# 3. BANNER MOTD # Message # - Appears at log in
4. Interface configuration – Router(config-if)# 4. SERVICE PASSWORD-ENCRYPTION – Encrypts clear text passwords.
5. Routing Protocol Configuration – Router(config-router)# 5. HOSTNAME Lab\_A - Changes the name of router at prompt
6. Line Configuration – Router(config-line)#

**Moving Through Router Prompts**

1. ENABLE – Moves you from user mode to privileged mode
2. CONFIGURE TERMINAL – Moves you from privileged mode to global configuration
3. EXIT – Moves you back one level
4. CONTROL-Z – Moves you from any configuration mode to privileged.

**SHOW Commands** – These are all performed from privileged mode

1. SHOW RUN – Shows the current configuration file in the router’s RAM
2. SHOW START – Shows the configuration file stored in NVRAM
3. SHOW IP ROUTE – Displays the routing table (shows the networks this router knows how to get to)
4. SHOW IP INTERFACES (BRIEF) – Gives status and IP information about this router’s interfaces.

**INTERFACE Commands**

1. Serial Interfaces
	1. INTERFACE SERIAL 2/0 – specifies the interface we want to configure.
	2. IP ADDRESS 201.100.11.65 255.255.255.252 – Make sure the IP address and subnet mask are correct.
	3. CLOCK RATE 64000 – This is only done on one side.

* 1. NO SHUTDOWN
1. FastEthernet interfaces
	1. INTERFACE FASTETHERNET 0/0
	2. IP ADDRESS 201.100.11.33 255.255.255.224 – Make sure the IP address and subnet mask are correct.
	3. DESCRIPTION This interface connects to the Kentwood Public Schools LAN - Provides a description to an interface
	4. NO SHUTDOWN
2. Loopback Interfaces – These are virtual interfaces. They will never go down unless manually removed.
	1. INTERFACE LOOPBACK0
	2. IP ADDRESS – 201.100.11.1 255.255.255.0

**TELNET** – These commands allow remote connections to be made to the router. enable secret and line console password should be configured to maximize security.

1. Line VTY 0 4 – This will allow up to five simultaneous telnet connections (line 0 through line 4)
2. PASSWORD cisco – This will require whoever is attempting to connect to the router to enter this password.
3. LOGIN – If the appropriate password is entered, the user to connected and “logged in” to the router.

**LINE CONSOLE** – This essentially puts a password on user mode, so the user has to enter a password even to see Router>

1. LINE CONSOLE 0
2. PASSWORD cisco – This will require whoever is attempting to connect to the router to enter this password.
3. LOGIN – If the appropriate password is entered, the user to connected and “logged in” to user mode.

**RIP**

1. ROUTER RIP – Starts the routing process
2. NETWORK 185.42.0.0 – One statement is inserted for each directly connected network. ( Class A, B, or C network.)
3. PASSIVE-INTERFACE F0/0 – Will not send routing updates out specified interfaces.
4. DEFAULT-INFORMATION ORIGINATE – Distributes a default route – Entered only at a border router.
5. VERSION 2 – Switches from version 1 to version 2, which allows for VLSM.

**Static Routes**

1. IP ROUTE <Destination Network> <Subnet Mask> <Exit-Interface>
	1. IP ROUTE 201.100.11.0 255.255.255.0 S3/0 - Create a route in the routing table to network 201.100.11.0 and send it out S3/0
2. Default Route (Special Static Route)
	1. Router with a default route will never drop a packet. Typically these point to the ISP (a way off the topology)
	2. IP ROUTE 0.0.0.0 0.0.0.0 S2/0