

### Basic Device Configuration

|                                                           |                                                          |
|-----------------------------------------------------------|----------------------------------------------------------|
| Enter Privileged Exec mode                                | Switch> <b>enable</b>                                    |
| Leave Privileged Exec mode                                | Switch# <b>disable</b>                                   |
| Enter Global Configuration mode                           | Switch# <b>configure terminal</b>                        |
| Configuring a Device Name (Hostname)                      | Switch(config)# <b>hostname</b> NAME                     |
| Configuring a Console Port (Console)                      | Switch(config)# <b>line console 0</b>                    |
| Configuring a Console Password (Console)                  | Switch(config-line)# <b>password</b> PASSWORD            |
| Activating password checking on the Console Port          | Switch(config-line)# <b>login</b>                        |
| Activating Username/Password checking on the Console Port | Switch(config-line)# <b>login local</b>                  |
| Creating a timeout on the Console Port                    | Switch(config-line)# <b>exec-timeout</b> MINUTES SECONDS |
| Backup one level                                          | Switch(config-line)# <b>exit</b>                         |
| Backup one level                                          | Switch(config)# <b>exit</b>                              |
| Backup all levels                                         | Switch# <b>CTRL + Z</b> or <b>CTRL + C</b>               |

### The Show Commands to Know!

|                                                                                                         |                                            |
|---------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Shows information about the switch and its interfaces, RAM, NVRAM, flash, IOS, etc                      | Switch# <b>show version</b>                |
| Shows the current configuration file stored in DRAM.                                                    | Switch# <b>show running-config</b>         |
| Shows the configuration file stored in NVRAM which is used when the device boots.                       | Switch# <b>show startup-config</b>         |
| Shows an overview of all interfaces, their physical status, protocol status and ip address if assigned. | Switch# <b>show ip interface brief</b>     |
| Shows any Descriptions you've configured on your individual interfaces.                                 | Switch# <b>show interfaces description</b> |
| Shows the status of all interfaces like connected or not, speed, duplex, trunk or access VLAN.          | Switch# <b>show interfaces status</b>      |

### Awesome Shortcuts

|                                                            |                                                                       |
|------------------------------------------------------------|-----------------------------------------------------------------------|
| Create shortcuts for long commands                         | Router(config)# <b>alias exec</b> SHIP <b>show ip interface brief</b> |
| Configure a Banner Message that shows "everywhere"         | Router(config)# <b>banner motd \$</b> THIS IS MY MESSAGE \$           |
| Encrypt all plain-text passwords stored on the device      | Router(config)# <b>service password-encryption</b>                    |
| Stop those "pop-up" messages from cutting through your CLI | Router(config)# <b>logging synchronous</b>                            |
| Save your configuration                                    | Router# <b>wr</b> or <b>write</b> or <b>copy run star</b>             |

### Some Fun "Studies"

|                                             |                           |
|---------------------------------------------|---------------------------|
| LearnCisco (Configuring a Cisco Router)     | A Very Thorough Deep Dive |
| Lock down your Cisco Router (from the NSA?) | Hardening a Cisco Router  |

### Configuring a Switch Management Interface

|                                                                                          |                                                                         |
|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Access a specific switch VLAN interface SVI (common VLAN 1)                              | Switch(config)# <b>interface VLAN #</b>                                 |
| Configure a reachable IP address and Subnet Mask                                         | Switch(config-if) <b>#ip address ADDRESS MASK</b>                       |
| Activate the Switch management interface                                                 | Switch(config-if) <b>#no shut</b>                                       |
| Exit the switch VLAN interface (SVI)                                                     | Switch(config-if) <b>#exit</b>                                          |
| Configure a default gateway for the switch to send upstream traffic out of the local LAN | Switch(config)# <b>ip default-gateway IP-ADDRESS-OF-UPSTREAM-ROUTER</b> |

### Configuring a Router Network Interface

|                                                          |                                                   |
|----------------------------------------------------------|---------------------------------------------------|
| Locate your Router interfaces (learn their designations) | Router# <b>show ip interface brief</b>            |
| Access Global Configuration mode                         | Router# <b>configure terminal</b>                 |
| Access a specific Router interface                       | Router(config)# <b>interface</b> gi0/0/0          |
| Configure a reachable IP address and Subnet Mask         | Router(config-if) <b>#ip address ADDRESS MASK</b> |
| Activate the Router interface                            | Router(config-if) <b>#no shut</b>                 |

### Configuring SSH for Remote Management

|                                                                              |                                                             |
|------------------------------------------------------------------------------|-------------------------------------------------------------|
| Configure the device hostname                                                | Switch(config)# <b>hostname</b> NAME                        |
| Configure the Domain Name the device will operate on                         | Switch(config)# <b>ip domain-name</b> EXAMPLE.COM           |
| Configure a username and password for remote management                      | Switch(config)# <b>username</b> admin <b>password</b> cisco |
| Generate encryption keys to "obfuscate" the management traffic               | Switch(config)# <b>crypto key generate rsa</b>              |
| Configure a minimum of 1024 bits for encryption security                     | How many bits in the modulus [512]: 1024                    |
| Define the SSH version to use (older versions have exploits/vulnerabilities) | Switch(config)# <b>ip ssh version 2</b>                     |
| Access the VTY lines (used for Telnet and SSH)                               | Switch(config)# <b>line vty</b> 0 4                         |
| Activate SSH on the VTY lines                                                | Switch(config-line)# <b>transport input</b> ssh             |
| Require a username and password combo                                        | Switch(config-line)# <b>login local</b>                     |
| Save your configuration                                                      | Switch# <b>wr</b>                                           |



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