Cisco IOS Reference Cheat Sheet

Command Syntax: (config)# service password encryption
What it does: Converts all plain text passwords into type 7 scrambled text.
Use case: The usual use cases would be when you configure normal plaintext passwords on Cisco equipment and need to add an extra layer of security.
Key differences: Type 7 is easily decryptable and not a good choice for security unlike choices within Juniper that have options like SHA or MD5.

Command Syntax: (config)# interface range [type] [start interface - end interface]
What it does: Allows you to configure multiple interfaces at the same time.
Use case: The usual use case would be when you want to configure multiple interfaces that have the same configuration or bundling a group to an etherchannel, so you don't have to configure each interface one by one.
Key differences: Cisco leads the way of configuring multiple interfaces unlike some of its competitors like Juniper that only allow "group interface" configurations under certain circumstances.

Command Syntax: (config)# no shutdown
What it does: Allows you to bring up an interface.
Use case: You would usually use this to bring up an interface that is within the Cisco device. By default Cisco router interface are always down so this command is really helpful.
Key differences: In most cases Cisco interfaces are always down which provides a little bit of a security layer rather than having all interfaces up out of a box and forgetting to disable them.

Command Syntax: 1. (config)# router eigrp [AS #], **2.** (config-router)# no auto-summary, **3.** (config-router)# network [IP address of network] [Wildcard mask]
What it does: Allows you to configure a EIGRP route.
Use case: You would use it when handling an enterprise network because it effectively uses bandwidth. It uses bandwidth and delay to select the best path to send packets within a network thus reserving bandwidth for other things, also you can configure unequal cost load balancing.
Key differences: Eigrp is Cisco proprietary which works perfect in an all Cisco environment but doesn't work well if you have different brand devices. Comparing it to OSPF which is vendor neutral EIGRP works best in an enterprise network.

Command Syntax: # show ip route
What it does: Allows you to bring up the routing table
Use case: You would use this command to review all the networks that a router or layer 3 switch knows from a routing protocol.
Key differences: Every vendor has a command like this available but is in this aspect that Cisco lacks. This command only shows ipv4 routes but in order to access the ipv6 routes you need a whole different command. Unlike other vendors like Juniper and Arista they show ipv4 and ipv6 routes together.

Command Syntax: # show cdp neighbors
What it does: Allows you to bring up a table that shows neighboring devices connected to your device.
Use case: You would use this command to review all devices that are connected to the device itself, it gives you key information like IP Addresses, version numbers, host name, etc.
Key differences: CDP is Cisco proprietary and the counterpart of this feature is a vendor neutral protocol LLDP. CDP has it advantages over LLDP like displaying VTP Domain, Platform, model # and etc.

Command Syntax: # show version
What it does: Allows you to bring up detailed information of the device itself.
Use case: You would use this command to view personal device information, troubleshooting and system management.
Key differences: Every vendor has a command like this available but in this aspect Cisco is ahead of the competition due to the fact that it displays detailed information that other vendors don't display. Vendors like Jupiter only display things such as host name, model #, software and build while Arista only shows the version it is running.

Command Syntax: (config)# vtp domain [domain name] **{do this for every device}**
What it does: Allows you to configure VLANs on a single device and share them between other networking devices within your network.
Use case: You would use this command to easily manage and configure multiple VLANs within a single device to distribute amongst your other networking devices. Saves so much time rather than manually configuring a VLAN one by one on every device.
Key differences: Cisco is the only vendor that has this ability, which makes it a perfect use for a Cisco networking infrastructure. Other vendors require manual configuration or automated scripts.

Command Syntax: 1. (config)# interface range [type] [starting interface - end interface] **2.** (config-int-range)# switchport mode trunk **3.** (config-int-range)# channel-group [#] [Auto | Desirable]
What it does: Allows you to bundle up interfaces to act as 1 interface.
Use case: You would use this command to ensure link redundancy, reduce configuration setups, and improve upon load-balancing.
Key differences: PAgP is Cisco proprietary; the other counterpart for bundling interfaces together that is vendor neutral is LACP. The benefit of PAgP is that it works perfectly in all Cisco network infrastructure with legacy devices. Equipment gets expensive as a network expands so the fact that PAgP works with Cisco legacy devices saves money.

Command Syntax: 1. (config)# interface [type] [interface-id] **2.** (config-int)# switchport mode [Trunk | Access]

What it does: Allows you to configure a switchport as an access port for hosts to use or a trunk port to allow multiple VLANs traveling between interfaces.

Use case: There are multiple cases where this command comes into play. Whether that would be configuring a port to allow a single host to access and interact with the network/VLAN it is a part of or configuring a trunk port between 2 networking devices to allow multiple VLANs to flow through.

Key differences: Every vendor has a feature like this but Cisco leads the way of simplicity. Other vendors like Arista and Juniper require 2 or more long commands to place an interface into access or trunk mode while Cisco allows you to do it all within the same line. Saves so much time.