When getting into the router for the first time we see the initial config-dialog--> ALWAYS SAY NO!!	--- System Configuration Dialog --- Continue with configuration dialog? [yes/no]: N *If stuck in Initial Config Dialog because of "Yes" = Use-> CNTRL+C
Console Settings-	When using a Console connection: Connect your PC/terminal to the console port via HyperTerminal/Putty and set the following: (9600-8-N-1-no flow)

Save/Delete/Reload	**(Same for both devices Routers and Switches)**	
Go from User mode to privilege	Router>en	
Saves Running cofig to NVRAM	Router#copy run start	Switch#copy run start
Same as "copy run start"-just better	Router#wr	Switch# wr
Erase the startup-config	Router#erase start	Switch#erase start
Same as erase start cmd	Router#wr erase	Switch# wr erase
To see files in flash	Switch#dir	
Deletes vlan file	Switch#delete vlan.dat	**(Typcially, Switch only)**
!!Must do "reload" to clear devices startup/running-configs/vlan.dat!!	Router#reload	Switch#reload

BASIC CONFIGs	**(Same for both devices)**
	Router#conf t
Name the device	Router(config)#hostname R1
Turns off error- DNS lookup	R1(config)#no ip domain-lookup
Privilege level encrypted pass	R1(config)#enable secret class
Privilege password	R1(config)#enable password class1
Encrypts clear-text passwords	R1(config)#service password-encryption
Sets motd banner "=Delimiting Chara.	R1(config)#banner motd "Warning"
All Pass must be "10" Characters	R1(config)#security passwords min-length 10
3 bad attempts in 1 min. locks out for 2 min.	R1(config)#login block-for 120 attempts 3 within 60

Line Passwords	**(Same for both devices)**
Enter Console Sub-mode	R1(config)#line con 0
Set Console Password	R1(config-line)#password cisco
Prompts/ "Asks" for the password	R1(config-line)#login
Keeps prompt @ bottom of screen	R1(config-line)#logging synchronous
Time of Console session- Min/Sec	R1(config-line)#exec-timeout 0
0= Never timeout	R1(config-line)#exit
	R1(config)#
Enter VTY Sub-mode (Telnet &/or SSH)	R1(config)#line vty 0 15
Set VTY Password	R1(config-line)#password cisco
Prompts/ "Asks" for the password	R1(config-line)#login
	R1(config-line)#exit
	R1(config)#

Router Interfaces	
Ethernet Interface on Rtr	R1(config)#int g0/0
	R1(config-if)#ip add 192.168.10.1 255.255.255.0
	R1(config-if)#no shut
	R1(config-if)#description Connects to S1
	R1(config-if)#exit
Serial Interface on Rtr	R1(config)#int s0/0/0
	R1(config-if)#ip add 172.16.10.1 255.255.255.252
DCE end only	R1(config-if)#clock rate 64000
	R1(config-if)#no shut
	R1(config-if)#description Connects to WAN
	R1(config)#
Switch VLAN Interface	
Set the VLAN address	S1(config)#int vlan1
Note- the IP is in the Management VLAN	S1(config-if)#ip add 192.168.10.2 255.255.255.0
	S1(config-if)#no shut
	S1(config-if)#exit
Tells the switch the DGW- for access off LAN	S1(config)#ip default-gateway 192.168.10.1
SSH- Setup	**(Same for both devices)**
This is the DNS name/domain-name	R1(config)#ip domain-name cisco.com
This is the username and Password	R1(config)#username admin password cisco
Goes from SSH ver.1 to more secure v.2	R1(config)#ip ssh ver 2
	Please create RSA keys (of at least 768 bits size) to enable SSH v2.
	R1(config)#crypto key generate rsa
	The name for the keys will be: R1.cisco.com
	Choose the size of the key modulus in the range of 360 to 2048 for your General Purpose Keys. Choosing a key modulus greater than 512 may take a few minutes.
	How many bits in the modulus [512]: 1024
	% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]
	*Mar 1 0:17:38.757: %SSH-5-ENABLED: SSH 2 has been enabled
Go into Line vty	R1(config)#line vty 0 15
local= now prompts for username+pass	R1(config-line)#login local
Turns off Telnet and turns on only SSH	R1(config-line)#transport input ssh
	R1(config-line)#end
Basic Show Commands for ssh	R1#show ip ssh <or> R1#show ssh <or> Router#sh crypto key mypubkey rsa
Show Commands	**(Same for both devices)**
Shows running configurations	R1#show run
Shows saved configurations (in NVRAM)	R1#show start
Shows IOS and files	R1#show flash
Shows all basic device information	R1#show version
Shows information about all interfaces	R1#show interfaces
Shows information about g0/0 int only	R1#show int g0/0
Shows all basic ip info on all int	R1#show ip int
Shows all basic ip info on g0/0 int	R1#show ip int g0/0
Shows brief ips on all interfaces	R1#show ip int brief
shows routing table	R1#show ip route
Shows route the rtr will choose to send to get traffic to this network	R1#show ip route 192.168.10.0
Displays Cisco neighbor's L1 &L2 info	R1#show cdp neighbor
Includes L3 addressing info	R1#show cdp neighbor detail
	*Note any Privilege level command may be complete in other areas like the global mode just by using "do" infront of the command… e.g. R1(config)# do sh run <or> R1(config-if)#do copy run start

Short Cuts	**(Same for both devices)**
Stops errors/processes	CNTRL + Shift + 6
Exit Initial Config Dialog	CNTRL + C
Back to Privilege Mode	CNTRL + Z <or> end
Back one level	exit
Editing Commands	
	Control-A: Moves to the beginning of the command line. Control-E: Moves to the end of the command line. Esc-B: Moves back one word. Control F: Moves forward one character. Control-B: Move back one character. Esc F: Moves forward one word.
More Testing Commands	**(Same for both devices)**
	Here are some commands which may help you troubleshoot the router. Many of the commands might be used while you are speaking with a Tech Support Engineer. R1# show memory R1# show stacks R1# show buffers R1# show arp R1# show processes R1# show processes cpu R1# show tech-support
Command History Commands	**(Same for both devices)**
	Control P or up arrow key: Recalls last (previous command. Control N or down arrow key: Recalls most recent command Tab key: completes the entry. R1# show history R1# terminal history R1# terminal editing R1# no terminal editing

IPv6 Commands	
Turns on the IPv6 protocol	R1(config)#ipv6 unicast-routing
	R1(config)#int g0/0
Global Addressing	R1(config-if)#ipv6 add 2001:db8:acad:1::1/64
Link Local Addressing (Simular to APIPA in IPv4)	R1(config-if)#ipv6 add fe80::1 Link R1(config-if)#no shut R1(config-if)#exit
	R1(config)#int g0/1
Notice the 4th Hextet is for the NW Segment. The first 4 Hextets must be the same for everyone on the link. -> 2001:db8:ACAD:2:	R1(config-if)#ipv6 add 2001:db8:acad:2::1/64 R1(config-if)#ipv6 add fe80::1 Link R1(config-if)#no shut R1(config-if)#exit

	R1(config)#int s0/0/0
Everything behind 4th Hextet is the User or Host portion= ::1 (when /64). This part must be unique on the link! * See Example	R1(config-if)#ipv6 add 2001:db8:acad:3::1/64 R1(config-if)#ipv6 add fe80::1 Link R1(config-if)#no shut R1(config-if)#exit

* **Example**- R1 is connected to R2. R1 is given address: 2001:db8:acad:3::1/64 R2 may be given: 2001:DB8:ACAD:3::2/64 The Red=NW portion/The Blue=Host Portion A device that is using EUI-64 process might look like the following: 2001:db8:acad:3:0012:34ff:fe56:7890 The 0012:34 part represents OUI of the MAC and 56:7890 represents Unique portion of MAC, separated by fffe.	**Note:** A Global Network Segment address would be expressed like the following: 2001:db8:acad:3:: /64 The :: /64 = All 0's in the host portion and represents the entire link. This address cannot be assigned to anyone because the router and PCs uses it for ANDing. (This represents everyone on this Network Segment)