

### Day 4 - Basic Device Security / Commands

SW1(config)# <b>banner motd</b> \$"enter welcome message"\$	sets message of the day banner when entering an IOS device.
SW1(config)# <b>enable password</b> "password"	unencrypted password text will be applied and can be viewed in running-config.
R1(config)# <b>service password-encryption</b>	encrypts the current unencrypted passwords and featured inserted passwords with <b>Type 7</b> encryption.
SW1(config)# <b>enable secret</b> "password"	encrypted password using MD5 hash. will take priority over unencrypted passwords.
R1(config)# <b>no ip domain-lookup</b>	disables DNS lookup from host and prevents miss-typed commands from being "translated". ( <b>CTRL+SHIFT+6</b> )
R1(conf-line)# <b>logging synchronous</b>	prevents logging output from interrupting your command input.
Router(config)# <b>line vty 0 15</b>	select ports 0-15 for SSH/Telnet virtual line.
R1(config)# <b>line console 0</b>	selects the console port on the IOS device to make configuration changes.
R1(config)# <b>login</b>	activates a configured password that has been set for a remote connection such as Telnet or SSH.
R1(config)# <b>login local</b>	asks the user logging in to enter a username & password stored on the router.
R1(config)# <b>username</b> <i>username</i> <b>privilege</b> <i>1-15</i> <b>secret</b> <i>password</i>	STEP 1# sets up a username and password.
R1(config)# <b>line console 0</b>	STEP 2# sets up a username and password.
R1(config)# <b>login local</b>	STEP 3# sets up a username and password.
R1(config)# <b>end</b>	STEP 4# sets up a username and password.
SW1(config-if)# <b>default interface</b> <i>g0/1</i>	restores the default settings of the interface selected.

### Day 6 - Ethernet LAN Switching

SW1(config)# <b>clear mac address-table dynamic</b>	manually removes the MAC address from the table.
SW1(config)# <b>clear mac address-table dynamic address</b> <i>MAC Address</i>	deletes specific entered mac address.
SW1(config)# <b>clear mac address-table dynamic interface</b> <i>interface</i>	deletes all mac address on an interface.

### Day 8 - IPv4 Addressing

R1(config-if)# <b>ip address</b> <i>192.168.1.1 255.255.255.0</i>	sets the chosen interface with an IP address and Subnet Mask
R1(config-if)# <b>no shutdown</b>	enables the interface
R1(config)# <b>hostname</b> <i>R1</i>	sets a hostname to a chosen network device.

### Day 9 - Switch Interfaces

SW1(config-if)# <b>speed</b> <i>10,100,1000 or auto</i>	sets the chosen interface speed settings.
SW1(config)# <b>duplex</b> <i>half,full or auto</i>	sets the chosen interface duplex settings.

### Day 11 - Static Routing

R1(config)# <b>ip route</b>   <i>destination of the network's ip address</i>   <i>destination of the network's Subnet Mask</i>   <i>next hop router</i>	sets a static configured route of the next hop address with destination and subnetmask.
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### Day 11 - Static Routing (cont)

R1(config)#**ip route 0.0.0.0 0.0.0.0 next hop router** sets a default route

### Day 16 - VLANs (1)

SW1(config-if)#**vlan vlan number** creates the VLAN.

SW1(config-vlan)**name name a vlan** names the VLAN.

SW1(config-if)#**switchport mode access** enables the VLAN on the selected interface.

SW1(config-if)#**switchport access vlan vlan number** lets the configured VLAN number to access the selected interface.

### Day 17 - VLANs (2)

SW1(config-if)#**switchport mode trunk** sets the switchport to trunking mode.

SW1(config-if)#**switchport trunk encapsulation dot1q** manually sets the encapsulation protocol to IEEE 802.1Q

SW1(config-if)#**switchport trunk allowed vlan vlan number** adds VLANs to the configured/selected trunk

SW1(config-if)#**switchport trunk native vlan native vlan number** changes the default native VLAN from "1" to the configured native VLAN.

SW1#**show interfaces trunk** displays the native VLAN number and the allowed VLAN on a trunk

### Day 17 - ROAS (3)

R1(config-if)#**interface g0/1** STEP #1 - select a sub-interface.

R1(config-subif)#**encapsulation dot1q vlan id** STEP #2 - encapsulate the VLAN with IEEE802.1Q frames.

R1(config-subif)#**ip address 192.168.1.62 255.255.255.192** STEP #3 - configure the sub-interface with an IP address and subnetmask.

R1#**show ip interface brief** we can view those sub-interfaces with these commands

R1#**show ip route** we can view those sub-interfaces with these commands

### Day 18 - Multilayer Switch L3

MLSW1(config)#**ip routing** enables Layer 3 routing on the MLSW.

MLSW1(config-if)#**no switchport** disables L2 switchport and makes it L3 capable switchport.

### Day 18 - Multilayer Switch SVI's

SW1(config-if)#**interface vlan vlan number\*** STEP 1# select a VLAN to configure an SVI on.

SW1(config-if)#**ip address 192.168.1.62 255.255.255.192** STEP 2# set the SVI with an IP address

SW1(config-if)#**no shutdown** STEP 3# enable the SVI interface.

### Day 19 - DTP

SW2(config-if)#**switchport mode dynamic auto/d-esirable** this is DTP. automatically determining if the switchport needs to be access-access or trunk-trunk.



### Day 19 - DTP (cont)

SW2(config-if)# <b>switchport nonegotiate</b>	disables DTP. recommended to disable it for security purposes. *note: <b>switchport mode access</b> also disables DTP, since it's a manual configuration.
SW2# <b>show interfaces</b> <i>g0/1</i> <b>switchport</b>	displays the following; interface name, administrative mode (desirable/auto), operational mode (trunk/access).

### Day 19 - VTP

SW1(config)# <b>vtp domain</b> <i>domain name</i>	changes domain name from "NULL" to a configured domain name. *note: can't delete vtp domain name. only change to a different VTP domain name or delete the .dat file on the Switch.
SW1(config)# <b>vtp mode</b> <i>client   server   transparent</i>	selects one of the following VTP modes
SW1(config)# <b>vtp version</b> <i>version number 1,2,3</i>	selects the version number. *note: for a server switch to share VTP advertisements and copy its VLANs and <b>revision number</b> and domain name to other client switches. they both need to be set to the same version number.
SW1# <b>show vtp status</b>	shows VTP version running, domain name, pruning mode, number of existing VLANs, revision number.

### Day 23 - EtherChannel (PAgP / LACP / Static)

MLSW(config)# <b>interface</b> <i>po1</i>	#STEP 1 - creates port channel interface
MLSW(config-if)# <b>switchport trunk encapsulation</b> <i>dot1q</i>	#STEP 2 - sets the port channel to IEEE 802.1Q VLAN trunking standard
MLSW(config-if)# <b>switchport mode</b> <i>trunk</i>	#STEP 3 - sets the port channel to trunk mode

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SW(config-if)# <b>switchport mode</b> <i>trunk</i>	#STEP 3 - sets the port channel to trunk mode
לערוך עם פאקט טרייסר את הפקודות ^	
MLSW(config)# <b>interface range</b> <i>g0/1-5</i>	STEP #1 - select interfaces
MLSW(config)# <b>no switchport</b>	STEP #2 - disable L2 switchport and make switchport L3 capable.
MLSW(config)# <b>channel-group</b> <i>1,2,3 mode active / desirable / on*</i>	STEP #3 - <i>*creates the po1 interface</i> and sets the channel group and EtherChannel Protocol.

SW1# <b>show etherchannel summary</b>	displays the flags   (SU) (SD) (RU) etc...
SW1# <b>show etherchannel load-balance</b>	displays the load-balance of <i>dst-ip dst-mac-ip etc...</i>
SW1# <b>show etherchannel port-channel</b>	SUMMARY לא בטוח שצריך את הפקודה הזו, לבדוק כנגד



### Day 23 - EtherChannel (PAgP / LACP / Static) (cont)

SW1#**show ip interface brief**

checks for *po1/2/3* interfaces to make sure they've been created..



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