

### Day 4 - Basic Device Security / Commands

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

### Day 6 - Ethernet LAN Switching

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

### Day 8 - IPv4 Addressing

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

### Day 9 - Switch Interfaces

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

### Day 11 - Static Routing

R1(config)#ip route   destination of the network's ip address   destination of the network's Subnet Mask   next hop router	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)# <b>vlan vlan number</b>	creates the VLAN.
SW1(config-vlan) <b>name name a vlan</b>	names the VLAN.
SW1(config-if)# <b>switchport mode access</b>	enables the VLAN on the selected interface.
SW1(config-if)# <b>switchport access vlan vlan number</b>	lets the configured VLAN number to access the selected interface.

### Day 17 - VLANs (2)

SW1(config-if)# <b>switchport mode trunk</b>	sets the switchport to trunking mode.
SW1(config-if)# <b>switchport trunk encapsulation dot1q</b>	manually sets the encapsulation protocol to IEEE 802.1Q
SW1(config-if)# <b>switchport trunk allowed vlan vlan number</b>	adds VLANs to the configured/selected trunk
SW1(config-if)# <b>switchport trunk native vlan native vlan number</b>	changes the default native VLAN from "1" to the configured native VLAN.
SW1# <b>show interfaces trunk</b>	displays the native VLAN number and the allowed VLAN on a trunk

### Day 17 - ROAS (3)

R1(config-if)# <b>interface g0/1</b>	STEP #1- select a sub-interface.
R1(config-subif)# <b>encapsulation dot1q vlan id</b>	STEP #2 - encapsulate the VLAN with IEEE802.1Q frames.
R1(config-subif)# <b>ip address 192.168.1.62 255.255.255.192</b>	STEP #3 - configure the sub-interface with an IP address and subnetmask.
R1# <b>show ip interface brief</b>	we can view those sub-interfaces with these commands
R1# <b>show ip route</b>	we can view those sub-interfaces with these commands

### Day 18 - Multilayer Switch L3

MLSW1(config)# <b>ip routing</b>	enables Layer 3 routing on the MLSW.
MLSW1(config-if)# <b>no switchport</b>	disables L2 switchport and makes it L3 capable switchport.

### Day 18 - Multilayer Switch SVI's

SW1(config-if)# <b>interface vlan vlan number*</b>	STEP 1# select a VLAN to configure an SVI on.
SW1(config-if)# <b>ip address 192.168.1.62 255.255.255.192</b>	STEP 2# set the SVI with an IP address
SW1(config-if)# <b>no shutdown</b>	STEP 3# enable the SVI interface.

### Day 19 - DTP

SW2(config-if)# <b>switchport mode dynamic auto/desirable</b>	this is DTP. automatically determining if the switchport needs to be access-access or trunk-trunk.
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### Day 19 - DTP (cont)

SW2(config-if)#switchport nonegotiate	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#show interfaces g0/1 switchport	displays the following; interface name, administrative mode (desirable/auto), operational mode (trunk/access).

### Day 19 - VTP

SW1(config)#vtp domain <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)#vtp mode <i>client / server / transparent</i>	selects one of the following VTP modes
SW1(config)#vtp version <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#show vtp status	shows VTP version running, domain name, pruning mode, number of existing VLANs, revision number.

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

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

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

SW(config)#interface po1	#STEP 1 - creates port channel interface
SW(config-if)#switchport trunk encapsulation dot1q	#STEP 2 - sets the port channel to IEEE 802.1Q VLAN trunking standard
SW(config-if)#switchport mode trunk	#STEP 3 - sets the port channel to trunk mode
לערוך עם פאקט טרייטר את הפקודות ^	
MLSW(config)#interface range g0/1-5	STEP #1 - select interfaces
MLSW(config)#no switchport	STEP #2 - disable L2 switchport and make switchport L3 capable.
MLSW(config)#channel-group 1,2,3 mode active / desirable / on*	STEP #3 - *creates the po1 interface and sets the channel group and EtherChannel Protocol.

SW1#show etherchannel summary displays the flags | (SU) (SD) (RU) etc...

SW1#show etherchannel load-balance displays the load-balance of dst-ip dst-mac-ip etc...

SW1#show etherchannel port-channel לא בטוח שציריך את הפקודה זו, לבדוק נגדי SUMMARY



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### 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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