DHCP : Esercitazione rete con Server DHCP e due VLAN
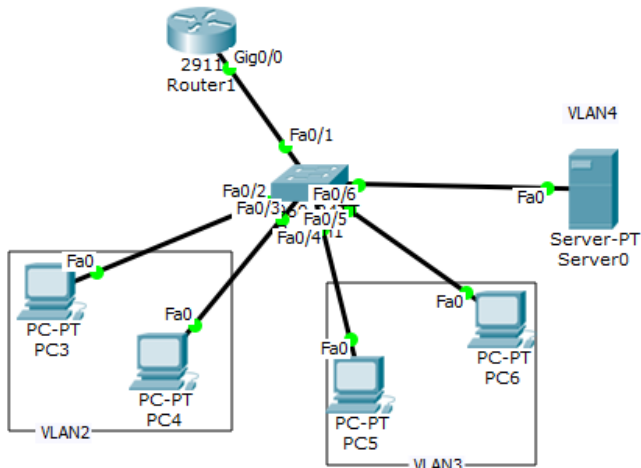

segmentazione della rete in vlan&
assegnazione ACCESS port

Switch>en   TAB
Switch>enable
Switch#conf t   TAB
Switch#confterminal
Switch(config)#vlan 2
Switch(config-vlan)#name VLAN2
Switch(config-vlan)#exit

Switch(config)#vlan 3
Switch(config-vlan)#name VLAN3
Switch(config-vlan)#exit

Switch(config)#vlan 4
Switch(config-vlan)#name DHCP
Switch(config-vlan)#exit

Switch(config)#
Switch(config)#int rang efa   TAB
Switch(config)#int range fastEthernet 0/2-3
Switch(config-if-range)#swit   TAB
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switch   TAB
Switch(config-if-range)#switchport access vlan 2
Switch(config-if-range)#exit

Switch(config)#int range fa
Switch(config)#int range fastEthernet 0/4-5
Switch(config-if-range)#switchpo   TAB
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switc   TAB
Switch(config-if-range)#switchport access vlan 3
Switch(config-if-range)#exit

Switch(config)#intfa 0/6
Switch(config-if)#switc   TAB
Switch(config-if)#switchport mode access
Switch(config-if)#sw   TAB
Switch(config-if)#switchport access vlan 4
Switch(config-if)#exit

ROUTER

Router#conf t
Router(config-if)#int gi
Router(config-if)#int gigabitEthernet**0/0.2**
Router(config-subif)#enc
Router(config-subif)#encapsulation dot1Q 2
Router(config-subif)#ip add
Router(config-subif)#ip address 192.168.2.1
255.255.255.0
Router(config-subif)#no shutdown
Router(config-subif)#exit

Router(config)#int gi */attiviamo fisicamente/*
Router(config)#int gigabitEthernet **0/0**
Router(config-if)#no shut
Router(config-if)#no shutdown
Router(config-if)#end
Router#
%SYS-5-CONFIG_I: Configured from console by
console

Router#conf t
Router#conf terminal
Router(config)#int gi
Router(config)#int gigabitEthernet **0/0.3**
Router(config-subif)#enc
Router(config-subif)#encapsulation dot1Q 3
Router(config-subif)#ip add
Router(config-subif)#ip address 192.168.3.1
255.255.255.0
Router(config-subif)#no shut
Router(config-subif)#no shutdown
Router(config-subif)#exit

Router(config)#int gi
Router(config)#int gigabitEthernet **0/0.4**
Router(config-subif)#enc
Router(config-subif)#encapsulation dot1Q 4
Router(config-subif)#ip add
Router(config-subif)#ip address 192.168.4.1
255.255.255.0
Router(config-subif)#no shut
Router(config-subif)#no shutdown
Router(config-subif)#exit
Router(config)#end
Router#

Router#wr mem
Building configuration…
[OK]
Router#show run
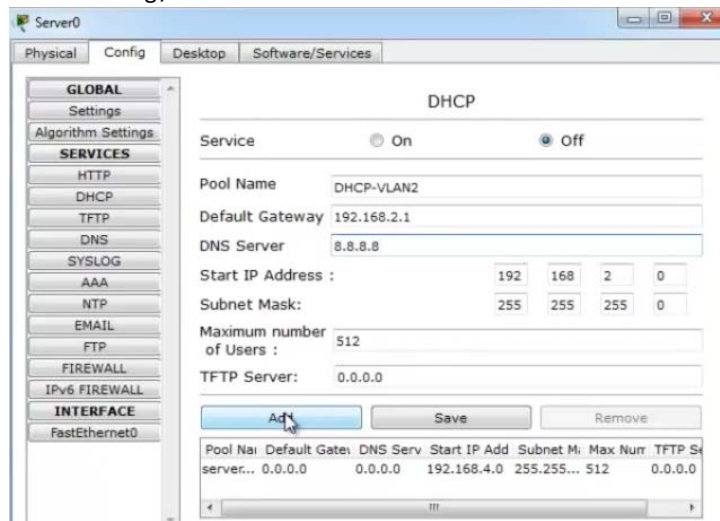
SWITCH: trunk port

Switch(config)#
Switch(config)#int fa
Switch(config)#int fastEthernet 0/1
Switch(config-if)#swi   TAB
Switch(config-if)#switchport mode trunk
Switch(config-if)#swi   TAB
Switch(config-if)#switchport trunk all
Switch(config-if)#switchport trunk allowed vlan 2,3,4
Switch(config-if)#exit
Switch(config)#end
Switch#
Switch#wr mem
Buildingconfiguration...
[OK]
Switch#show run

SERVER

SERVER: Desktop/ IP Configuration : indirizzo statico **192.168.4.2**
Gateway 192.168.4.1
Desktop/Command Prompt: pingare il router
SERVER>ping 192.168.4.1

SchedaConfig / DHCP:

				DHCP	
GLOBAL					
Settings		Service	○ On	◉ Off	
Algorithm Settings					
SERVICES		Pool Name	DHCP-VLAN2		
HTTP		Default Gateway	192.168.2.1		
DHCP		DNS Server	8.8.8.8		
TFTP					
DNS		Start IP Address :	192 168 2 0		
SYSLOG		Subnet Mask:	255 255 255 0		
AAA					
NTP		Maximum number of Users :	512		
EMAIL					
FTP		TFTP Server:	0.0.0.0		
FIREWALL					
IPv6 FIREWALL		Add	Save	Remove	
INTERFACE					
FastEthernet0		Pool Nai Default Gatei DNS Serv Start IP Add Subnet Mi Max Num TFTP Si			
		server... 0.0.0.0 0.0.0.0 192.168.4.0 255.255... 512 0.0.0.0			

Aggiungiamo un indirizzo per rinviare la richiesta di un PC al server DHCP, che altrimenti non riescono ad inviargli una richiesta broadcast del indirizzo

HELPER ADDRESS

Router>
Router>en
Router>enable
Router#conf t
Router#conf terminal

Router(config)#int gi
Router(config)#int gigabitEthernet 0/0.2
Router(config-subif)#ip help
Router(config-subif)#ip helper-address 192.168.4.2
Router(config-subif)#exit

Router(config)#int gi
Router(config)#int gigabitEthernet 0/0.3
Router(config-subif)#ip help
Router(config-subif)#ip helper-address 192.168.4.2
Router(config-subif)#exit
Router(config)#end

Router#
Router#wr mem

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Serve
DHCP-VLAN3	192.168.3.1	8.8.8.8	192.168.3.0	255.255.255.0	256	0.0.0.0
DHCP-VLAN2	192.168.2.1	8.8.8.8	192.168.2.0	255.255.255.0	256	0.0.0.0
serverPool	0.0.0.0	0.0.0.0	169.254.0.0	255.255.0.0	255	0.0.0.0

CONFIGURAZIONE ROUTER

Router>en
Router>enable
Router#conf t

Router(config)#int fa0/0
Router(config-if)#no shut
Router(config-if)#no shutdown

Router(config-if)#
Router(config-if)#ip add
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#exit

Router(config)#
Router(config)#ip dhcp
Router(config)#ip dhcp pool DHCP
Router(dhcp-config)#network 192.168.1.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.1.1
Router(dhcp-config)#dns-server 8.8.8.8
Router(dhcp-config)#ip dhcp excluded-address 192.168.1.100
Router(dhcp-config)#ip dhcp excluded-address 192.168.1.1
Router(config)#exit
Router#show run
Router#show running-config
Router#wr mem