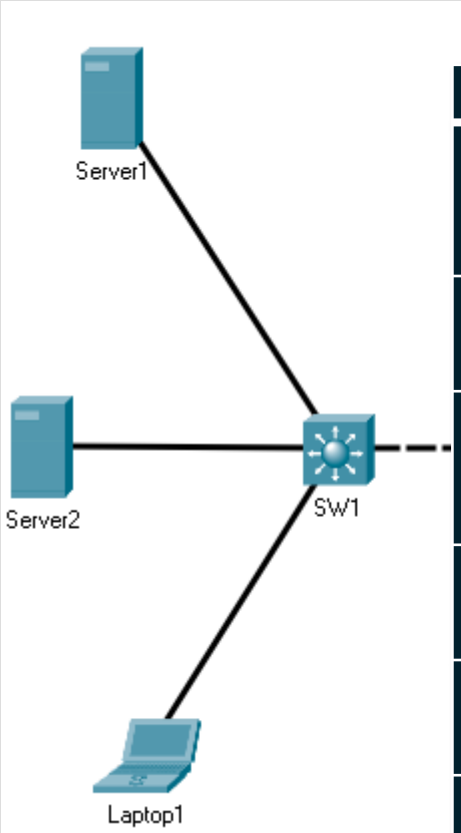
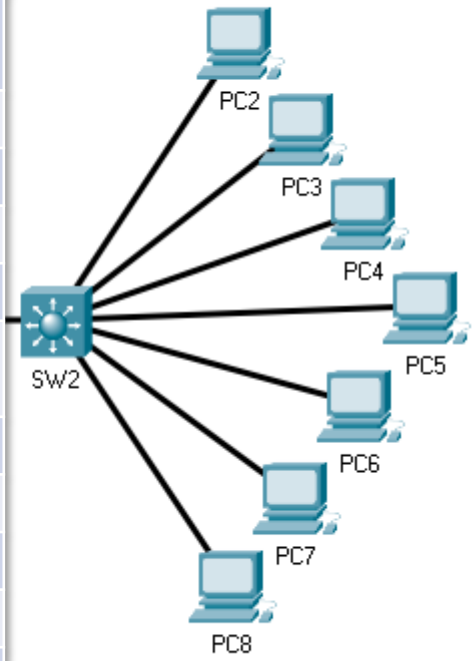
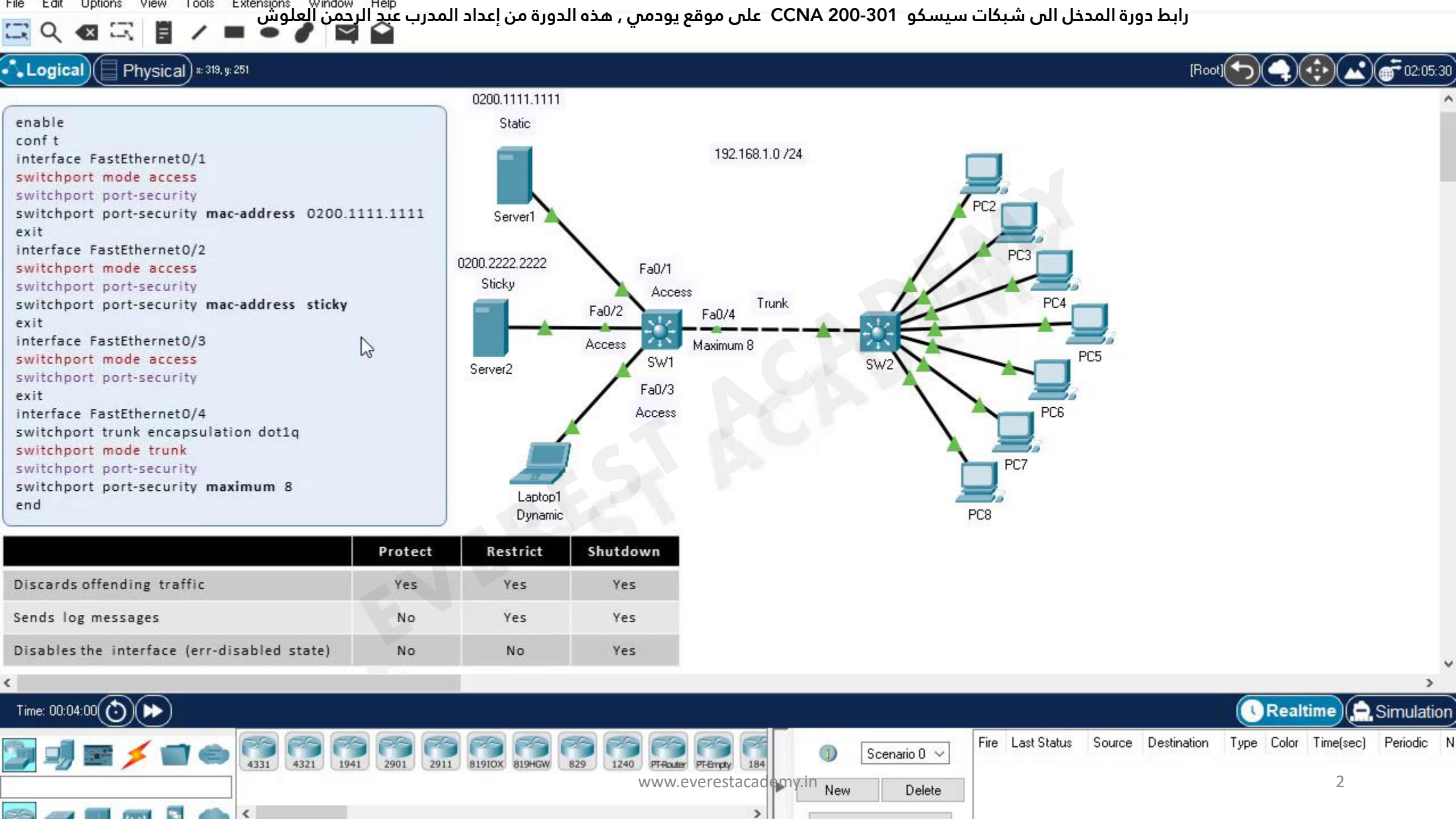
Port Security



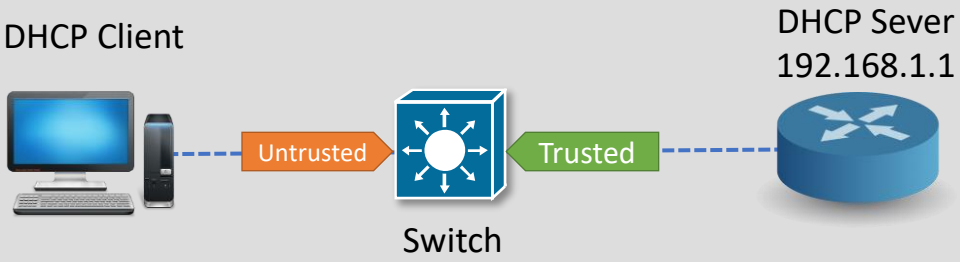
	switchport mode access	**switchport trunk encapsulation dot1q** **switchport mode trunk**
	to make the switch interface either a static access or trunk interface.	
	switchport port-security	
	to enable port security on the interface.	
Optional	**switchport port-security maximum** *number*	
	to override the default maximum number of allowed MAC addresses associated with the interface [**1**].	
Optional	**switchport port-security violation {*protect* | *restrict* | *shutdown*}**	
	to override the default action to take upon a security violation [**shutdown**].	
Optional	**switchport port-security mac-address** *mac-address*	
	to predefine any allowed source MAC addresses for this interface.	
Optional	**switchport port-security mac-address sticky**	
	to tell the switch to “sticky learn” dynamically learned MAC addresses.	

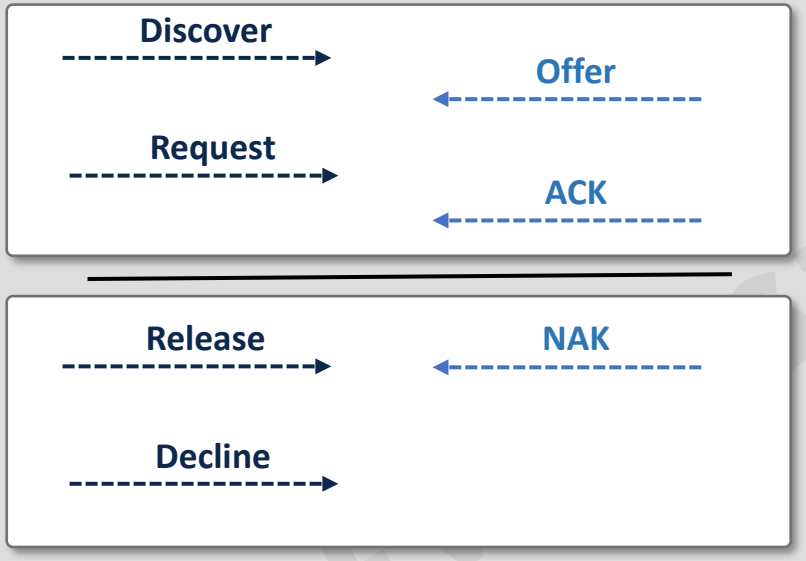




	Protect	Restrict	Shutdown
Discards offending traffic	Yes	Yes	Yes
Sends log messages	No	Yes	Yes
Disables the interface (err-disabled state)	No	No	Yes

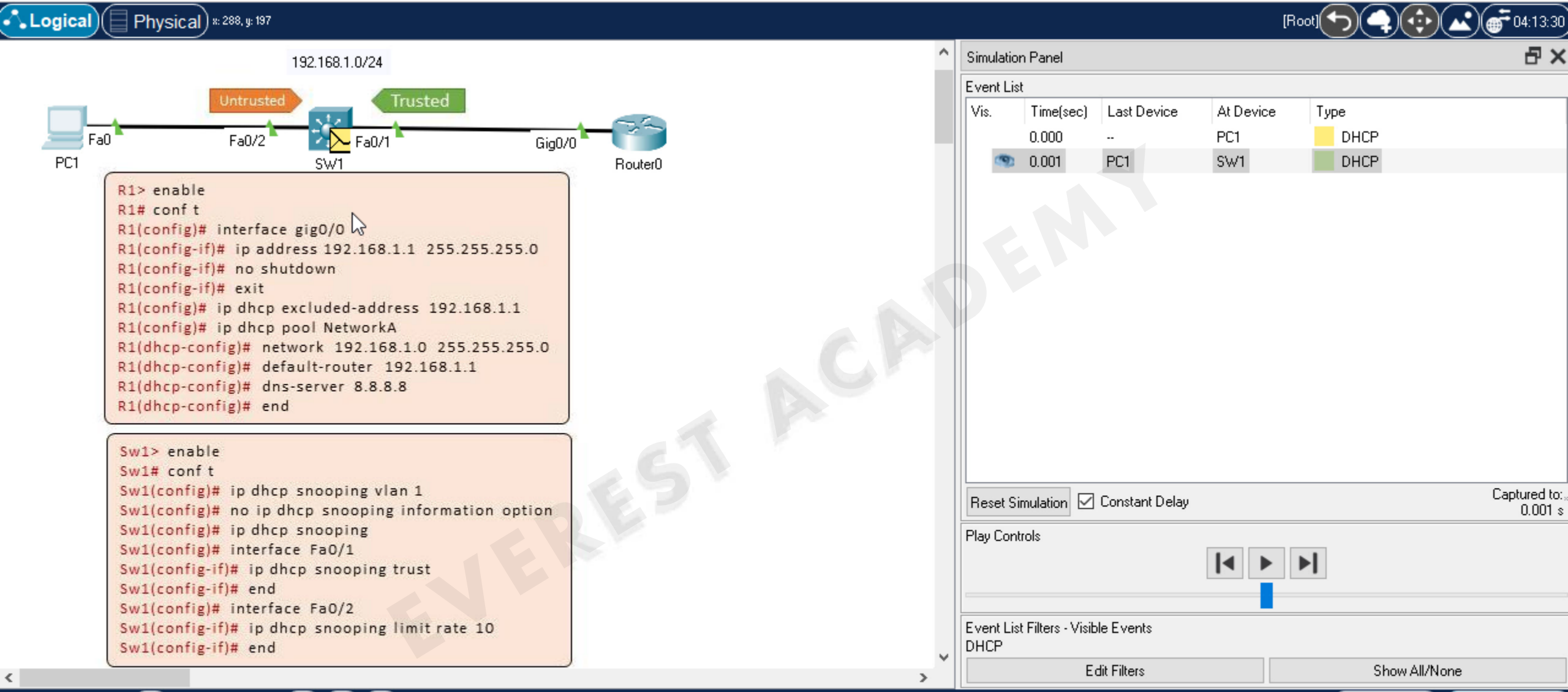
DHCP Snooping





Server Messages	Discard the message.
Client Messages	For **DISCOVER** and **REQUEST** messages, check for ***MAC address*** consistency between the Ethernet frame and the DHCP message.
	For **RELEASE** or **DECLINE** messages, check the incoming interface plus ***IP address*** versus the DHCP Snooping binding table.
	For messages not filtered that result in a DHCP lease, build a new entry to the DHCP Snooping binding table.

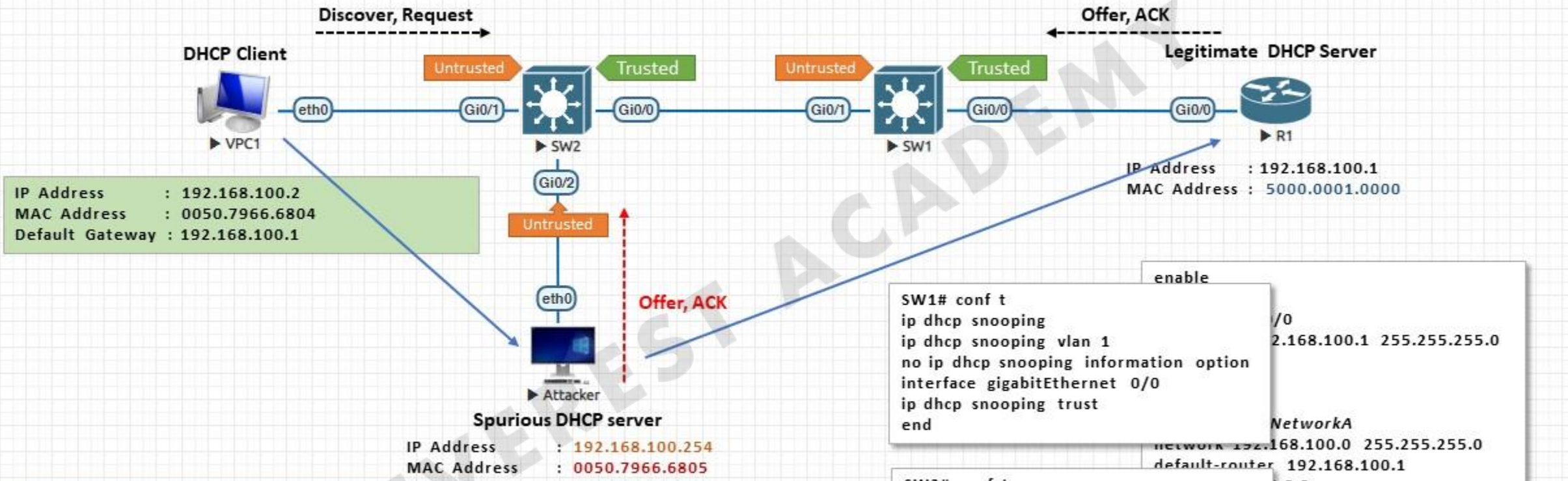
```
Sw1#show ip dhcp snooping binding
MacAddress          IpAddress        Lease(sec)  Type           VLAN  Interface
------------------  ---------------  ----------  -------------  ----  --------------------
00:0C:11:11:11:11   192.168.1.2      86400       dhcp-snooping  1     FastEthernet0/2
Total number of bindings: 1
Sw1#
```



EVEREST ACADEMY

Dynamic ARP Inspection (DAI)

DHCP Snooping




```
SW1# conf t
ip dhcp snooping
ip dhcp snooping vlan 1
no ip dhcp snooping information option
interface gigabitEthernet 0/0
ip dhcp snooping trust
end
```

```
enable
/0
2.168.100.1 255.255.255.0
NetworkA
168.100.0 255.255.255.0
default-router 192.168.100.1
```

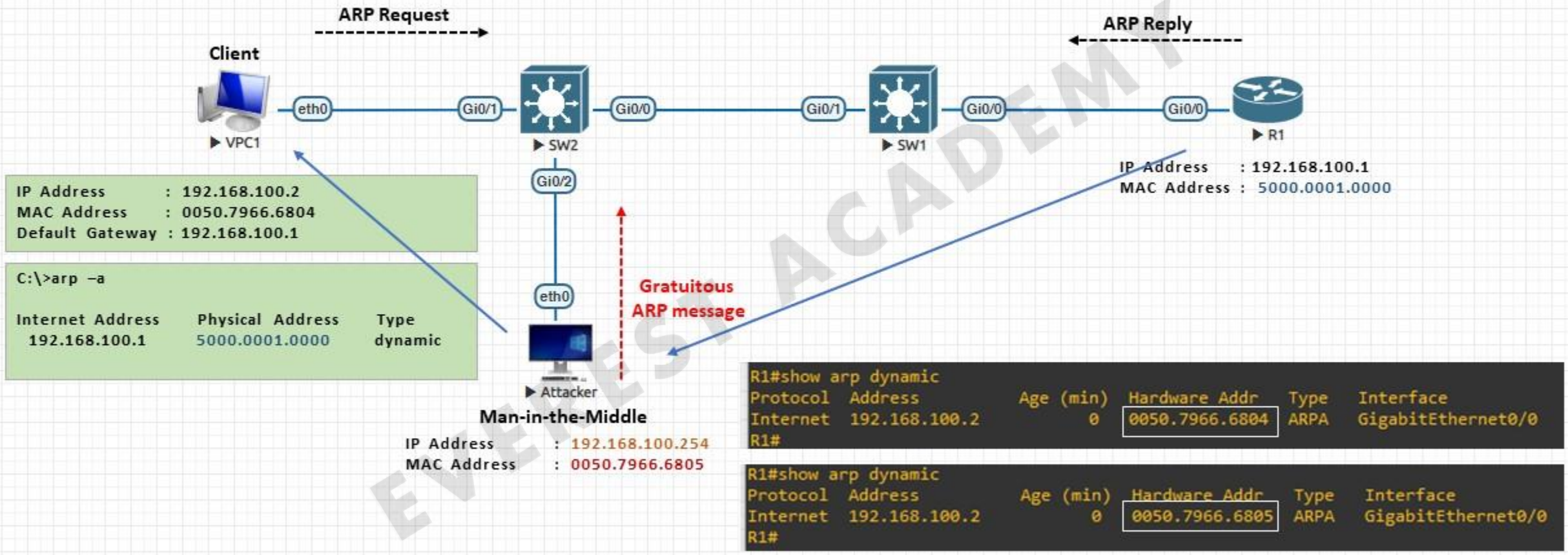
```
SW2# conf t
```

IP Address : 192.168.100.2
MAC Address : 0050.7966.6804
Default Gateway : 192.168.100.254

```
SW2#show ip dhcp snooping binding
MacAddress          IpAddress       Lease(sec)  Type           VLAN  Interface
------------------  --------------  ----------  -------------  ----  --------------------
00:50:79:66:68:04   192.168.100.2   86146       dhcp-snooping  1     GigabitEthernet0/1
Total number of bindings: 1
```

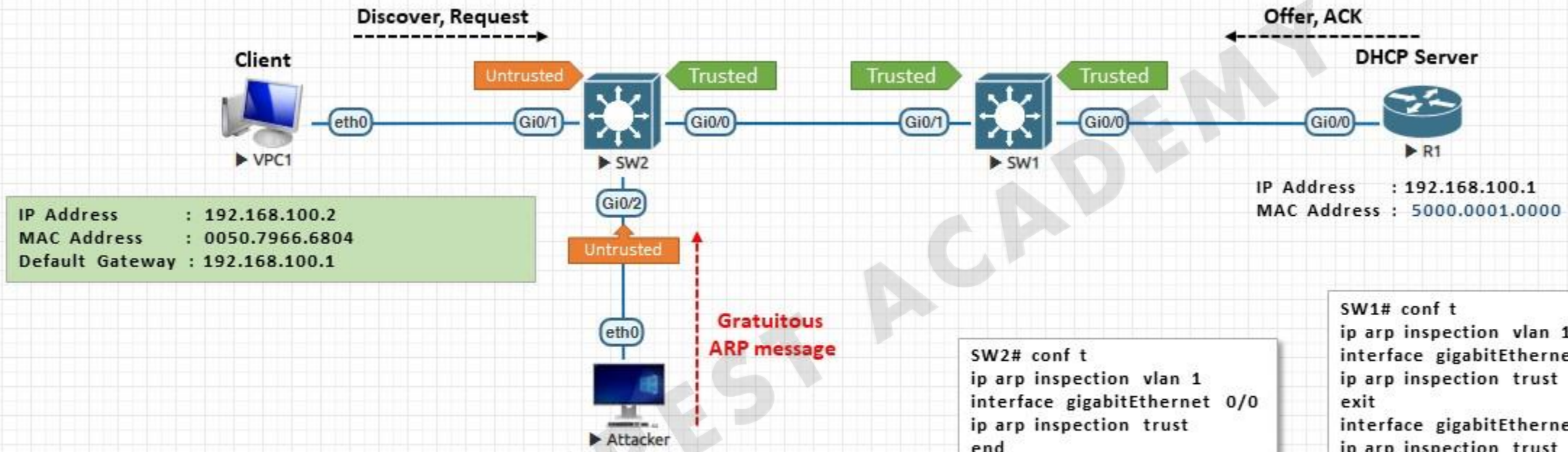
EVEREST ACADEMY

Dynamic ARP Inspection (DAI)



EVEREST ACADEMY

Dynamic ARP Inspection (DAI)




```
SW2# conf t
ip arp inspection vlan 1
interface gigabitEthernet 0/0
ip arp inspection trust
end
```

```
SW1# conf t
ip arp inspection vlan 1
interface gigabitEthernet 0/0
ip arp inspection trust
exit
interface gigabitEthernet 0/1
ip arp inspection trust
end
```

```
SW2#show ip dhcp snooping binding
MacAddress          IpAddress        Lease(sec)  Type           VLAN  Interface
------------------  ---------------  ----------  -------------  ----  --------------------
00:50:79:66:68:04   192.168.100.2    86146       dhcp-snooping  1     GigabitEthernet0/1
Total number of bindings: 1
```

EVEREST ACADEMY