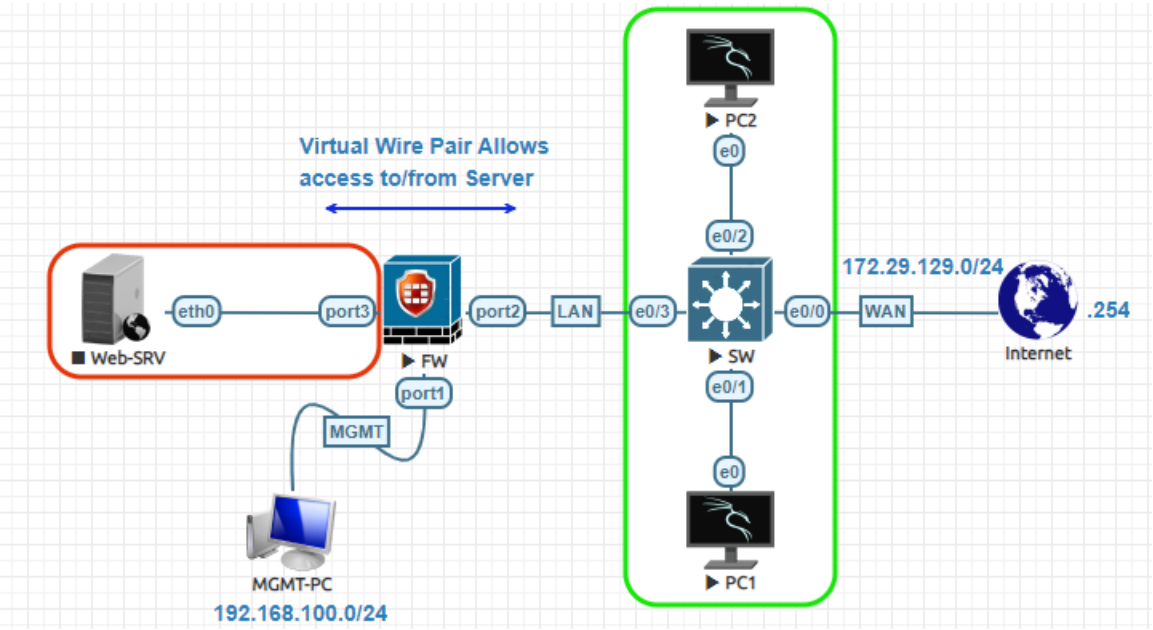
Virtual Wire Pair Lab:

- Two interfaces that do not have IP addressing & are treated similar to a transparent mode.
- All traffic received by one interface in virtual wire pair can only be forwarded out the other.
- In FortiGate Unit Firewall provided that a virtual wire pair firewall policy allows this traffic.
- Virtual wire pairs are useful for topologies where MAC addresses do not behave normally.
- Virtual Wire Pairing can be used for FortiGate in both the NAT and Transparent modes.



Let's login to Fortigate Firewall default username is admin and there is no password we need to set new password in this case the password is 123.

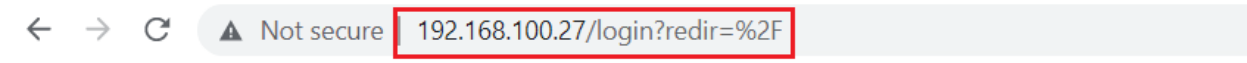
FortiGate-VM64-KVM login: admin
Password:
You are forced to change your password. Please input a new password.
New Password:
Confirm Password:
Welcome!

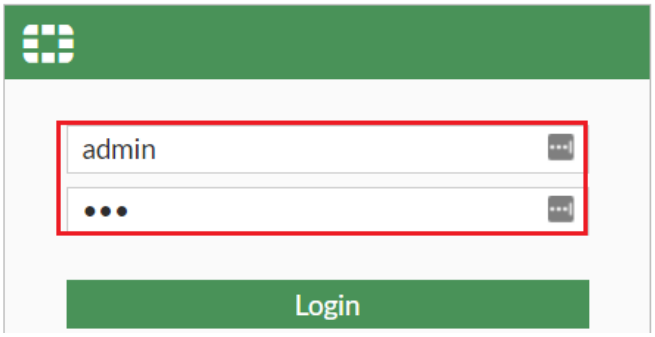
Fortigate Firewall get Management IP address through DHCP automatically.

FW

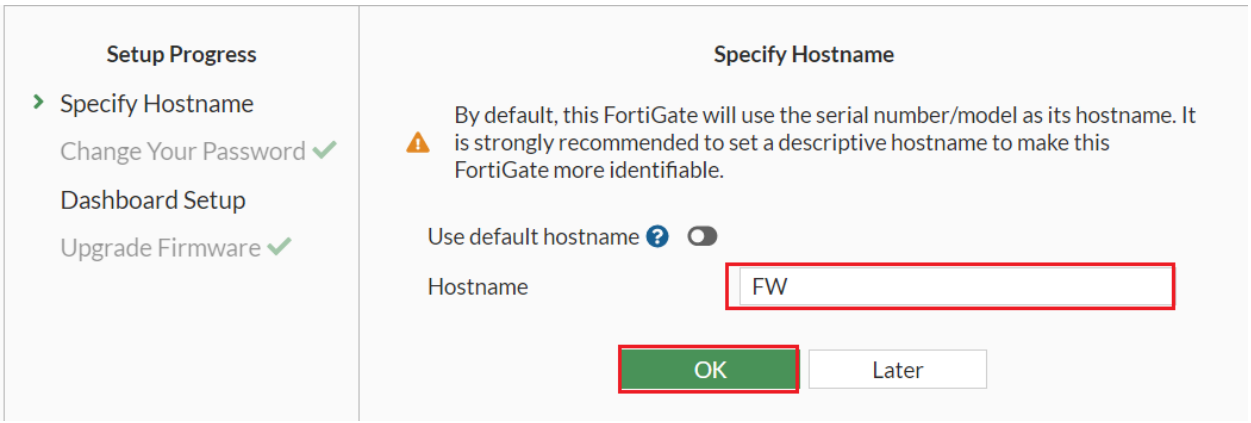
```
FortiGate-VM64-KVM # show system interface
name    Name.
fortilink   static   0.0.0.0 0.0.0.0  10.255.1.1 255.255.255.0  up   disable   aggrega
te  enable
l2t.root    static   0.0.0.0 0.0.0.0  0.0.0.0 0.0.0.0  up   disable   tunnel  enable
naf.root    static   0.0.0.0 0.0.0.0  0.0.0.0 0.0.0.0  up   disable   tunnel  disable

port1   dhcp   0.0.0.0 0.0.0.0  192.168.100.27 255.255.255.0  up   disable   physical
```

Let's browse Fortigate Firewall IP address in the browser http://192.168.100.27 login with default username admin and password set initially which is 123.

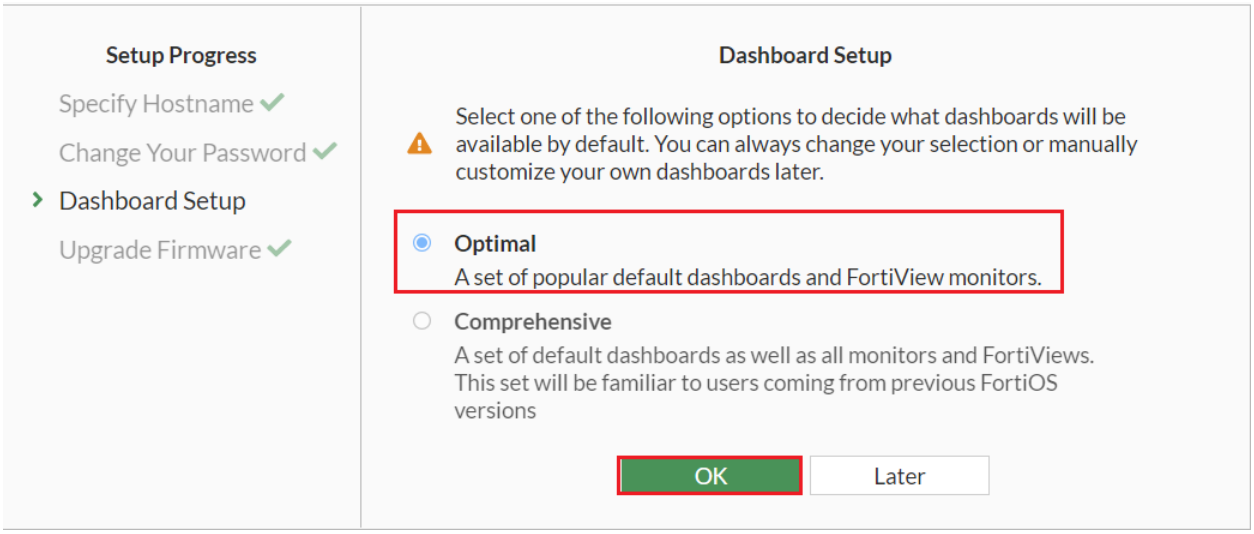




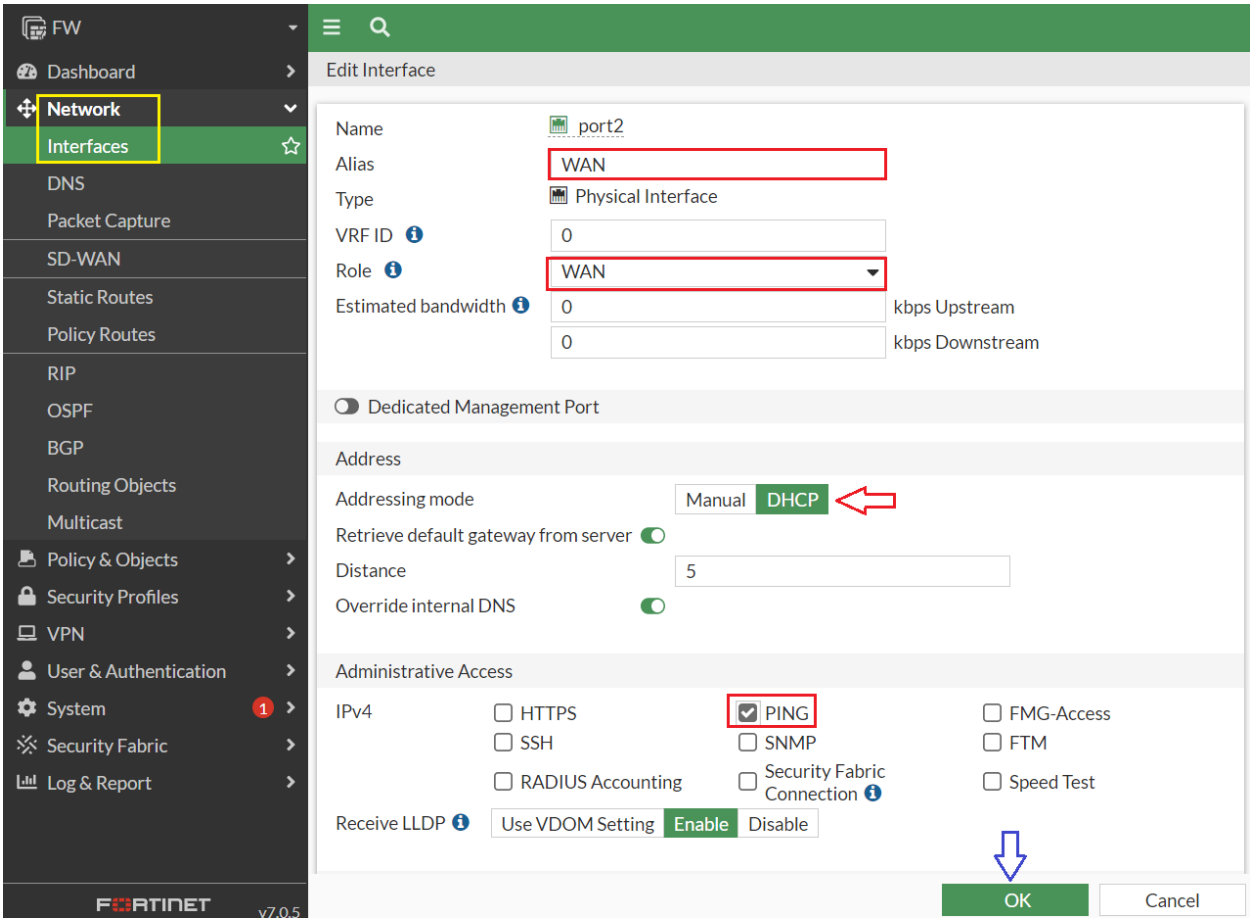
Set the hostname in this case FW and click OK to continue.



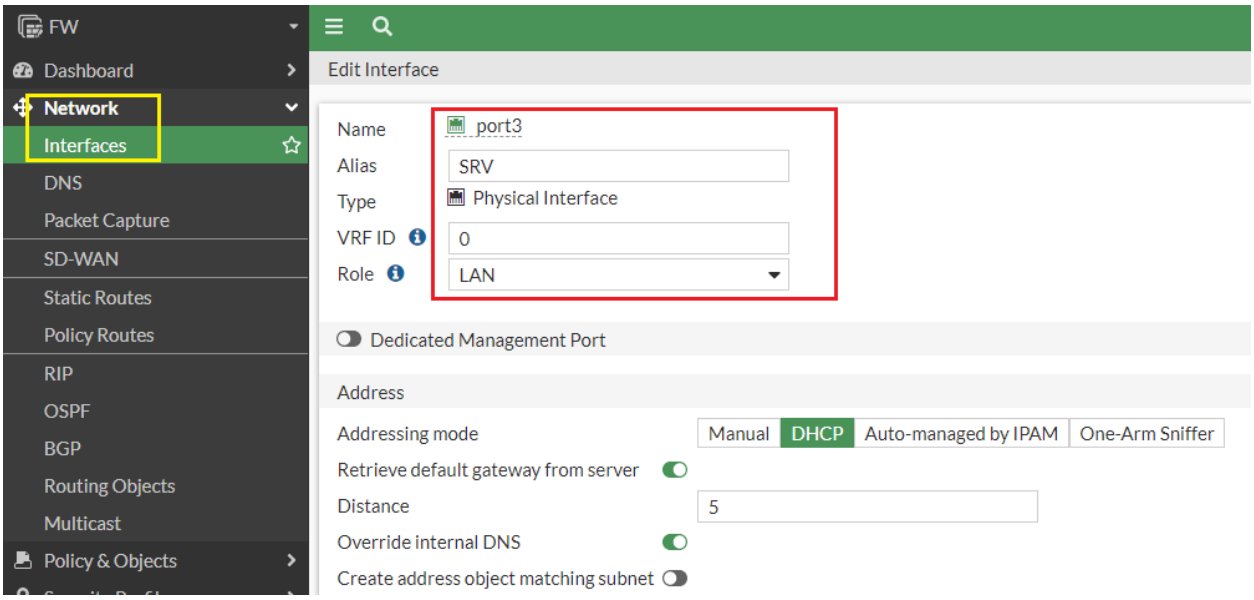
Select Optimal and click OK to continue log in to Fortigate Firewall dashboard.



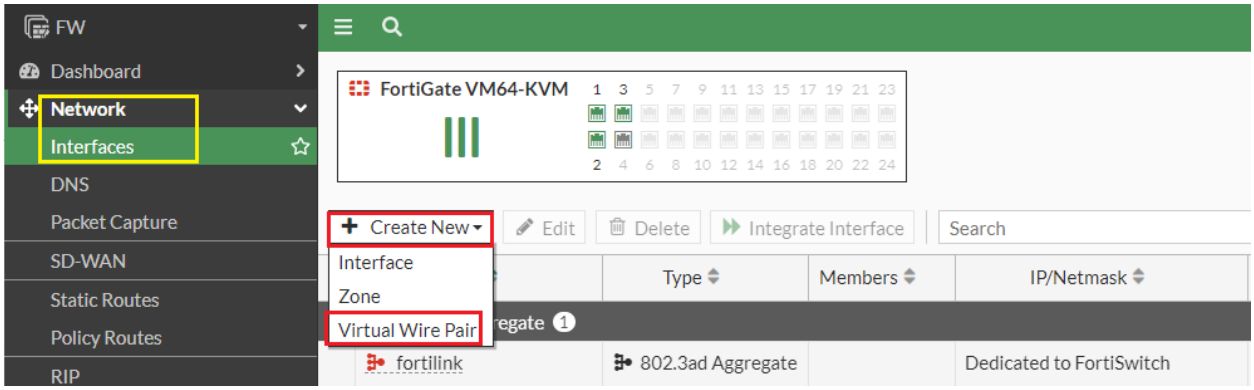
Navigate to Network > Interfaces double click on port2 to configure it as WAN interface type the Alias WAN, choose the Role WAN change the Addressing Mode to Manual click OK.



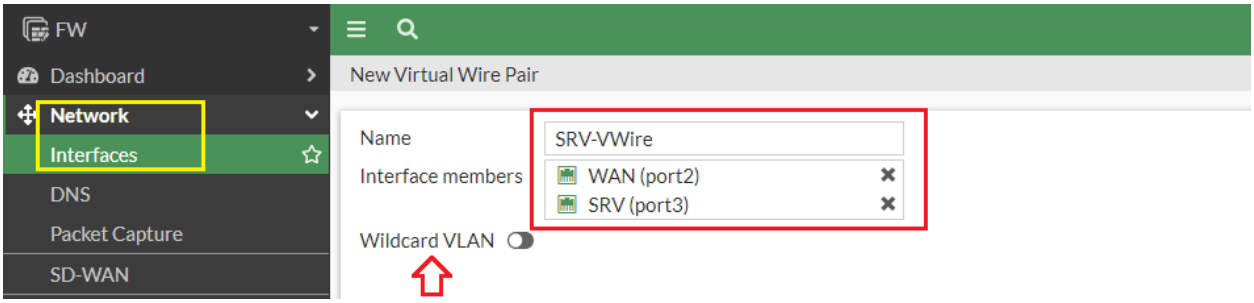
Change the other interfaces Alias names and Role set Port3 Alias to SRV, besides this set Alias for port1 MGMT and Click OK.



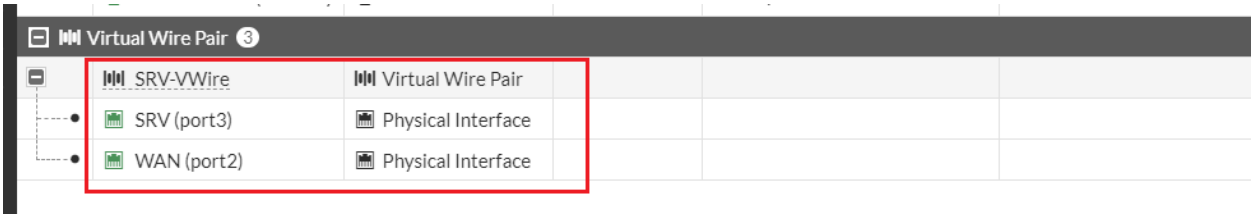
Navigate to Network > Interfaces and select Create New > Virtual Wire Pair.



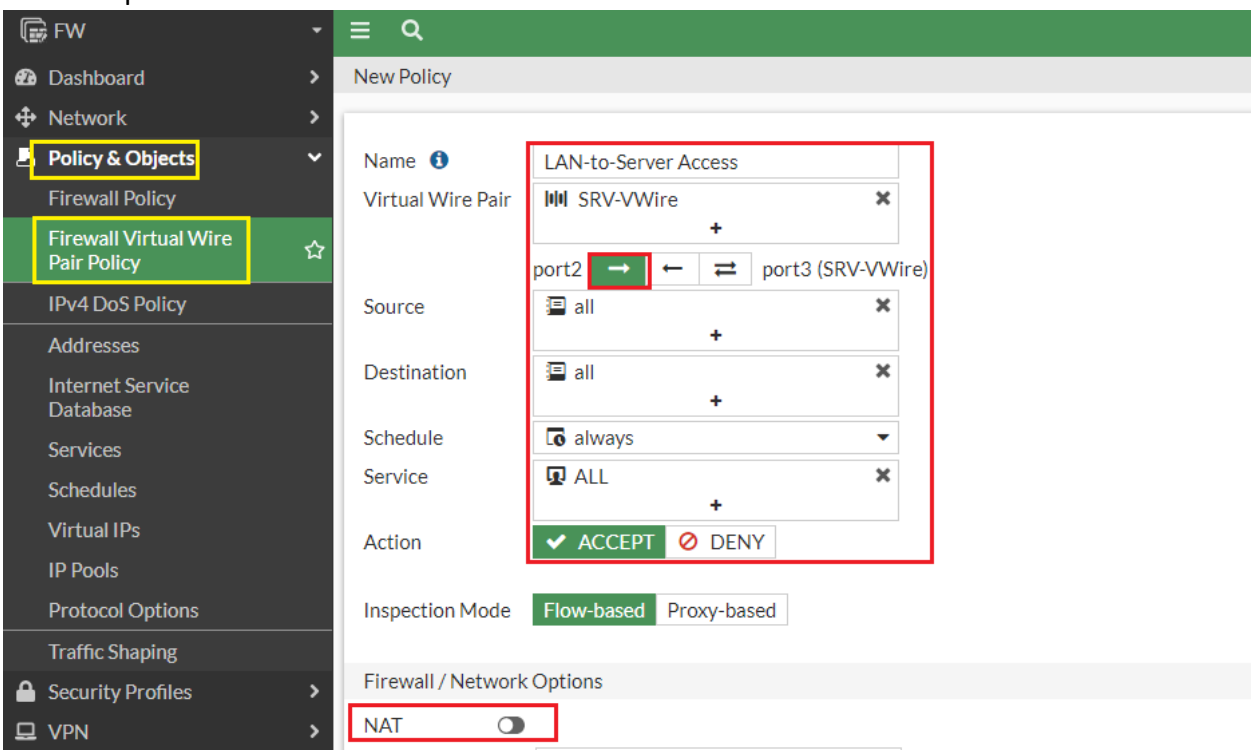
Select the interfaces to add to the virtual wire pair. If desired, enable Wildcard VLAN. Select OK.



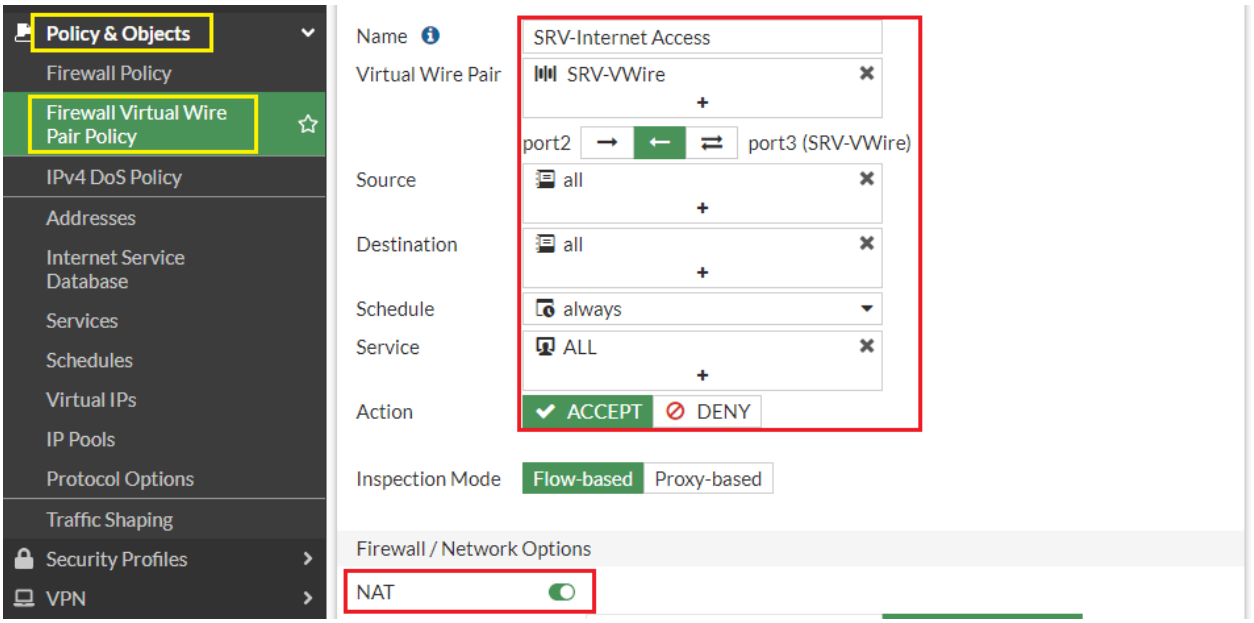
After created Virtual Wire Pair look like below in interfaces.



Go to Policy & Objects > IPv4 Virtual Wire Pair Policy, Select Create New. Select the direction that traffic is allowed to flow. Allow users on the internal network to connect to the server. Select the direction that traffic is allowed to flow (from port2 to port3). Configure the other firewall options as desired. Select OK.

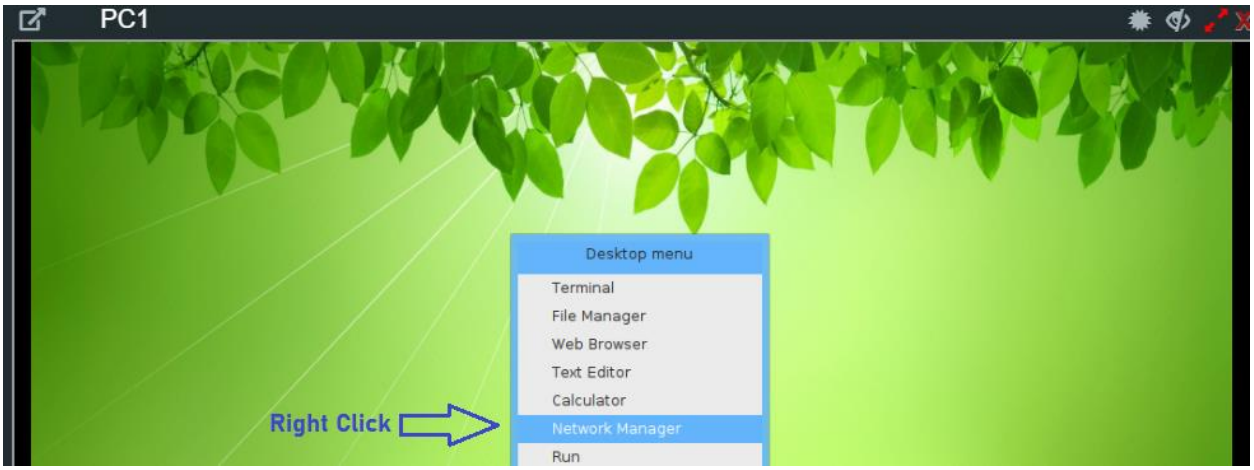


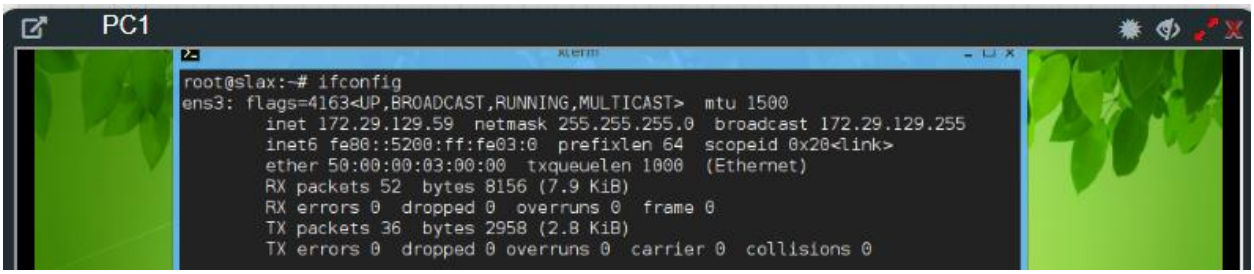
Create a second virtual wire pair policy allowing traffic from port3 to exit out of port2. This policy allows the server to connect to the Internet, in order to download updates.

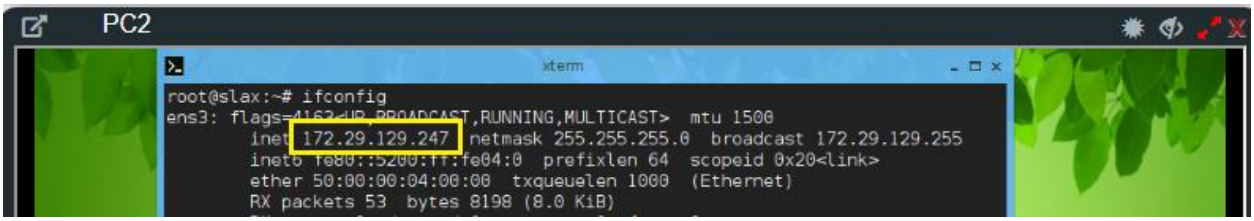


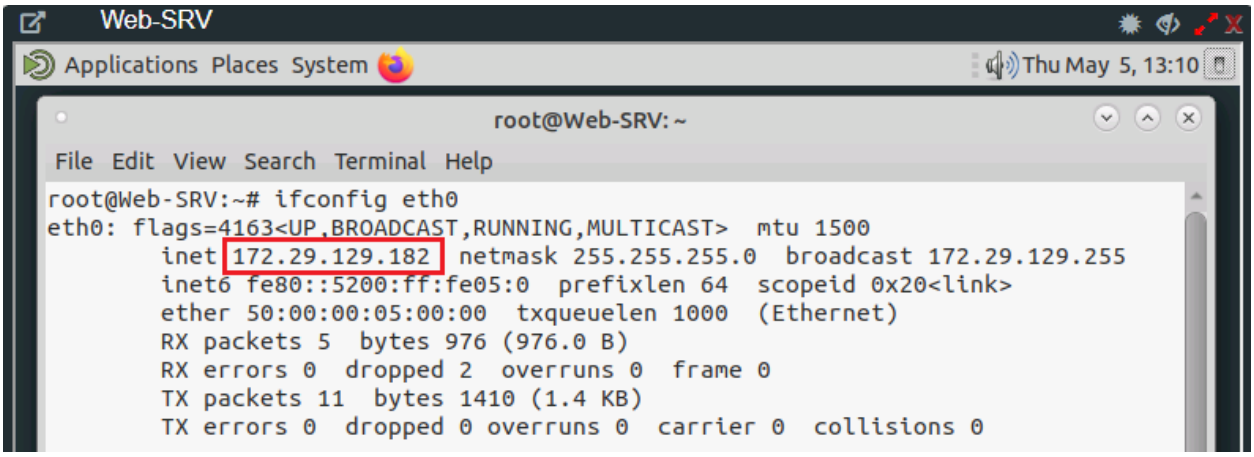
Testing and Verification:

To test both virtual wire pair policies, connect to the web server from a PC on the internal network, and also connect to the Internet from the web server. Right click to get Desktop Menu click on Network Manager click refresh to get IP address.

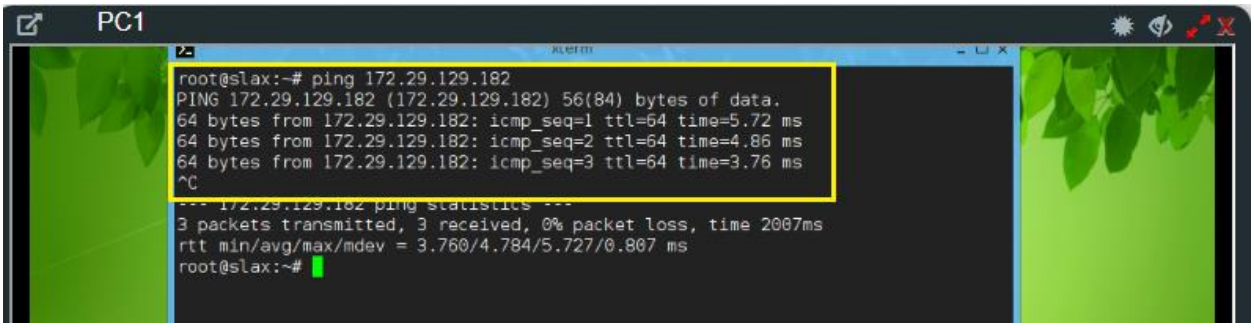




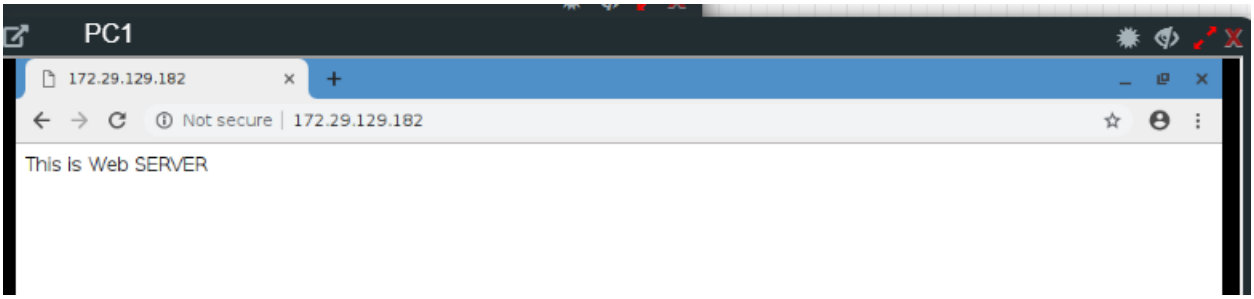




Let’s try to ping from LAN PC1 to Web-Server, It is working.



Let’s try to Access Web-Server from Internal LAN PC1, it is accessible.



Let’s Try to access Internet from Web-Server, It is working.