Table of Contents

1. Setup Skylab Enviroment

Skylab consist of 3 major components:

- Firewall (for connectivity)
- ESXhost or Virtualbox on Windowshost
- Ubuntu Servers

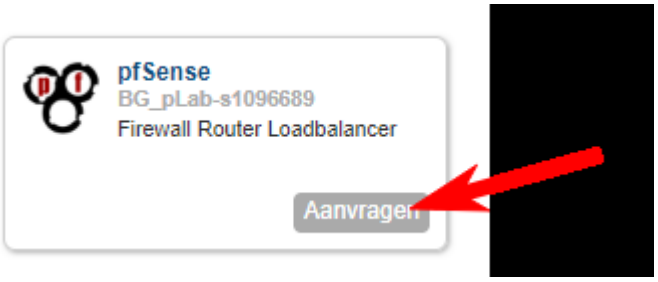
This paige explains howto setup the basic Skylab enviroment.

1.1. First step request a skylab enviroment

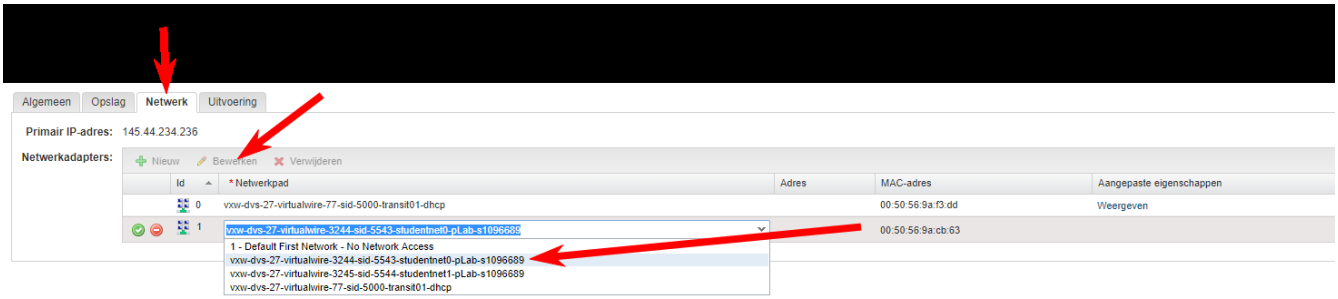
- Request project lab use: “Project Willy” as a reference, this is a known project for Skylab managers. Via https://skylab.windesheim.nl (Login with: studentnr only! not with @student.windesheim.nl)
- After approval you can request machines.

1.2. Next request machines

- First request a PFsense firewall.



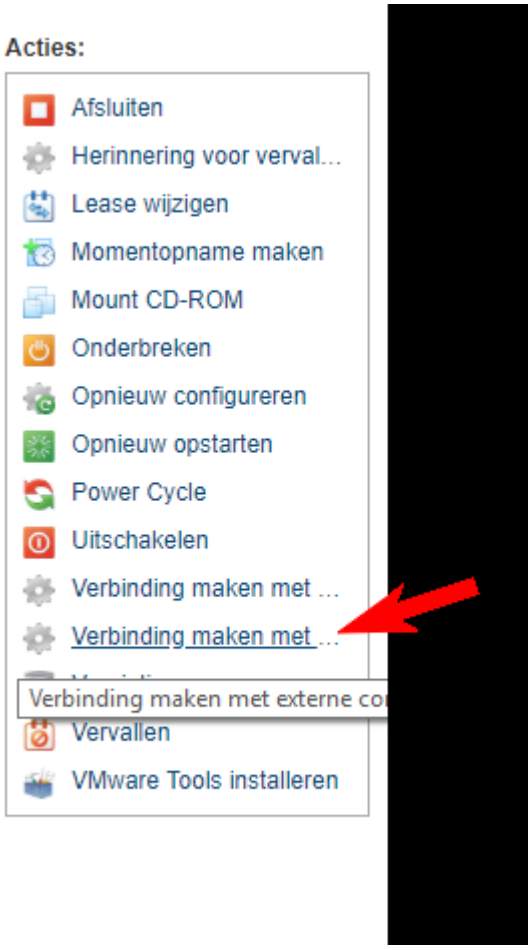
- Next request a Windows 10 or Server machine to configure the PFsense firewall.
- Next configure correct networks to adapters. Goto items > select Machines on the left > click the item which blueprint name is “pfsense”. Select “opnieuw configureren”.



- Next select network > Adaptor ID 1 and click: “bewerken” and select <studentnr>studentnet0, this is your default lan. Next do the same for Adaptor ID 0 but here select the Transit01-dhcp network this is network gives you internetaccess, also known as WAN port.

1.3. Configure Pfsense

- Connect to the pfsense firewall through the console option in Skylab.



- Login with admin and default password: pfsense and check interfaces Lan should be 192.168.1.1 and Wan> DHCP 145.44.234.* . If not press option 1 and select correct interfaces.
- Next perform step 4 on the Windows machine and login to the console of this machine: with administrator and default password: Welkom01!
- Browse to the pfsense firewall default ip-adress: http://192.168.1.1
- Login to the pfsense with default admin/pfsense
- Make sure internet is working correctly on firewall.
- Go to Diagnostics > Backup/restore and select the config file (sharepoint\skylab): pfsenseskylab.xml and click restore.
- Wait 10 minutes, because it will install nessecary packages, which takes a while, then restart the Windows Machine.
- Now the firewall can be managed at: http://10.10.1.1
- To create a new vpn user goto > system > user manager
- Next click: add user and fillout the username and password and make the user a member of the VPN group.

1.4. Connect Willy to Skylab

- First make sure the routernode (rpi)and laptop are turned on. and verify you have internet.
- Next verify vpn connection: On the laptop try to ping to 10.10.1.1 if replies are succesfull it all

works!

- If not please check DNSName: ping skylabwilly.dynu.net (this should point to currenct Skylab ip) If not please change manually: https://www.dynu.com/en-US/ControlPanel/DDNS login with Willy google account.
- If this does not work, reimage the Pi version model 3 (not +) with the version found on sharepoint. (routernode.img)
- A more detailed description can be found on sharepoint in the skylab folder on howto setup openwrt.

1.5. Connect to Skylab over VPN Client

- Now install the openvpn client, the installer can be found on sharepoint: \skylab\install
- After installation you can connect to skylab by starting the openvpngui, then rightclick on the icon in the taskbar and select connect to skylabwilly.dynu.net and enter username password from before.
- To verify connection type ping 10.10.1.1 (which is the pfsense firewall in skylab).