Install OPNsense

- Sources and inspiration
  - Set Up a Fully Functioning Home Network Using OPNsense
  - Videos
    - Set up a Full Network using OPNsense (Part 1: Overview)
    - Set up a Full Network using OPNsense (Part 2: OPNsense)
    - Set up a Full Network using OPNsense (Part 3: Switch)
    - Set up a Full Network using OPNsense (Part 4: Wireless Access Point))

IP Plan

addr.	VLAN 1	VLAN 10	VLAN 20
*	Management	Office	Train
*	192.168.101.0/24	192.168.110.0/24	192.168.120.0/24
.001	Firewall	Firewall	Firewall
.004	*	WiFi-AP	WiFi-AP
.008	*	Printer	*
.009	*	TV-PC	*
.012	*	WD My Cloud	*
.016-.032	*	*	TrainServer
.128-.254	DHCP	DHCP	*
.128-.159	*	*	TrackSensor
.160-.254	*	*	LedControler

OPNsense Dokumentation

Articles - Sources and inspiration

- Welcome to OPNsense's documentation!
  - OPNsense Download
  - OPNsense VLANs
- Home Network Guy - Dustin Casto
  - Set Up a Fully Functioning Home Network Using OPNsense
    - How to Install and Configure OPNsense
    - How to Configure LAGG/LACP and VLANs using SFP Ports on Two TP-Link Switches
    - How to Configure VLANs in OPNsense
    - How to Configure DHCP When Using VLANs in OPNsense
    - How to Create a VLAN Only Interface in OPNsense
- HPE 1820 J9983A

    - How to set up LACP link aggregation with a HP 1810-8G v2 switch and FreeBSD 10.0-RELEASE

YouTube Videos

- [Home Network Guy - Dustin Casto
    - Set Up a Fully Functioning Home Network Using OPNsense
        - (Part 1: Overview)
        - (Part 2: OPNsense)
        - (Part 3: Switch)
        - (Part 4: Wireless Access Point)
- Tech Tutorials - David McKone
    - How to Install OPNsense firewall
- How to make LAN & WAN interface assignments and IP address configuration on OPNsense CLI
- Gateway IT Tutorials
    - OPNSense Firewall Rules Explained
- Dev Odyssey
    - Let's make a Router Firewall // How to install OPNsense on a PC
    - Make more networks with this feature - How to Create a VLAN // OPNsense Firewall
- HPE 1820
    - ITCU Solutions - HPE 1820 Switch Configuration

Install OPNsense

Hardware

- Server
    - HP Compaq 6200 Pro SFF PC
        - CPU type Intel(R) Core(TM) i5-2400 CPU @ 3.10GHz (4 cores, 4 threads)
- Extra NIC card
    - 2 stk. tp-link TG-3468
- Wi-Fi Range Extender
    - 1 stk. tp-link RE205 AC750 Wi-Fi Range Extender
- VLAN Switch
    - 1 stk. HPE 1820-24G-PoE+ (185W) Switch (J9983A)

Configure * Wi-Fi Range Extender [tp-link RE205 AC750 Wi-Fi Range Extender] (https://www.tp-link.com/dk/

- !!! To bee completed

Install

- Boot ***'HP Compaq 6200 Pro SFF PC'***
    - Press ***'F9'*** to select Boot option
    - Please select boot devise
        - EFI boot source
            - KingstonDataTraveler 3.0
            - Press ***'Enter'***

    - Wait for ***'Login Prompt'***
        - login as ***installer***, with password ***"opnsense"***
    - Keymap Selection
        - Select Keyboard : ***'Danish'***
        - Select : ***'Continue with dk.kbd keymap'***
        - Press ***'Enter'***
    - OPNsense 23.x
        - Select : ***'Install (ZFS)'***
            - Press ***'Enter'***
        - ZFS Configuration
            - Select Virtual Device Type: ***'Stripe - No Redundancy'***
            - Press ***'Enter'***
            - Select Harddrive for Installation:
                - Press ***'SpaceBar'*** to select ***'ada0'***
            - Press ***'Enter'***
            - Last Chanced Warning
                - Press ***'YES'***
    - Final Configuration
        - Select ***'Complete Install Exit and reboot'***
        - Press ***'Enter'***
        - Remove USB-key when system reboot

Set LAN & WAN interface

- Boot from hardrive
- When prompt for Login, then login as ***root*** with password ***"opnsense"***
    - Select option 1
        - Press ***'n'*** we don't to configure LAGGs
        - Press ***'n'*** we don't to configure VLANs
        - Enter the WAN interface name: ***'em0'***
        - Enter the LAN interface name: ***'ue0'***
        - Press Enter to finished ***'[ENTER]'***
        - Press ***'y'*** to confirm the interface assignment
    - select Option 0 ***'Logout'***
        - Press ***'Enter'***

Set interface IP address

- When prompt for Login, then login as ***root*** with password ***"opnsense"***
    - Select option: 2
    - Select option: 1 - LAN (re0 -static, track6)
        - IPv4
            - Configure IPv4 address LAN interface via DHCP?: Press ***'Enter'***
            - Enter the new LAN IPv4 address: ***'Enter 192.168.101.1'***
            - Enter ten new LAN IPv4 subnet bit count: ***'Enter 24'***
            - For a LAN, press for none: ***'Press Enter'***
        - IPv6

            - Configure IPv6 address LAN interface via WAN tracking: ***'Press N'***
            - Configure IPv6 address LAN interface via DHCPv6 tracking: ***'Press N'***
            - Enter the new LAN IPv6 address.: ***'Press Enter'***
        - Enable DHCP LAN
            - Do you want to enable the DHCP server on LAN: ***'Press y'***
            - Enter the start address of the IPv4 client address range: ***'Enter 192.168.101.128'***
            - Enter the end address of the IPv4 client address range: ***'Enter 192.168.101.254'***
            - Do you want to change the web GUI protocol from HTTPS to HTTP?: ***'Press N'***
            - Do you want to generate a new self-signed web GUI certificate?: ***'Press N'***
            - Restore web GUI access defaults?: ***'Press N'***
    - Result setting interface IP address
        - ***OPNsense.localdomain: OPNsense 23.1***
            - LAN (ue0) -> **v4: 192.168.101.1/24**
            - WAN (em0) -> **v4/DHCP4: xxx.xxx.xxx.xxx**

Configure OPNsense via WEB-page

- Connect Workstation to Lan network
- Open Browser
    - Connect to 192.168.1.1
    - Byepass warning for ***'NET ERR_CERT_AUTHORITY_INVALID'***
        - Press ***'Advanged'***
        - Press ***'Continue to 192.168.1.1 (unsafe)'***
    - Login to OPNsense
        - Username: ***'root'***
        - Password:_***'opnsense'***
        - Press ***'Enter'***