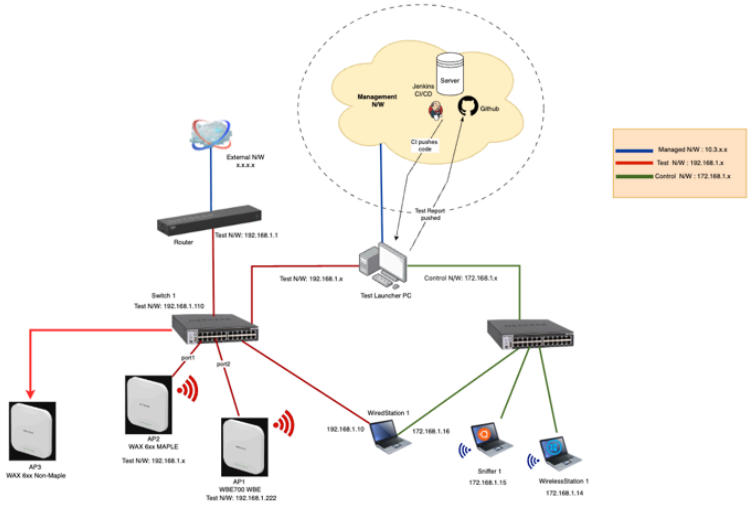
Chennai Lab - Basic Setup and Device Addition (Dev)

Setup Location:

Test Bench 19, 20 in Lab (3rd row from last)

Basic Setup (Pic copied from AP QA team):



- In the above setup ignore the “Control N/W“ portion (not present/needed in our setup) and replace APs with our switches for understanding.
- “Test Launcher PC” in our setup is a Raspberry PI.
  - Raspberry PI IP: ~~10.216.202.77~~ (Use 10.216.202.81 instead) (Username/password: host1/sheldon123)
  - This IP is reachable within Zscaler and ssh to the PI is allowed.
  - DHCP server is running in this PI.
- Console Server is connected to the “Test N/W“.
- There is no Router in our setup currently (external N/W is not reachable)

New device Addition:

- Connect the switch’s OOB to the already present smart switch on “Test Bench 20“ in the lab. Note down the IP assigned using console.
- Connect the device’s console to the console server on “Test Bench 19“.
- Refer the section “UI Access“ below for establishing UI access from Zscaler enabled laptop to the switch.

UI Access:

- UI for devices in the lab can’t be done like it was done with devices near our desks. This time the connections are going via Zscaler and it is blocking port accesses. Port 22 for SSH is allowed by Zscaler.
- SSH config has an option called “LocalForward“. This forwards connections for a particular port in localhost to a particular IP and port mapping in the ssh tunnel. This is used in addition to access the device UIs. **Note: An ssh tunnel should be opened (after adding the below configs) from your laptop to the PI (10.216.202.77) for accessing the device UIs.**
  - Ex: “LocalForward 60057 192.168.1.57:4443”, forwards localhost:60057 to 192.168.1.57:4443 in the ssh tunnel.

One time ssh config setup in your laptop:

- Add the following to “~/.ssh/config”. Create the file if not already present.

```
Host lab-pi
    HostName 10.216.202.81
    User host1
    ServerAliveInterval 60
    ServerAliveCountMax 3
    ExitOnForwardFailure yes

Include ~/.ssh/lab-pi.forwards
```

- Create a file “~/.ssh/lab-pi.forwards“ and add the following.

```
Host lab-pi
    LocalForward 60102 192.168.1.102:443
```

- The above entry is for the Console Server.

Laptop ssh config for every device addition:

- This is the general port mapping that is used currently.
  - AV UI (port 4443): 60000 + last octet of the device’s IP
  - Main UI (port 49152) (Newer builds): 51000 + last octet of the device’s IP
  - Main UI (port 49151) (Older builds): 50000 + last octet of the device’s IP
- This is the config for the device with IP 192.168.59.

```
Host lab-pi
    LocalForward 60102 192.168.1.102:443
    LocalForward 50163 192.168.1.163:49151
    LocalForward 60163 192.168.1.163:4443
```

- Use this script to add entries to the file “~/.ssh/lab-pi.forwards“ after new device addition.
  - Script: `portForwardMac.sh`
  - Usage: “./portForwardMac.sh <device ip> <port number>“. Only 49151, 49152 and 4443 are allowed. Ex: “./portForwardMac.sh 192.168.1.163 49151“

Launcher PC config for every device addition:

- Use this script for the Raspberry PI configs for port forwarding.
  - Script location: “/home/host1/setup/**portForwardPi.sh**“.
  - Usage: “./portForwardPi.sh <device ip> <port number>“. Only 49151, 49152 and 4443 are allowed. Ex: “./**portForward**Pi.sh 192.168.1.163 49151“

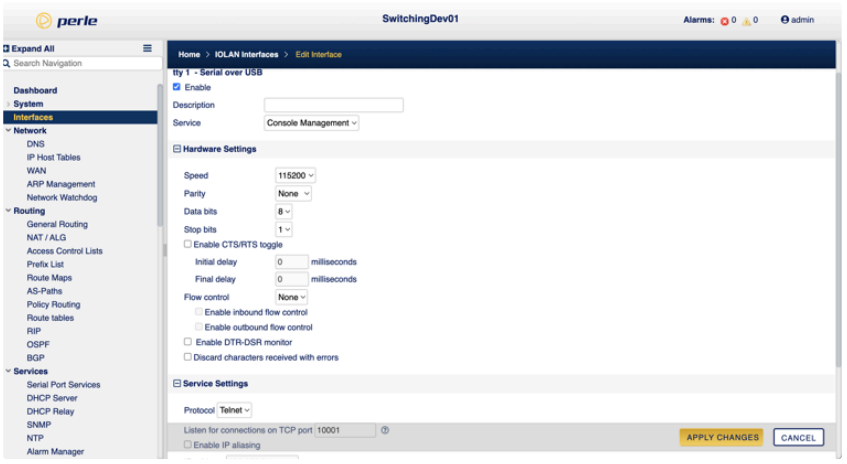
Access from laptop:

- Before proceeding further to your device access or console server access, ensure that you establish an ssh connection to your RASPBERRY PI device (use ssh lab-pi instead of ssh host1@<ip>).
- After doing the above step, now proceed to accessing your device UI or console server.
- With both the above configs present, from the browser use like following (examples are for device 192.168.1.59):
  - Main UI: “http://localhost:50059/“ (older builds) or “https://localhost:51059/“ (newer builds)
  - AV UI: “https://localhost:60059/“

Console Access:

- Once the port forwarding configs are updated, console server can be accessed through “https://localhost:60102“. Credentials: admin/switch@123
  - Console Server LAN IP is 192.168.1.102.
- Connect the console cable of a managed switch to the usb port at the back of the console server. Note the interface number as well.
- In the console server UI, in the **Interfaces** page double click on the interface you have connected.

- The “Enable“ checkbox has to be checked. If not, check and apply changes.
- Under hardware settings, ensure that “Speed“ is 115200.
- Under Service Settings ensure the protocol is “Telnet“.
- The port details for the interface will be present under Service Settings.



- From the launcher PC (lab-pi), telnet using console server’s LAN IP and the port number displayed.