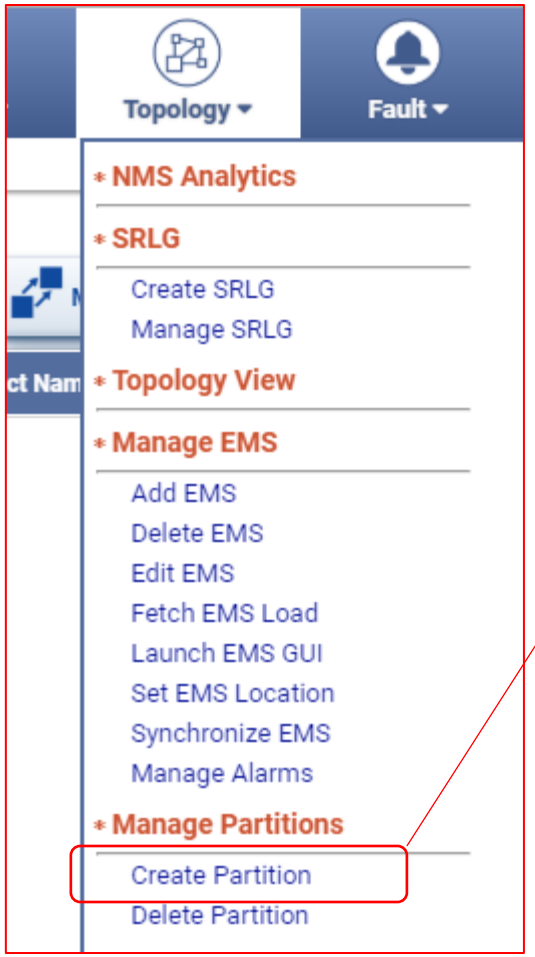
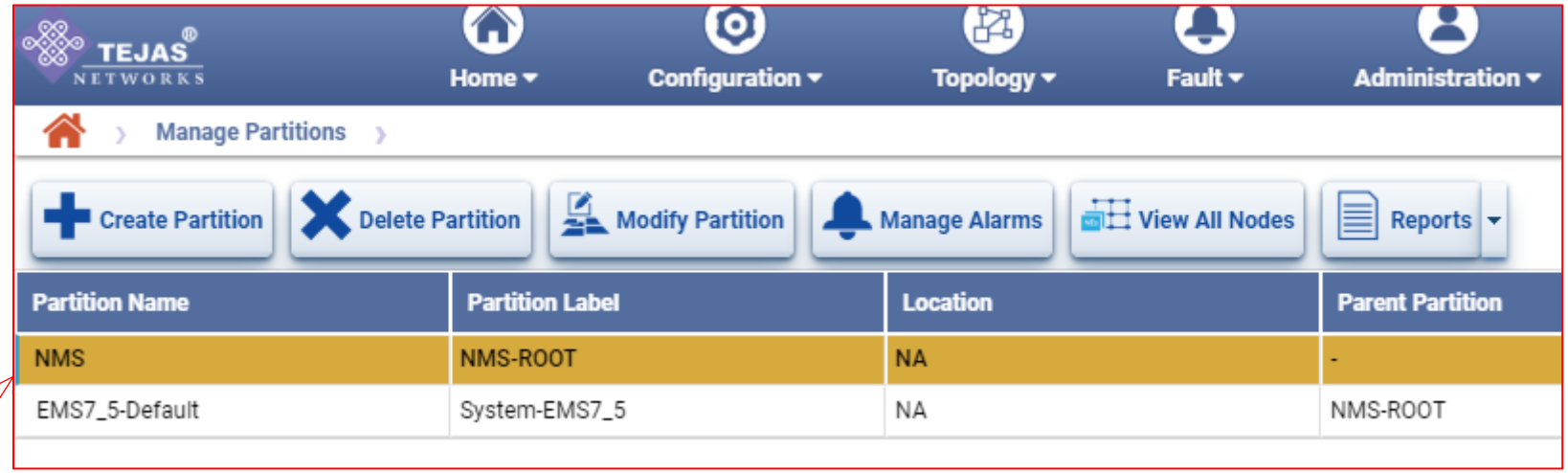
TJ5500

NMS 7.5-GPON

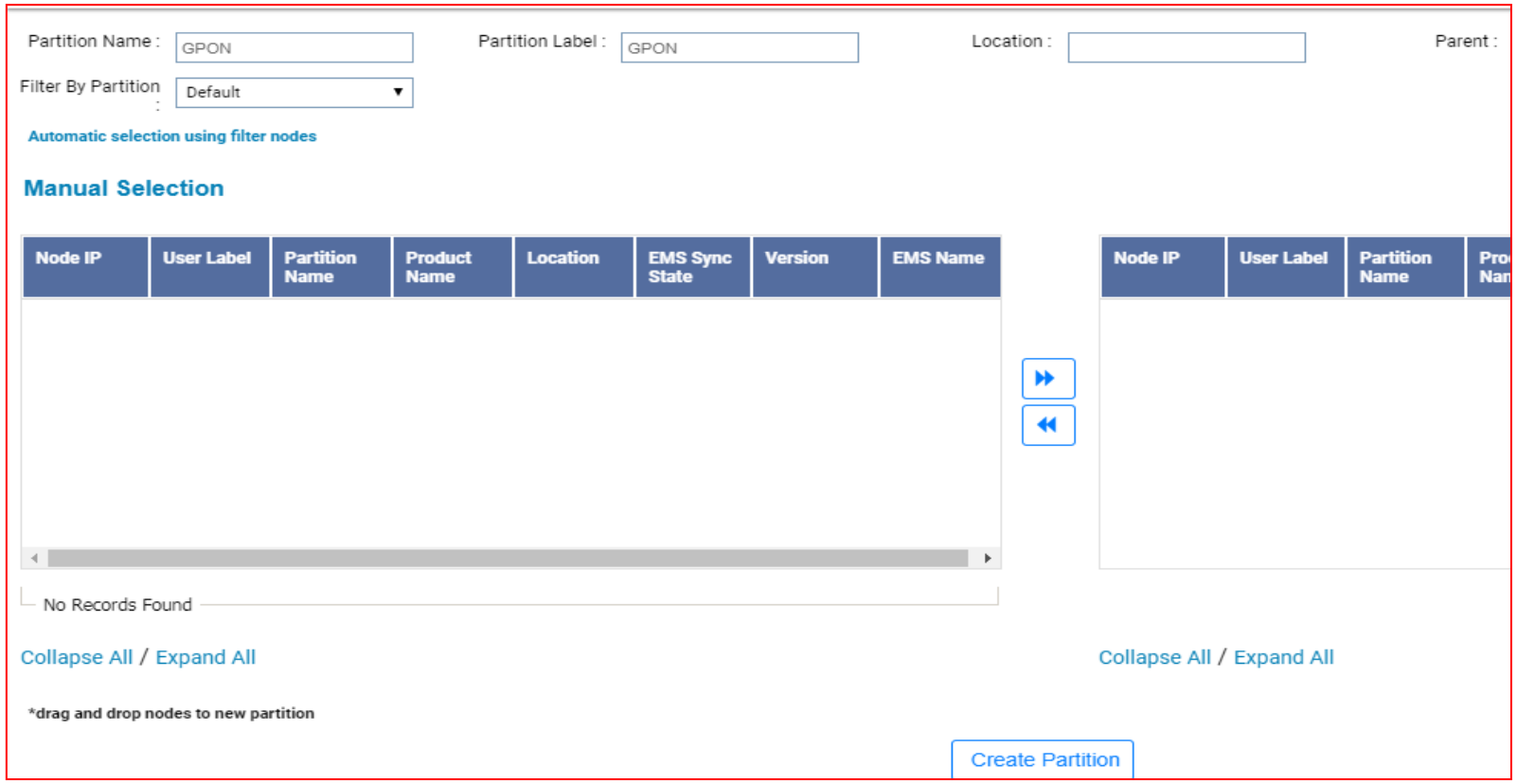
Create Partition





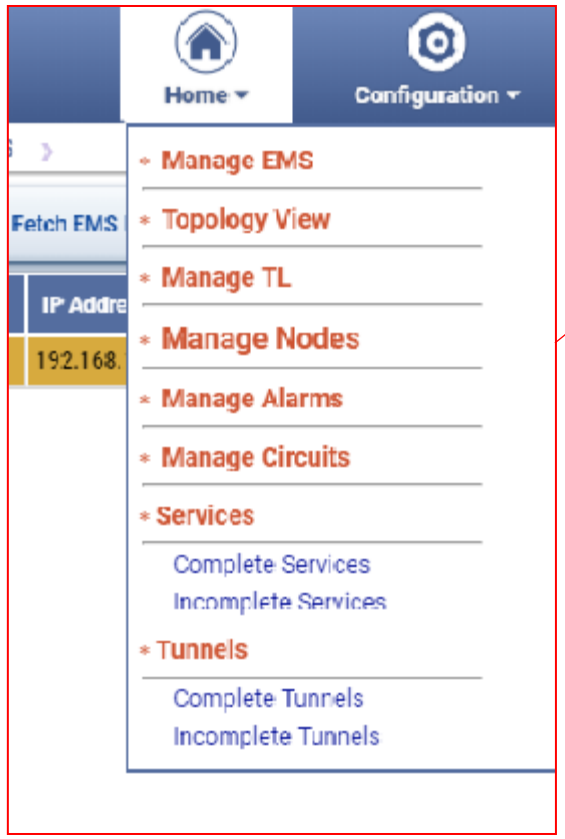
- Click on Topology->create partition
- The manage partition page opens and then click on create partion

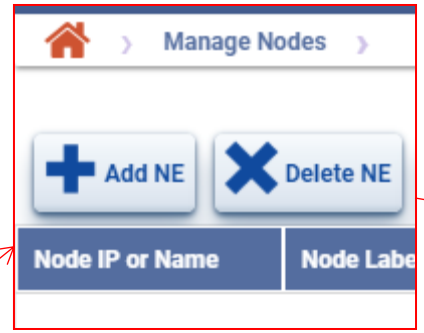
Create Partition

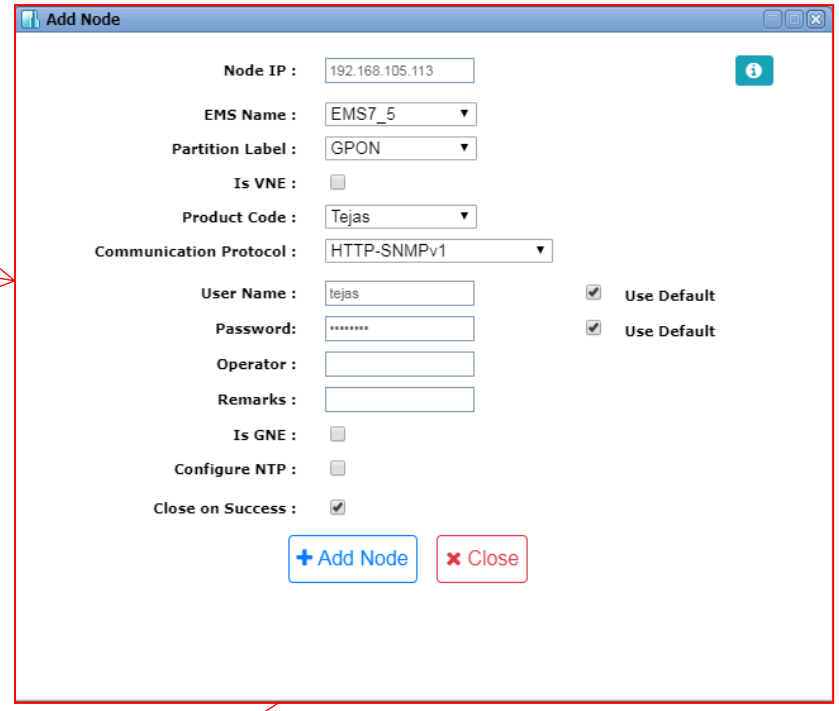


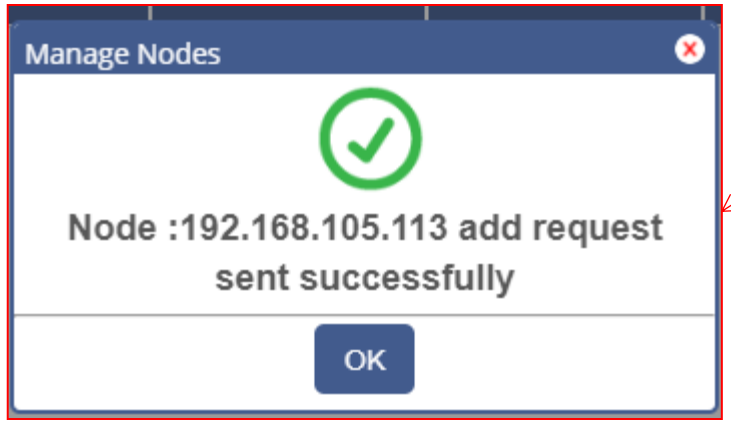
- Fill in the details and click on Create Partition

Node Addition









Node Addition

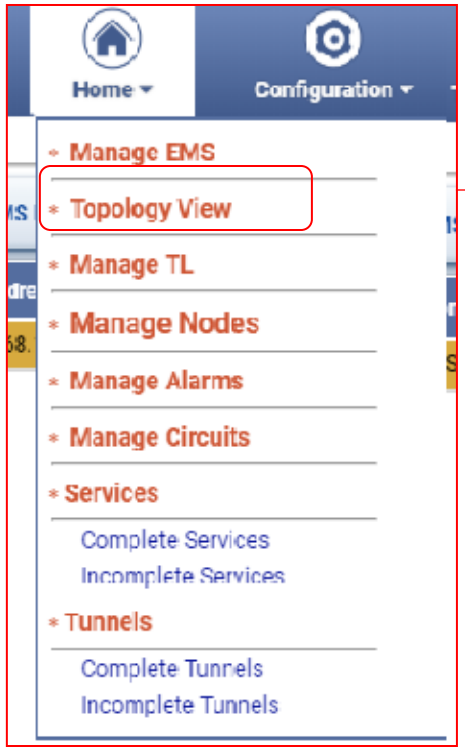
- User can add or delete nodes to the available EMS from NMS directly from NMS.
- Go to Topology->Manage Nodes
- Click on the Add NE button
- Enter all the information and submit Add Node.
- Now node can be added using http, https, SNMP protocol.

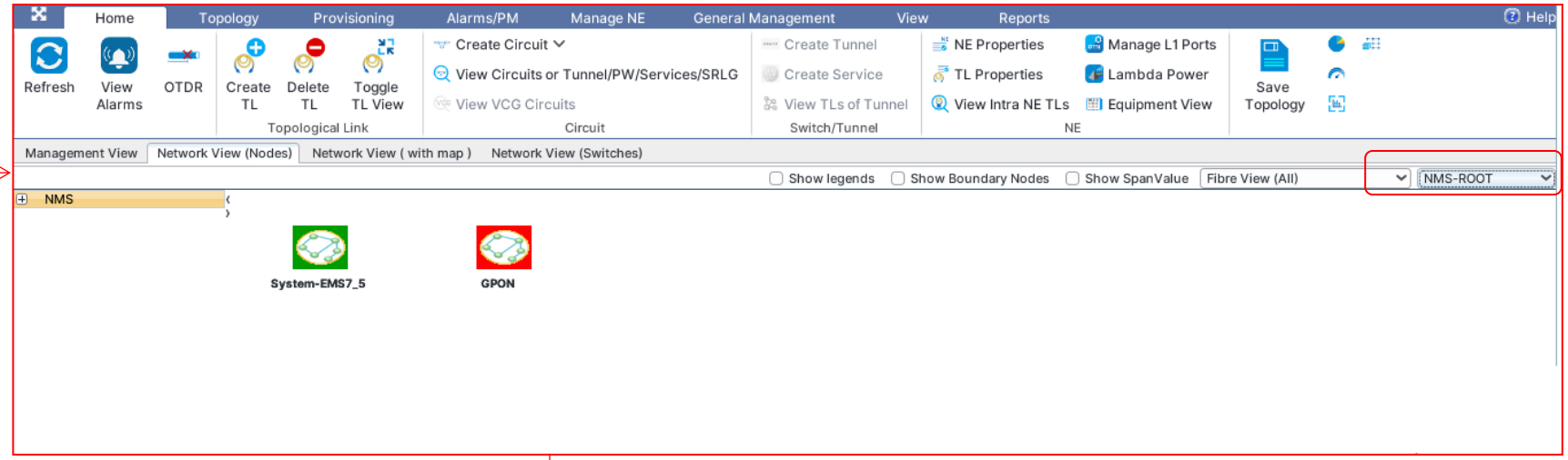
This feature is dependent on node.

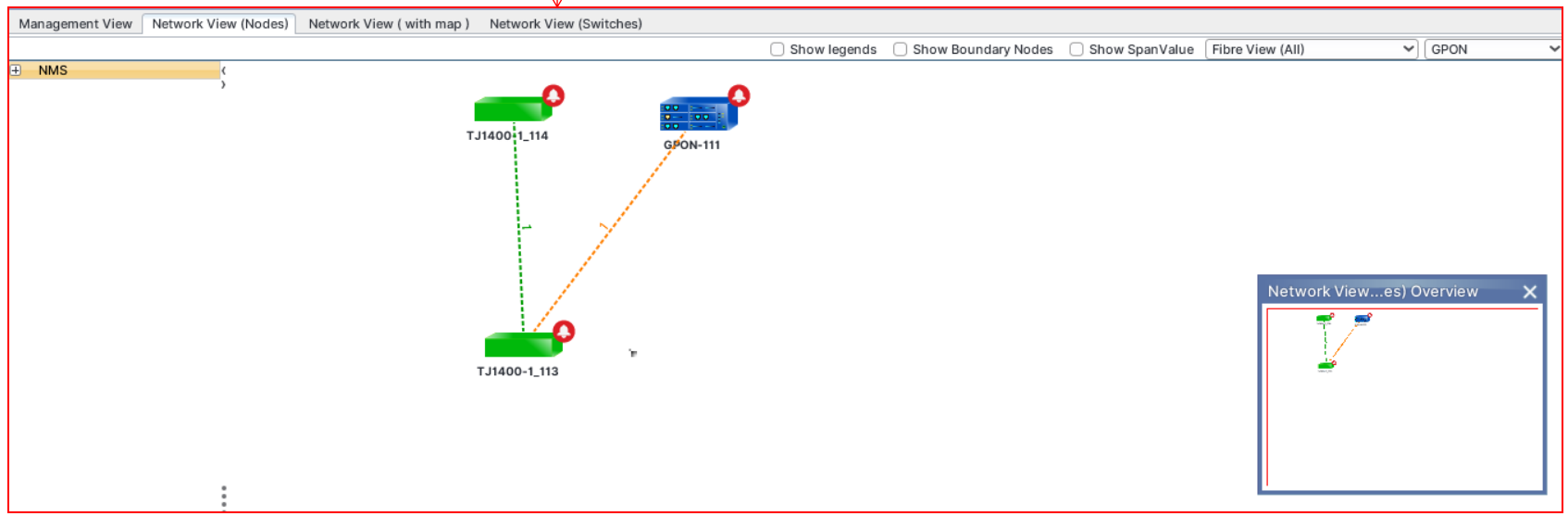
- A successful message will be shown after addition of node is completed.
- After Successful addition the node will be seen as in available state in

NMS and EMS.

L2 topology

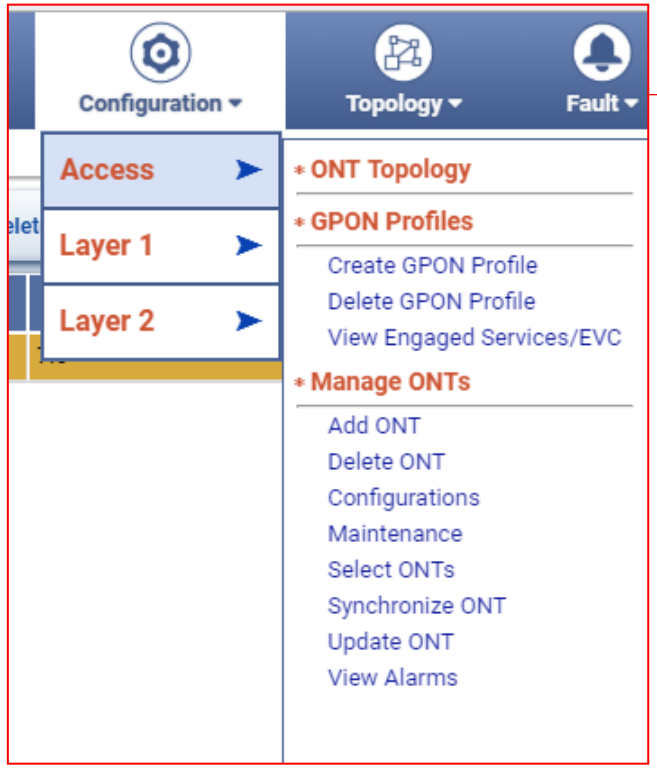


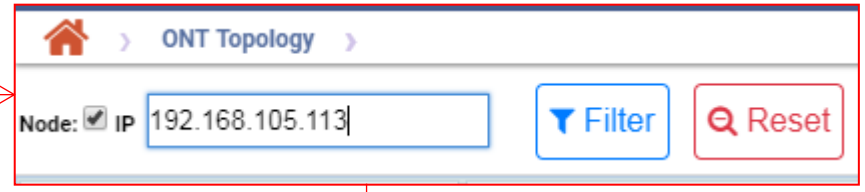


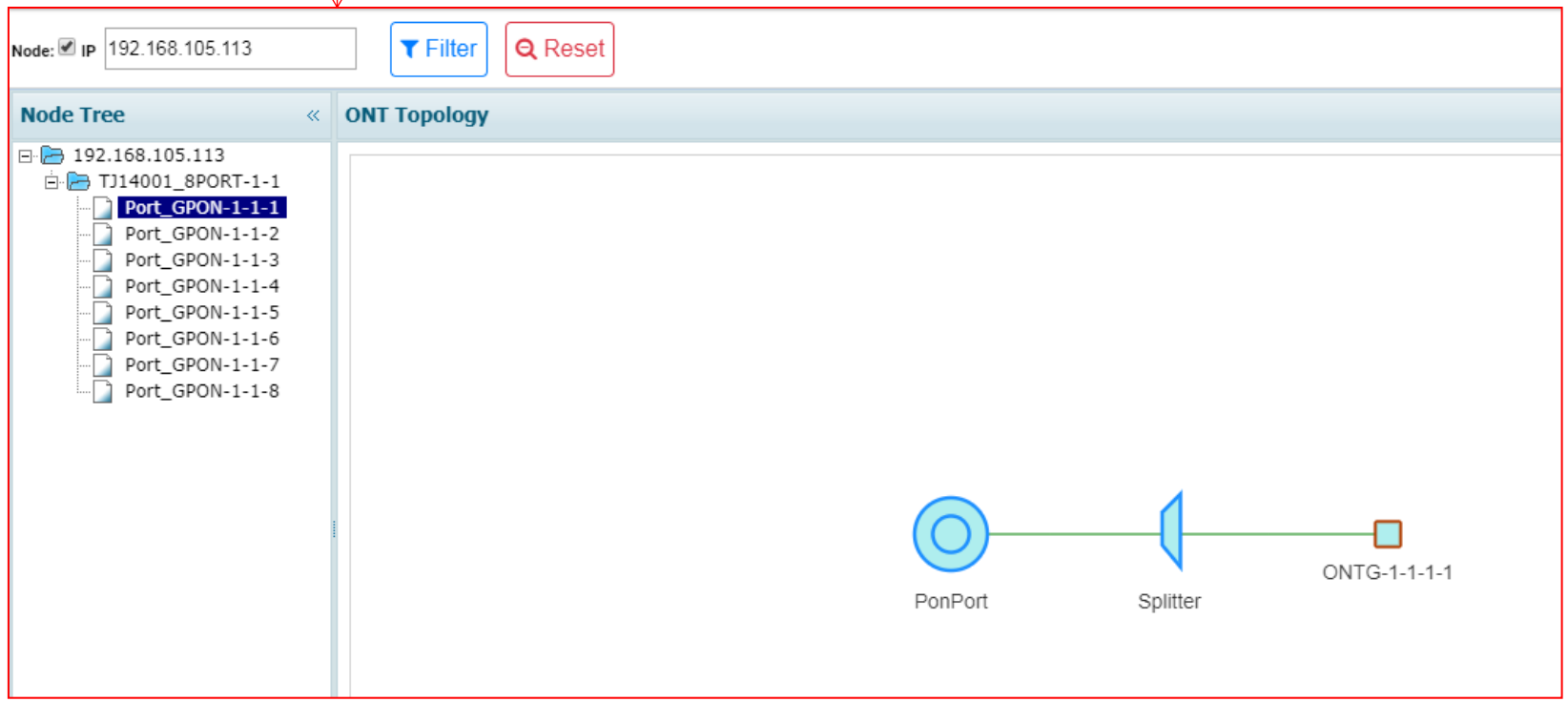


- Click topology view-> select partition

ONT topology

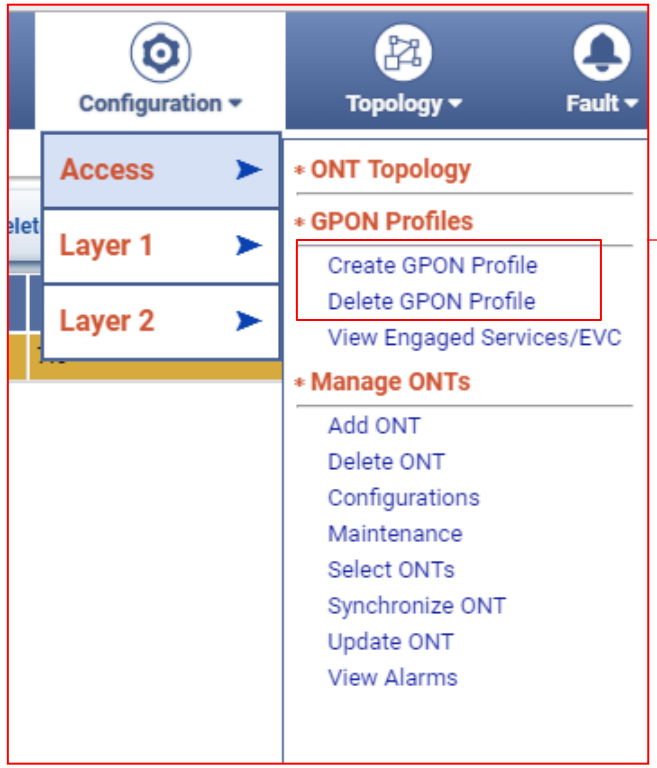


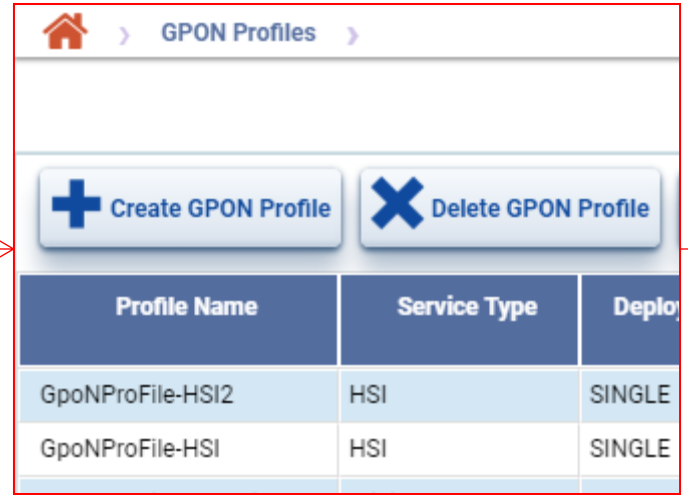


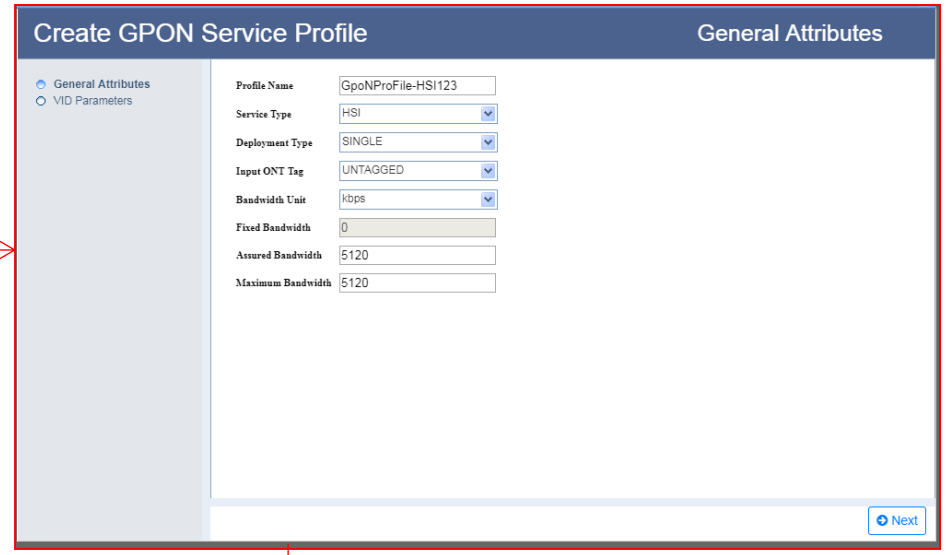


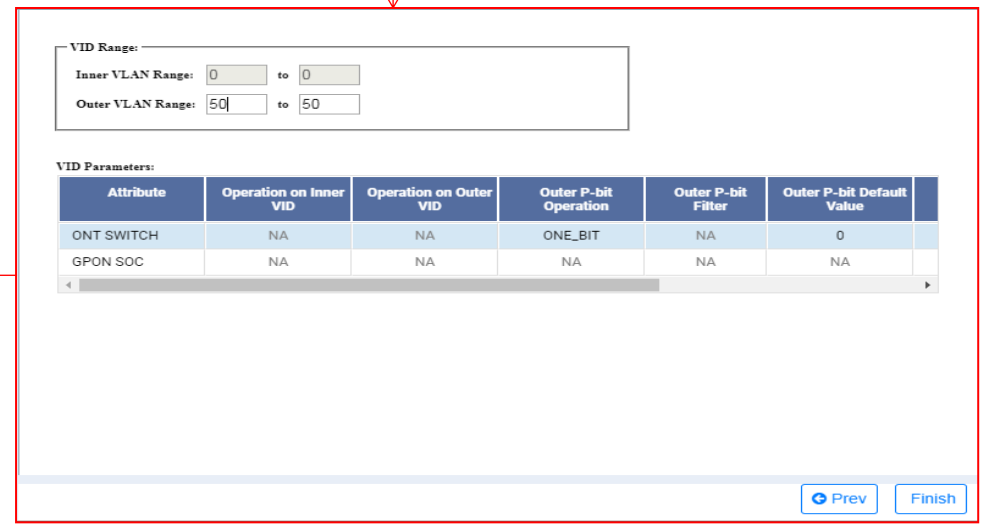
- Click on Access->ONT topology->give the IP address and click on Filter-> select the port where ONT is connected

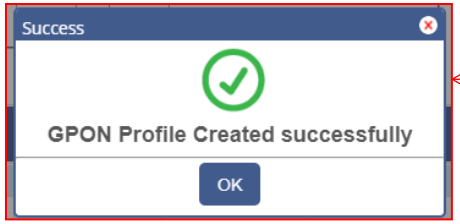
GPON Profile creation-HSI







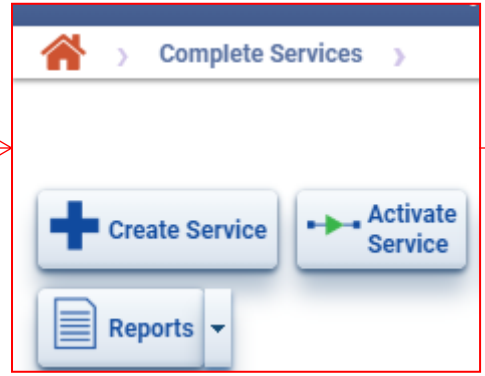


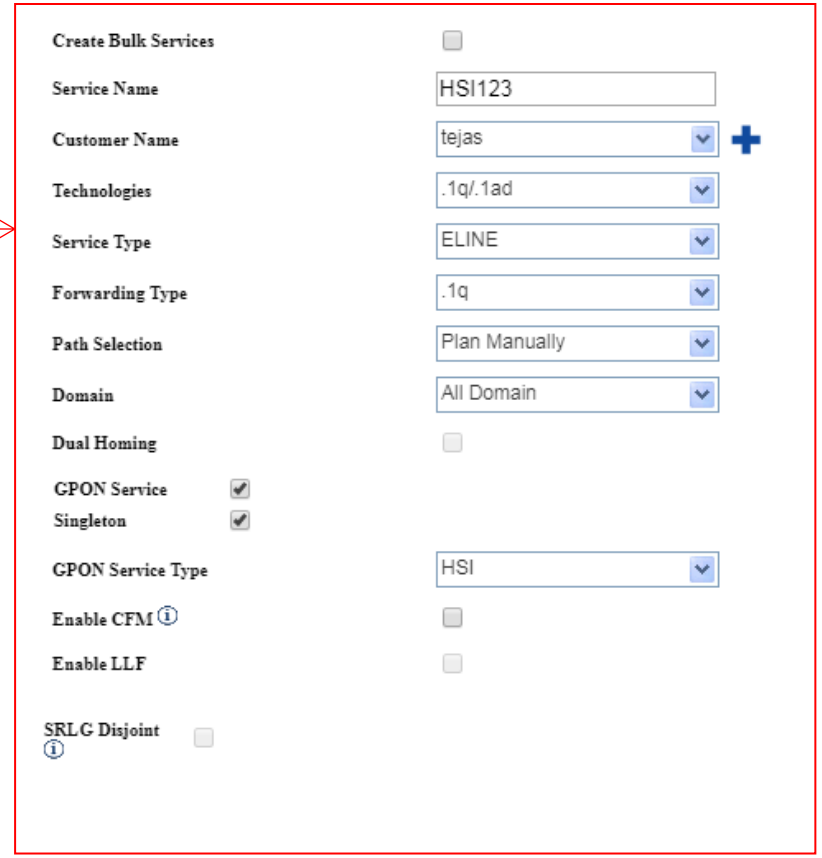


GPON Profile creation-HSI

- Click on Configuration->Access>create Gpon profile
- Fill in the name, service type, deployment type, input ONT tag and the bandwidth required.
  - Name-HSI123
  - Service type- HSI
  - Deployment type –Single/Double
  - Input ONT tag- Untagged/Single tagged
  - Bandwidth- has to be multiple of 64
- Then click on next
- Fill in the vlan Id and click on finish
- A successfully created message with be shown.

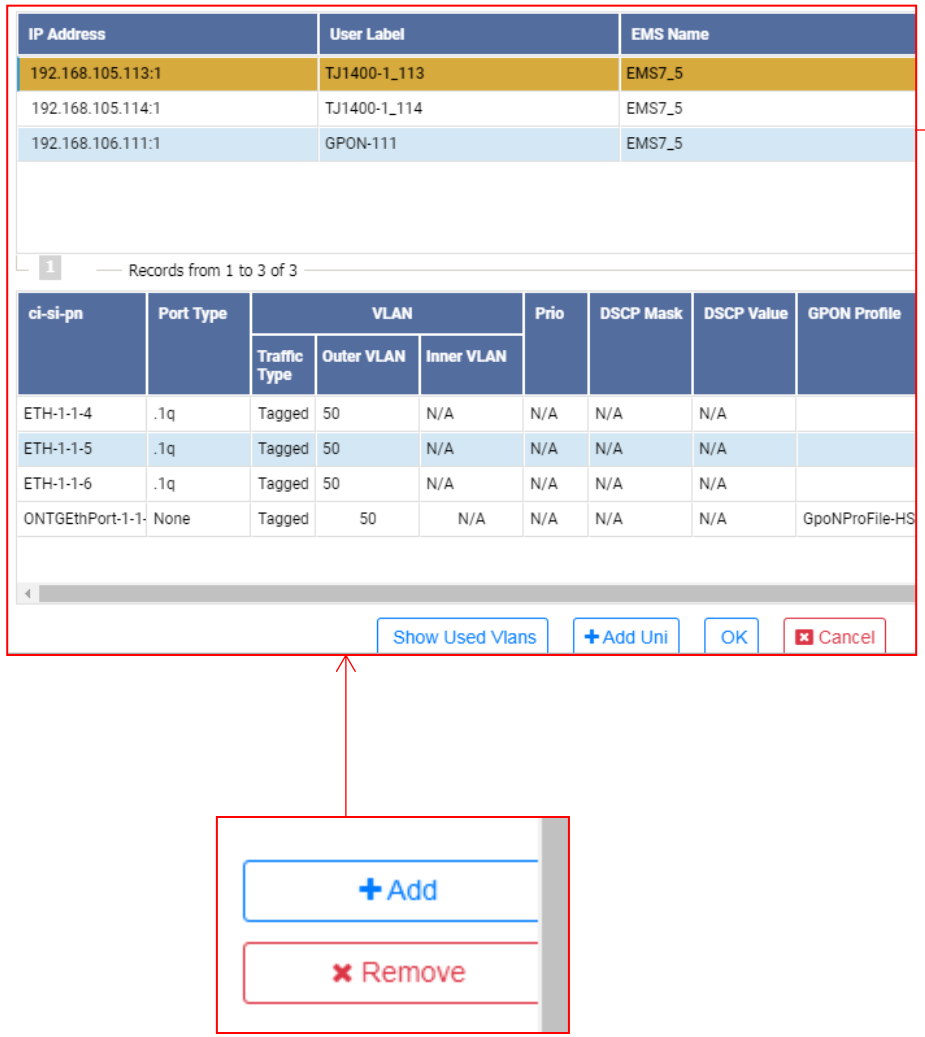
Service creation-HSI

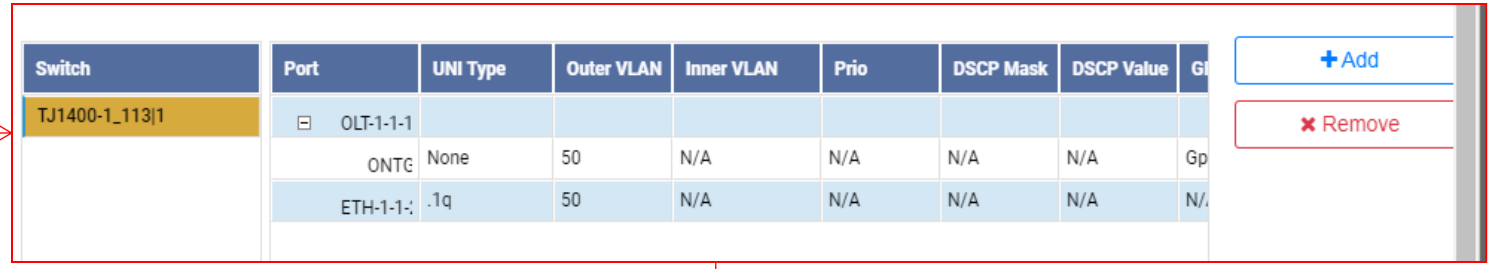


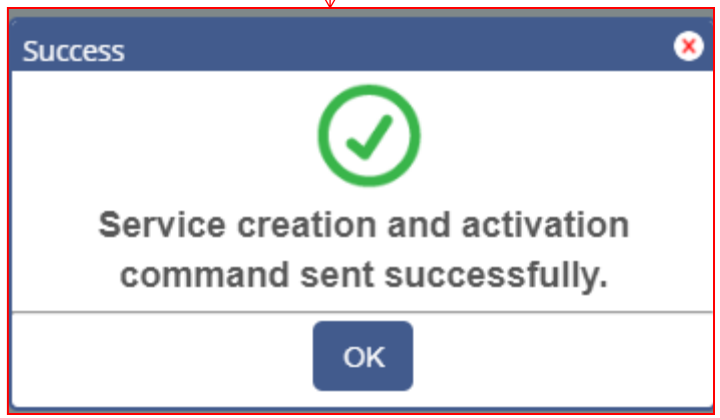


Continuation in the next slide…

Service creation-HSI



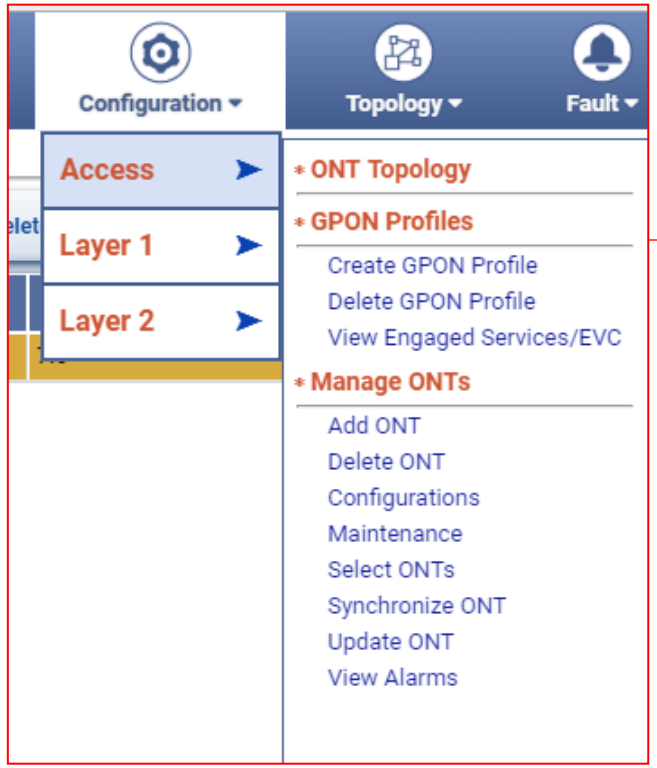


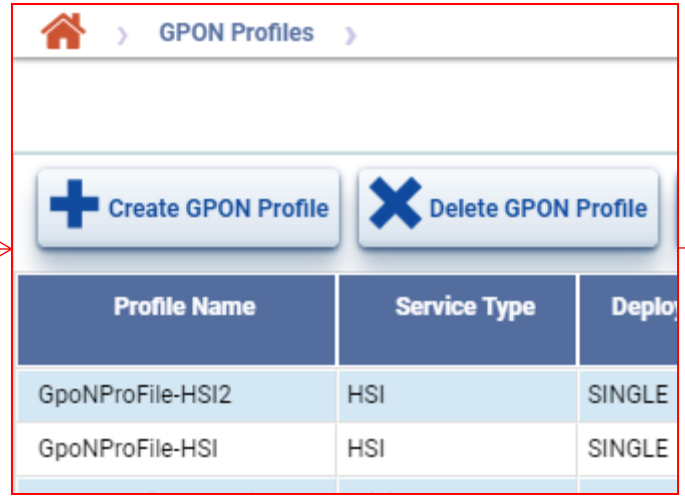


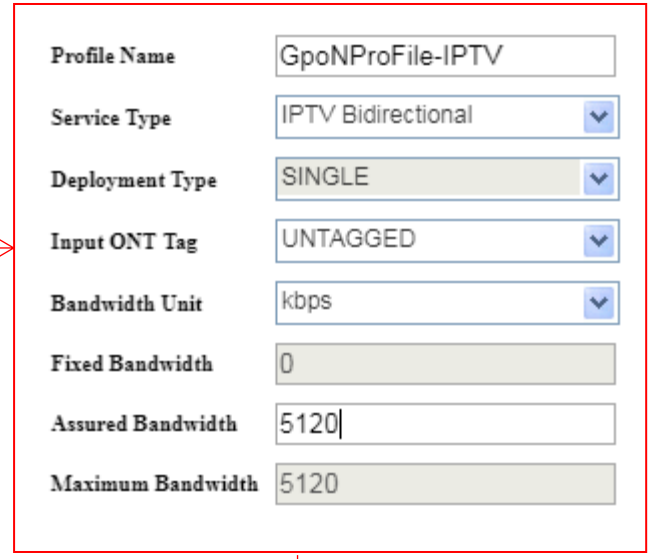
Service creation-HSI

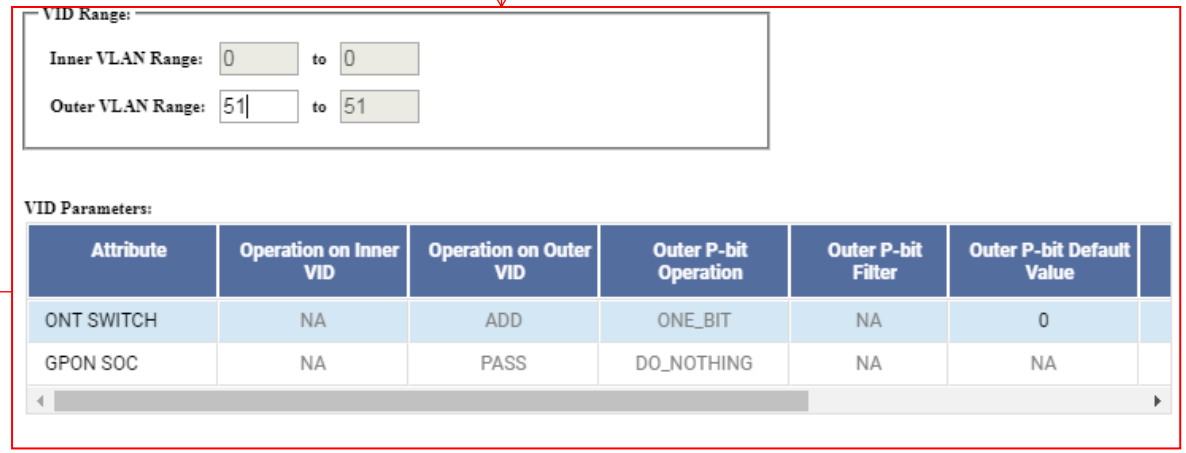
- Goto configuration->Layer 2->complete services
- Then click on create services and the fill in the details
  - Service name
  - Customer name
  - Technologies – has to be .1q/.1ad
  - Service type-eline or elan(depending on the requirement)
  - Forwarding type-.1q
  - Path selection- manually(if we want to select the path)or it can be automatically as well
  - Domain- All Domain (as it supports both QoS and non QoS nodes)
  - GPON check box should be ticked
  - GPON Service type- Select depending on the service we want (HSI, IPTV, VOIP, WIFI, VBES)
- Click on next and select the UNI ports.
- After selecting the UNI ports again click on next and the select “Create and Activate” and click on finish.
- Creation and activation successful message with pop up.

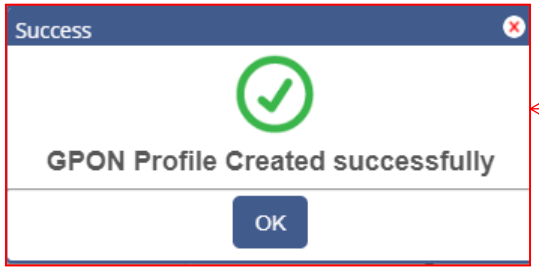
GPON Profile creation-IPTV











GPON Profile creation-IPTV

- Click on Configuration->Access>create Gpon profile
- Fill in the name, service type, deployment type, input ONT tag and the bandwidth required.
  - Name-IPTV
  - Service type- IPTV Bidirectional
  - Deployment type – In case of IPTV it is fixed to “Single”
  - Input ONT tag- Untagged/Single tagged
  - Bandwidth- has to be multiple of 64
- Then click on next
- Fill in the vlan Id and click on finish
- A successfully created message with be shown.

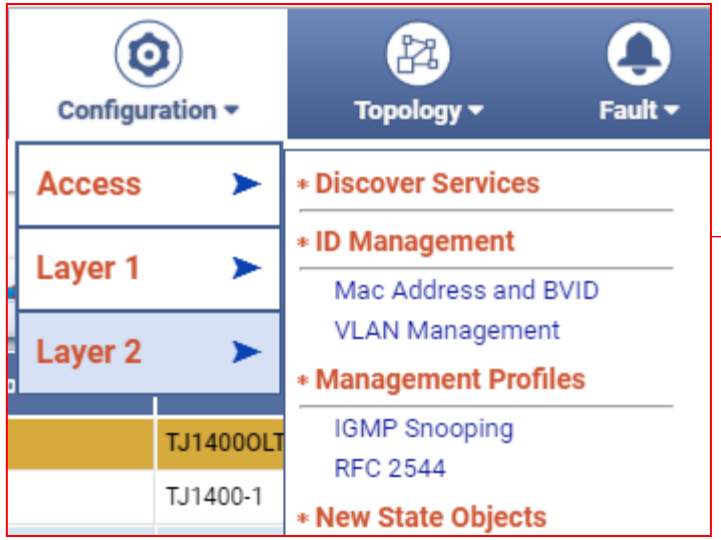
Service creation-IPTV **(IGMP Snooping profile)**

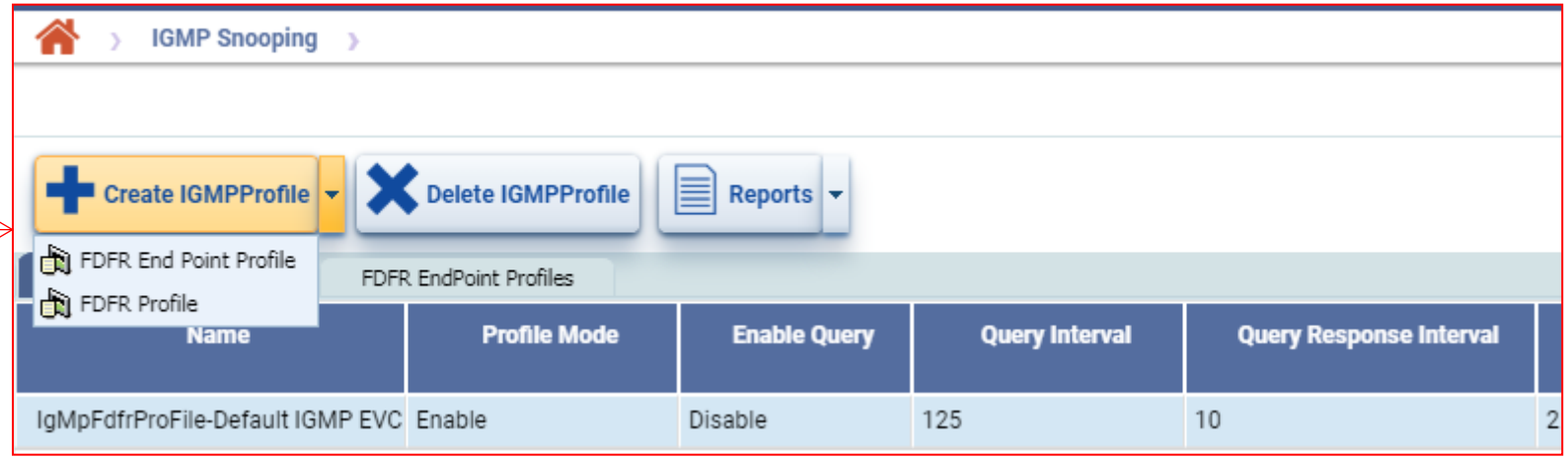
For IPTV, before creating ELINE/ELAN service, we need to first create

IGMP Snooping profile with

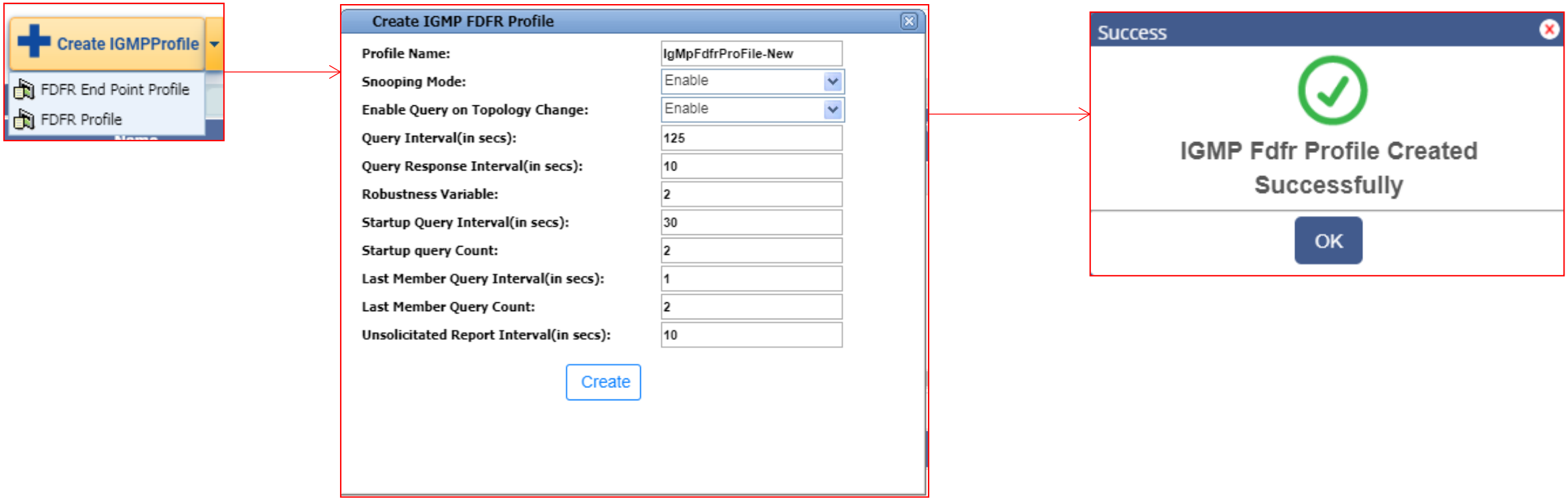
a) FDFR profile b) FDFR end point profile

Goto configuration->Layer 2-> IGMP Snooping-> Create IGMPProfile





FDFR profile



- Select FDFR Profile->fill in all the details and click on create
- A profile created successfully message will appear.

FDFR End Point profiles

- Static profile

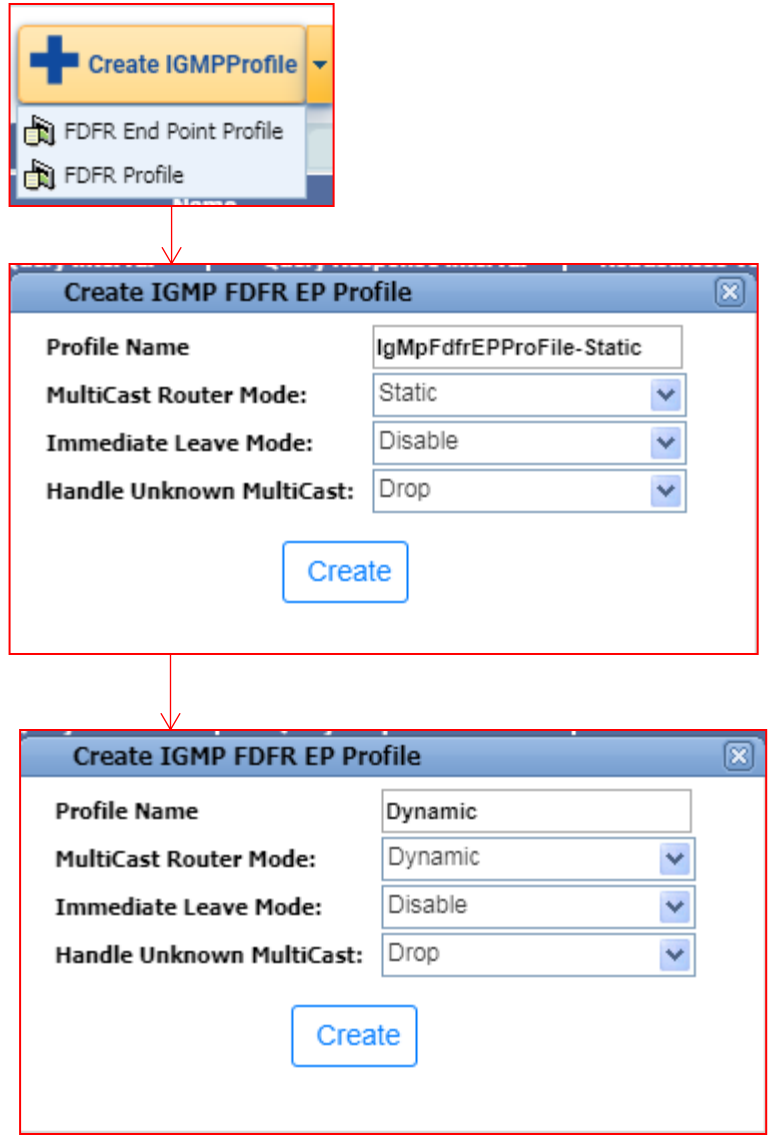
(This profile has to be attached to the ONTGETH port during service creation)

  - To create a static profile, click on Create IGMPProfile and click on FDFR End point profile
  - Provide a unique profile name and select the remaining fields as shown

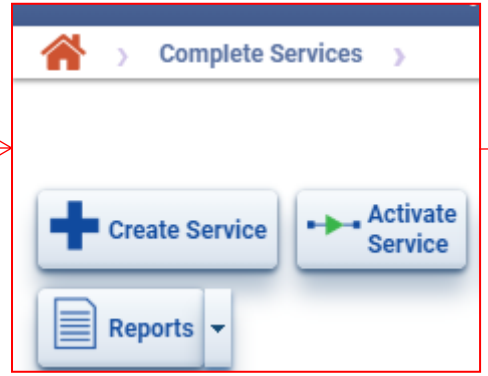
- Dynamic profile

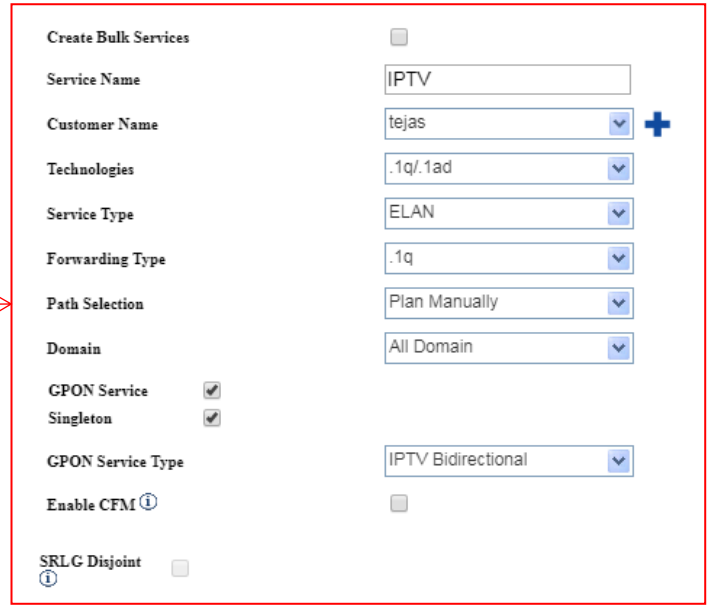
(This profile has to be attached to the UNI ETH port during service creation)

  - To create a Dynamic profile, click on Create IGMPProfile and click on FDFR End point profile
  - Provide a unique profile name and select the remaining fields as shown



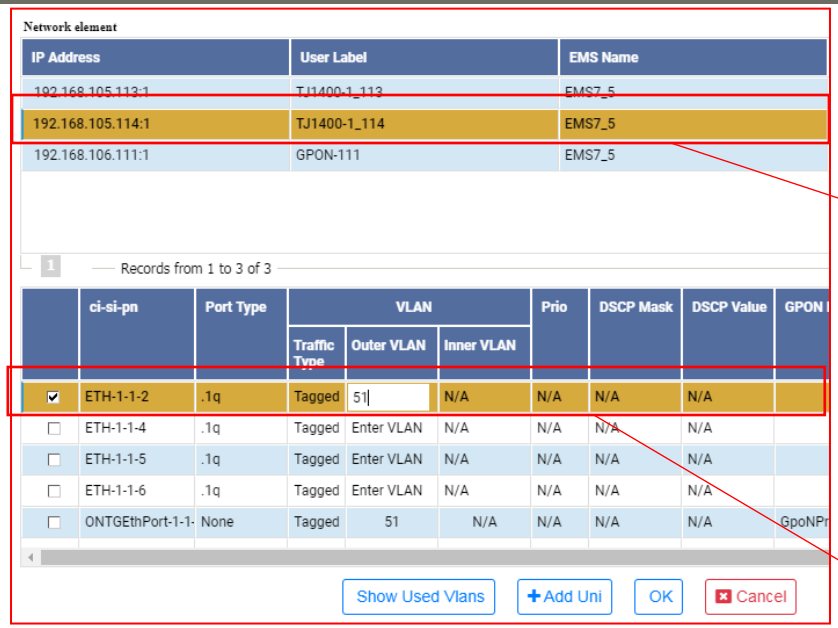
Service creation-IPTV

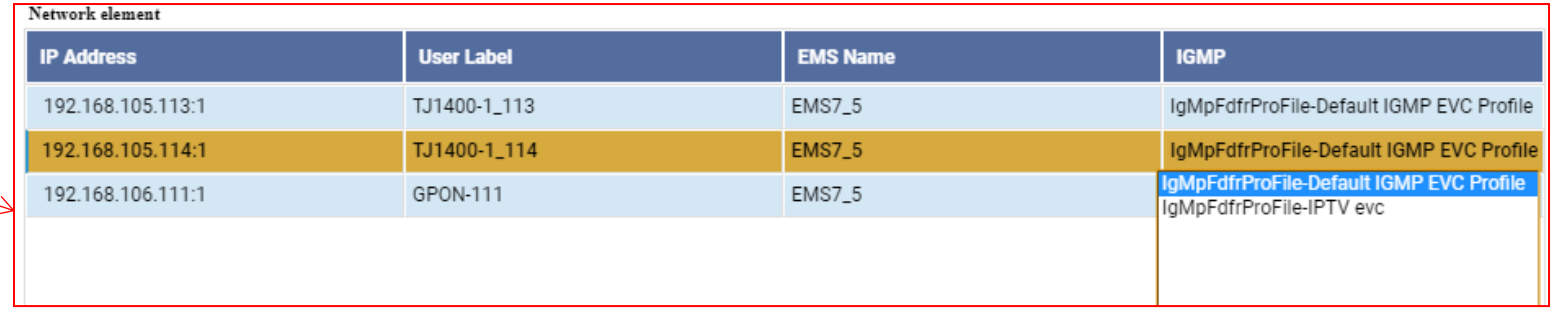


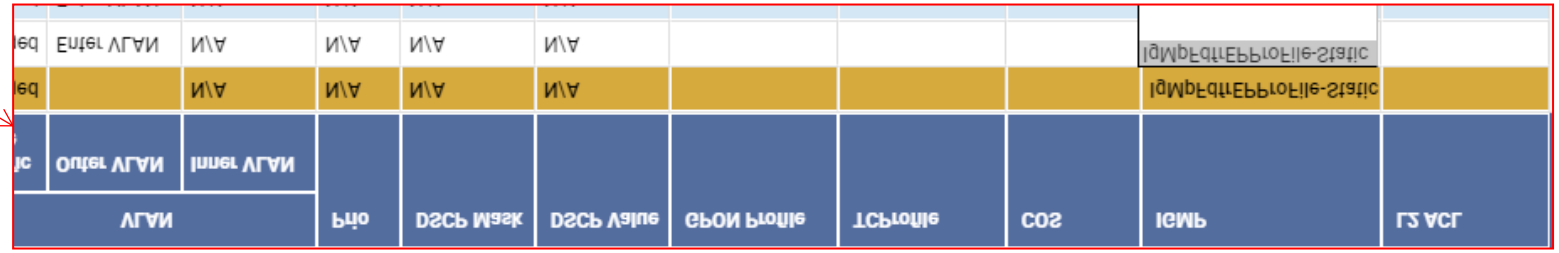


- Goto layer->create services and then fill in the details and select GPON service type and select the services as iptv bidirectional and click next.

Service creation-IPTV

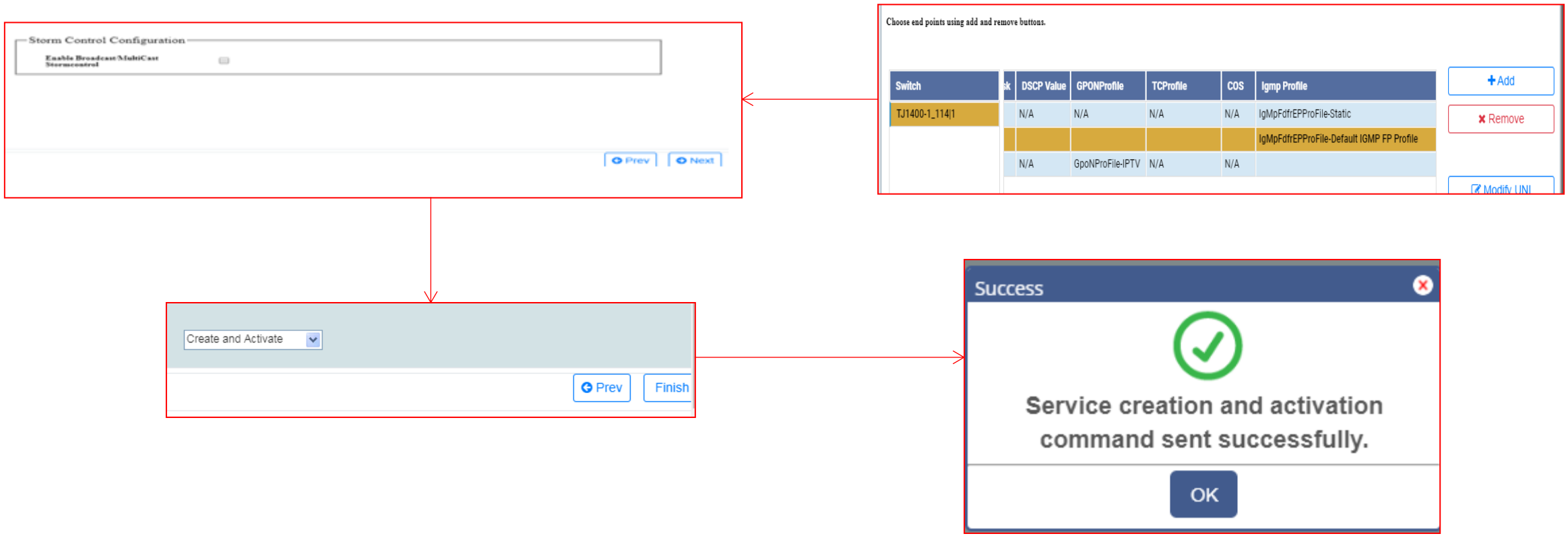






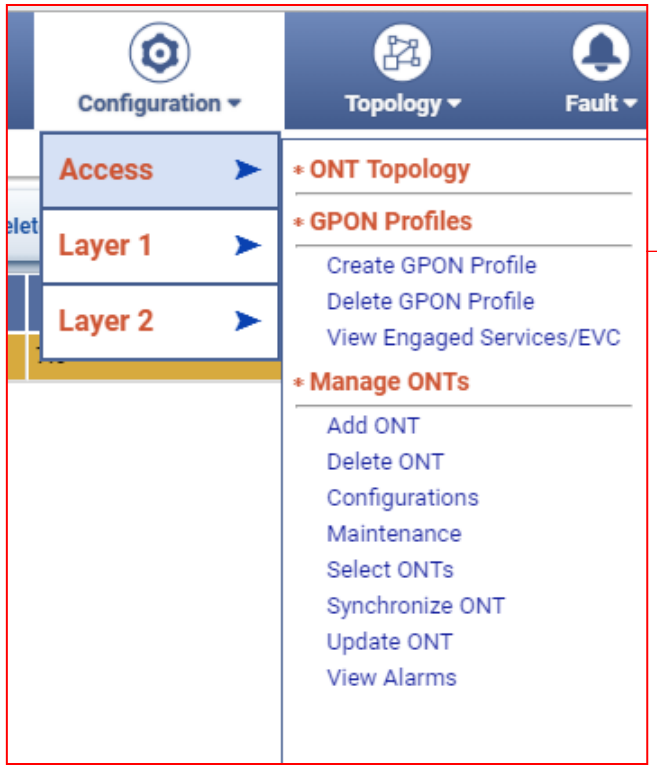
- Next step is to select the UNI ports. While doing so we need to attach the EVC IGMP snooping to the service and the FP IGMP snooping profile both the dynamic and static one to the ONT port and the Ethernet port respectively.
- The VLAN should also be mentioned while selecting the UNI.

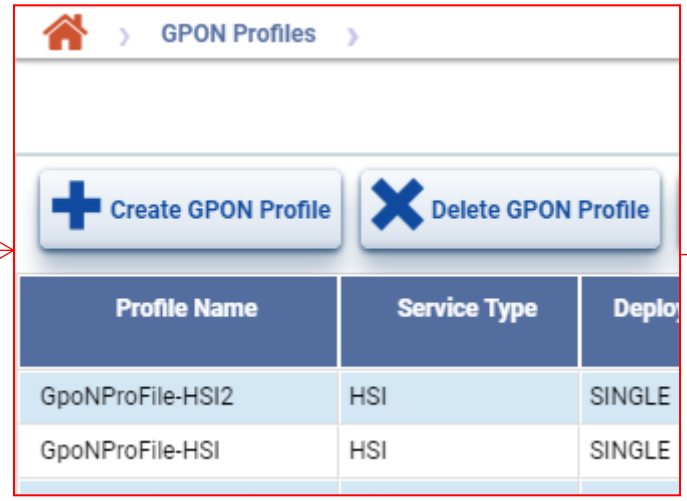
Service creation-IPTV

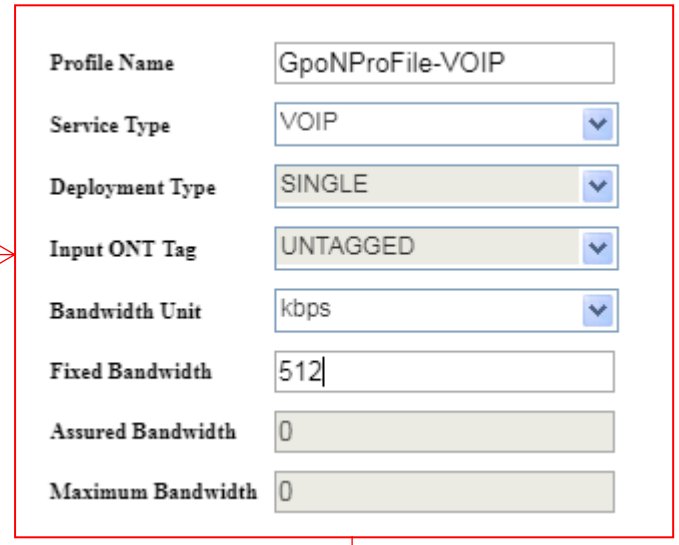


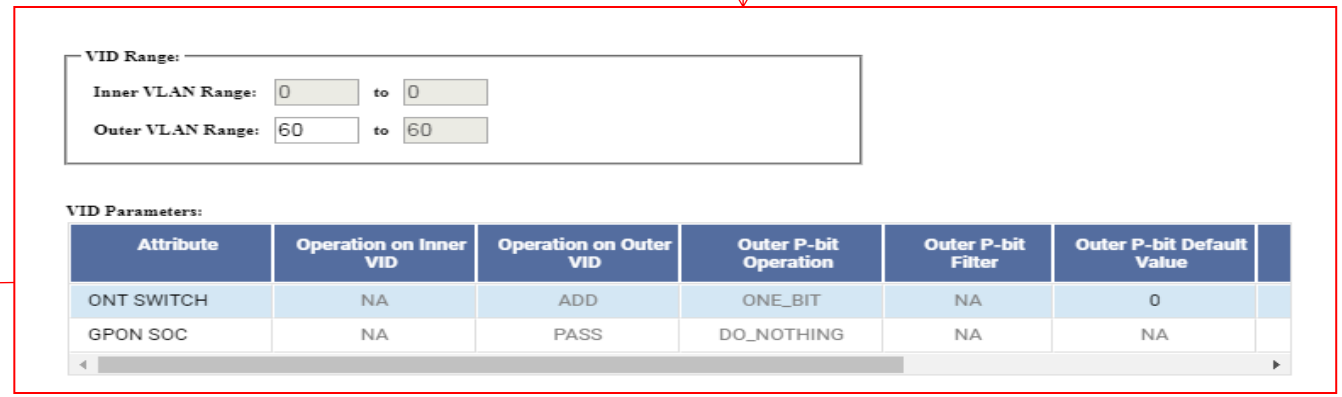
- After selecting the UNIs and attaching the IGMP snooping profiles in it click on next and then create and activate the service.

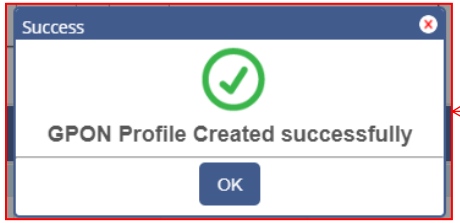
GPON Profile creation-VOIP







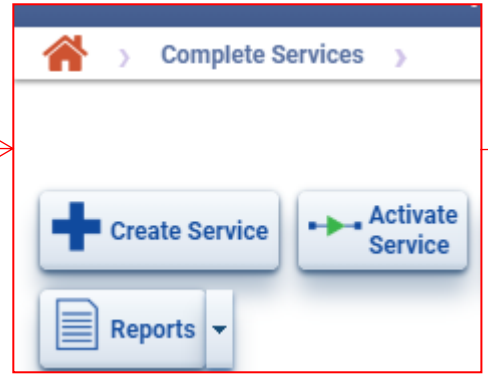


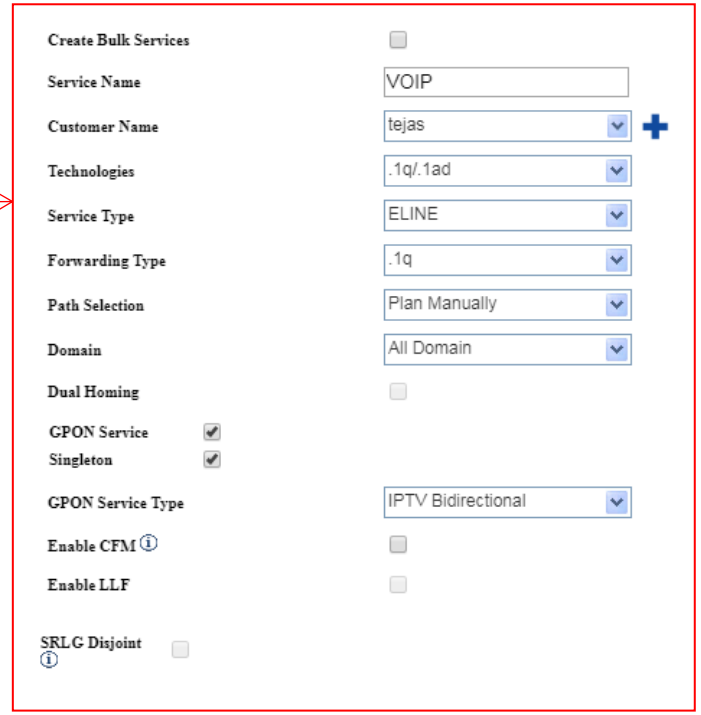


GPON Profile creation-VOIP

- Click on Configuration->Access>create Gpon profile
- Fill in the name, service type, deployment type, input ONT tag and the bandwidth required.
  - Name-VOIP
  - Service type- VOIP
  - Deployment type –Single
  - Input ONT tag- Untagged
  - Bandwidth- for VOIP it is always Fixed Bandwidth and the value should be a multiple of 64kbps
- Then click on next
- Fill in the vlan Id and click on finish
- A successfully created message with be shown.

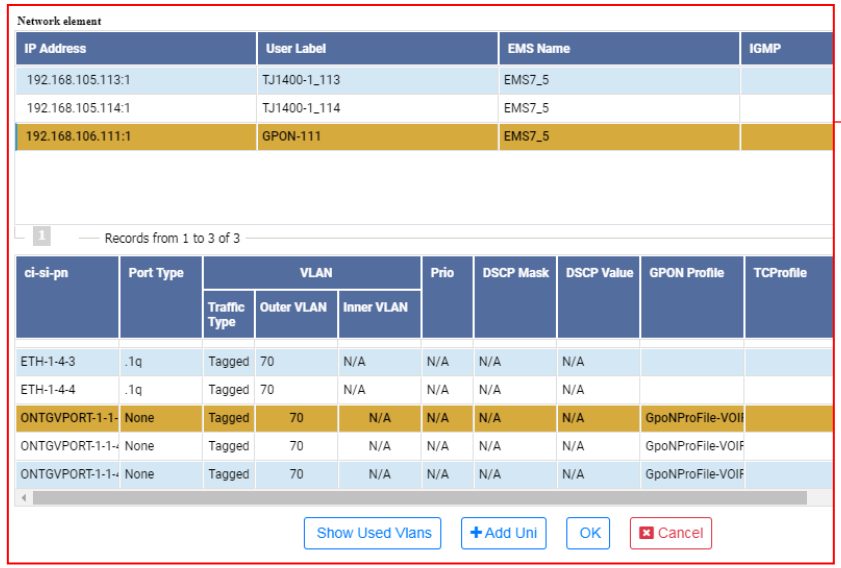
Service creation-VOIP

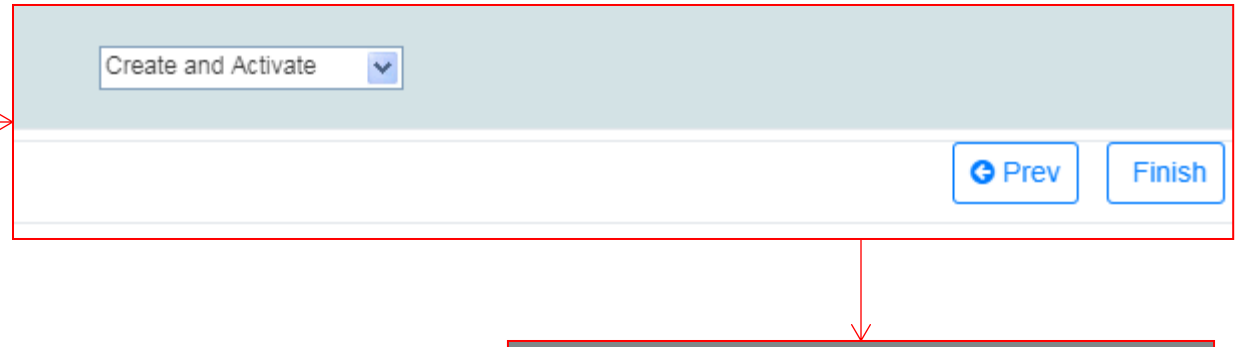


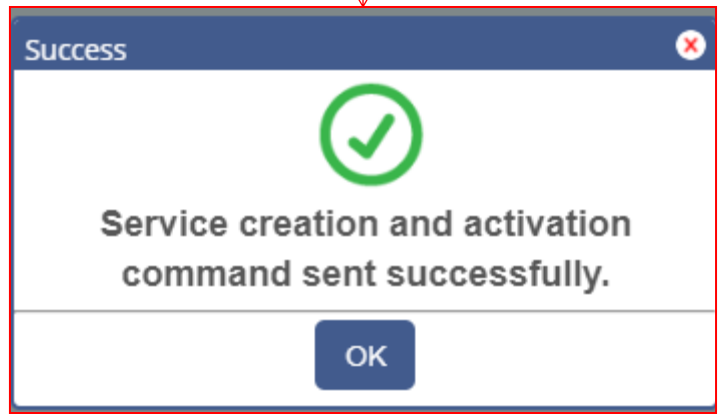


- For VOIP the service can be either ELINE or ELAN.

Service creation-VOIP

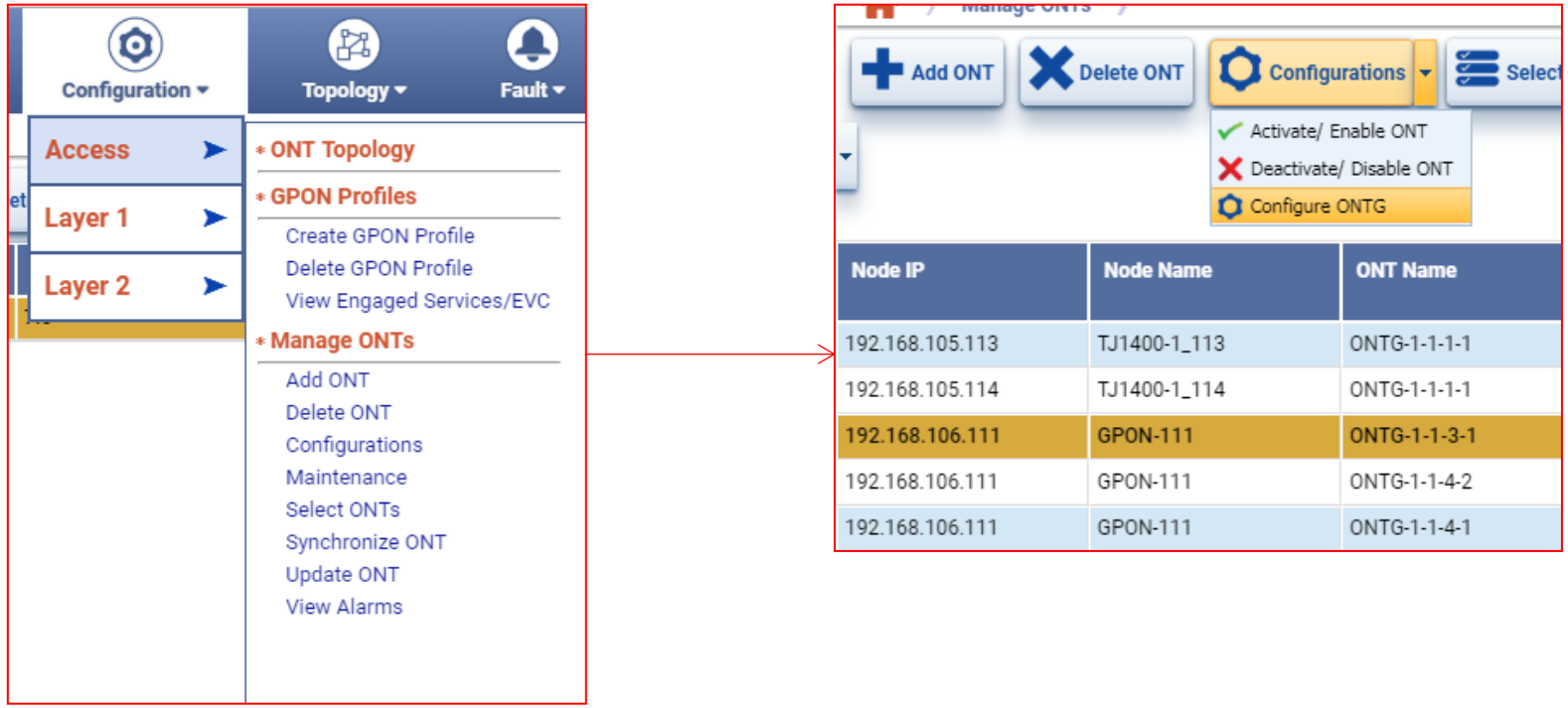






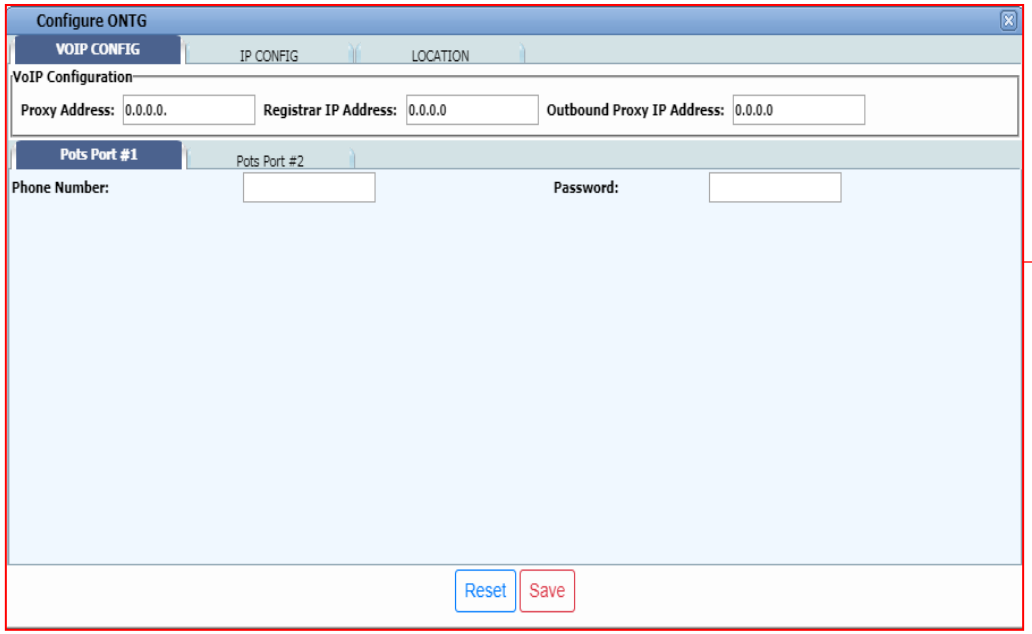
- After selecting the UNIs click on next and then create and activate the service.

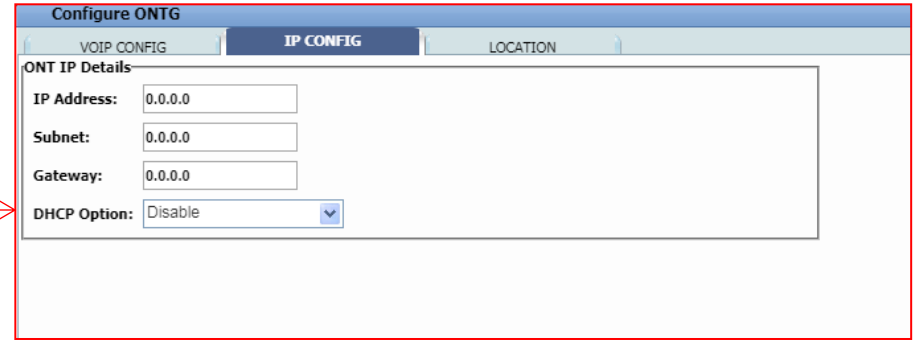
ONT configuration for VOIP



- Goto configuration->Manage ONTs->Configuration
- Select the node and Click on configuration->Configure ONTG

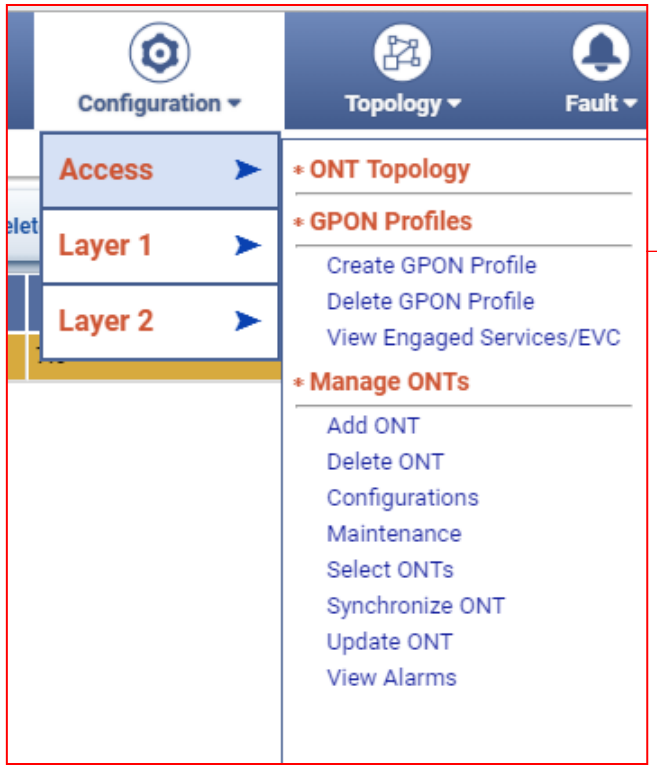
ONT configuration for VOIP

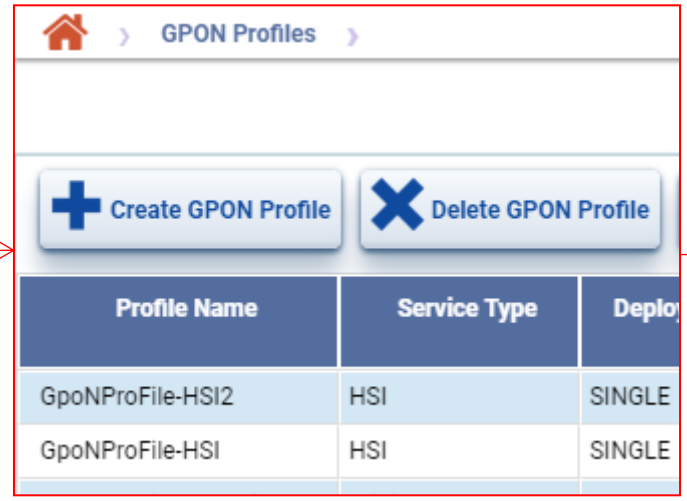


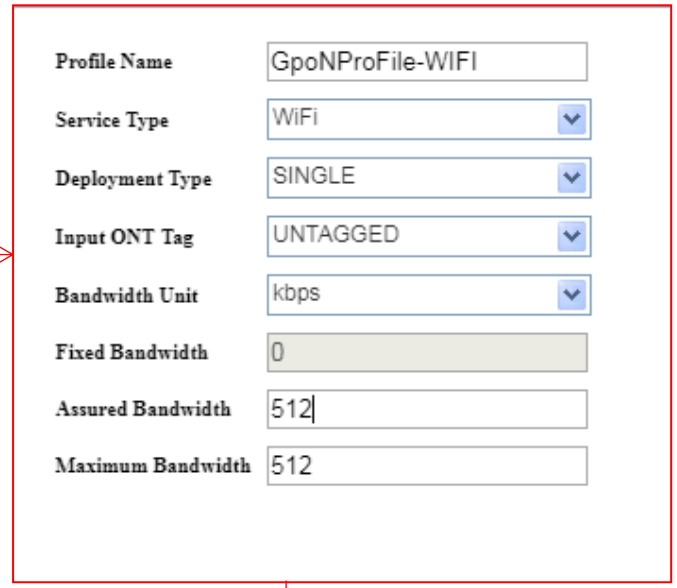


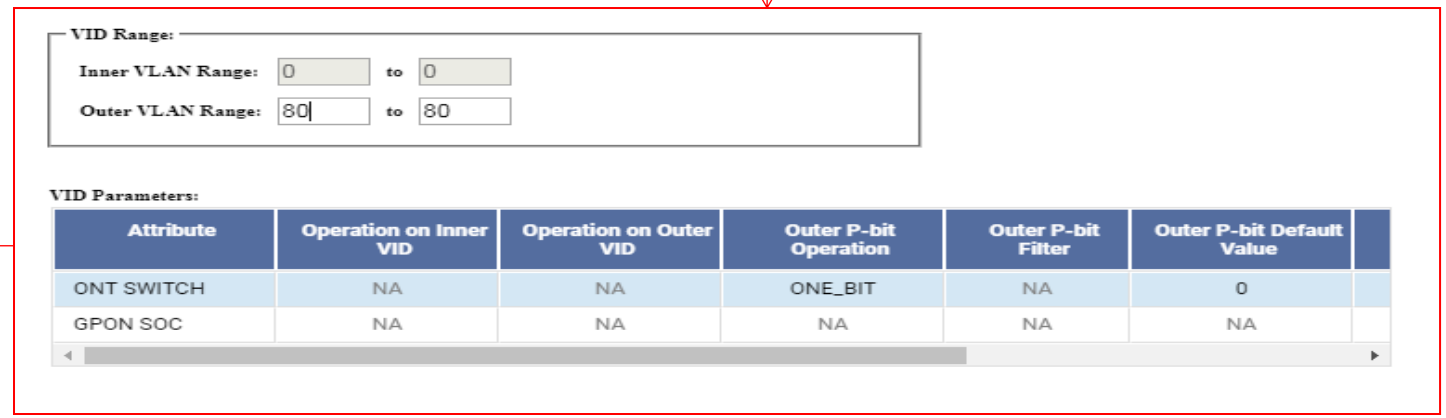
- Fill in the details:
  - Proxy Address, Registered IP address, Outbound Proxy IP Address- IP of the SIP server
  - Phone number and Password for POTs pot 1 and 2- give a suitable phone number and password can be given the same as phone number
  - The next tab is IP config and has the ONT IP details
- After filling all the details click on save.

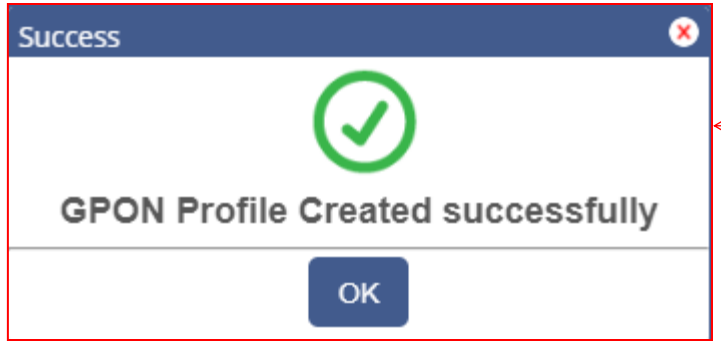
GPON Profile creation-WIFI







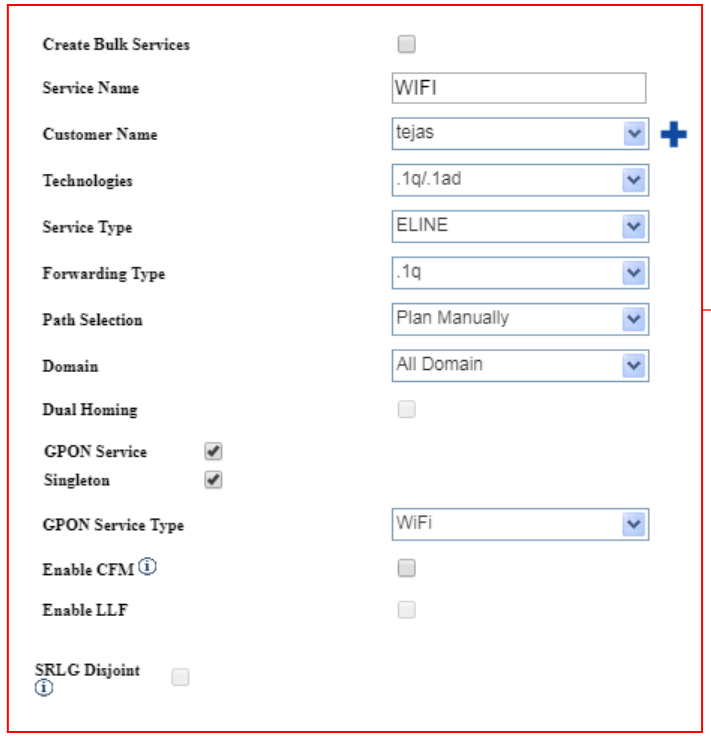


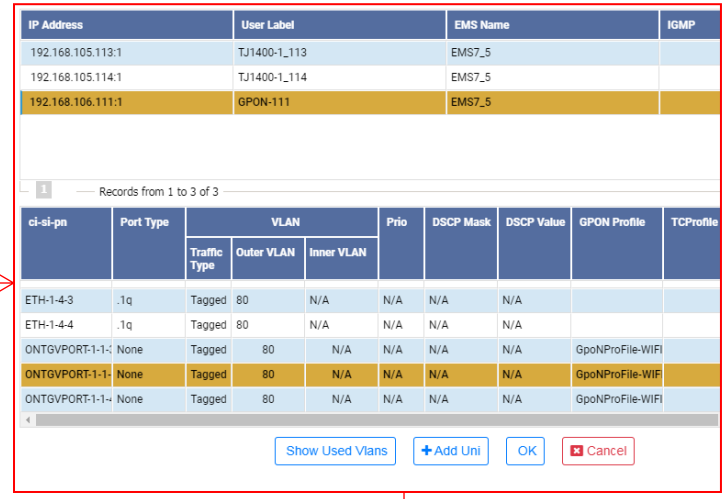


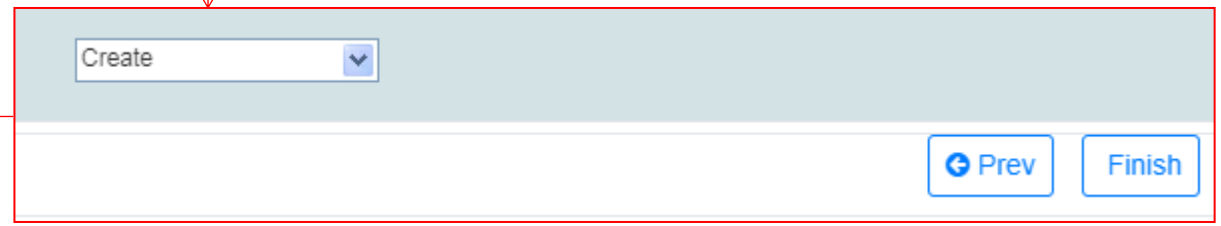
GPON Profile creation-WIFI

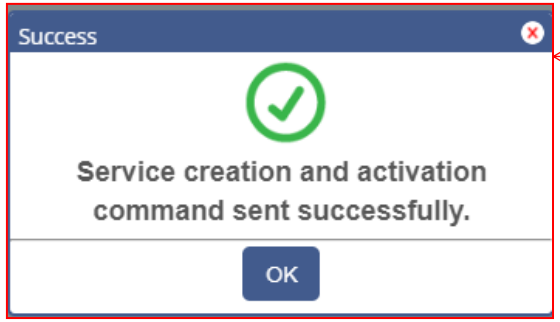
- Click on Configuration->Access>create Gpon profile
- Fill in the name, service type, deployment type, input ONT tag and the bandwidth required.
  - Name-WIFI
  - Service type- WIFI
  - Deployment type –Single/Double
  - Input ONT tag- Untagged/Single tagged
  - Bandwidth- has to be multiple of 64
- Then click on next
- Fill in the vlan Id and click on finish
- A successfully created message with be shown.

Service creation-WIFI







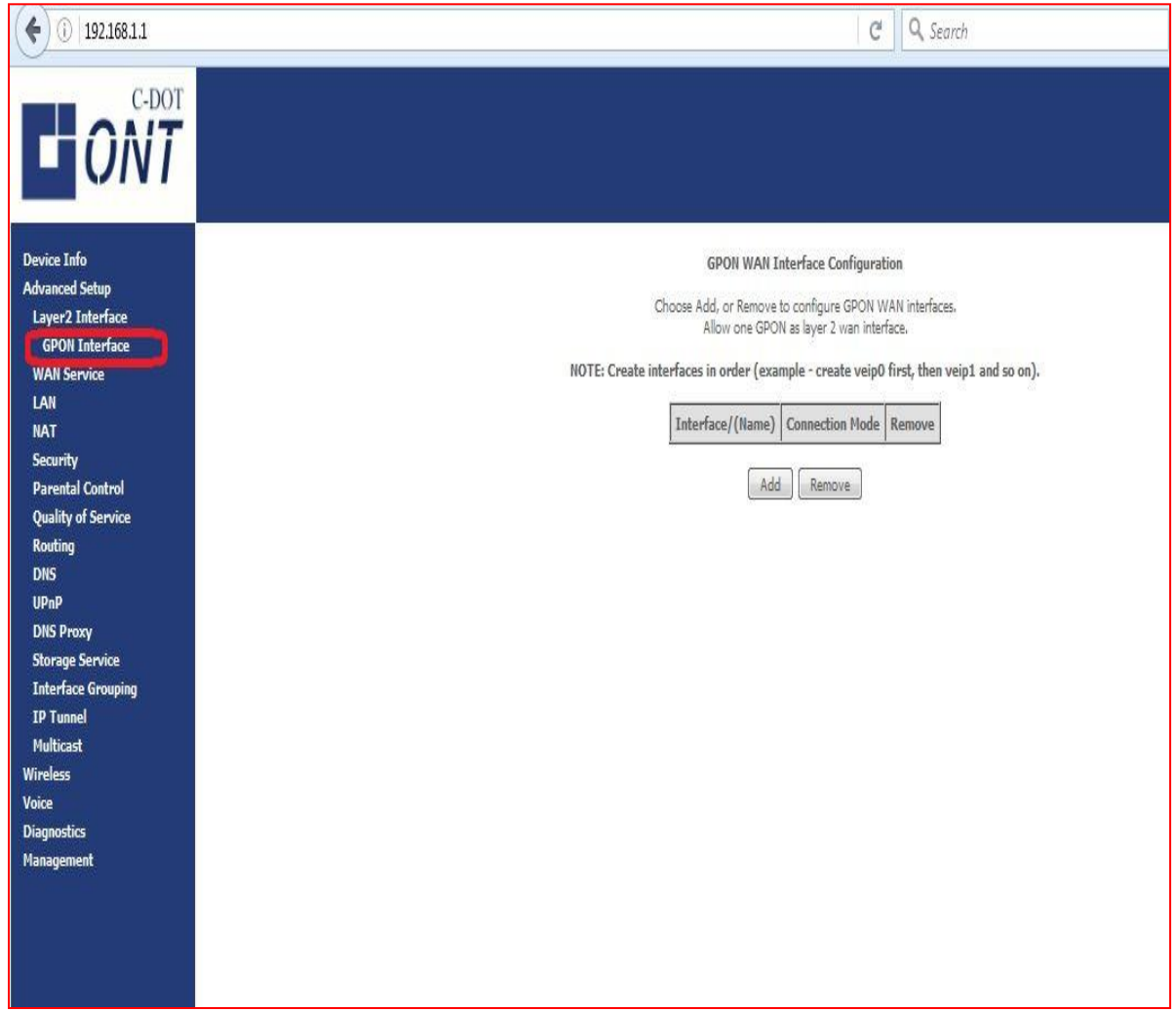


Service creation-WIFI

- Goto configuration->Layer 2->complete services
- Then click on create services and the fill in the details
  - Service name
  - Customer name
  - Technologies – has to be .1q/.1ad
  - Service type-eline or elan(depending on the requirement)
  - Forwarding type-.1q
  - Path selection- manually(if we want to select the path)or it can be automatically as well
  - Domain- All Domain (as it supports both QoS and non QoS nodes)
  - GPON check box should be ticked
  - GPON Service type- Select depending on the service we want (HSI, IPTV, VOIP, WIFI, VBES)
- Click on next and select the UNI ports.
- After selecting the UNI ports again click on next and the select “Create and Activate” and click on finish.
- Creation and activation successful message with pop up.
- After creating the service the ONT has to be configured by directly logging in into the ONT.

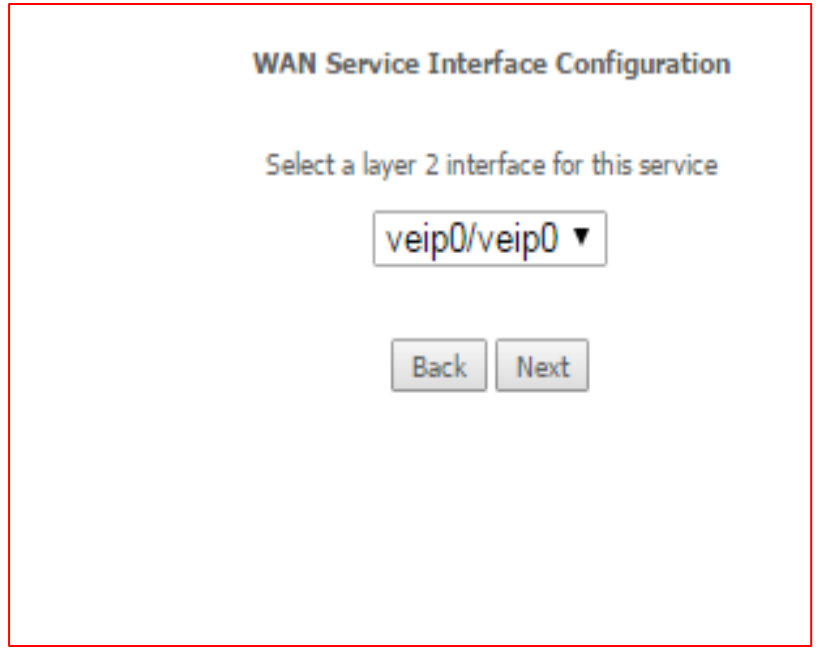
ONT configuration for WIFI

- Connect to the WiFi of ONT and login to the ONT with IP 192.168.1.1
- Goto advance setup->GPON interface-> add interface (veip0/veip0)->apply and save.



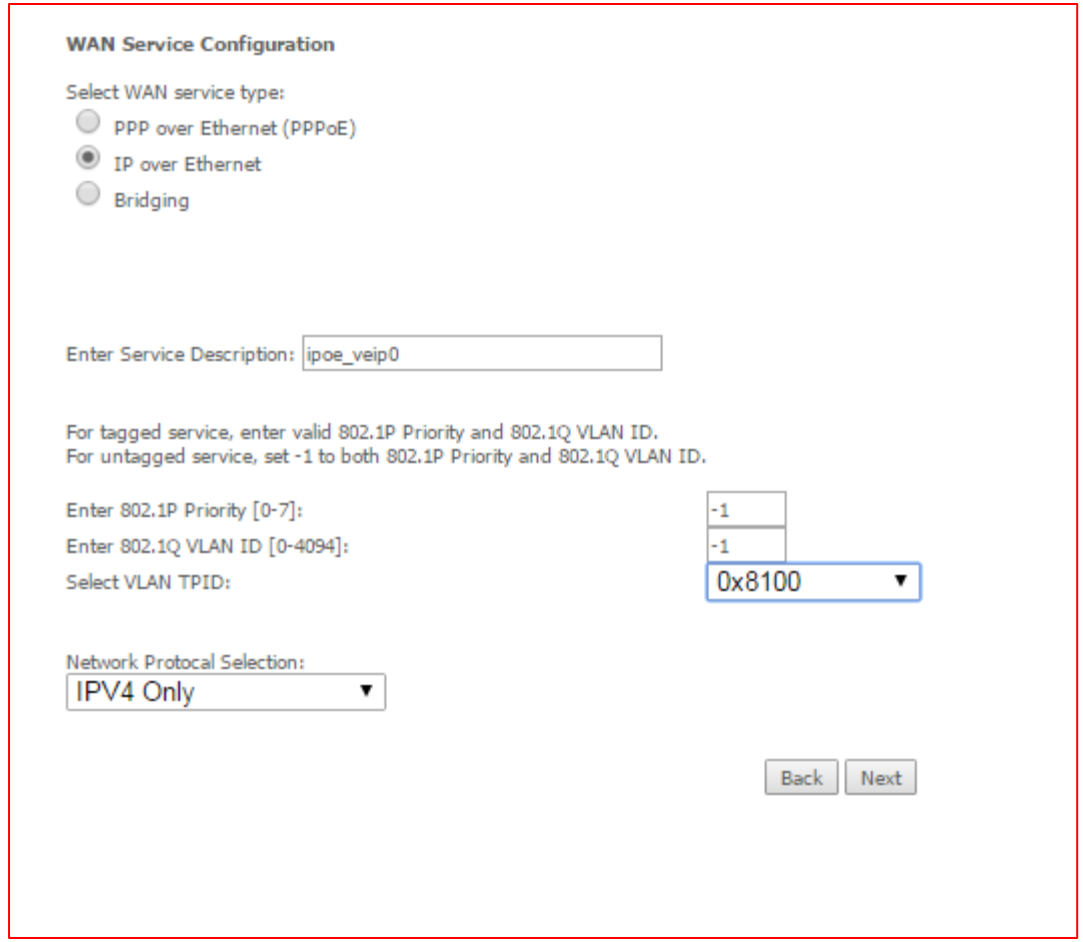
ONT configuration for WIFI

- Create WAN service
  - PPPoE
- PPPoE server will dynamically assign WAN IP based on authentication process
- User has to input valid username & password while creating WAN service
  - IPoE
- User has to manually input WAN IP to be used



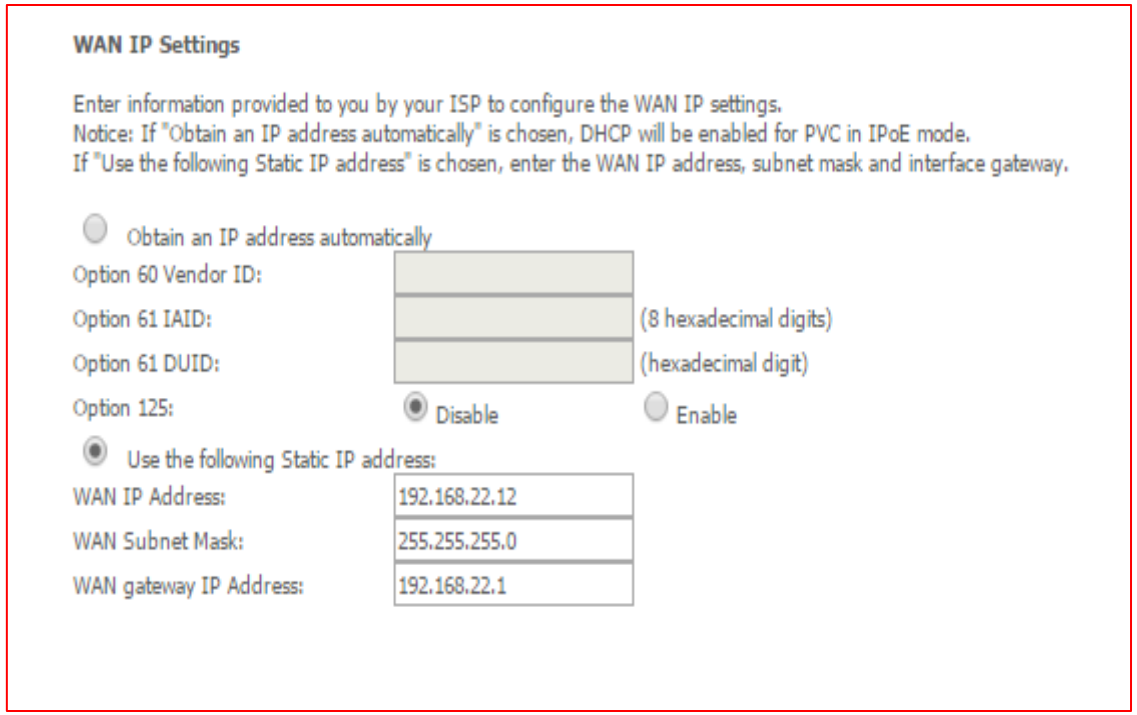
ONT configuration for WIFI

- Select IP over Ethernet if connected to LAN and since the WiFi connection created was untagged so no need to make changes on 802.1P priority and 802.1Q VLAN ID. Only select VLAN TPID as 0x 8100 and click next.

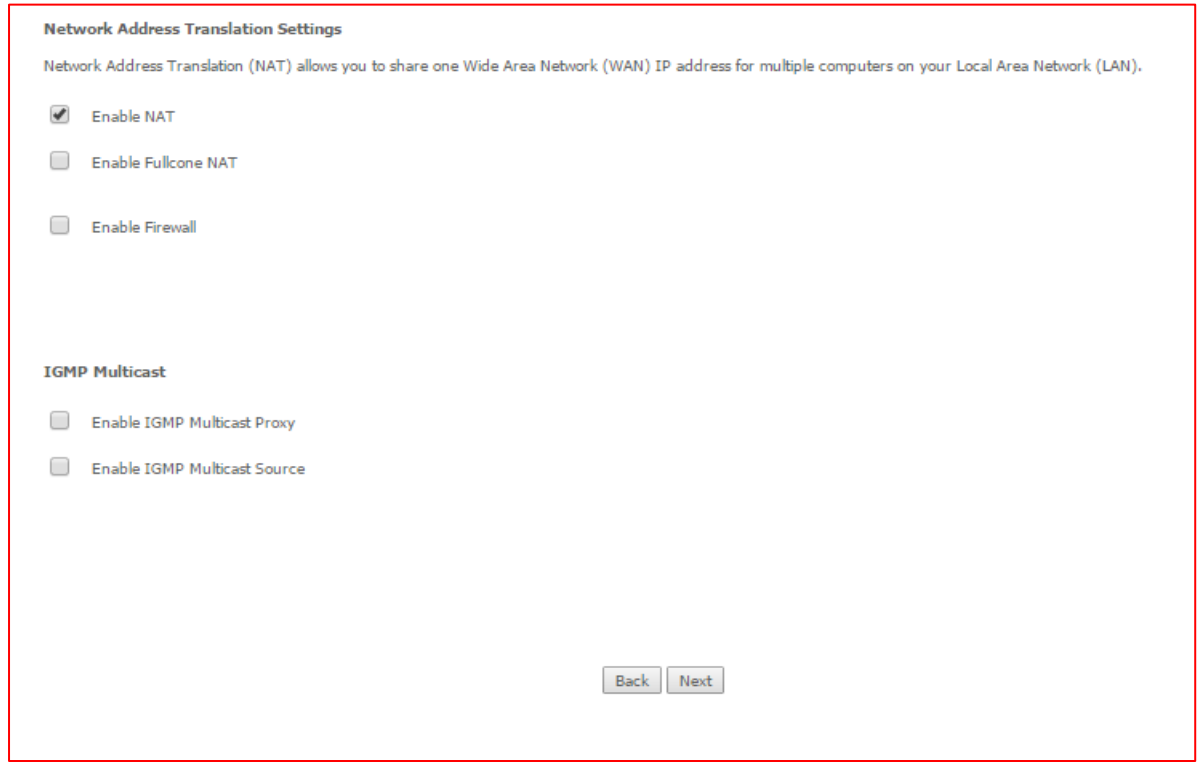


ONT configuration for WIFI

- Select static IP and click next.



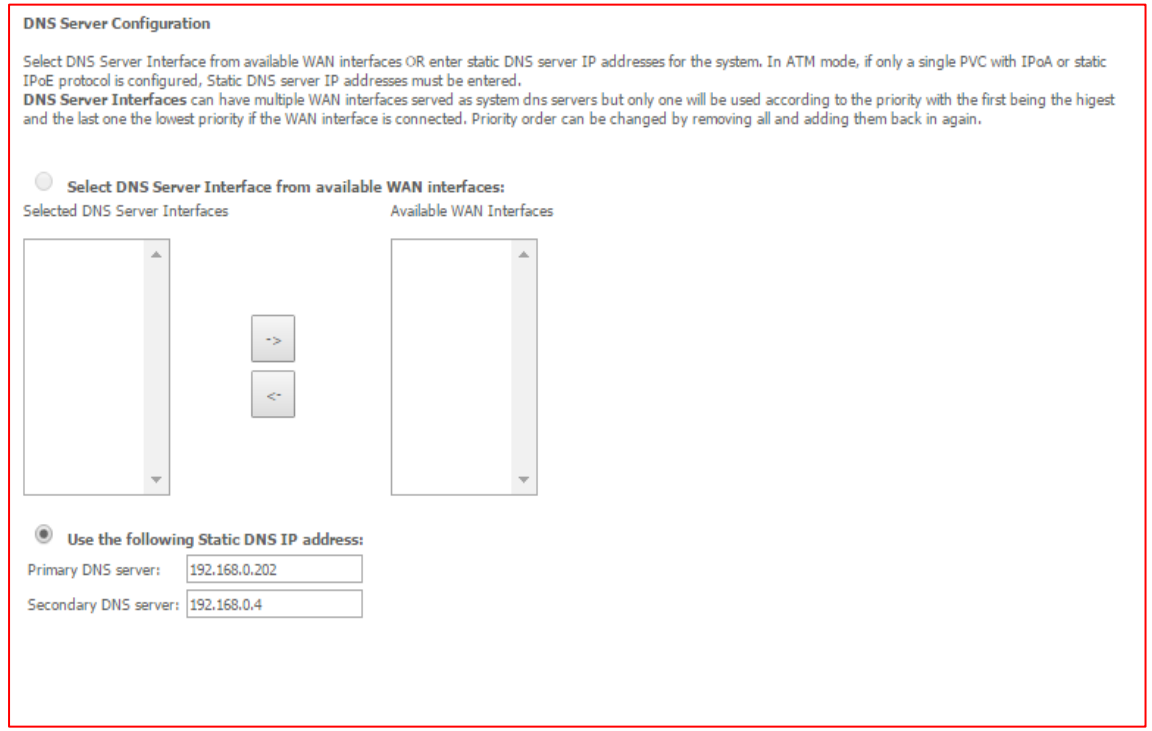
- Enable NAT and click next



ONT configuration for WIFI

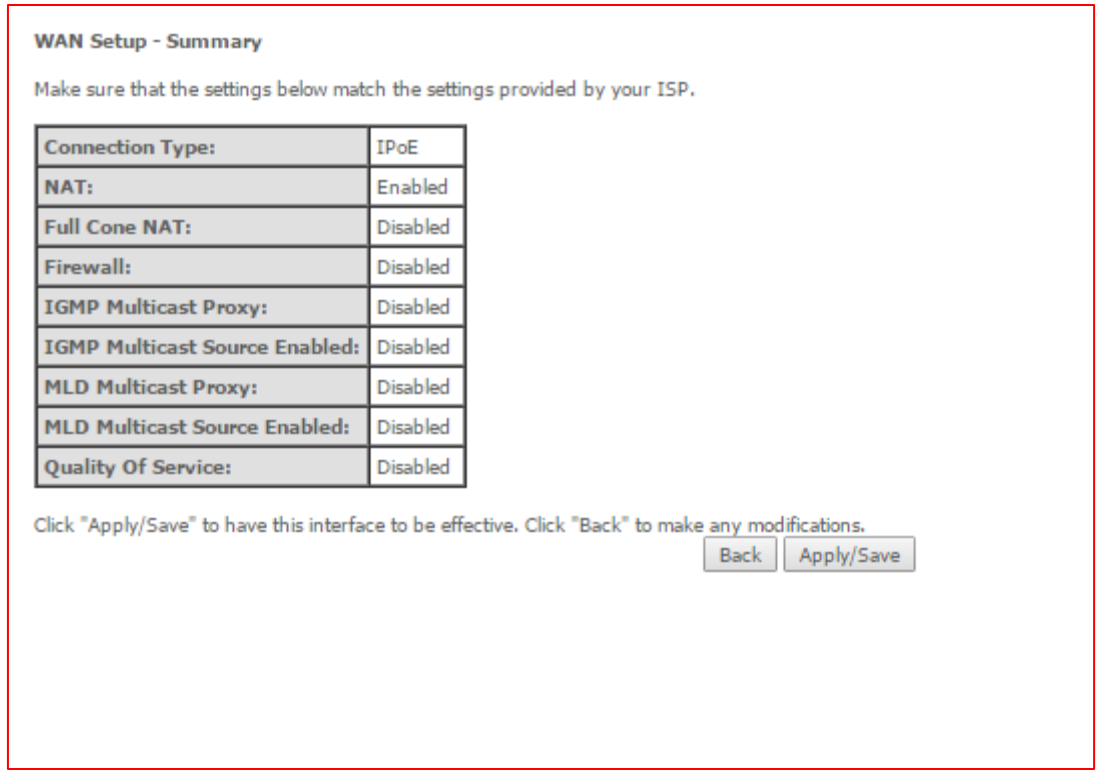
- Routing default gateway just click next

- Next we have to give the DNS Server IP (which is 192.168.0.202 and the secondary IP is 192.168.0.4 in our case) and click next

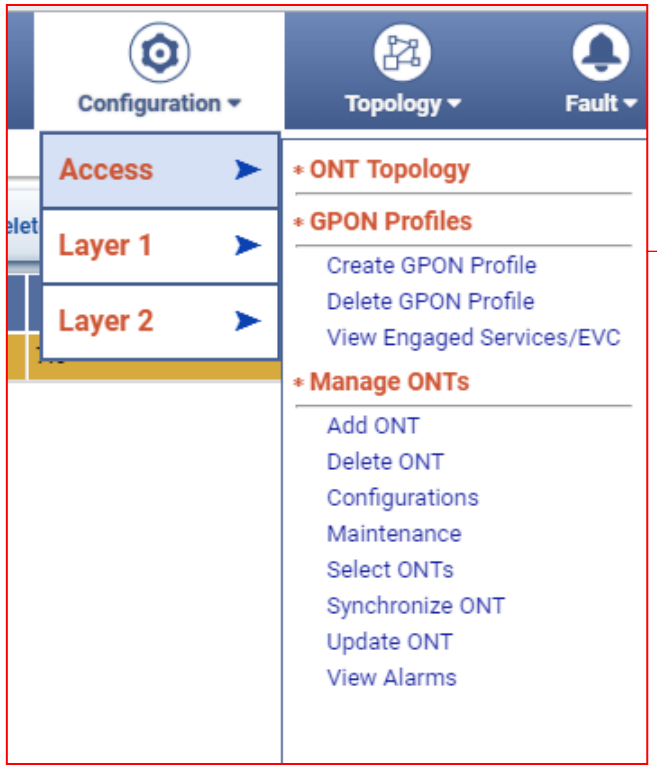


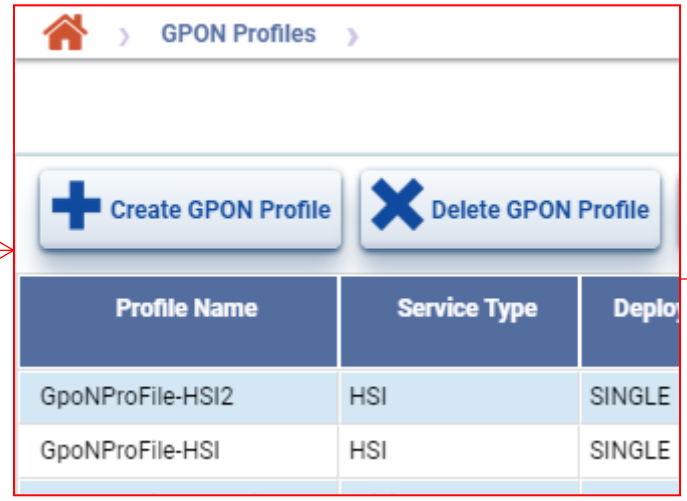
ONT configuration for WIFI

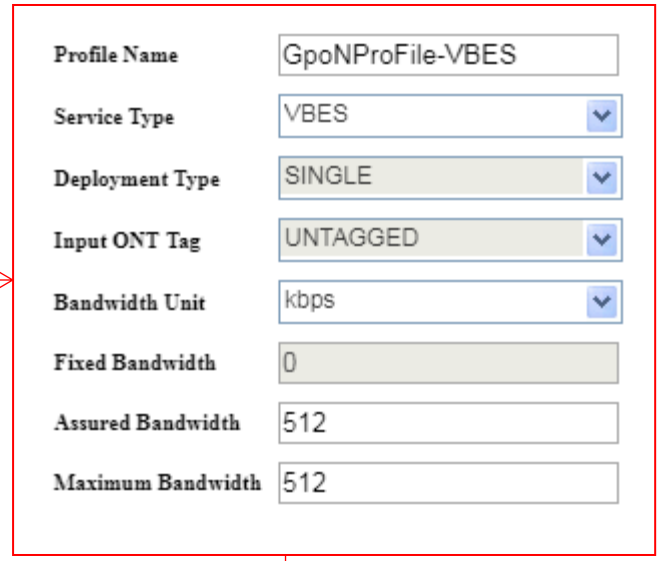
- Finally click apply and save. If all the configurations are correct then we will be able to access the internet with the help of this WiFi connection. Multiple devices can connect to the WiFi.

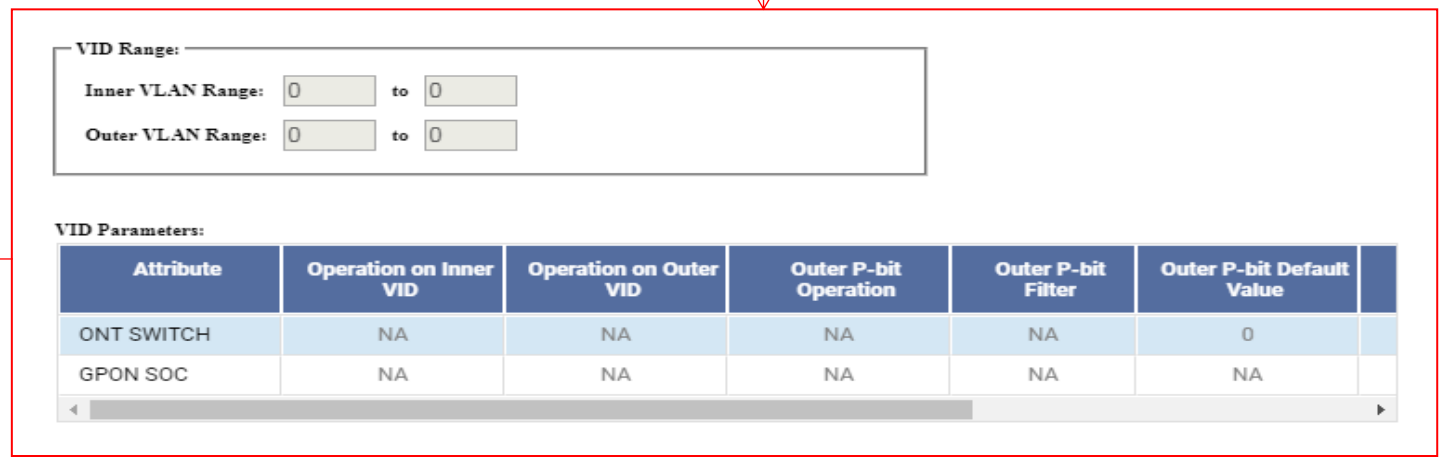


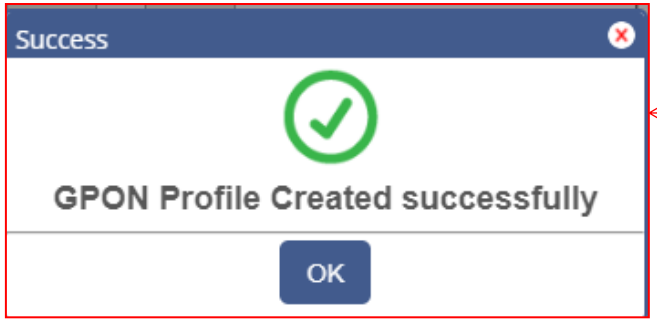
GPON Profile creation-VBES







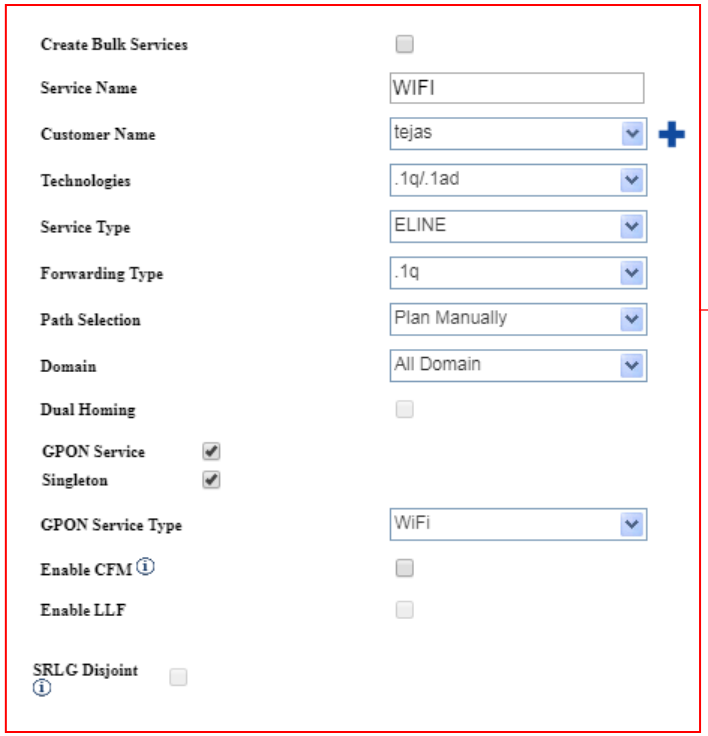


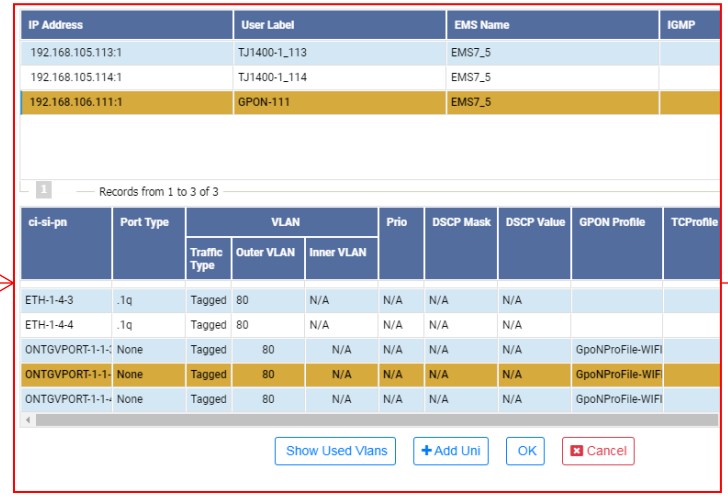


GPON Profile creation-VBES

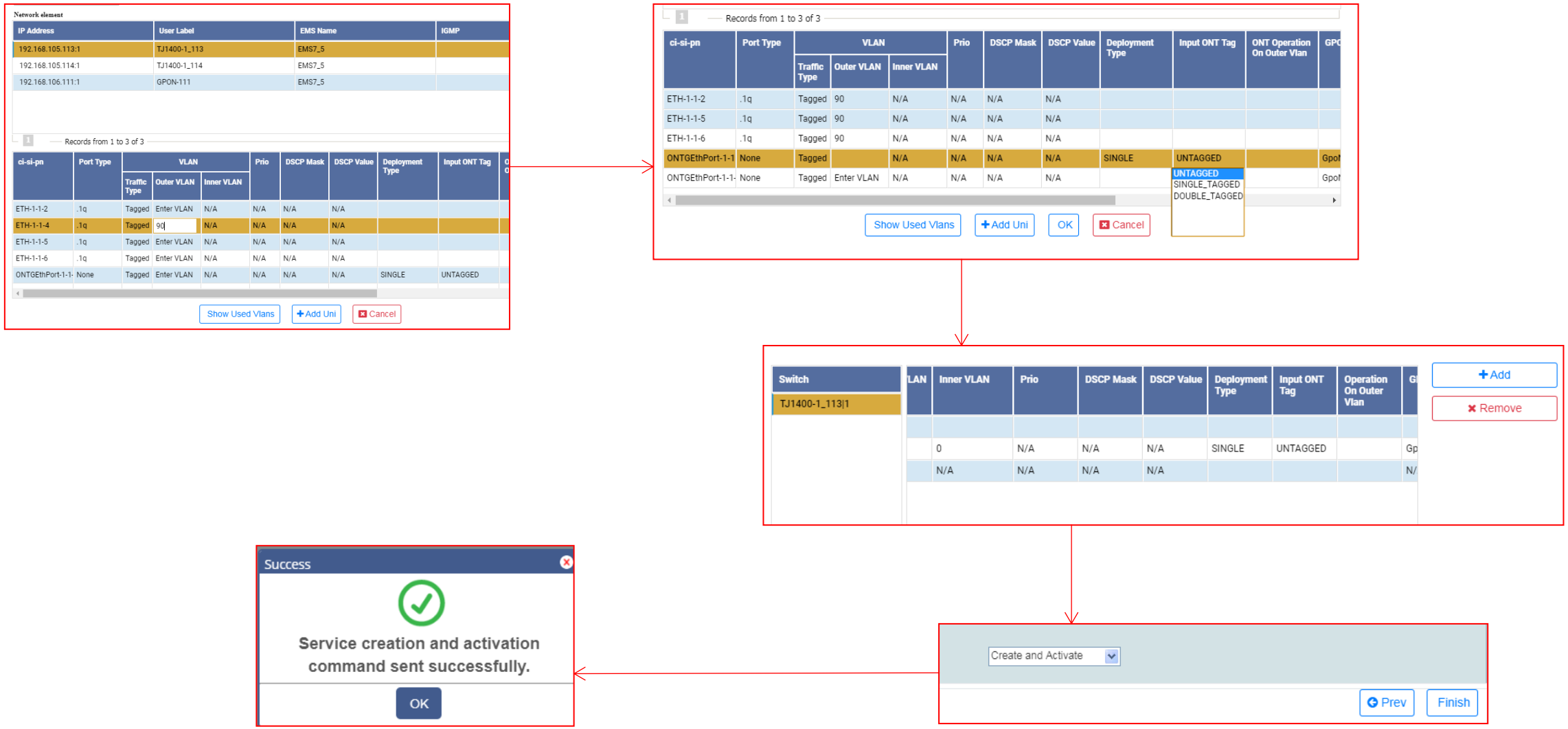
- Click on Configuration->Access>Create Gpon profile
- Fill in the name, service type, deployment type, input ONT tag and the bandwidth required.
  - Name-WIFI
  - Service type- WIFI
  - Deployment type –Single/Double
  - Input ONT tag- Untagged/Single tagged
  - Bandwidth- has to be multiple of 64
- Then click on next
- Unlike other service profile, for VBES the VLAN ID will be greyed out and we cannot select it while creating the service profile.
- A successfully created message with be shown.

Service creation-VBES





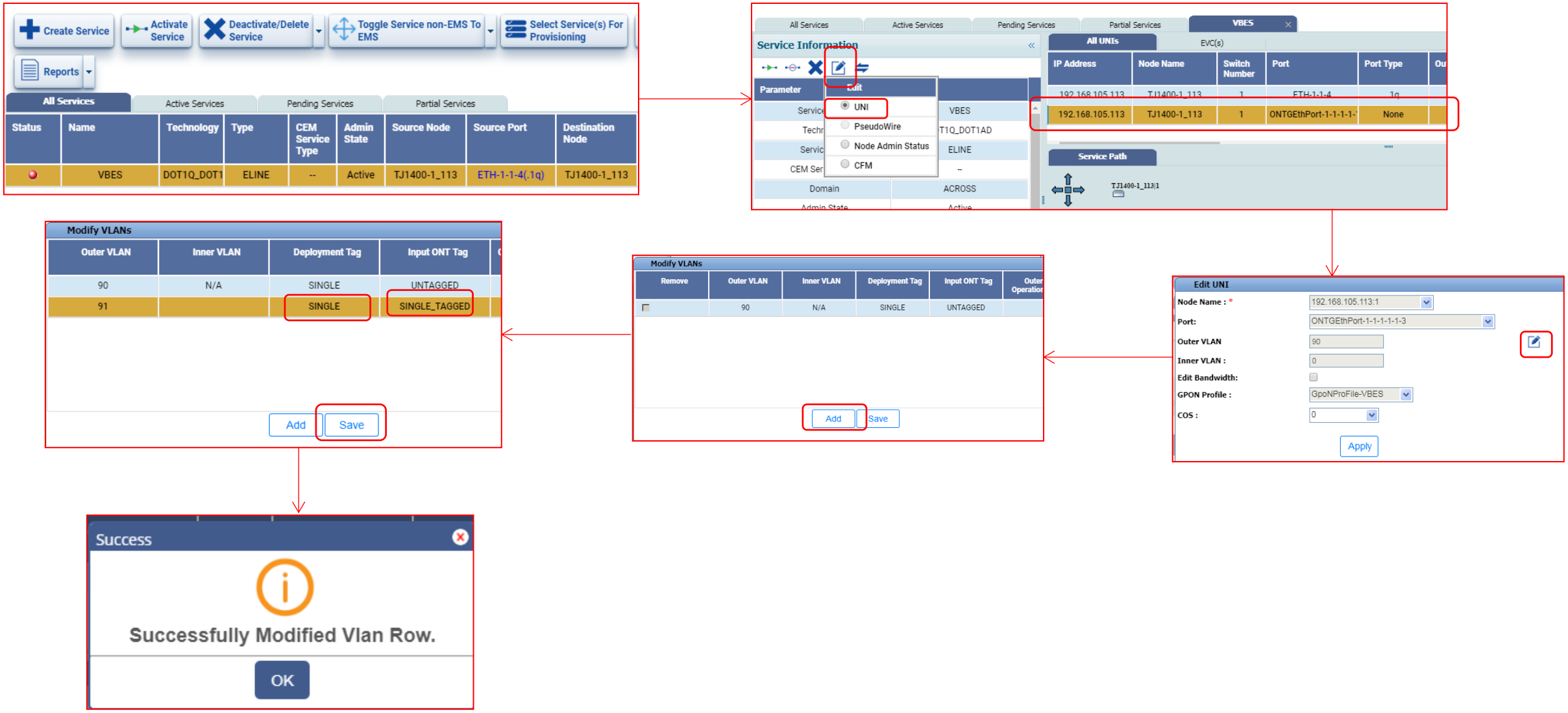
Service creation-VBES



Service creation-VBES

- Goto configuration->Layer 2->complete services
- Then click on create services and the fill in the details
  - Service name
  - Customer name
  - Technologies – has to be .1q/.1ad
  - Service type-eline or elan(depending on the requirement)
  - Forwarding type-.1q
  - Path selection- manually(if we want to select the path)or it can be automatically as well
  - Domain- All Domain (as it supports both QoS and non QoS nodes)
  - GPON check box should be ticked
  - GPON Service type- Select depending on the service we want (HSI, IPTV, VOIP, WIFI, VBES)
- Click on next and select the UNI ports.VBES supports a total of 12 VLANs out of which only one can have Input ONT Tag as Untagged
- In case of VBES the first VLAN given at the time of selecting the UNI ports. Then click on next and select "Create and Activate" and click on finish.
- Creation and activation successful message with pop up.

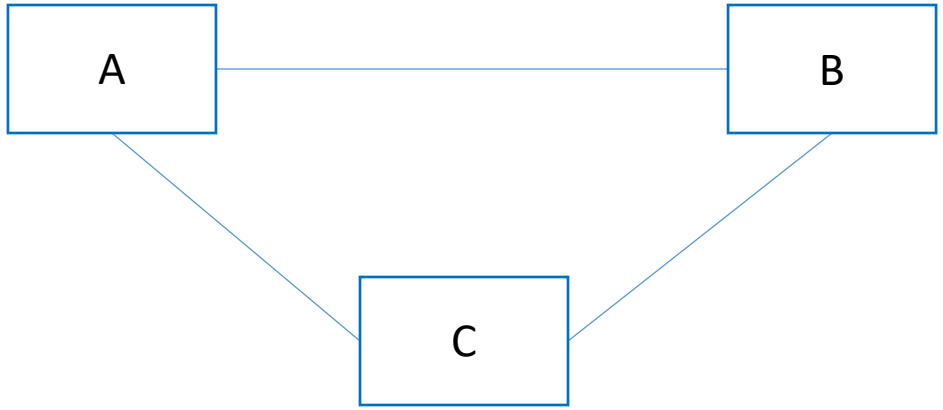
Addition of VLANs in VBES



Addition of VLANs in VBES

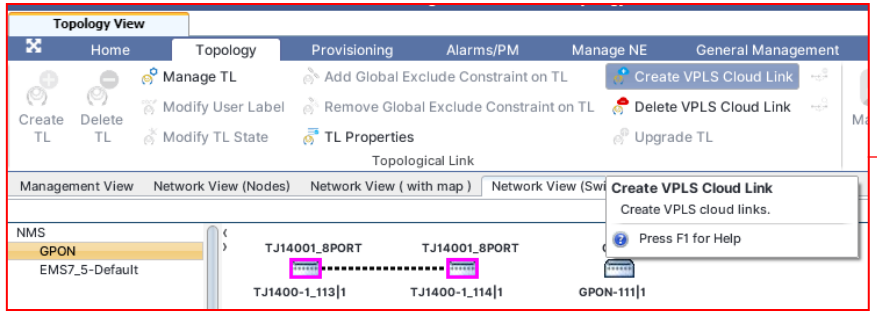
- After creation, the service will have only one VLAN.
- To add the rest of the VLANs on the same service
  - Select the service by double clicking on the service
  - Select the UNI port (ONT port) and click on edit icon and select uni
  - Click on the edit icon again and click on add
  - The option of adding a VLAN and changing the Deployment type and Input ONT tag will be available.
  - Ones done click on save and new VLAN is added
  - Such 12 VLANs can be added.

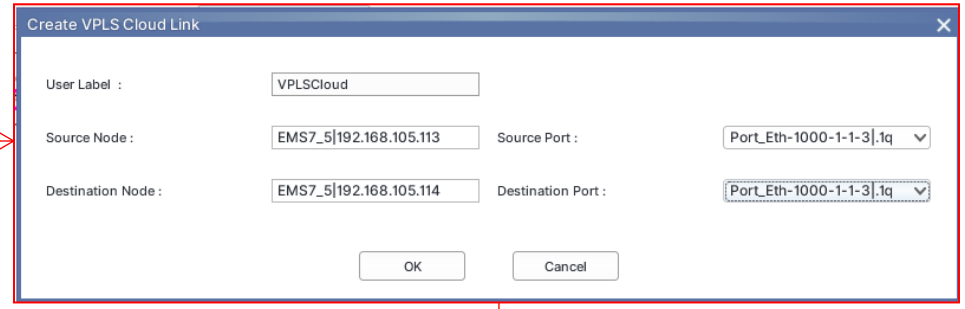
Open ERPS

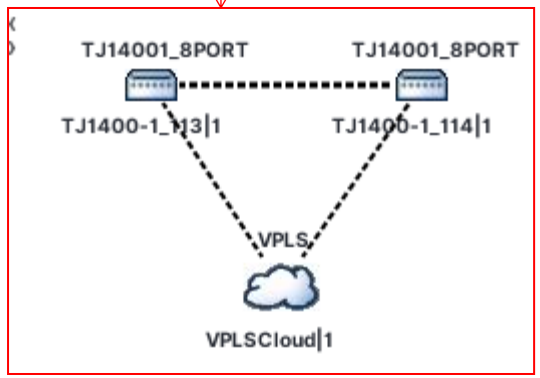


- Open ERPS is used when all the nodes in the ring does not support ERPS.
- In the above setup Node C does not support ERPS and Node A and Node B supports ERPS.
- Open ERPS is configured in node A and B.
- A service with the same vlan is created in node C.

Open ERPS

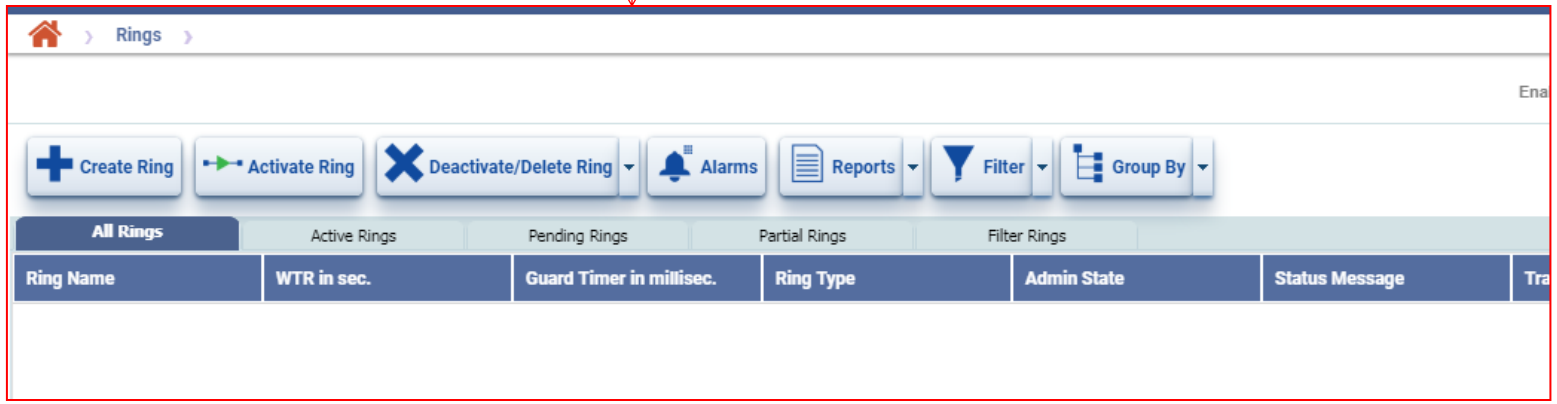




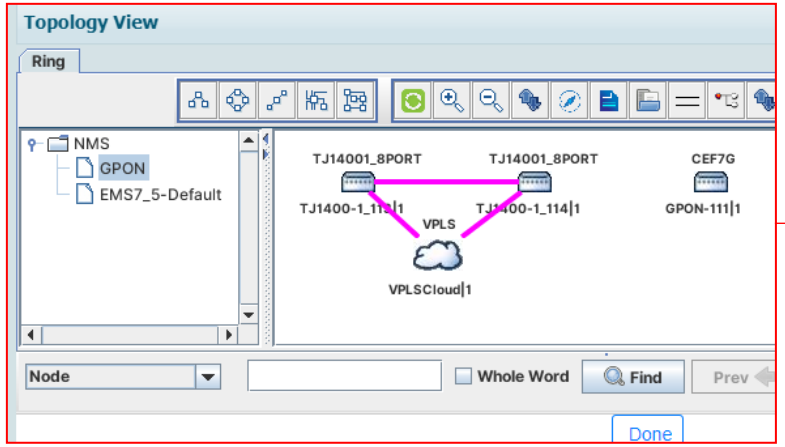


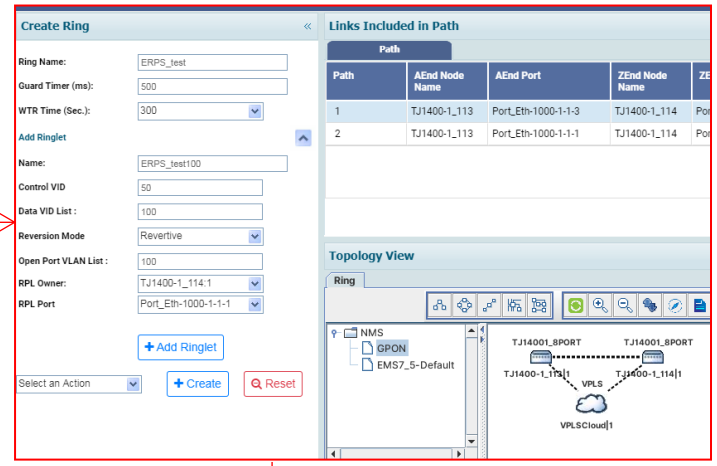
- First we have to create a VPLS cloud between the ERPS supporting nodes.
- Goto topology-> network switch view
- Select the two nodes and click on create VPLS cloud Link->fill in the port details to which the cloud is connected and click ok.

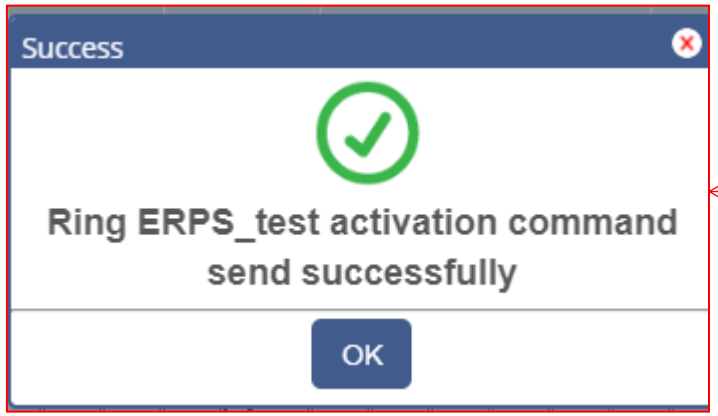
Open ERPS

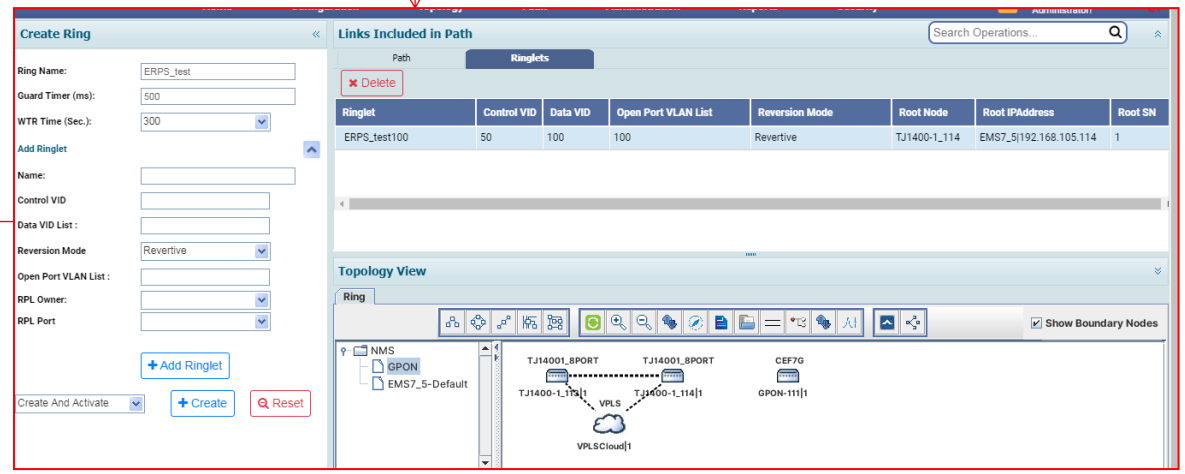


Open ERPS









Open ERPS

- After creating the VLSP cloud link goto configuration->layer 2->rings-> create ring
- Select the links in the topology view that appears and click on Done.
- The create ring page is shown. Fill in the details:
  - Ring Name- any name
  - In add Ringlet: Name- any name
  - Control VID-A VLAN for the R-APS packets
  - Data VID list- VLAN for the data
  - Revertive mode- revertive/unrevertive
  - Open port Van list- same as data VID list
  - RPL owner- the node whose port is to be blocked
  - RPL port- port to be blocked
- After filling in all the details click on ADD ringlet.
- Select create and activate on select action and click on create.

THANK YOU