iMaster NCE-FAN
GPON FTTB or FTTC IPTV Service Configuration

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Objectives

- Upon completion of this course, you will be able to:
  - Describe the GPON FTTB networking.
  - Describe the functions of profiles.
  - Outline the configuration flow
  - Complete FTTB IPTV service configuration tasks.

Contents

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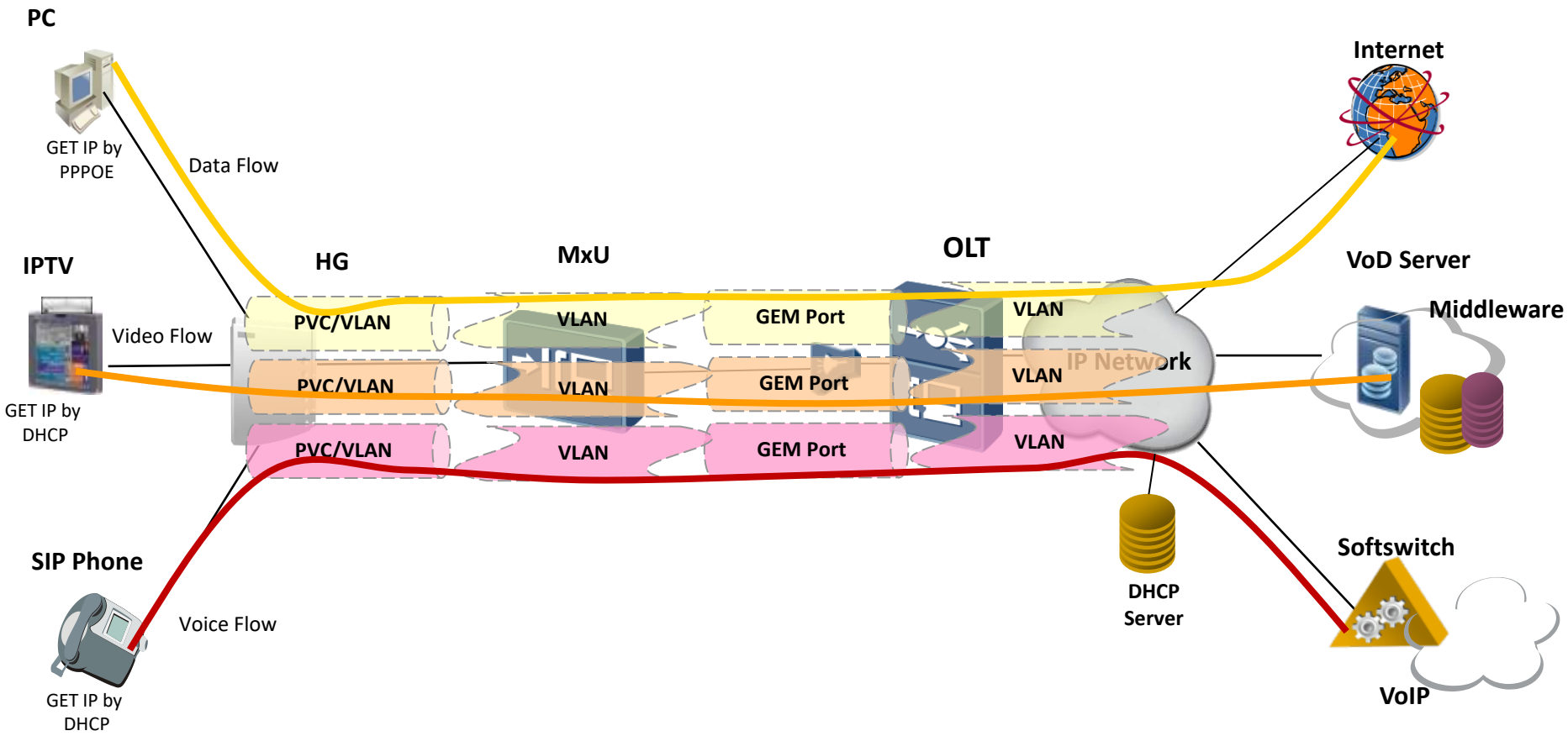
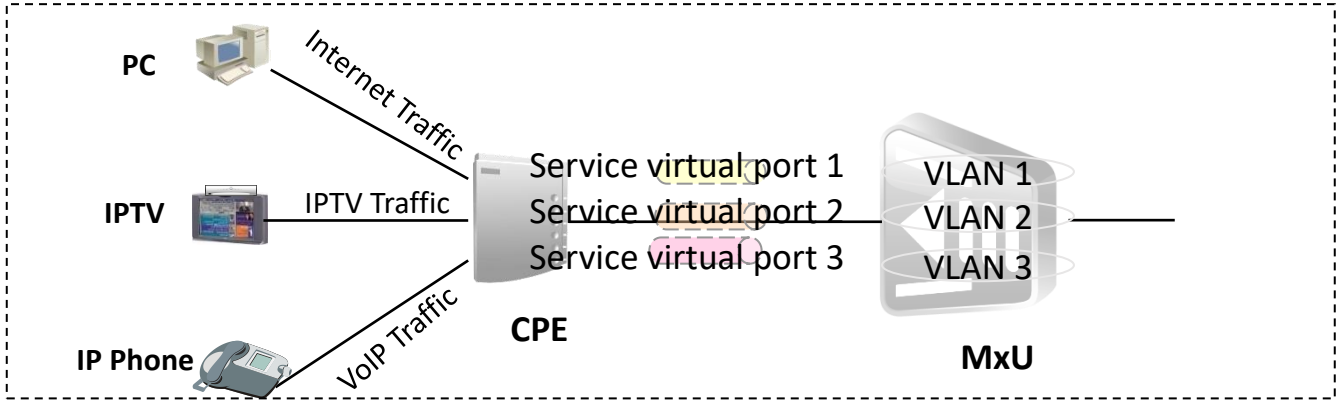
Service Mapping

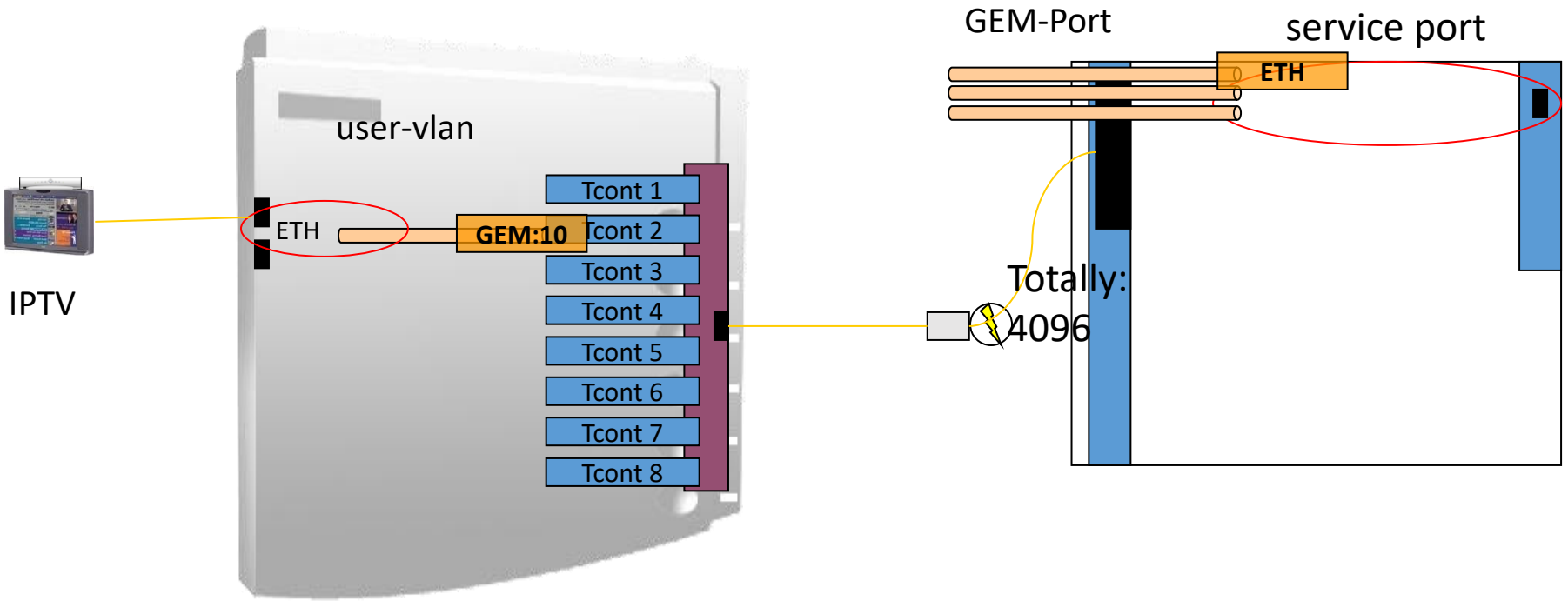


MxU VLANs and Ports

- Service VLAN
  - Service VLAN is used to mapping up play service network
  - Usually one service one VLAN
- Service virtual port
  - A virtual channel used to forward the user traffic from the user side
  - Used to classify the different services traffic and then mapping to the upstream VLAN



MxU and OLT Service Flow Principle



Necessary Profiles for ONUs

- DBA Profile

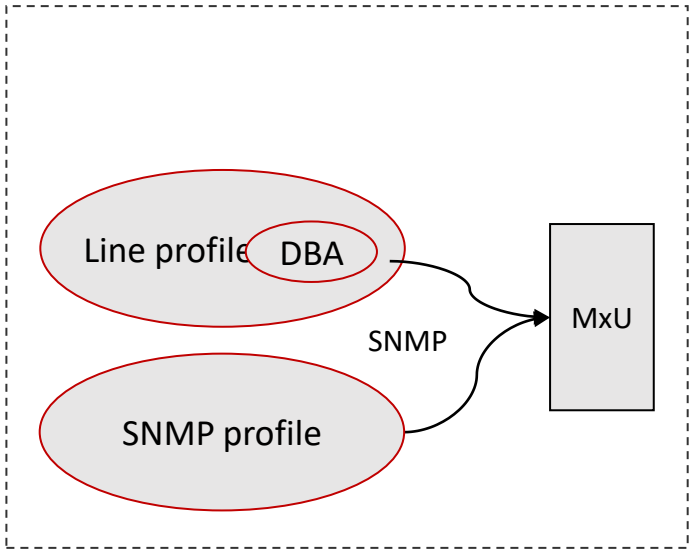
  A DBA profile defines the traffic parameters of GPON and can be bound to dynamically allocate the bandwidth and improve the usage of the upstream bandwidth.

- ONU line profile ont-line profile

  The GPON ONU line profile defines the DBA profile binding with the TCONT, GEM port ID and mapping between GEM port and VLAN.

- SNMP profile

  SNMP profile is used to set the SNMP parameters of an ONT that is in the SNMP management mode.



Necessary Profiles for ONUs

- Traffic Profile

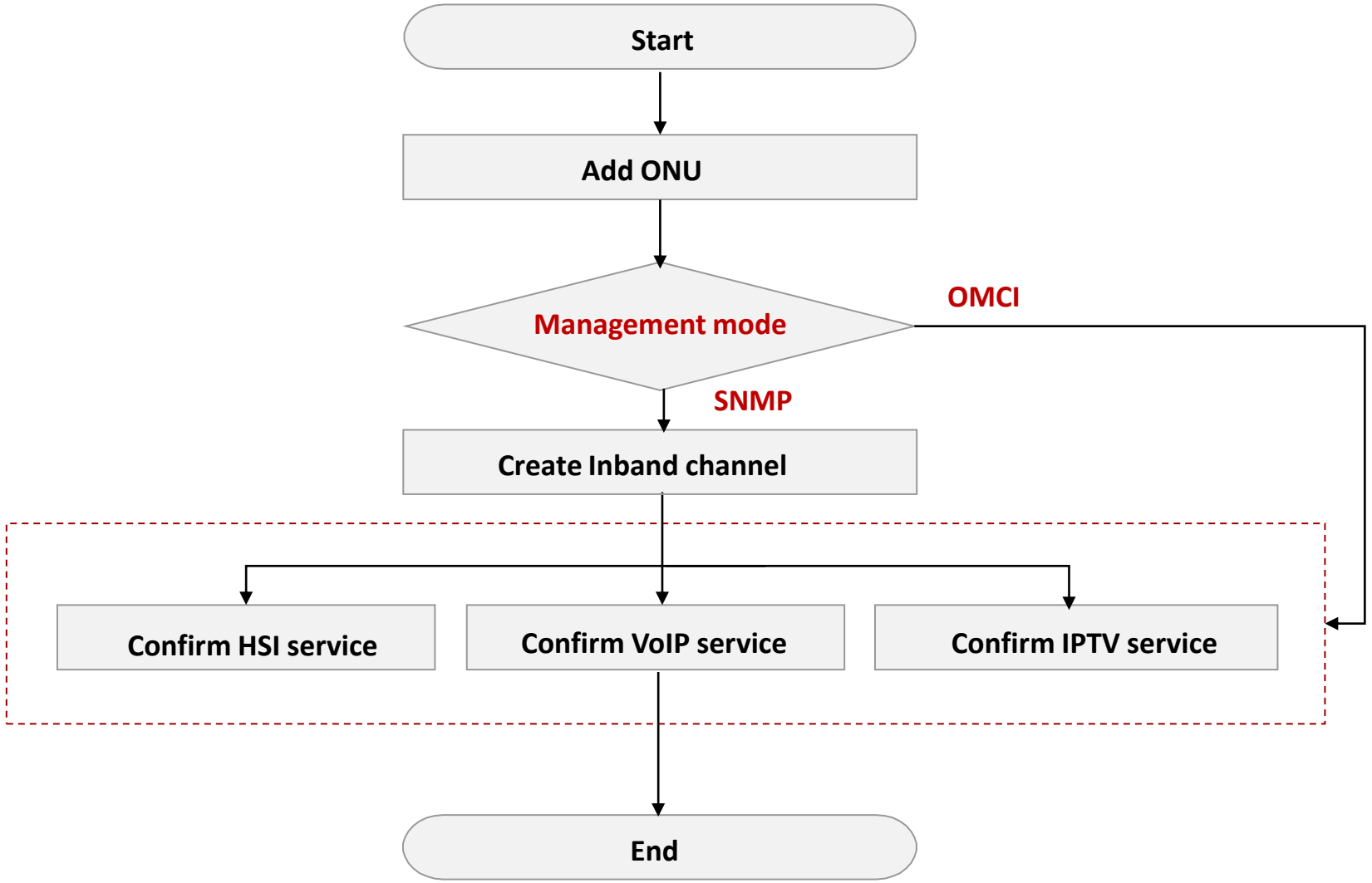
  An IP traffic profile is used to manage the traffic of the service port through the traffic parameters defined in the profile (PIR/CIR, Priority policies).

- IGMP Profile

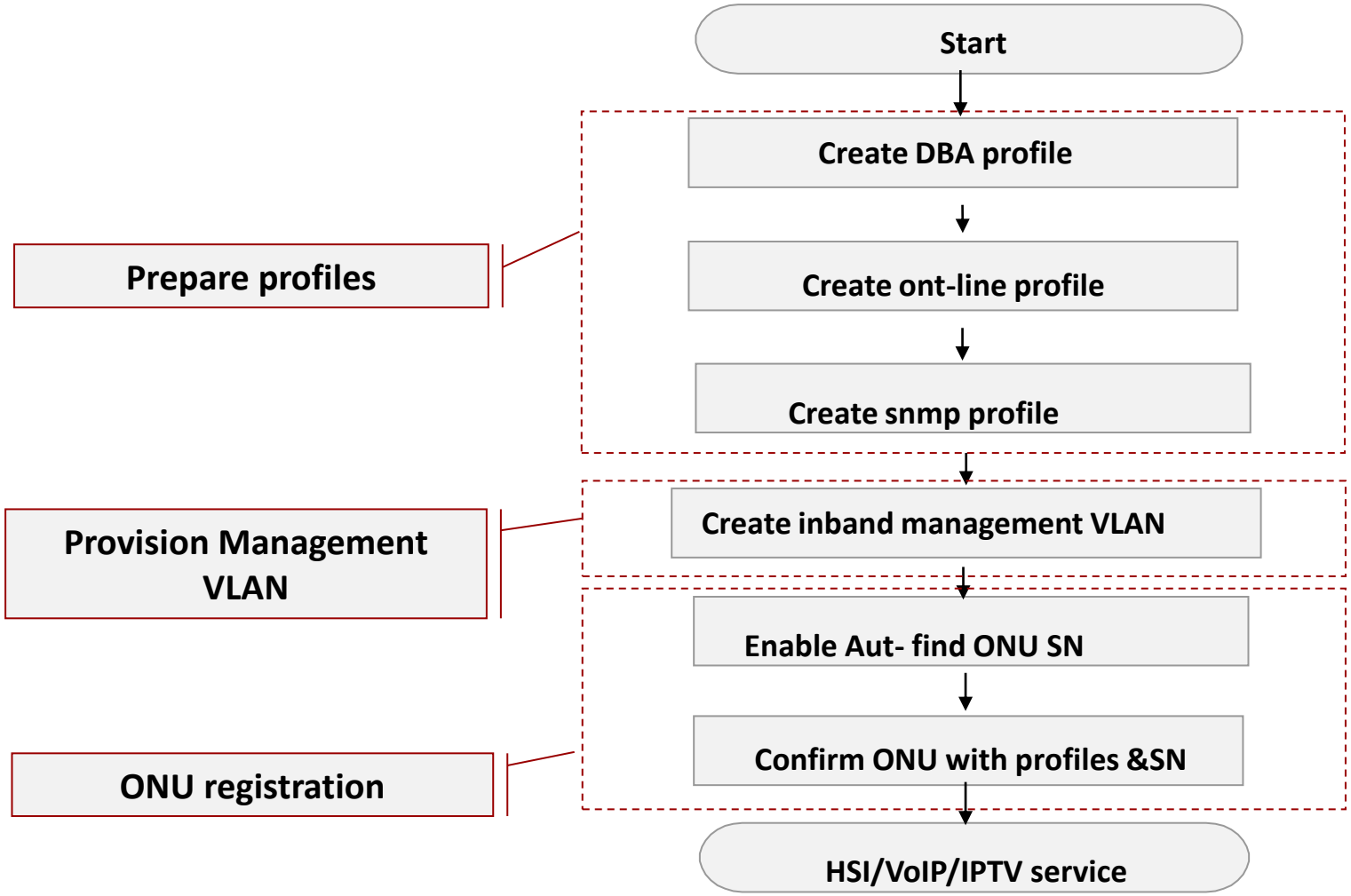
  Internet Group Management Protocol (IGMP) profile contains the parameters required for configuring the multicast service. The IGMP profiles of the NE include program profiles, rights profiles, and preview profiles program profiles and rights profiles.

Contents

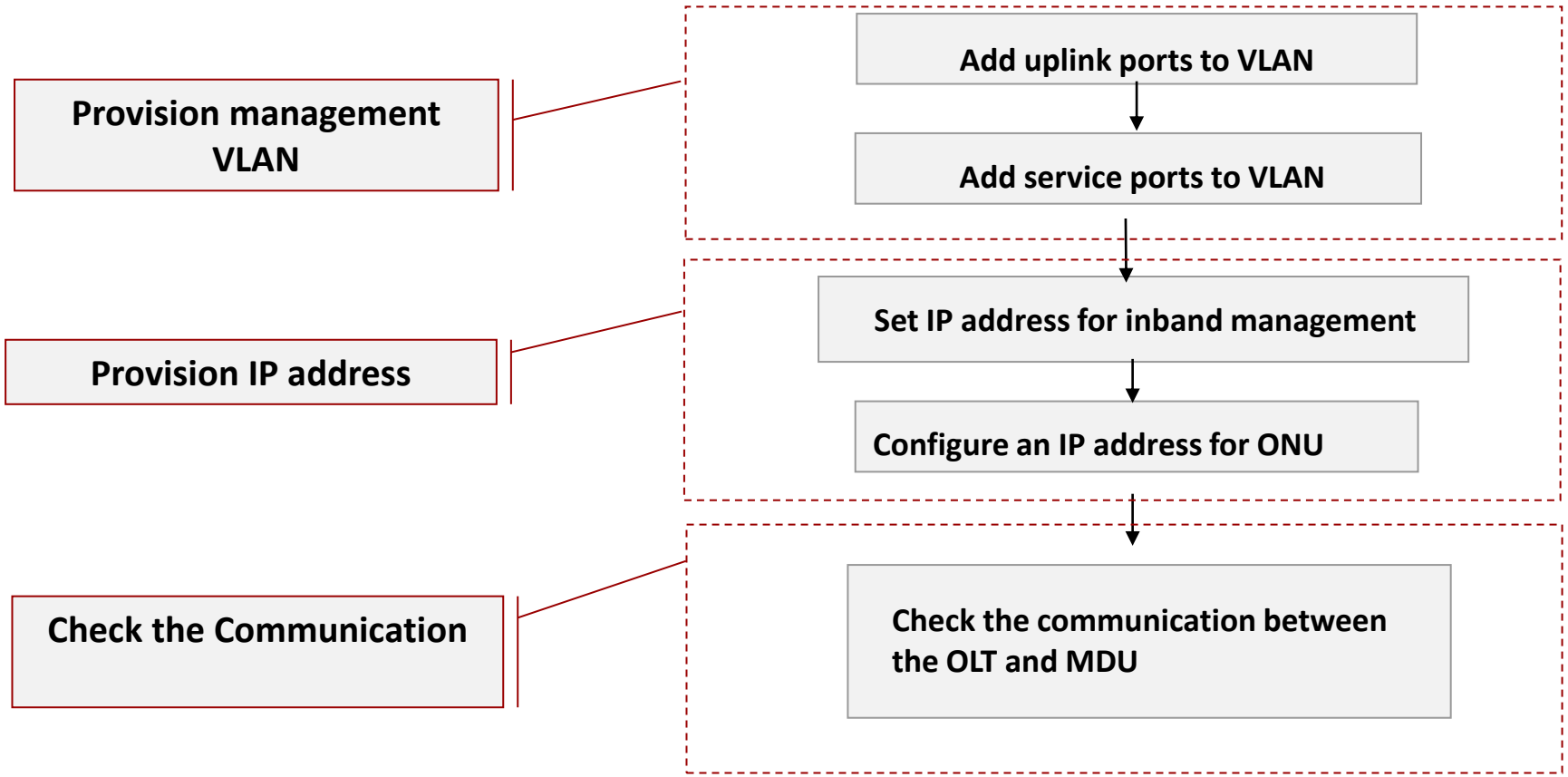
Full Configuration Flow



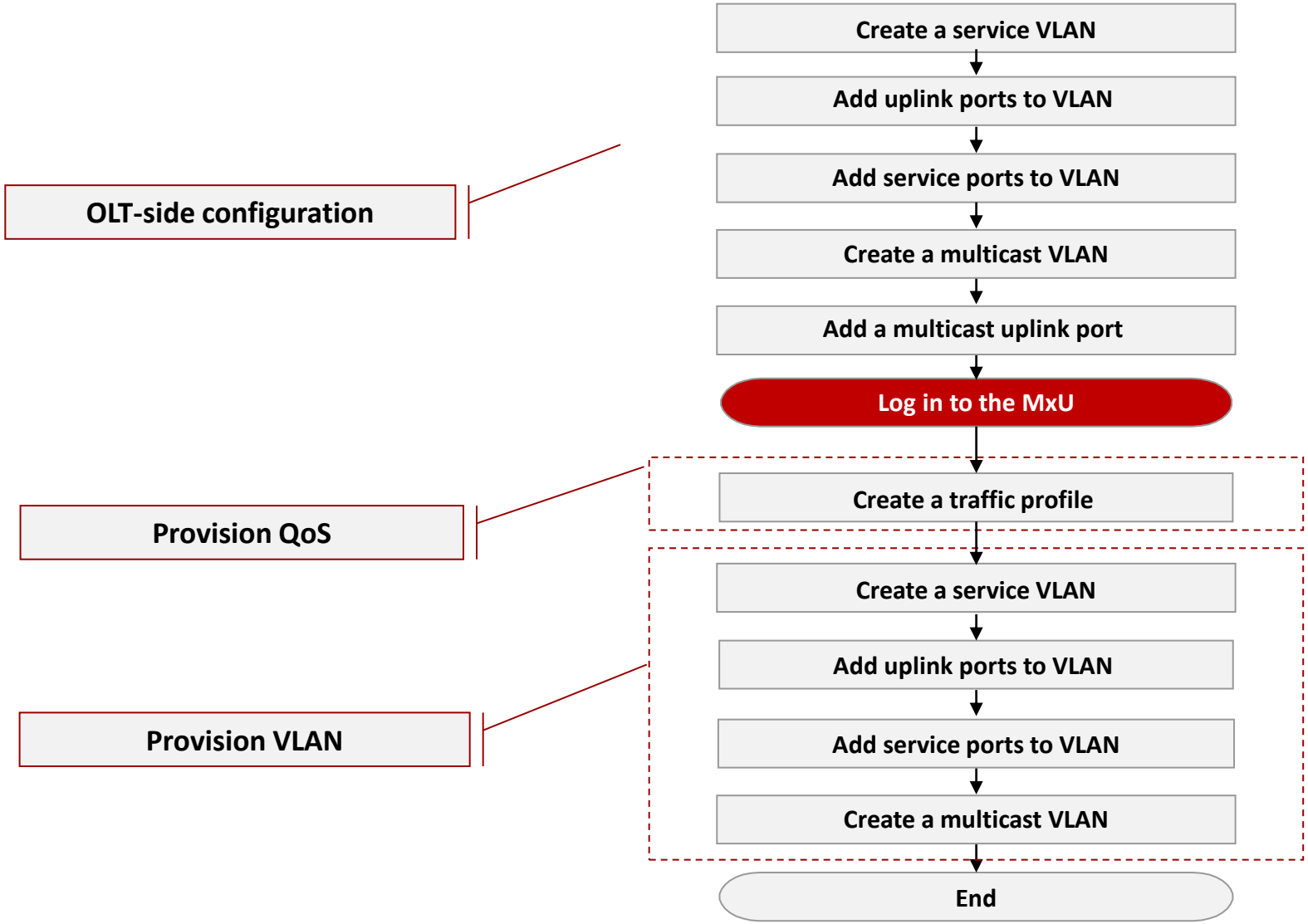
Flow Chart - Adding an ONU



Flow Chart - Configuring an Inband Management Channel

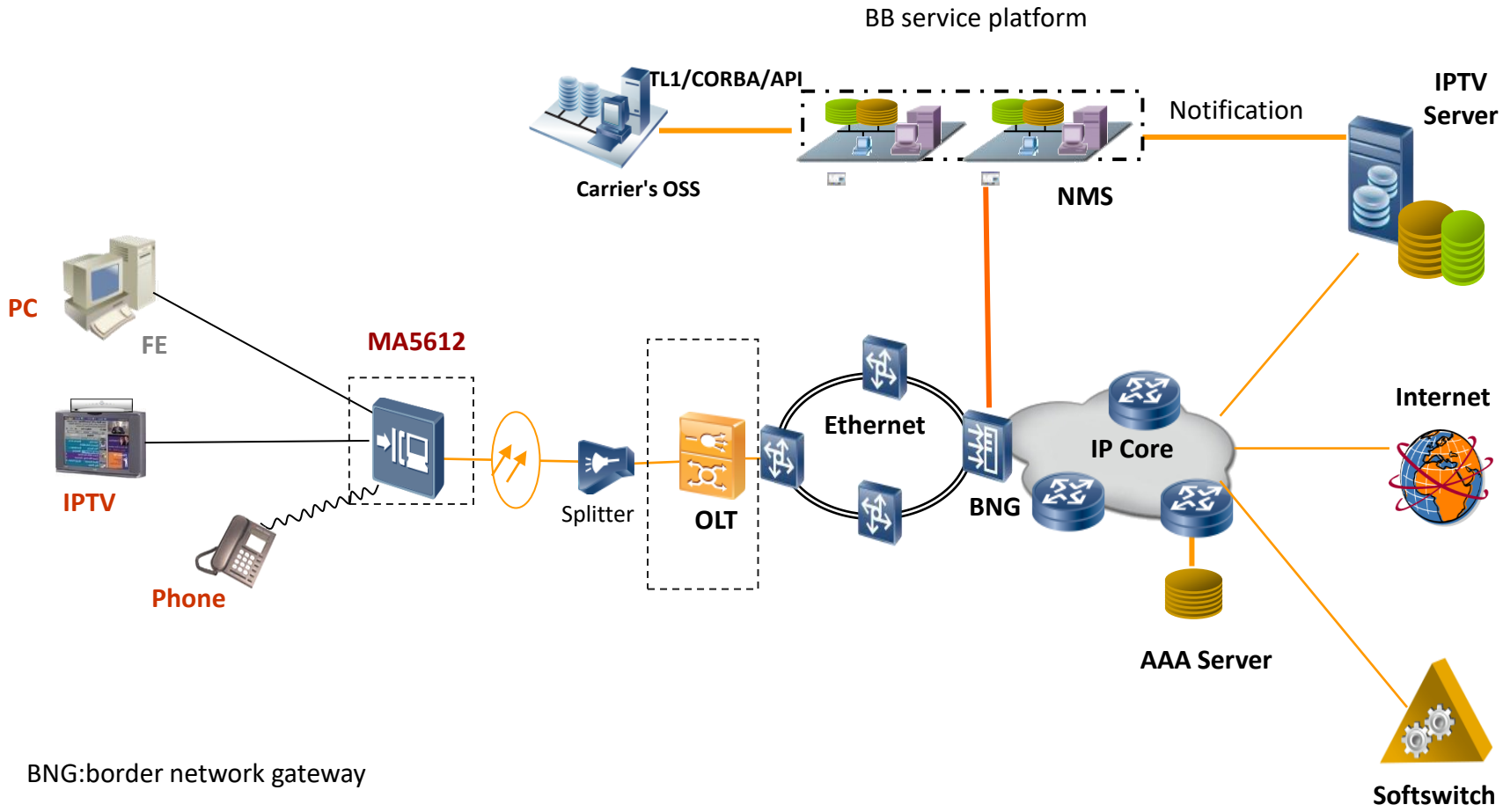


Flow Chart - Configuring an IPTV Service



Contents

GPON FTTB Network

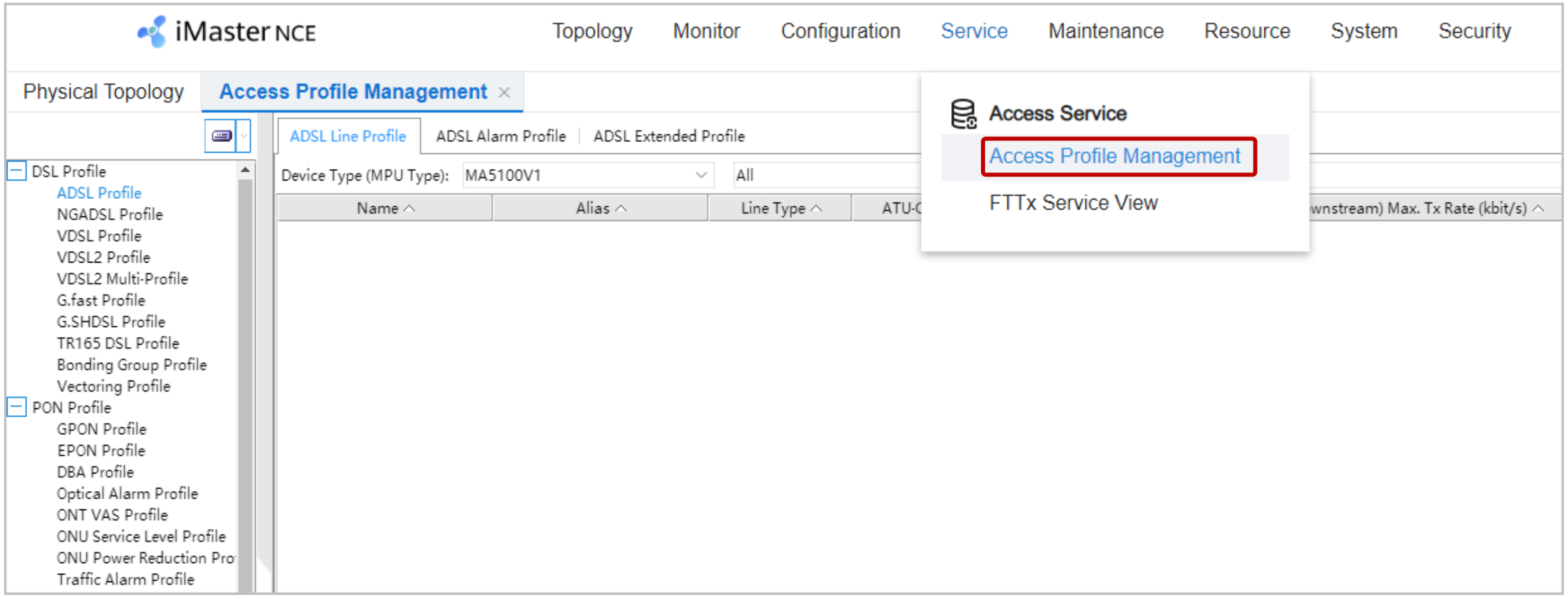


BNG:border network gateway

GPON FTTB Case Data Plan

Type	MxU port	C-VLAN	GEM	DBA	T-CONT	Traffic table	S-VLAN	OLT port
IPTV	LINE:0/4/0	1000	1	60M-60M	1	20M/20M	Common 1000	GPON: 0/18/0 Unlink: 0/9/0
EMS	-	4000	0	default	0	Not limited	4000	

Creating GPON Profiles



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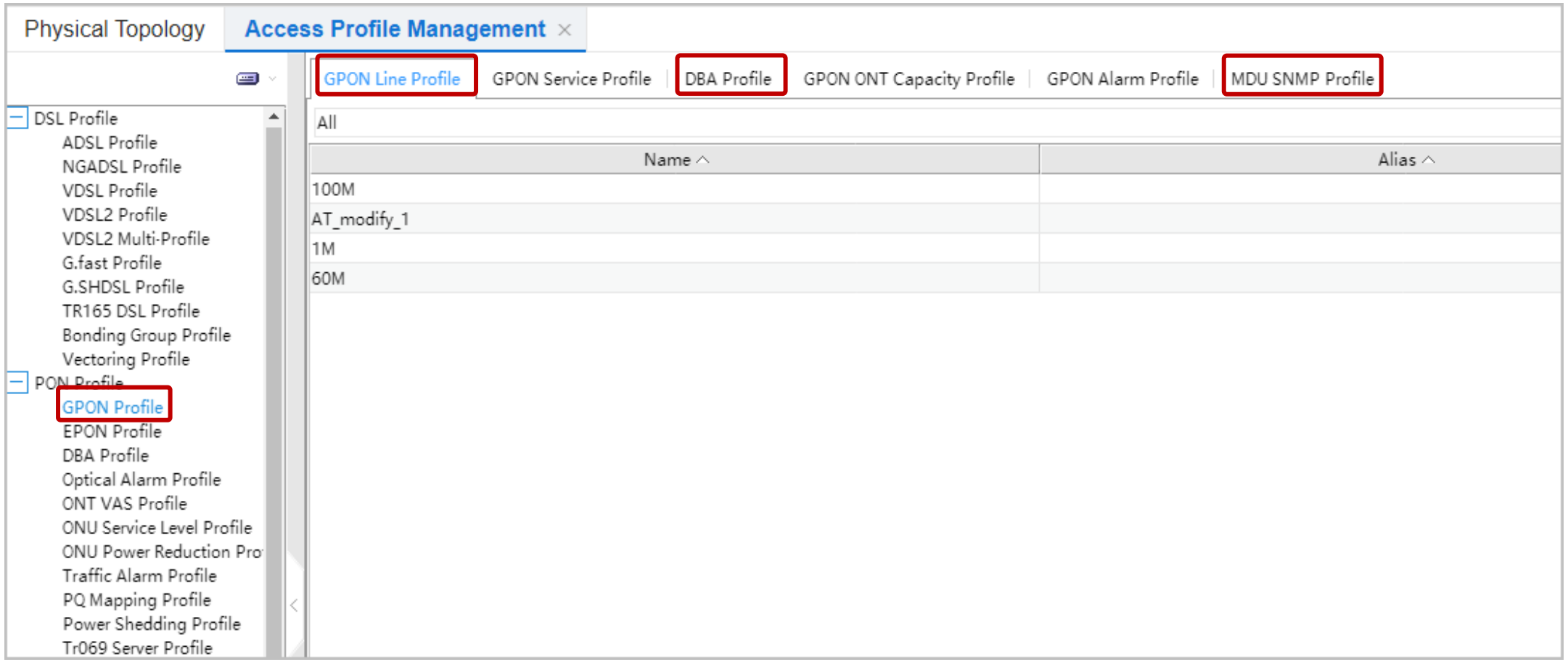
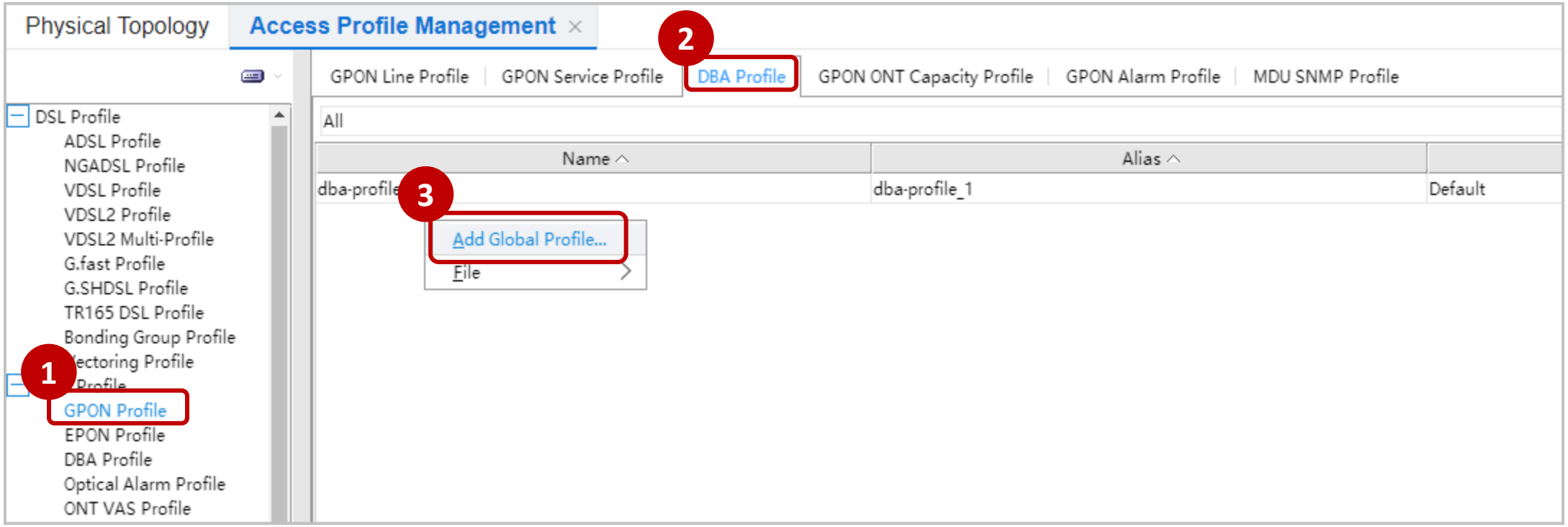


Adding a DBA Profile



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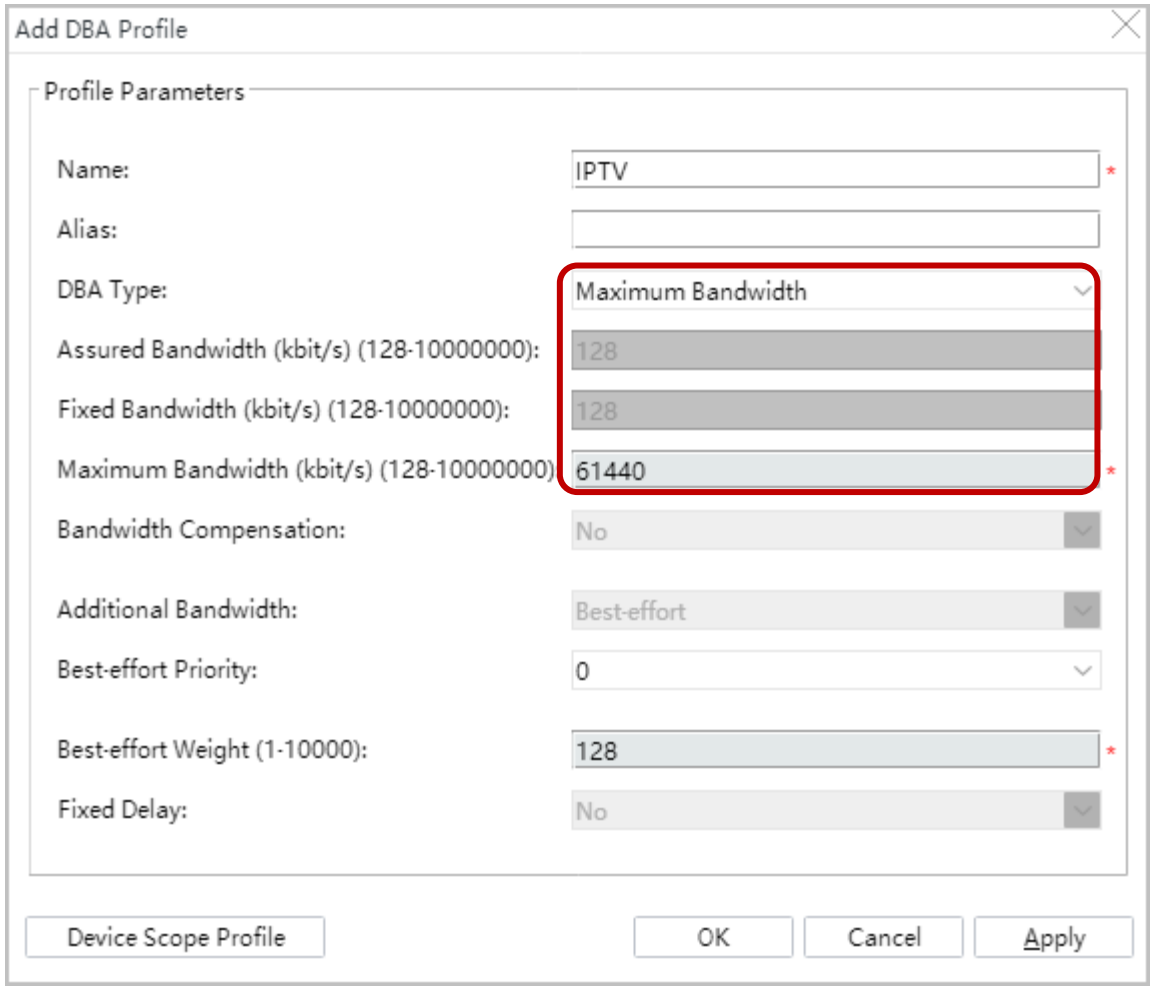
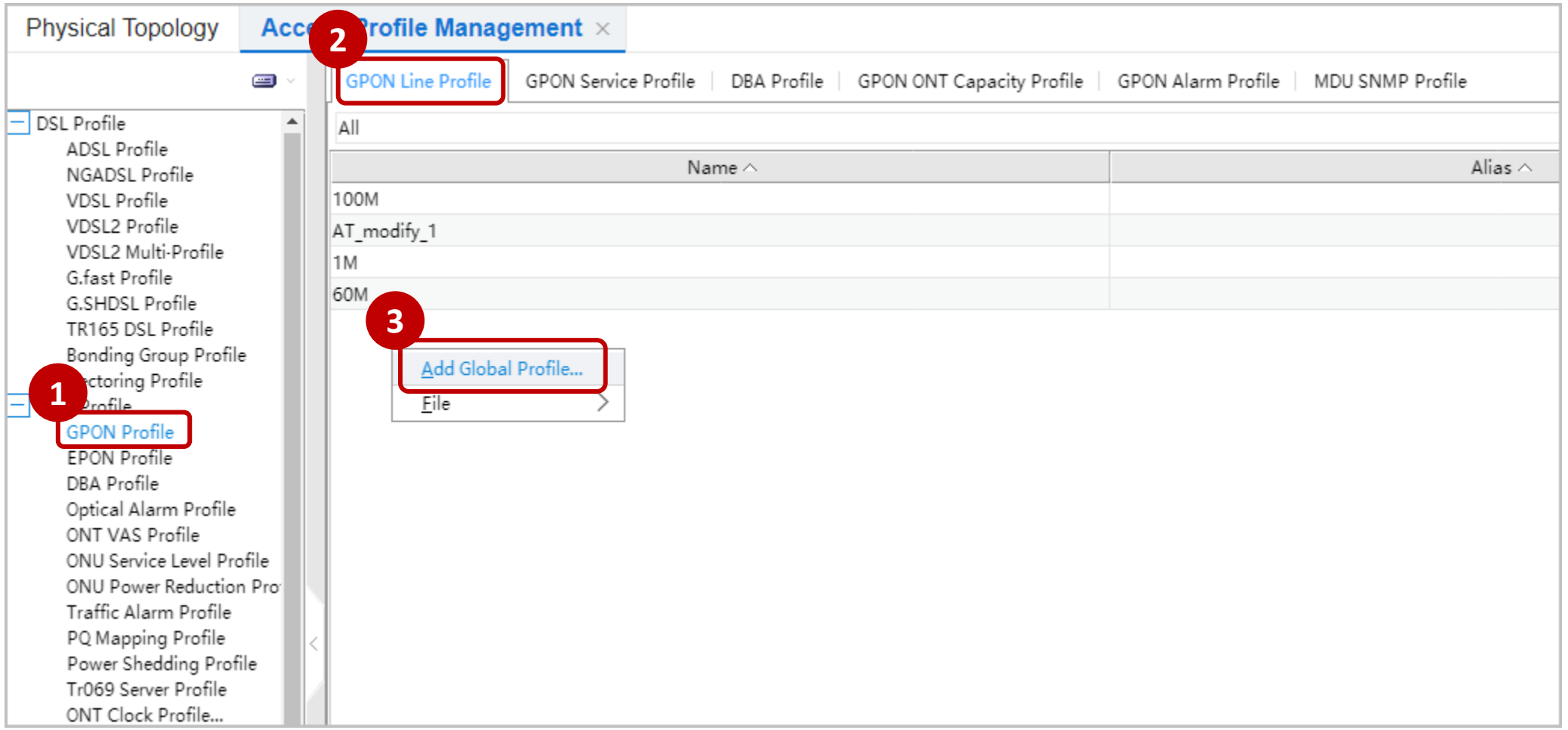
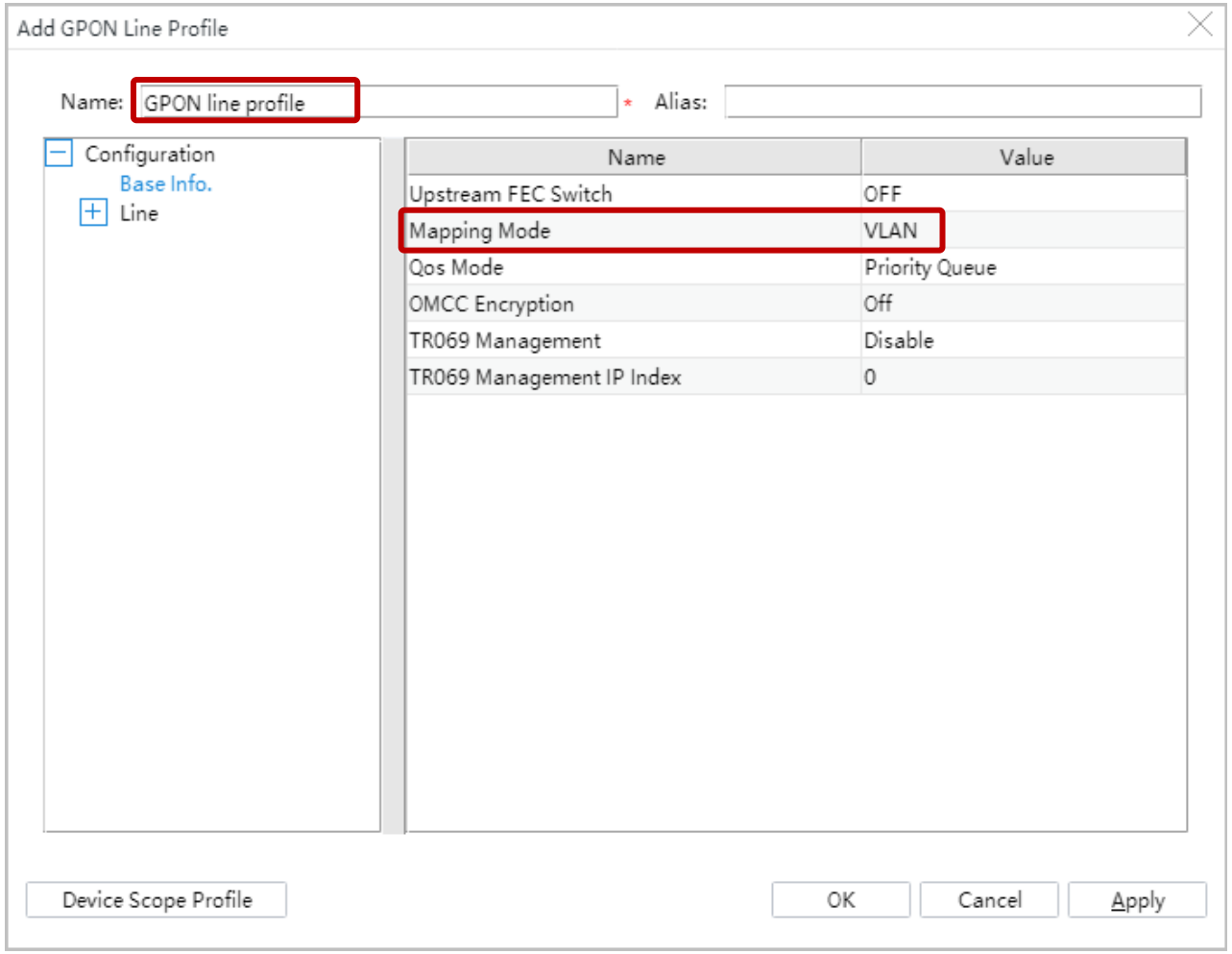


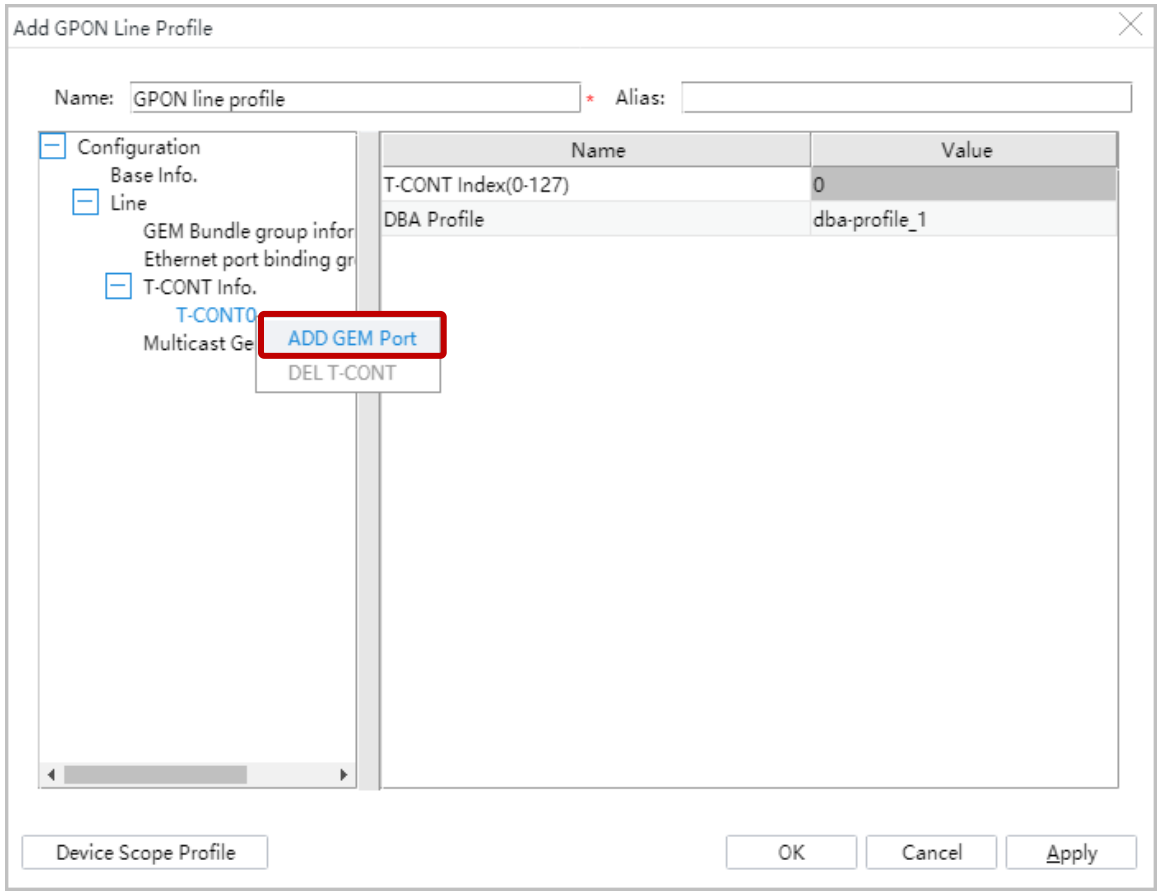
Adding a GPON Line Profile



Setting a Mapping Mode



Adding a GEM Port for a Management Channel



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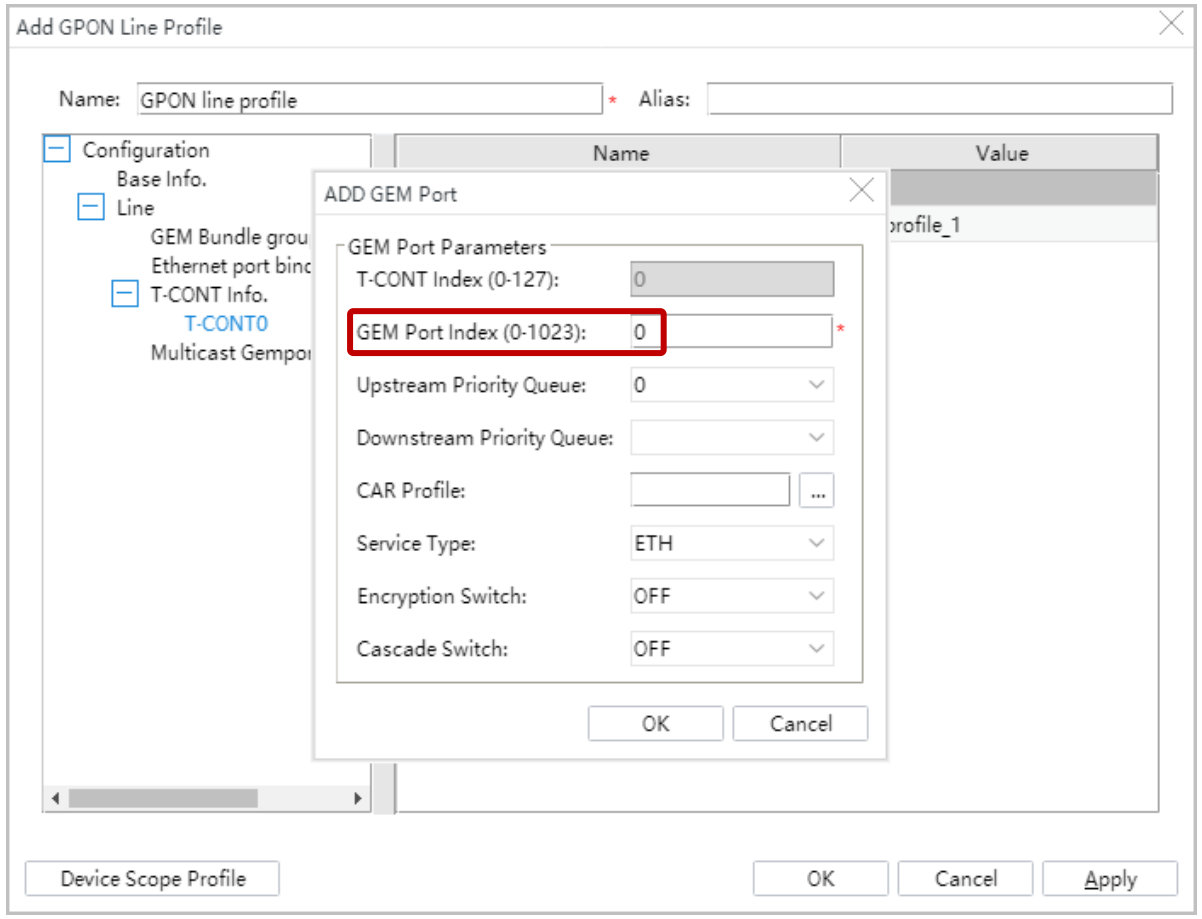
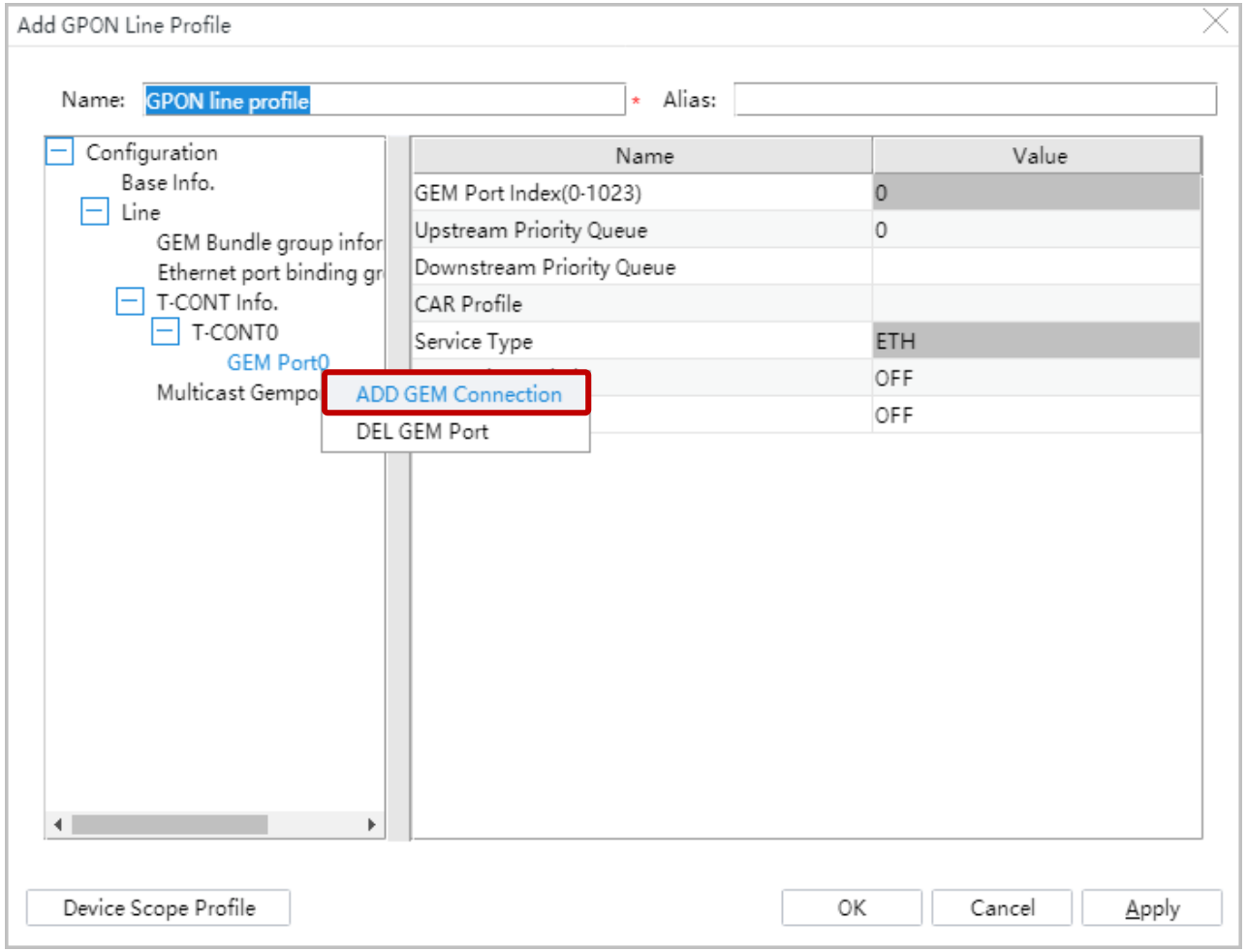


Adding a GEM Connection for a Management Channel



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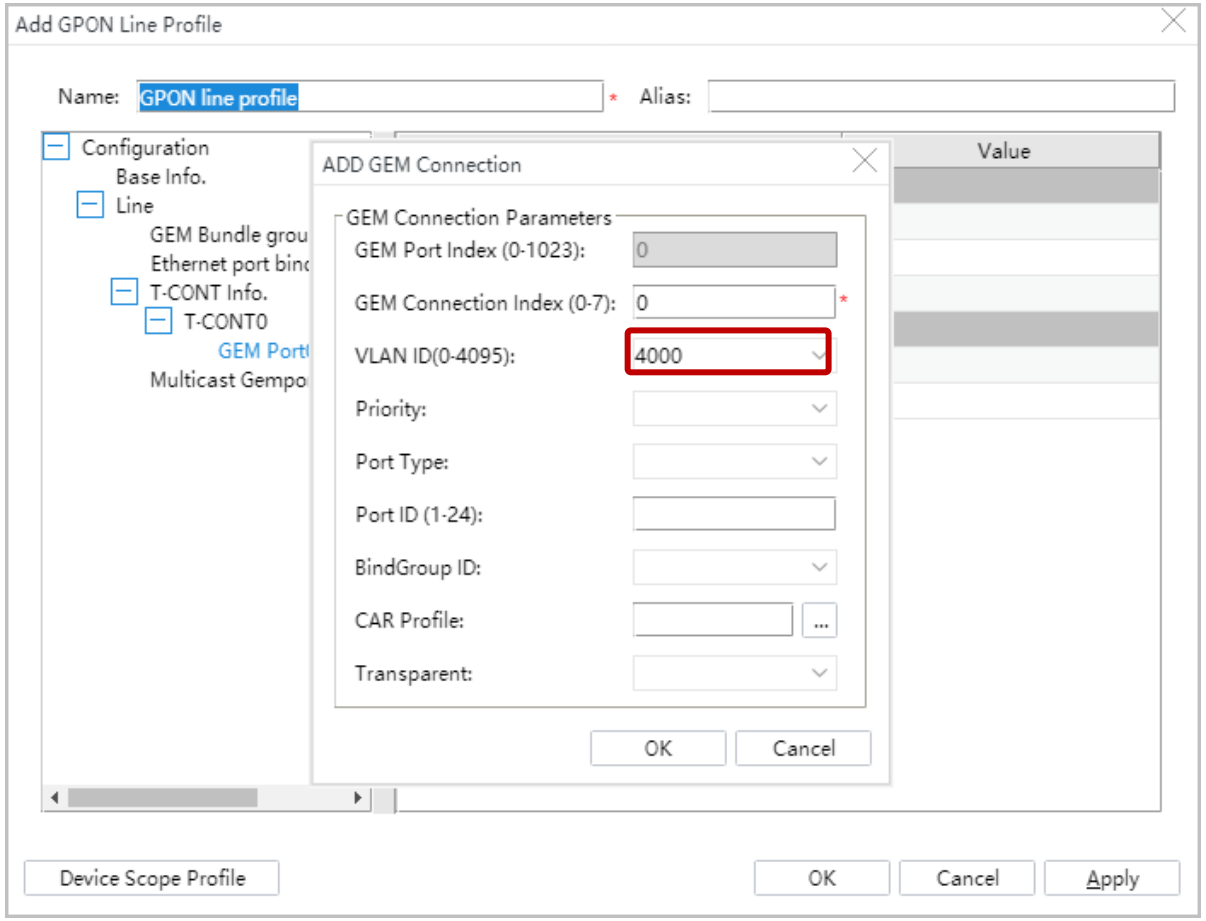
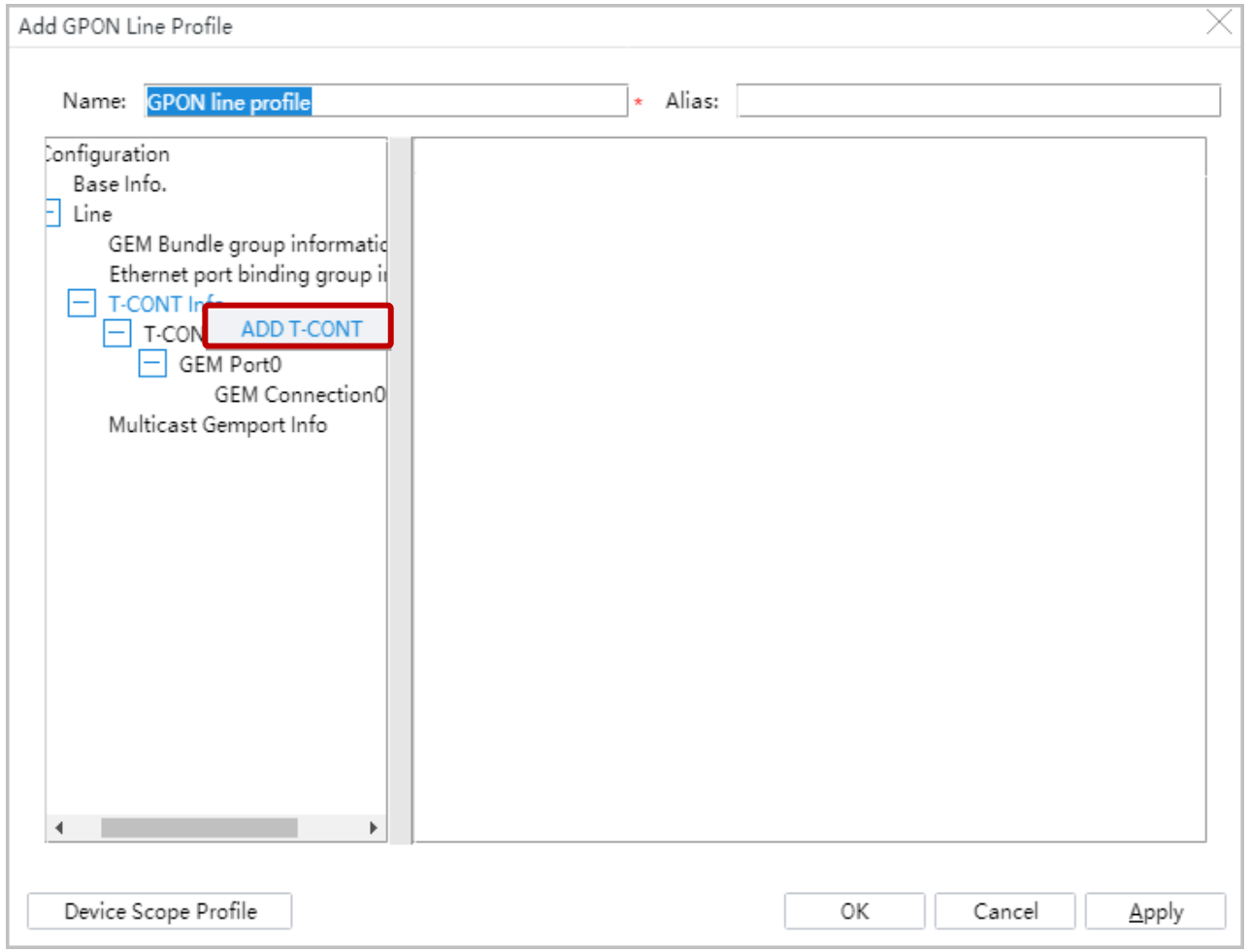


Adding a T-CONT for a Service



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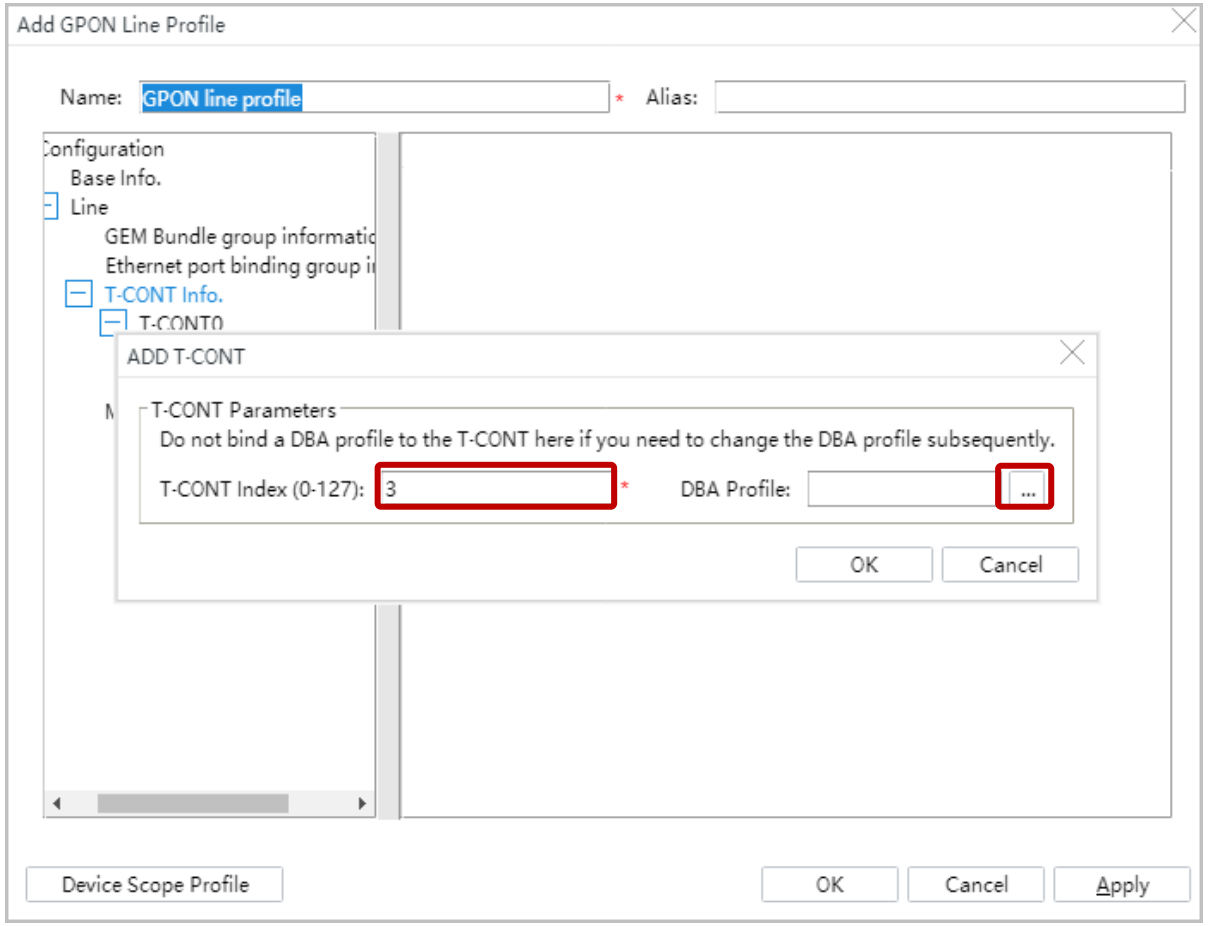
Binding a DBA Profile



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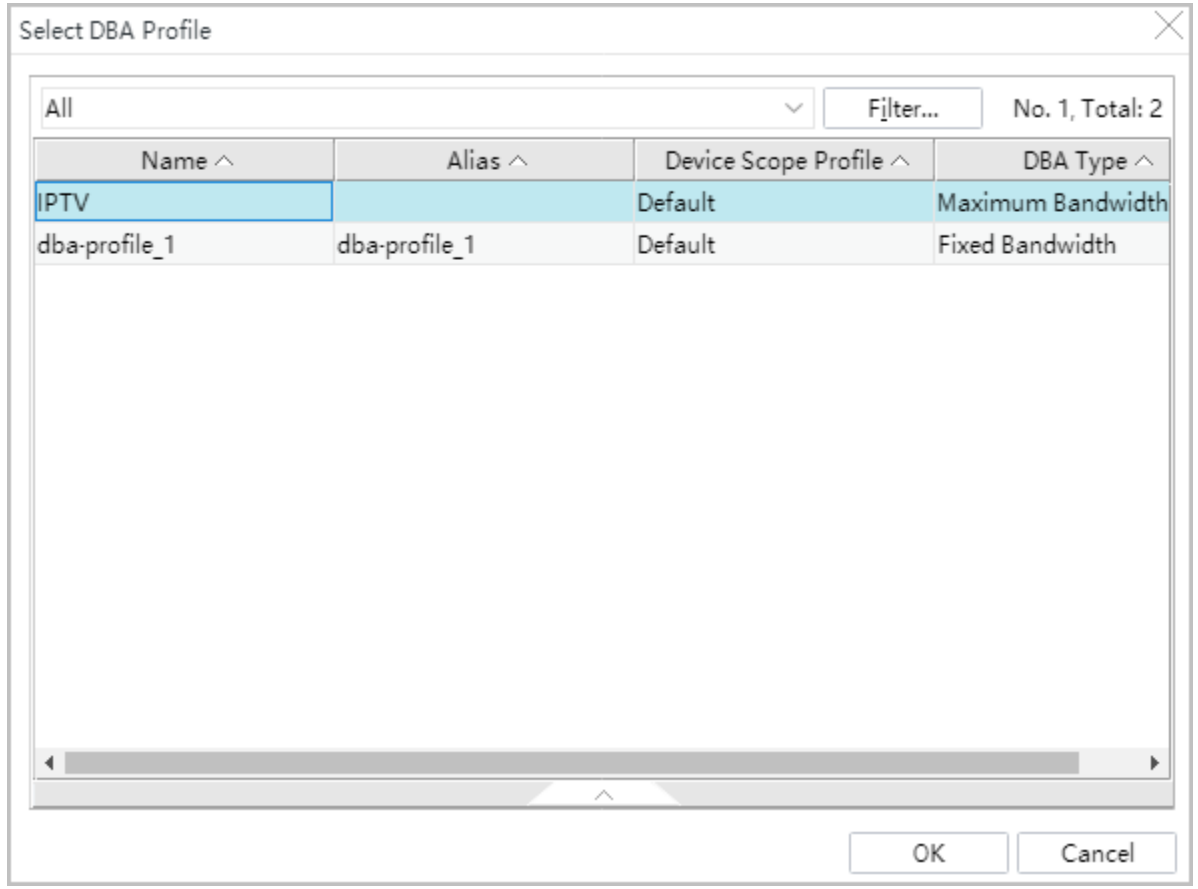

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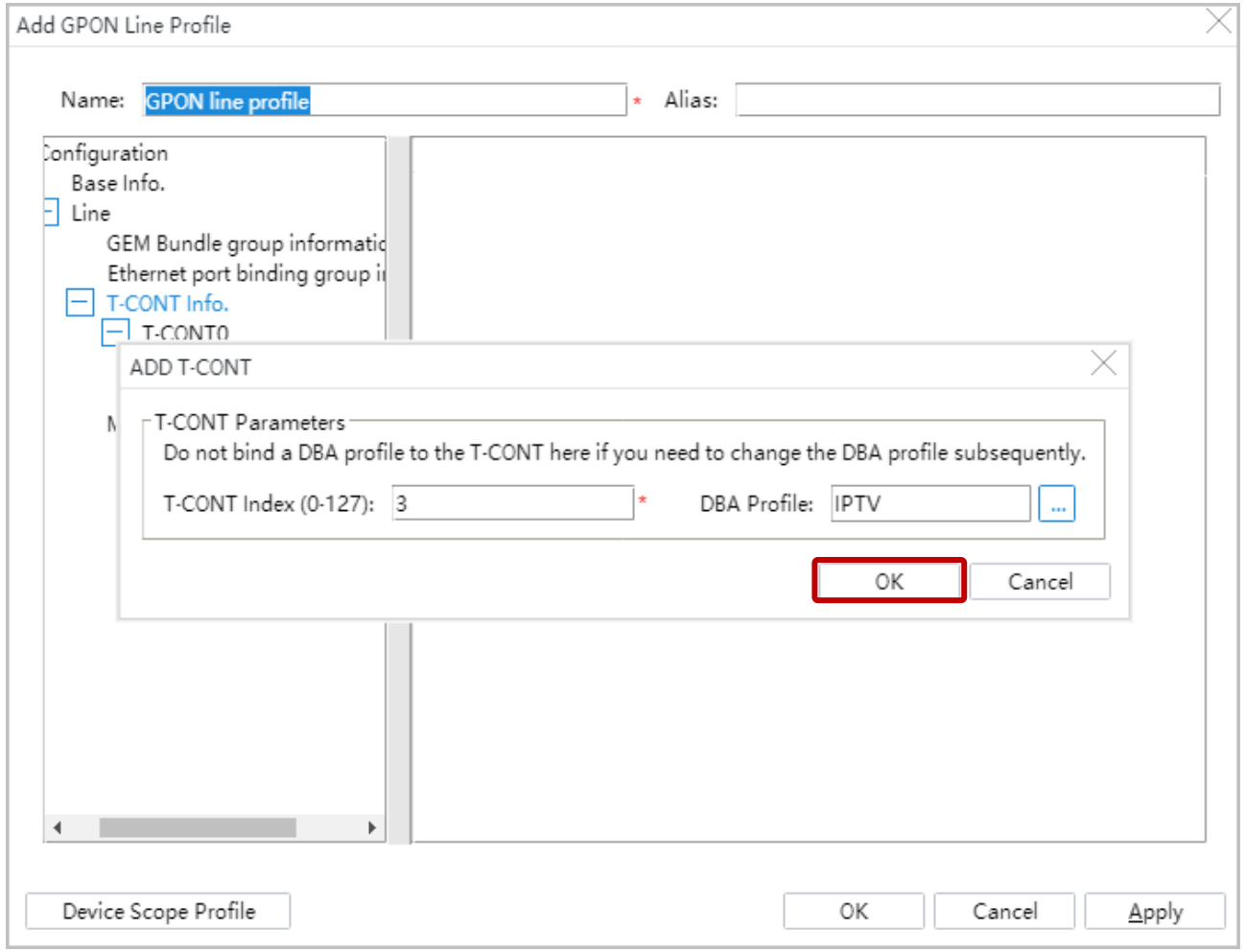
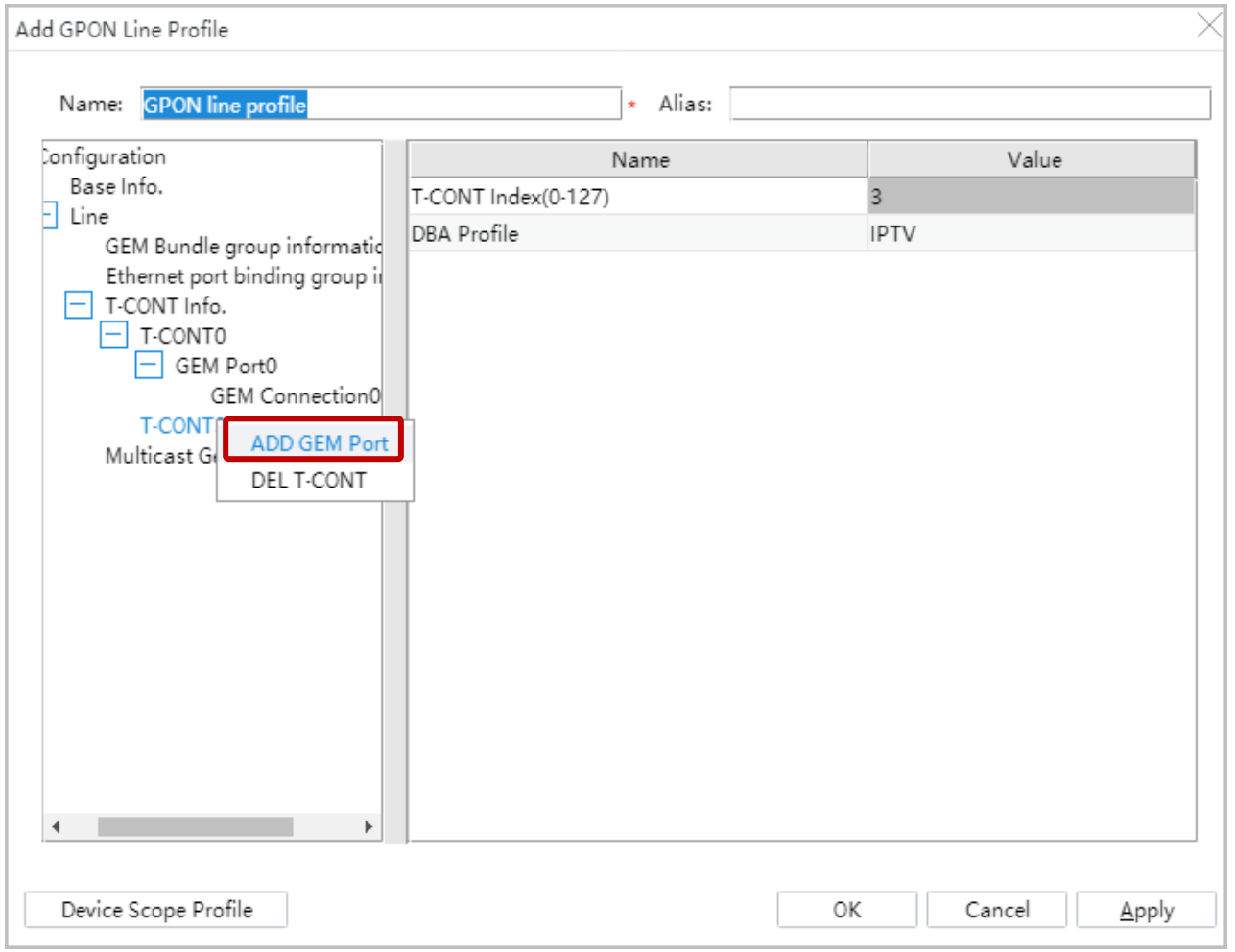


Adding a GEM Port for a Service



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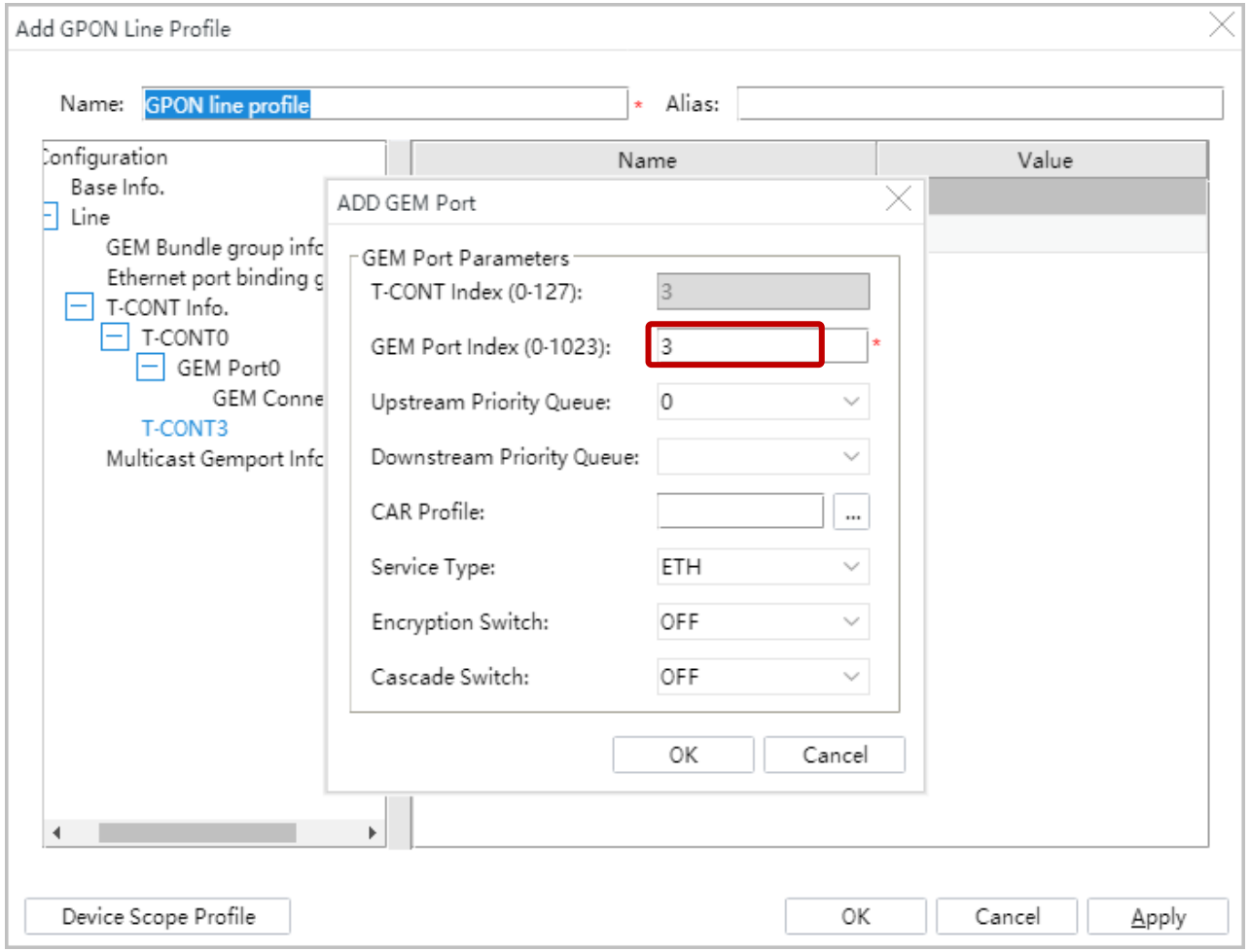

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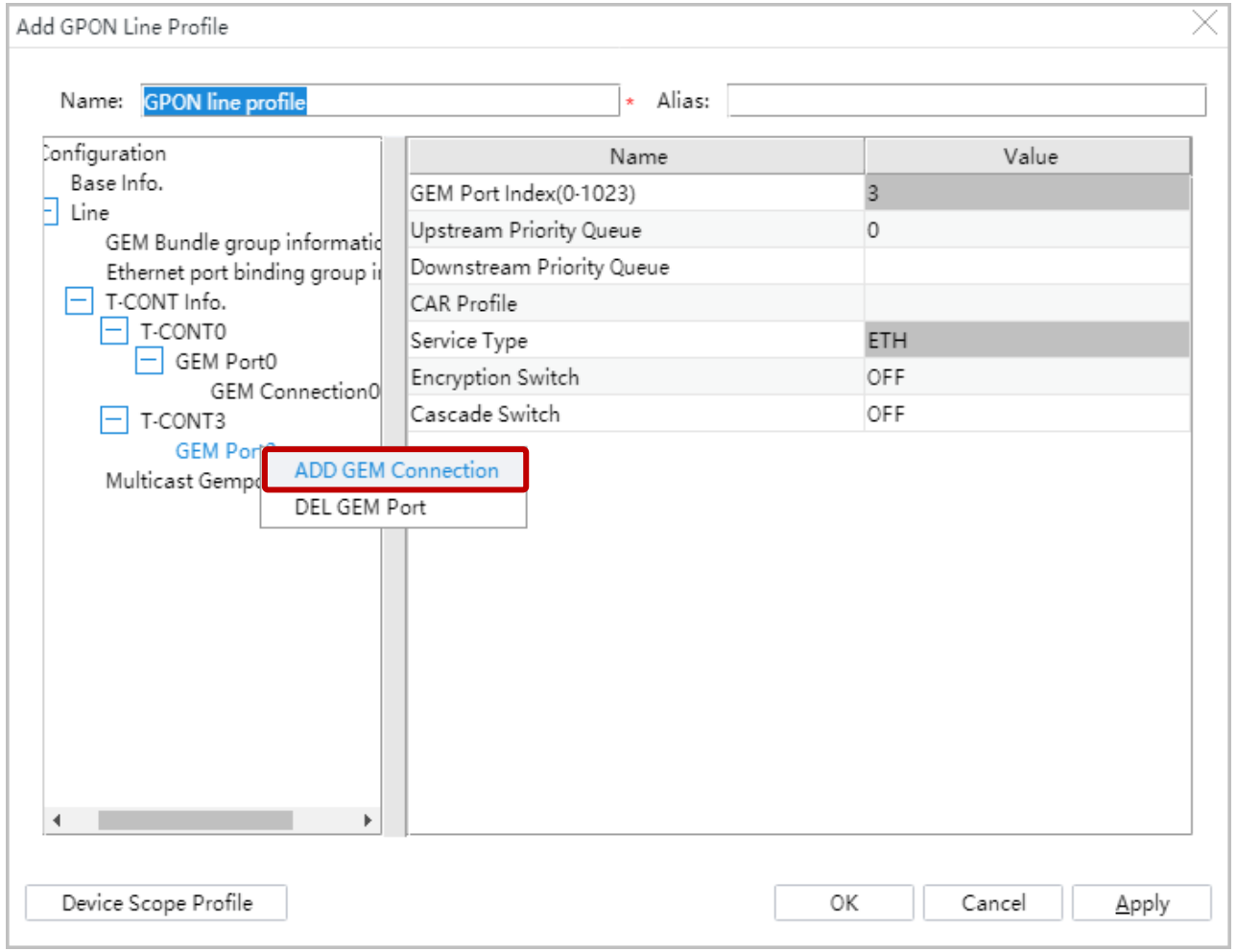

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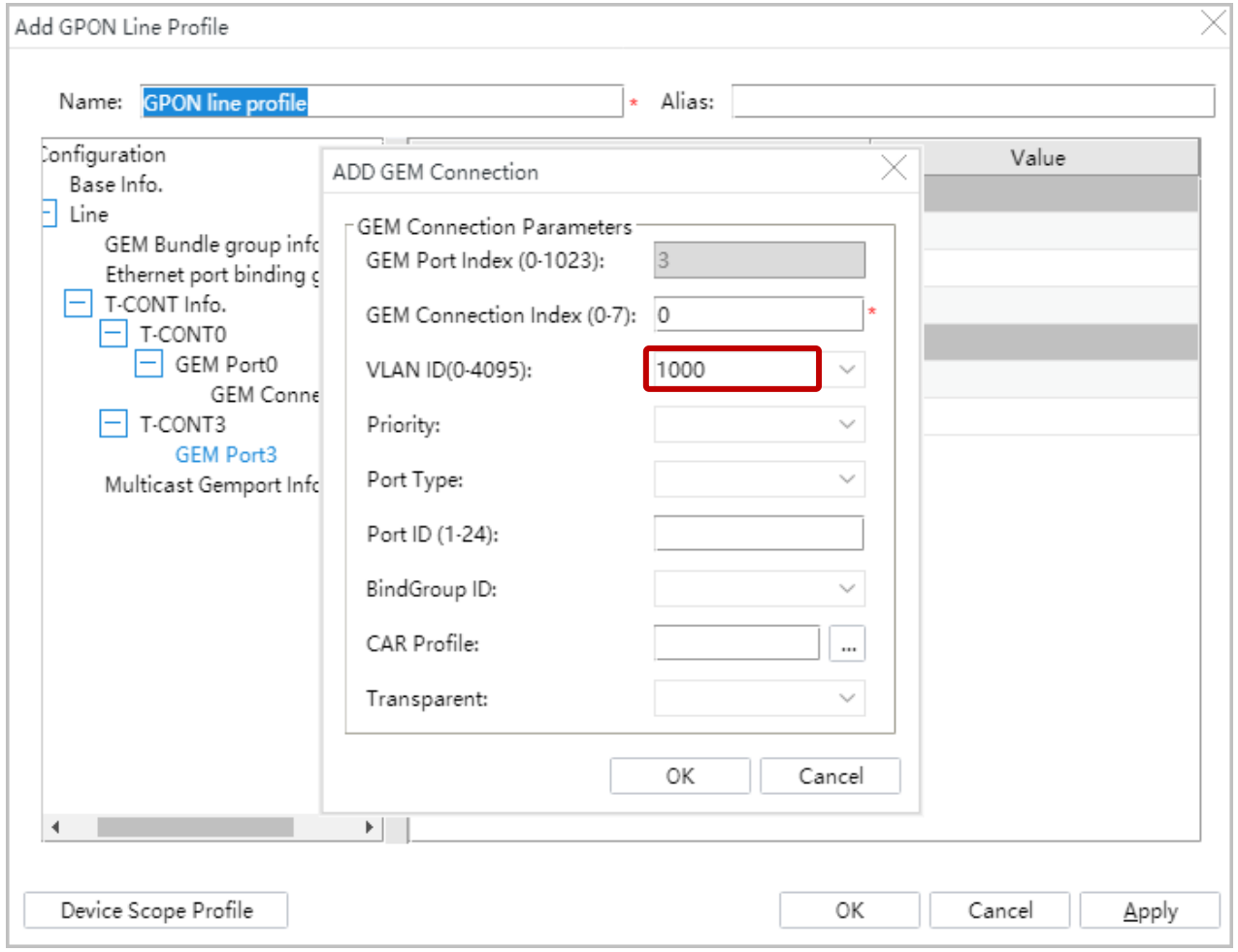
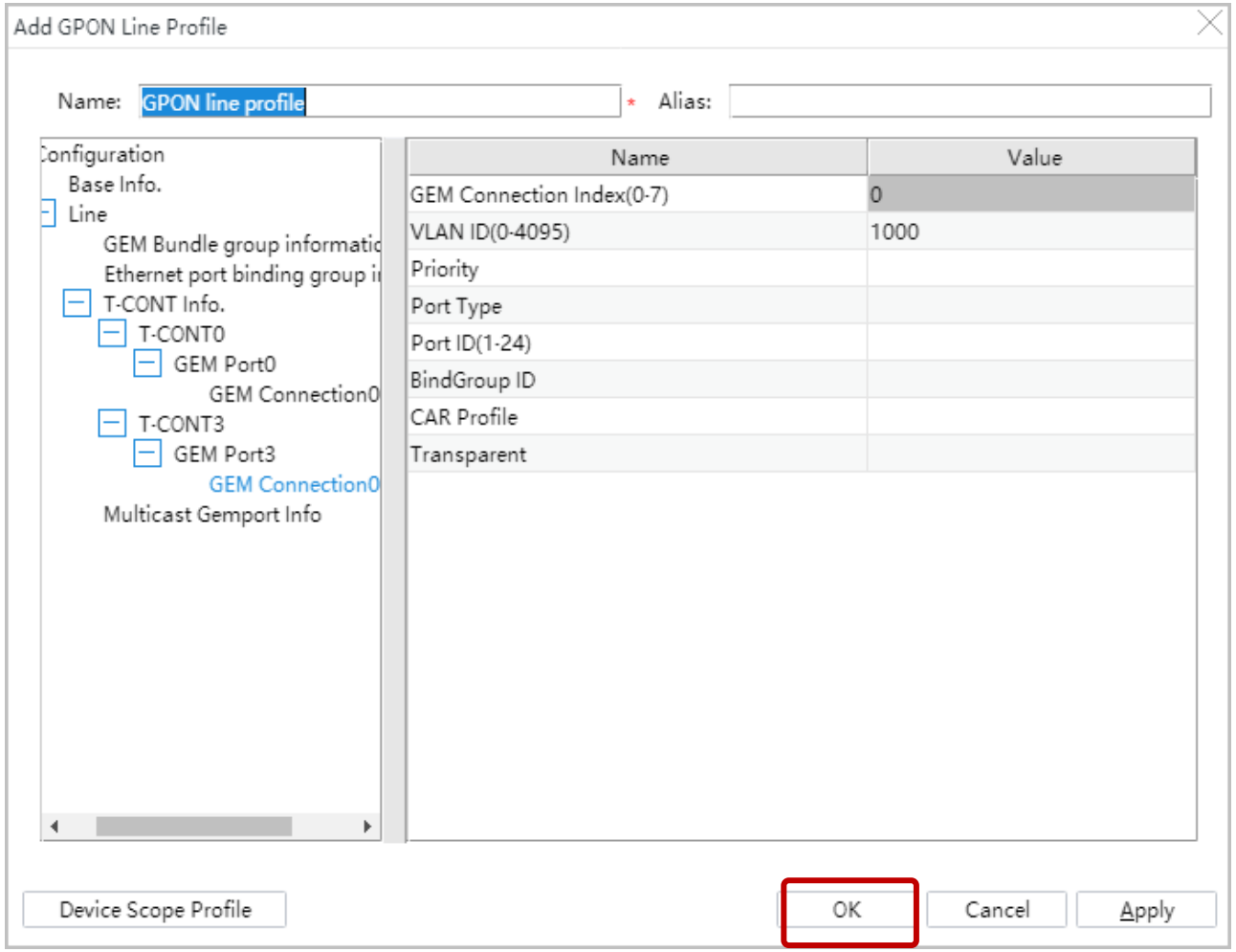
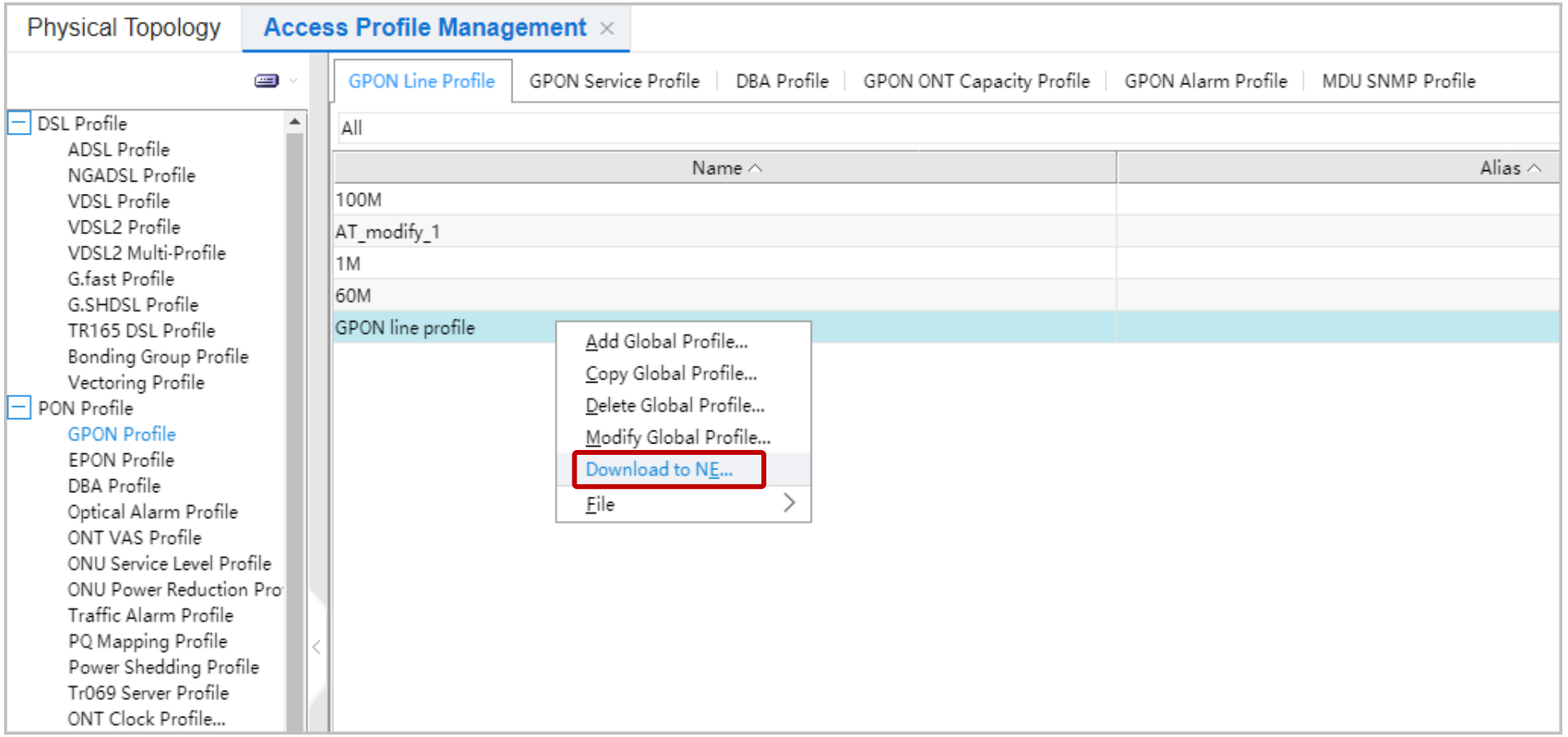


Adding a GPON Line Profile



Downloading a GPON Line Profile to an NE



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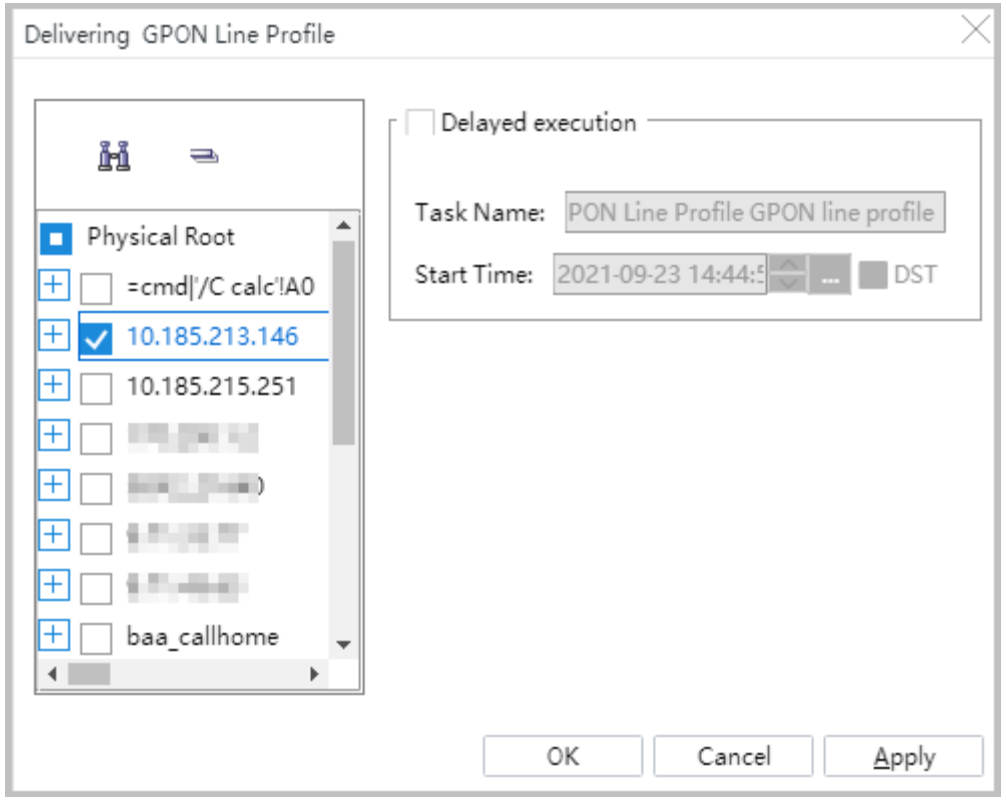

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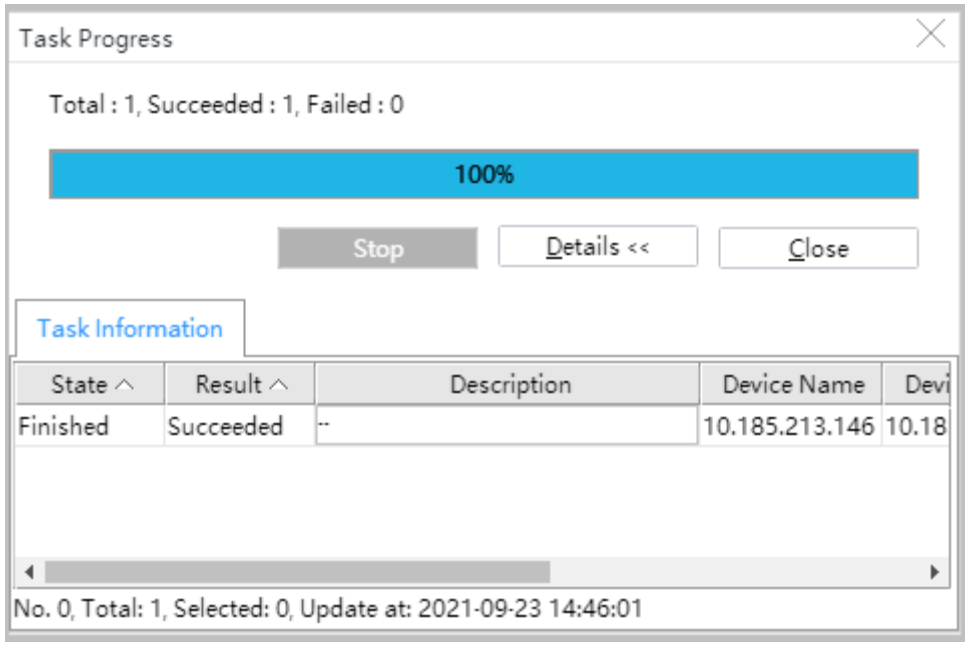
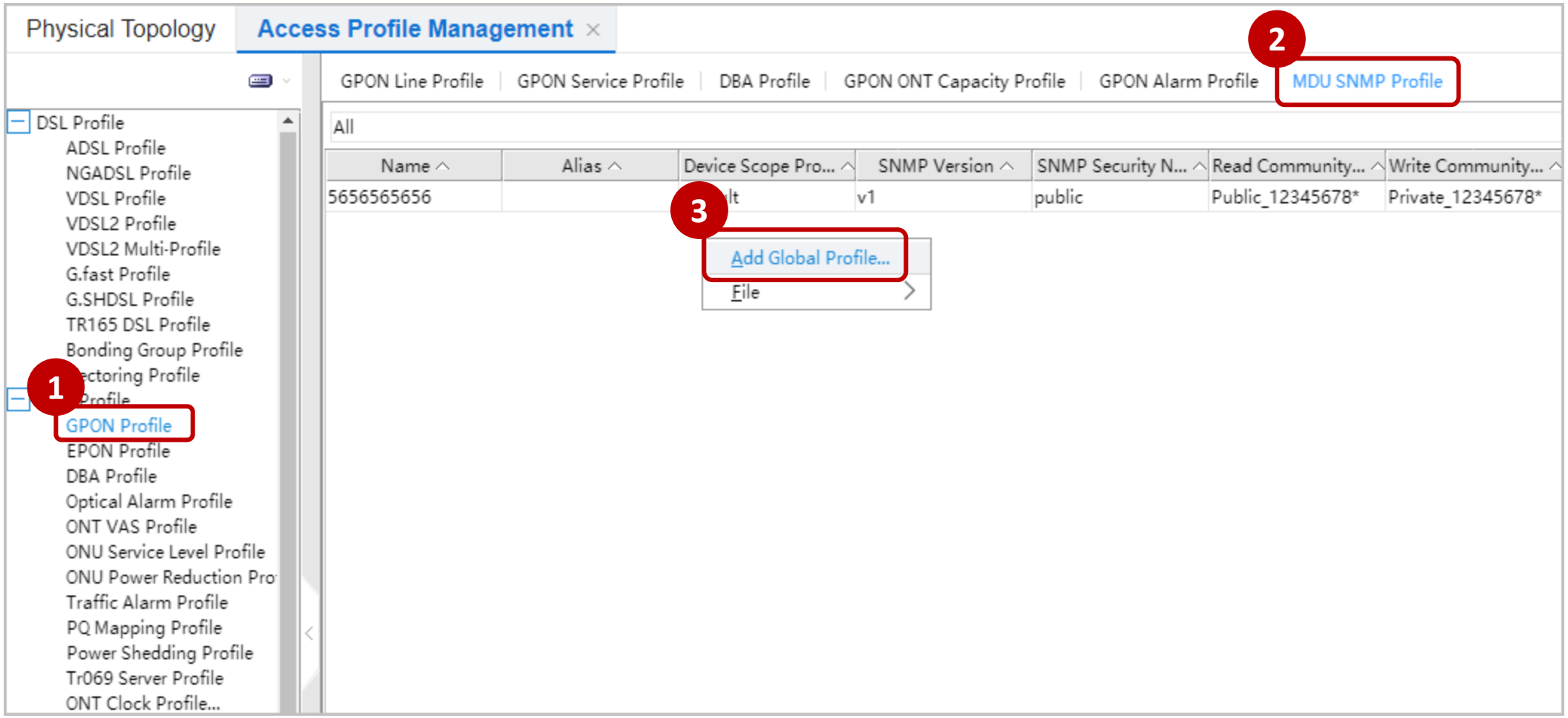


Adding an MDU SNMP Profile



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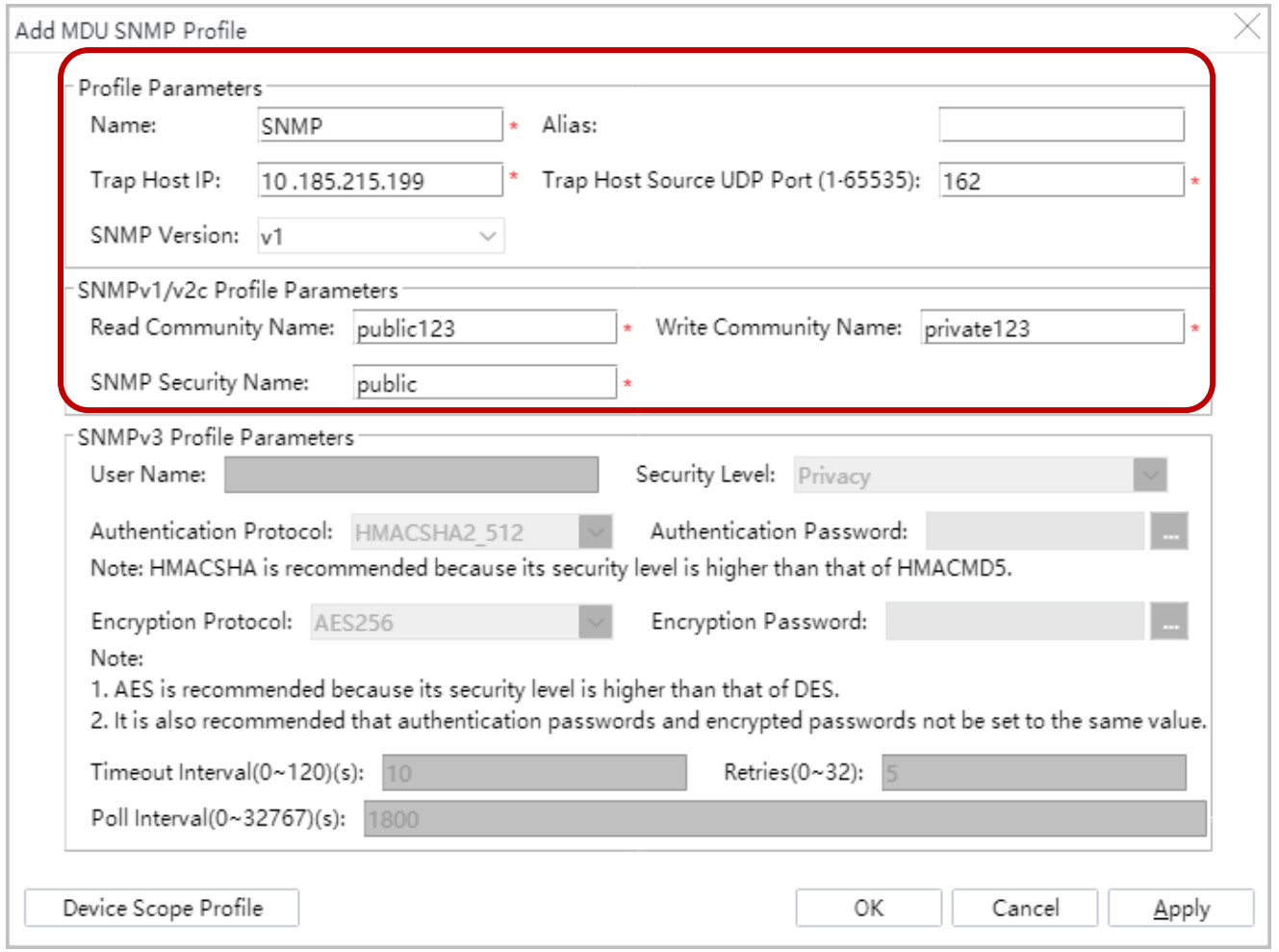

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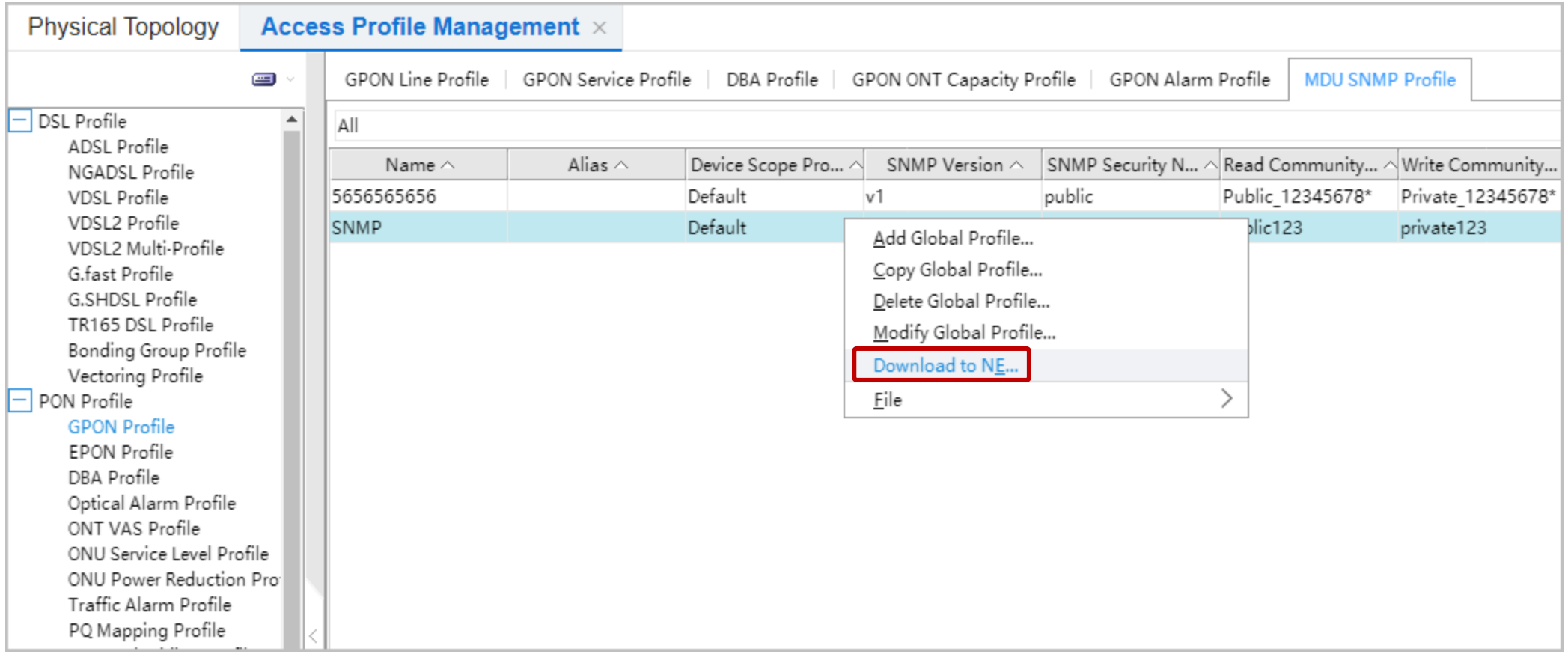

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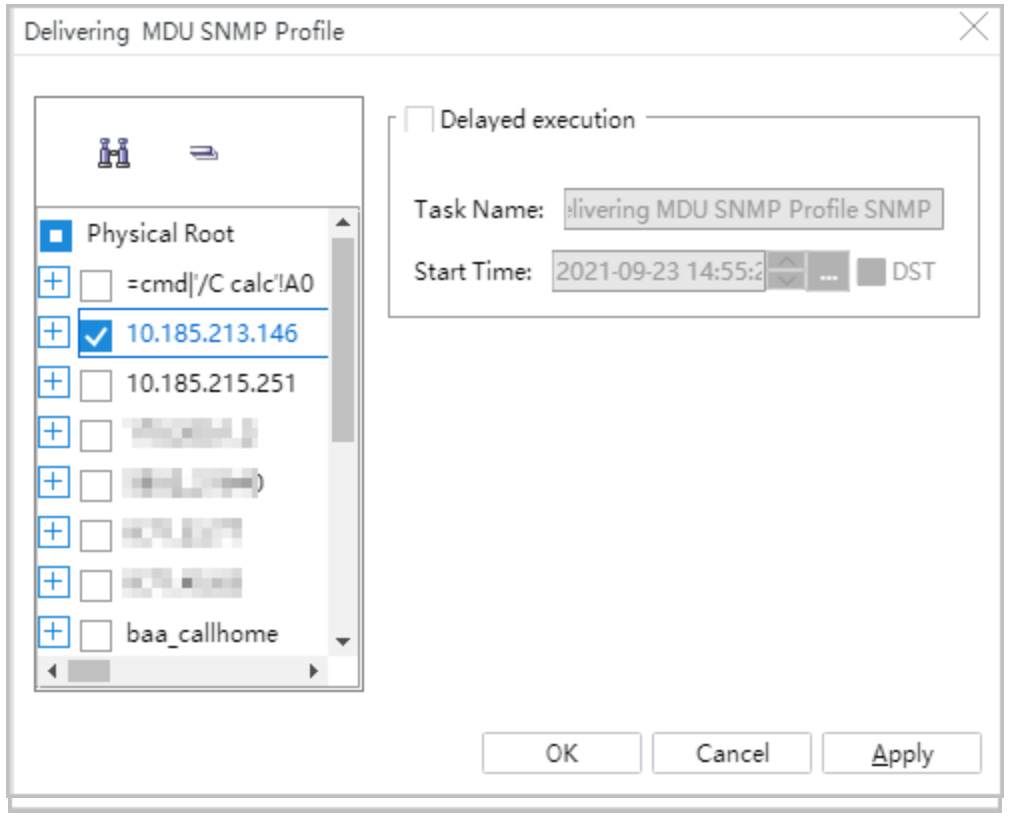

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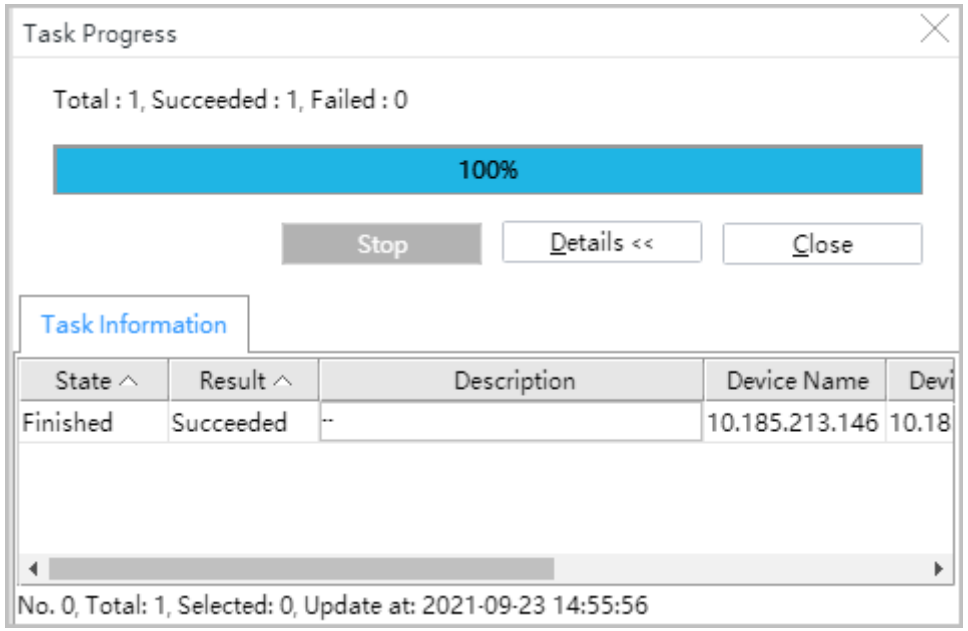
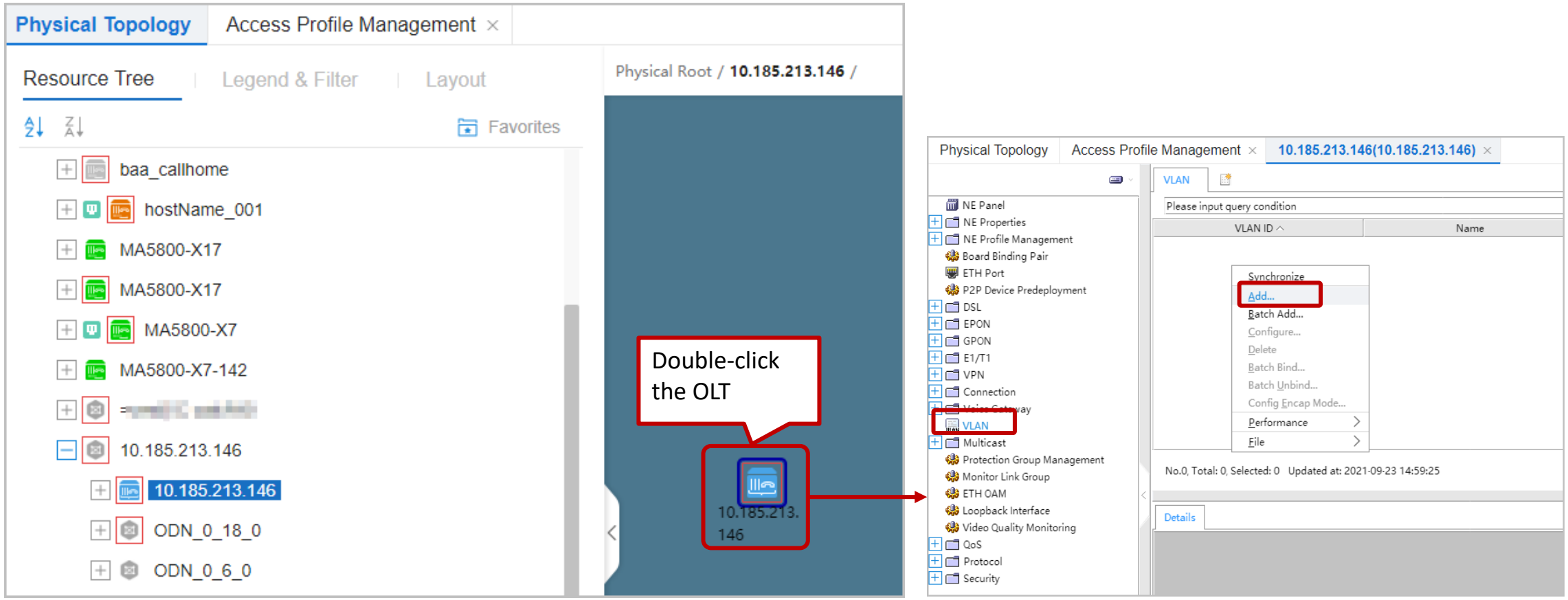


Creating a Management VLAN



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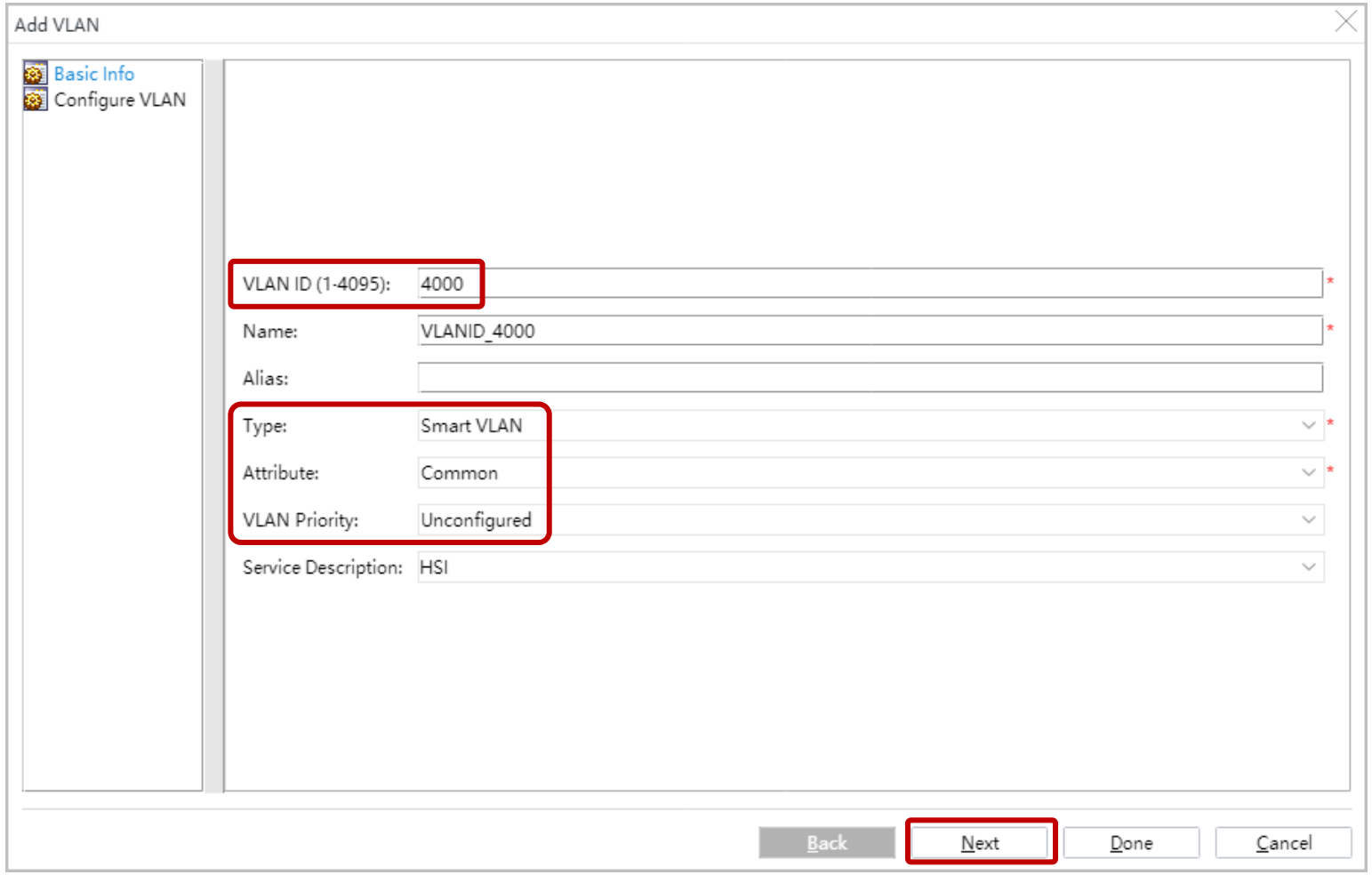
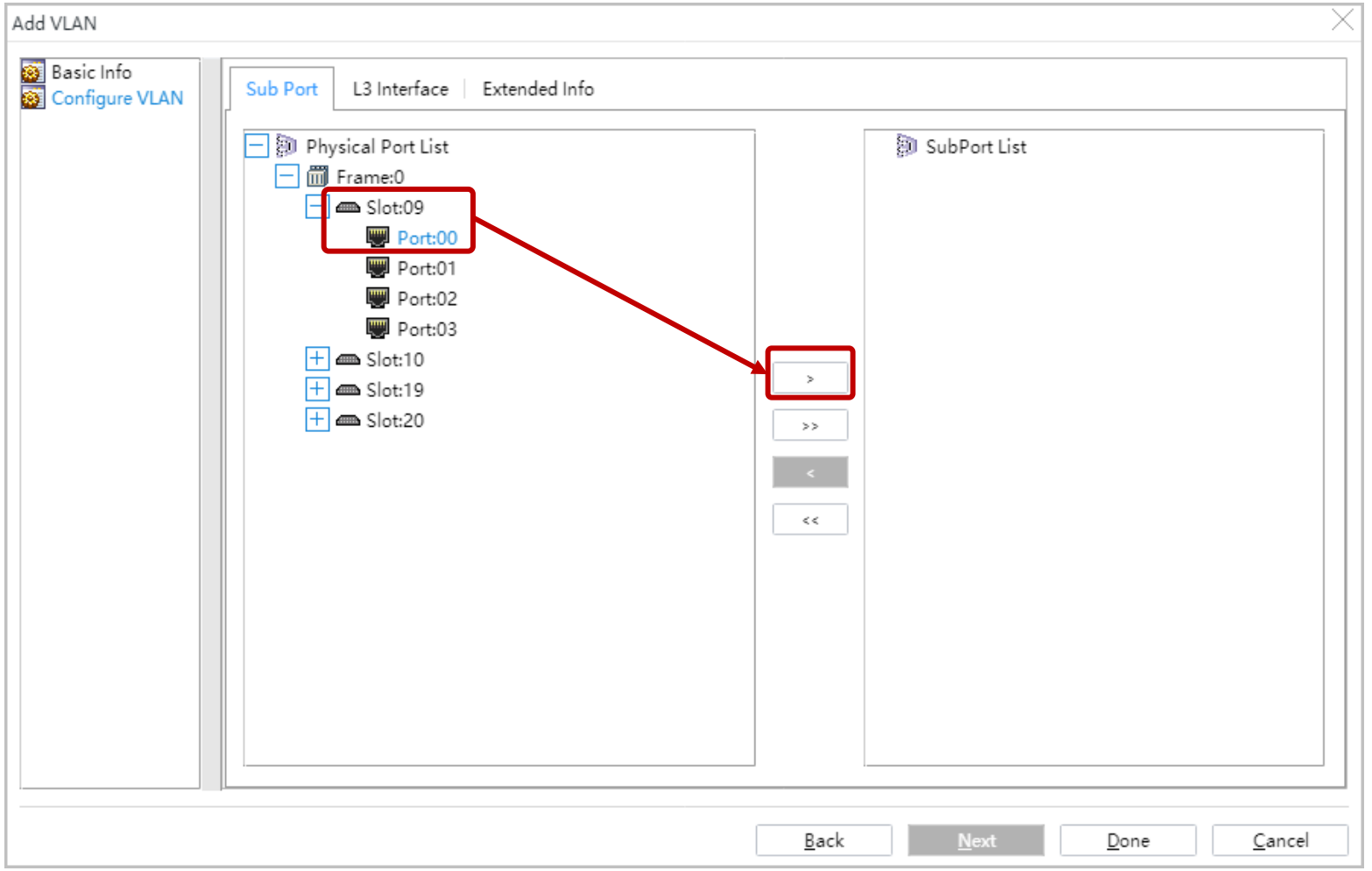


Selecting an Uplink Port



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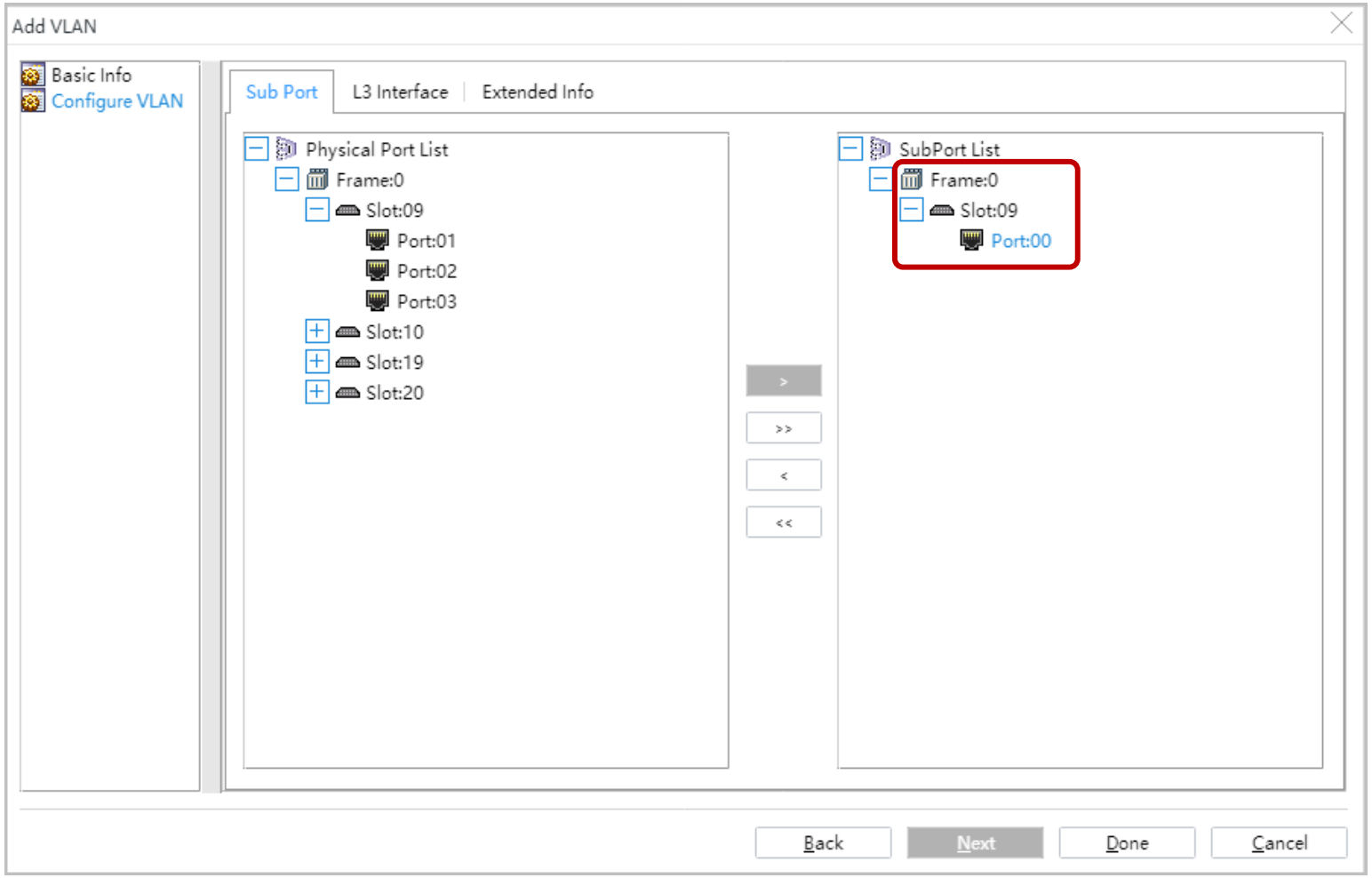

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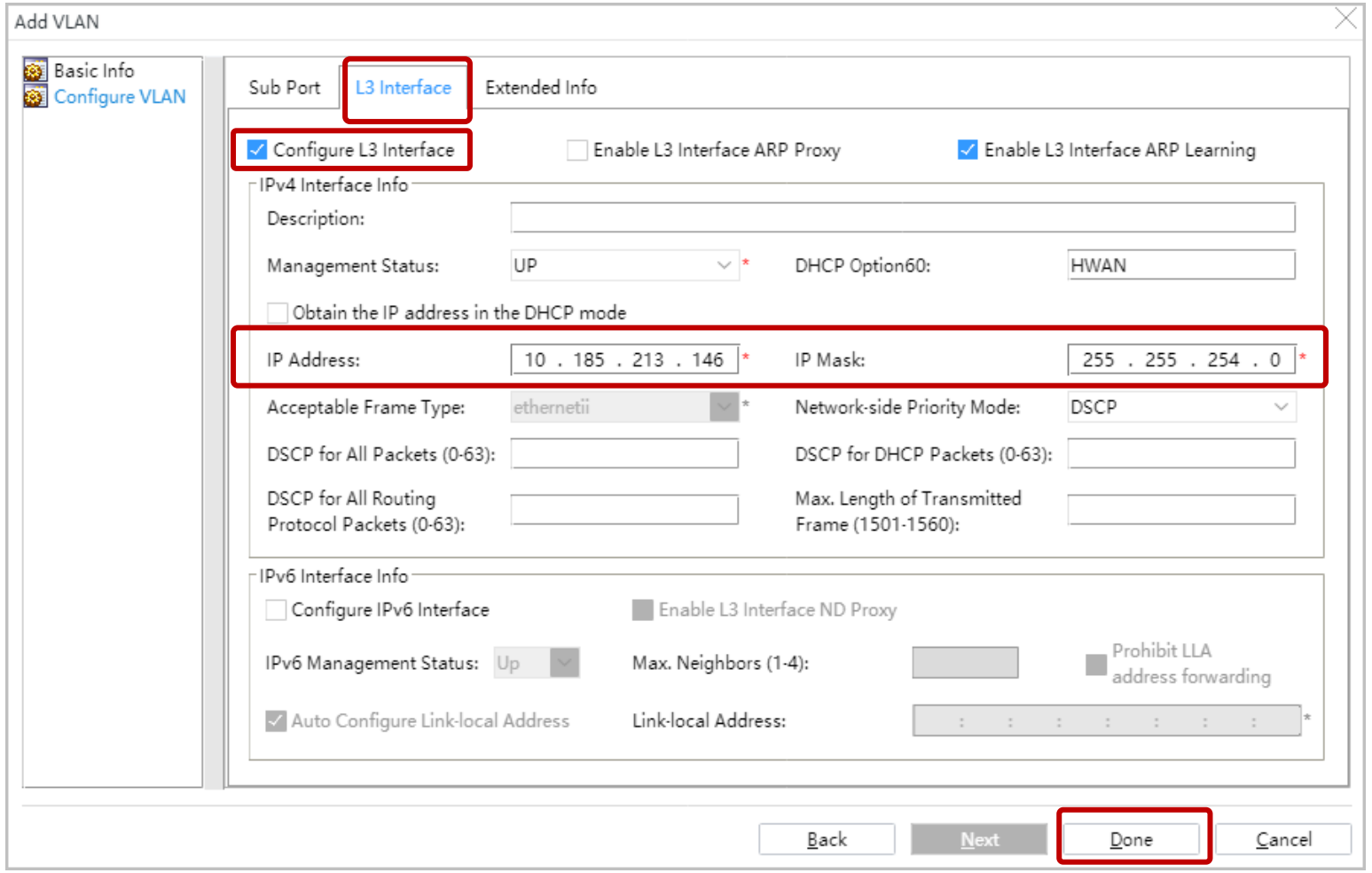
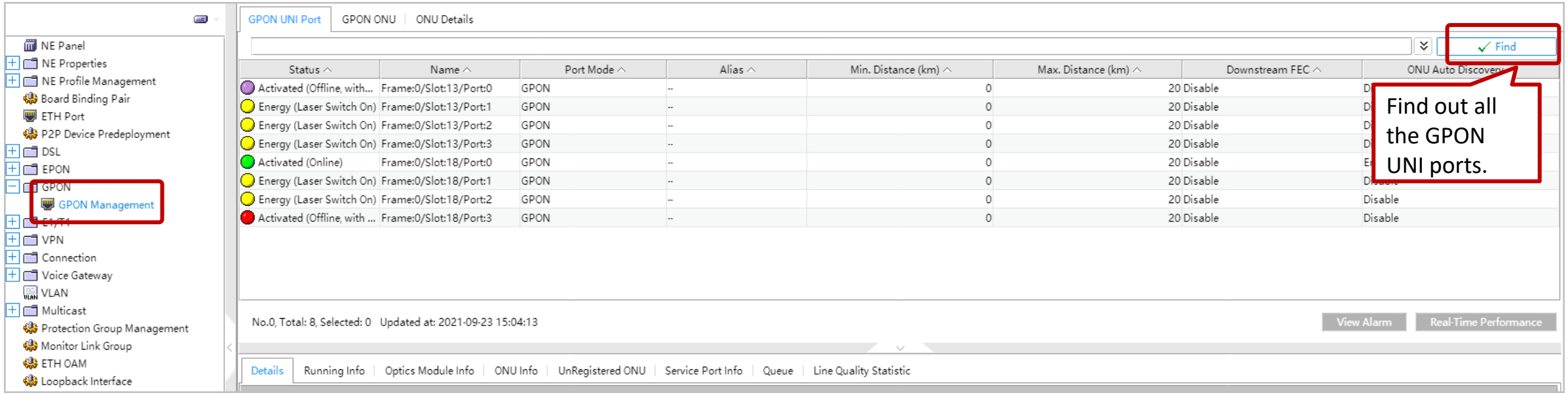
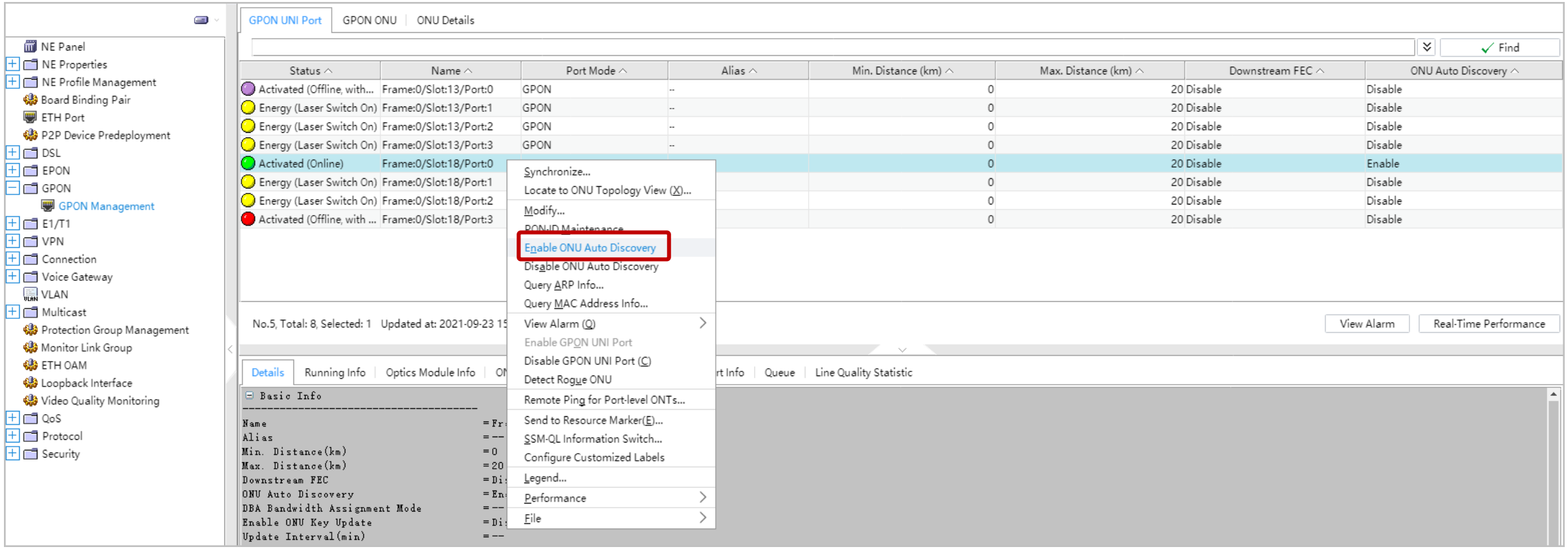
Configuring a Layer 3 Interface



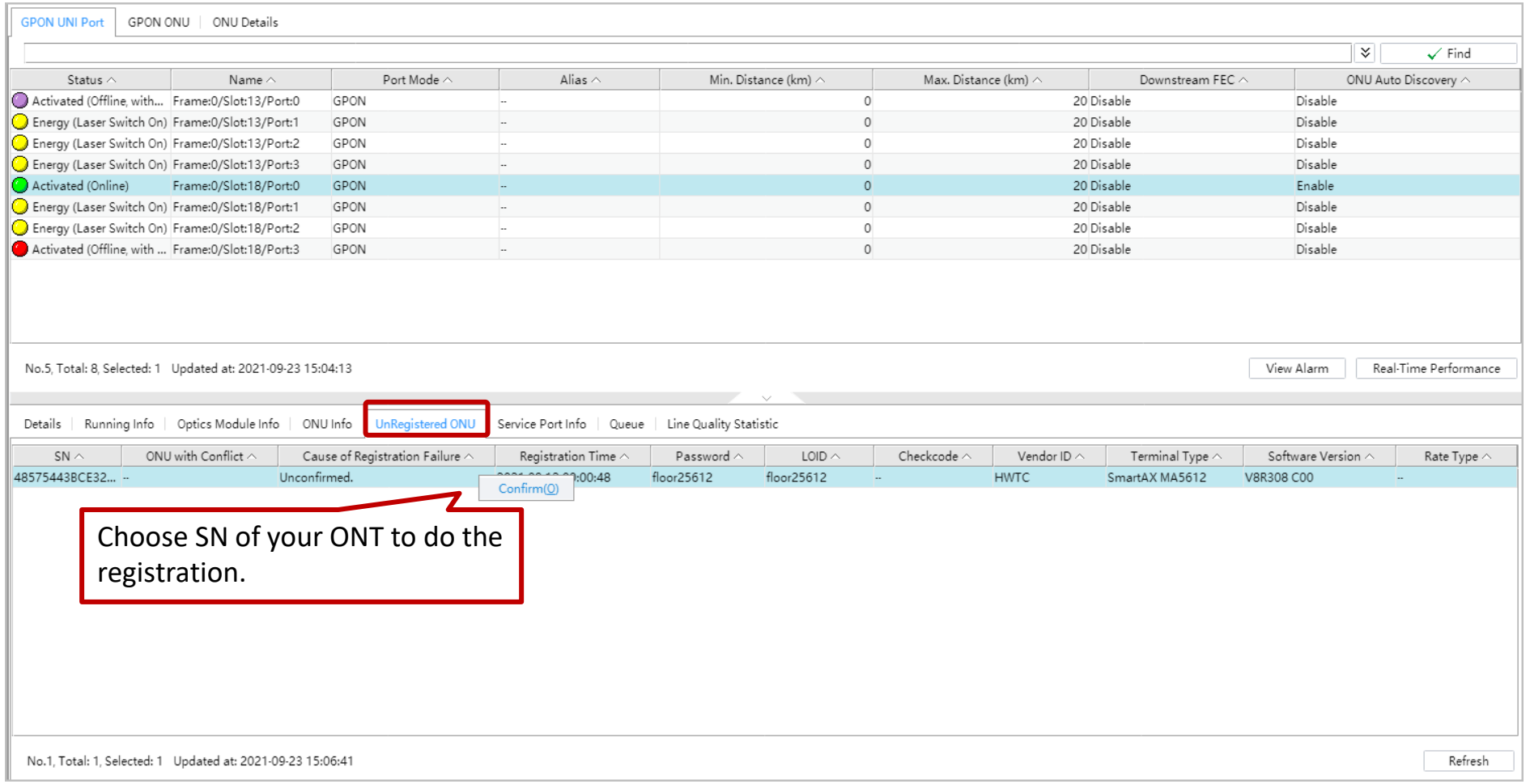
Checking a GPON UNI Port



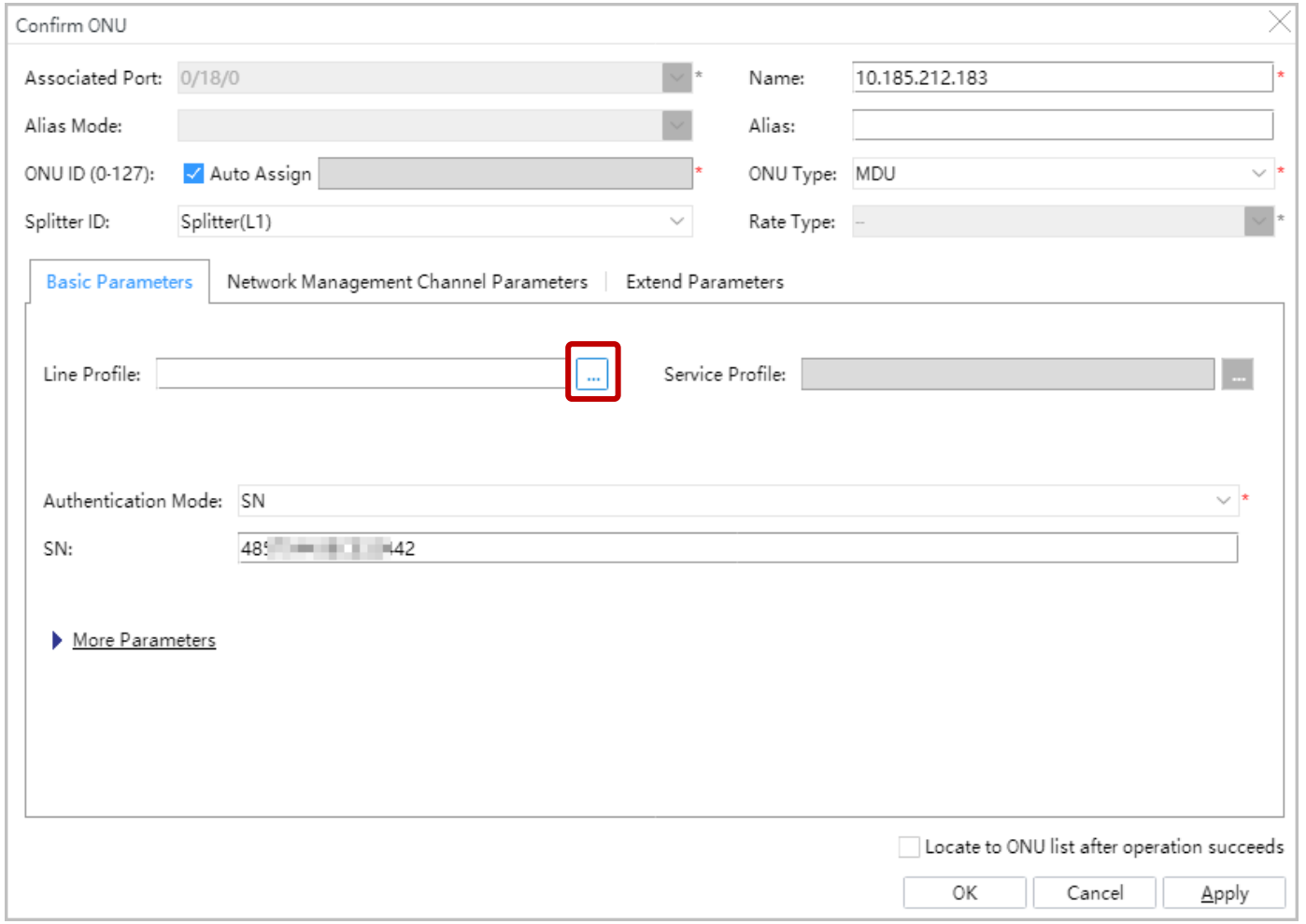
Enabling ONU Auto Discovery



ONU Registration



Binding a GPON Line Profile



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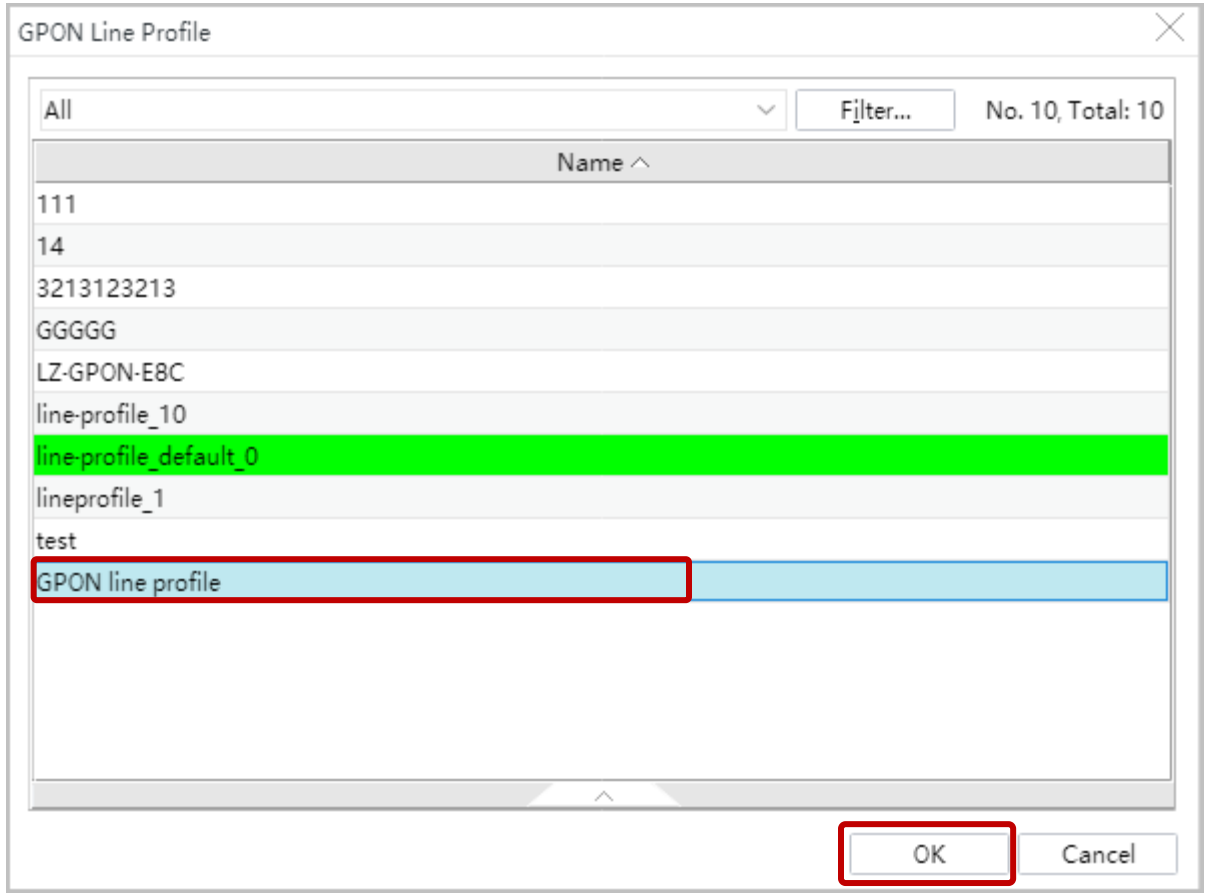
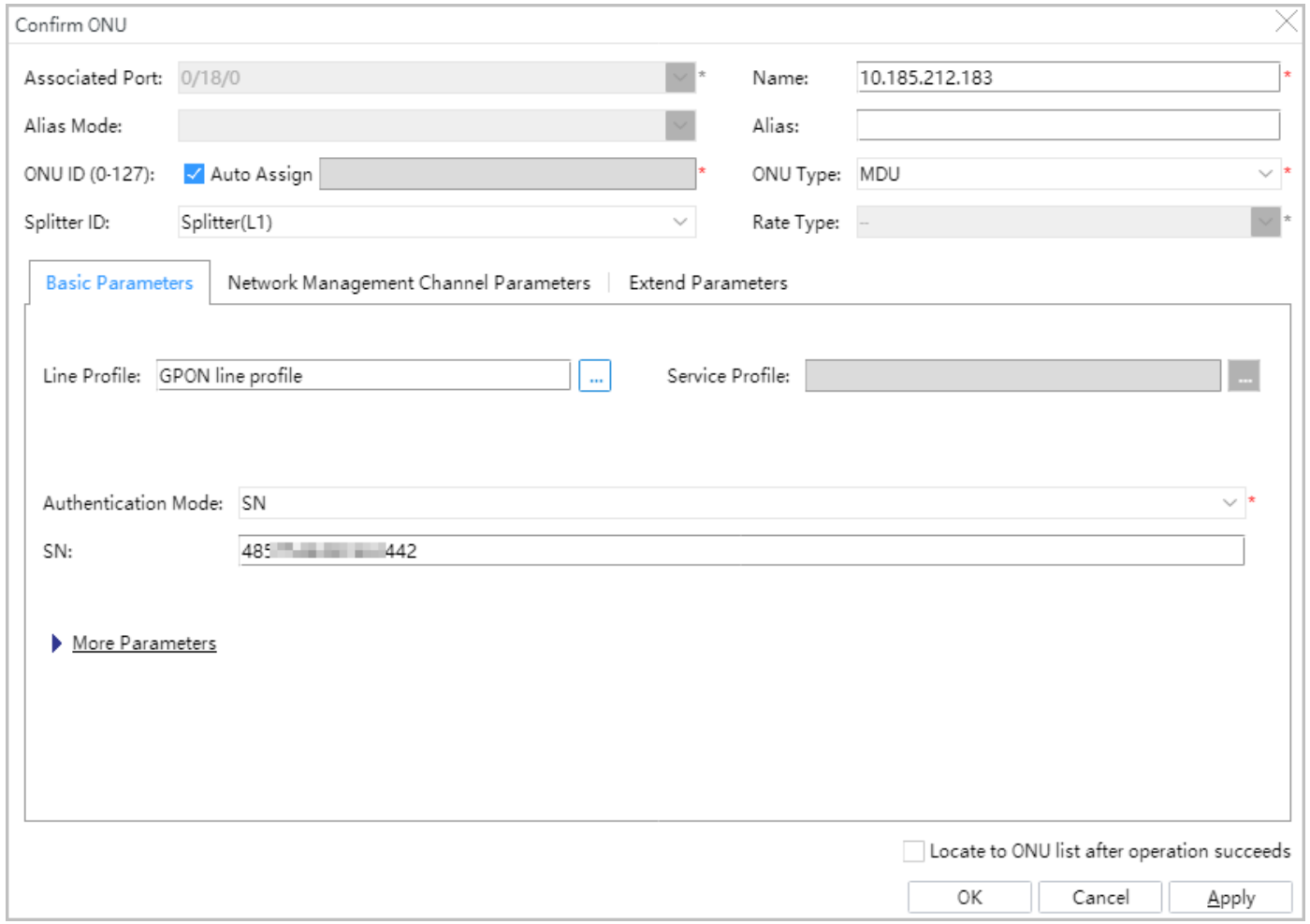
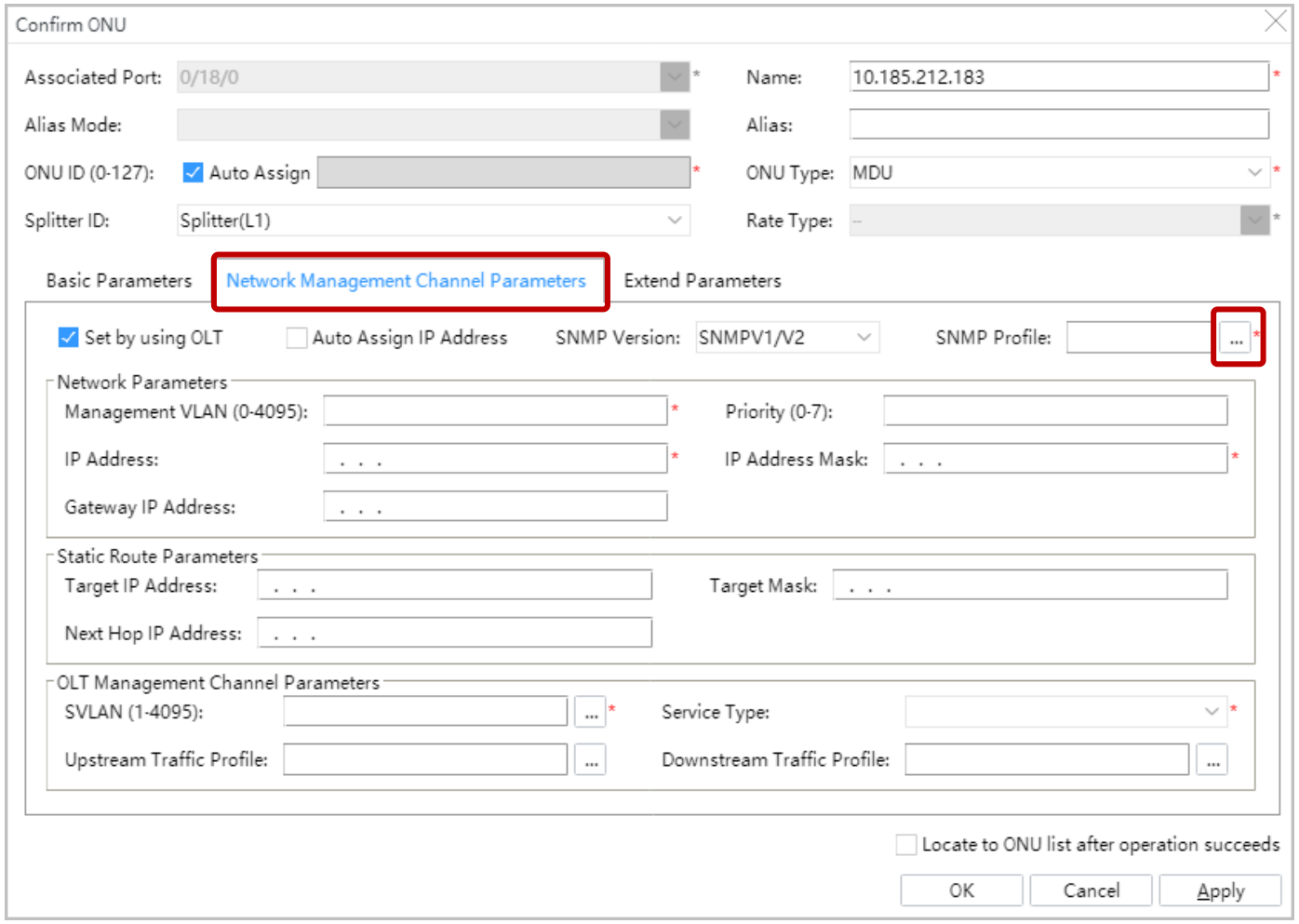


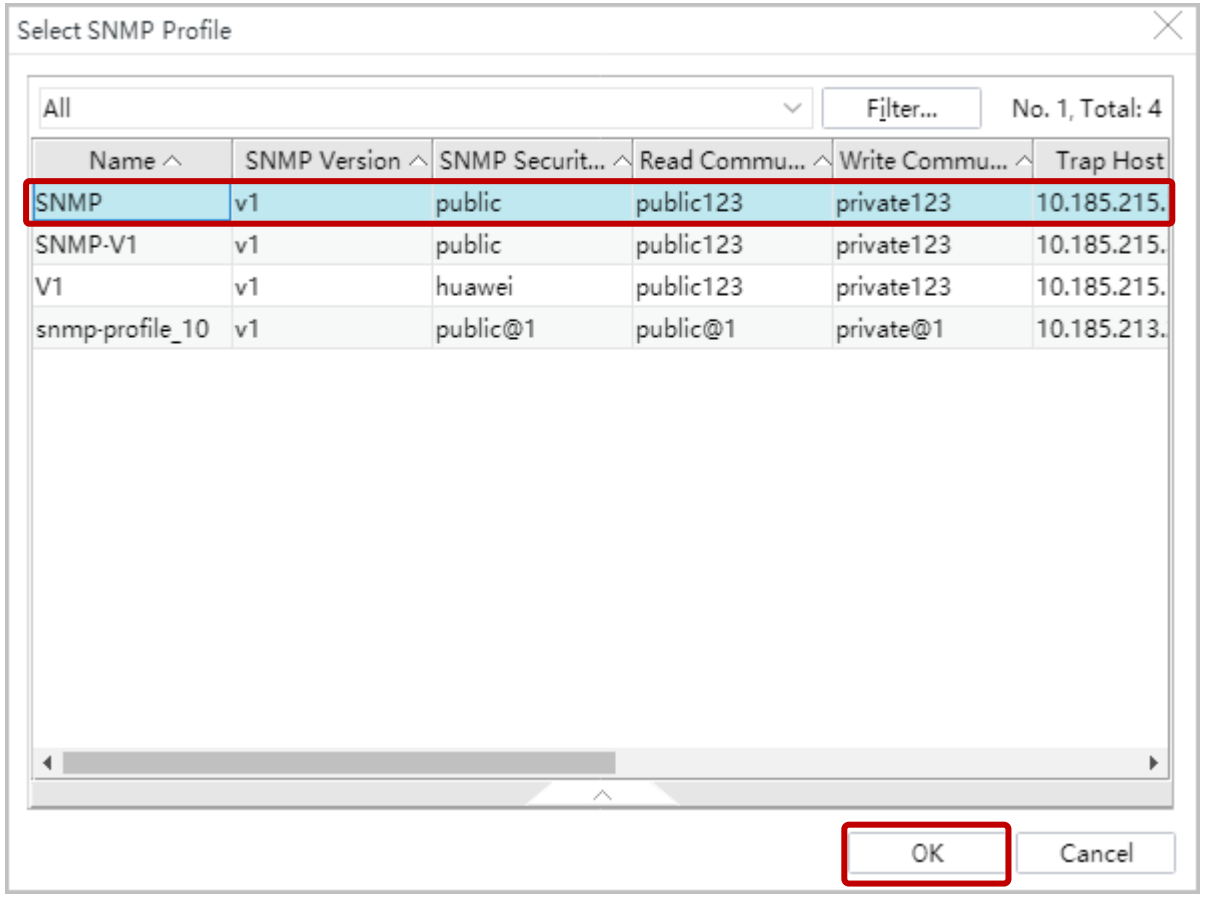
Binding a GPON Line Profile



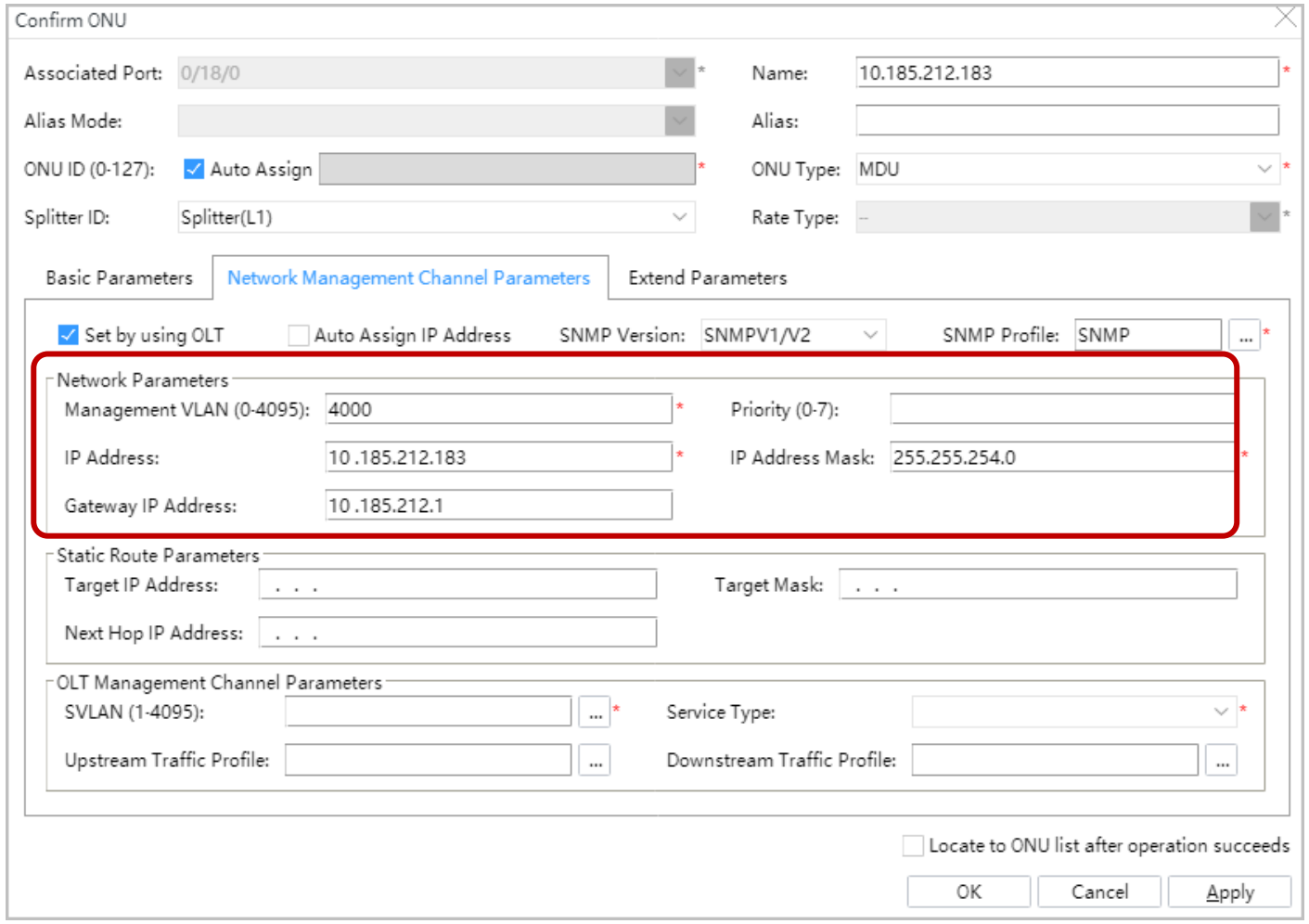
Binding an SNMP Profile



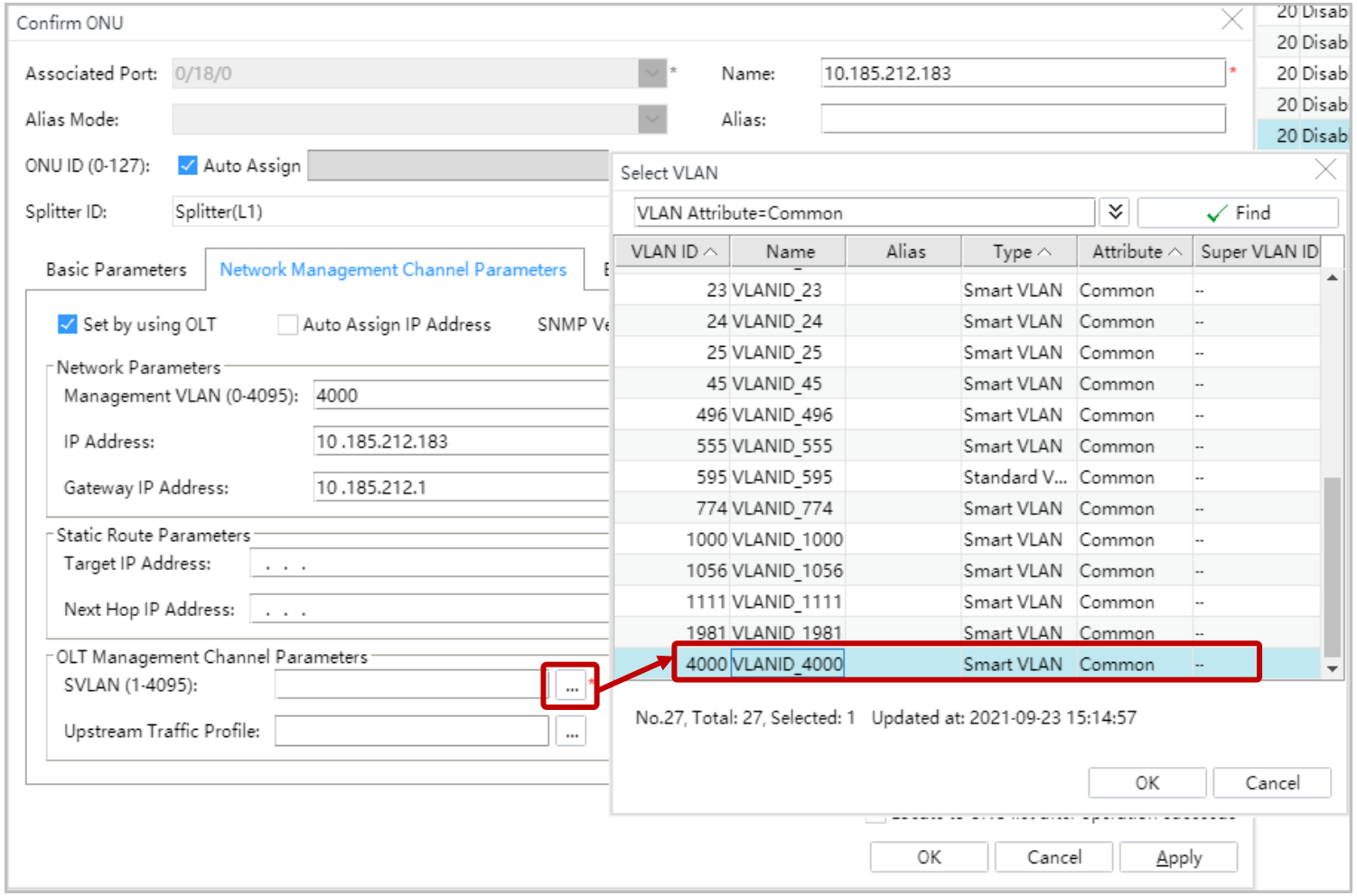
Binding an SNMP Profile



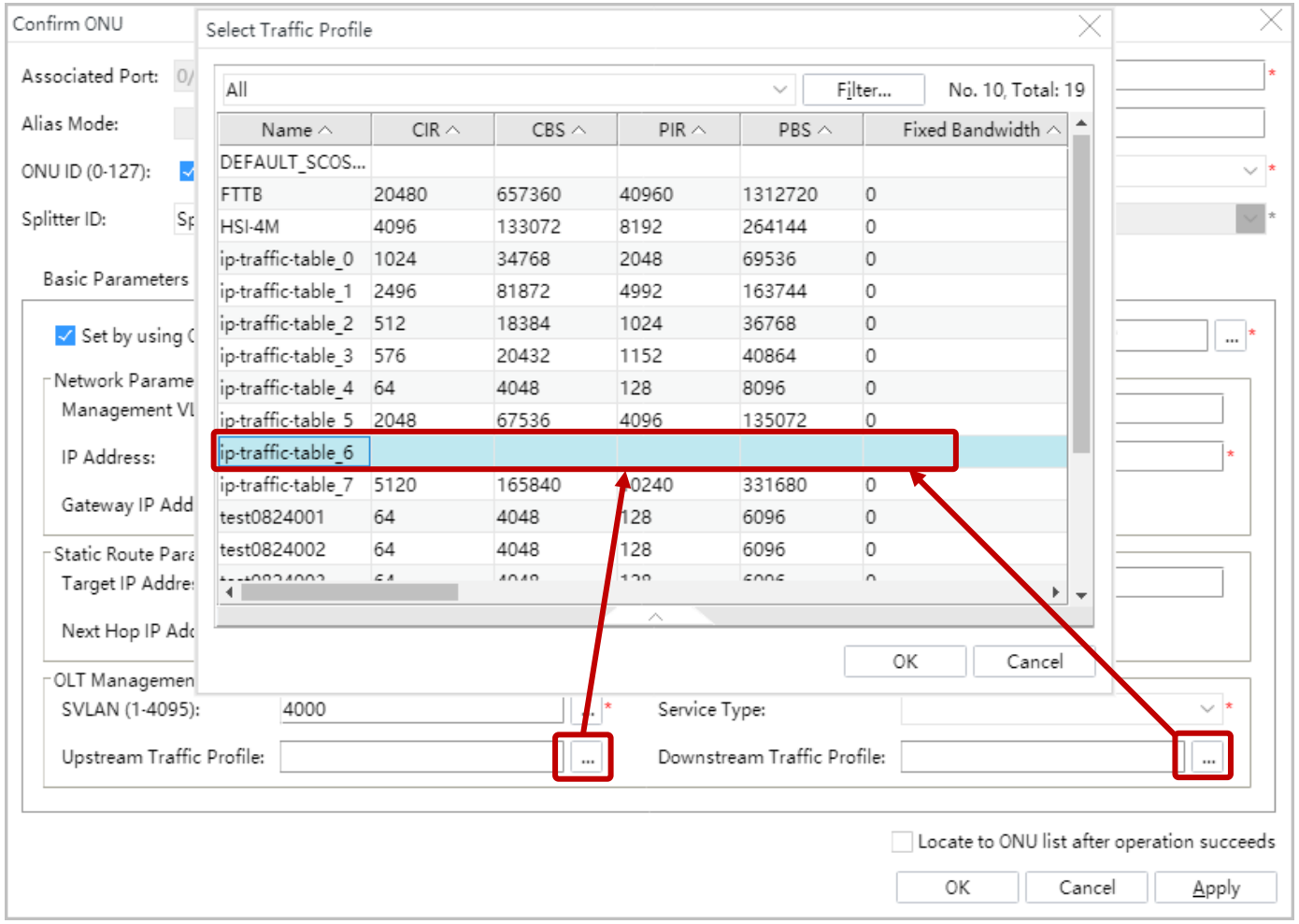
Setting the Inband IP Address



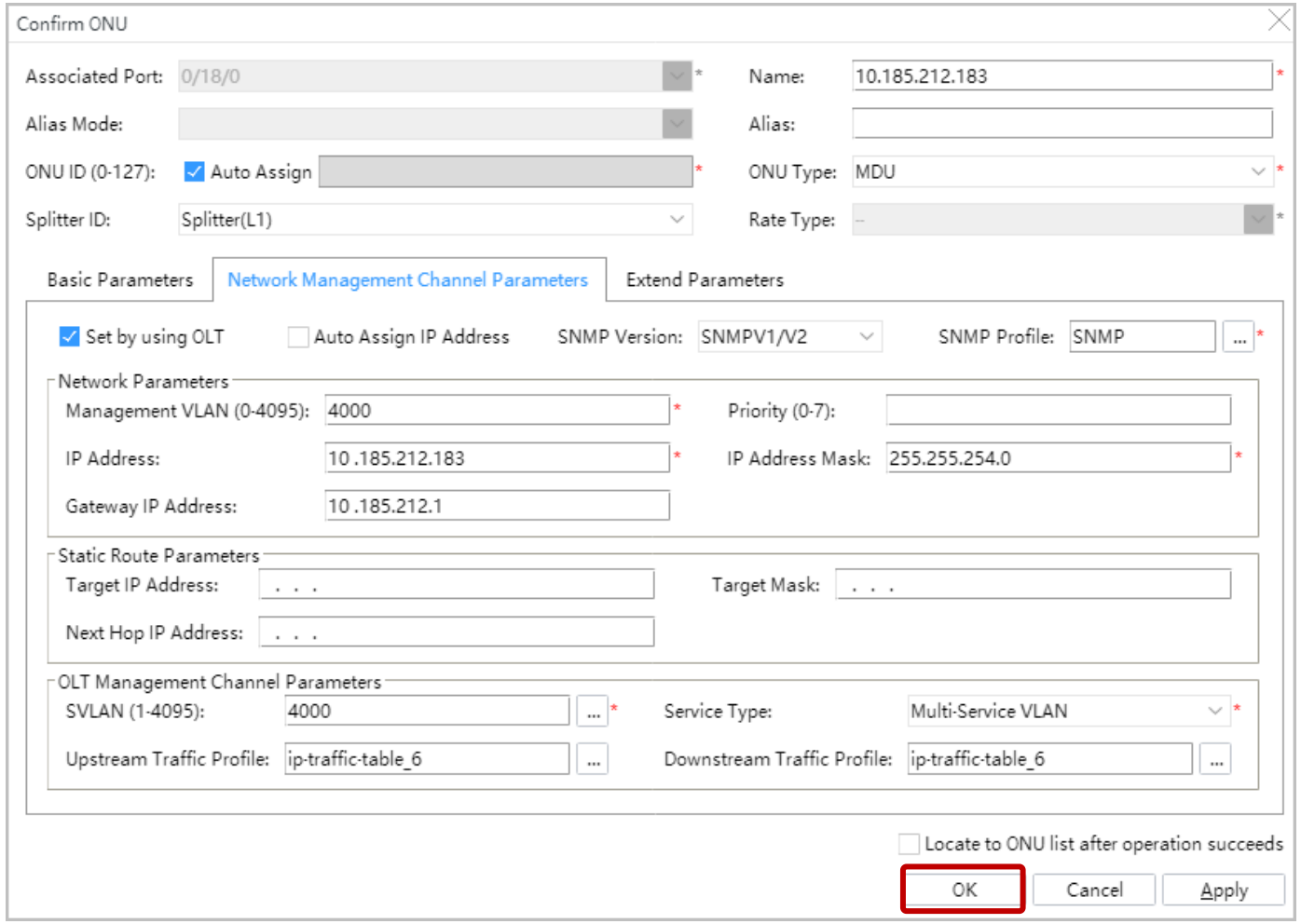
Selecting the Management VLAN



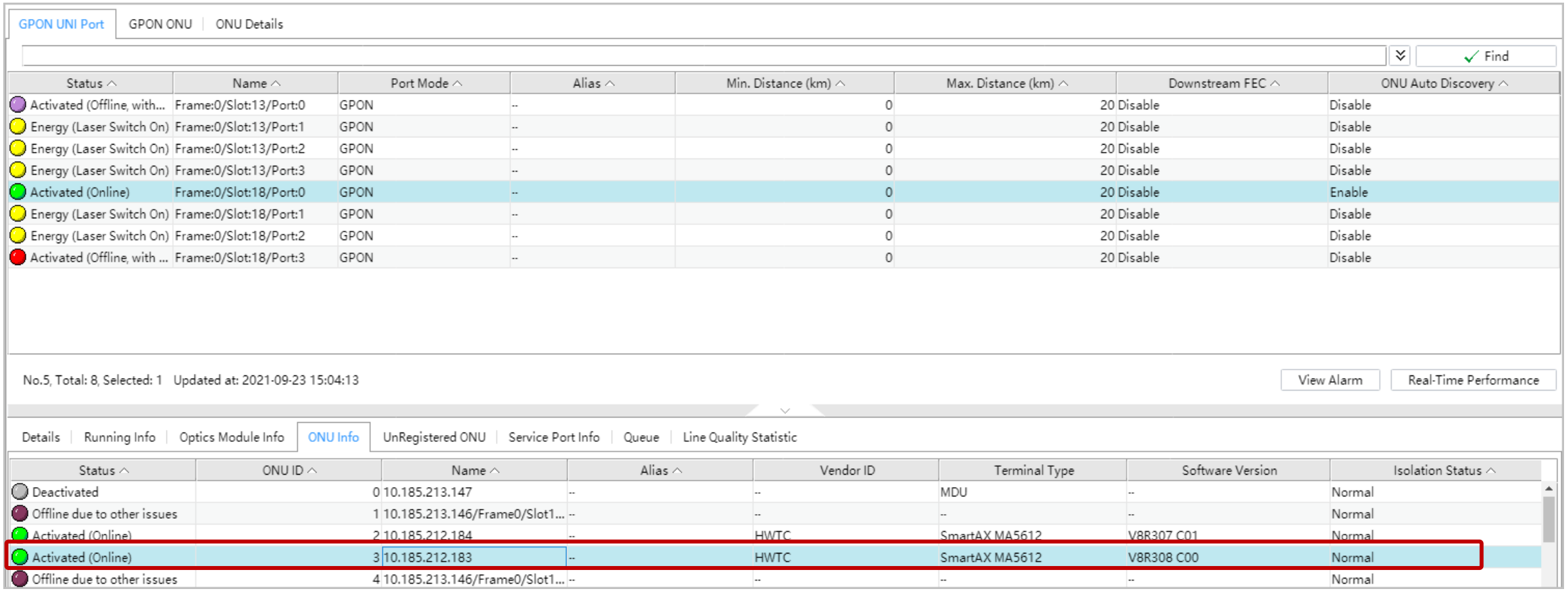
Binding Traffic Profiles



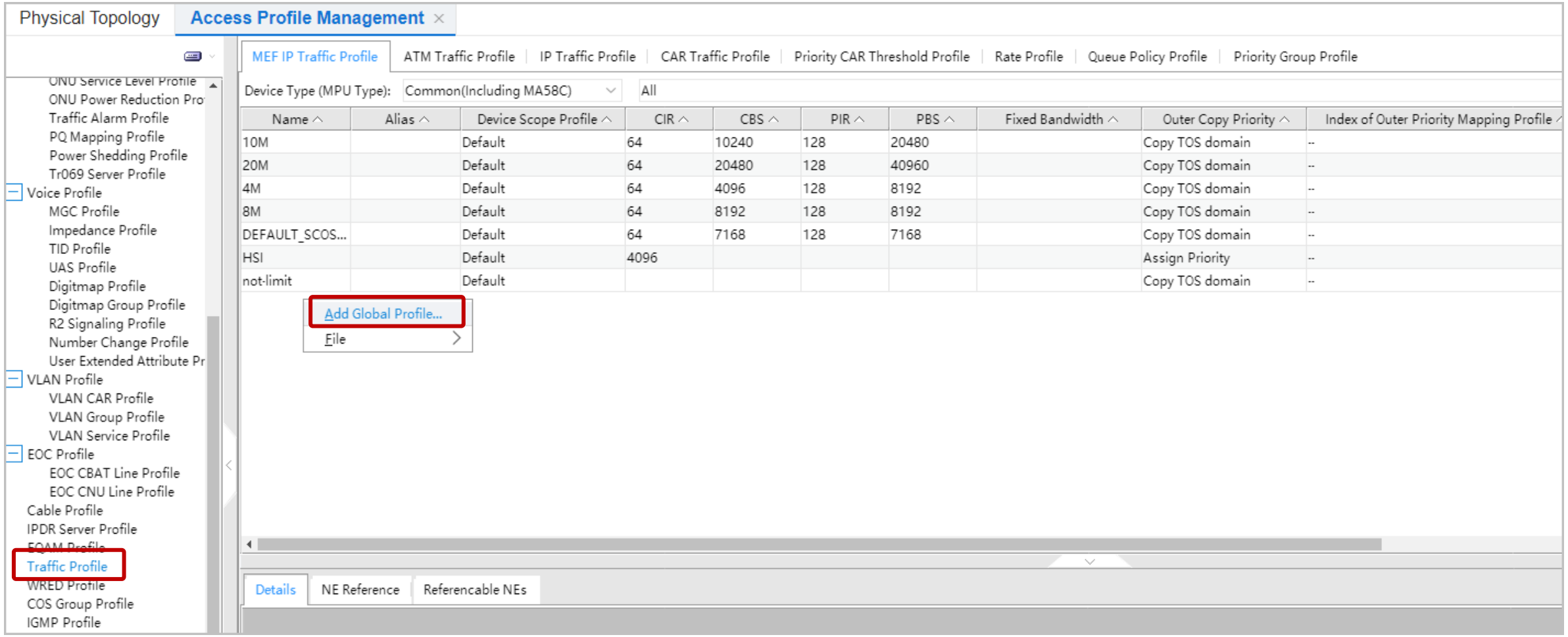
ONU Registration



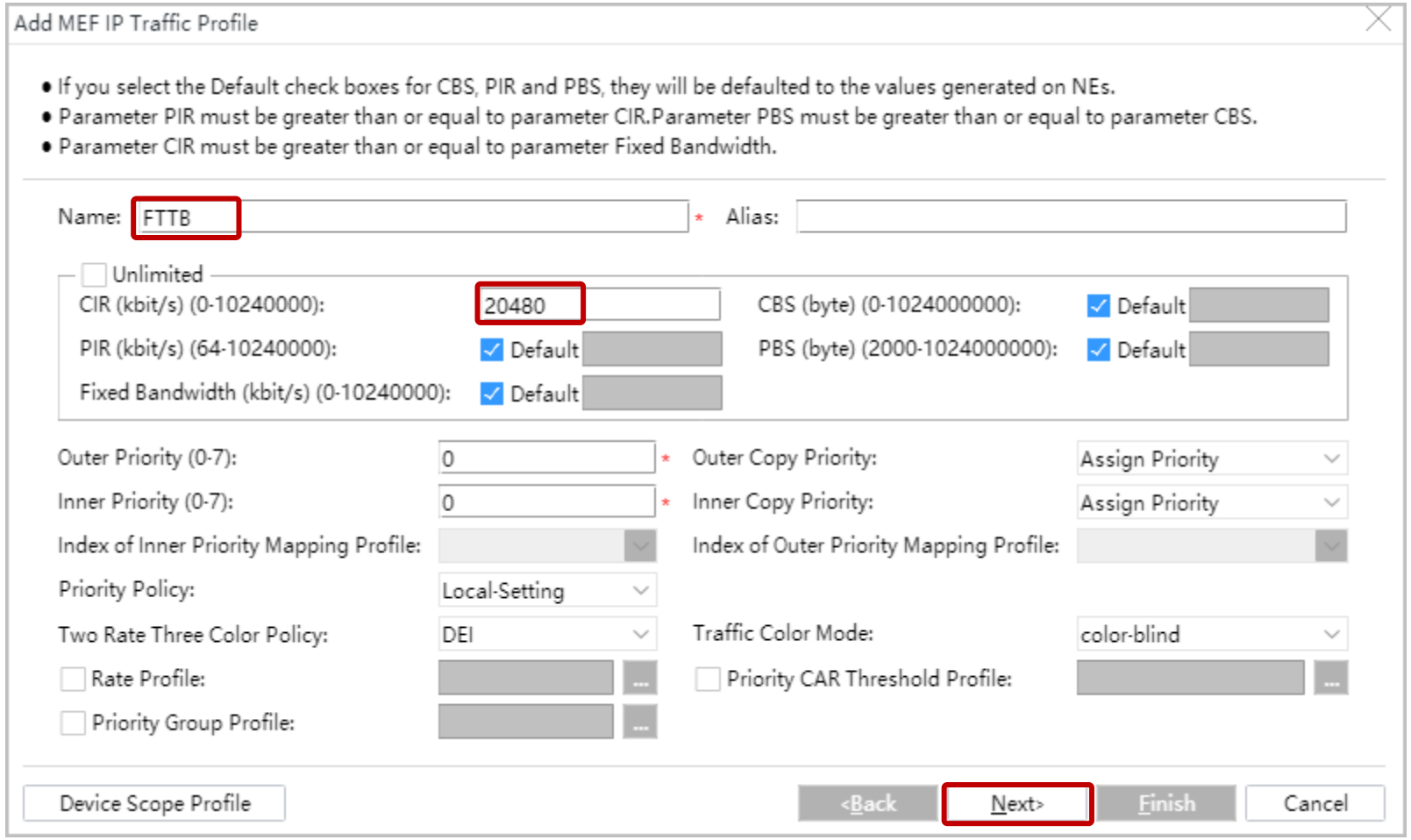
ONU Registration



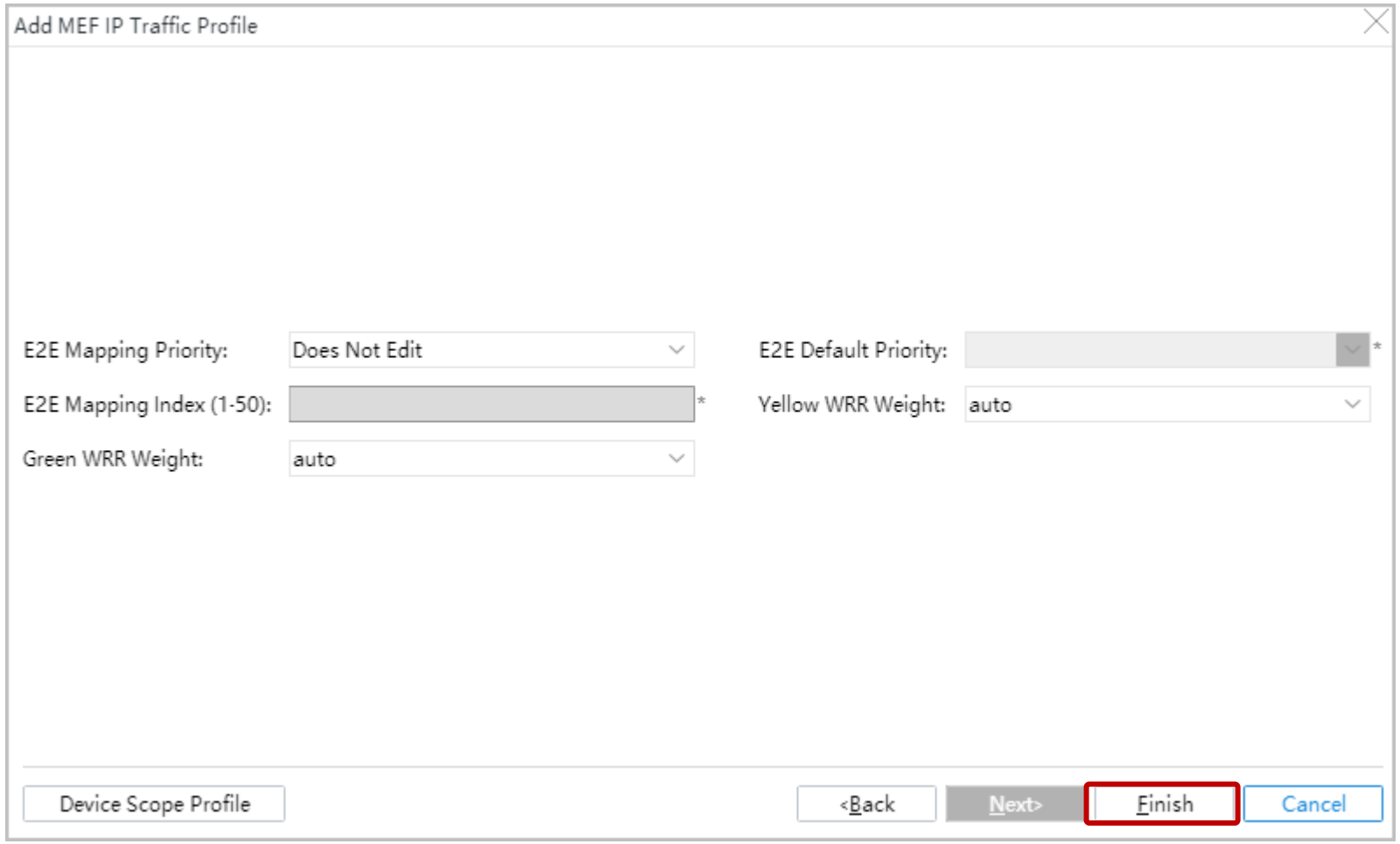
Adding a Traffic Profile



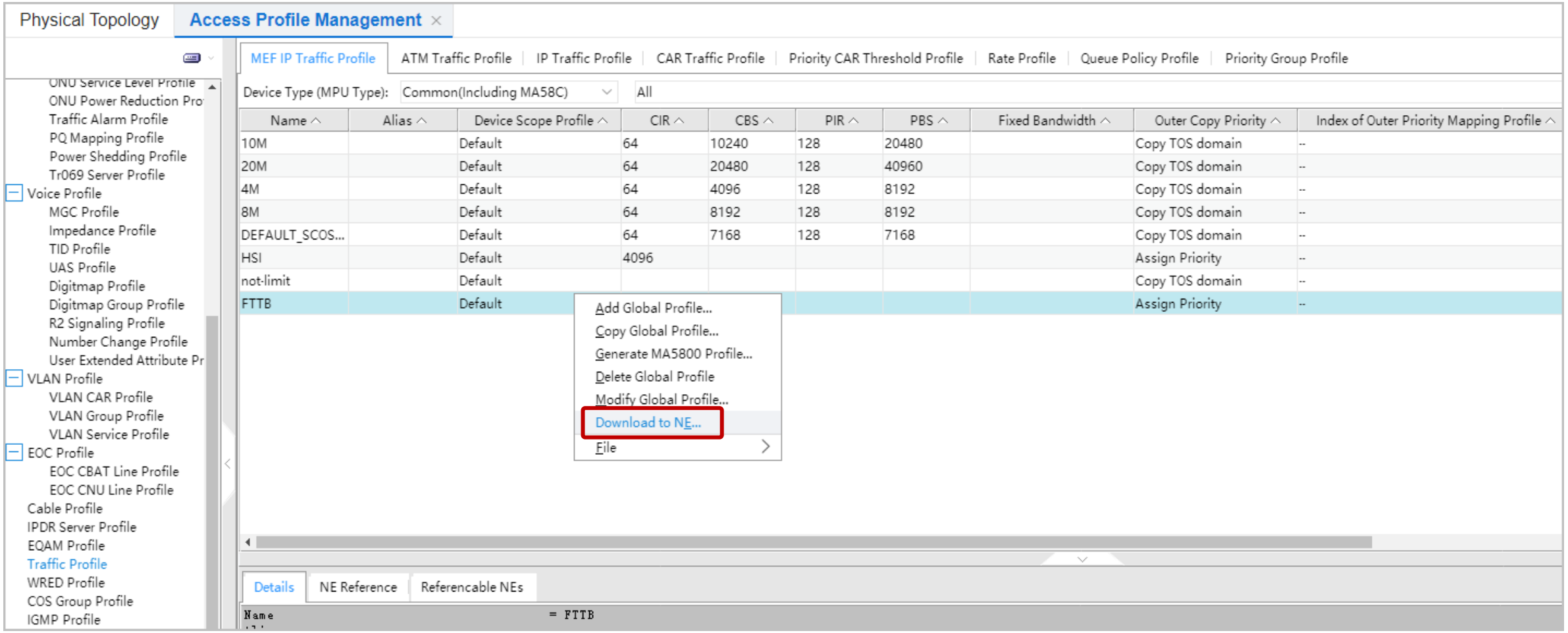
Adding a Traffic Profile



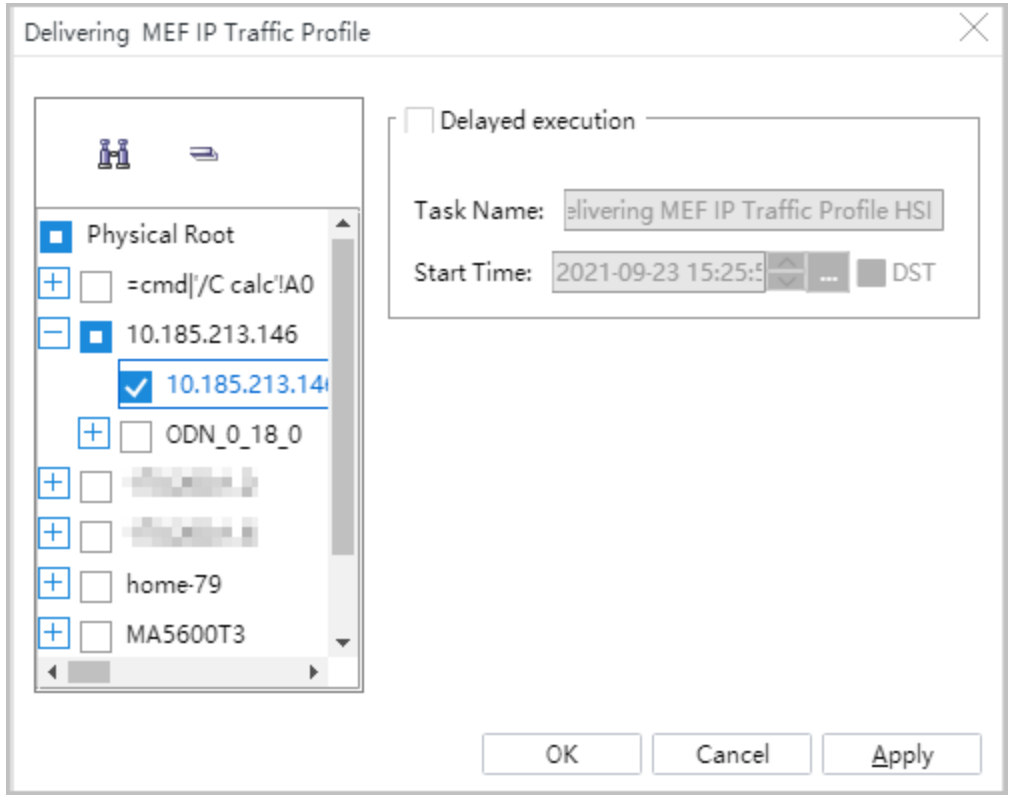
Adding a Traffic Profile



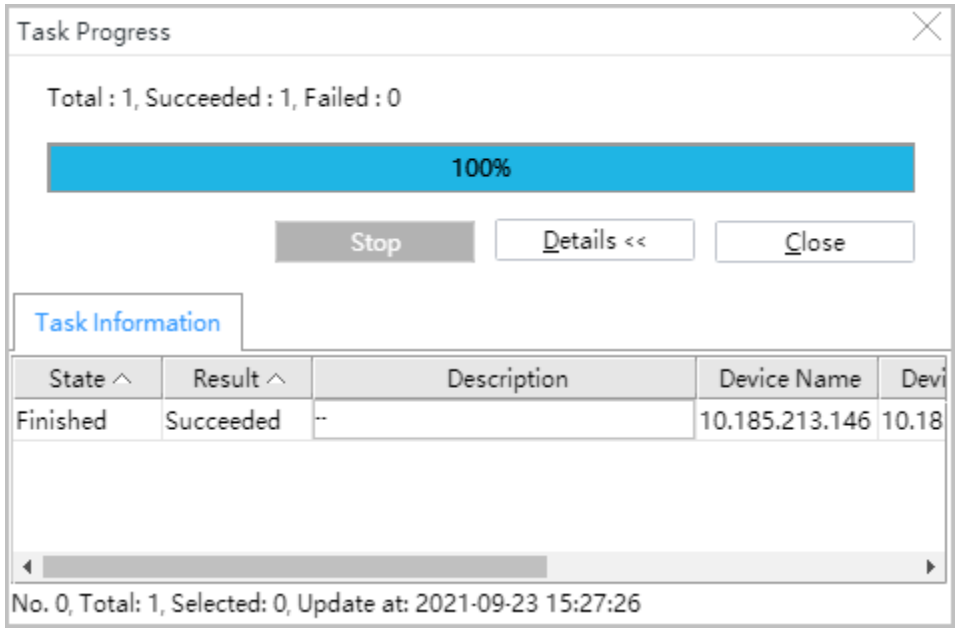
Downloading a Traffic Profile to an NE



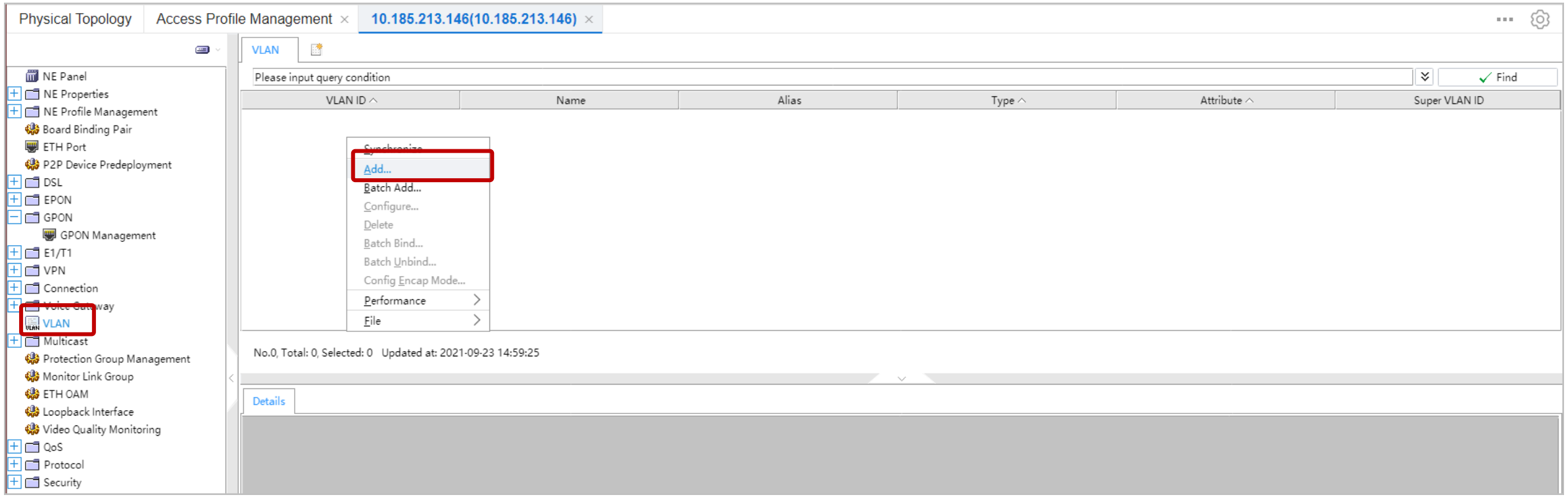
Downloading a Traffic Profile to an NE



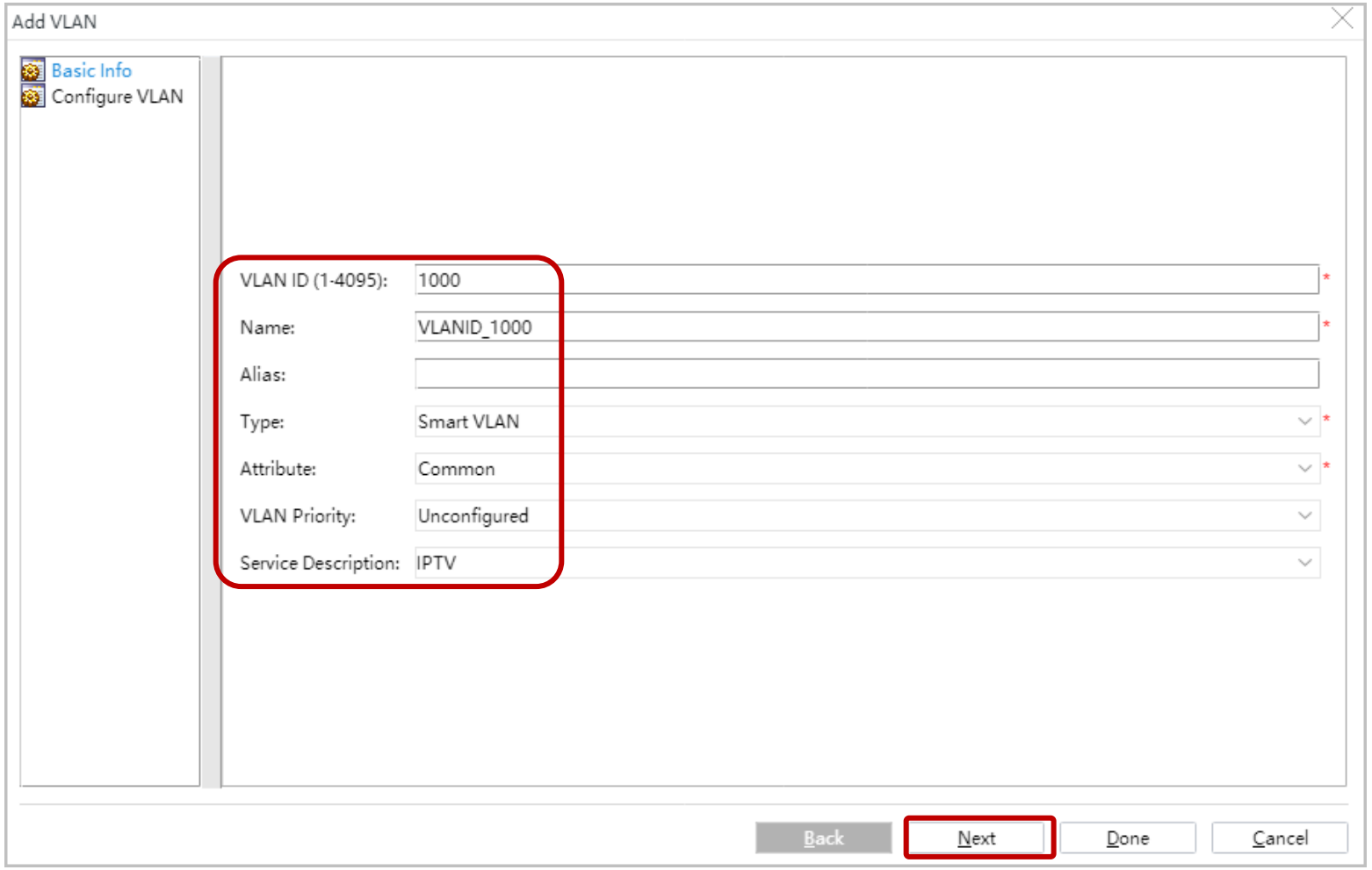
Downloading a Traffic Profile to an NE



Configuring a Service VLAN on the OLT

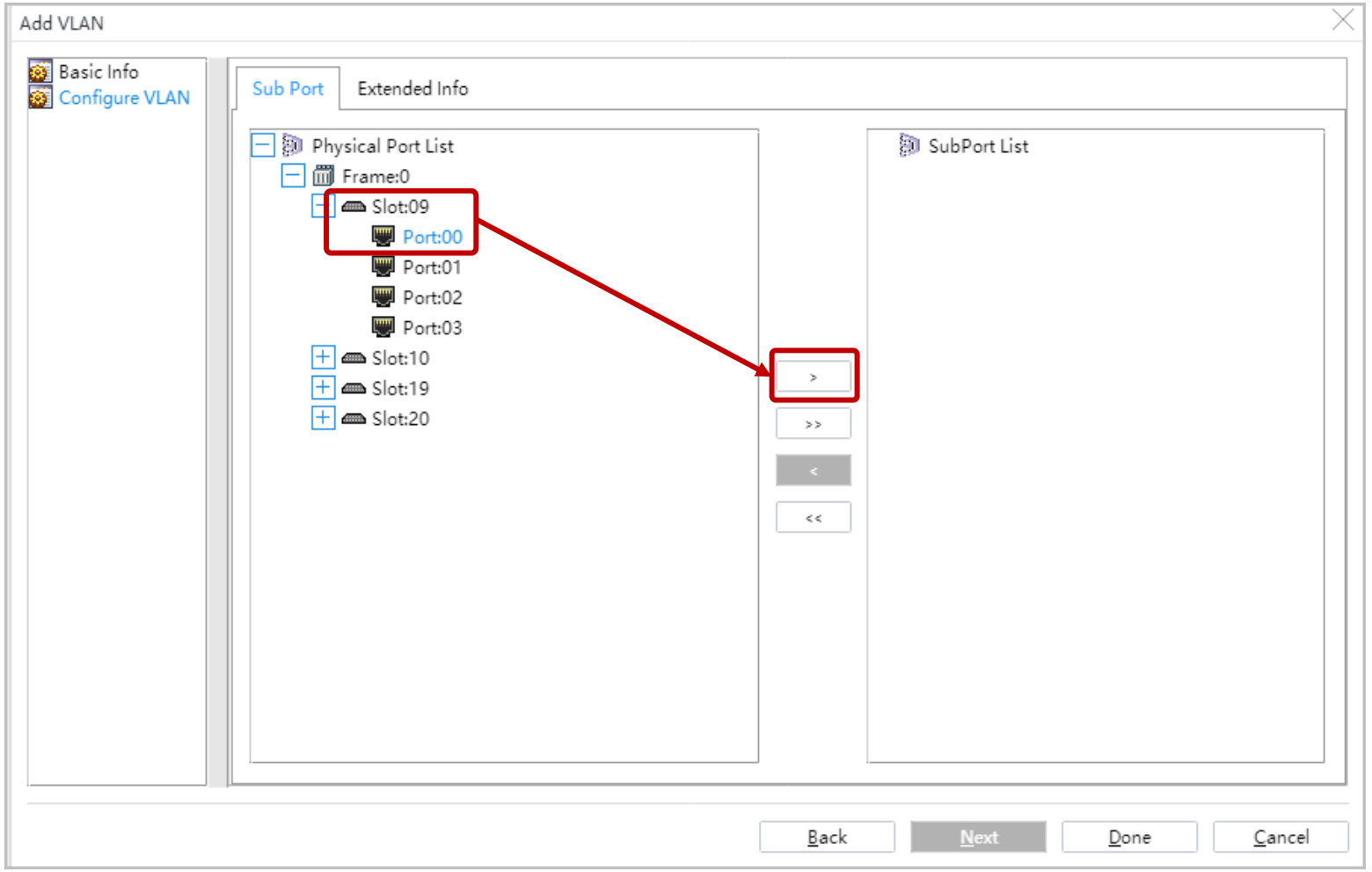


Configuring a Service VLAN

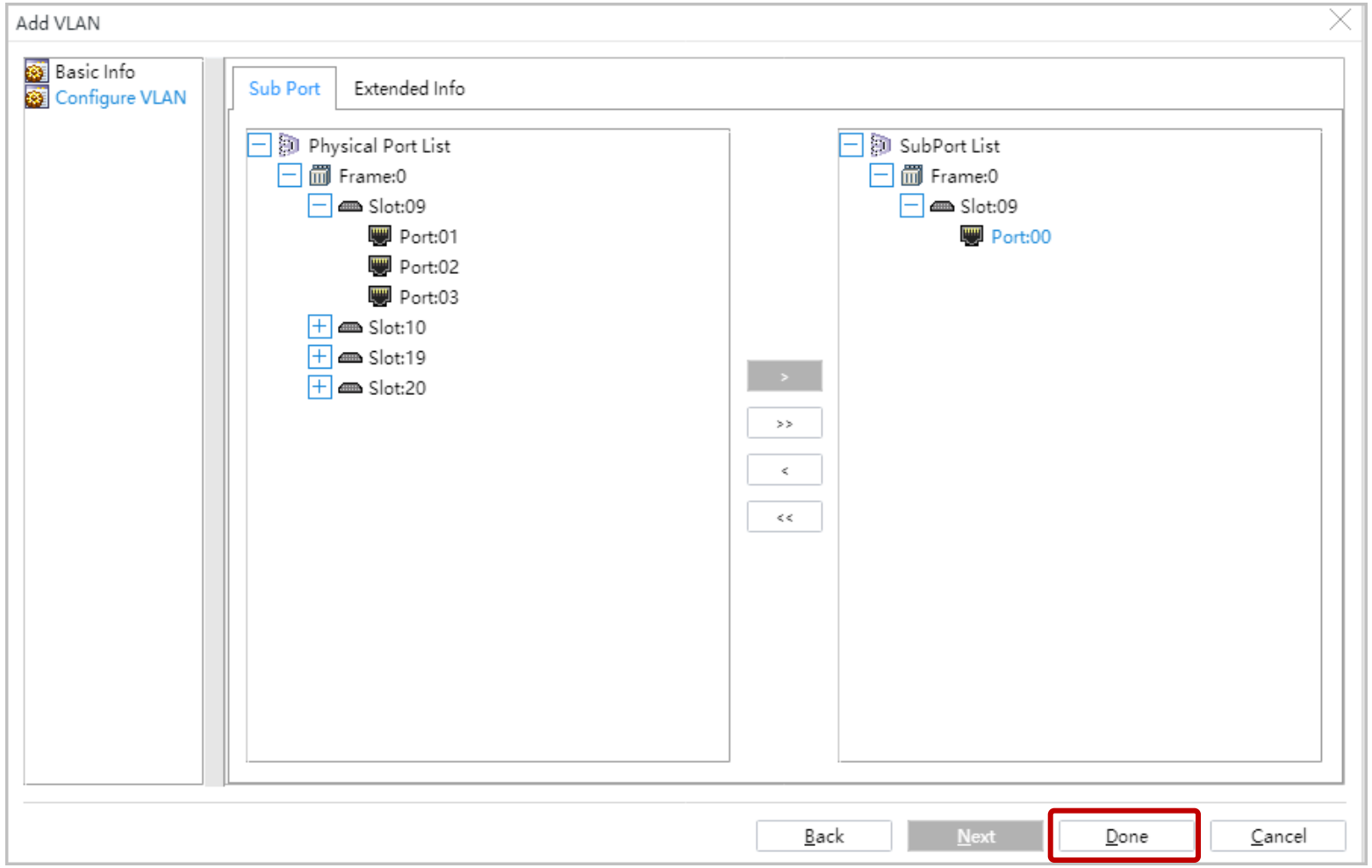


HUAWEI

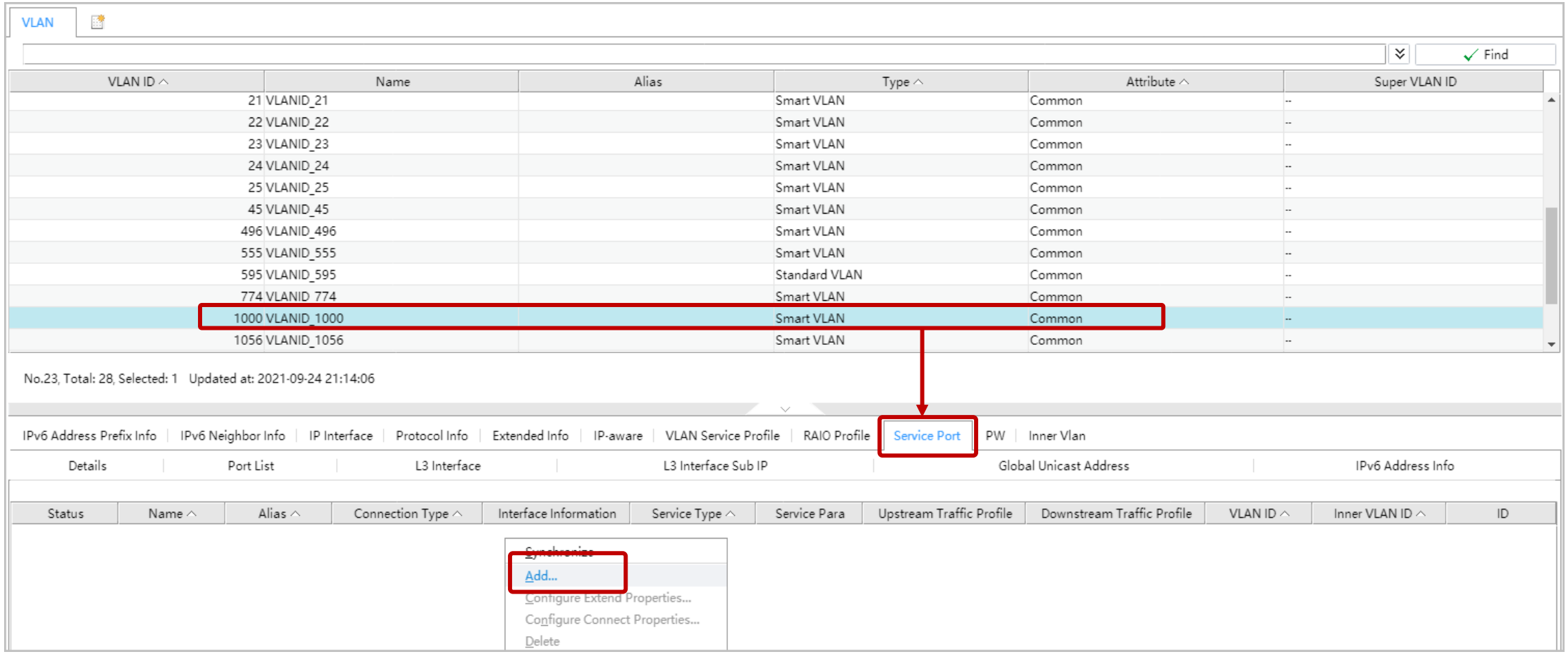
Selecting an Uplink Port



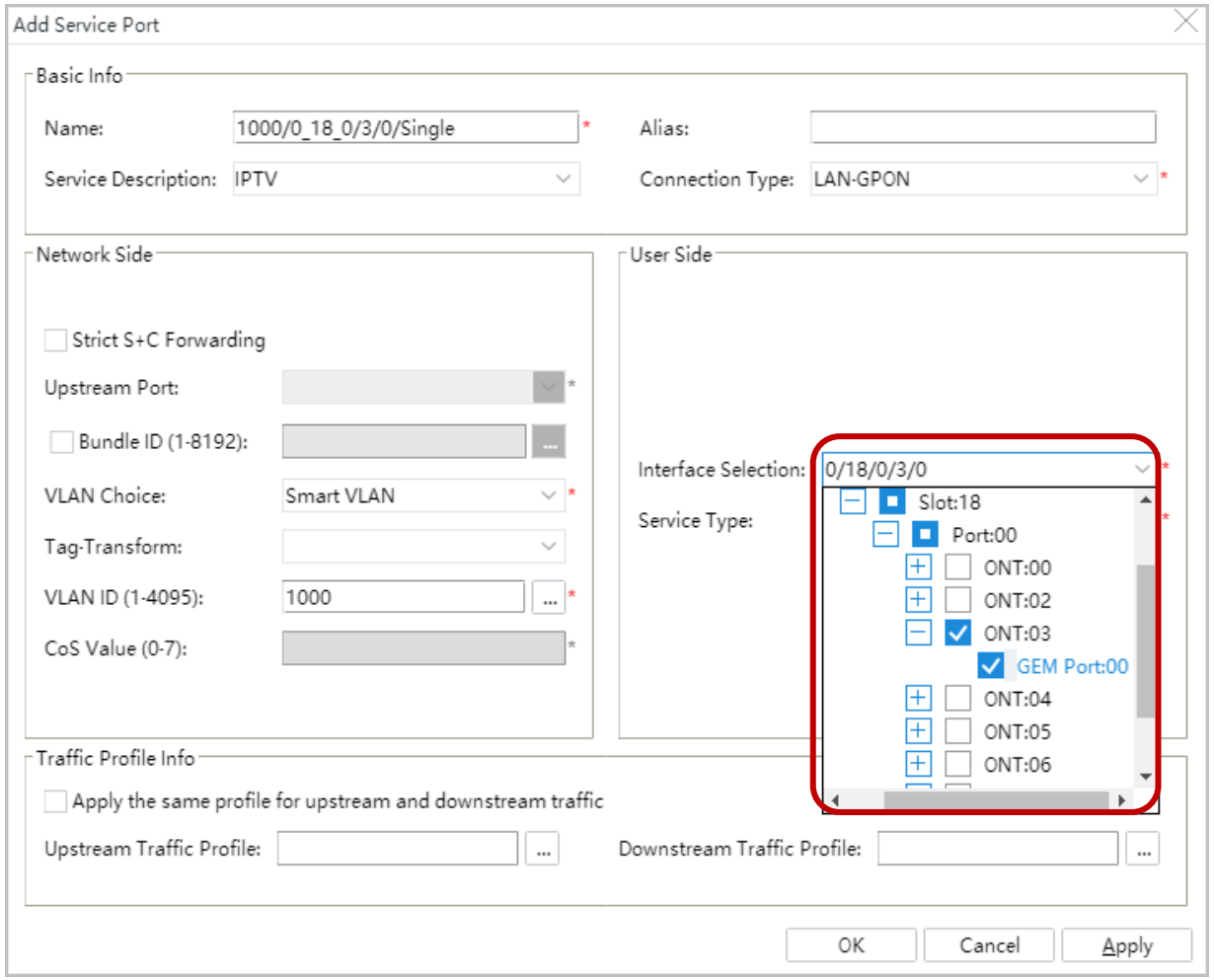
Configuring a Service VLAN



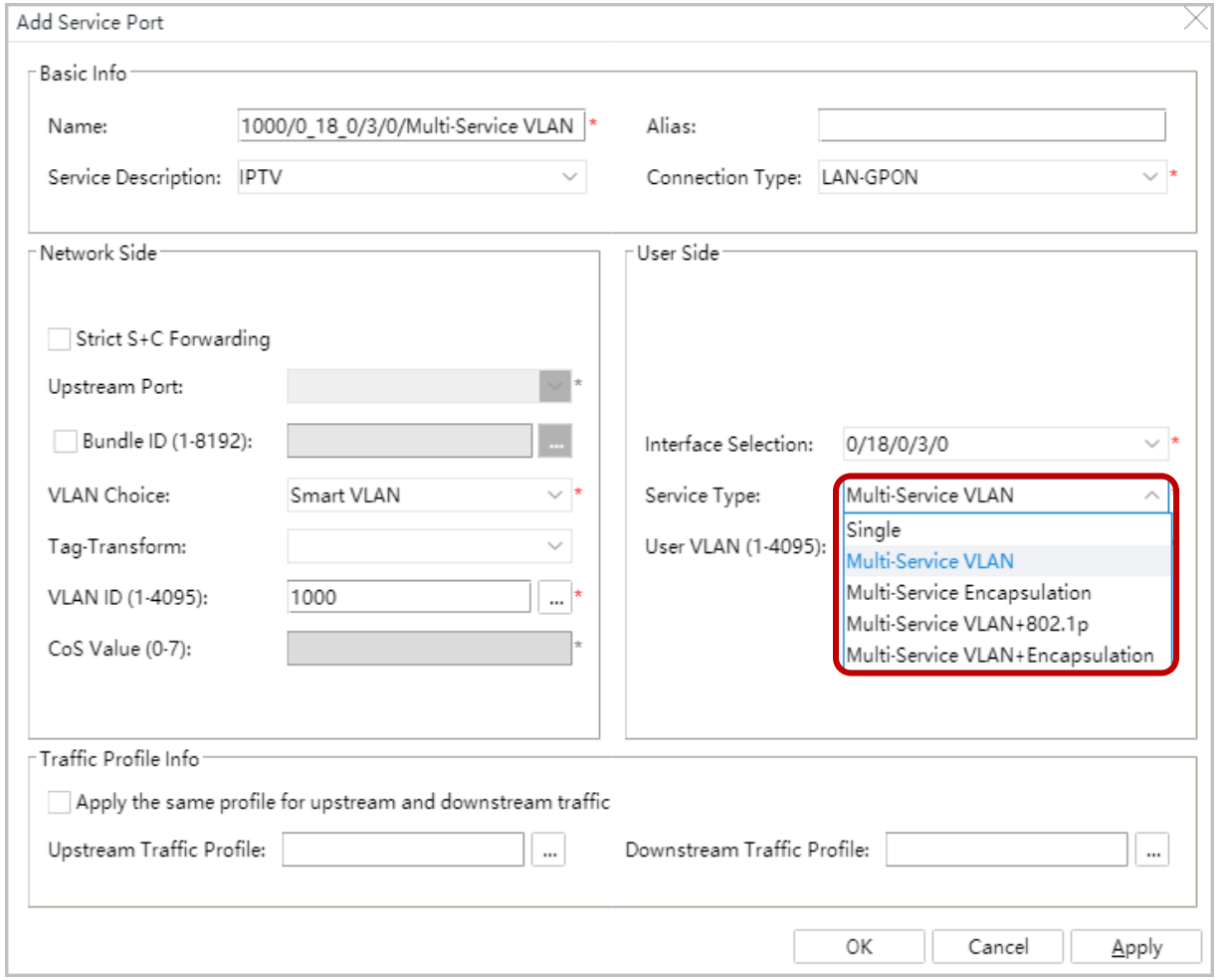
Adding a Service Port



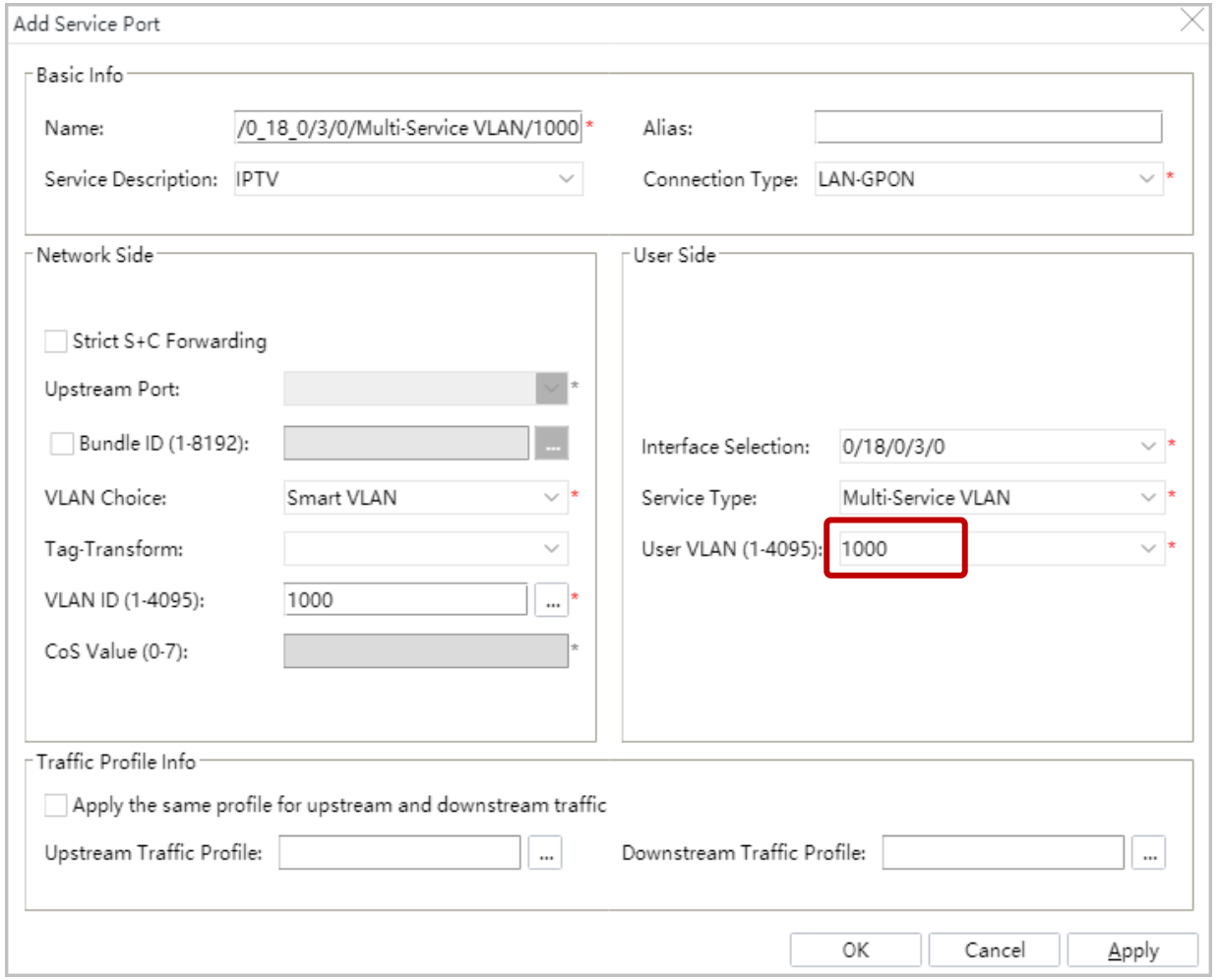
Selecting a GEM Port



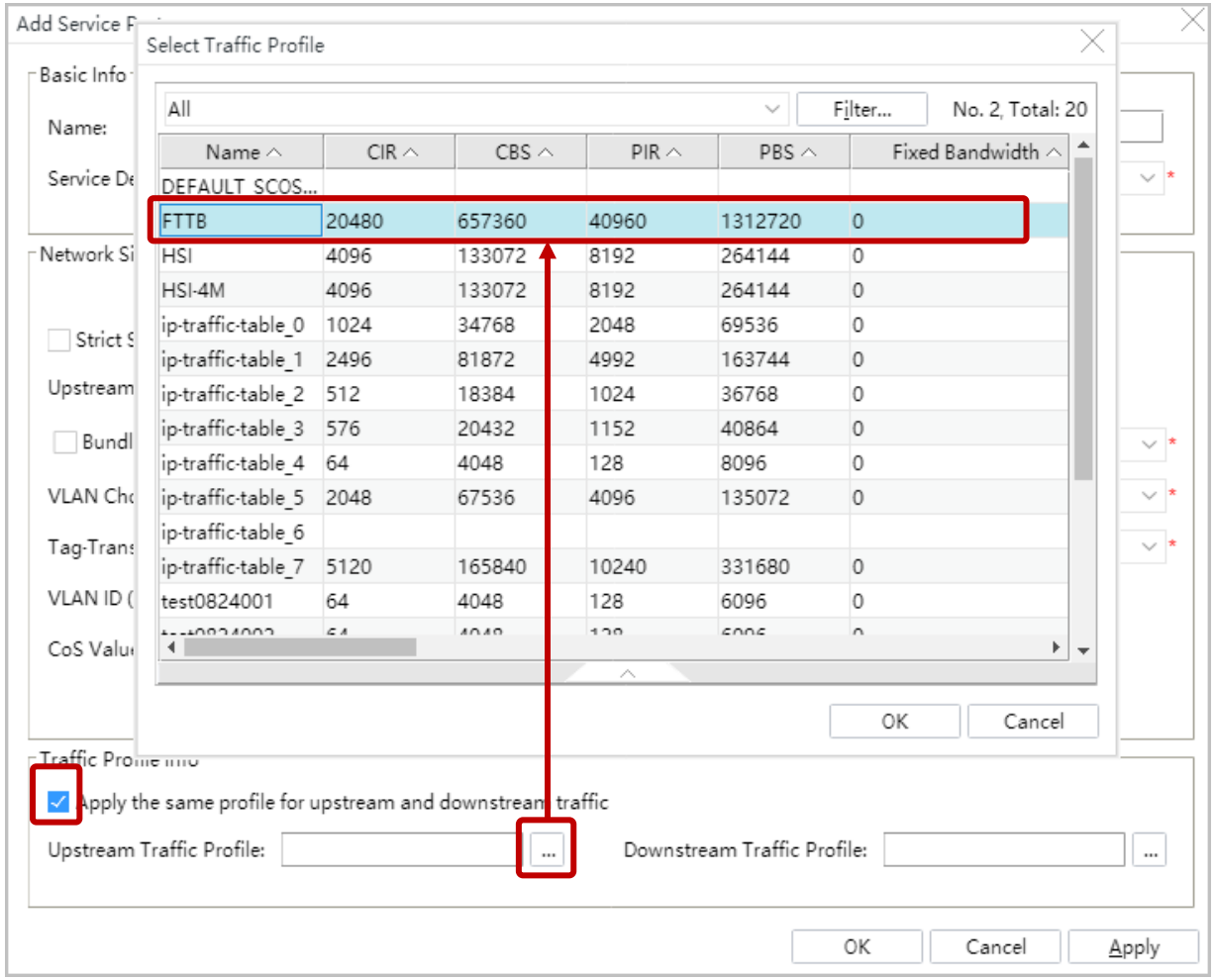
Setting the Service Type



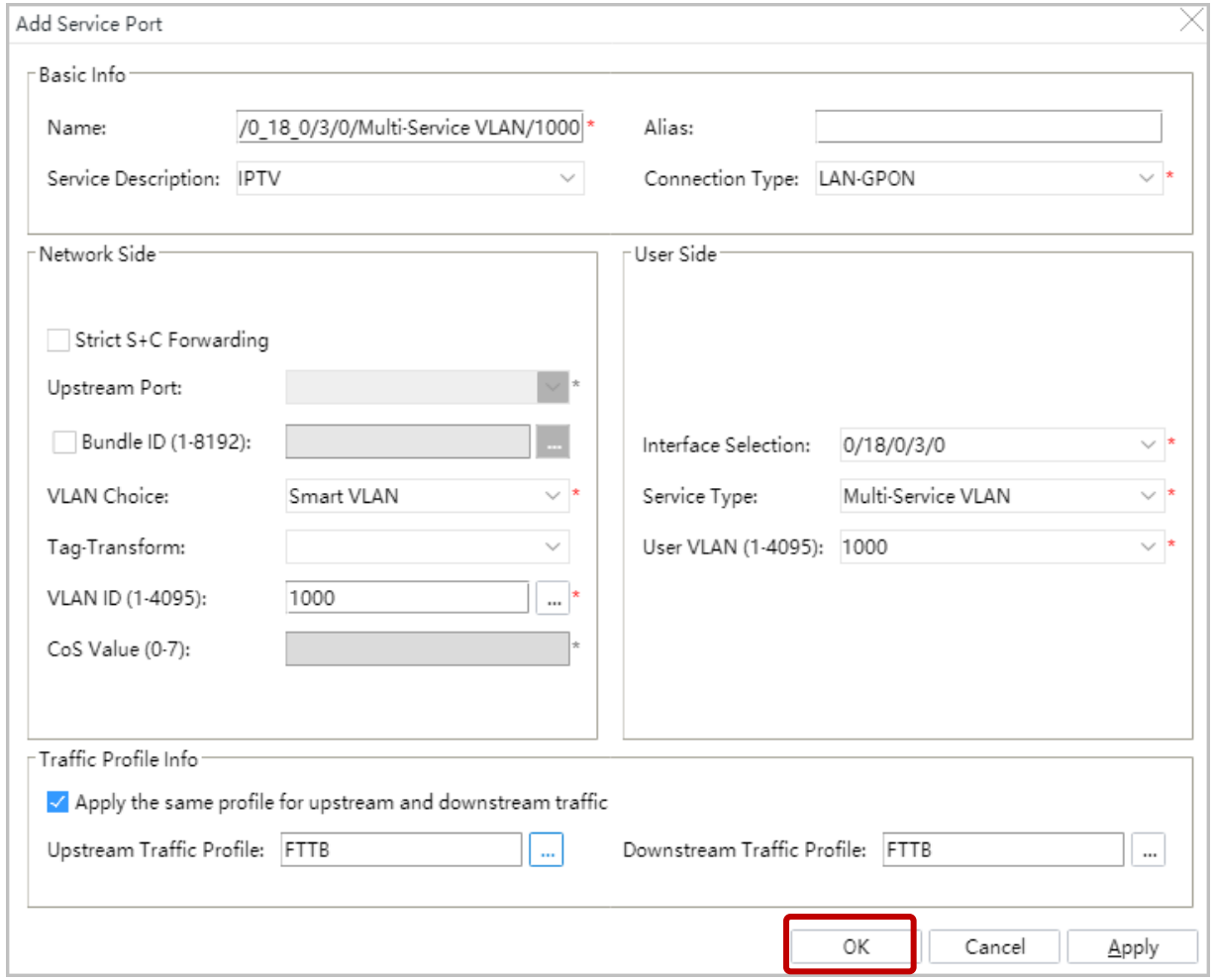
Setting the User VLAN



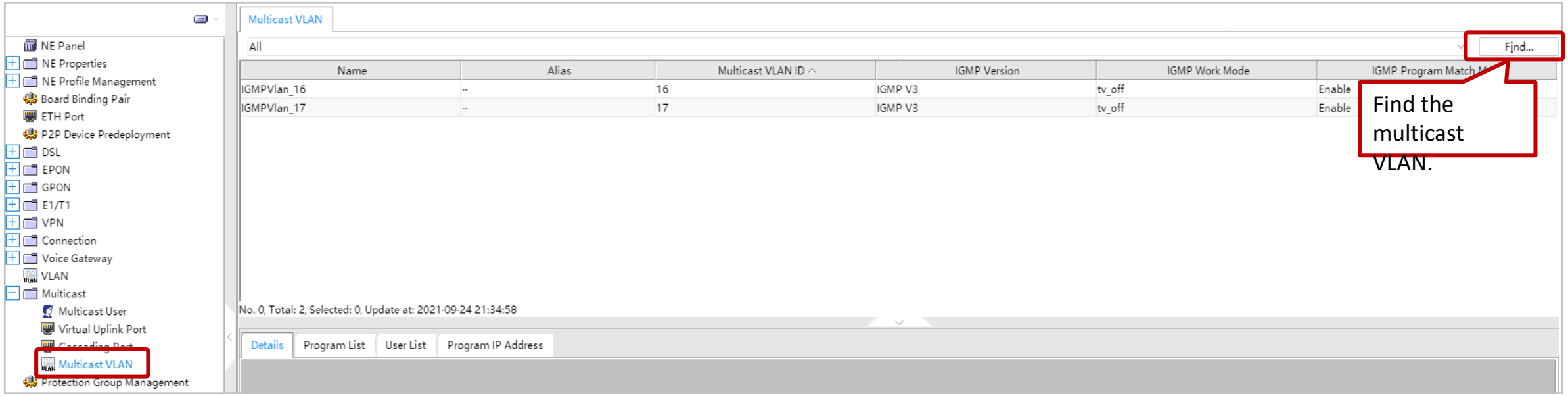
Binding Traffic Profiles



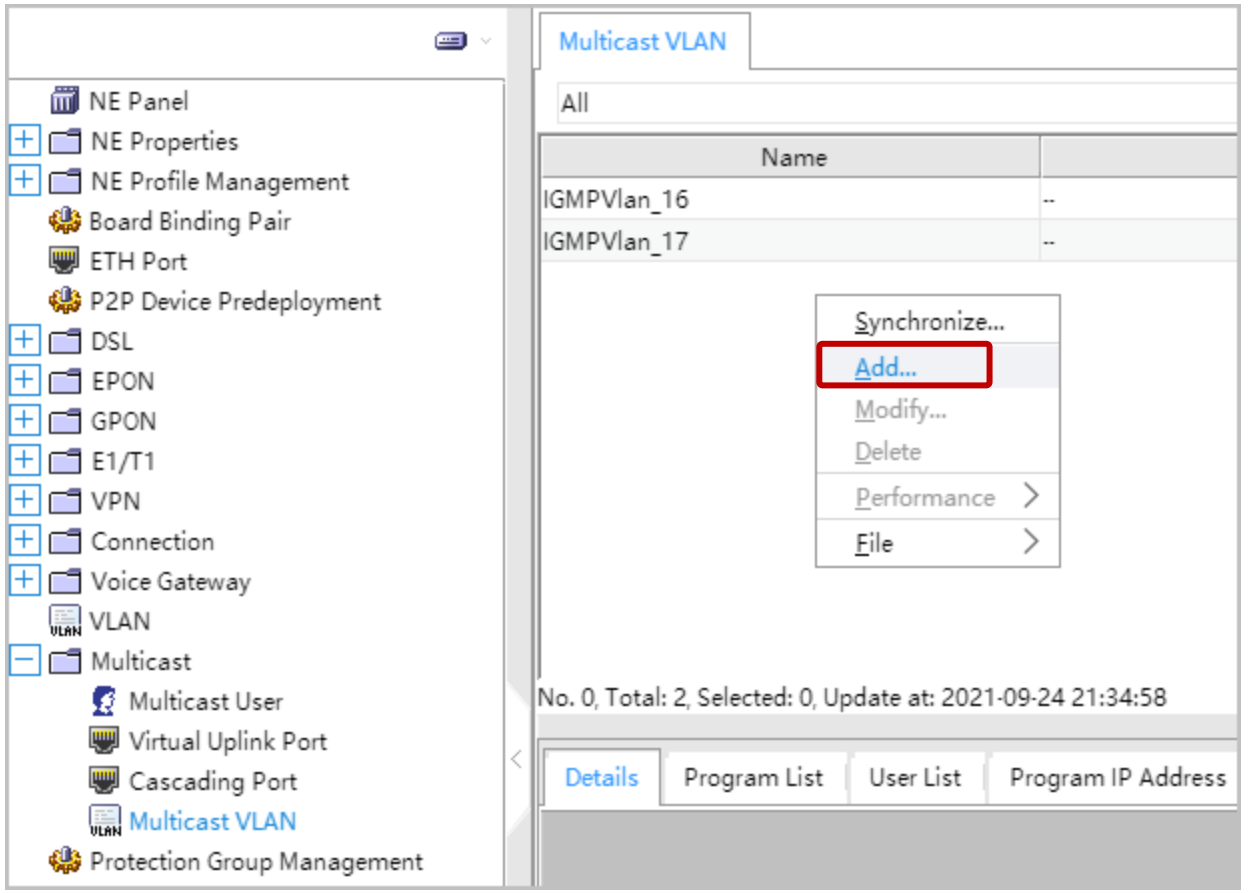
Adding a Service Port



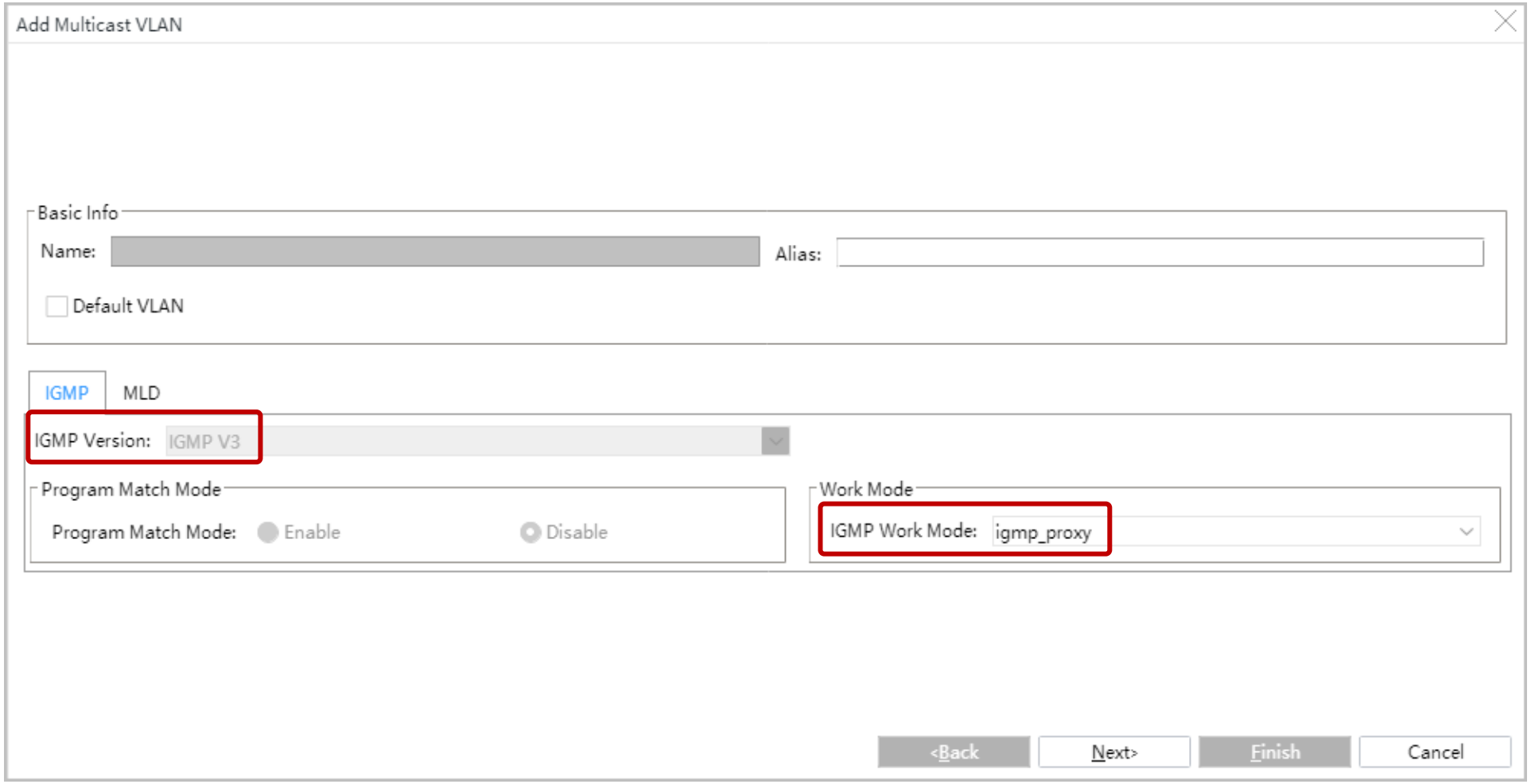
Adding a Multicast VLAN (on the OLT)



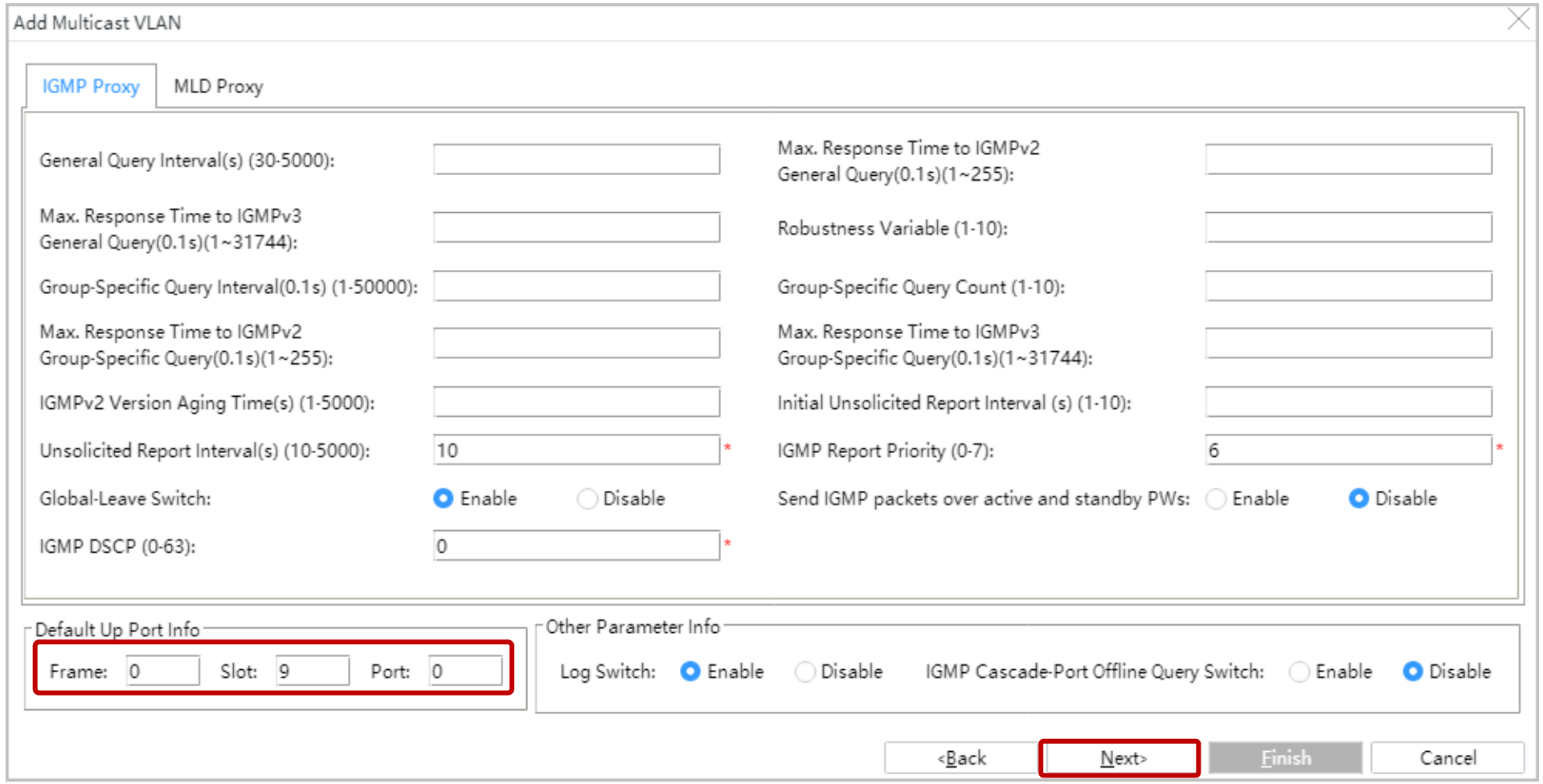
Adding a Multicast VLAN



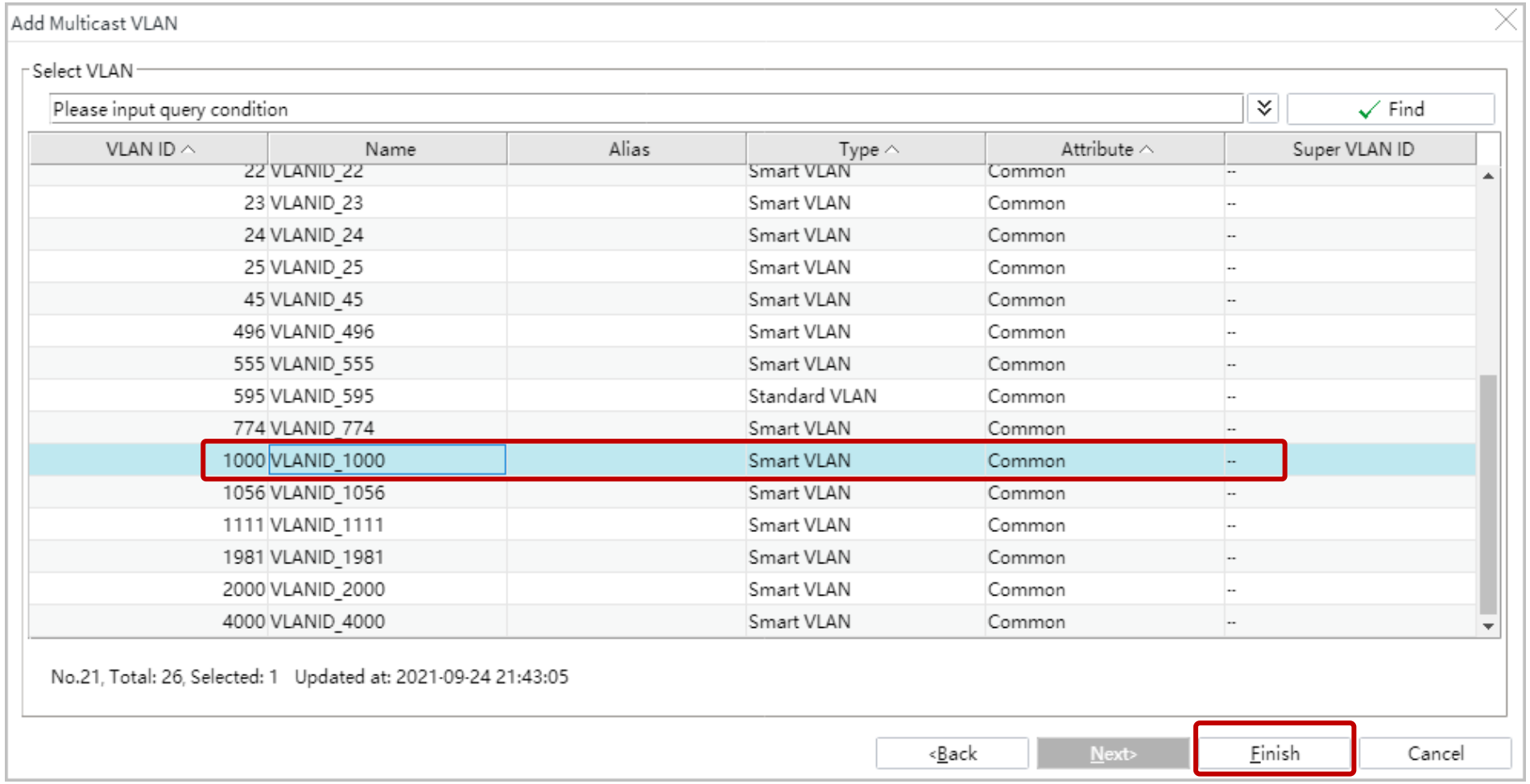
Adding a Multicast VLAN



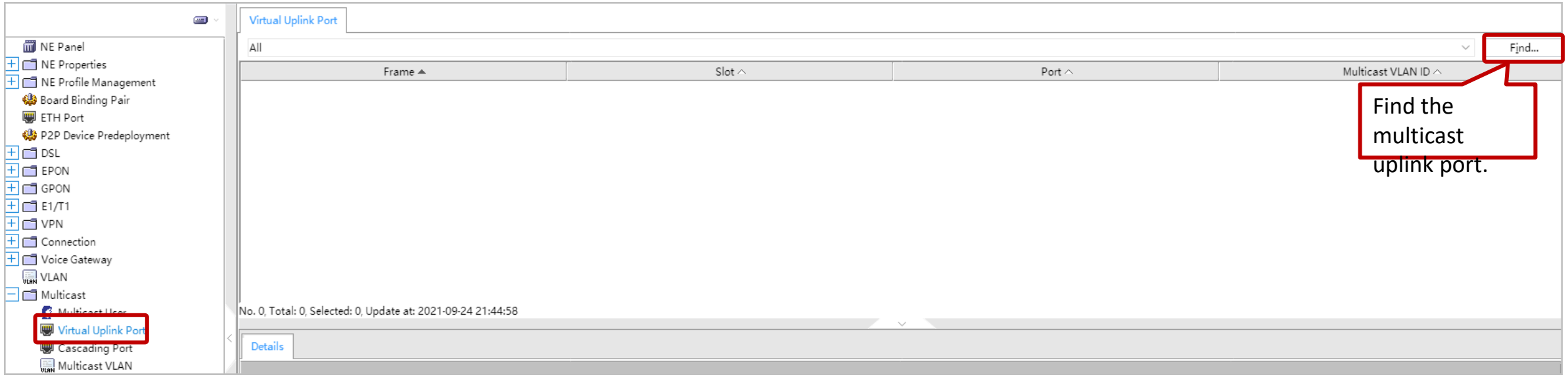
Adding a Multicast VLAN



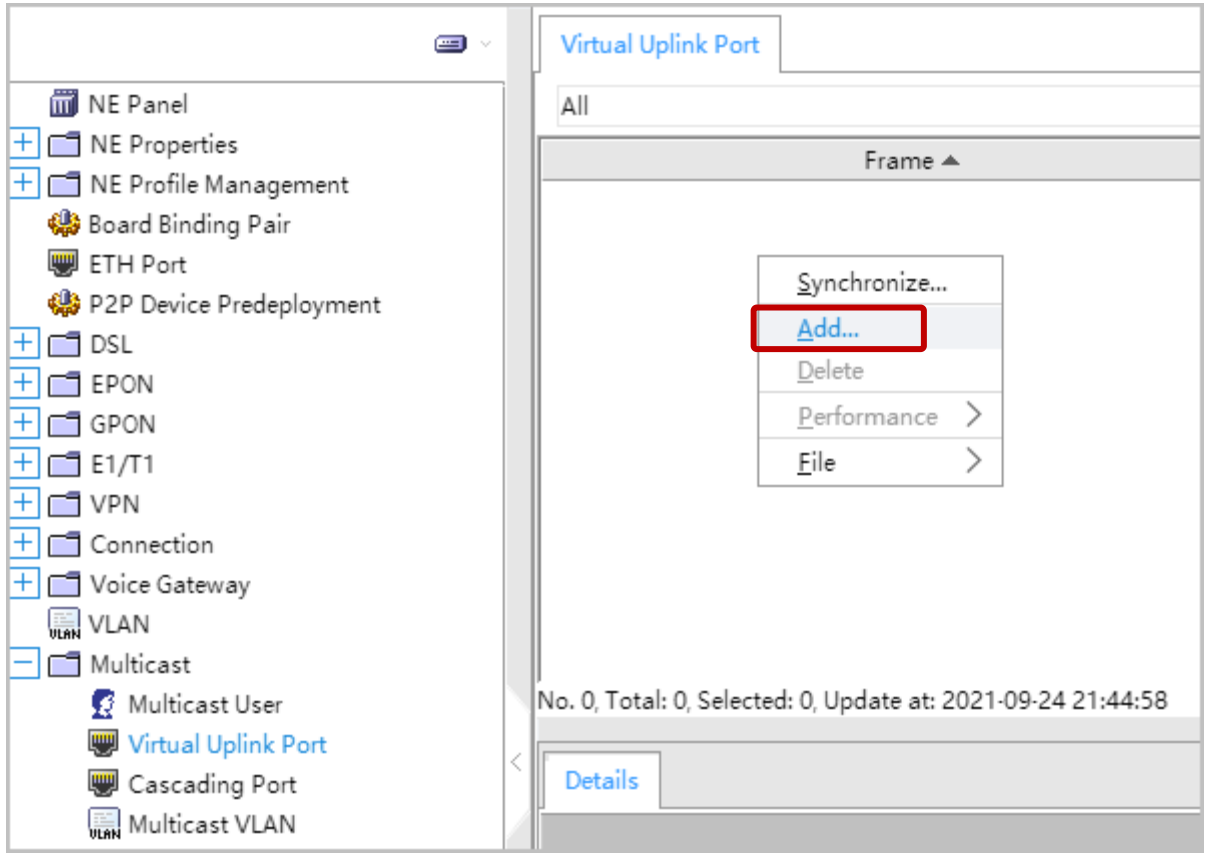
Adding a Multicast VLAN



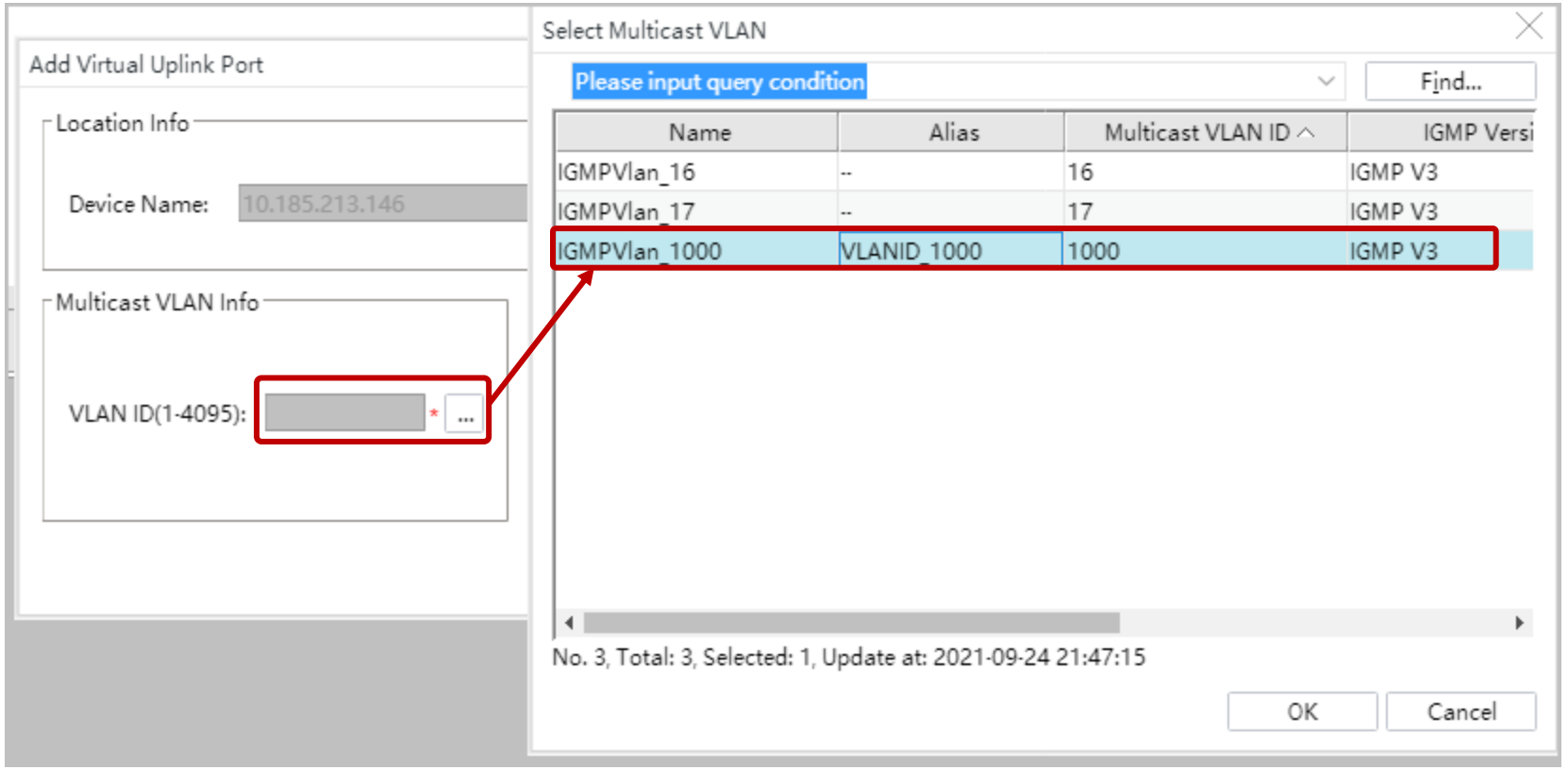
Adding a Multicast Uplink Port



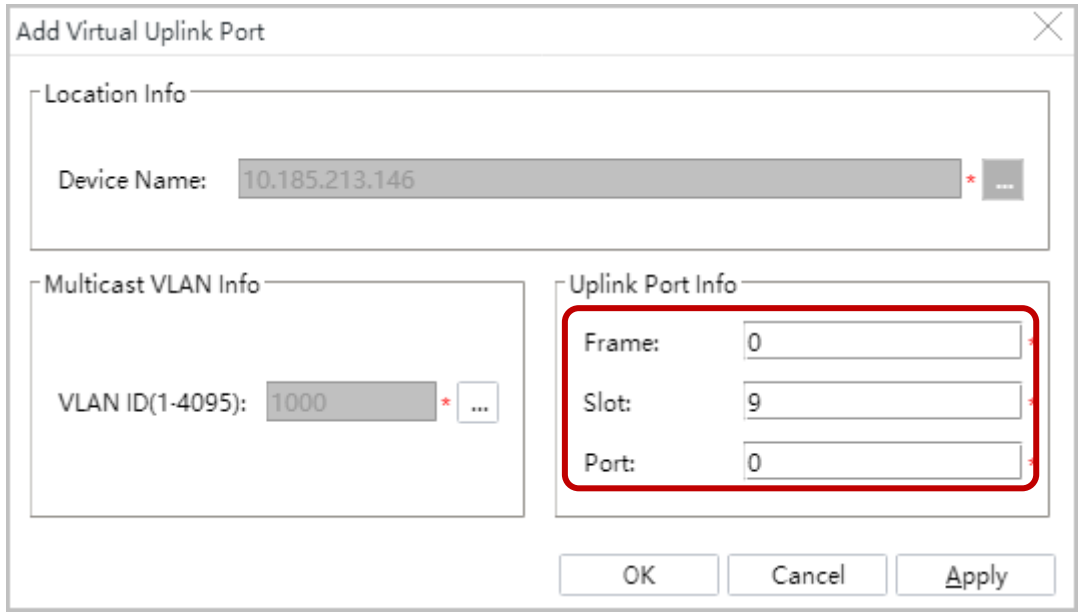
Adding a Multicast Uplink Port



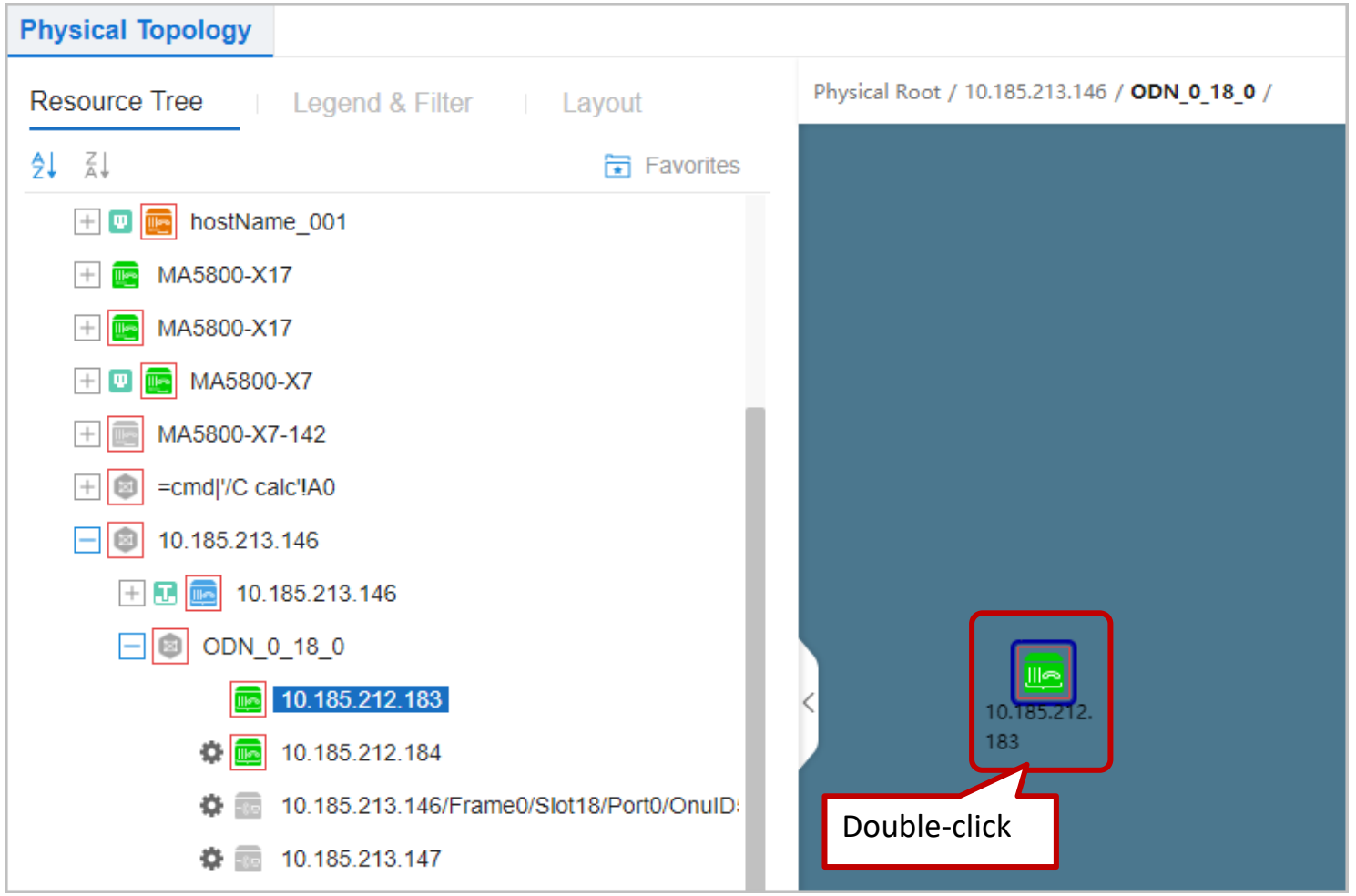
Adding a Multicast Uplink Port



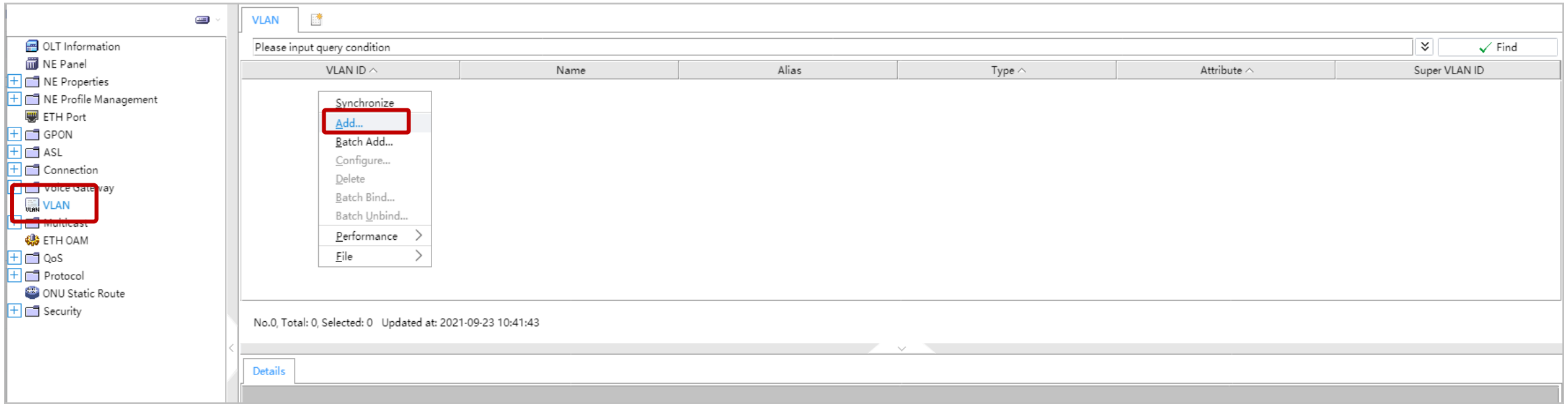
Adding a Multicast Uplink Port



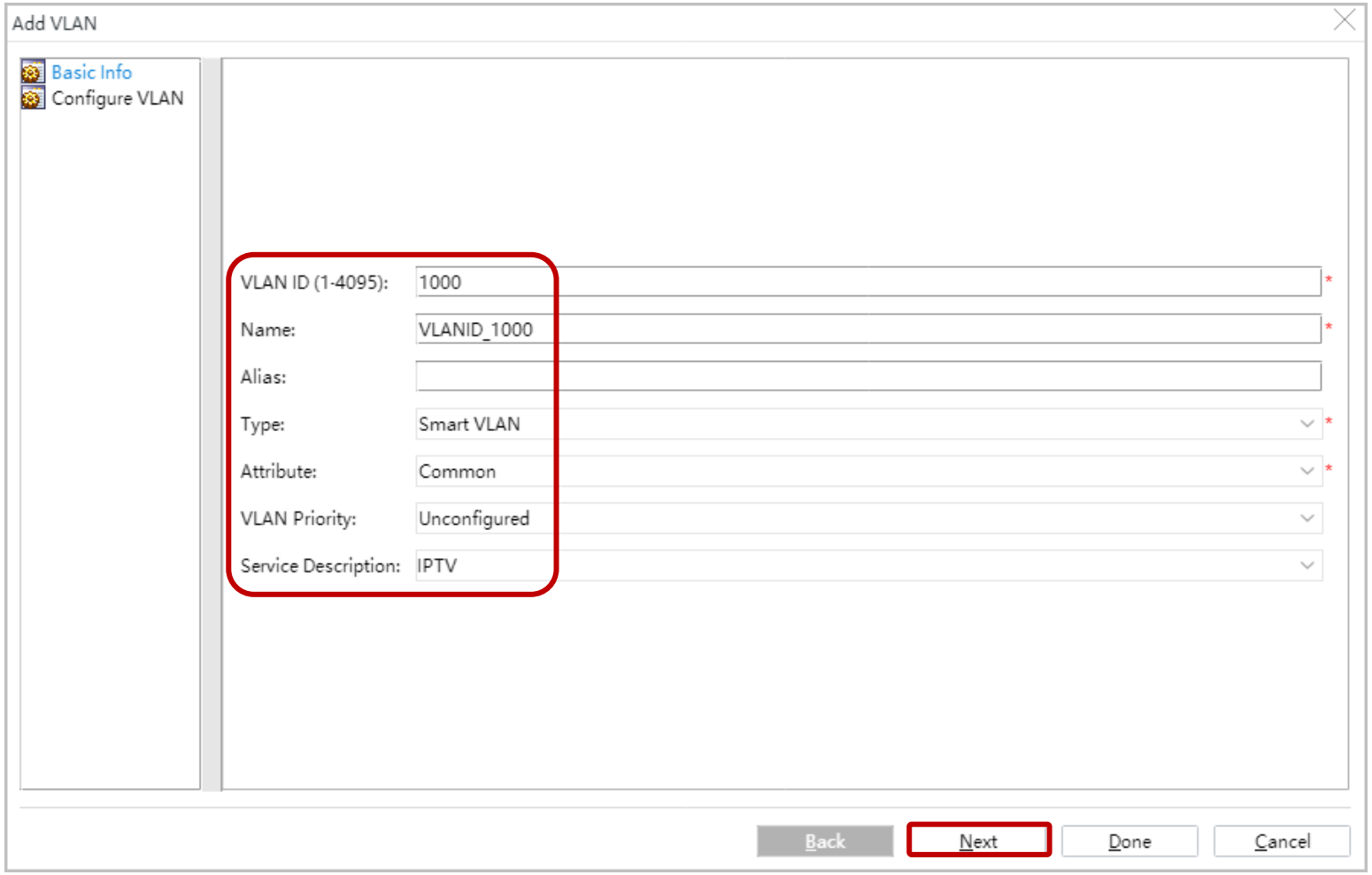
Double-clicking an ONU



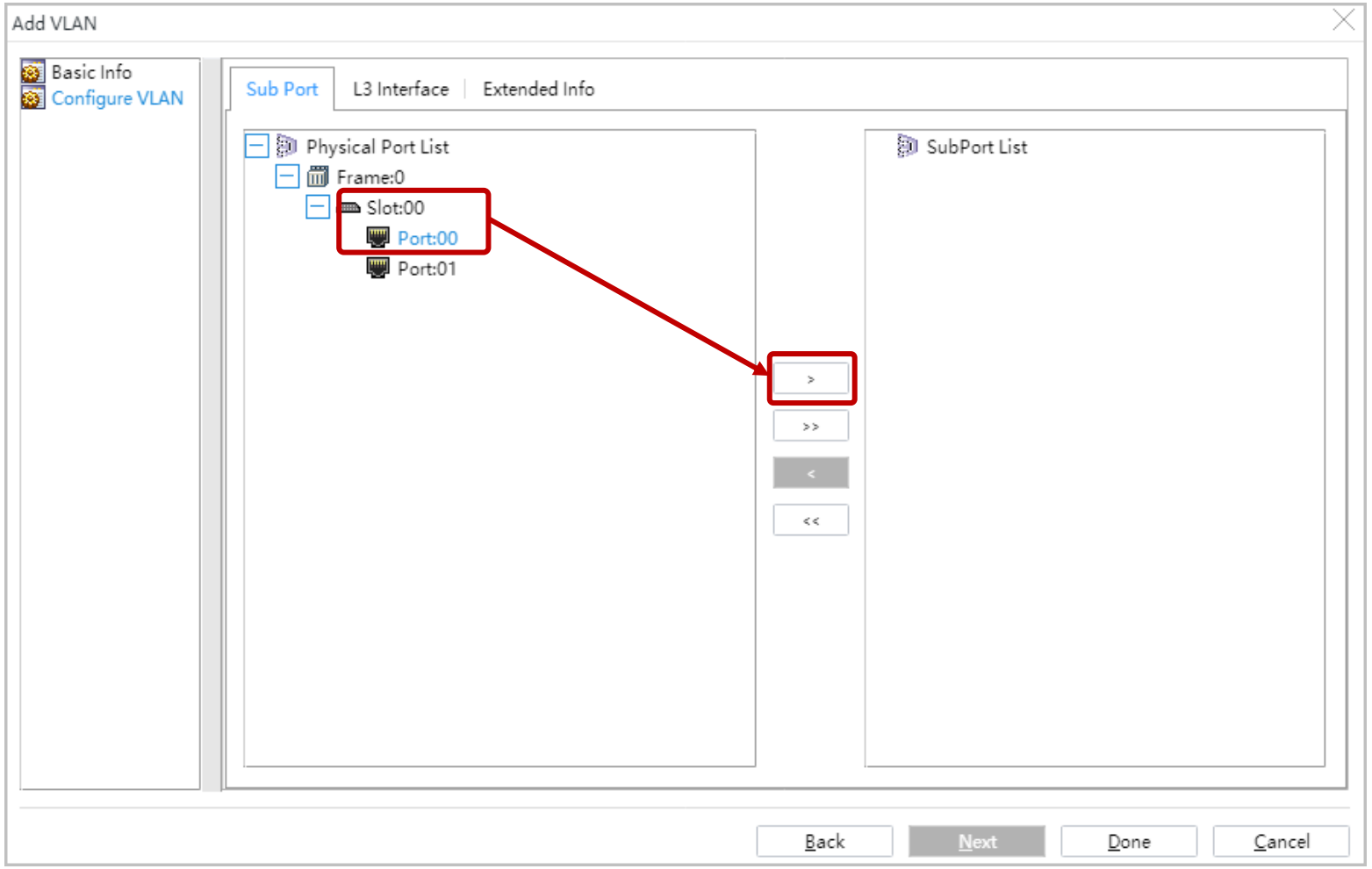
Configuring a Service VLAN on the ONU



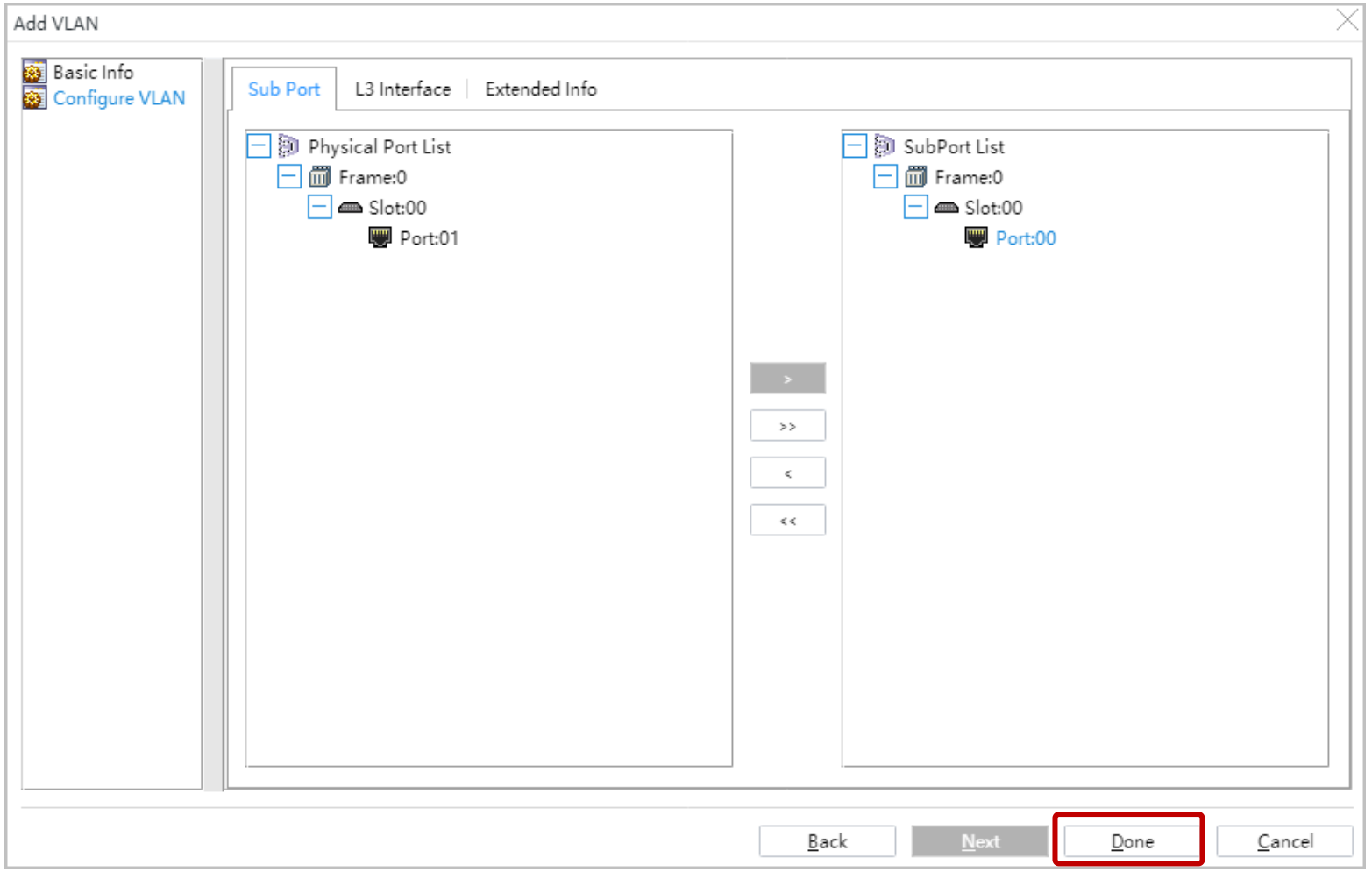
Configuring a Service VLAN



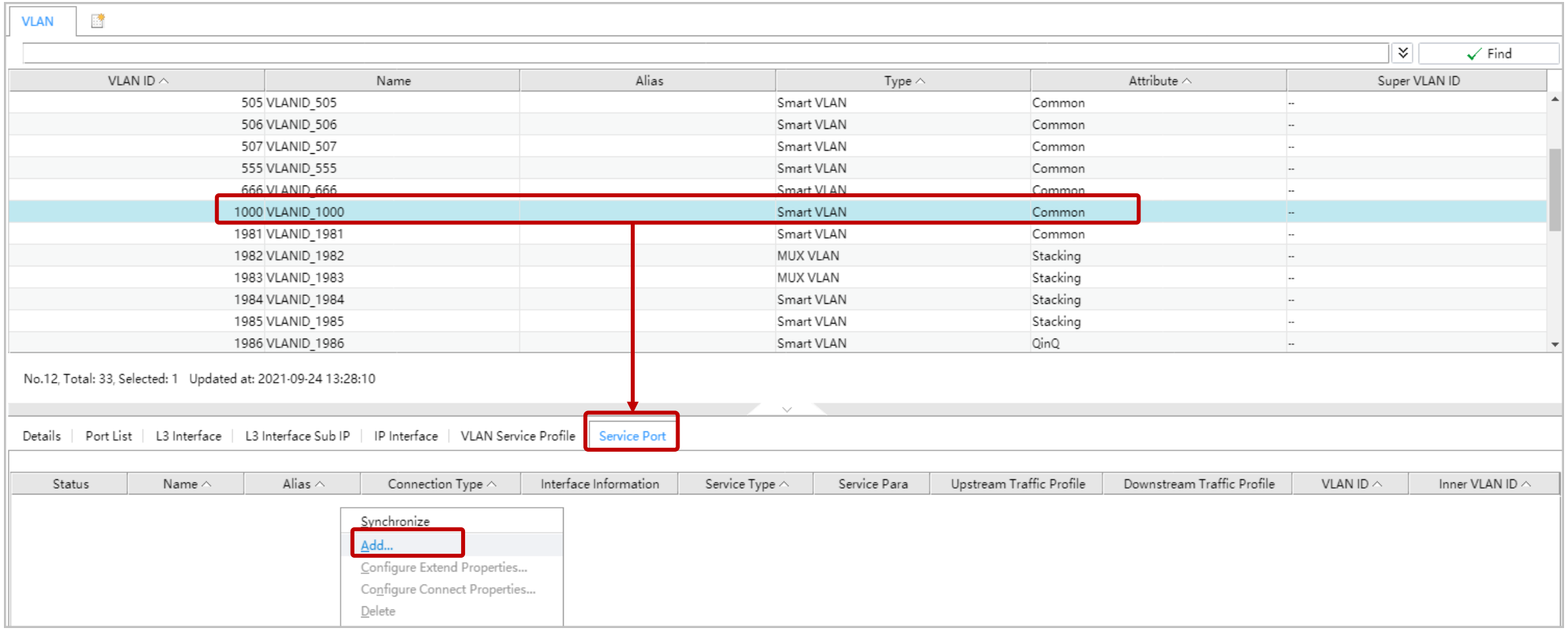
Selecting an Uplink Port



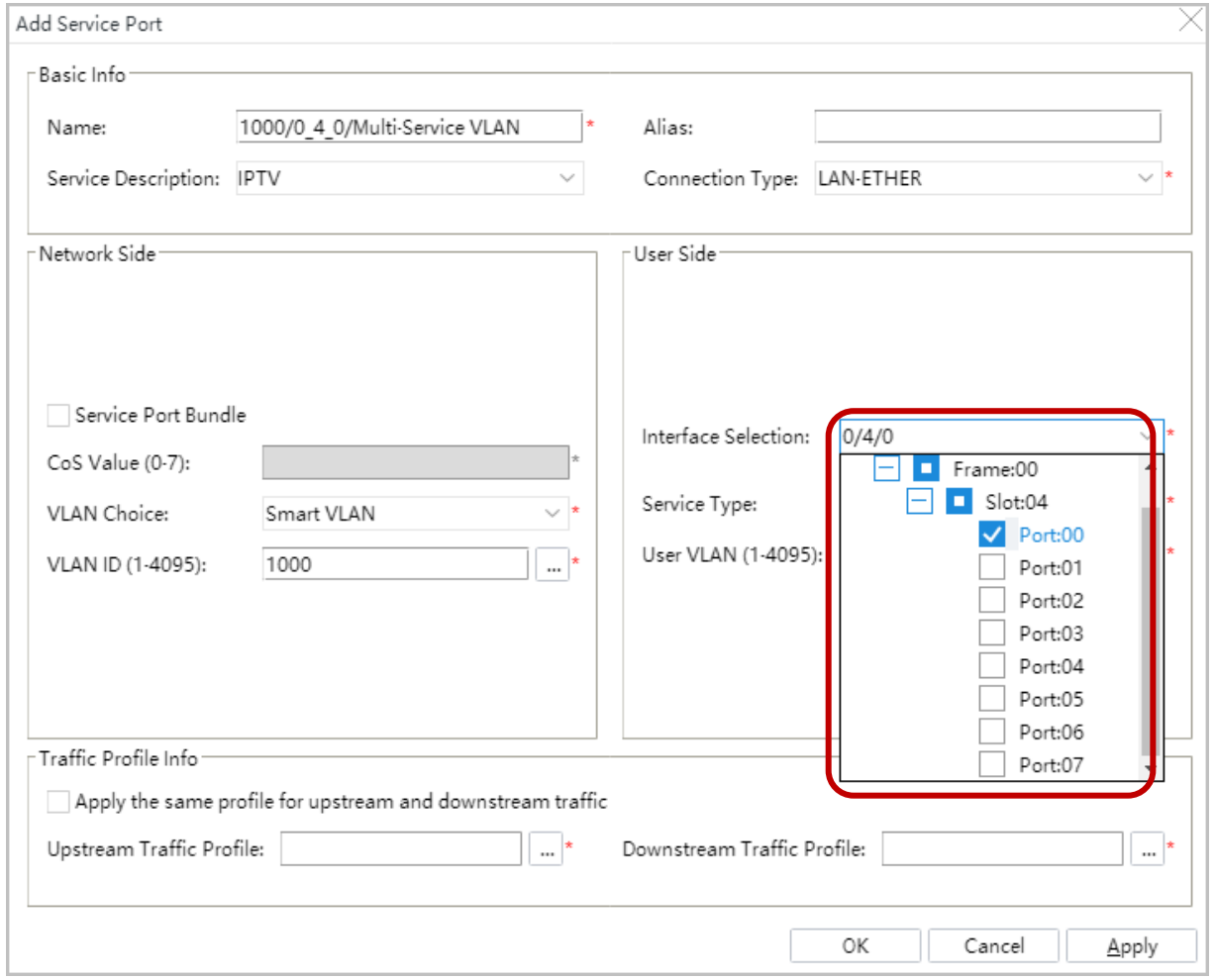
Configuring a Service VLAN



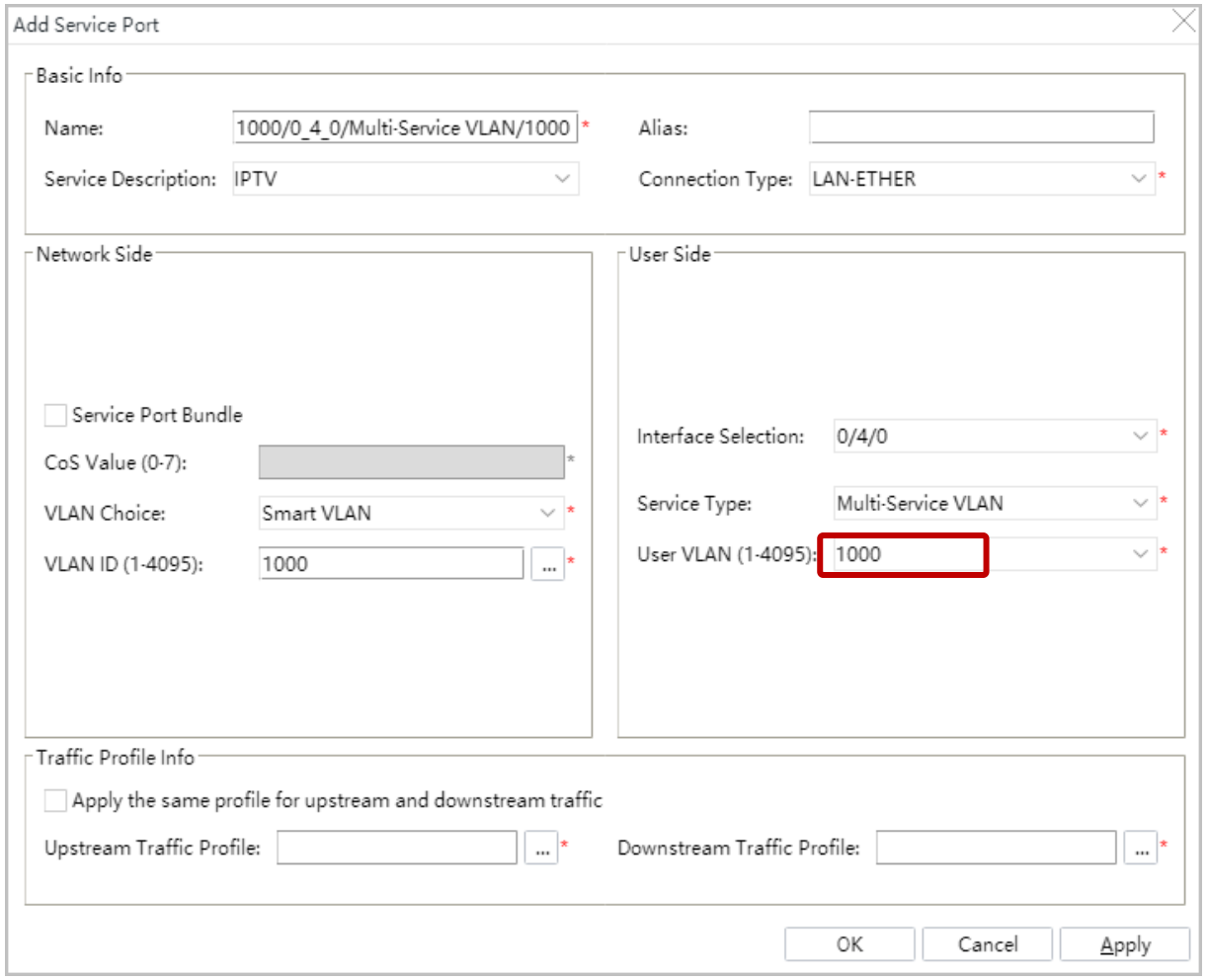
Adding a Service Port



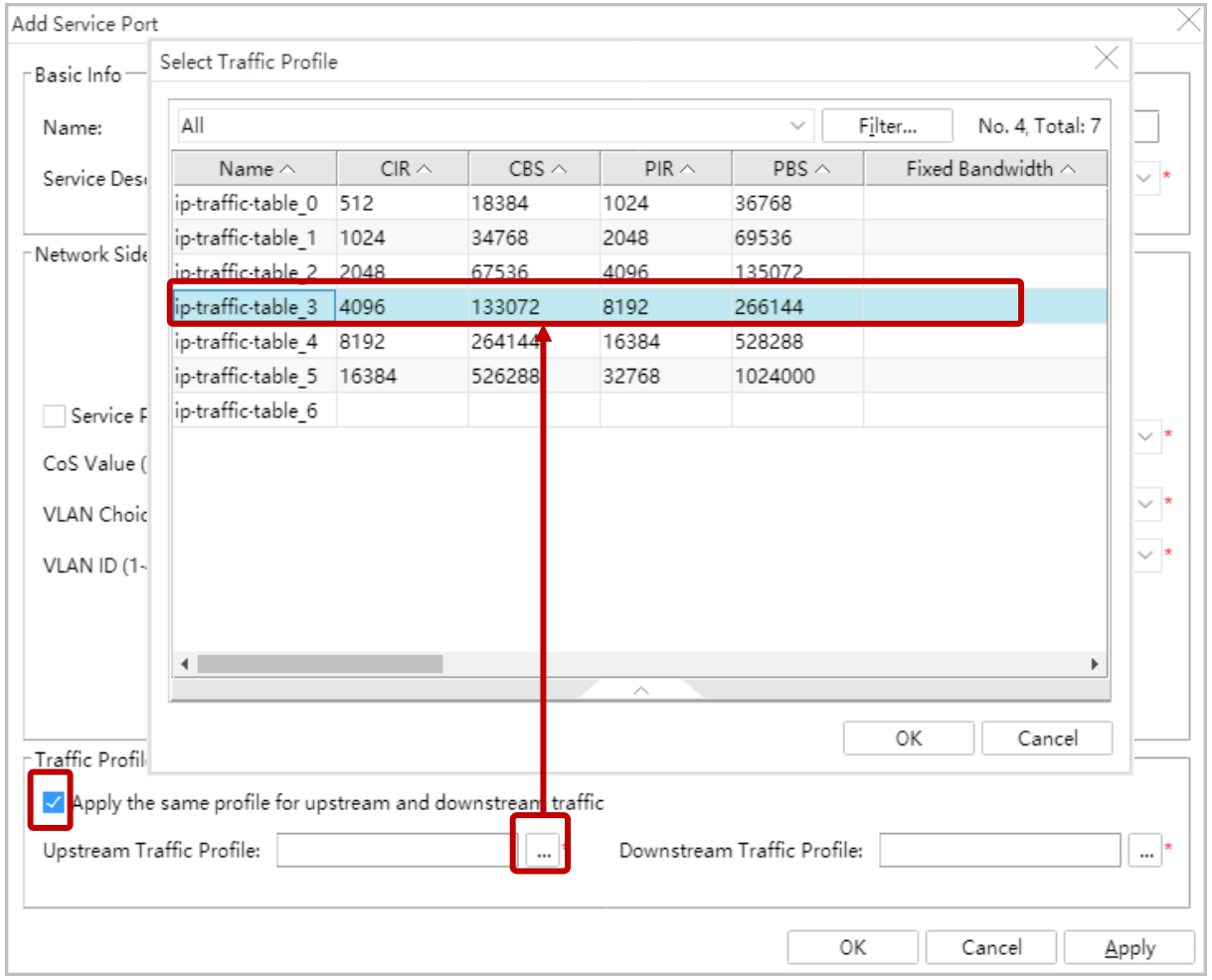
Selecting the Ethernet Port



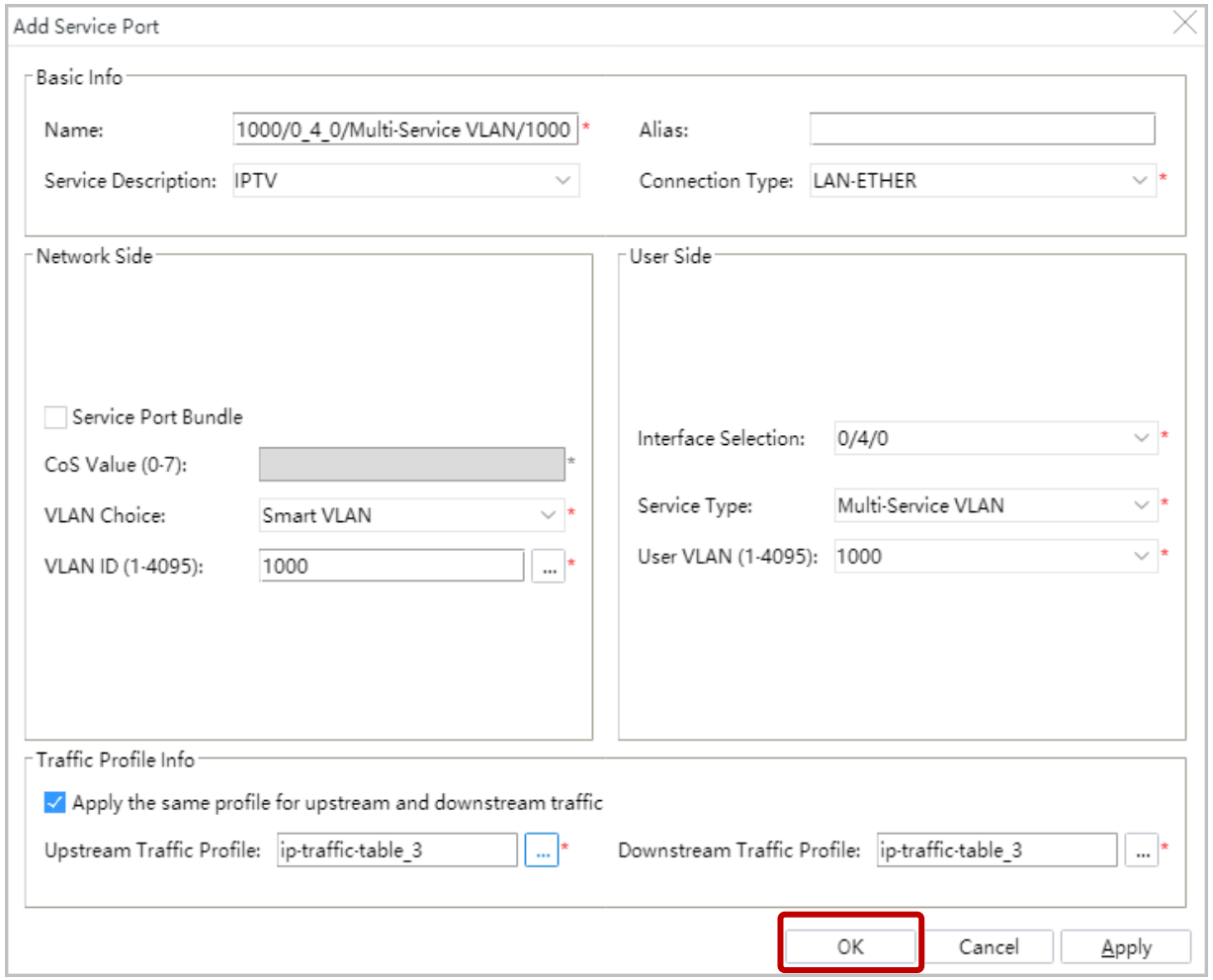
Setting the User VLAN



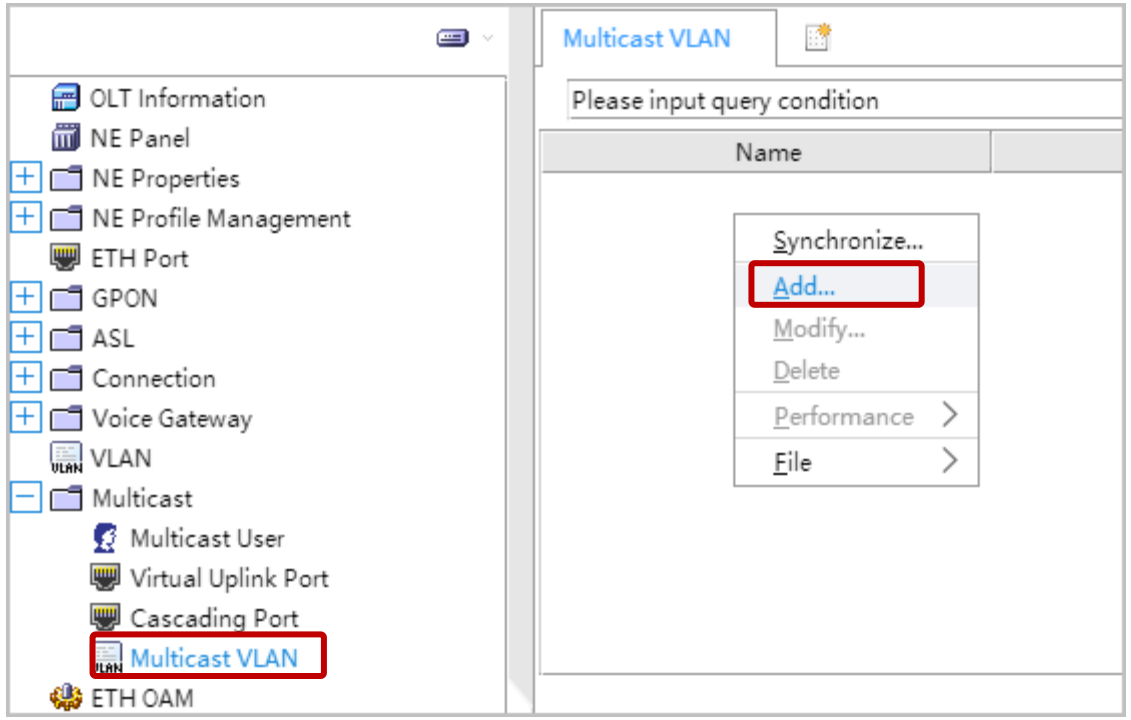
Binding Traffic Profiles



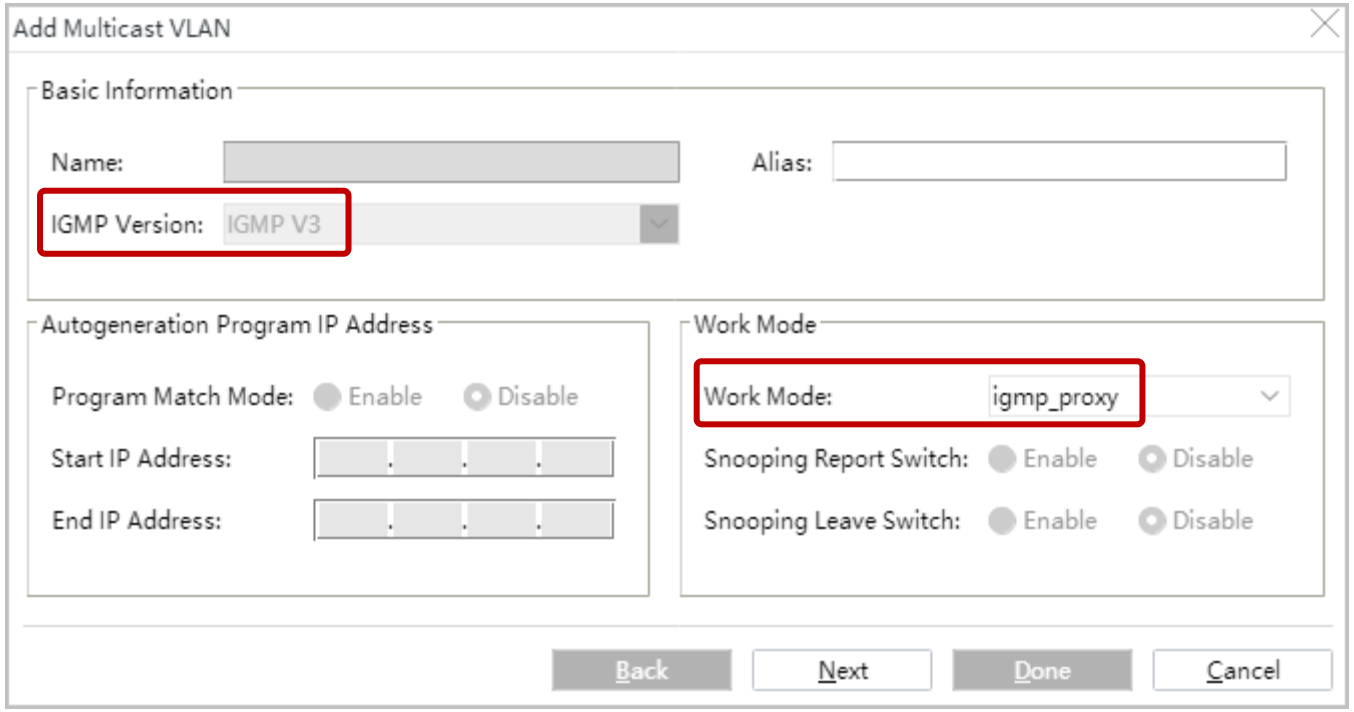
Adding a Service Port



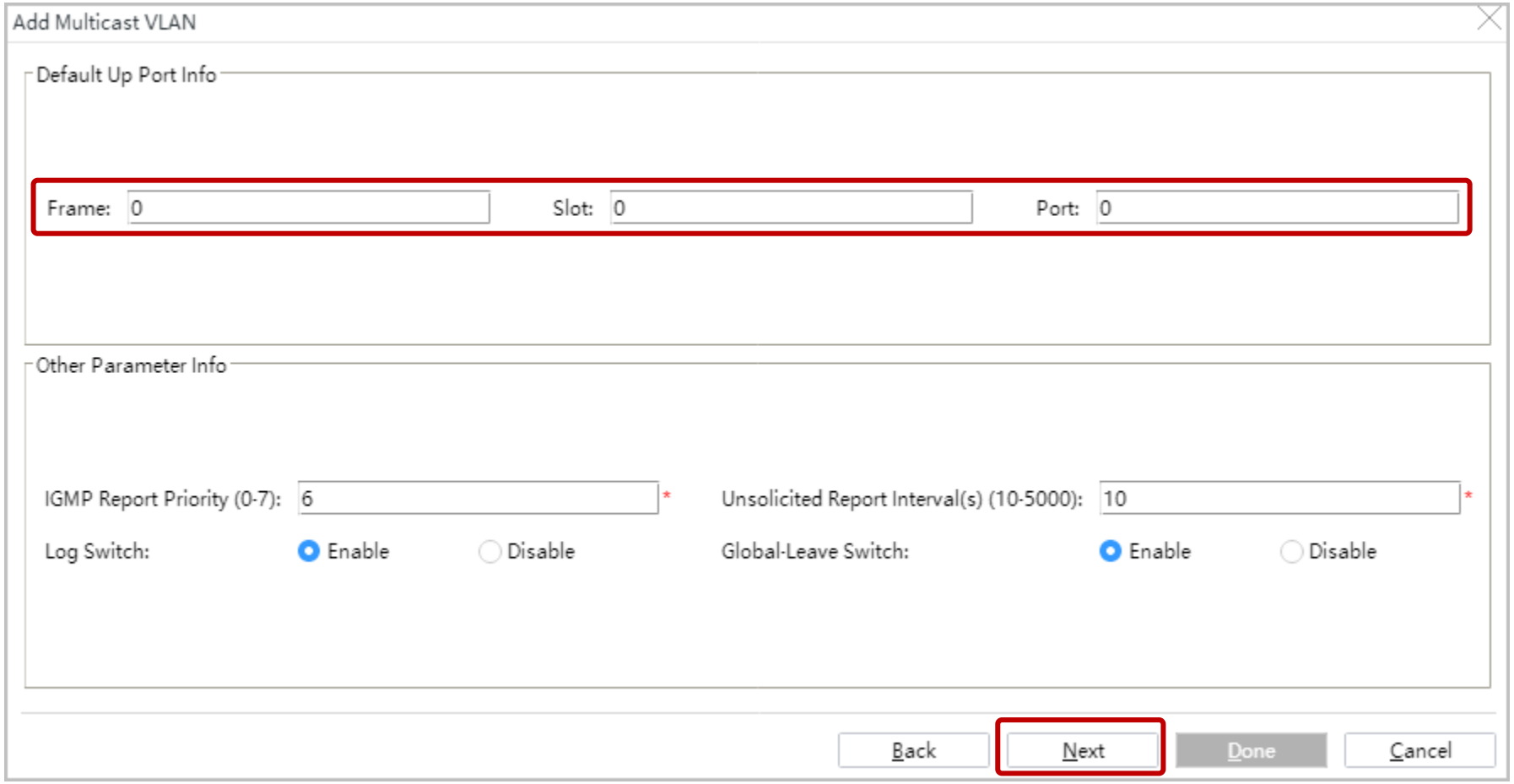
Adding a Multicast VLAN (on the ONU)



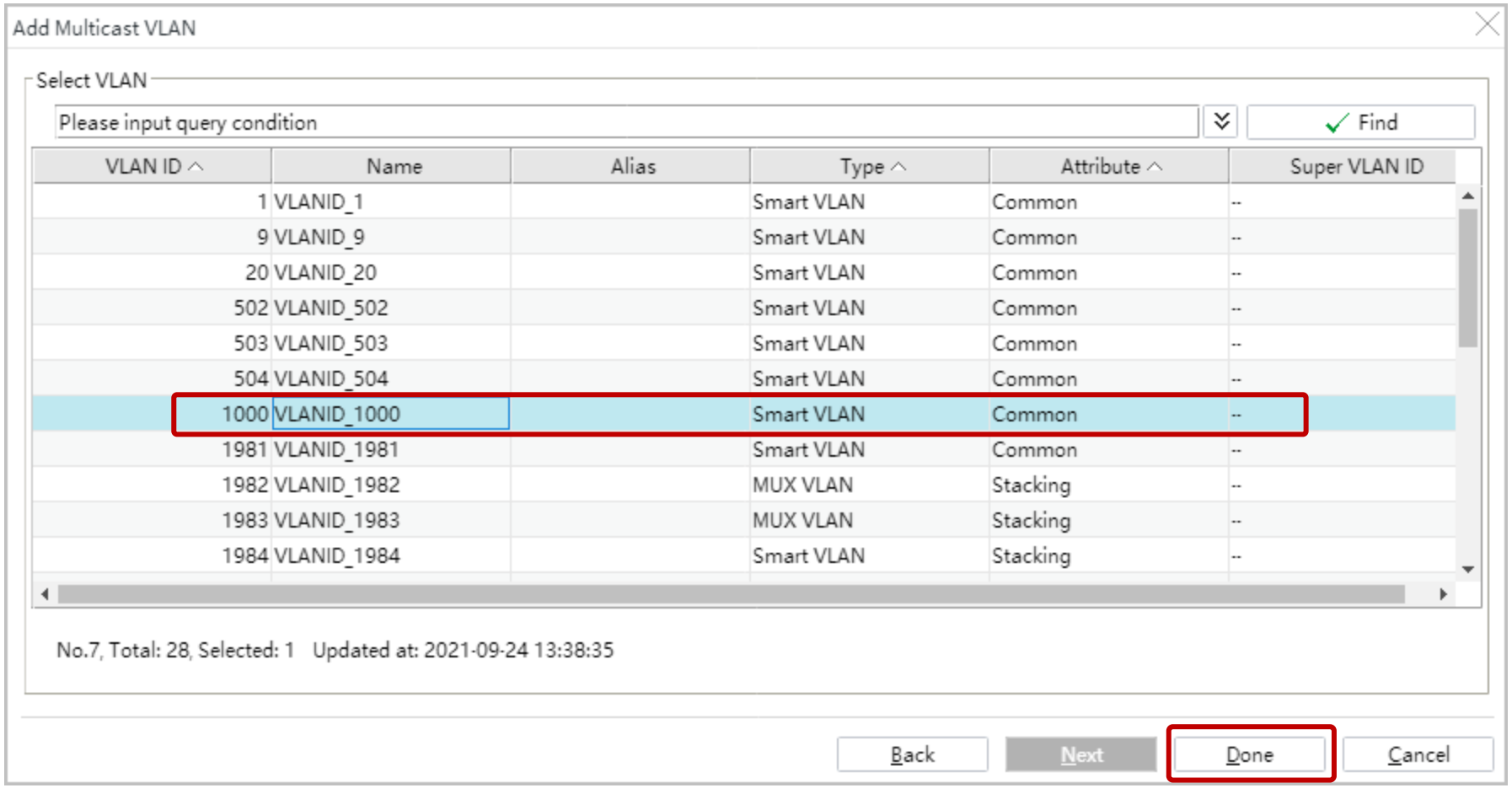
Adding a Multicast VLAN



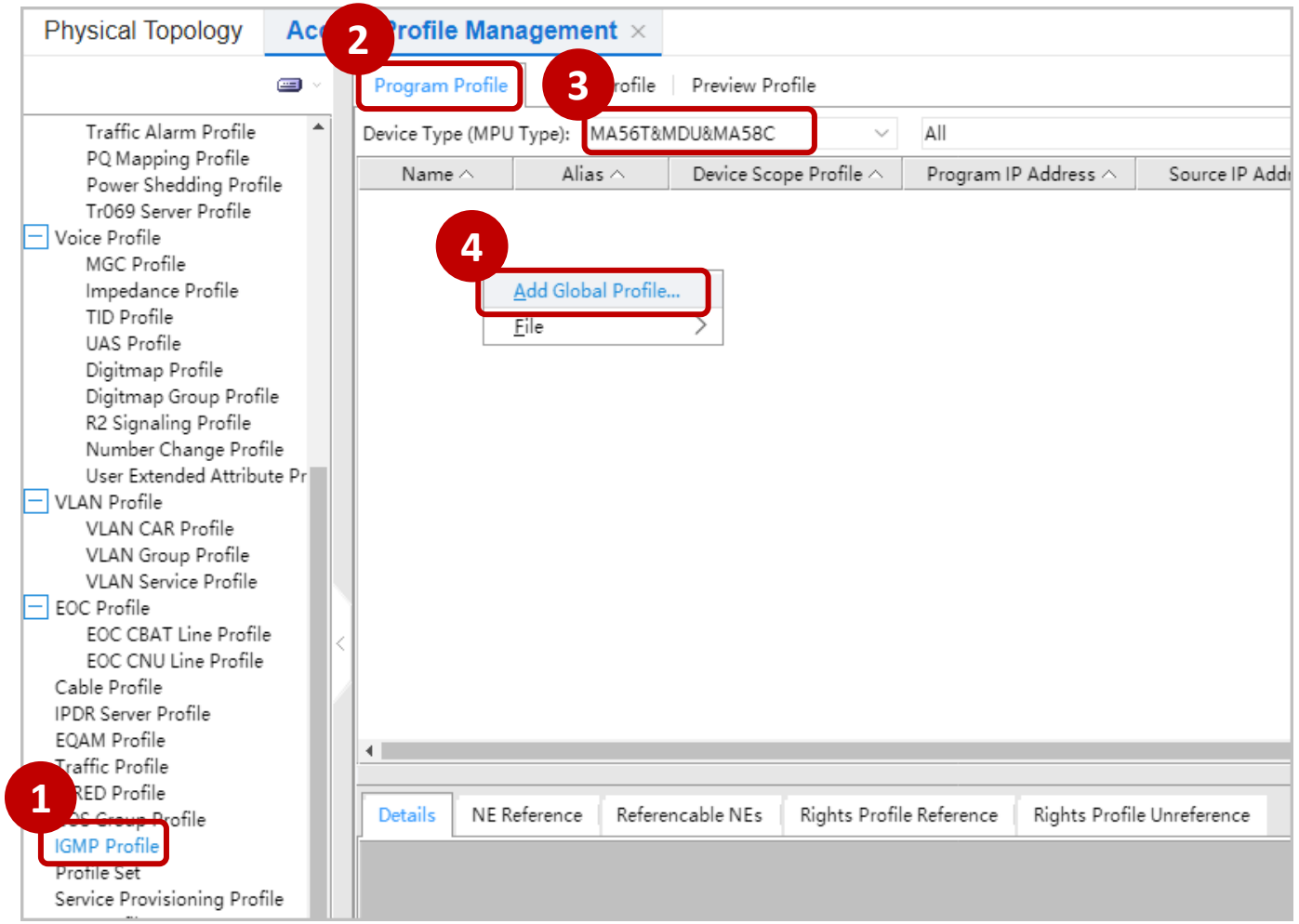
Adding a Multicast VLAN



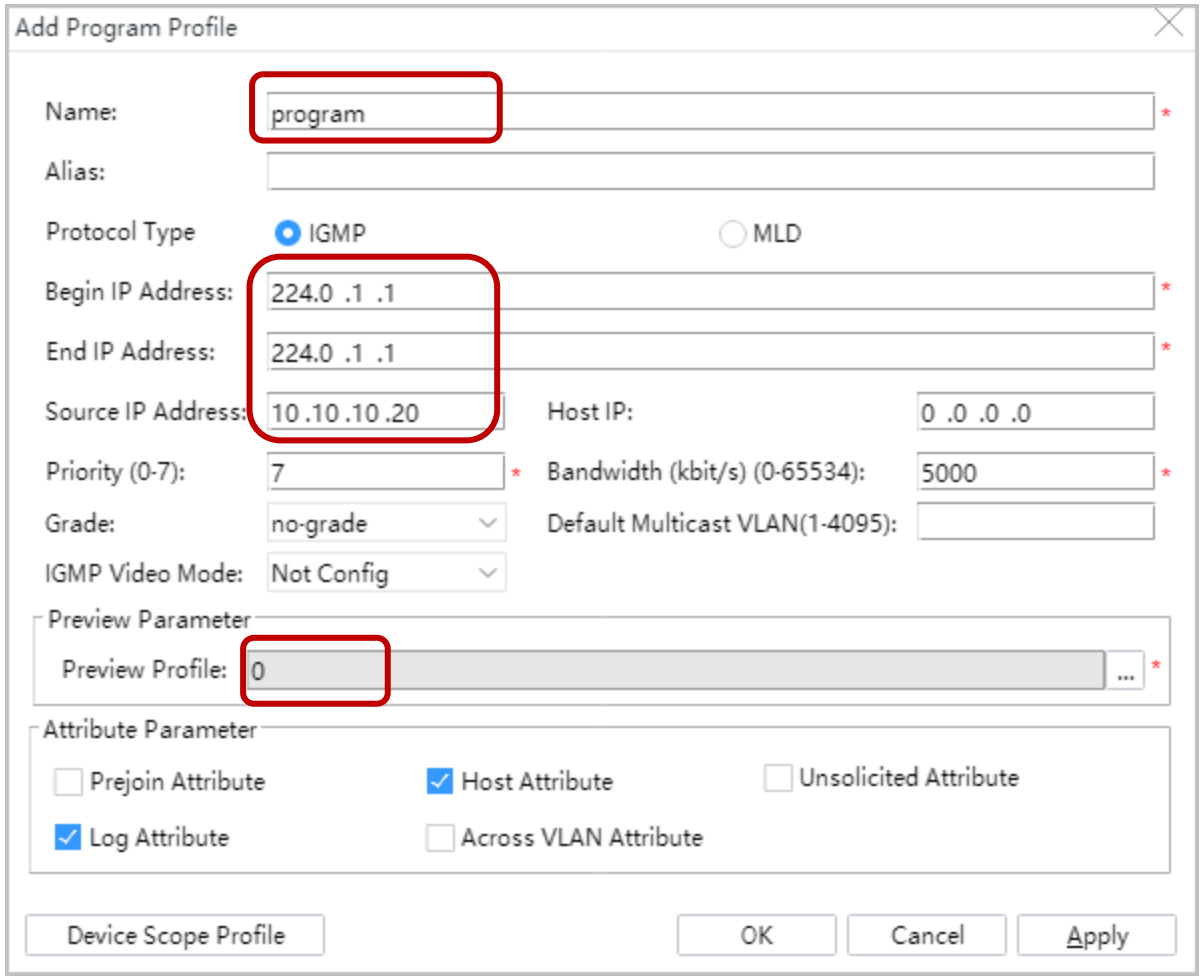
Adding a Multicast VLAN



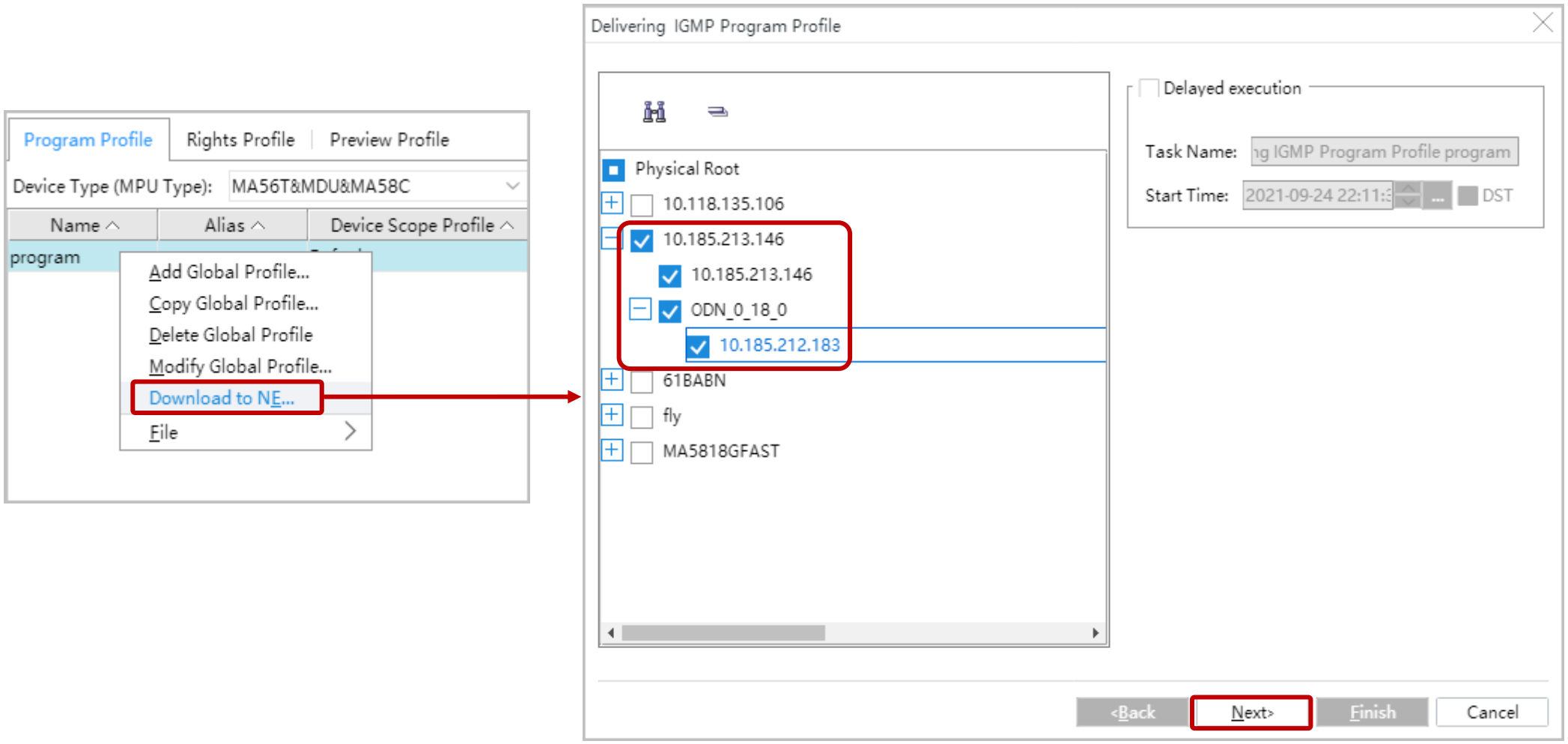
Configuring a Program Profile



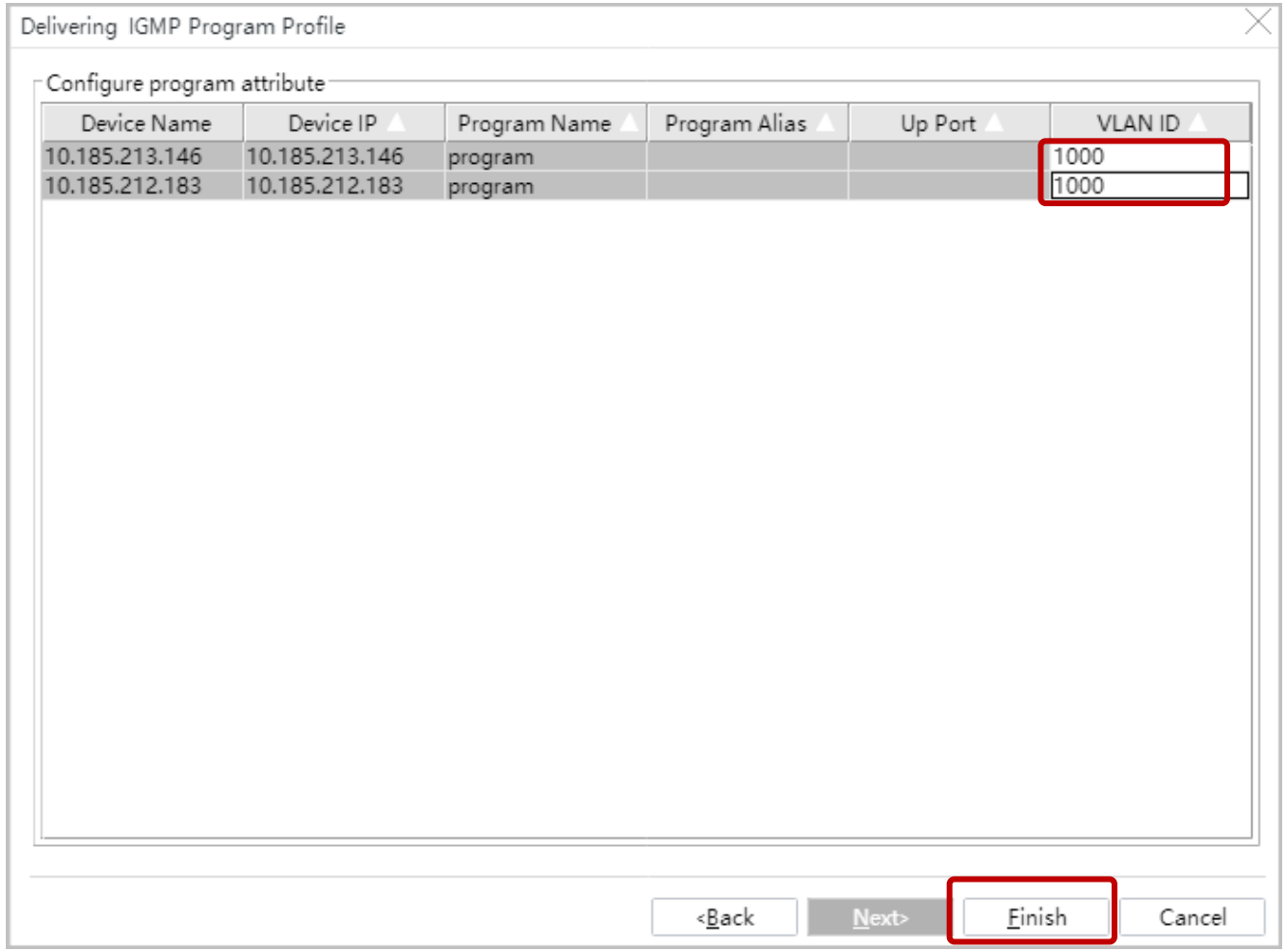
Configuring a Program Profile



Delivering a Profile to an NE



Delivering a Profile to an NE



Summary

- FTTB IPTV Service Configuration Flow
- Usage of profiles

Q&A

1. What are the functions of a traffic profile?
2. What are the functions of a service VLAN?
3. What are the functions of a service port?
4. What are the functions of a DBA profile?
5. When do users need to configure a multicast profile?

More Information

- For more cases, see Huawei Technical Support.

Recommendations

- Huawei support case library:
  - https://support.huawei.com/carrierindex/en/anony/index.html

Tech Support App

Thank You

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