



# C-DATA CMS

# User Manual

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CMS Scenario Configuration Guide V1.2

--Command Reference

Version: V1.2

Website: [www.cdatatec.com](http://www.cdatatec.com)

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### Revision History

Version	Issue Date	Update Description
1.2	2024-5-24	

# CMS Scenario Configuration Guide V1.2

## 1 CMS Introduction

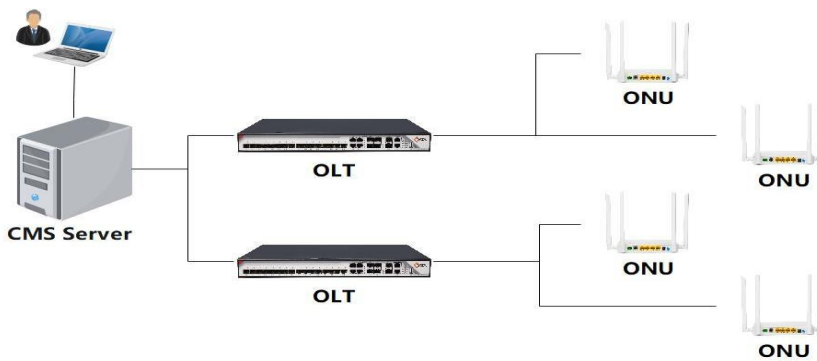
CMS (Cloud Managed System) is a full-life cloud management platform launched by Sidit from planning, deployment, operation and maintenance to optimization. It provides an integrated and integrated O&M management solution for small and medium-sized operators, including centralized management, visual monitoring and intelligent operation and maintenance of network equipment such as ONU, OLT, switches and routers. In order to improve the efficiency of network management and reduce service costs.

### 1.1 Core Features

<b>Centralized management</b> <ul style="list-style-type: none"> <li>Support TR-069 for direct management of ONUs, compatible with third-party ONUs.</li> <li>Support MQTT management of OLTs and manages ONUs indirectly through OMCI.</li> <li>ONU/OLT batch configuration operation.</li> </ul>	<b>Intelligent operation and maintenance</b> <ul style="list-style-type: none"> <li>Device and alarm data statistics, added trend analysis</li> <li>Graphical monitoring of core indicators</li> <li>User fault automatic diagnosis analysis</li> <li>North interface</li> </ul>	<b>Graphical interaction</b> <ul style="list-style-type: none"> <li>One-click installation deployment</li> <li>Upgrade/monitoring/diagnosis process guidance</li> <li>Device/configuration visualization</li> <li>Support for CMS App</li> </ul>
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## 2 Installation and Deployment

The CMS supports private deployment and can be installed on either a physical machine or a cloud host.



### 2.1 Step1-Prepare the Environment

Before installing the CMS service, match the CMS configuration and operating system (OS) based on the scale of managed devices. Supports horizontal expansion and unlimited device access.

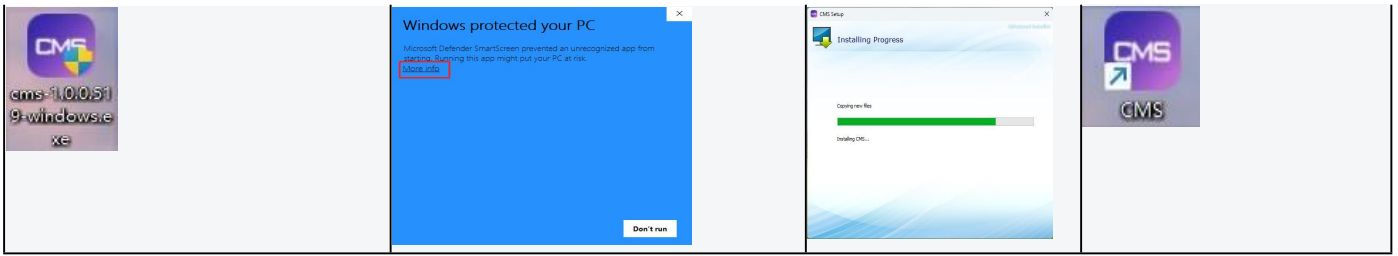
Minimum configuration requirements: CPU: 2 cores, memory: 4G, free hard disk space: 64GB.

Device Size	CPU	Memory	Hard Disk Space	Operating System
500k	Main frequency 2.65GHz 32 core	64G	4TB of free space, PCI-E 3.0 x 4 spec SSD drive	Windows Server 2022
300k	Main frequency 2.65GHz 24 core	64G	2TB of free space, PCI-E 3.0 x 4 spec SSD drive	Windows Server 2022
200k	Main frequency 2.65GHz 16 core	32G	2TB of free space, PCI-E 3.0 x 4 spec SSD drive	Windows Server 2019 Windows Server 2022
100k	Main frequency 2.65GHz 12 core	32G	1TB of free space, PCI-E 3.0 x 2 spec SSD drive	Windows Server 2019 Windows Server 2022
50k	Main frequency 2.65GHz 8 core	16G	512GB of free space, SATA spec SSD drive	Windows 10-64-bit 22H2 Windows 11-64-bit
30k	Main frequency 3.0GHz 4 core	16G	512GB of free space, SATA spec SSD drive	Windows 10-64-bit 22H2 Windows 11-64-bit

### 2.2 Step2 Installation Wizard

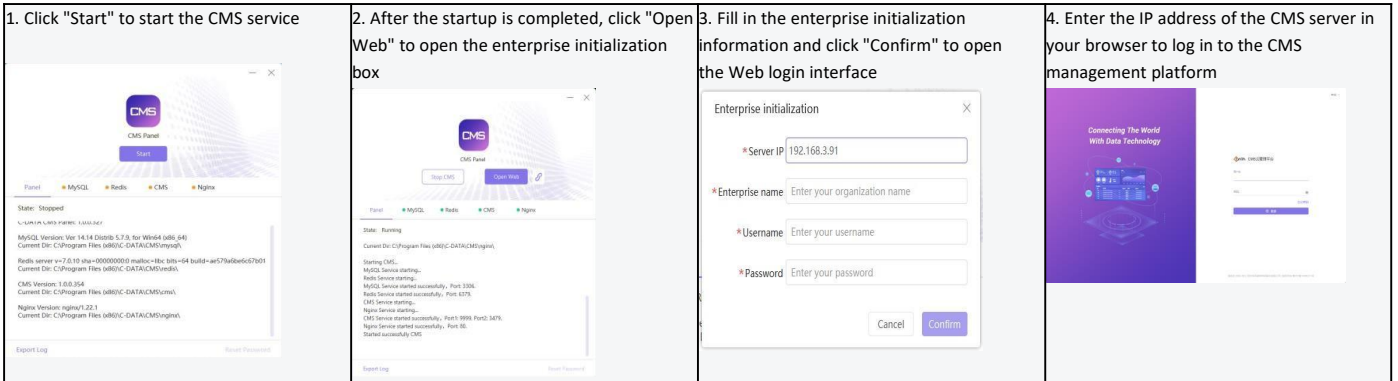
Open the CMS installer provided by the C-DATA sales and follow the wizard to complete the installation.

1. Double-click the installation package to open the installation program	2. After clicking "More info", select still want to run	3. Follow the Installing process to install	4. After the installation is complete, generate the CMS Panel icon on the desktop
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## 2.3 Step3 Start Service

Open the desktop CMS Panel to start the service.



## 3 Single Device Bind

Once the CMS installation is completed, you can bind a single ONU or OLT to the CMS to make it easy to quickly see the display.

### 3.1 ONU binding

The CMS manages the ONU through TR-069, which is compatible with third-party devices. The binding procedure consists of the following four steps.

Precondition: The ONU has been registered to OLT, and the OLT has been configured to ensure that the ONU can communicate with CMS.

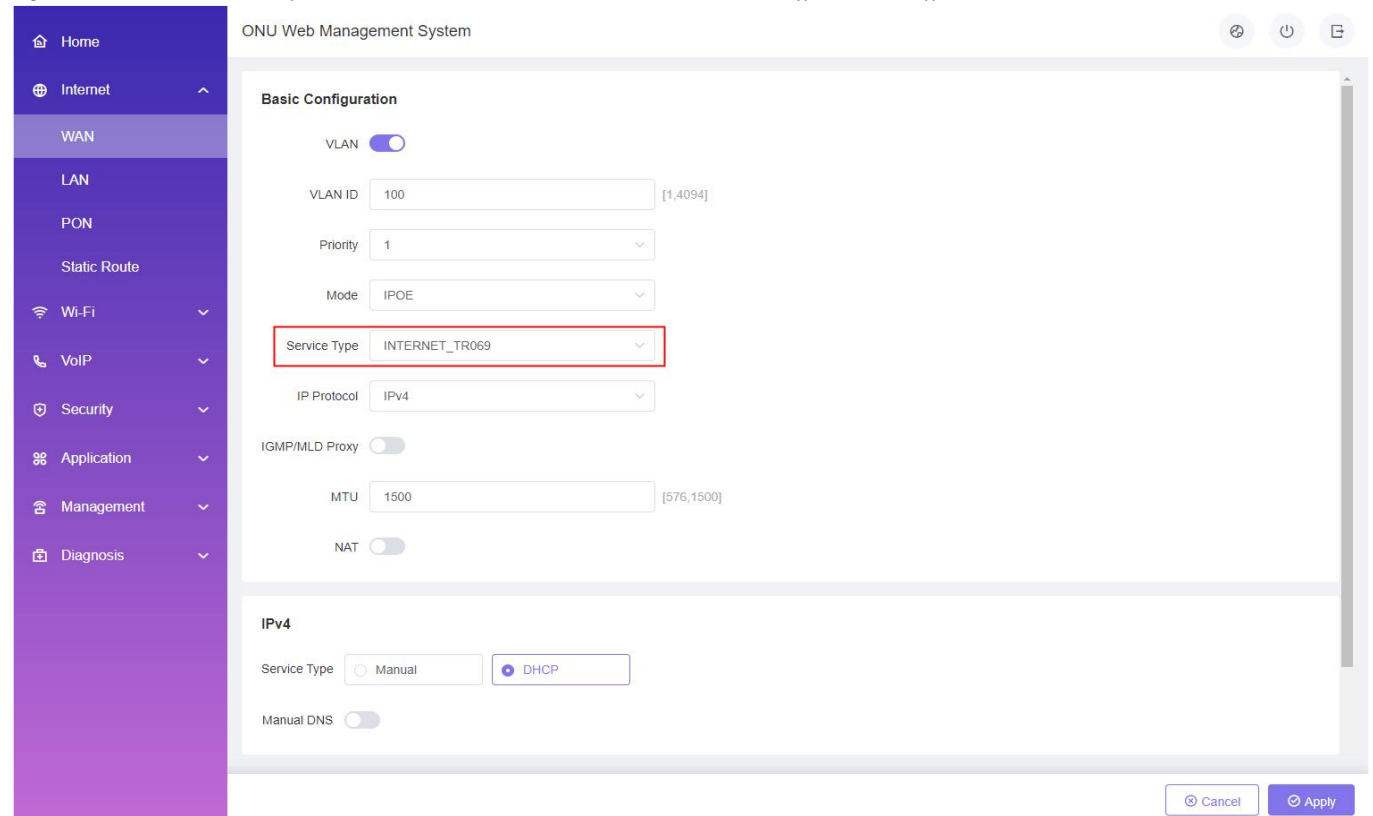
Upgraded ONU	TR-069 WAN configuration	TR-069 Server Parameter Configuration	View binding results
--------------	--------------------------	---------------------------------------	----------------------

#### 3.1.1 ONU device upgrade

Log in to the ONU Web interface and upgrade the RTL9607C model to version 3.1.0 or later. (Ignore this step if you are a third party ONU)

#### 3.1.2 TR-069 WAN configuration

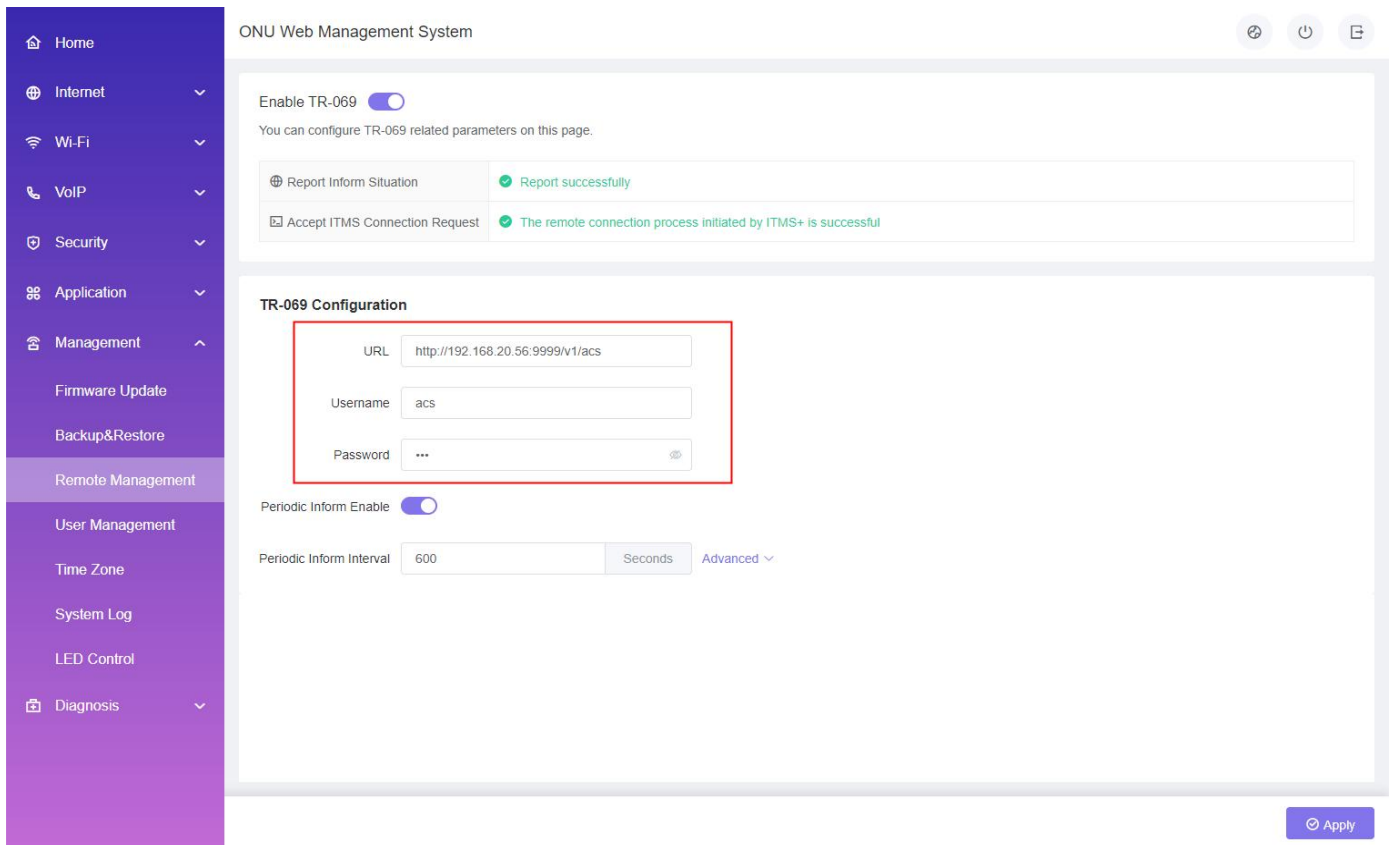
Log in to the ONU Web interface, open the [Internet-WAN], click [Add], select the TR-069 related type for Service Type, and create a TR-069 WAN.



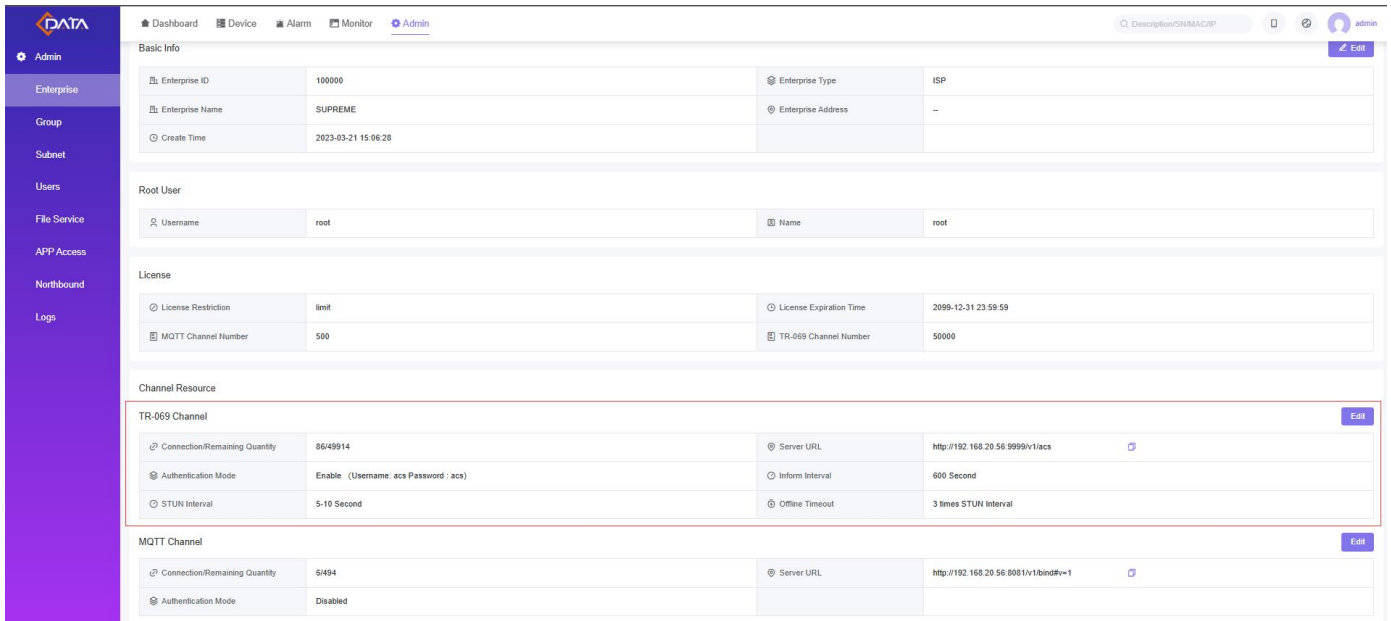
#### 3.1.3 TR-069 server parameter configuration



Log in to the ONU Web page, open the [Management-Remote Management] page, and set the TR-069 parameters, including the server address, Username, and Password.



You can view the TR-069 parameters on the CMS [Admin-Enterprise] page.



### 3.1.4 View binding results

Log in to the CMS management platform and open the 【Device-ONU-ONU List】 interface. You can view the bound ONUs in the list.

## 3.2 OLT binding

CMS manages OLTs via MQTT and currently only supports C-DATA OLT bindings, with third-party OLT bindings supported in later versions.

Precondition: The route from OLT to CMS is reachable.

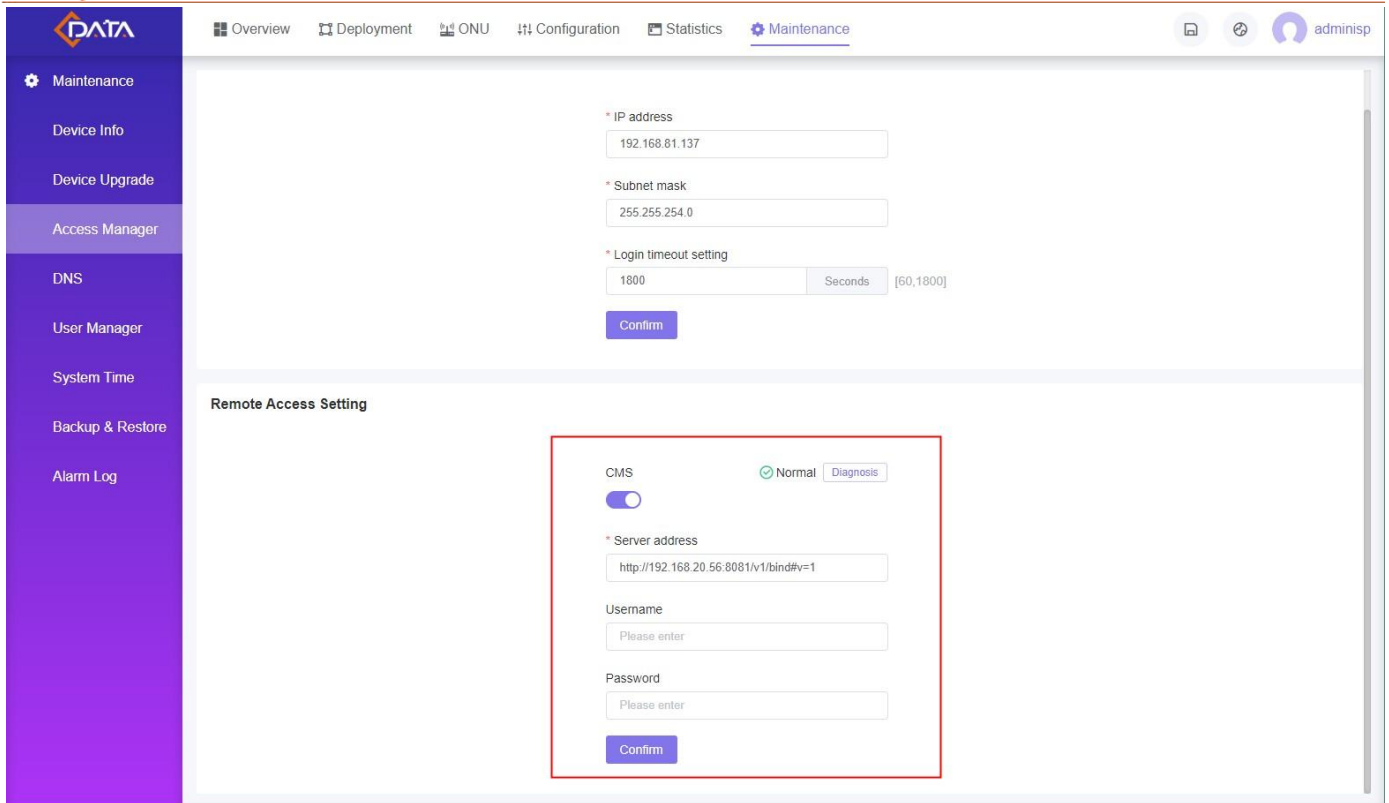
Upgrade OLT device	Enable the CMS remote access	View binding results
--------------------	------------------------------	----------------------

### 3.2.1 OLT equipment upgrade

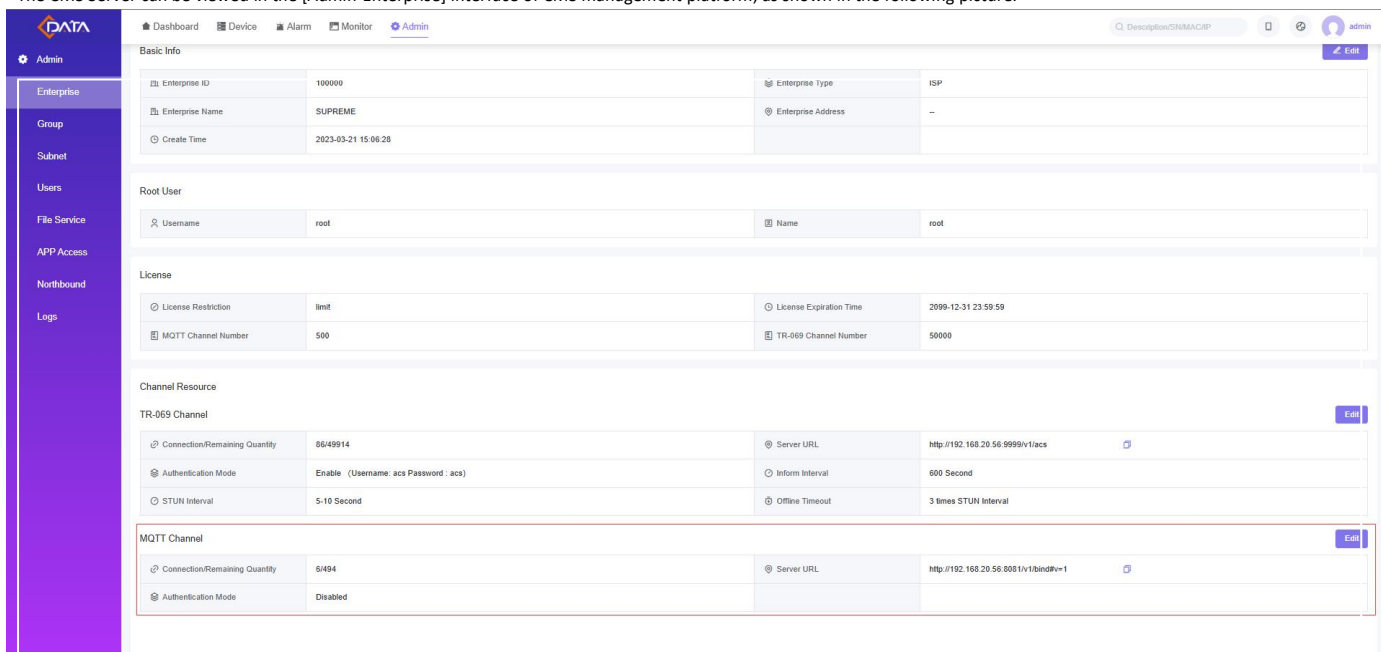
Log on to the ONU Web interface to upgrade your GPON 16 series model to version 3.2 and above.

### 3.2.2 Enable CMS remote access

Log in to the OLT Web Management platform, open the [Maintenance-Access Manager] interface, start the CMS switch, and fill in the CMS Server URL, as shown in the following picture.

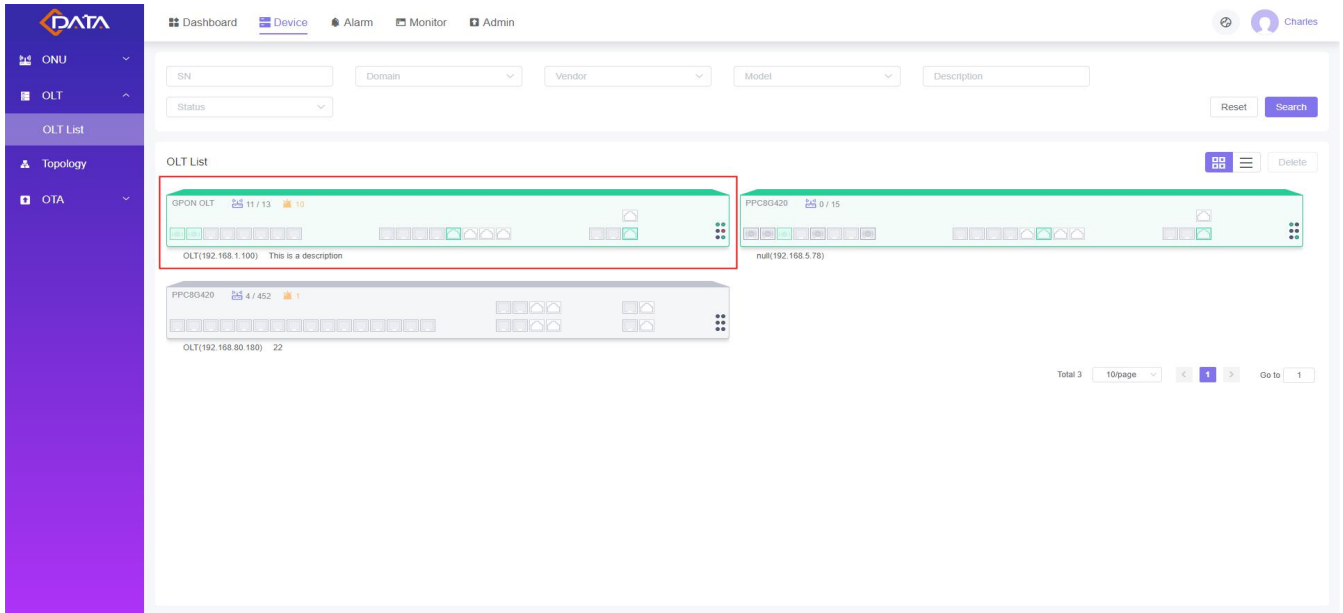


The CMS Server can be viewed in the [Admin-Enterprise] interface of CMS management platform, as shown in the following picture.



### 3.2.3 View binding results

After the CMS is bound to the OLT successfully, log in to the CMS management platform and view the OLT information on the [Device-OLT-OLT List] interface, as shown in the following figure.



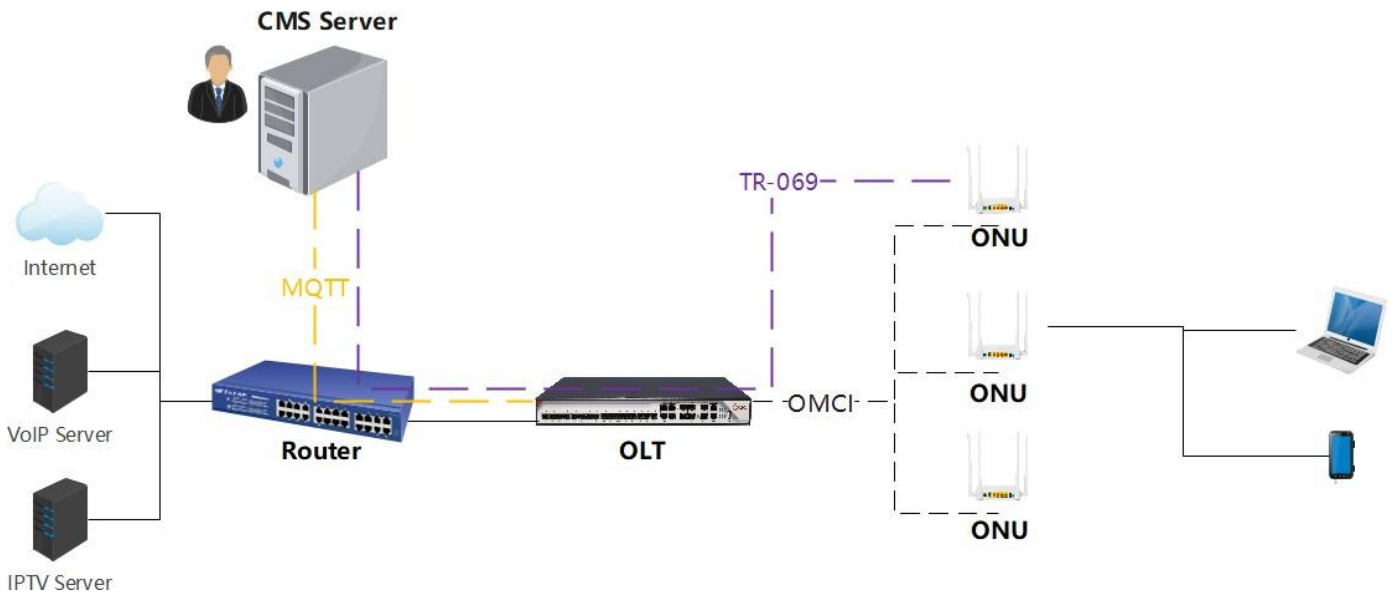
## 4 Network management scenarios

After a single ONU/OLT binding is completed, the optimal solution is provided in the following three scenarios based on whether the OLT and ONU are managed by CMS and how they are managed.

1. CMS manages OLT and HGU at the same time. OLT is managed through MQTT and HGU is managed through TR-069.
2. CMS manages only OLT and OLT manages SFU through OMCI;
3. CMS does not manage OLTs, but directly manages HGU through TR-069, including third-party HGU.

### 4.1 Scenario 1: CMS manages OLT via MQTT and HGU via TR-069

The network architecture as follows:



The recommended configuration procedure as follows:

The OLT is routable to the CMS	The OLT is bound to the CMS	OLT easy deployment	ONU binding CMS	OLT/ONU routine maintenance
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#### 4.1.1 Step1 The OLT is routable to the CMS

To connect the OLT to the upstream route, you need to configure VLANIF interfaces and route.

##### 4.1.1.1 Configure VLANIF Interfaces

Log in to the OLT Web management platform, open the VLAN Planing page, add VLAN 300, and bind VLAN 300 to the GE1 port for management.

Overview
Deployment
ONU
Configuration
Statistics
Maintenance

charles

Reset
Search

Add VLAN
Batch Add

<input type="checkbox"/>	VLAN ID	Description	Untag port	Tag port	Operate
<input type="checkbox"/>	1	N/A	ge 0/0/1,ge 0/0/3,xge 0/0/1	gpon 0/0/1,gpon 0/0/2,gpon 0/0...	<a href="#">Details</a> <a href="#">Edit</a> <a href="#">Delete</a>
<input type="checkbox"/>	2	N/A	N/A	gpon 0/0/1,gpon 0/0/2,gpon 0/0...	<a href="#">Details</a> <a href="#">Edit</a> <a href="#">Delete</a>
<input type="checkbox"/>	3	N/A	N/A	gpon 0/0/1,gpon 0/0/2,gpon 0/0...	<a href="#">Details</a> <a href="#">Edit</a> <a href="#">Delete</a>
<input type="checkbox"/>	4	N/A	N/A	gpon 0/0/1,gpon 0/0/2,gpon 0/0...	<a href="#">Details</a> <a href="#">Edit</a> <a href="#">Delete</a>
<input type="checkbox"/>	5	N/A	N/A	gpon 0/0/1,gpon 0/0/2,gpon 0/0...	<a href="#">Details</a> <a href="#">Edit</a> <a href="#">Delete</a>
<input type="checkbox"/>	6	N/A	N/A	gpon 0/0/1,gpon 0/0/2,gpon 0/0...	<a href="#">Details</a> <a href="#">Edit</a> <a href="#">Delete</a>
<input type="checkbox"/>	7	N/A	N/A	gpon 0/0/1,gpon 0/0/2,gpon 0/0...	<a href="#">Details</a> <a href="#">Edit</a> <a href="#">Delete</a>

Total 4017
20/page
<
1
2
3
4
5
6
...
201
>
Go to
1

**Add**
✕

\* VLAN

[1,4094]

Description

management

Port configuration

Port	Mode	Forbidden	Tag	Untag
ge 0/0/1	Hybrid	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ge 0/0/2	Hybrid	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ge 0/0/3	Access	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ge 0/0/4	Access	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
xge 0/0/1	Trunk	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Configure the management IP address 192.168.4.123 for VLAN 300.

Overview
Deployment
ONU
Configuration
Statistics
Maintenance

charles

Reset
Search

Gateway
Add

VLAN ID	VLANIF name	Description	Connection status	IP address	Subnet mask	Operate
100	Vlanif100	Optlink_MGMT	up	172.168.100.100	255.255.255.0	<a href="#">Edit</a> <a href="#">Delete</a>
200	Vlanif200	vlan200-Interface	up	192.168.95.249	255.255.248.0	<a href="#">Edit</a> <a href="#">Delete</a>

**Add** ✕

\* VLAN

\* IP mode

\* IPV4 address

\* Subnet mask

Description

DATA
Overview Deployment ONU **Configuration** Statistics Maintenance
root

Configuration

- Port Management
- VLAN
- VLANIF**
- Link Aggregation
- IGMP
- DHCP
- Profile Management

VLAN ID	VLANIF name	Description	Connection status	IP address	Subnet mask	Operate
100	Vlanif100	Optilink_MGMT	up	172.168.100.100	255.255.255.0	<a href="#">Edit</a> <a href="#">Delete</a>
200	Vlanif200	vlan200-Interface	up	192.168.95.249	255.255.248.0	<a href="#">Edit</a> <a href="#">Delete</a>
300	Vlanif300	manage_ip	up	192.168.4.123	255.255.255.0	<a href="#">Edit</a> <a href="#">Delete</a>

#### 4.1.1.2 Configure Route

Configure the default route 192.168.4.1 for vianif 300.

DATA
Dashboard Device Alarm Monitor Admin
Save Config admin

ONU

- OLT
- OLT List
- Topology
- OTA

VLAN ID	VLANIF name	Description	IP address	Subnet mask	Operate
100	Vlanif100	vlan100-Interface	192.168.30.196	255.255.255.0	<a href="#">Edit</a> <a href="#">Delete</a>
200	Vlanif200	vlan200-Interface	192.168.2.1	255.255.254.0	<a href="#">Edit</a> <a href="#">Delete</a>
300	Vlanif300	manage_ip	192.168.4.123	255.255.255.0	<a href="#">Edit</a> <a href="#">Delete</a>

**Gateway** ✕

\* Network Interface

\* Interface address

\* Subnet mask

\* Default gateway

#### 4.1.2 Step2 Bind the OLT to the CMS

CMS manages OLTs through MQTT, currently only C-DATA OLT binding is supported, and later versions of third-party OLTs are supported.

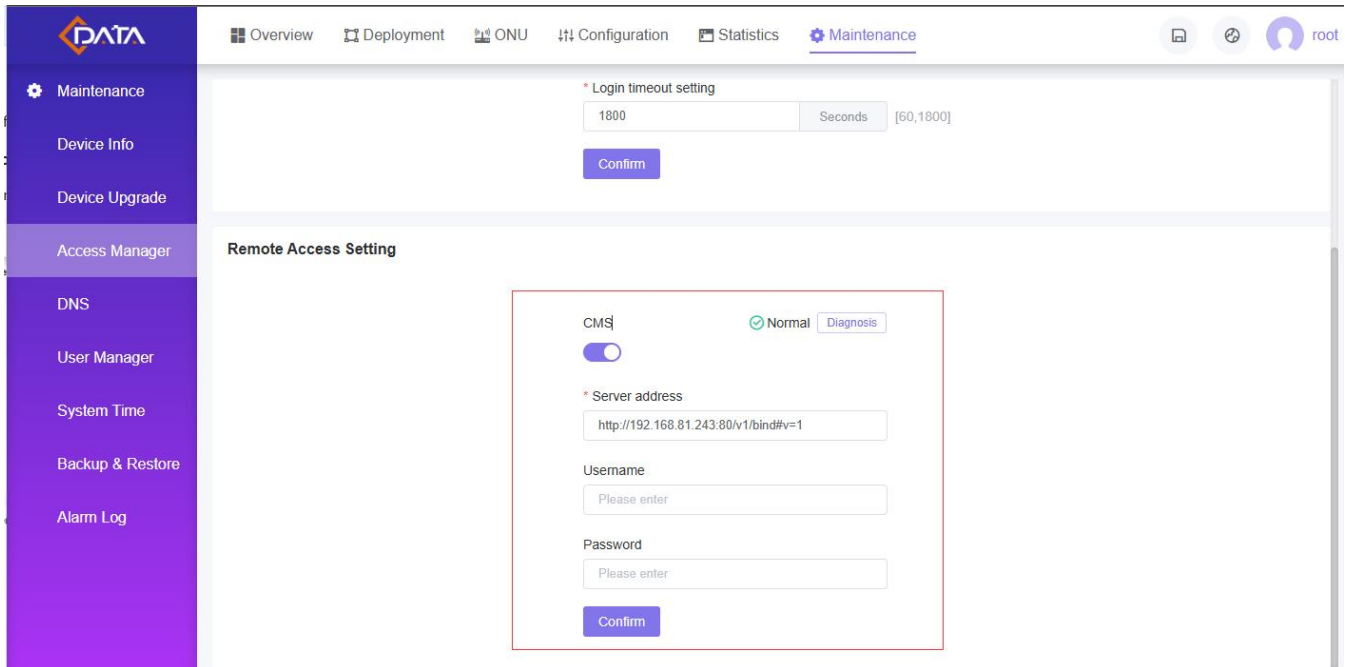
OLT upgrade	Enable the CMS remote access function	View binding results
-------------	---------------------------------------	----------------------

#### 4.1.2.1 OLT upgrade

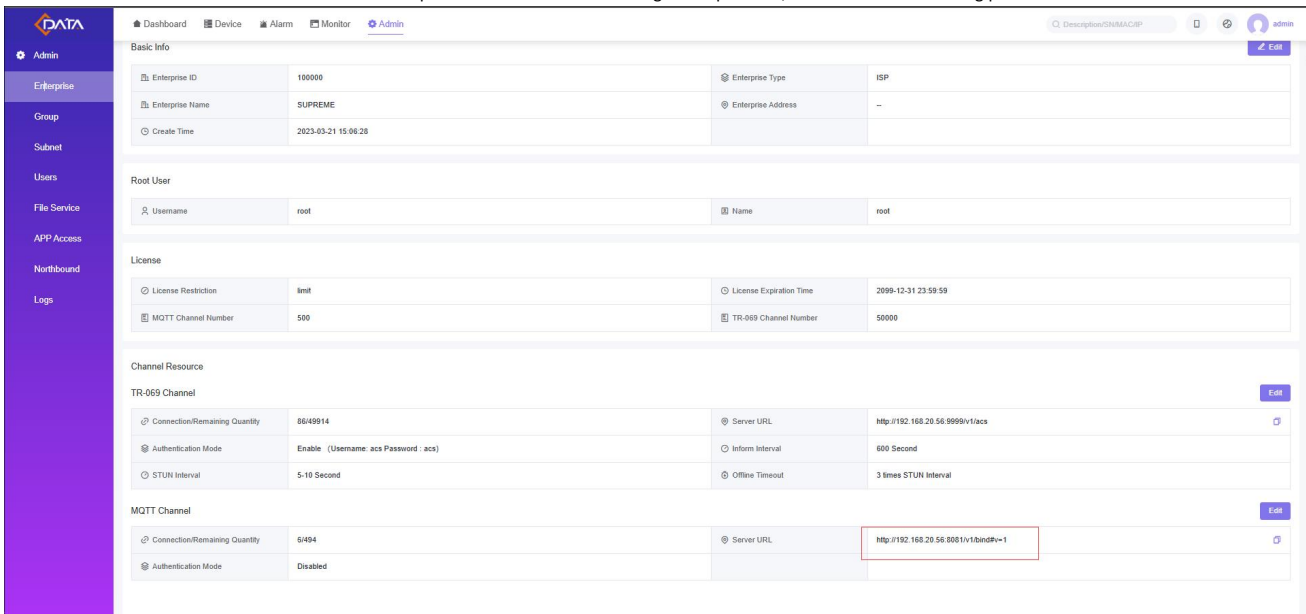
Log on to the OLT Web interface to upgrade your GPON 16 series OLT to version 3.2 or newer.

#### 4.1.2.2 Enable CMS remote access

Log in to the OLT Web Management platform, open the [Maintenance-Access Manager] interface, start the CMS switch, and fill in the CMS Server and Port, as shown in the following figure.

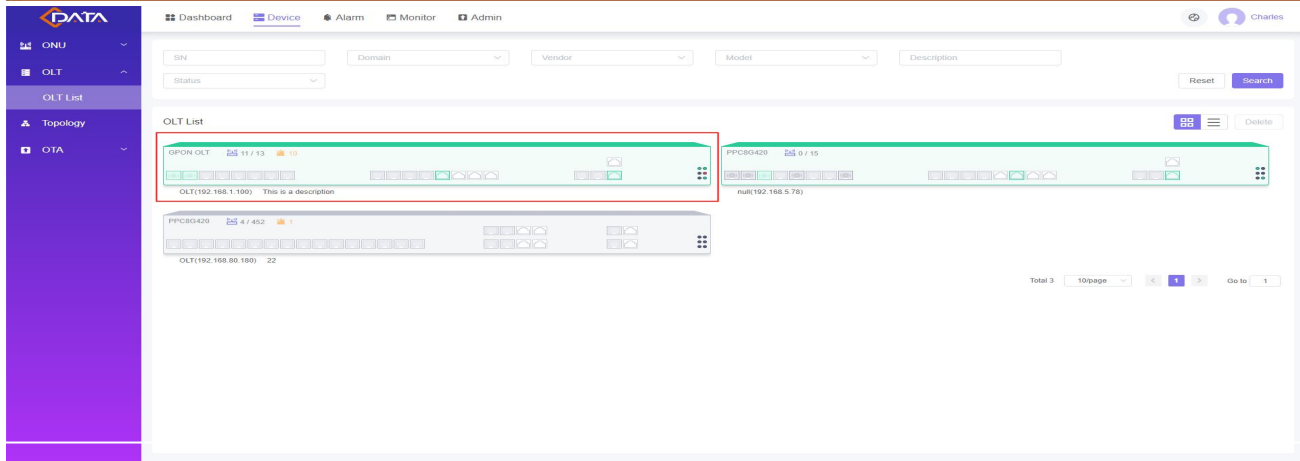


CMS Server and Port can be viewed on the **【Admin-Enterprise】** interface of CMS management platform, as shown in the following picture.



#### 4.1.2.3 View the binding result

After the CMS is bound to the OLT successfully, log in to the CMS management platform and view the OLT information on the [Device-OLT-OLT List] interface, as shown in the following figure.



### 4.1.3 Step3 deployment of OLT

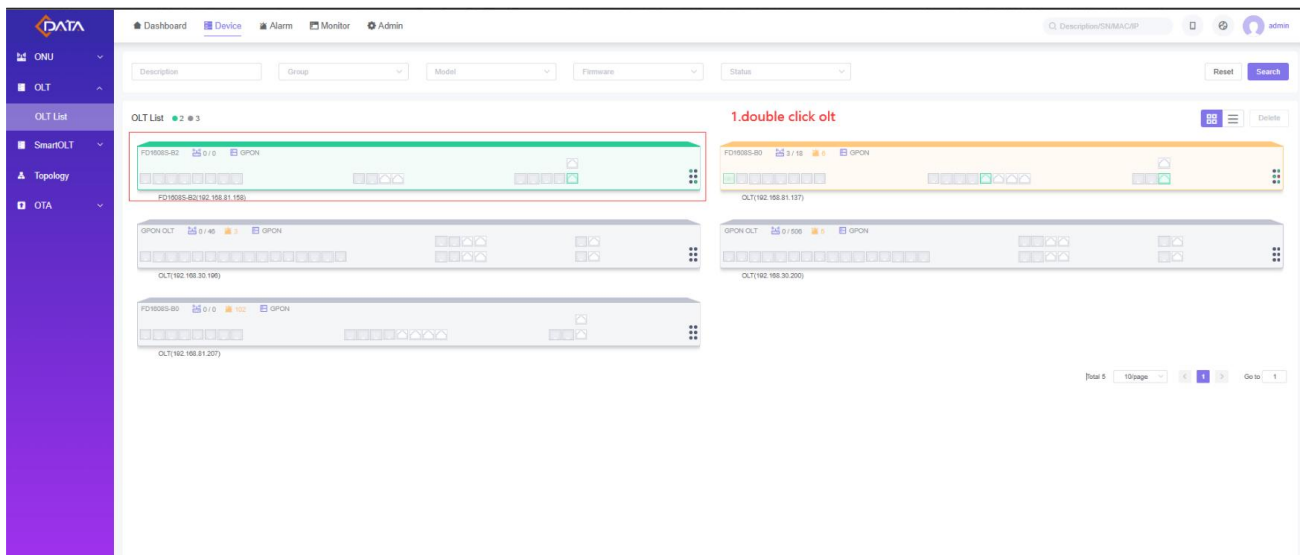
After the OLT is powered on, the simple deployment allows you to quickly configure the OLT globally and create deployment policies. After the ONU is power on, the policies are automatically delivered to the ONU connected the OLT.

Take the HGU as an example to implement Internet access services through simple deployment. The steps are as follows:

#### 4.1.3.1 Prerequisites

Complete the configuration of the line profile, service profile, tr069 profile, Wan profile

- Create the line profile



Dashboard Device Alarm Monitor Admin Save Config Description

ONU Manage ONU Upgrade Configuration Port Statistics More

### 2. click "Configuration"

Count: 2 pcs State: Running Power  
Count: 3 pcs State: Running FAN

CPU: 57% Memory: 24% Temperature: 37.5°C

#### ONU Summary

Registered	0
Online	0
Active	0
Alarm	0

#### Rate

LinkMbps	Upstream	Downstream
5		
4		
3		
2		
1		
0		

#### Alarm

Level	Alarm Name	Device Type	Alarm Source	Alarm time
Major	PON 0/0/1 The TX output power of ...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 13:55:23
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 18:07:26
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 17:38:25
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 17:30:25

#### Alarm Trend

Subnet	Unassigned Subnet	Device Name	FD1608S-B2	Description	FD1608S-B2(192.168.81.158)
Device Type	--	Vendor	C-Data	Model	FD1608S-B2
SN	AF2101-160170001	Hardware Version	V1.1	Firmware	V3.1.56_240301
Inband MAC	E0:67:83:39:56:07	Outband MAC	E0:67:83:39:56:06	System Time	2024-4-23 17:37:15

Dashboard Device Alarm Monitor Admin Save Config Description

### 3. click "Profile Management"

Deployment Profile Management Port Management VLAN VLANIF Link Aggregation IGMP DHCP MAC Loopback detection Port Mirroring PPPoE+ STP

#### Profile Management

DBA Profile **Line Profile** Service Profile TR-069 Profile WAN Profile

### 4. select "Line Profile"

Profile ID Profile name Reset Search

#### Line Profile

Profile ID	Profile name	Operate
0	line-profile_0	Details Edit Delete
1	line-profile_yao	Details Edit Delete

Total 2 / 20page 1/1 Go to 1

### 5. click "Add"

Dashboard Device Alarm Monitor Admin Save Config Description

### 6. Profile name is "line-profile\_yao"

#### Global Configuration

\* Profile name: line-profile\_yao  
\* Mapping-mode: VLAN

#### Tcont

Tcont1  
\* DBA: dba-profile\_1



Dashboard Device Alarm Monitor Admin Save Config DescriptionList admin

Tcont1

Tcont1

\* DBA  
dba-profile\_1 Select Add

Gempport

Tip: It is a suggestion to assign different Gempports for different businesses when configuring business channels

Gempport1

Mapping

Mapping1

\* VLAN-transparent

\* User VLAN  
1000

Service Port

\* Tag-action  
Vlan-Transparent

Cancel Confirm

7.gempport 1 vlan 1000 for management

Dashboard Device Alarm Monitor Admin Save Config DescriptionList admin

Tcont1

Tcont1

\* DBA  
dba-profile\_1 Select Add

Gempport

Tip: It is a suggestion to assign different Gempports for different businesses when configuring business channels

Gempport1

Mapping

Mapping1

\* VLAN-transparent

\* User VLAN  
1000

Service Port

\* Tag-action  
Vlan-Transparent

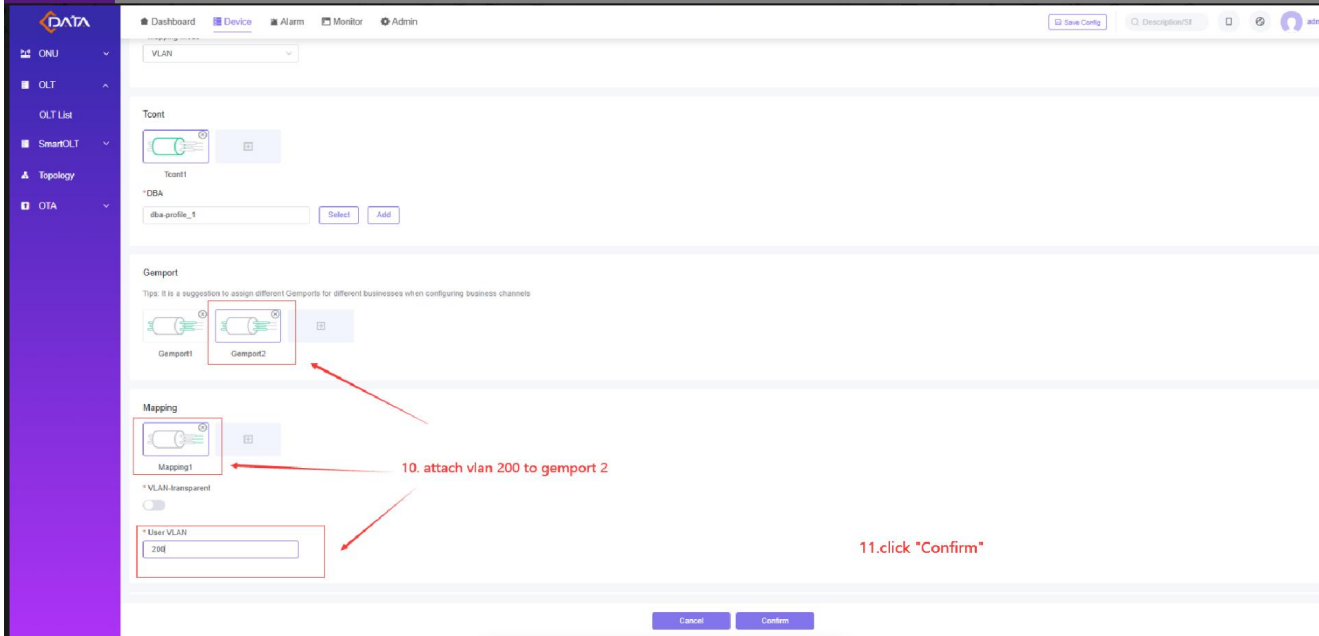
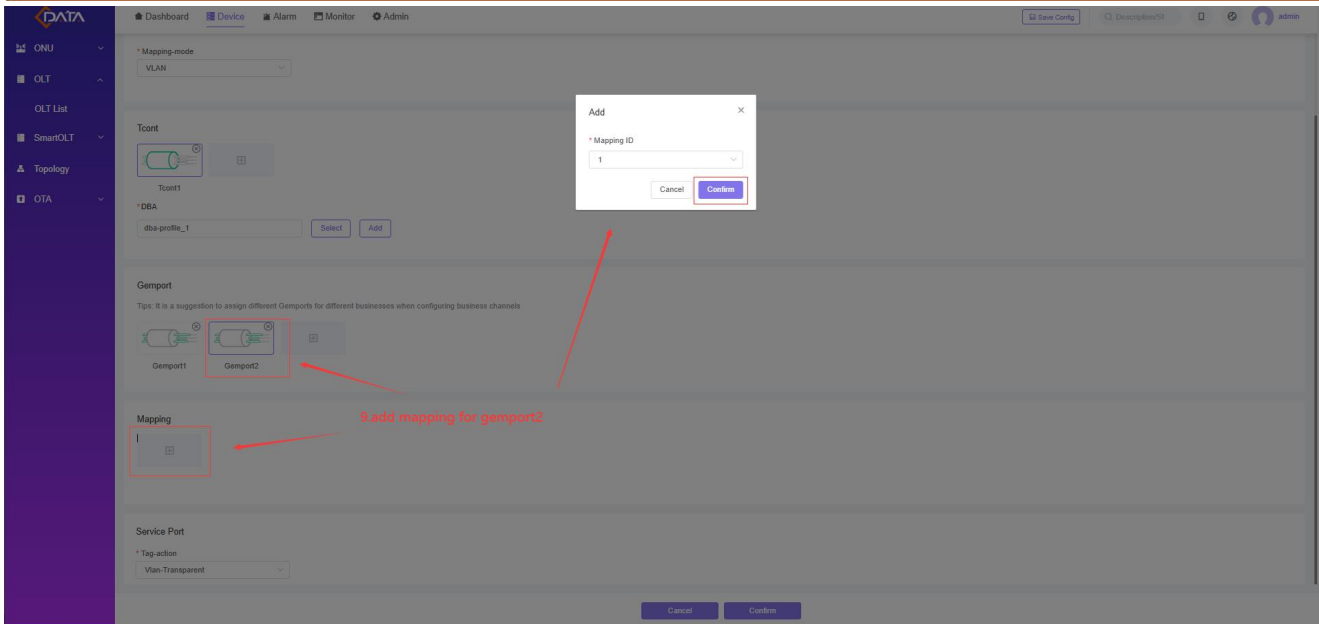
Cancel Confirm

8.add another gempport for internet service

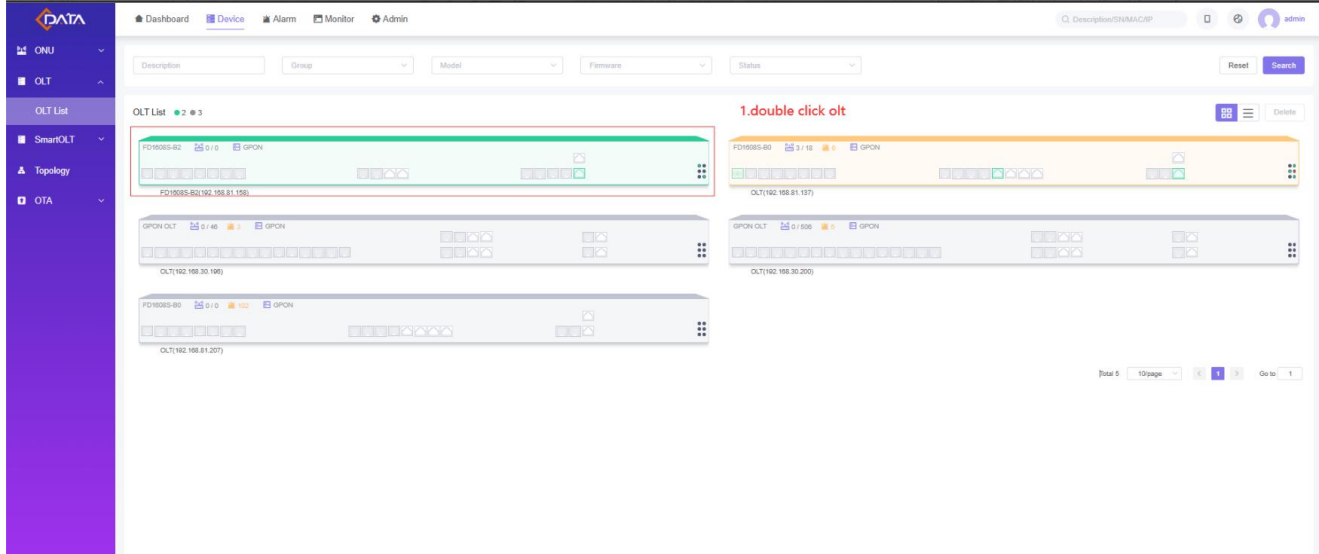
Add

\* Gempport ID  
2

Cancel Confirm



Create a service profile



Dashboard Device Alarm Monitor Admin Save Config Description/ST

ONU Management ONU Upgrade Configuration Port Statistics More

2. click "Configuration"

Count: 2 pcs State: Running Power  
Count: 3 pcs State: Running FAN

57% CPU 24% Memory 37.5°C Temperature

ONU Summary

Registered	0
Online	0
Active	0
Alarm	0

Rate

Unit Mbps	Upstream	Downstream
5		
4		
3		
2		
1		
0		

Alarm

Level	Alarm Name	Device Type	Alarm Source	Alarm time
Major	PON 0/0/1 The TX output power of ...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 13:55:23
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 18:07:26
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 17:36:25
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 17:30:25

Alarm Trend

Subnet	Device Name	Description
Unassigned Subnet	FD1608S-B2	FD1608S-B2(192.168.81.158)

Device Type	Vendor	Model
--	C-Data	FD1608S-B2

SN	Hardware Version	Firmware
AF2101-160170001	V1.1	V3.1.56_240301

Inband MAC	Outband MAC	System Time
E0:67:83:39:56:07	E0:67:83:39:56:06	2024-4-23 17:37:15

Dashboard Device Alarm Monitor Admin Save Config Description/ST

3. click "Profile Management"

Deployment Profile Management Port Management VLAN VLANIF Link Aggregation IGMP DHCP MAC Loopback detection Port Mirroring PPPoE+ STP

Profile Management

DBA Profile Line Profile Service Profile TR-069 Profile WAN Profile

4. click "Service Profile"

Profile ID Profile name Reset Search

Service Profile

5. click "Add"

Profile ID	Profile name	Operate
0	srv-profile_0	Details Edit Delete

Total 1 20page 1 Go to 1

Dashboard Device Alarm Monitor Admin Save Config Description/ST

4. OLT / OLT List / AF2101-160170001 / Configuration / New Profile

1 Basic Configuration 2 IP Host 3 ONU Port 4 ONU Multicast 5 Completed

Basic Info

Profile name:  6. Profile name is "srv-profile\_yao"

Loopback detection:

ONU Capability Planning

ETH	Adaptive
POTQ	Adaptive
CATV	Adaptive
IP Host	Adaptive

7. onu capability keep default

Next 8. click "Next"

Dashboard | Device | Alarm | Monitor | Admin

Save Config | Description/ST | admin

← OLT / OLT List / AF2101-160170001 / Configuration / New Profile

1 Basic Configuration | 2 IP Host | 3 ONU Port | 4 ONU Multicast | 5 Completed

### IP Host Configuration

9. don't need configure iphost, click next

Previous | Next

Dashboard | Device | Alarm | Monitor | Admin

Save Config | Description/ST | admin

← OLT / OLT List / AF2101-160170001 / Configuration / New Profile

1 Basic Configuration | 2 IP Host | 3 ONU Port | 4 ONU Multicast | 5 Completed

### Port configuration

\* Native VLAN

Concern  Unconcern

#### Port VLAN Configuration

Port	Native VLAN	Native VLAN priority	Operate
1	1	0	Edit Delete
2	1	0	Edit Delete
3	1	0	Edit Delete
4	1	0	Edit Delete

More

#### Configure VLAN Rules For Ports

Port	VLAN mode	Service VLAN	Service VLAN priority	User VLAN	User VLAN priority	Operate
1	Transparent	N/A	N/A	N/A	N/A	Edit Delete

10. ONU port keep default and click Next

Previous | Next

Dashboard | Device | Alarm | Monitor | Admin

Save Config | Description/ST | admin

← OLT / OLT List / AF2101-160170001 / Configuration / New Profile

1 Basic Configuration | 2 IP Host | 3 ONU Port | 4 ONU Multicast | 5 Completed

### ONU Multicast

\* ONU Multicast

\* Multicast mode: Snooping

\* Fast-leave:

11. enable multicast mode and click "Next"

#### Multicast Rules Configuration

Port	Multicast VLAN	Multicast IP type	Multicast IP address		IGMP-Forward			Multicast-Forward	Operate
			Starting IP	Ending IP	Forwarding mode	Default VLAN	Default VLAN priority		
No Data									

Previous | Next

● Create a tr069 profile

Dashboard | Device | Alarm | Monitor | Admin

1.double click olt

OLT List

Description	Group	Model	Firmware	Status
FD1608S-B2				
FD1608S-B2				
FD1608S-B2				

Dashboard | Device | Alarm | Monitor | Admin

2.click "Configuration"

Configuration

ONU Summary

Registered	Online	Active	Alarm
0	0	0	0

Rate

Unit:Mbps	Upstream	Downstream
5		
4		
3		
2		
1		
0		

Alarm

Level	Alarm Name	Device Type	Alarm Source	Alarm time
Major	PON 0/0/1 The TX output power of...	OLT	FD1608S-B2(192.168.81.158)(23)	2024-3-27 13:55:23
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158)(23)	2024-3-27 18:07:26
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158)(23)	2024-3-27 17:36:25
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158)(23)	2024-3-27 17:30:25

Alarm Trend

Level	Alarm Name	Device Type	Alarm Source	Alarm time
Major	PON 0/0/1 The TX output power of...	OLT	FD1608S-B2(192.168.81.158)(23)	2024-3-27 13:55:23
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158)(23)	2024-3-27 18:07:26
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158)(23)	2024-3-27 17:36:25
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158)(23)	2024-3-27 17:30:25

Subnet: Unassigned Subnet

Device Name: FD1608S-B2

Device Type: --

Vendor: C-Data

SN: AF2101-160170001

Hardware Version: V1.1

Inband MAC: E0:67:83:39:56:07

Outband MAC: E0:67:83:39:56:06

Description: FD1608S-B2(192.168.81.158)

Model: FD1608S-B2

Firmware: V3.1.56\_240301

System Time: 2024-4-23 17:37:15

Dashboard | Device | Alarm | Monitor | Admin

3.click "Profile Management"

4.click "TR-069 Profile"

5.click "Add"

Profile Management

Profile ID: Profile name: [Reset] [Search]

TR-069 profile

Profile ID	Profile name	Operate
No Data		

Global

Profile name  
tr069-profile\_xxx

TR-069 Service Configuration

TR-069 Configuration  
 Concern  Unconcern

IP Host  
Bind IP Host @

Enable TR-069

ACS Server Configuration

ACS server  
http://192.168.20.56:9999/v1/acs

Username  
acs

Password  
\*\*\*

Service inform

Service inform interval  
30 Second (1,429,496,7295)

Cancel Confirm

6. configure tr069 info then click "Confirm"

Admin

Basic Info

Enterprise ID	100000	Enterprise Type	ISP
Enterprise Name	SUPREME	Enterprise Address	--
Create Time	2023-03-21 15:06:28		

Root User

Username	root	Name	root
----------	------	------	------

License

License Restriction	limit	License Expiration Time	2099-12-31 23:59:59
MQTT Channel Number	500	TR-069 Channel Number	50000

Channel Resource

TR-069 Channel

Connection/Remaining Quantity	86/49914	Server URL	http://192.168.20.56:9999/v1/acs
Authentication Mode	Enable (Username: acs Password: acs)	Inform Interval	600 Second
STUN Interval	5-10 Second	Offline Timeout	3 times STUN Interval

MQTT Channel

Connection/Remaining Quantity	8/494	Server URL	http://192.168.20.56:8081/v1/bndrv+1
Authentication Mode	Disabled		

Note: ACS server Configuration requires and [Admin-Enterprise], as shown in the image below:

● Create wan profile

OLT List

1.double click olt

Description	Group	Model	Firmware	Status
FD1905S-80	OPON	OPON		
OPON OLT	OPON	OPON		
FD1905S-80	OPON	OPON		

Dashboard Device Alarm Monitor Admin Save Config Description admin

← OLT / OLT List / AF2101-100170001 ONU Manage ONU Upgrade Configuration Port Statistics More

2. click "Configuration"

Count: 2 pcs State: Running Power  
Count: 3 pcs State: Running Fan  
57% CPU 24% Memory 37.5°C Temperature

ONU Summary

Registered	-	0
Online	-	0
Active	-	0
Alarm	-	0

Rate

Unit: Mbps

5	
4	
3	
2	
1	
0	

Alarm

Level	Alarm Name	Device Type	Alarm Source	Alarm time
Major	PON 0/0/1 The TX output power of ...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 13:55:23
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 18:07:26
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 17:36:25
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 17:30:25

Alarm Trend

Subnet	Device Name	Description
Unassigned Subnet	FD1608S-B2	FD1608S-B2(192.168.81.158)
Device Type	Vendor	Model
...	C-Data	FD1608S-B2
SN	Hardware Version	Firmware
AF2101-100170001	V1.1	V3.1.56_240301
Inband MAC	Outband MAC	System Time
E6:67:83:38:56:07	E6:67:83:38:56:06	2024-4-23 17:37:15

Dashboard Device Alarm Monitor Admin Save Config Description admin

← OLT / OLT List / DA16-2211000047 / Configuration

Deployment Profile Management Port Management VLAN VLANIF Link Aggregation IGMP DHCP MAC Loopback detection Port Mirroring PPPoE+ STP

3. click "Profile Management"

Profile Management

DBA Profile Line Profile Service Profile TR-069 Profile WAN Profile

4. click "WAN Profile"

Profile ID Profile name Reset Search

WAN Profile

5. click "Add"

Profile ID	Profile name	Operate
No Data		

Total 0 20/page 1 1 Go to 1

Dashboard | Device | Alarm | Monitor | Admin | Save Config | Description | admin

← OLT | OLT List | DA18-2211000047 | Configuration | New Profile | Exit

1 Basic Configuration    2 WAN    3 Completed

Basic Configuration

\* Profile name  
wan-profile\_yao

6.profile name is "wan-profile\_yao"

Next

Dashboard | Device | Alarm | Monitor | Admin

← OLT | OLT List | DA18-2211000047 | Configuration | New Profile

1 Basic Configuration    2 WAN    3 Completed

WAN Configuration

Name	Mode	VLAN	Multicast VLAN	IP protocol	IP address	Gateway
No Data						

7.Add 1000 wan

Add WAN

Basic Configuration

\* VLAN

\* VLAN ID  
1000 [1,4094]

\* VLAN priority  
5

\* Mode  
IPoE

\* Service type  
TR069

\* IP protocol  
IPv4

\* MTU  
1500 [576,1500]

IPv4 Configuration

\* Mode  
 Static IP     DHCP

Previous    Next    Cancel    Confirm



Dashboard | Device | Alarm | Monitor | Admin

ONU | OLT | SmartOLT | Topology | OTA

← OLT / OLT List / DA16-2211000047 / Configuration / New Profile

1 Basic Configuration | 2 WAN | 3 Completed

### WAN Configuration

Name	Mode	VLAN	Multicast VLAN	IP protocol	IP address	Gateway
_L_TR969_VID_1000	IPoE	1000	N/A	IPv4	N/A	N/A

**8. Add internet wan**

#### Add WAN

VLAN

\* VLAN ID:  [1,4094]

\* VLAN priority:

\* Mode:

\* Service type:

\* IP protocol:

\* IGMP/MLD proxy:

\* MTU:  [576,1500]

#### IPv4 Configuration

\* Mode:  Static IP  DHCP

#### Port Binding

LAN1  LAN2  LAN3  
 LAN4  LAN5  LAN6  
 LAN7  LAN8  
 SSID1(2.4G)  SSID2  SSID3  
 SSID4  SSID5(5G)  SSID6

Dashboard | Device | Alarm | Monitor | Admin

ONU | OLT | SmartOLT | Topology | OTA

← OLT / OLT List / DA16-2211000047 / Configuration / New Profile

1 Basic Configuration | 2 WAN | 3 Completed

**9. click "Confirm"**

The WAN profile is created

### 4.1.3.2 Deploymen

Dashboard | Device | Alarm | Monitor | Admin

Save Config | Description/ST | admin

← OLT / OLT List / DA18-2211000047 / Configuration / Create Policy

1 Global      2 Policy      3 Completed

4.click "Add VLAN"

OLT VLAN Configuration

Port	VLAN-mode	Native VLAN	Tag VLAN	Untag VLAN	Operate
ge 0/0/1(lag1)	Access	100	N/A	100	Edit
ge 0/0/2	Access	1	N/A	1	Edit
ge 0/0/3	Hybrid	1	N/A	1	Edit
ge 0/0/4(lag2)	Access	100	N/A	100	Edit
xge 0/0/1(lag5)	Hybrid	1	N/A	1	Edit
xge 0/0/2	Access	100	N/A	100	Edit
gpon 0/0/1	Trunk	1	1-4080	N/A	Edit
gpon 0/0/2	Trunk	1	1-4080	N/A	Edit
gpon 0/0/3	Trunk	1	1-4080	N/A	Edit

Next

Add

\* VLAN

1000      5.enter vlan id      [1,4094]

Description

Please enter the specified VLAN description information

Port	VLAN-mode	Forbidden	Tag	Untag
ge 0/0/1	Access	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
ge 0/0/2	Access	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
ge 0/0/3	Access	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
ge 0/0/4	Access	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
xge 0/0/1	Access	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

6.select uplink port

7.click

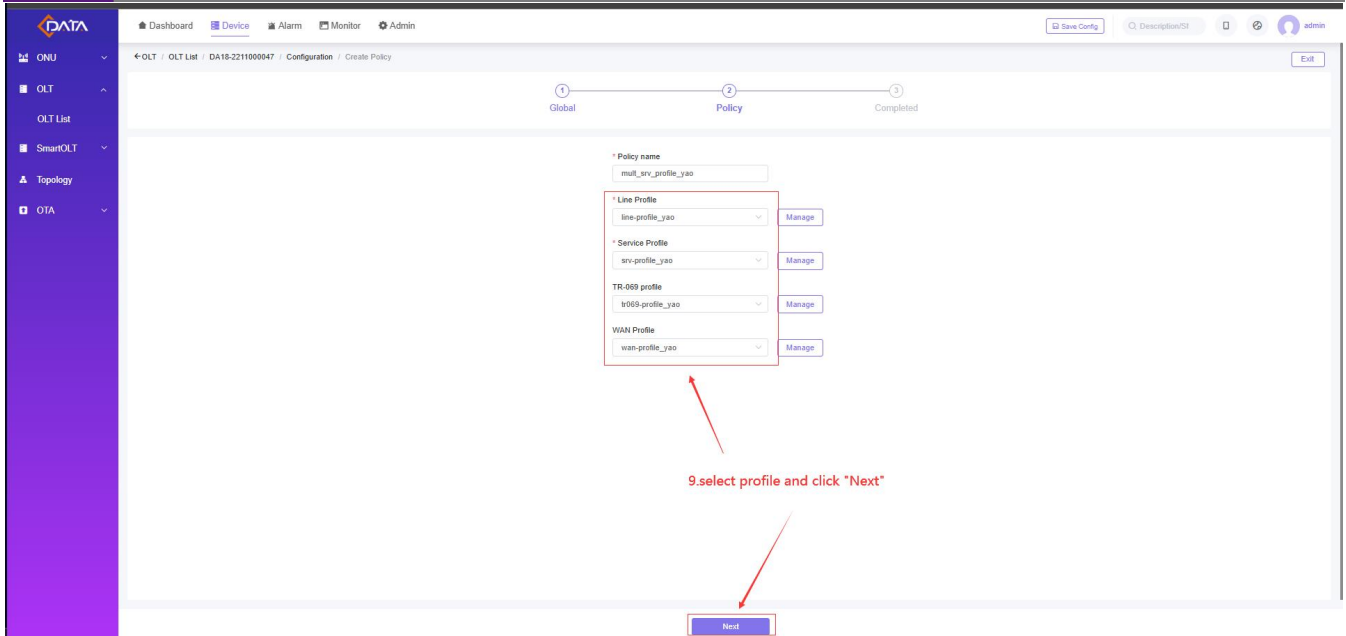
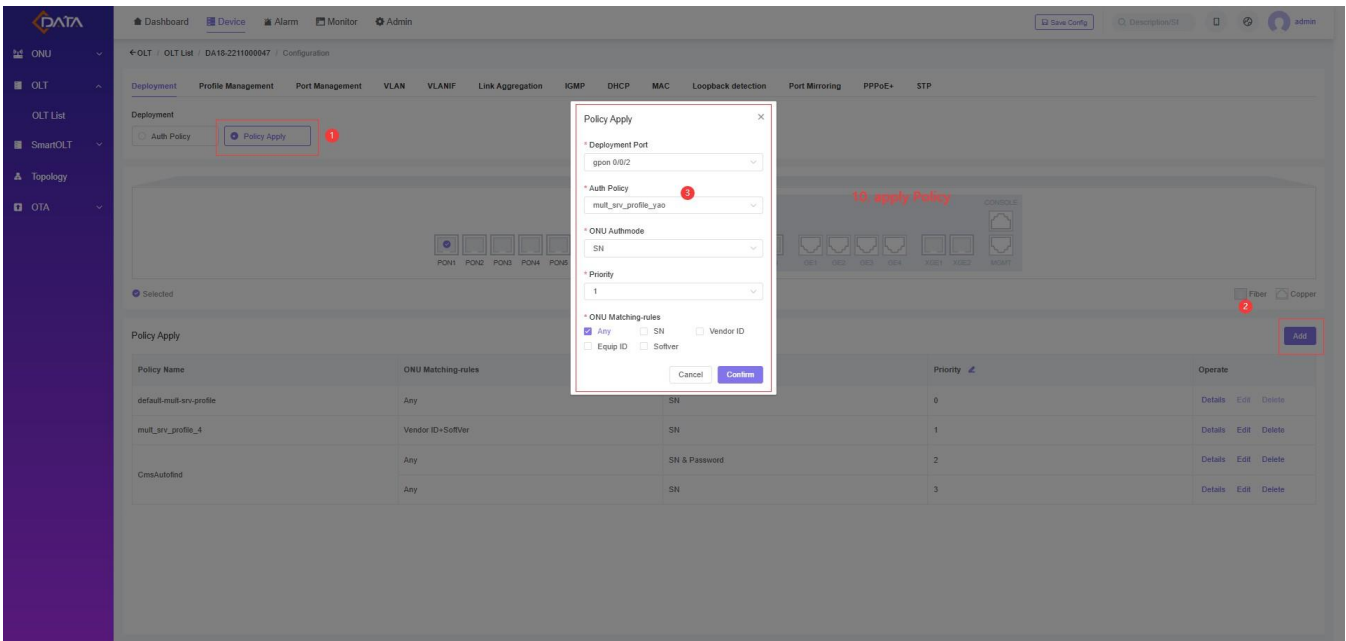
Cancel      Confirm

OLT VLAN Configuration

Add VLAN

Port	VLAN-mode	Native VLAN	802.1P	Tag VLAN	Untag VLAN	Operate
ge 0/0/1	Access	100	0	N/A	100	Edit
ge 0/0/2	Access	100	0	N/A	100	Edit
ge 0/0/3	Access	2	0	N/A	2	Edit
ge 0/0/4	Access	1000	0	N/A	1000	Edit
xge 0/0/1	Access	1	0	N/A	1	Edit

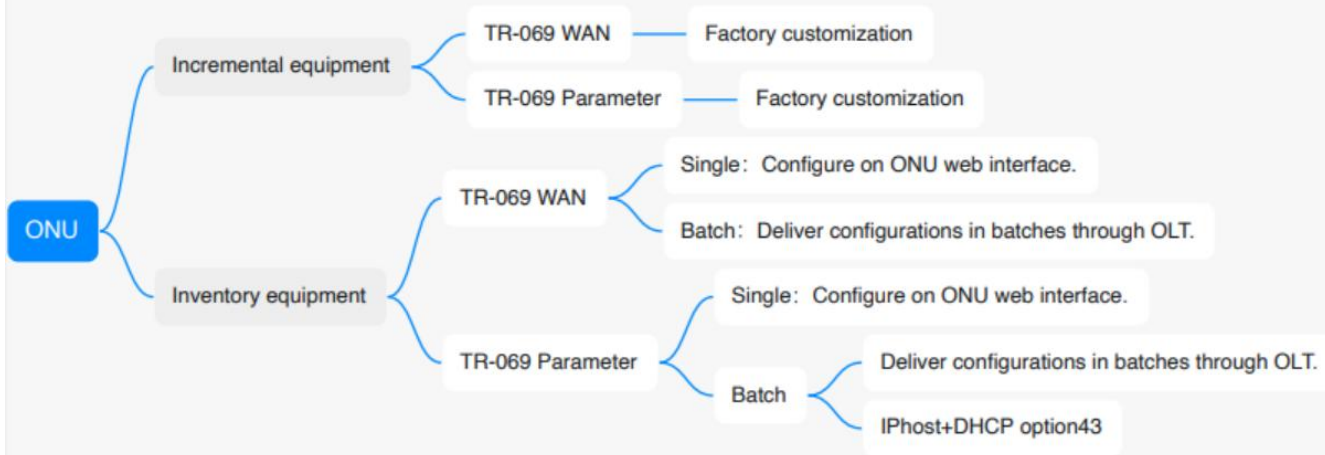
Next      8.click "Next"



#### 4.1.4 Step4 Bind the ONU to the CMS

ONU configuration TR-069 WAN connection and TR-069 server parameter method,

- Incremental device: recommended unified factory customization;
- Stock device: for a single device can be directly configured on the ONU Web interface, for multiple devices can be delivered in batches through OLT.



#### 4.1.4.1 TR-069 WAN batch configuration

Batch WAN profile via OLT (some vendor OLTs, or older versions of ONUs do not support private protocol), using cdata gpon OLT as an example:  
See [4.1.3 Step3 deployment of OLT - Prerequisites - Creating a wan profile]

#### 4.1.4.2 TR-069 Batch Configuration of Server parameters (OLT batch delivery)

Batch delivery of TR069 parameter profile through OLT (some manufacturers OLT, or older versions of ONUs do not support private protocol), using cdata gpon OLT as an example:  
See [4.1.3 Step3 deployment of OLT - Prerequisites - Creating a tr069 profile]

#### 4.1.4.3 TR-069 Batch configuration of server parameters (IPhost+DHCP option43)

IPhost is the GPON standard protocol, which is generally supported by ONU. TR069 channel can be established through IPhost. TR069 server parameters can be delivered through DHCP option 43 field, including the ACS server address, ACS server user name and password.

Using a Huawei DHCP Server as an example, you can run the following command to configure ACS parameters: option 43 hex 01length URL username password, where the URL, username, and password must be in ASCII hexadecimal format.

Parameters	Instructions	Example Parameter Values	Hexadecimal value
length	The total length of the argument following the keyword option 43 hex 01	40 characters	28
URL	ACS's address	http://192.168.20.56:9999/v1/acs	687474703A2F2F3139322E3136382E32302E35363A393939392F76312F61637320
username	ACS user name	acs	61637320
password	Password for ACS	acs	616373

The configuration commands are as follows:

```
<Sysname> system-view
[Sysname] dhcp server ip-pool 0
[Sysname-dhcp-pool-0] option 43 hex 0128687474703A2F2F3139322E3136382E32302E35363A393939392F76312F61637320616373
```

### 4.1.5 Step5 Routine maintenance

#### 4.1.5.1 OLT routine maintenance

OLT routine maintenance includes viewing lists and details, single configuration, device upgrade, restart, factory restoration, etc.

##### 4.1.5.1.1 OLT list and details view

Select [Device-OLT-OLT List] to display the OLT List interface as follows, you can view all bound OLT devices.

Dashboard | Device | Alarm | Monitor | Admin

Description: [ ] Group: [ ] Model: [ ] Firmware: [ ] Status: [ ] [Reset] [Search]

OLT List 3 / 2 [Grid] [List] [Delete]

GPON OLT 41 / 46 22 GPON  
OLT(192.168.30.100)

GPON OLT 3 / 506 2 GPON  
OLT(192.168.30.200)

FD1008S-B2 0 / 2 1 GPON  
FD1008S-B2(192.168.81.158)

FD1008S-B0 3 / 18 6 GPON  
OLT(192.168.81.137)

FD1008S-B0 0 / 0 102 GPON  
OLT(192.168.81.207)

Total 5 10/page [1] Go to 1

Double-click the card to enter the OLT details displayed as follows, you can view the OLT port status, running status, alarm and other information.

Dashboard | Device | Alarm | Monitor | Admin

[Save Config] [Description/ID] [admin]

[<] OLT / OLT List / DA16-2211000047 [ONU Manage] [ONU Upgrade] [Configuration] [Port Statistics] [More]

GPON OLT

CONSOLE

Count: 2 pcs State: Running Power  
Count: 3 pcs State: Running FAN

23% CPU 21% Memory 34°C Temperature

1% ONU Summary

Registered	Online	Active	Alarm
506	1%	1%	0%
	3	3	1

Rate

Unit: Mbps

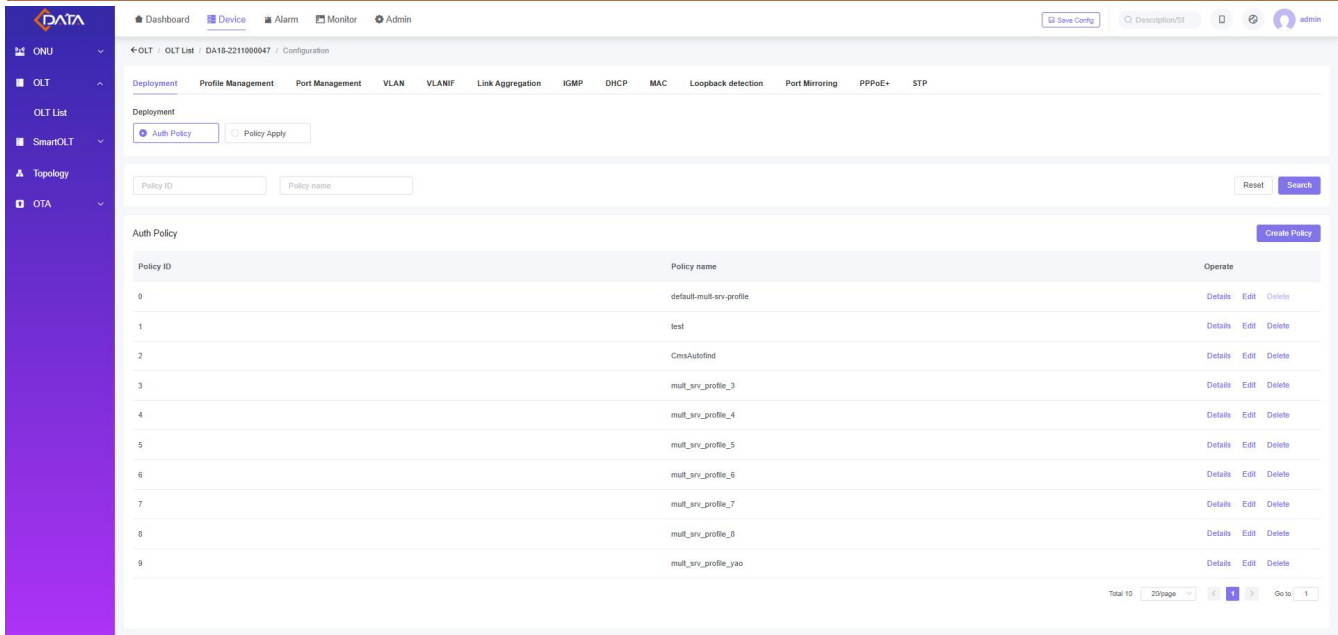
Alarm

Level	Alarm Name	Device Type	Alarm Source	Alarm time
Minor	PON 0/0/1 The TX output power of ...	OLT	OLT(192.168.1.10024)	2000-2-17 17:16:40
Minor	PON 0/0/1 ONU: 4 UNI 4 The Ether...	ONU	EGS141A5_PON 0/0/1_ONU 4(192.168.1.1...	2000-2-17 17:16:03
Minor	PON 0/0/1 ONU: 4 UNI 3 The Ether...	ONU	EGS141A5_PON 0/0/1_ONU 4(192.168.1.1...	2000-2-17 17:16:03
Minor	PON 0/0/1 ONU: 4 UNI 2 The Ether...	ONU	EGS141A5_PON 0/0/1_ONU 4(192.168.1.1...	2000-2-17 17:16:03

Subnet	Unassigned Subnet	Device Name	OLT	Description	OLT(192.168.30.200)
Device Type	--	Vendor	GPON OLT	Model	GPON OLT
SN	DA16-2211000047	Hardware Version	V1.1	Firmware	V3.0_0_240328
Inband MAC	E0:67:B3:7B:11:F1	Outband MAC	E0:67:B3:7B:11:F0	System Time	2000-3-7 15:25:45

#### 4.1.5.1.2 Single OLT configuration

On the OLT details screen, click 'Configuration' to enter the OLT configuration screen. You can create and apply deployment policies and configure port vlans, link aggregation, vlans, and VLANIF configurations.



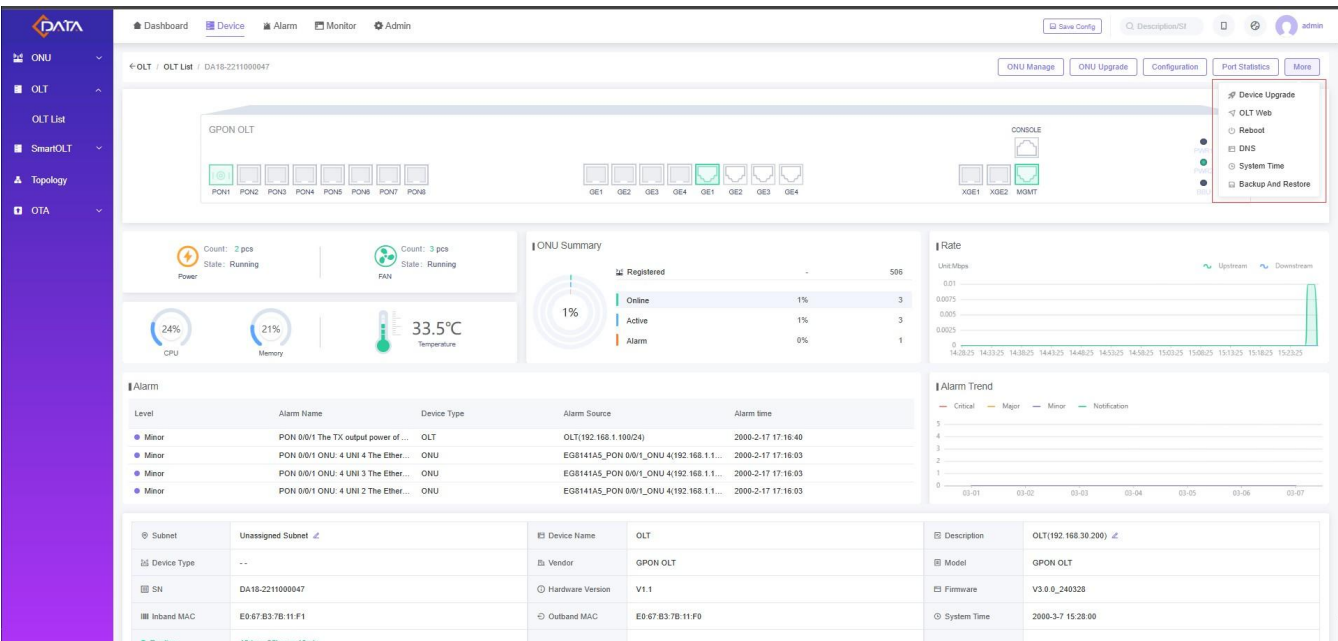
**4.1.5.1.3 OLT More operations**

on the OLT details screen, click "More" to upgrade the device, open the OLT Web, and restart and restore the factory.

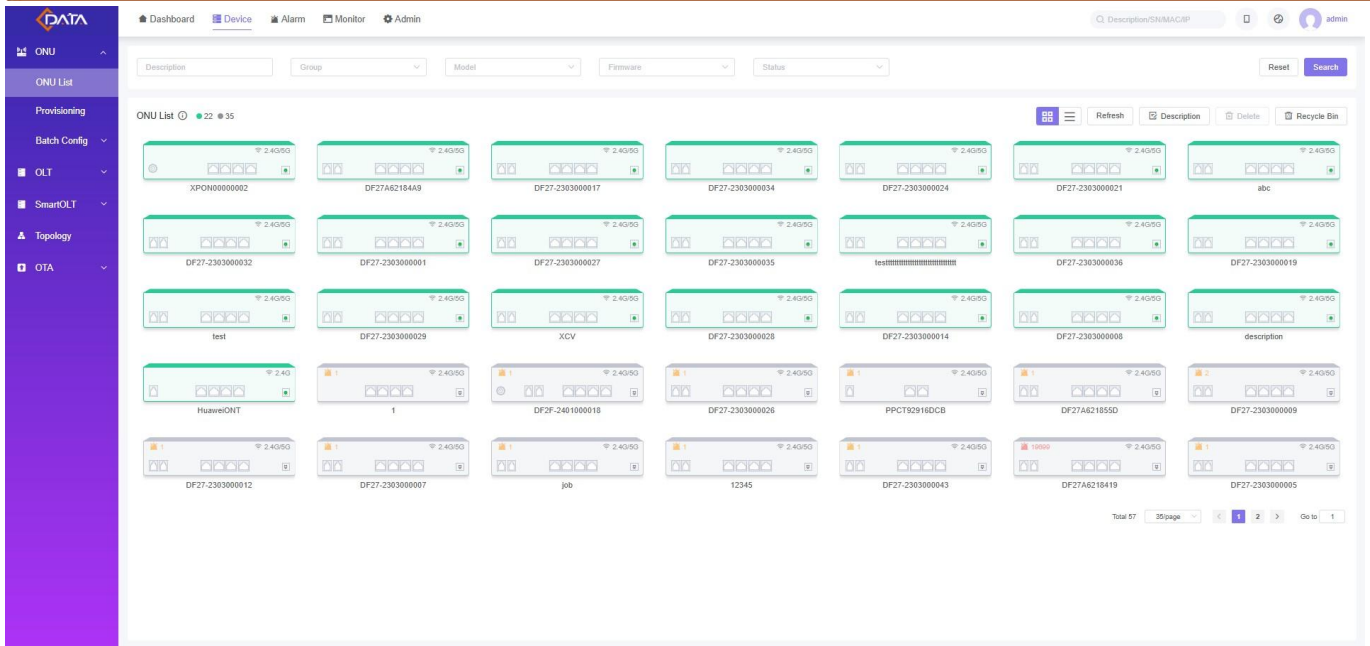
**4.1.5.2 Routine maintenance of ONU**

ONU routine maintenance includes list and details view, single configuration, batch configuration, OTA upgrade, etc.

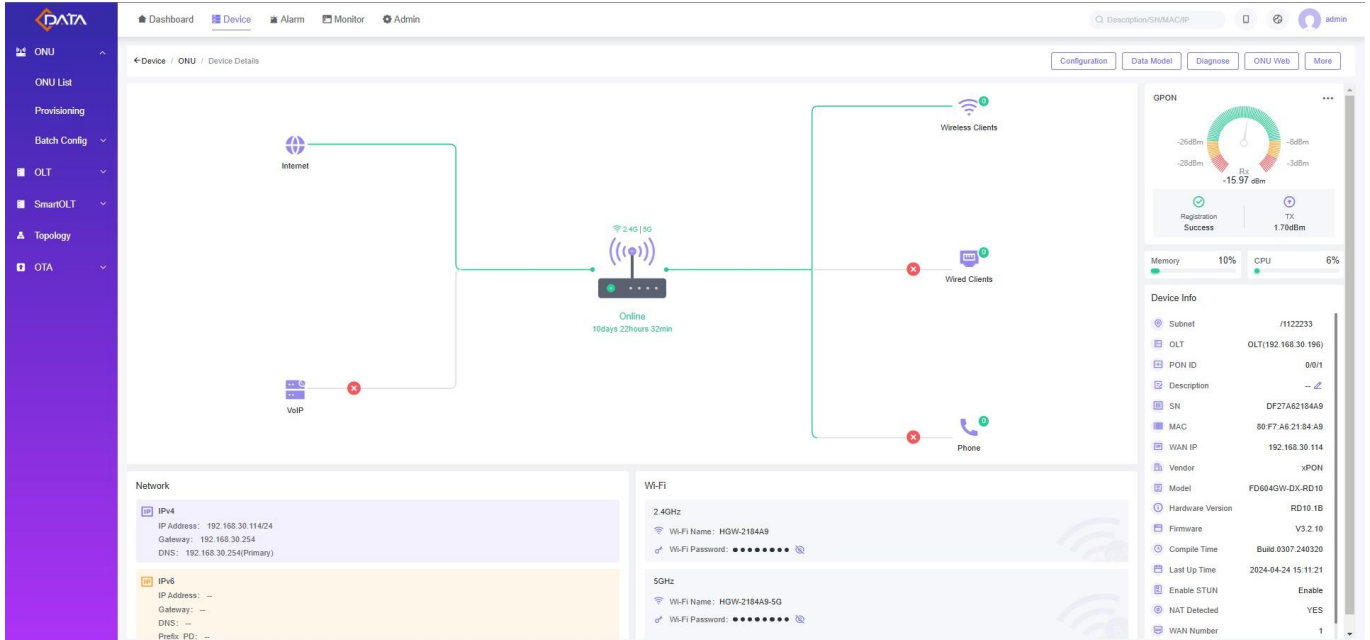
**4.1.5.2.1 ONU list and details view**



Select [Device-ONU-ONU List] to display the ONU list interface as follows, you can view all the ONU devices bound by TR-069.



Double-click the card to enter the ONU details screen displayed as follows, you can view ONU capability and connection status, PON optical power, network and Wi-Fi information.



#### 4.1.5.2.2 Create an ONU preconfiguration

After the ONU is connected to the OLT, the CMS can directly deliver service configurations based on the TR-069 protocol to realize zero-configuration commissioning. Preconfiguration of the ONU consists of the following three steps.

Creating a Configuration profile	Create a preconfiguration task	View the preconfiguration results
----------------------------------	--------------------------------	-----------------------------------

##### Create configuration profile

Open the [Device-Batch Config-Profile] screen and create a profile that includes WAN, Wi-Fi, and VoIP services.

- Create a WAN profile



Dashboard | Device | Alarm | Monitor | Admin

Q: Description/SN/MAC/IP

admin

ONU

ONU List

Provisioning

Batch Config

Profile

Config File

Distribution

OLT

SmartOLT

Topology

OTA

WAN Profile | **Wi-Fi Profile** | VoIP Profile | Composite Profile

Profile Name  Create Time  Reset Search

1.Add wan profile Add

Profile Name	Description	Create Time	Operate
WAN模板-20240322 10:13:38	123	2024-03-22 10:40:22	Edit Delete
ts1-wan	N/A	2024-03-08 13:59:24	Edit Delete
WAN模板-20240202 14:25:19	N/A	2024-02-02 14:26:35	Edit Delete
WAN Profile-20231221 15:53:40	N/A	2023-12-21 15:53:50	Edit Delete

Total 4 | 10page | 1 | Go to 1

● Create a Wi-Fi profile

Dashboard | Device | Alarm | Monitor | Admin

Q: Description/SN/MAC/IP

admin

ONU

ONU List

Provisioning

Batch Config

Profile

Config File

Distribution

OLT

SmartOLT

Topology

OTA

WAN Profile | **Wi-Fi Profile** | VoIP Profile | Composite Profile

Profile Name  Create Time  Reset Search

2.Add Wifi Profile Add

Profile Name	Description	Create Time	Operate
ts1-wifi	N/A	2024-03-08 14:00:22	Edit Delete
Wi-Fi模板-20240102 13:48:59	测试	2024-01-02 13:49:07	Edit Delete

Total 2 | 10page | 1 | Go to 1

● Create a VoIP profile

Dashboard | Device | Alarm | Monitor | Admin

Q: Description/SN/MAC/IP

admin

ONU

ONU List

Provisioning

Batch Config

Profile

Config File

Distribution

OLT

SmartOLT

Topology

OTA

WAN Profile | Wi-Fi Profile | **VoIP Profile** | Composite Profile

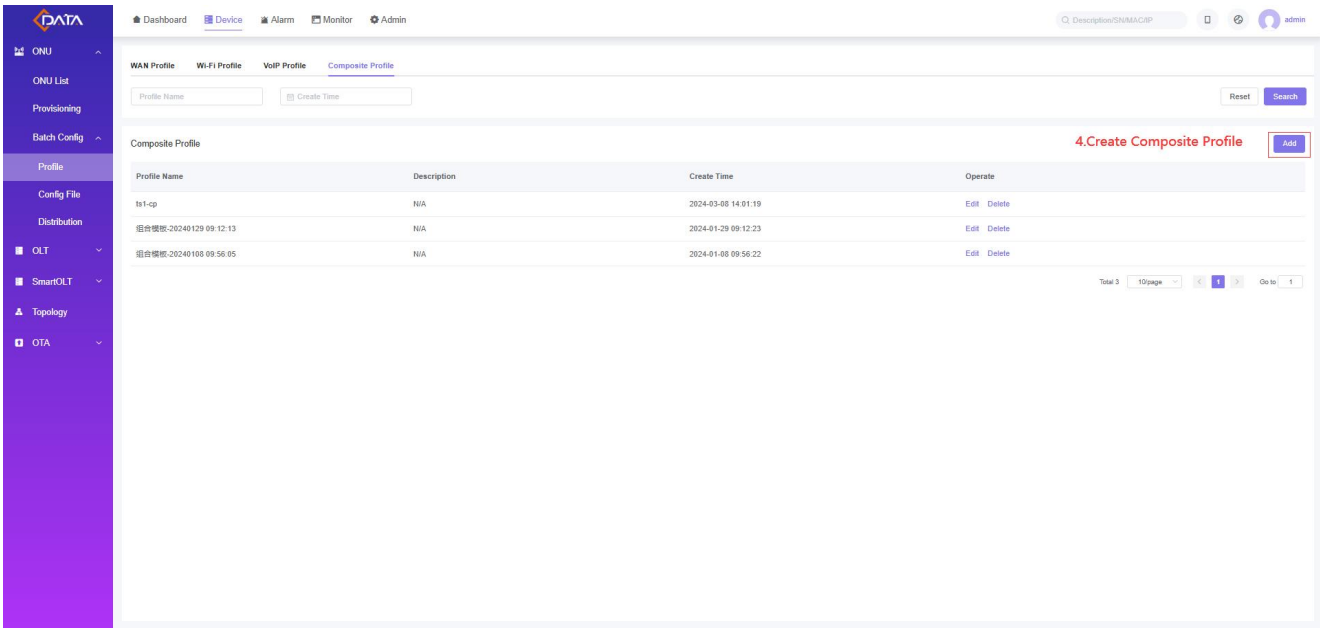
Profile Name  Create Time  Reset Search

3.Add VoIP Profile Add

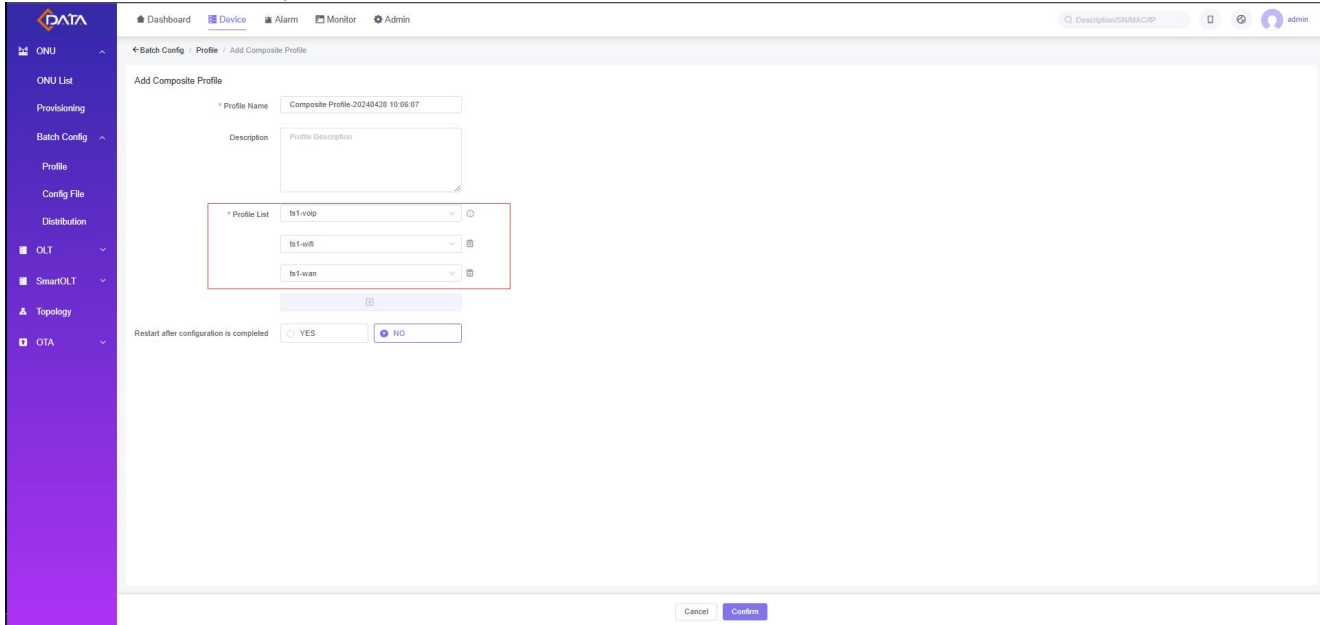
Profile Name	Description	Create Time	Operate
ts1-voip	N/A	2024-03-08 14:00:52	Edit Delete
VoIP Profile-20240117 17:36:31	测试	2024-01-17 17:37:03	Edit Delete
语音模板-20240108 09:55:40	N/A	2024-01-08 09:55:53	Edit Delete

Total 3 | 10page | 1 | Go to 1

● Create a composite profile

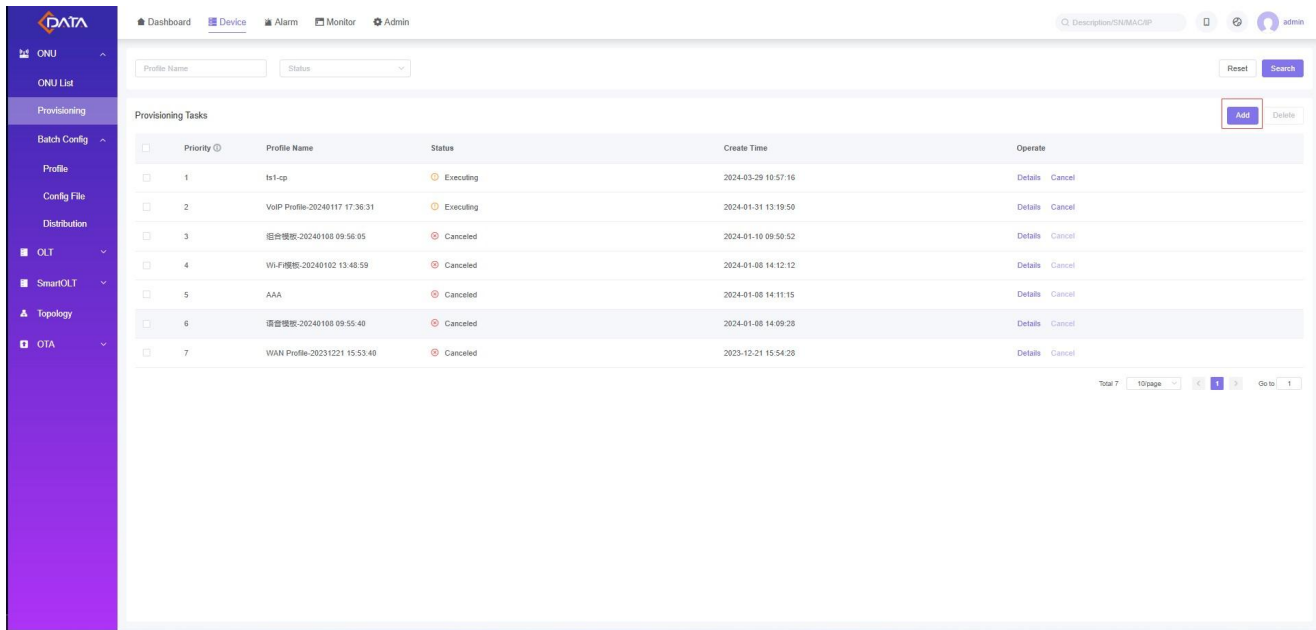


Select the WAN, Wi-Fi, and VoIP templates created earlier and click "Confirm".

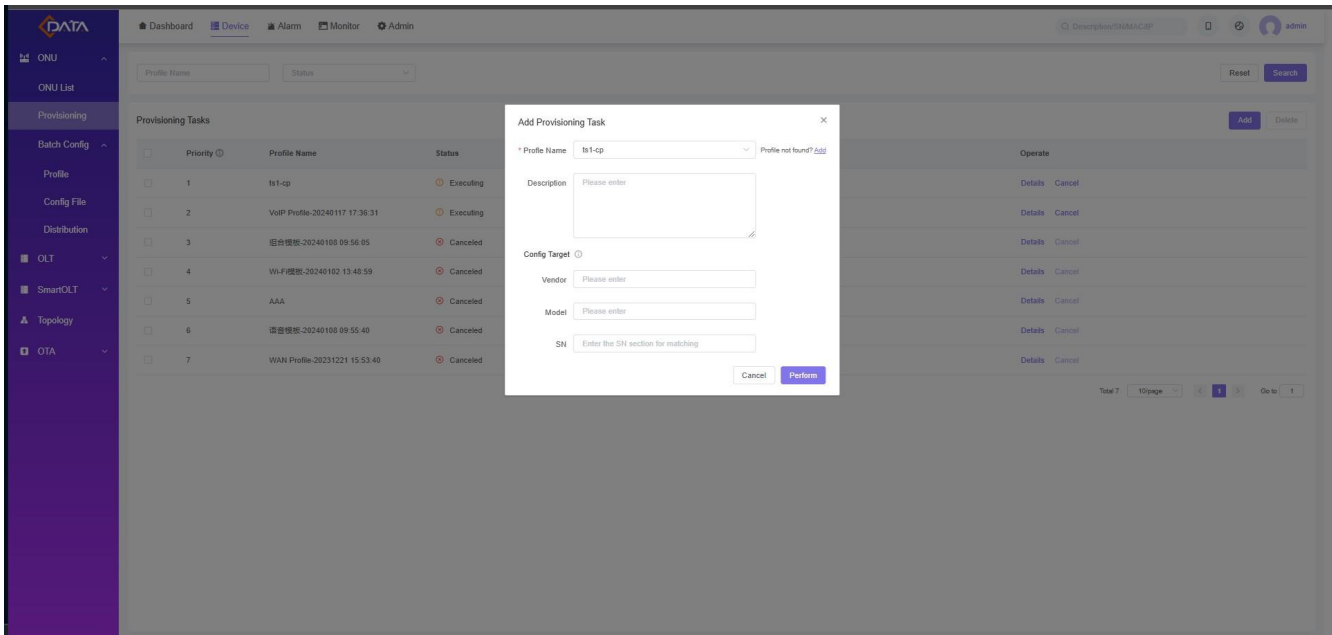


**2. Create a Provisioning task**

Open the [Device-Provisioning] interface and click "Add" to add a preconfigured task.

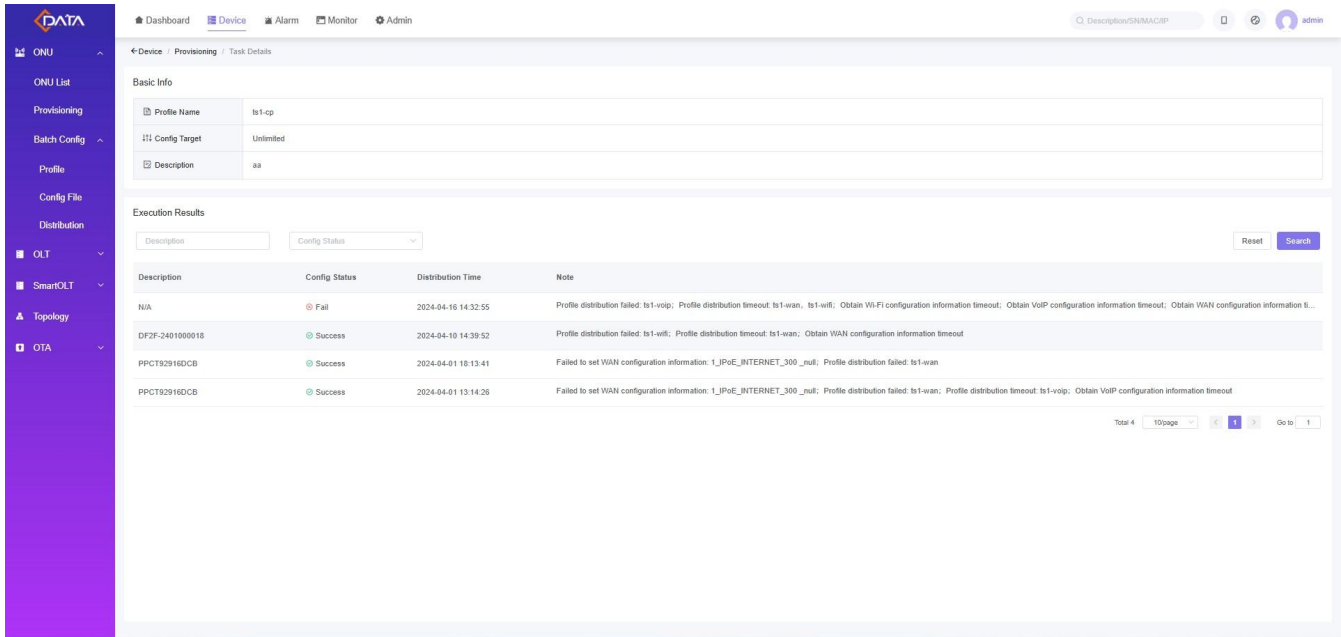


Select the profile name and config target. The config target can be matched with the device based on the vendor, model, or SN. If you enter multiple values, the intersection is selected. If neither of these parameters is specified, there is no limit. The profile will be automatically delivered to any device reported for the first time.



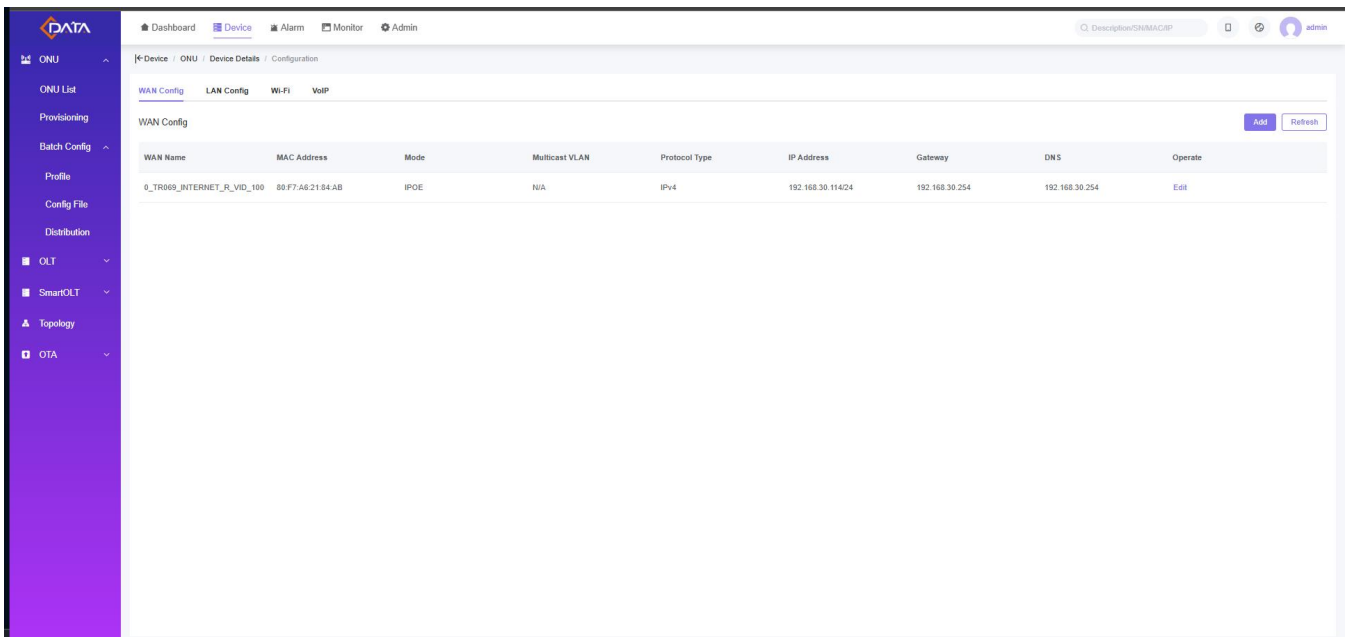
### 3.View the preconfiguration result

After the ONU is bound to the CMS using TR-069, the CMS automatically delivers the pre-configuration task. On the Provisioning page, click Details to view the execution of the matched ONU pre-configuration task.



#### 4.1.5.2.3 Configure a single ONU

On the ONU Details page, click "Configuration" to open the configuration screen shown as follows, which supports common service configurations such as WAN, LAN, Wi-Fi, VoIP, and CATV.



On the ONU details page, click "Data Model" to open the data model interface displayed as follows, which supports viewing and editing of all node information.

Dashboard | Device | Alarm | Monitor | Admin

Device / ONU / Device Details / Data Model

Parameter Search Update Time: 2023-09-06 15:07:47 Refresh

Parameter	Value	Operate
> Capabilities		⊙
> DeviceConfig		⊙
> DeviceInfo		⊙
DeviceSummary	InternetGatewayDevice:1.4[] (Baseline:2,EthernetLAN:2,WIFILAN:2,WIFIW...	⊙
> DownloadDiagnostics		⊙
> IPPingDiagnostics		⊙
> LANConfigSecurity		⊙
> LANDevice		⊙
LANDeviceNumberOfEntries	1	⊙
> LANInterfaces		⊙
> Layer2Bridging		⊙
> Layer3Forwarding		⊙
> ManagementServer		⊙
> QueueManagement		⊙
> Services		⊙

Full Path: InternetGatewayDevice.DeviceInfo.

#### 4.1.5.2.4 Batch configuration of ONU

ONU configurations can be changed in batches for ONU devices bound to CMS. Similar to pre-configuration, a configuration profile must be created in advance for batch configuration.

Select [Device-ONU-Batch Config-Distribution]. The following ONU batch configuration page is displayed. You can view the execution of all configurations delivered in batches in history.

Dashboard | Device | Alarm | Monitor | Admin

Profile Name Vendor Model Config Status Description MAG Distribution Time Reset Search

Distribution Record Add Retry Delete

Description	MAC	Vendor	Model	Status	Profile Name	Config Status	Create Time	Distribution Time	Operate
DF27-2303000001	80:F7:A6:21:83:89	xPON	FD664GW-DX-RD10	Online	VajP Profile-20240117 17:36:31	Not Started	2024-03-29 10:58:11	N/A	
DF27A621855D	80:F7:A6:21:85:5D	xPON	FD664GW-DX-RD10	Offline	ts1-cp	Not Started	2024-03-27 17:34:25	N/A	
DF27-2303000001	80:F7:A6:21:83:89	xPON	FD664GW-DX-RD10	Online	ts1-cp	Not Started	2024-03-27 17:34:25	N/A	
DF27A621855D	80:F7:A6:21:85:5D	xPON	FD664GW-DX-RD10	Offline	ts1-cp	Not Started	2024-03-27 17:32:27	N/A	
DF27-2303000001	80:F7:A6:21:83:89	xPON	FD664GW-DX-RD10	Online	ts1-cp	Not Started	2024-03-27 17:32:27	N/A	
DF27A621855D	80:F7:A6:21:85:5D	xPON	FD664GW-DX-RD10	Offline	ts1-cp	Not Started	2024-03-27 17:32:06	N/A	
DF27-2303000001	80:F7:A6:21:83:89	xPON	FD664GW-DX-RD10	Online	ts1-cp	Not Started	2024-03-27 17:32:06	N/A	

Total 7 10page 1 1 On to 1

Click Add to create a batch configuration task, select the configuration profile and object, and deliver the task directly.

4.1.5.2.5 OTA Upgrade

<b>Step1: Upload and verify the firmware</b>	<b>Step2: Create an upgrade task</b>	<b>Step3: Check the upgrade status of the device</b>
--	--------------------------------------	--

1) Select [Device-OTA-Firmware] to display the firmware management interface as follows, you can upload the firmware and verify it;

2) Select [Device-OTA-Upgrade] to display the following upgrade management interface, which allows you to create upgrade tasks and view the upgrade status.

Dashboard | Device | Alarm | Monitor | Admin

Upgrade Name: [ ] Status: [ ] Effective Date: [ ] [Reset] [Search]

Upgrade Task [Add] [Delete]

Upgrade Name	Vendor	Model	Firmware Name	Status	Effective Date	Upgrade Time Slot	Progress	Operate
OTA升级-20240402 11:34	PPCT	2K15X	img_ppc-excite_602_2024031-6-4.0.8.2+AI+custom-V2.3.1...	Completed	2024/04/02-2024/04/02	11:36-15:36	0/1	Details Pause
OTA升级-20240401 18:24	PPCT	2K15X	img_ppc-excite_602_2024031-6-4.0.8.2+AI+custom-V2.3.1...	Completed	2024/04/01-2024/04/01	18:26-22:26	1/1	Details Pause
OTA-20240401 18:14	PPCT	2K15X	img_ppc-excite_20230530-4.0.8.2+AI+custom-V2.3.15-un...	Completed	2024/04/01-2024/04/01	18:15-22:15	1/1	Details Pause
OTA-20240401 16:00	PPCT	2K15X	img_ppc-excite_602_2024031-6-4.0.8.2+AI+custom-V2.3.1...	Completed	2024/04/01-2024/04/01	16:01-20:01	1/1	Details Pause
OTA-20240401 15:43	PPCT	2K15X	img_ppc-excite_602_2024031-6-4.0.8.2+AI+custom-V2.3.1...	Completed	2024/04/01-2024/04/01	15:44-19:44	1/1	Details Pause
OTA-20240401 15:22	PPCT	2K15X	img_ppc-excite_unimim-20221914-4.0.8.3+AI+custom-V2.3...	Completed	2024/04/01-2024/04/01	15:24-19:24	1/1	Details Pause
OTA升级-20240401 15:15	PPCT	2K15X	img_ppc-excite_602_2024031-6-4.0.8.2+AI+custom-V2.3.1...	Completed	2024/04/01-2024/04/01	15:16-19:16	1/1	Details Pause
OTA升级-20240401 14:43	PPCT	2K15X	img_ppc-excite_20230530-4.0.8.2+AI+custom-V2.3.15-un...	Completed	2024/04/01-2024/04/01	14:45-18:45	1/1	Details Pause
OTA-20240401 14:40	PPCT	2K15X	img_ppc-excite_20230530-4.0.8.2+AI+custom-V2.3.15-un...	Completed	2024/04/02-2024/04/03	02:42-06:42	1/1	Details Pause
OTA-20240401 14:30	PPCT	2K15X	img_ppc-excite_20230530-4.0.8.2+AI+custom-V2.3.15-un...	Completed	2024/04/01-2024/04/02	14:31-18:31	1/1	Details Pause

Total 10 | 10page | [1] [2] [3] [4] [5] Go to [1]

3) In the upgrade management interface, click "Details" to view the upgrade status of each device.

Dashboard | Device | Alarm | Monitor | Admin

OTA / Upgrade / Upgrade Details

Basic Info

Upgrade Name	OTA-20240401 16:00
Vendor	PPCT
Model	2K15X
Firmware Name	img_ppc-excite_602_20240316-4.0.8.2+AI+custom-V2.3.19-unimim-web tar
Effective Date	2024/04/01 - 2024/04/01
Upgrade Time Slot	16:01-20:01
Note	--
Create Time	2024/04/01 16:00:40

Summary

100%

Total	1 PCS	
Success	1PCS	100%
Failed	0PCS	0%
Upgrading	0PCS	0%
Canceled	0PCS	0%
Not started	0PCS	0%

Upgrade Target

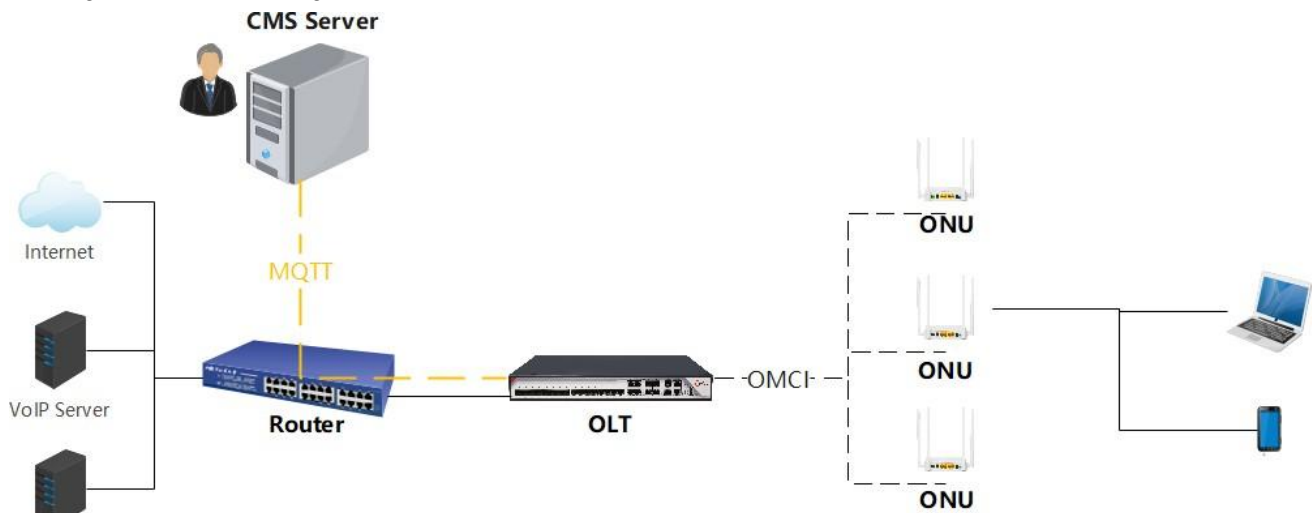
Description: [ ] Group: [ ] V2.3.18PPCU [ ] Status: [ ] Upgrade Status: [ ] [Reset] [Search] [Retry]

Description	Group	Firmware	Status	Upgrade Status	Note
PPCT92916DCB	Group/Ungrouped	V2.3.18PPCU	Offline	Success	

Total 1 | 10page | [1] [2] [3] [4] [5] Go to [1]

### 4.2 Scenario 2: CMS manages OLT via MQTT, OLT manages SFU via OMCI

CMS manages OLT via MQTT, OLT manages ONU via OMCI, and the network architecture is as follows:



The recommended configuration steps are as follows:

**4.2.1 Step1 The OLT is routable to the CMS**

To connect the OLT to the upstream router, you need to configure VLANIF interfaces and routes.

**4.2.1.1 Configuring VLANIF Interfaces**

Log in to the OLT Web management platform, open the VLAN Planing page, add VLAN 300, and bind VLAN 300 to the GE1 port for management.

The screenshot shows the OLT Web management platform interface. The left sidebar contains navigation options: Configuration, Port Management, VLAN (expanded), VLAN Planning (selected), Port VLAN, VLANIF, Link Aggregation, IGMP, DHCP, Profile Management, MAC, and Loopback Detection. The main content area is titled 'VLAN Planning' and features a search bar for 'VLAN ID', a table of existing VLANs, and an 'Add VLAN' button highlighted with a red box. The table lists VLANs 1 through 7 with their respective descriptions, untagged ports, and tagged ports. At the bottom of the table, there is a pagination control showing 'Total 4017' and '20/page'.

The 'Add' dialog box is shown with the following configuration:

- VLAN:** 300 (range [1,4094])
- Description:** management
- Port configuration:** A table with columns for Port, Mode, Forbidden, Tag, and Untag. The 'ge 0/0/1' port is selected for tagging.

Port	Mode	Forbidden	Tag	Untag
ge 0/0/1	Hybrid	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
ge 0/0/2	Hybrid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
ge 0/0/3	Access	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
ge 0/0/4	Access	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
xge 0/0/1	Trunk	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

- Configure the management IP address 192.168.4.123 for VLAN 300.



**Add** ✕

\* VLAN

\* IP mode

\* IPV4 address

\* Subnet mask

Description

Overview
Deployment
ONU
Configuration
Statistics
Maintenance

root

Configuration

VLANIF

VLAN ID	VLANIF name	Description	Connection status	IP address	Subnet mask	Operate
100	Vlanif100	Optilink_MGMT	up	172.168.100.100	255.255.255.0	Edit Delete
200	Vlanif200	vlan200-Interface	up	192.168.95.249	255.255.248.0	Edit Delete
300	Vlanif300	manage_ip	up	192.168.4.123	255.255.255.0	Edit Delete

#### 4.2.1.2 Configure Route

Configure the default route 192.168.4.1 for vlanif 300

Dashboard
Device
Alarm
Monitor
Admin

admin

OLT

VLANIF

VLAN ID	VLANIF name	Description	IP address	Subnet mask	Operate
100	Vlanif100	vlan100-Interface	192.168.30.196	255.255.255.0	Edit Delete
200	Vlanif200	vlan200-Interface	192.168.2.1	255.255.254.0	Edit Delete
300	Vlanif300	manage_ip	192.168.4.123	255.255.255.0	Edit Delete

**Gateway** ✕

\* Network Interface

\* Interface address

\* Subnet mask

\* Default gateway

#### 4.2.2 Step2 Bind the OLT to the CMS

35

CMS manages OLTs via MQTT and currently only supports C-DATA OLT bindings, with support for later versions of third-party OLTs.

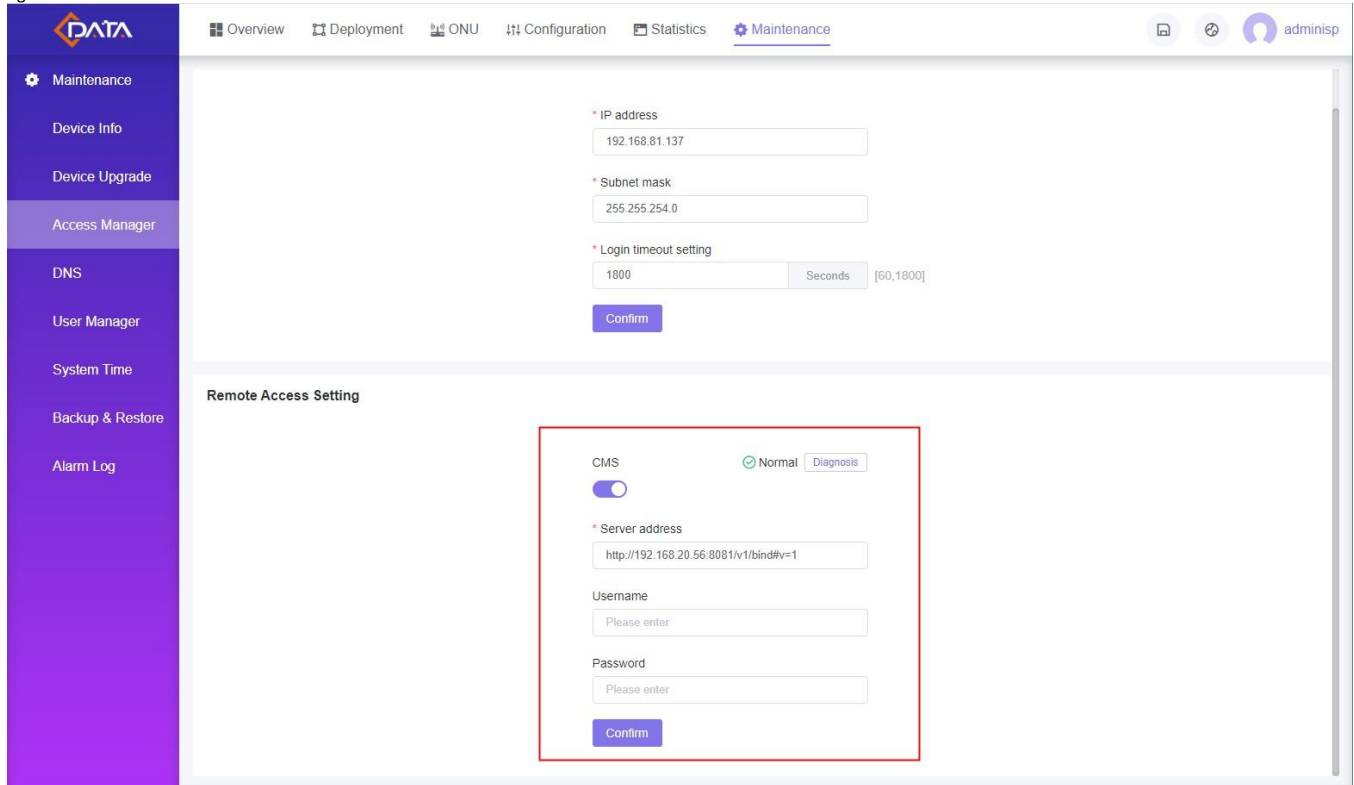
OLT device upgrades	Enable CMS remote access	View binding results
---------------------	--------------------------	----------------------

**4.2.2.1 OLT device upgrade**

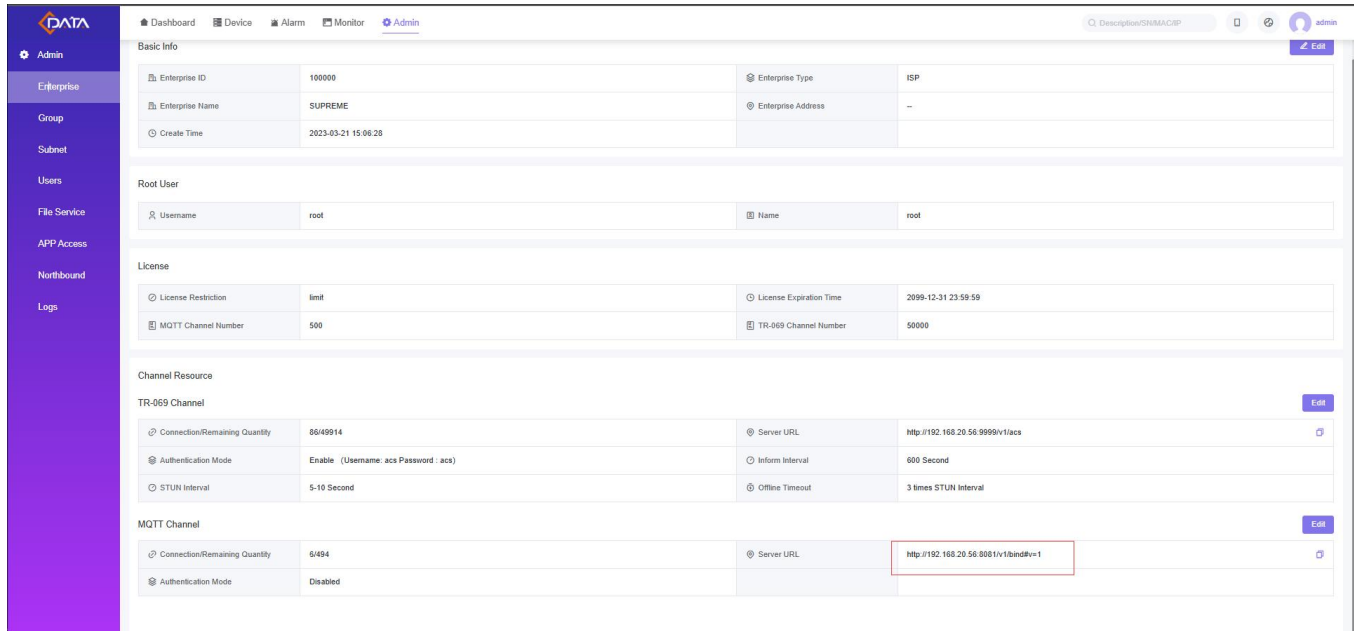
Log on to the ONU Web interface to upgrade your GPON 16 series model to version 3.2 and above.

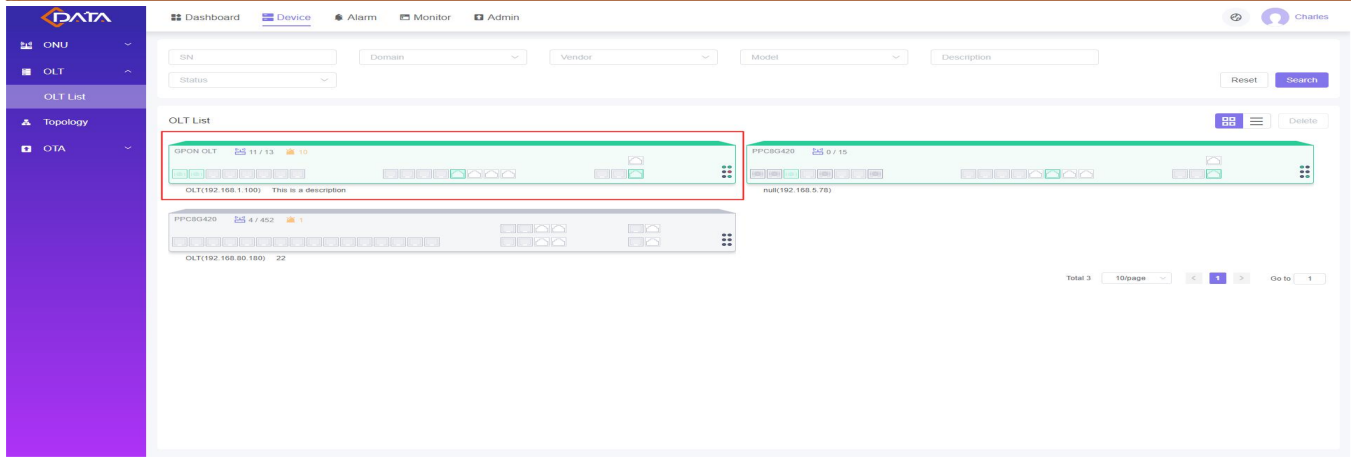
**4.2.2.2 Enable CMS remote access**

Log in to the OLT Web Management platform, open the [Maintenance-Access Manager] interface, start the CMS switch, and fill in the CMS Server and Port, as shown in the following figure.



CMS Server and Port can be viewed on the **Admin-Enterprise** interface of CMS management platform, as shown in the following picture.





### 4.2.3 Step3 Simple deployment of OLT

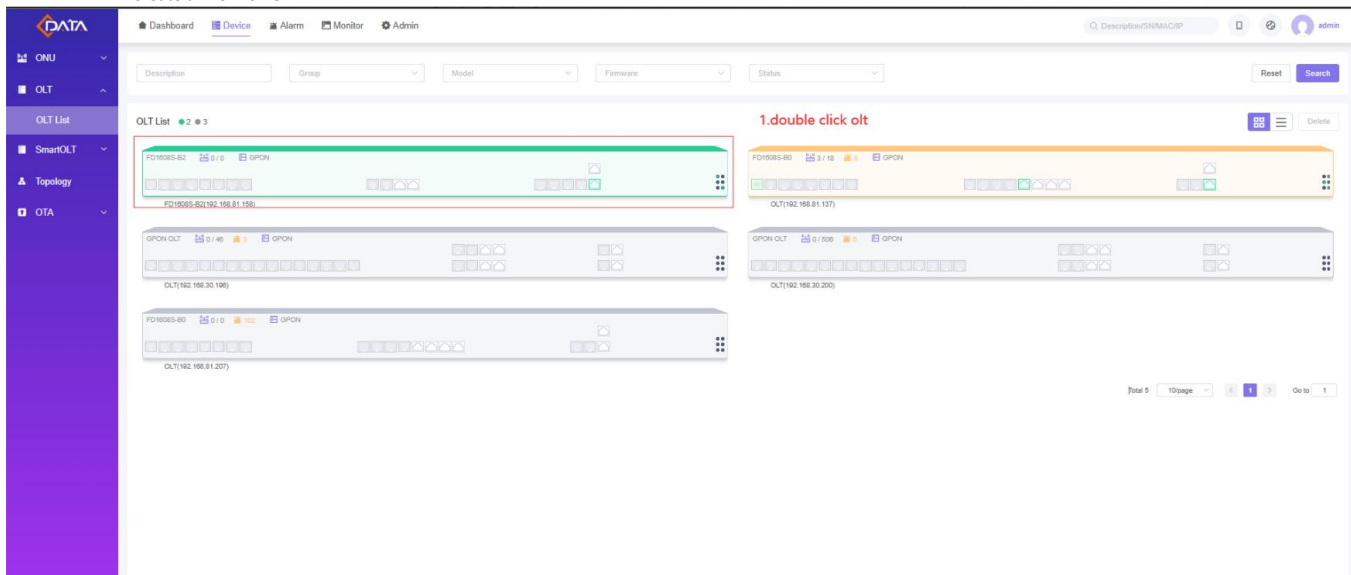
After the OLT is powered on, the simple deployment allows you to quickly configure the OLT globally and create deployment policies. After the ONU is powered on, the policies are automatically delivered to connect the ONU to the OLT.

Take the SFU as an example to implement Internet access services through simple deployment. The steps are as follows:

#### 4.2.3.1 Prerequisites

The line template and service template are configured

- Create a line Profile



Dashboard | Device | Alarm | Monitor | Admin

Save Config | Description/ST | admin

← OLT / OLT List / AF2101-160170001

ONU Manage | ONU Upgrade | **Configuration** | Port Statistics | More

2. click "Configuration"

Count: 2 pcs State: Running  
Count: 3 pcs State: Running

ONU Summary

Registered	-	0
Online	-	0
Active	-	0
Alarm	-	0

Rate

Unit: Mbps

Alarm

Level	Alarm Name	Device Type	Alarm Source	Alarm Time
Major	PON 0/0/1 The TX output power of ...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 13:55:23
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 18:07:26
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 17:36:25
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 17:30:25

Alarm Trend

Subnet	Unassigned Subnet	Device Name	FD1608S-B2	Description	FD1608S-B2(192.168.81.158)
Device Type	--	Vendor	C-Data	Model	FD1608S-B2
SN	AF2101-160170001	Hardware Version	V1.1	Firmware	V3.1.56_240301
Inband MAC	E0 67 83 39 56 07	Outband MAC	E0 67 83 39 56 06	System Time	2024-4-23 17:37:15

Dashboard | Device | Alarm | Monitor | Admin

Save Config | Description/ST | admin

← OLT / OLT List / AF2101-160170001 / Configuration

3. click "Profile Management"

Deployment | **Profile Management** | Port Management | VLAN | VLANIF | Link Aggregation | IGMP | DHCP | MAC | Loopback detection | Port Mirroring | PPPoE+ | STP

Profile Management

DBA Profile |  **Line Profile** |  Service Profile |  TR-069 Profile |  WLAN Profile

4. select "Line Profile"

Profile ID: Profile name: [Reset] [Search]

Line Profile

5. click "Add" [Add]

Profile ID	Profile name	Operate
0	line-profile_0	Details Edit Delete
1	line-profile_yao	Details Edit Delete

Total 2 | 20/page | 1 | Go to 1

Dashboard | Device | Alarm | Monitor | Admin

Save Config | Description/ST | admin

← OLT / OLT List / AF2101-160170001 / Configuration / New Profile

Global Configuration

\* Profile name:  6. Profile name is "line-profile\_yao"

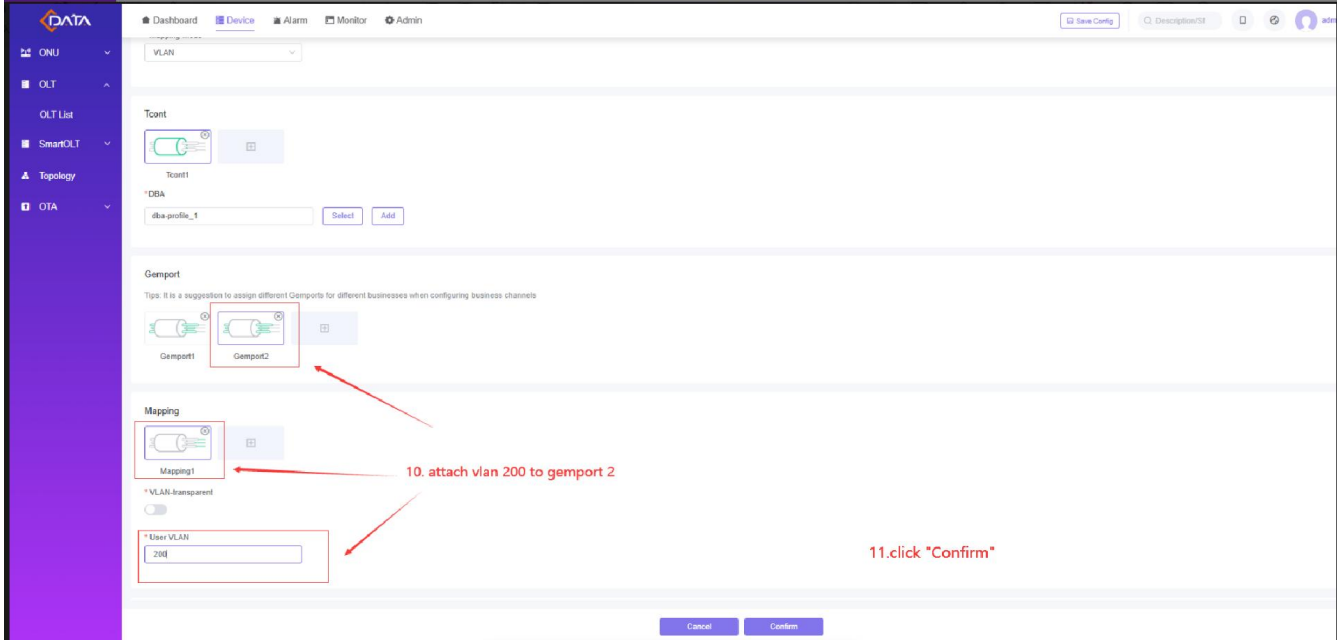
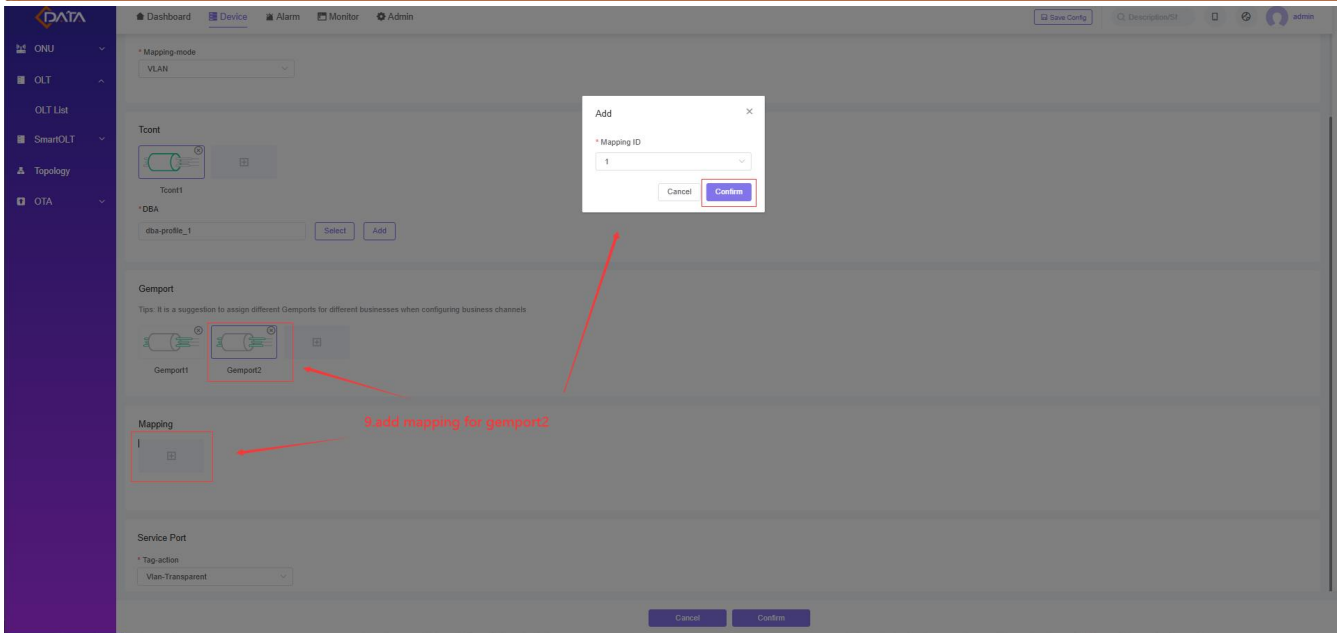
\* Mapping-mode: VLAN

Tcont

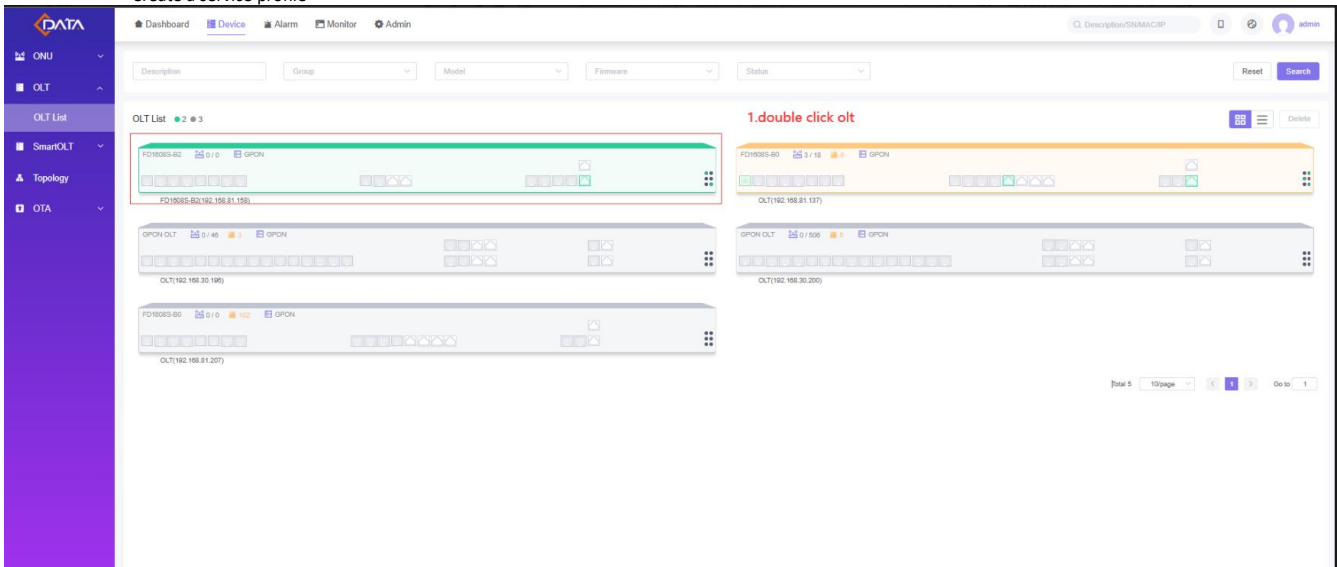
Tcont1

\* DBA: dba-profile\_1 [Select] [Add]





● Create a service profile



2. click "Configuration"

Level	Alarm Name	Device Type	Alarm Source	Alarm time
Major	PON 0/0/1 The TX output power of ...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 13:55:23
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 18:07:26
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 17:38:25
Minor	PON 0/0/1 The bias current of the o...	OLT	FD1608S-B2(192.168.81.158/23)	2024-3-27 17:30:25

Subnet	Device Name	Description
Unassigned Subnet	FD1608S-B2	FD1608S-B2(192.168.81.158)
Device Type	Vendor	Model
--	C-Data	FD1608S-B2
SN	Hardware Version	Firmware
AF2101-160170001	V1.1	V3.1.56_240301
Inband MAC	Outband MAC	System Time
E0:67:B3:39:56:07	E0:67:B3:39:56:06	2024.4.23 17:37:15

3. click "Profile Management"

4. click "Service Profile"

5. click "Add"

Profile ID	Profile name	Operate
0	srv-profile_0	Details Edit Delete

6. Profile name is "srv-profile\_yao"

7. onu capability keep default

8. click "Next"

Dashboard | Device | Alarm | Monitor | Admin

Save Config | Description/ST | admin

← OLT / OLT List / AF2101-160170001 / Configuration / New Profile

1 Basic Configuration → 2 IP Host → 3 ONU Port → 4 ONU Multicast → 5 Completed

### IP Host Configuration

+

9. don't need configure ip host, click next

Previous Next

Dashboard | Device | Alarm | Monitor | Admin

Save Config | Description/ST | admin

← OLT / OLT List / DA18-2211900047 / Configuration / New Profile

1 Basic Configuration → 2 IP Host → 3 ONU Port → 4 ONU Multicast → 5 Completed

### Port configuration

\* Native VLAN

Concern Unconcern

### Port VLAN Configuration

Port	Native VLAN	Priority	Operate
1	1	0	Edit Delete
2	1	0	Edit Delete
3	1	0	Edit Delete
4	1	0	Edit Delete

10. configure onu lan port native vlan and click next

**Edit**

\* Port: ETH1

\* Native VLAN: 200 (1,409)

Native VLAN priority: 0

Cancel Confirm

1

Add

### Configure VLAN Rules For Ports

Port	VLAN mode	Service VLAN	Service VLAN priority	User VLAN	User VLAN priority	Operate
1	Transparent	N/A	N/A	N/A	N/A	Edit Delete

3

Previous Next

Dashboard | Device | Alarm | Monitor | Admin

Save Config | Description/ST | admin

← OLT / OLT List / AF2101-160170001 / Configuration / New Profile

1 Basic Configuration → 2 IP Host → 3 ONU Port → 4 ONU Multicast → 5 Completed

### ONU Multicast

\* ONU Multicast:

\* Multicast mode: Snooping

\* Fast-leave:

11. enable multicast mode and click "Next"

### Multicast Rules Configuration

Port	Multicast VLAN	Multicast IP type	Multicast IP address		IGMP-Forward			Multicast-Forward	Operate
			Starting IP	Ending IP	Forwarding mode	Default VLAN	Default VLAN priority		
No Data									

Previous Next



Dashboard | Device | Alarm | Monitor | Admin

Save Config | Description/ST | admin

← OLT / OLT List / AF2101-160170001 / Configuration / New Profile

1 Basic Configuration | 2 IP Host | 3 ONU Port | 4 ONU Multicast | 5 Completed

**✓**

The service profile is created

**Confirm** | 12.click "Confirm" to finish configuration

4.2.3.2 Deployment

Dashboard | Device | Alarm | Monitor | Admin

SN | Domain | Vendor | Model

Description | Status | Reset | Search

OLT List | 1.double click olt | Delete

GPON OLT	11 / 13	6			
OLT(192.168.30.196) This is a description					
PPC8G420	0 / 13	1			
PPC8G420(192.168.5.78)					
PPC8G420	4 / 452	1			
OLT(192.168.80.180) 22					

Total 3 | 10/page | 1 | Go to 1

Dashboard | Device | Alarm | Monitor | Admin

Save Config | Description/ST | admin

← OLT / OLT List / AF2101-160170001

ONU Manage | ONU Upgrade | **Configuration** | Port Statistics | More

2.click "Configuration"

FD1608S-B2

PON | XGE | GE | CONSOLE

1 2 3 4 5 6 7 8 | 1 2 3 4 | 1 2 3 4 | MGMT | PWR1 SYS | PWR2 ALM | EBU MGMT

Count: 2 pcs | State: Running | Power

Count: 3 pcs | State: Running | FAN

58% CPU | 23% Memory | 37.5°C Temperature

ONU Summary

Registered	-	0
Online	--	0
Active	--	0
Alarm	--	0

Rate

Unit: Mbps | Upstream | Downstream

Level	Alarm Name	Device Type	Alarm Source	Alarm time
Major	PON 0/0/1 The TX out...	OLT	FD1608S-B2(192.168.81.15...	2024-3-27 13:55:23
Minor	PON 0/0/1 The bias c...	OLT	FD1608S-B2(192.168.81.15...	2024-3-27 18:07:26

Alarm Trend

Legend: Critical (red), Major (orange), Minor (blue), Notification (green)

Dashboard | Device | Alarm | Monitor | Admin

Save Config | Description/ST | admin

← OLT / OLT List / DA18-2211000047 / Configuration

Deployment | Profile Management | Port Management | VLAN | VLANIF | Link Aggregation | IGMP | DHCP | MAC | Loopback detection | Port Mirroring | PPPoE+ | STP

Deployment

Auth Policy | Policy Apply

Policy ID:  Policy name:  Reset Search

Auth Policy 3.click "Create Policy" Create Policy

Policy ID	Policy name	Operate
0	default-mult-srv-profile	<a href="#">Details</a> <a href="#">Edit</a> <a href="#">Delete</a>
1	test	<a href="#">Details</a> <a href="#">Edit</a> <a href="#">Delete</a>
2	CmsAutofind	<a href="#">Details</a> <a href="#">Edit</a> <a href="#">Delete</a>
3	mult_srv_profile_3	<a href="#">Details</a> <a href="#">Edit</a> <a href="#">Delete</a>
4	mult_srv_profile_4	<a href="#">Details</a> <a href="#">Edit</a> <a href="#">Delete</a>
5	mult_srv_profile_5	<a href="#">Details</a> <a href="#">Edit</a> <a href="#">Delete</a>
6	mult_srv_profile_6	<a href="#">Details</a> <a href="#">Edit</a> <a href="#">Delete</a>

Dashboard | Device | Alarm | Monitor | Admin

Save Config | Description/ST | admin

← OLT / OLT List / DA18-2211000047 / Configuration / Create Policy Exit

1 Global — 2 Policy — 3 Completed

OLT VLAN Configuration 4.click "Add VLAN" Add VLAN

Port	VLAN-mode	Native VLAN	Tag VLAN	Untag VLAN	Operate
ge 0/0/1(lag1)	Access	100	N/A	100	<a href="#">Edit</a>
ge 0/0/2	Access	1	N/A	1	<a href="#">Edit</a>
ge 0/0/3	Hybrid	1	N/A	1	<a href="#">Edit</a>
ge 0/0/4(lag2)	Access	100	N/A	100	<a href="#">Edit</a>
xge 0/0/1(lag5)	Hybrid	1	N/A	1	<a href="#">Edit</a>
xge 0/0/2	Access	100	N/A	100	<a href="#">Edit</a>
gpon 0/0/1	Trunk	1	1-4080	N/A	<a href="#">Edit</a>
gpon 0/0/2	Trunk	1	1-4080	N/A	<a href="#">Edit</a>
gpon 0/0/3	Trunk	1	1-4080	N/A	<a href="#">Edit</a>

Next

Add ×

\* VLAN  
1000 5. enter vlan id [1,4094]

Description  
Please enter the specified VLAN description information

Port	VLAN-mode	Forbidden	Tag	Untag
ge 0/0/1	Access	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
ge 0/0/2	Access	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
ge 0/0/3	Access	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
ge 0/0/4	Access	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
xge 0/0/1	Access	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. click

Cancel Confirm

OLT VLAN Configuration Add VLAN

Port	VLAN-mode	Native VLAN	802.1P	Tag VLAN	Untag VLAN	Operate
ge 0/0/1	<span style="color: blue;">● Access</span>	100	0	N/A	100	Edit
ge 0/0/2	<span style="color: blue;">● Access</span>	100	0	N/A	100	Edit
ge 0/0/3	<span style="color: blue;">● Access</span>	2	0	N/A	2	Edit
ge 0/0/4	<span style="color: blue;">● Access</span>	1000	0	N/A	1000	Edit
xge 0/0/1	<span style="color: blue;">● Access</span>	1	0	N/A	1	Edit

Next 8. click "Next"

Dashboard | Device | Alarm | Monitor | Admin Save Config | Description/ST | admin

← OLT / OLT List / DA18-2211000047 / Configuration / Edit

\* Policy name  
mult\_srv\_profile\_yao

\* Line Profile  
line-profile\_yao Manage

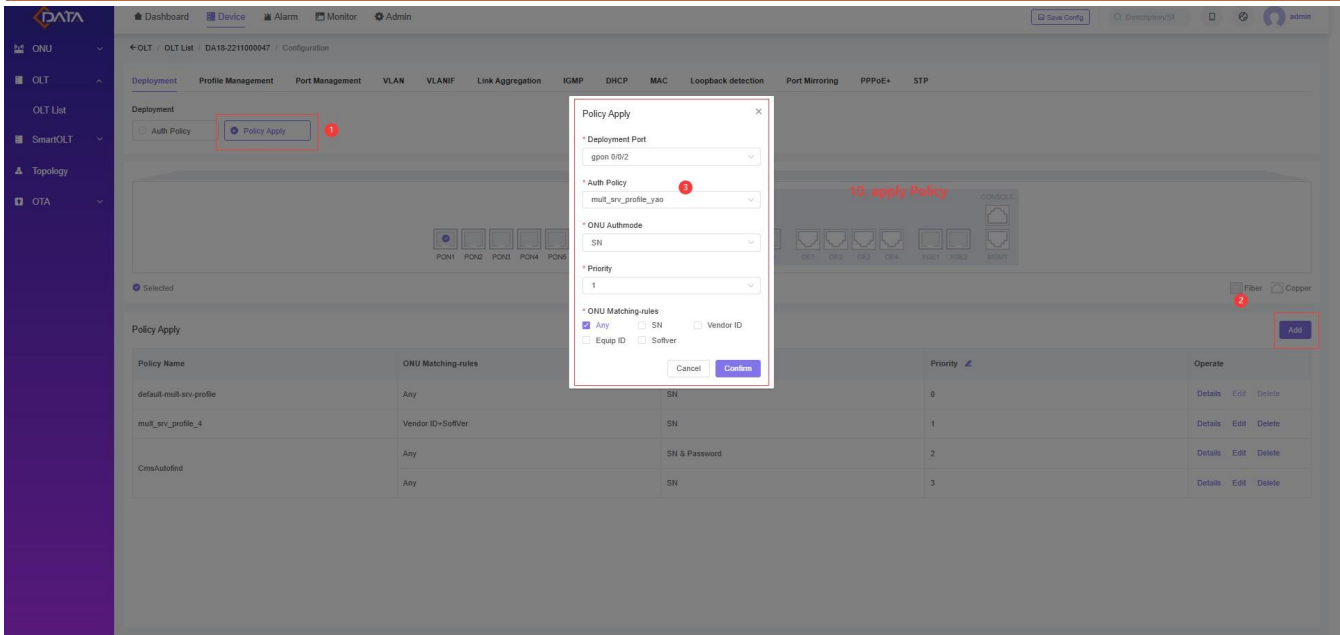
\* Service Profile  
srv-profile\_yao Manage

TR-069 profile  
Please select Manage

WAN Profile  
Please select Manage

9. select profile and click "Confirm"

Cancel Confirm

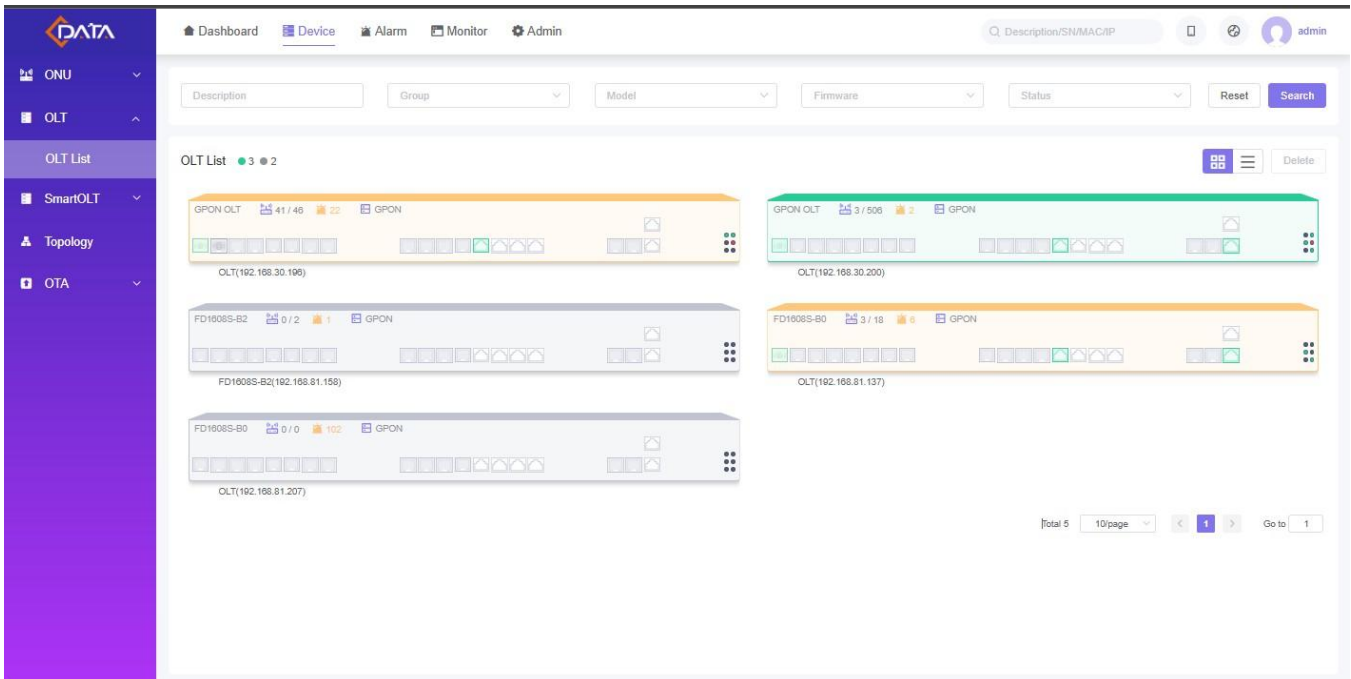


#### 4.2.4 Step4 Routine maintenance of OLT/SFU

##### 4.2.4.1 OLT routine maintenance

OLT routine maintenance includes viewing lists and details, single configuration, device upgrade, restart, factory restoration, etc.

##### 4.2.4.1.1 OLT list and details view



Select [Device-OLT-OLT List] to display the OLT List interface as follows, you can view all bound OLT devices.

Double-click the card to enter the OLT details displayed as follows, you can view the OLT port status, running status, alarm and other information.

**4.2.4.1.2 Single OLT configuration**

On the OLT details screen, click "Configuration" to enter the OLT configuration screen. You can create a deployment policy and apply it, and configure port VLAN, link aggregation, VLAN, VLANIF, etc.

**4.2.4.1.3 OLT More operations**

On the OLT details screen, click "More" to upgrade the device, open the OLT Web, and restart and restore the factory.

#### 4.2.4.2 Routine maintenance of ONU

CMS manages the ONU indirectly through OLT, based on the OMCI protocol.

##### 4.2.4.2.1 See the list of ONUs and details

On the ONU upper-layer OLT device details page, click ONU Manager to enter the ONU list screen.

In the authenticated ONU list interface, double-click a row of an ONU to enter the details page displayed as follows, you can view ONU capability status, PON optical power, service channel, WAN, VoIP and other information.

#### 4.2.4.2.2 Configure a single ONU

In the ONU details screen, click "Configuration" to enter the ONU configuration screen displayed as follows, you can modify the Service Channel, Service Port, General Service, etc.

Gemport	Method	Service port type	Match type	Ether type	Tag-action	Service VLAN	User VLAN	Inner VLAN	Inner VLAN Priority	Operate
1	Auto	Multi-Service	User VLAN	N/A	Transparent	100	100	N/A	N/A	Edit Delete

#### 4.2.4.2.3 Batch upgrade ONU

On the OLT Details screen, click "ONU Upgrade" to access the ONU Batch upgrade screen.

Upload Firmware	Create an upgrade task	View device upgrades
-----------------	------------------------	----------------------

- 1) On the ONU Firmware Management screen, you can upload firmware.

The screenshot shows the 'ONU Upgrade' page. At the top, there's a navigation bar with 'Dashboard', 'Device', 'Alarm', 'Monitor', and 'Admin'. Below it, the breadcrumb is '< OLT / OLT List / DA18-2211000047 / ONU Upgrade'. The main content area is titled 'Overview of Storage Resources' and shows a 'Flash' section with '120.34MB available / 1128MB'. Below this is the 'ONU Firmware' section with an 'Upload Firmware' button. A table lists the firmware files:

Firmware Name	File Size (MB)	Operate
OPT%20OUT.pog	0.00	Delete
升级脚本生产20230919.xlsx	0.03	Delete
FD602XW_RC_FR_So16H_V0IP_DXS101_LE9641_V3.0.2_230731_19196111111	7.63	Delete

2) On the ONU Firmware Upgrade interface, click "Add Task" to create an upgrade task.

The screenshot shows the 'Batch Upgrades' page. At the top, there's a progress bar with four steps: 1 Basic Info, 2 Select Device, 3 Confirm Device, and 4 Completed. The main content area is a form for creating a task:

- \* Task ID: 1
- \* Task Name: task20240428\_1
- \* Equipment ID: Selected
- \* Device Firmware: Selected
- \* Task Start Time: 2024-04-28 10:00:18
- \* Task End Time: 3 hours later
- Task Description: (empty text area)

At the bottom, there is a 'Next' button.

3) On the ONU Firmware Upgrade screen, click "Details" to view the device upgrade status.

The screenshot shows the 'Task Details' page. At the top, there's a navigation bar with 'Dashboard', 'Device', 'Alarm', 'Monitor', and 'Admin'. Below it, the breadcrumb is '< OLT / OLT List / DA18-2211000047 / ONU Upgrade / Task Details'. The main content area is titled 'Basic Info' and shows the task details:

Task name	task20240428_1	Task type	Batch upgrades
Task ID	1	Equipment ID	EG8141A5
Task status	Waiting	Task end time	2024-04-28 13:51:58
Task start time	2024-04-28 10:51:58	Task description	--

Below this is the 'Task Statistics' section with a row of cards:

- Total devices: 1
- Waiting: 1
- Upgrading: 0
- Update succeeded: 0
- Cancel upgrade: 0
- Upgrade failed: 0

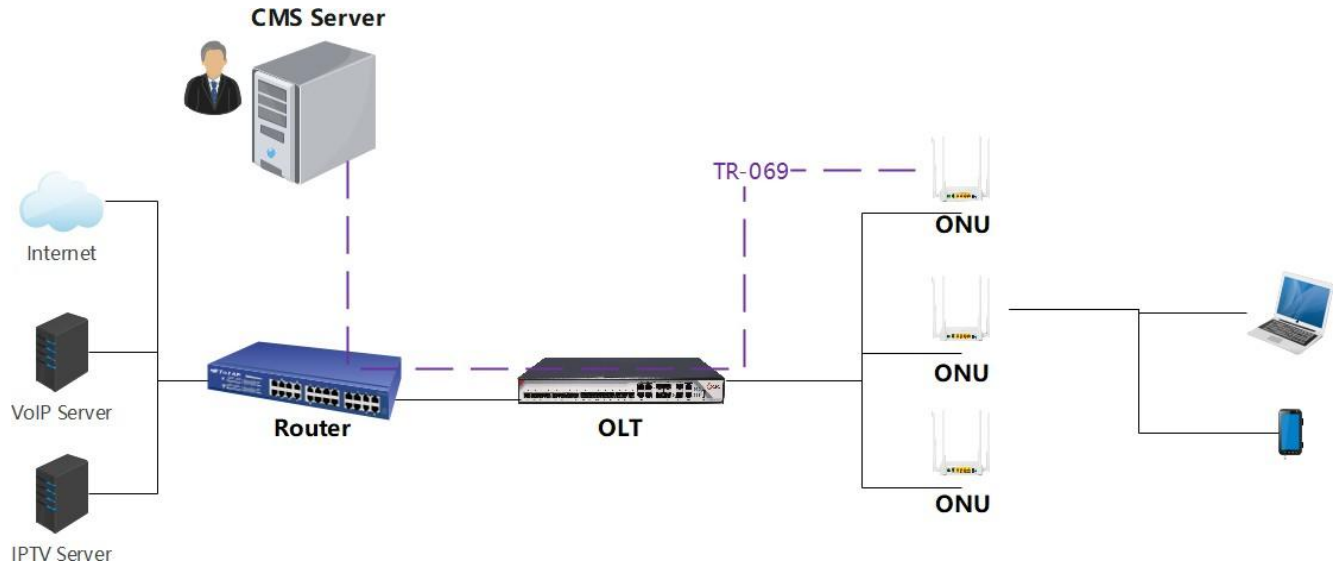
At the bottom, there's a 'Task Details' section with search filters for PON ID, ONU ID, and PON SN. Below the filters is a table:

Device Name	PON ID	ONU ID	PON SN	Software Version	Device status	Upgrade status	Description
EG8141A5_PON_1_ONU_4	0/01	4	HWTG5260E9B	VSR019C10S100	Online	Waiting	N/A



### 4.3 Scenario 3: The CMS does not manage the OLT, but manages the ONU via TR-069

The CMS manages the ONU directly through the TR-069, including third-party devices. The network architecture is as follows:



The recommended configuration steps are as follows:

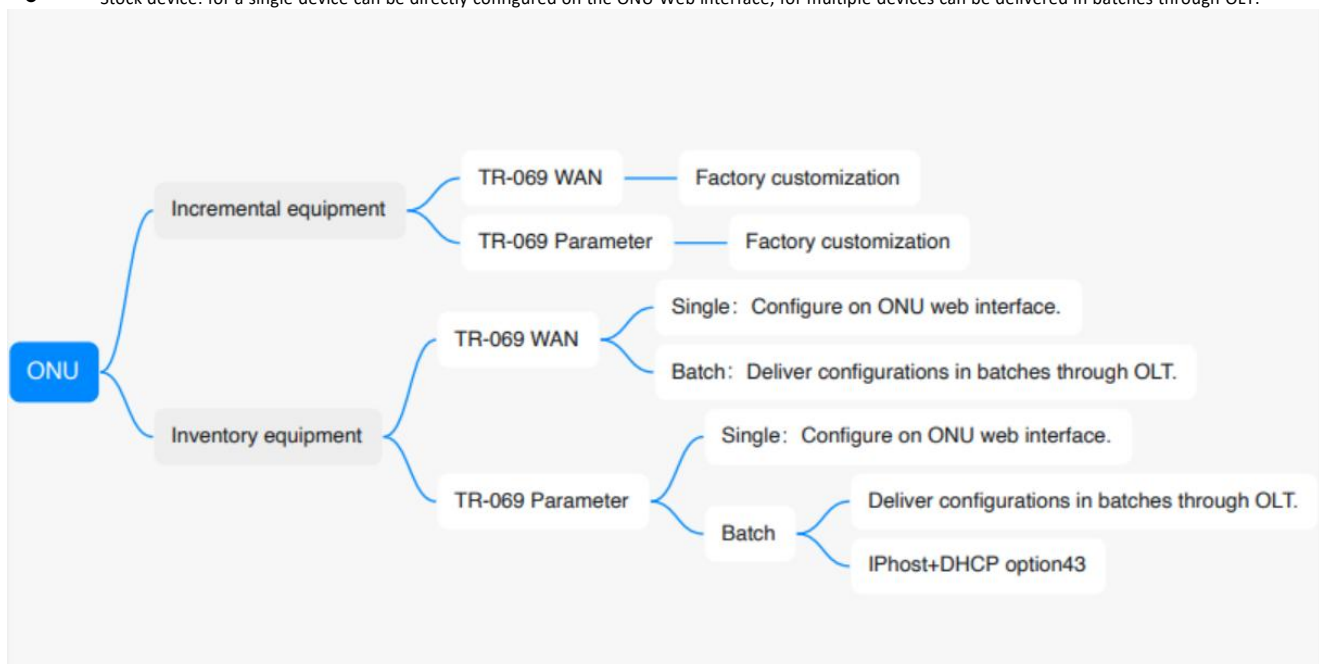
**Prerequisites:** The ONU has been registered with the OLT and the OLT has been configured to ensure that the ONU is connected to the CMS.

Step P1: Bind the ONU to the CMS	Step2: ONU routine maintenance
----------------------------------	--------------------------------

#### 4.3.1 Step 1 Bind the ONU to the CMS

ONU Configuration TR-069 WAN Connection and TR-069 Server Parameter method,

- Incremental device: recommended unified factory customization;
- Stock device: for a single device can be directly configured on the ONU Web interface, for multiple devices can be delivered in batches through OLT.



- **TR-069 WAN batch configuration**

Batch WAN templates via OLT (some vendor OLTs, or older versions of ONUs do not support proprietary protocols), using cdata gpon OLT as an example:

See[Scenario 1 - Step3 Simple deployment of OLT - Prerequisites - Creating a wan Profile]

- **TR-069 Batch Configuration of Server parameters (OLT batch delivery)**

See [Scenario 1 - Step3 Simple deployment of OLT - Prerequisites - Creating a tr069 Profile]

- **Batch configuration of TR-069 Server parameters (IPhost+DHCP option43)**

IPhost is the GPON standard protocol, which is generally supported by OLT. TR069 channel can be established through IPhost. TR069 server parameters can be delivered through DHCP option 43 field, including the ACS server address, ACS server user name and password.

Take Huawei DHCP Server as an example, you can use the command line to configure the ACS parameters. The command format is as follows: option 43 hex 01length URL username password, where the URL, username, and password must be in ASCII hexadecimal format.

Parameters	Instructions	Parameter value example	Hexadecimal value
------------	--------------	-------------------------	-------------------

length	The total length of the argument following the keyword option 43 hex 01	40 characters	28
URL	ACS's address	http://192.168.20.56:9999/v1/acs	687474703A2F2F3139322E3136382E32302E35363A393939392F76312F61637320
username	ACS user name	acs	61637320
password	Password for ACS	acs	616373

The configuration commands are as follows:

```
<Sysname> system-view
```

```
[Sysname] dhcp server ip-pool 0
```

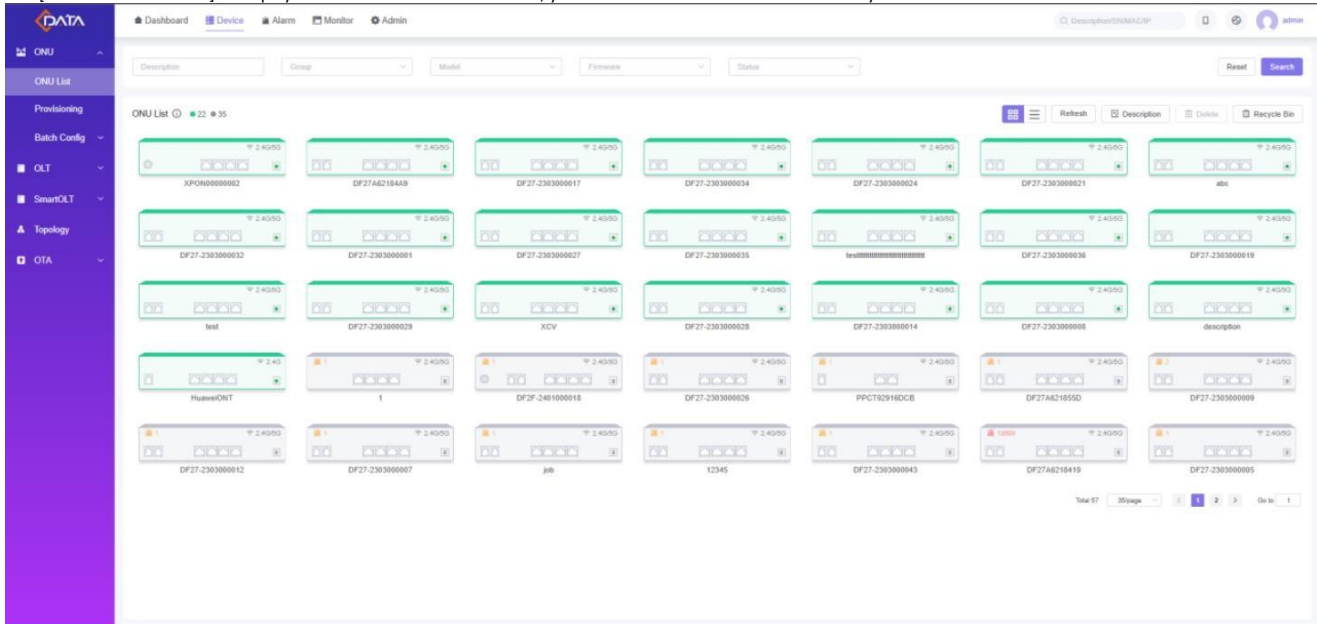
```
[Sysname-dhcp-pool-0] option 43 hex 0128687474703A2F2F3139322E3136382E32302E35363A393939392F76312F6163732061637320616373
```

### 4.3.2 Step2 Perform routine maintenance on the ONU

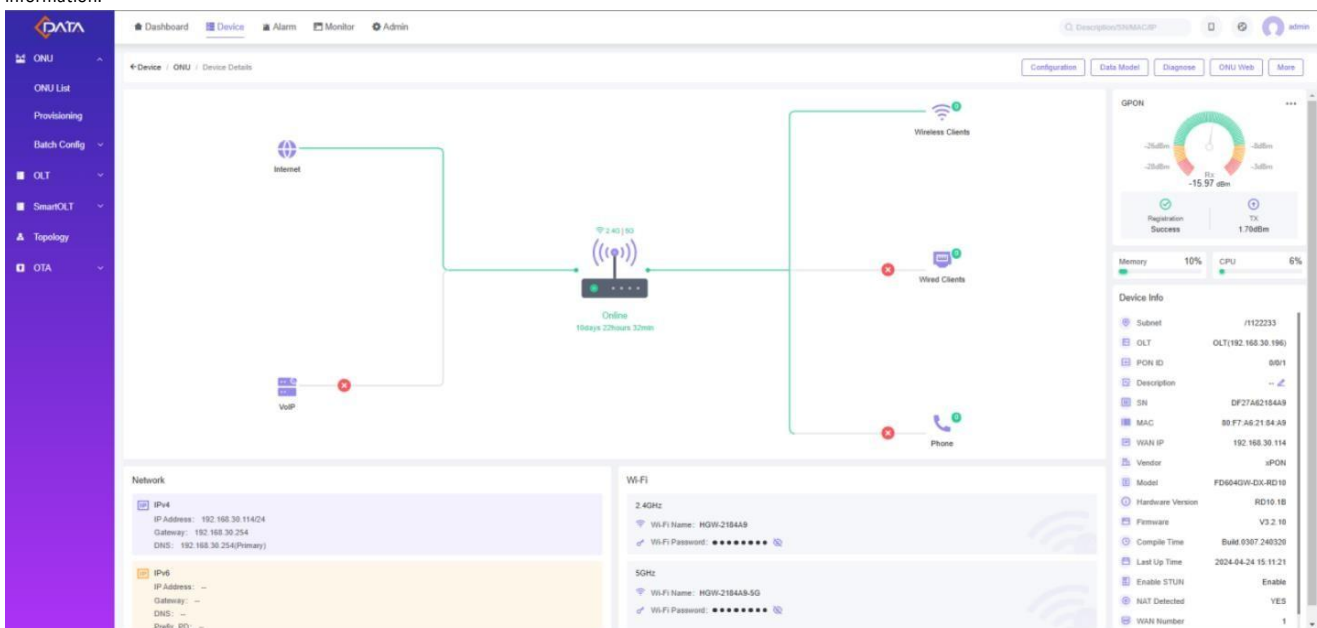
ONU routine maintenance includes list and details view, single configuration, batch configuration, OTA upgrade, etc.

#### 4.3.2.1 ONU list and details view

Select [Device-ONU-ONU List] to display the ONU list interface as follows, you can view all the ONU devices bound by TR-069.



Double-click the card to enter the ONU details screen displayed as follows, you can view ONU capability set and connection status, PON optical power, network and Wi-Fi information.



#### 4.3.2.2 Create an ONU preconfiguration

After the ONU is connected to the OLT, the CMS can directly deliver service configurations based on the TR-069 protocol to realize zero-configuration commissioning. Pre-configuration of the ONU consists of the following three steps.

Creating a Configuration Template	Create a pre-configuration task	View the pre-configuration results
-----------------------------------	---------------------------------	------------------------------------

1) Create a configuration profile

Open the [Device-Batch Config-profile] screen and create a profile that includes WAN, Wi-Fi, and VoIP services.

● Create a WAN Profile

Dashboard | Device | Alarm | Monitor | Admin

WAN Profile | Wi-Fi Profile | VoIP Profile | Composite Profile

Profile Name  Create Time  Reset Search

1.Add wan profile Add

Profile Name	Description	Create Time	Operate
WANProfile-20240322 10:13:30	123	2024-03-22 10:40:22	<a href="#">Edit</a> <a href="#">Delete</a>
test-wan	N/A	2024-03-08 13:59:24	<a href="#">Edit</a> <a href="#">Delete</a>
WANProfile-20240202 14:25:19	N/A	2024-02-02 14:26:35	<a href="#">Edit</a> <a href="#">Delete</a>
WAN Profile-20231221 15:53:40	N/A	2023-12-21 15:53:50	<a href="#">Edit</a> <a href="#">Delete</a>

Total 4 | 10page | 1 | 2 | 3 | Go to 1

● Create a Wi-Fi profile

Dashboard | Device | Alarm | Monitor | Admin

WAN Profile | Wi-Fi Profile | VoIP Profile | Composite Profile

Profile Name  Create Time  Reset Search

2.Add Wifi Profile Add

Profile Name	Description	Create Time	Operate
test-wifi	N/A	2024-03-08 14:00:22	<a href="#">Edit</a> <a href="#">Delete</a>
Wi-FiProfile-20240102 13:48:59	测试	2024-01-02 13:48:07	<a href="#">Edit</a> <a href="#">Delete</a>

Total 2 | 10page | 1 | 2 | 3 | Go to 1

● Create a VoIP Profile

Dashboard | Device | Alarm | Monitor | Admin

WAN Profile | Wi-Fi Profile | VoIP Profile | Composite Profile

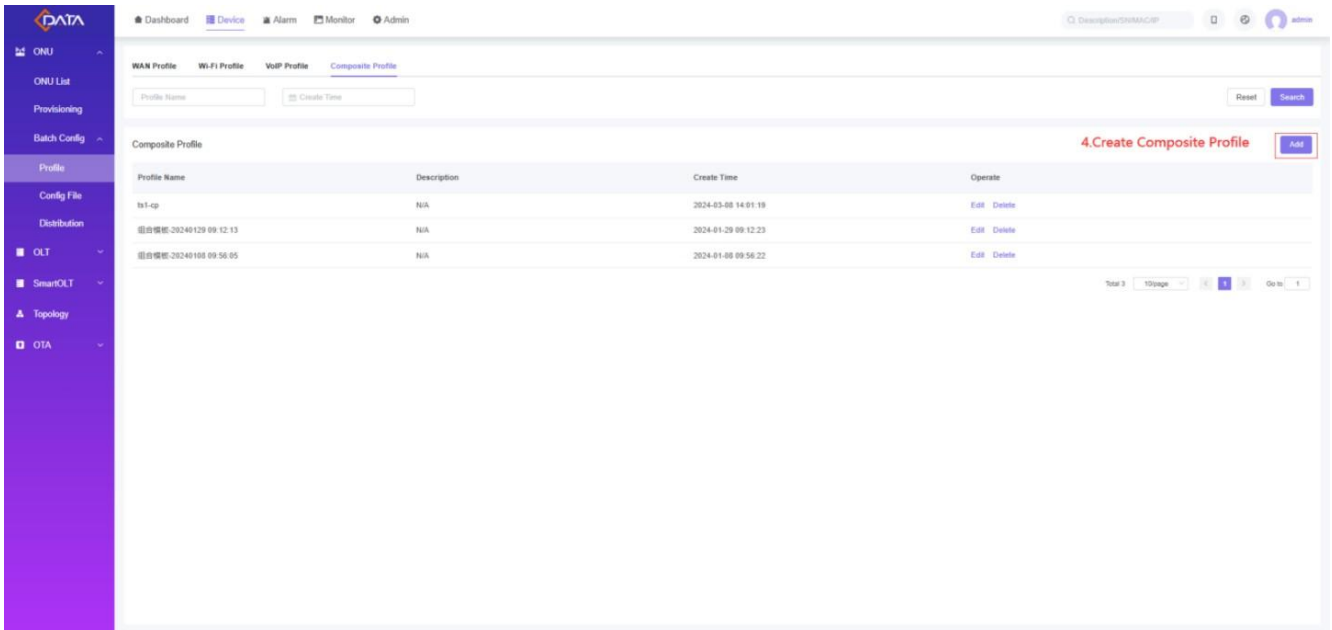
Profile Name  Create Time  Reset Search

3.Add VoIP Profile Add

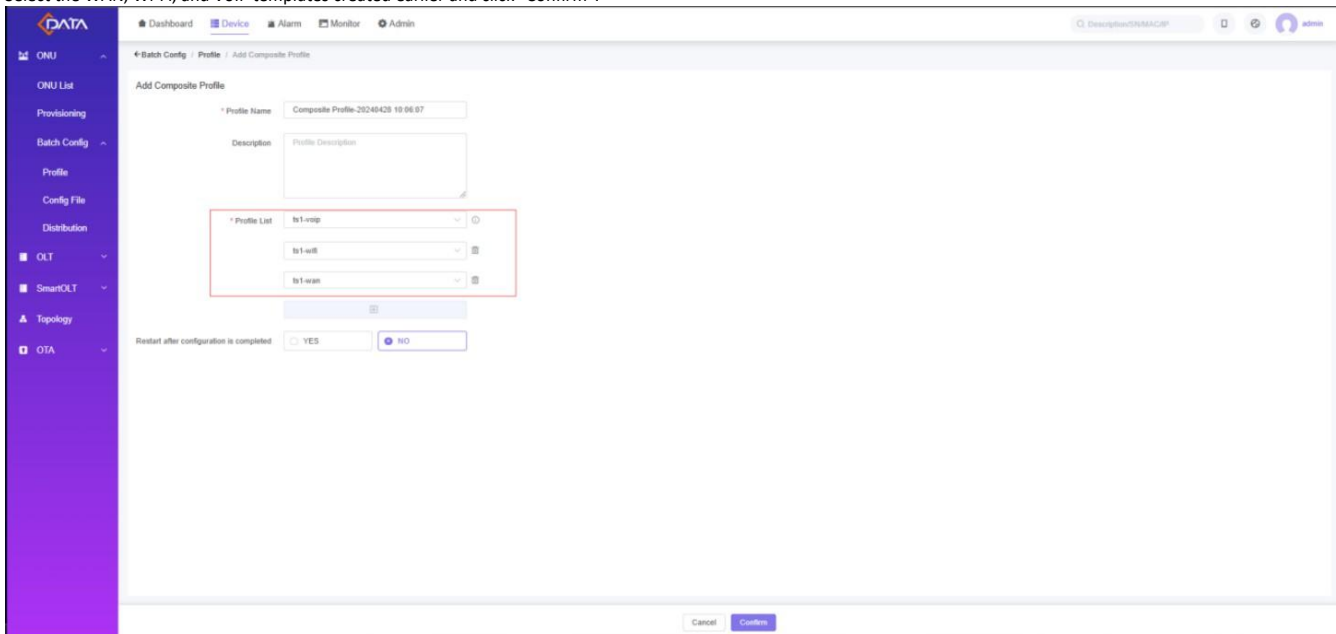
Profile Name	Description	Create Time	Operate
test-voip	N/A	2024-03-08 14:00:52	<a href="#">Edit</a> <a href="#">Delete</a>
VoIP Profile-20240117 17:36:31	测试	2024-01-17 17:37:03	<a href="#">Edit</a> <a href="#">Delete</a>
VoIPProfile-20240108 09:55:40	N/A	2024-01-08 09:55:53	<a href="#">Edit</a> <a href="#">Delete</a>

Total 3 | 10page | 1 | 2 | 3 | Go to 1

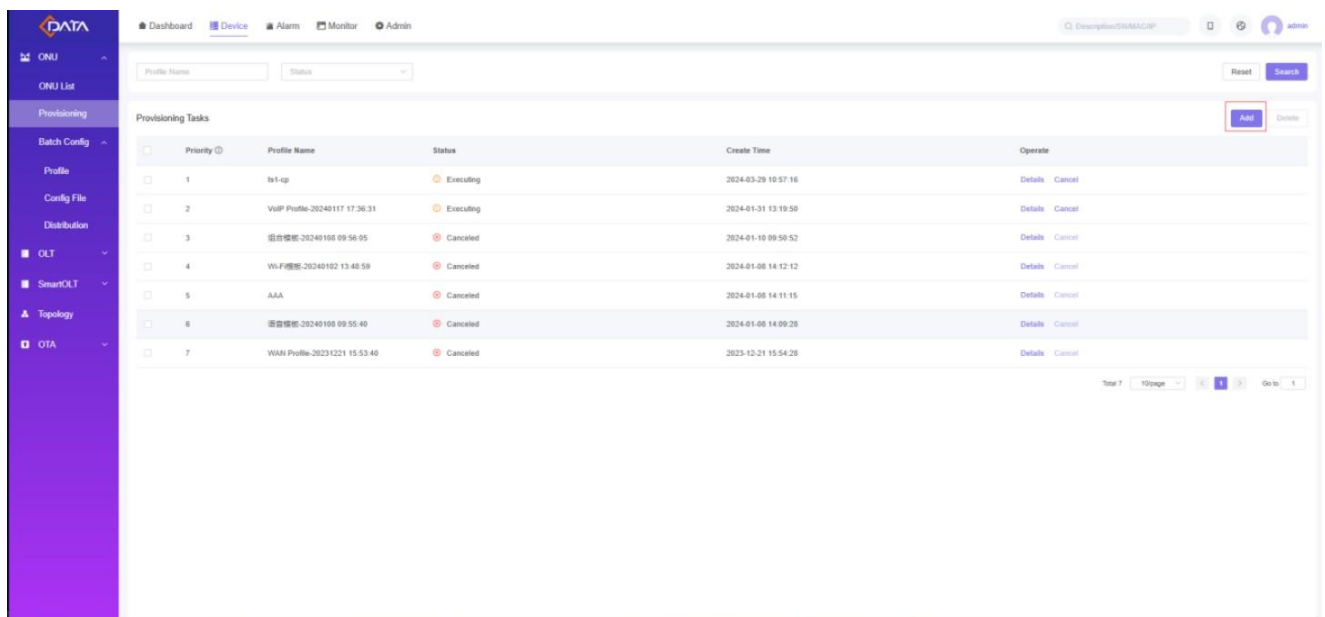
● Create a composite Profile



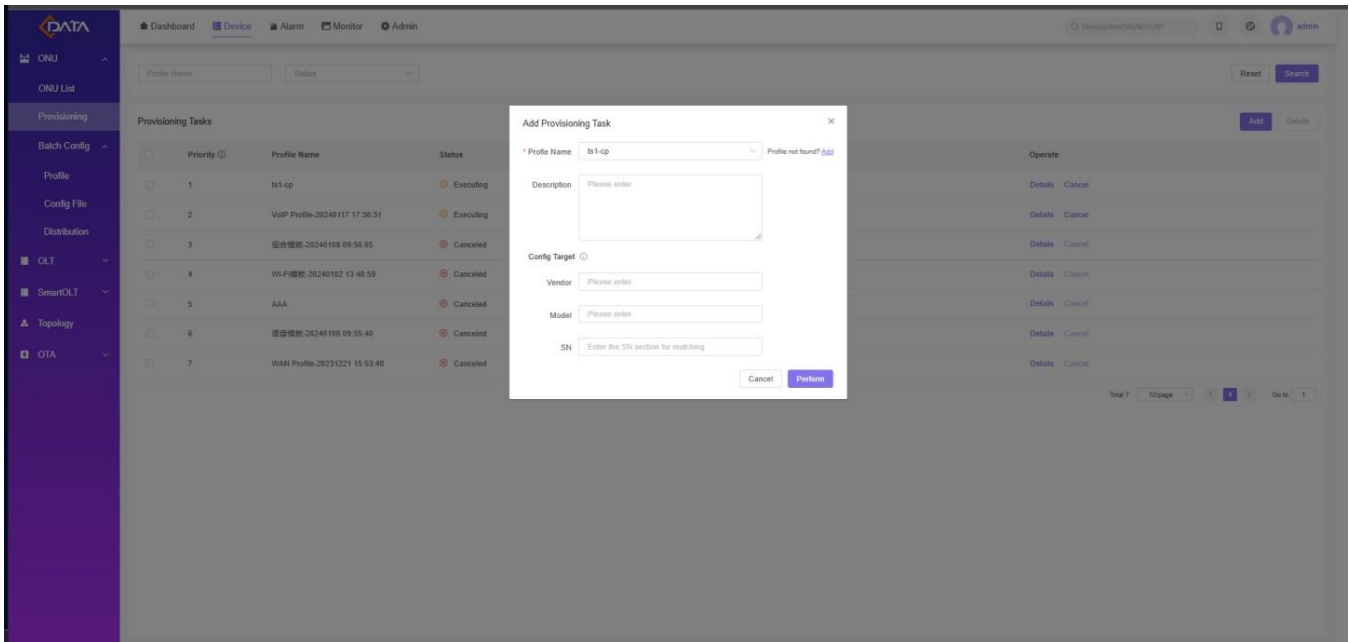
Select the WAN, Wi-Fi, and VoIP templates created earlier and click "Confirm".



2) Create a Provisioning task  
Open the [Device-Provisioning] interface and click "Add" to add a preconfigured task.

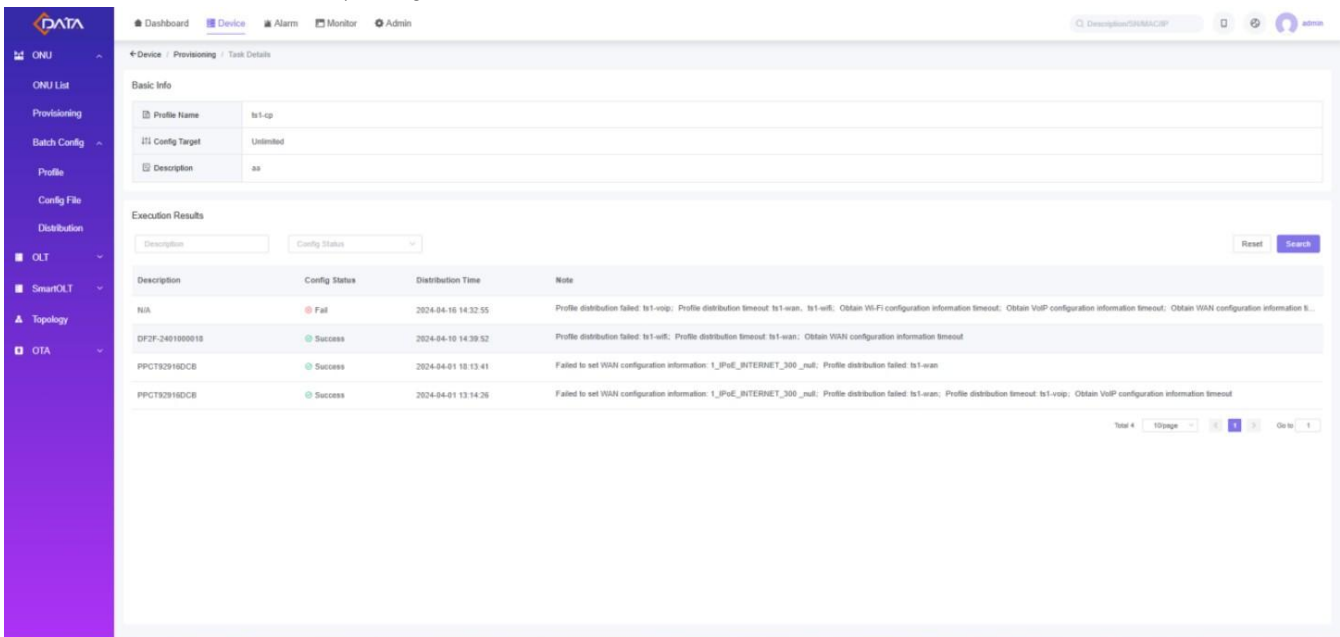


Select the configuration profile and the configuration object. The configuration object can match the device according to the vendor, model or SN. If multiple items are entered, the intersection match will be taken. If neither of these parameters is specified, there is no limit. The profile will be automatically delivered to any device reported for the first time.



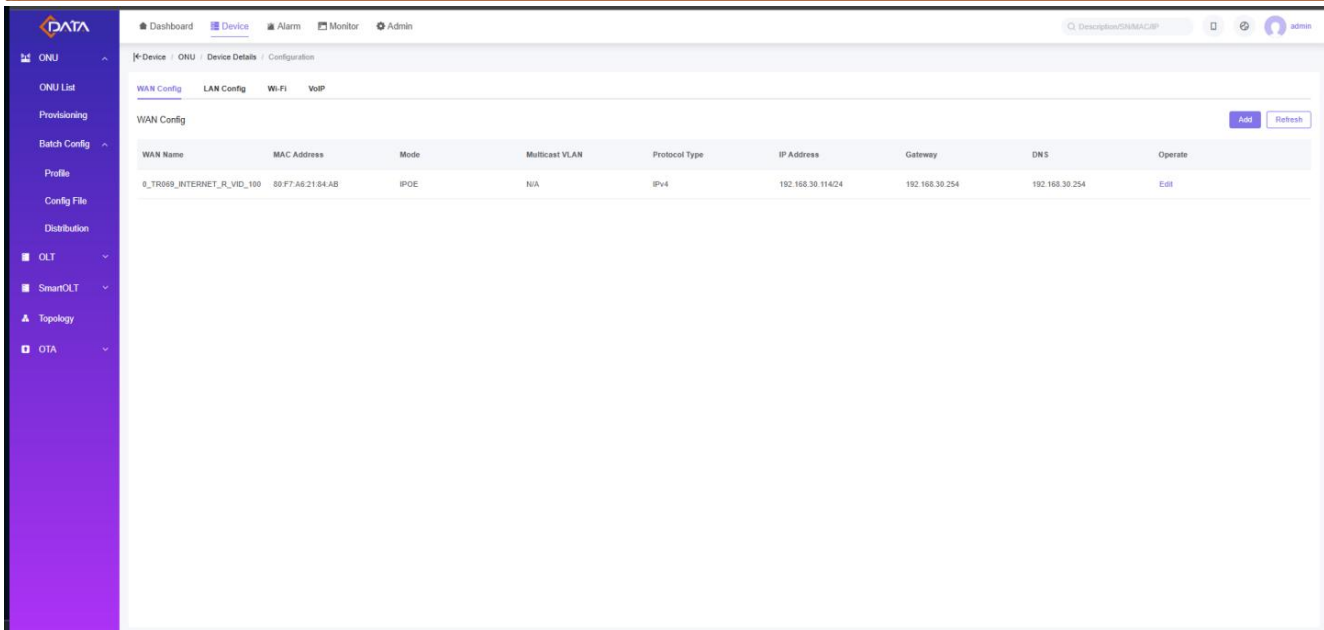
3) View the preconfiguration result

After the ONU is bound to the CMS through TR-069, the CMS automatically delivers the pre-configuration task. On the Provisioning page, click Details to enter the task details. You can view the execution of the matched ONU pre-configuration task.

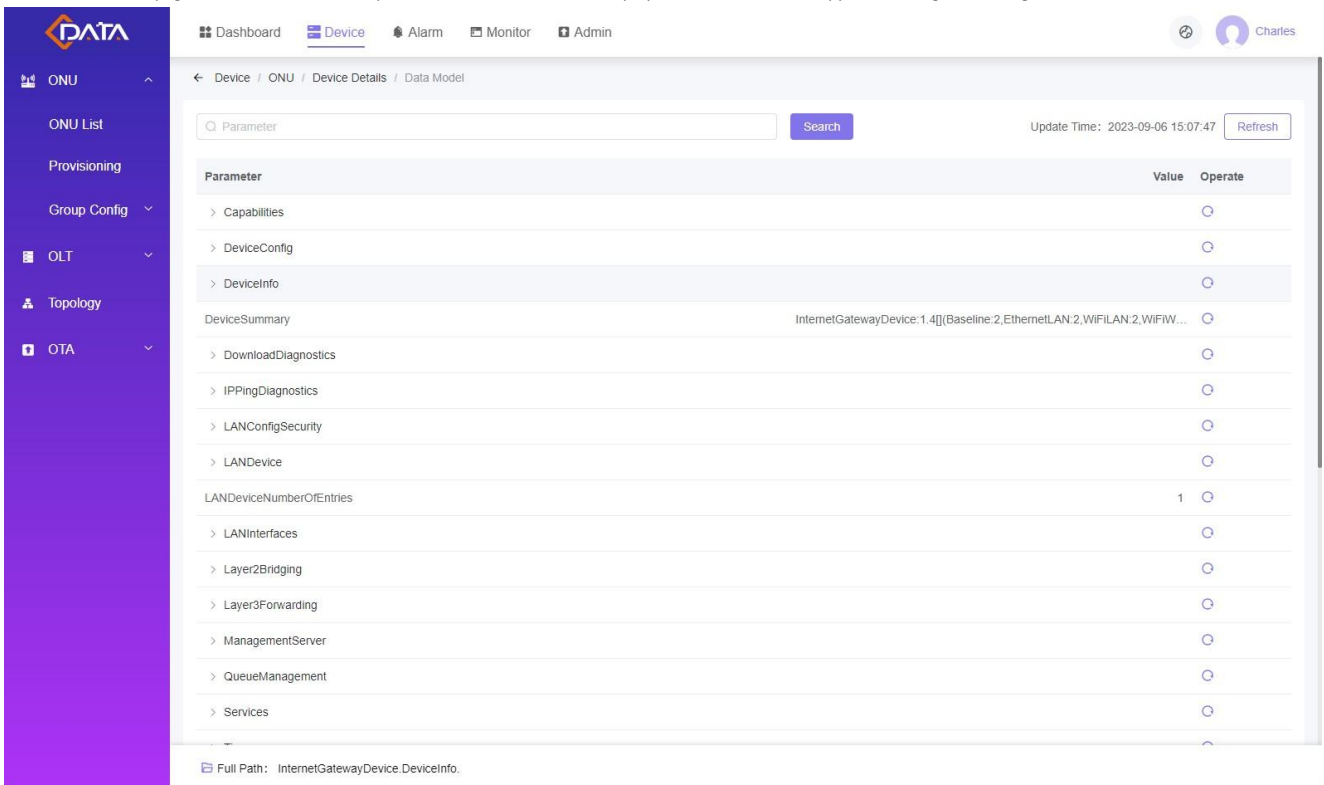


4.3.2.3 Configure a single ONU

On the ONU Details page, click "Configuration" to open the configuration screen shown as follows, which supports common service configurations such as WAN, LAN, Wi-Fi, VoIP, and CATV.



On the ONU details page, click "Data Model" to open the data model interface displayed as follows, which supports viewing and editing of all node information.



#### 4.3.2.4 Batch configuration of ONU

Batch configuration ONU configurations can be changed in batches for ONU devices bound to CMS. Similar to pre-configuration, a configuration profile must be created in advance for batch configuration.

Select [Device-ONU-Batch Config-Distribution]. The following ONU batch configuration page is displayed. You can view the execution of all configurations delivered in batches in history.

Description	MAC	Vendor	Model	Status	Profile Name	Config Status	Create Time	Distribution Time	Operate
DF27-2303000001	80 F7 A6 21 83 89	xPON	FD604GW-DX-RD10	Online	VuIP Profile-20240117 17:36:31	Not Started	2024-03-29 10:58:11	N/A	
DF27A821855D	80 F7 A6 21 85 5D	xPON	FD604GW-DX-RD10	Offline	ts1-cp	Not Started	2024-03-27 17:34:25	N/A	
DF27-2303000001	80 F7 A6 21 83 89	xPON	FD604GW-DX-RD10	Online	ts1-cp	Not Started	2024-03-27 17:34:25	N/A	
DF27A821855D	80 F7 A6 21 85 5D	xPON	FD604GW-DX-RD10	Offline	ts1-cp	Not Started	2024-03-27 17:32:27	N/A	
DF27-2303000001	80 F7 A6 21 83 89	xPON	FD604GW-DX-RD10	Online	ts1-cp	Not Started	2024-03-27 17:32:27	N/A	
DF27A821855D	80 F7 A6 21 85 5D	xPON	FD604GW-DX-RD10	Offline	ts1-cp	Not Started	2024-03-27 17:32:96	N/A	
DF27-2303000001	80 F7 A6 21 83 89	xPON	FD604GW-DX-RD10	Online	ts1-cp	Not Started	2024-03-27 17:32:96	N/A	

Click Add to create a batch configuration task, select the configuration profile and object, and deliver the task directly.

New profile distribution

\* Profile: Please select Profile not found? [Add](#)

Config Target

Group:  Vendor:  Model:  Description:  MAC:  Firmware:

Total Selected: 0 PCID

Description	MAC	Group	Vendor	Model	Firmware
XPOH00000002	E6 67 B3 23 56 98	Group/Ungrouped	Realtek	Modem/Router	V3.1.0
N/A	80 F7 A6 21 84 A9	Group/Ungrouped	xPON	FD604GW-DX-RD10	V3.2.10
DF27-2303000017	80 F7 A6 21 84 49	Group/Ungrouped	xPON	FD604GW-DX-RD10	V3.2.10
DF27-2303000034	80 F7 A6 21 85 15	Group/Ungrouped	xPON	FD604GW-DX-RD10	V3.2.10
DF27-2303000024	80 F7 A6 21 84 9D	Group/Ungrouped	xPON	FD604GW-DX-RD10	V3.2.10
DF27-2303000021	80 F7 A6 21 84 79	Group/Ungrouped	xPON	FD604GW-DX-RD10	V3.2.10
abc	80 F7 A6 21 84 3D	Group/Ungrouped	xPON	FD604GW-DX-RD10	V3.2.10
DF27-2303000032	80 F7 A6 21 84 FD	Group/Ungrouped	xPON	FD604GW-DX-RD10	V3.2.10
DF27-2303000001	80 F7 A6 21 83 89	Group/Ungrouped	xPON	FD604GW-DX-RD10	V3.2.10
DF27-2303000027	80 F7 A6 21 84 C1	Group/Ungrouped	xPON	FD604GW-DX-RD10	V3.2.10

Total 07 | 10page | 1 2 3 4 5 6 | Go to 1

#### 4.3.2.5 OTA Upgrade

- |                                   |                           |  |
|-----------------------------------|---------------------------|--|
| 1) Upload and verify the firmware | 2) Create an upgrade task | 3) Check the upgrade status of your device |
|-----------------------------------|---------------------------|--|

Select [Device-OTA-Firmware] to display the following firmware management interface, you can upload the firmware and verify it.

Firmware Name	Validating	Upload Time	Note	Operate
img_ppc-excitel_602_20240112-4.0.8.2+AI+custom-V2.3.15-uniml-web.tar	Not verified	2024-04-01 16:25:00	N/A	Verify Details Delete
img_ppc-excitel_uniml-20221014-4.0.8.3+AI+custom-V2.3.13_web.tar	Not verified	2024-04-01 15:22:49	2.3.13excitel	Verify Details Delete
img_ppc-excitel_20230530-4.0.8.2+AI+custom-V2.3.15-uniml-web.tar	Not verified	2024-04-01 14:30:19	2.3.15_EXCITEL	Verify Details Delete
img_ppc-excitel_602_20240316-4.0.8.2+AI+custom-V2.3.15-uniml-web.tar	Not verified	2024-04-01 13:31:46	PPC_2.3.15	Verify Details Delete
FD51H0_F_S085_V3.2.1_240322_73424_X000_WEB.img	Not verified	2024-03-22 18:29:45	FD501_3_22	Verify Details Delete
FD16xx_Web_V1.2.4_230323_16940_X000.img	Success	2024-03-08 03:35:53	WEB	Verify Details Delete
FD7840(WYD)_S440(WYD)_S620(WYD)_RC_VA@B@_Sa12BH_V3.1_0_230918_20273_X000.img	Success	2023-12-15 13:39:16	N/A	Verify Details Delete
FD8840(WYD)_S440(WYD)_RC_VA@B@_Sa12BH_V3.2_3_231106_21209_X000.img	Success	2023-12-14 14:03:39	07C231106	Verify Details Delete

Select [Device-OTA-Upgrade] to display the upgrade management interface as follows, where you can create upgrade tasks and view the upgrade status.

Upgrade Name	Vendor	Model	Firmware Name	Status	Effective Date	Upgrade Time Slot	Progress	Operate
OTA升@-20240402 11:34	PPCT	2K15X	img_ppc-excitel_602_20240316-4.0.8.2+AI+custom-V2.3.15-uniml-web.tar	Completed	2024/04/02-2024/04/02	11:36-15:36	0/1	Details Pause
OTA升@-20240401 18:24	PPCT	2K15X	img_ppc-excitel_602_20240316-4.0.8.2+AI+custom-V2.3.15-uniml-web.tar	Completed	2024/04/01-2024/04/01	18:26-22:26	1/1	Details Pause
OTA-20240401 18:14	PPCT	2K15X	img_ppc-excitel_20230530-4.0.8.2+AI+custom-V2.3.15-uniml-web.tar	Completed	2024/04/01-2024/04/01	18:15-22:15	1/1	Details Pause
OTA-20240401 16:00	PPCT	2K15X	img_ppc-excitel_602_20240316-4.0.8.2+AI+custom-V2.3.15-uniml-web.tar	Completed	2024/04/01-2024/04/01	16:01-20:01	1/1	Details Pause
OTA-20240401 15:43	PPCT	2K15X	img_ppc-excitel_602_20240316-4.0.8.2+AI+custom-V2.3.15-uniml-web.tar	Completed	2024/04/01-2024/04/01	15:44-19:44	1/1	Details Pause
OTA-20240401 15:22	PPCT	2K15X	img_ppc-excitel_uniml-20221014-4.0.8.3+AI+custom-V2.3.13_web.tar	Completed	2024/04/01-2024/04/01	15:24-19:24	1/1	Details Pause
OTA升@-20240401 15:15	PPCT	2K15X	img_ppc-excitel_602_20240316-4.0.8.2+AI+custom-V2.3.15-uniml-web.tar	Completed	2024/04/01-2024/04/01	15:16-19:16	1/1	Details Pause
OTA升@-20240401 14:43	PPCT	2K15X	img_ppc-excitel_20230530-4.0.8.2+AI+custom-V2.3.15-uniml-web.tar	Completed	2024/04/01-2024/04/01	14:45-18:45	1/1	Details Pause
OTA-20240401 14:40	PPCT	2K15X	img_ppc-excitel_20230530-4.0.8.2+AI+custom-V2.3.15-uniml-web.tar	Completed	2024/04/02-2024/04/03	02:42-06:42	1/1	Details Pause
OTA-20240401 14:30	PPCT	2K15X	img_ppc-excitel_20230530-4.0.8.2+AI+custom-V2.3.15-uniml-web.tar	Completed	2024/04/01-2024/04/02	14:31-18:31	1/1	Details Pause

1) In the upgrade management interface, click "Details" to view the upgrade status of each device.

Basic Info

- Upgrade Name: OTA-20240401 16:00
- Vendor: PPCT
- Model: 2K15X
- Firmware Name: img\_ppc-excitel\_602\_20240316-4.0.8.2+AI+custom-V2.3.15-uniml-web.tar
- Effective Date: 2024/04/01 - 2024/04/01
- Upgrade Time Slot: 16:01-20:01
- Note: --
- Create Time: 2024/04/01 16:00:40

Summary

Total: 1 PCS

Status	Count	Percentage
Success	1PCS	100%
Failed	0PCS	0%
Upgrading	0PCS	0%
Cancelled	0PCS	0%
Not started	0PCS	0%

Upgrade Target

Description	Group	Firmware	Status	Upgrade Status	Note
PPCT92916DCB	Group/Ungrouped	V2.3.15PPCU	Offline	Success	