

Alepo SDM Portal Admin Guide

Table of Contents

About this guide	4
Introduction - Alepo SDM Portal.....	5
Intended Audience	6
Conventions	7
Commonly used terms.....	8
Open Source Credits.....	9
SDM Portal - Quick Tour	10
Getting started	11
Key Terms.....	11
DNN	11
Slice	11
PLMN.....	12
APN	12
Presence Info	12
Usage Limit	12
Session Context	13
Key Operations	14
Dashboard	18
Business Benefits -	18
Service Configurations	19
IntroductioN.....	20
Navigation	20
Description	20
Configurations for Subscription Data.....	21
Navigation	21
Description	21
DNN	23
Slice (S-NSSAI).....	41
PLMN.....	56
APN	71

Configurations for Policy Data	87
Navigation	87
Description	87
DNN - Policy.....	89
Slice (S-NSSAI) - Policy.....	101
PLMN - Policy.....	117
Category Groups.....	131
Presence Information.....	135
Usage Limit - Policy.....	156
SIM Batch Management.....	162
Introduction	163
Navigation	163
Description	163
SIM Batch	164
Navigation	164
Description	164
SIM Batch Import Template	168
SIM Info	169
Navigation	169
Description	169
Subscription Management.....	171
Introduction	172
Navigation	172
Description	172
Associate Subscription	175
4G Subscriptions	176
5G Subscriptions	192
View/Modify Subscriptions.....	205
View/Edit 4G Subscriptions.....	205
View/Edit 5G Subscriptions.....	219
Delete Subscriptions.....	241

Delete 4G Subscription.....	241
Delete 5G Subscription.....	243
Policy Data Management.....	245
Description	245
AM Policy	247
SM Policy	248
SDM Portal Navigation View.....	252
About Alepo	254

About this guide

This guide has been written for the operator's system users, who are going to use this system for various configurations and operations. This guide covers the service configurations, SIM and subscription management. We will explore all areas to perform various operations.

The 'Subscriber Data Management (SDM) Portal' guide is split into various chapters. These chapters are ordered in a way that it helps you performing various operations in the system.

Readers of this guide do not need to have development knowledge or prior knowledge of 'Subscriber Data Management'.

To summarize, this guide has been written to give details of:

- Complete features and their functionality that Alepo SDM Portal has on offer.
- A step-by-step guide on how each feature is configured.

It is worth noting that Alepo SDM Portal can be operated by people with minimal technical experience and this guide shall further ease the reader's efforts in understanding the product. Care has been taken to bring out the product's rich features by citing ample illustrations and business use cases.

INTRODUCTION - ALEPO SDM PORTAL

Alepo SDM portal empowers system users to carry out network service configurations, subscriptions management and SIM management. It comes with an easy-to-use GUI that helps system users to view all the subscription and service configuration information in one place. With the SDM Portal, SIM information is encrypted to maintain strict privacy and security of the subscriber.

Alepo SDM portal serves as the front end for accessing and managing subscription and service parameters for subscribers, such as the details concerning the subscriber's 4G, 5G service subscriptions. The subscription profile of a subscriber is identified by unique Subscription identifier (SUPI). Every subscription profile is associated with service parameters such as PLMN, Slice (S-NSSAI), DNN and APN.

Service provider needs to create roles and system users for this portal. Based on the role, these users can carry out different actions such as -

- SIM Batch Management - involves importing and managing the SIM batches
- Service Level Configurations - involves configurations for subscription and policy data.
- Subscription Management - involves viewing and managing 4G, 5G subscription and policy data for a subscription profile.
- Administration - involves role-based access and SDM portal system-user creation and management

INTENDED AUDIENCE

This manual can be used by both first time and experienced system users of SDM Portal.

Care has been taken to provide the reader with the latest on product information. However, should you encounter new features or changes in Alepo SDM Portal that are not in this document, please get the latest release information by registering online at <https://gtac.alepo.net/>

Alepo encourages feedback and queries from all our customers and potential customers. Should you have any questions or concerns, please contact Alepo support staff at teamgtac@alepo.com

CONVENTIONS

The following table lists conventions that are used in this guide.

When you see...	Description
Bold text	What you click on, select, or enter.
Two keys separated by a plus sign	Hold down the first key, press the second key, and then release both keys. CTRL+B , for example, means hold down the CTRL key, and then press B .
	Notes that provide additional information that you may find very useful.
	Additional information that users may find useful in understanding a certain aspect or feature in the product.
*	Asterisk mark in bold and red color indicates compulsory field.

COMMONLY USED TERMS

This section lists all definitions or terms unique to this document or computer operation and subject to interpretation by the user of this document.

The following terms are commonly used throughout this document:

Term	Description
SDM	Subscriber Data Management
SUPI	Subscription Identifier
SUCI	Subscription Concealed Identifier
3GPP	3rd Generation Partnership Project
UDR	Unified Data Repository
PLMN	Public Land Mobile Network
DNN	Data Network Name. DNN is a form of APN (Access Point Name).
Slice	5G network slicing is a network architecture that enables the multiplexing of virtualized and independent logical networks on the same physical network infrastructure. This is also called as S-NSSAI (Single - Network Slice Selection Assistance Information)
PDU Session	Protocol Data Unit (PDU) Session is a logical connection between the UE and the data network.
ARP	Allocation and Retention Priority.
IPv4	Internet Protocol Version 4 and has 32-bit address length. IPv4 is a connectionless protocol used in packet-switched layer networks, such as Ethernet.
IPv6	Internet Protocol Version 6 and has a 128-bit address length. IPv6 is an alphanumeric addressing method and provides interoperability and mobility capabilities, embedded in network devices
DNN Templates	DNN is the Data Network Name. In Alepo UDR Portal, DNN acts similarly to the APN (Access Point Name) in HSS.
DNN Groups	A DNN Group is created by adding multiple DNN Templates to it. Therefore, DNN Templates are created first and then a DNN Group is created.
Slice Template	In 3GPP, a Slice Template is known as S-NSSAI or Single - Network Slice Selection Assistance Information. S-NSSAI is used to uniquely identify a network slice. It contains two components i.e. SST (Slice/Service Type) and SD (Slice Differentiator). An S-NSSAI also contains a DNN Group.
Slice Group	A Slice Group is created by adding multiple S-NSSAI (or Slice Templates) to it. Therefore, S-NSSAI is created first and then a Slice Group is created.
PLMN Template	A PLMN Template has a single Slice Group which further has multiple Slice Template and each Slice Template having DNN Groups.
PLMN Group	A PLMN Group is created by adding multiple PLMN Templates to it. Therefore, PLMN Templates are created first and then a PLMN Group is created.

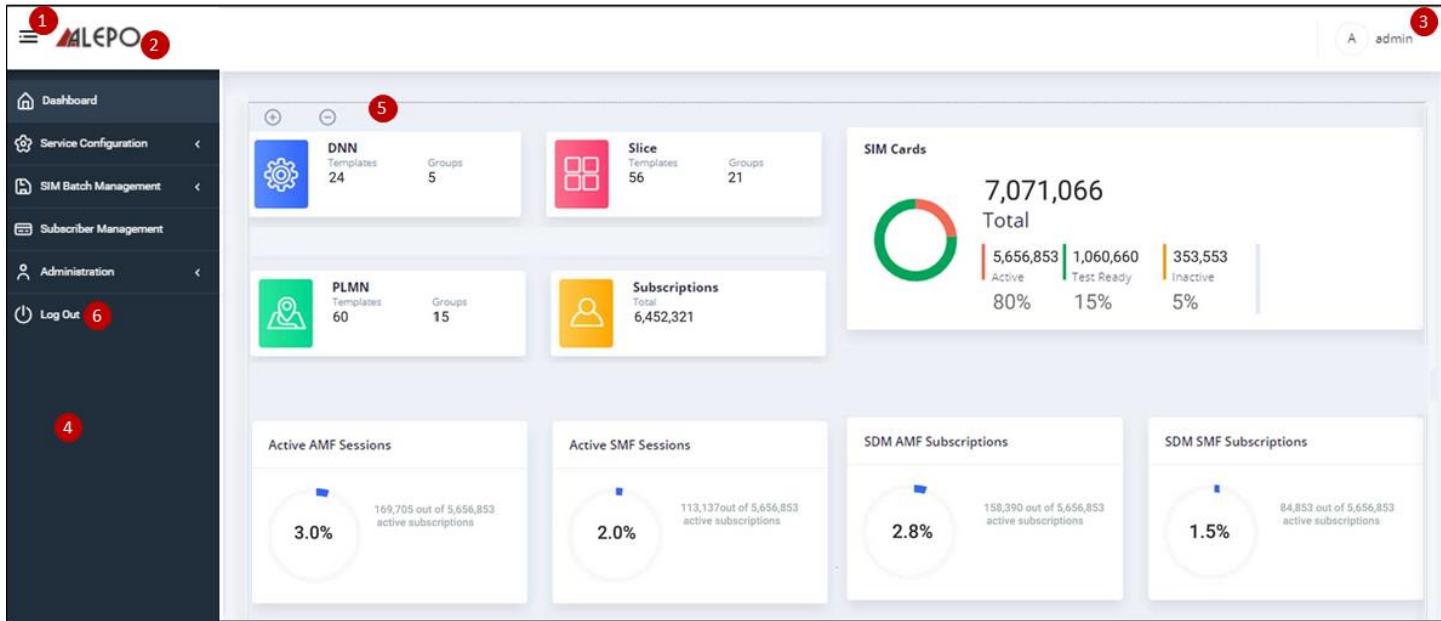
OPEN SOURCE CREDITS

Alepo proudly embraces open-source libraries in our software. By contributing and using open source we can provide a best-of-breed stack to our customers.

The following list covers projects that have contributed to our software solutions:

<https://www.alepo.com/credits/UDR/>

SDM Portal - Quick Tour



Logging into Alepo SDM portal, system users will initially land on the 'Home' screen, as is seen in the above screenshot.

The SDM portal follows a standard layout that is explained as under:

1. Menu bar hide / unhide option
2. Logo of the customer (operator) who is using the product.
3. Displays the logged in user's user-id
4. Menu Bar that links the product to each module
5. This is the display area where the content of each menu option, when invoked via the menu, will be displayed
6. Clicking on 'Log out' will enable user to logout of the system.

Getting started

KEY TERMS

DNN

DNN stands for 'Data Network Name'. DNN is a terminology that is used in 5G networks and is the equivalent of APN in 4G networks. DNN configuration will be used by telecom networks to establish network connectivity for UE (User Equipment). DNN Parameter configurations define some of the critical network access parameters such as 'Quality of Service', 'Service and Session Continuity', etc.

Example

A SUPI has service configuration for DNN : 'DNN data' for internet connectivity. The DNN for this function needs to be configured with parameters specific for internet access like choosing the appropriate PDU session profile, QoS profile and Session AMBR settings – all geared to provide the expected quality of internet service.

Similarly, one can define separate DNN for a function like 'IMS service'. This DNN will need to be configured with settings geared to provide the desired level/quality for IMS service.

Slice

Network slicing empowers service providers to configure one or more logical end-to-end networks over a physical network that is designed and based on customer needs.

A network slice or S-NSSAI (Single - Network Slice Selection Assistance Information) enables service providers to provide quality of service based on various customer segments. e.g. slice for enterprise customer, gaming, etc. The network slice will have specific parameters like Slice/Service Type (SST) and Slice Differentiator (SD), set to match with specific segment requirement. It is possible to configure multiple network slices, with each slice configured to cater to a specific set of subscriber segment requirements.

Example

Subscriber wants to play online games using his mobile device. Once done, he switches to updating some office documents by connecting to his office network from his mobile.

The above scenario talks of two different service segments requirements, each wanting a certain quality of service. Service provider can configure 2 different network slices to address these.

- The 'Online Gaming' network slice will be configured to provide high bandwidth, with low latency and high data speed because these are imperative for online gaming

- When subscriber switches from online gaming to office work, the 'Enterprise' network slice will kick-in to provide medium bandwidth, medium latency and medium data speed

PLMN

It stands for 'Public Land Mobile Network', which is designed for a geographical area within which a mobile subscription can identify the network. PLMN is identified by MCC (Mobile Country Code) and MNC (Mobile Network Code). Operators need to define various technical configurations for PLMN based on the type of service(s) allowed at a geographical location.

APN

APN stands for 'Access Point Network' and is the 4G equivalent of what a DNN is in 5G. APN is what enables mobile subscribers to connect their devices to the mobile network services (e.g. internet). It is possible for operators to have multiple APNs with each APN configured to provide a specific network service.

Presence Info

Presence Info informs the UE's presence state for a group of locations. The presence state for location group can be

- Inside the given location
- Outside the given location
- State is not known
- Inactive

Usage Limit

Usage limits are defined to carry out usage monitoring for specific session/service. Usage limits are identified with unique limit IDs and can be defined per session or for a specific service. It monitors volume or time usage for a defined time period.

Session Context

Session context includes session parameters for ongoing or active sessions associated with SUPI.

Below are some of the major session contexts that are managed in the system for a SUPI:

- AMF context : Access and mobility context created for SUPI registered in AMF based on access type.
- SMF context : Session context created based on SUPI and DNN that is registered in SMF
- MME context : Mobility management context created for IMSI registered in MME
- PGW context : Session context created based on IMSI and APN that is registered in PGW

KEY OPERATIONS

This page depicts the workflow for some of the key operations that Alepo SDM portal offers

Pre-configurations required before subscription provisioning



Quick Links

- [SIM Batch Import](#)
- [Service Configurations for Subscription Data](#)
- [Service Configurations for Policy Data](#)

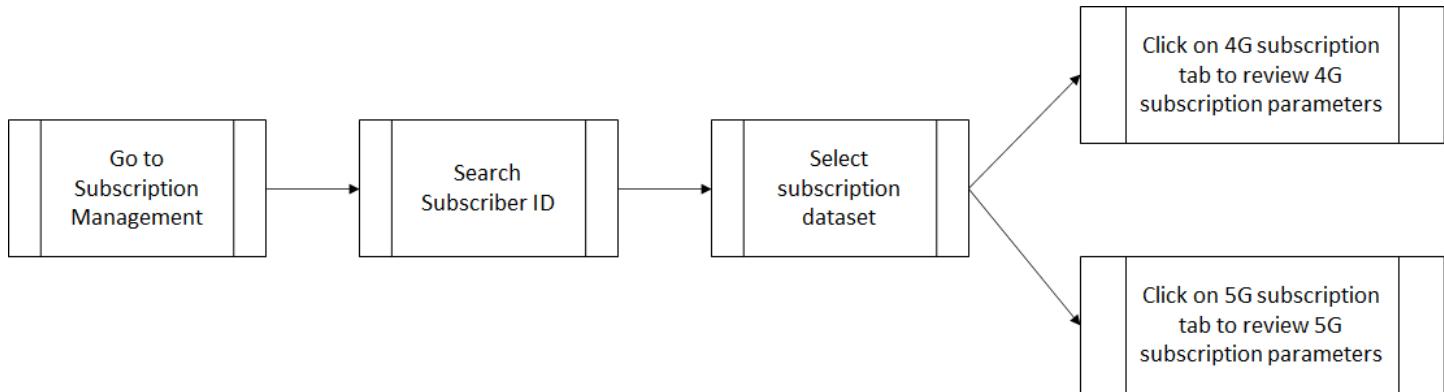
How to import SIM Cards into the system?



Quick Links

- [SIM Batch Import](#)

How to view 4G / 5G subscriptions using Subscriber ID (SUPI / IMSI)?

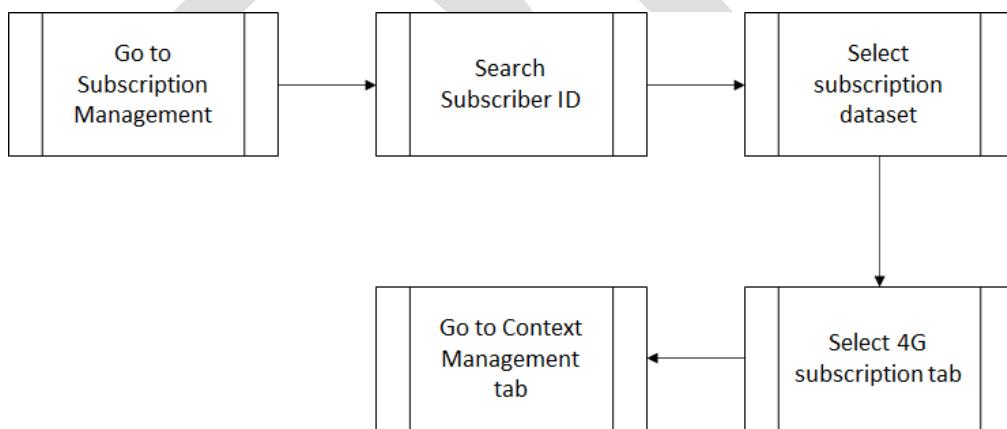


Quick Links

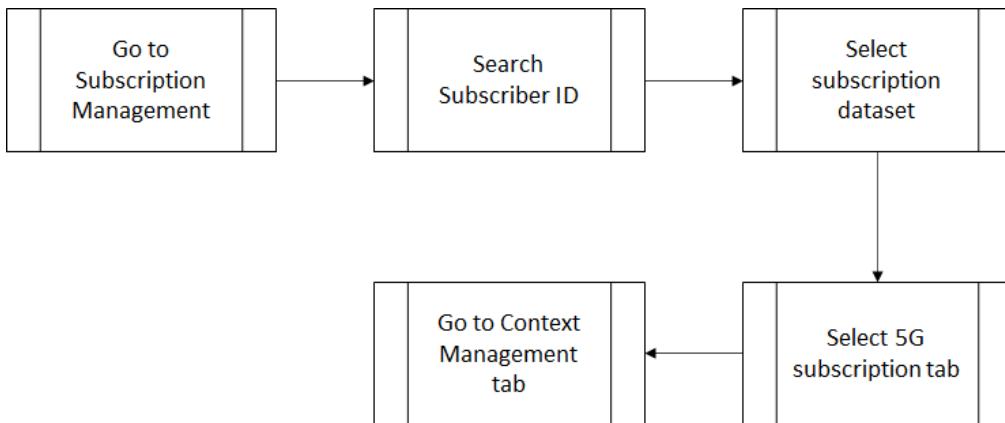
- [Subscription Management](#)
- [View 4G subscription](#)
- [View 5G subscription](#)

How to see online sessions for SUPI / IMSI?

To view 4G contexts



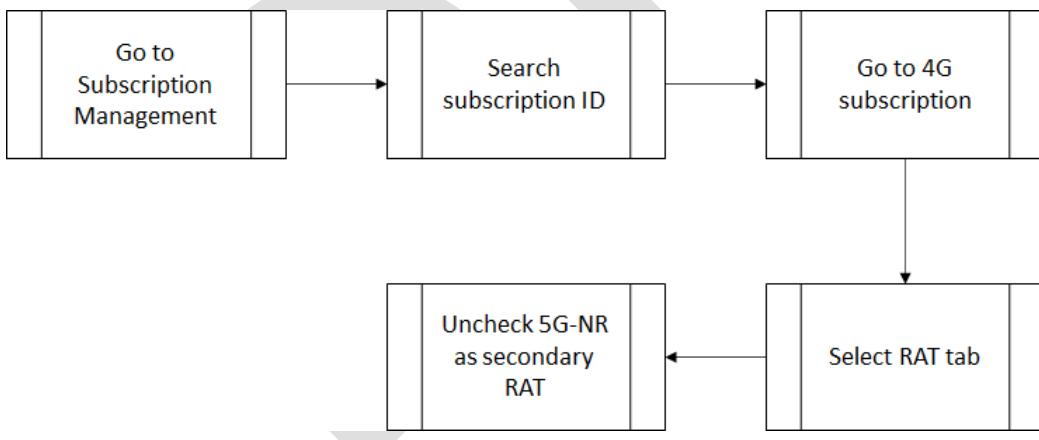
To view 5G contexts



Quick Links

- [Subscription Management](#)
- [4G Context Management](#)
- [5G Context Management](#)

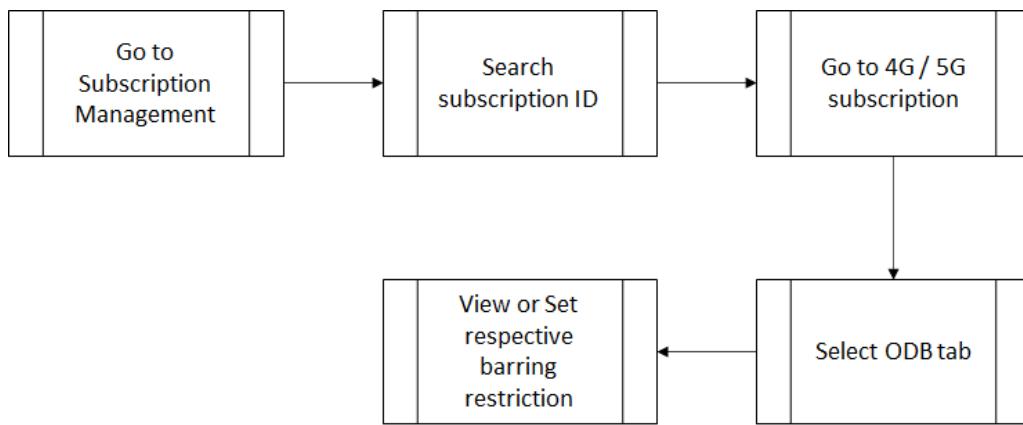
How to configure 5G-NR for 5G-NSA?



Quick Links

- [Subscription Management](#)
- [View 4G subscription](#)

How to view or set barring restrictions for a subscriber?



Quick Links

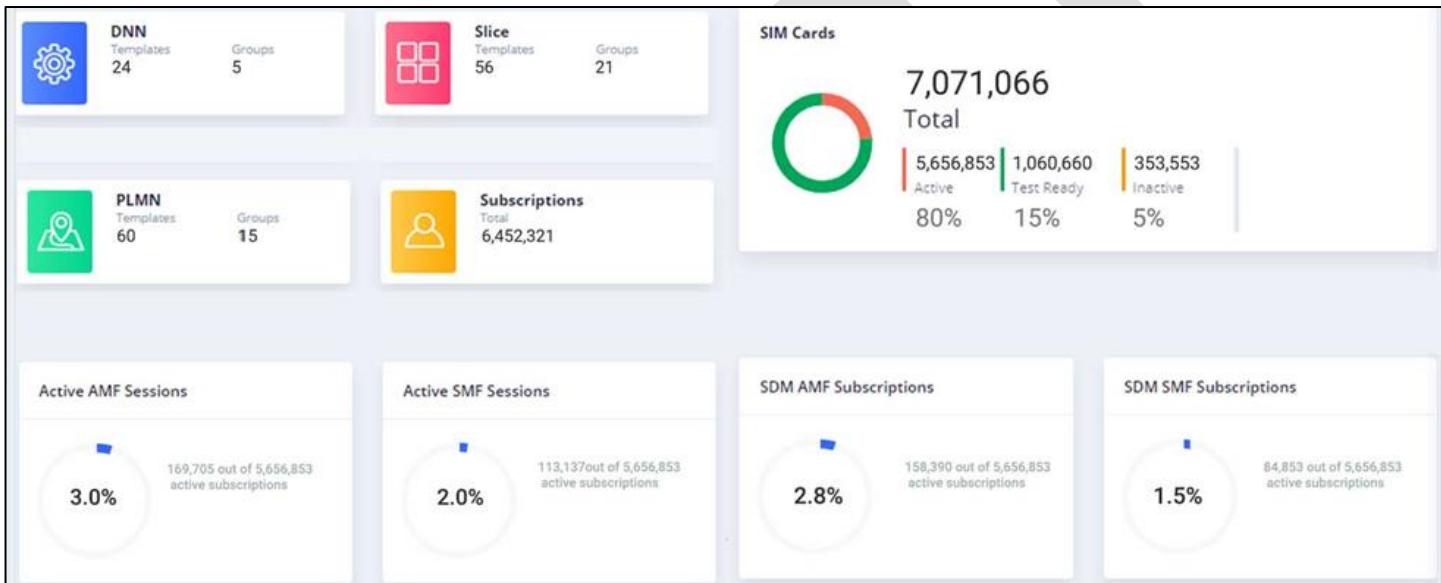
- [Subscription Management](#)
 - [4G Context Management](#)
 - [5G Context Management](#)
-

Dashboard

The SDM Portal Dashboard displays the summary of network service configurations and subscriptions and online sessions or contexts.

BUSINESS BENEFITS -

1. The dashboard gives a real-time view of the subscription profiles, service templates.
2. The dashboard provides the status of the SIM cards.
3. It also gives information about the online sessions.



Service Configurations



SDM PORTAL
SERVICE CONFIGURATION

WHAT DOES SERVICE
CONFIGURATION INCLUDE?



- PLMN Configuration
- Slice Configuration
- DNN/APN Configuration
- Presence Information
- Usage Limit Configuration
- Subscriber Category

INTRODUCTION

Navigation

Alepo SDM Portal > Service Configuration

Description

Service configuration module includes the basic and mandatory configurations required before subscription provisioning into the system. This module helps system users to carry out CRUD (create, read/view, update, and delete) operations on PLMN, Slice, DNN, APN templates, and groups as well as Location groups, Presence information, Subscriber category, and Usage limits.

It allows system users to link PLMN/Slice/DNN/APN templates and group them to create an end-to-end hierarchy of network services. This makes it easier for system users to search, filter, and traverse through the hierarchy.

For a subscription profile, the SDM portal handles subscription as well as policy related data. Here, service configurations maintain the two types - Configuration for Subscription Data and Policy Data.

The 'Configuration for Subscription Data' section manages

- the network-service related configurations - (PLMN, Slice, DNN, APN) whereas, the 'Configuration for Policy Data' section manages
- the network service configurations - (PLMN, Slice, DNN)
- the service configurations required for Access and Mobility (AM) and Session Management (SM) policy - (Presence Information, Locations, Usage limits, Subscriber Category)

CONFIGURATIONS FOR SUBSCRIPTION DATA

Navigation

Alepo SDM Portal > Service Configuration > Subscription

Description

Service configuration for subscription related data includes parameter configurations for PLMN, APN, Slice and DNN. These service configurations are mandatory before creating a subscription profile or provisioning subscriptions into the system.

The SDM portal also provides the facility to create separate configurations for 4G and 5G subscriptions in the system. Mandatory pre-configurations required for 4G and 5G subscription profiles are as follows:

- 4G subscription - APN and PLMN configurations must be present.
- 5G subscription - DNN, Slice and PLMN configurations must be present.

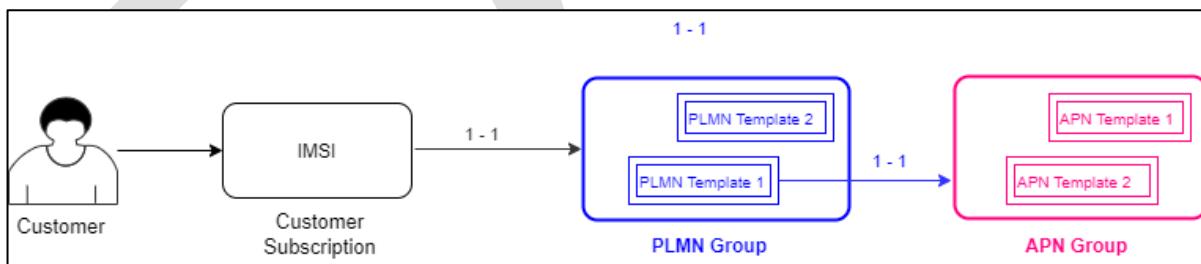
Pre-requisite / steps required before creating 4G subscription profile in the system

Step 1 : [Create APN Template](#)

Step 2 : [Create APN Group](#) and associate one or multiple APN templates inside the APN group

Step 3 : [Create PLMN Template](#) and associate a APN group to it.

Step 4 : [Create PLMN Group](#) and associate one or multiple PLMN templates inside the PLMN group



Pre-requisite / steps required before creating 5G subscription profile in the system

Step 1 : [Create DNN Template](#)

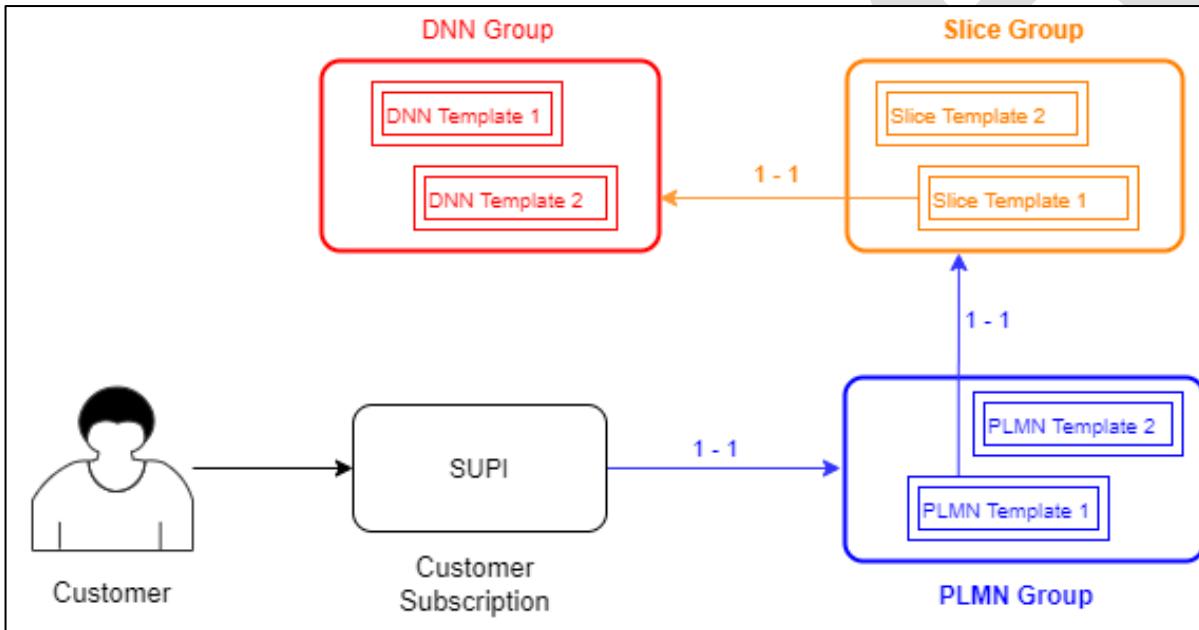
Step 2 : [Create DNN Group](#) and associate one or multiple DNN templates inside the DNN group

Step 3 : [Create Slice Template](#) and associate a DNN group to it.

Step 4 : [Create Slice Group](#) and associate one or multiple Slice templates inside the Slice group

Step 5 : [Create PLMN Template](#) and associate a Slice group to it.

Step 6 : [Create PLMN Group](#) and associate one or PLMN templates inside the PLMN group



DNN

This section is used to configure DNN based configurations required for subscription data.

How DNN is setup in Alepo SDM Portal?

It involves the below steps:

- [Create DNN templates](#) - Allows system users to configure DNN templates with technical parameters tailored to provide the desired type of network service and quality.
- [Create a DNN Group](#) - A DNN group is formed by combining multiple DNN templates.

DNN Templates - Subscription

Navigation

Alepo SDM Portal > Service Configuration > Subscription > DNN Templates

Description

A DNN template is used to configure the technical parameters to establish network sessions.

Name	Description	Last Updated Date	Actions
DNN Gaming	DNN for Gaming Usage	09-18-2020 07:04:45	
DNN-Internet		09-08-2020 07:32:41	

Below user operations can be performed from this screen:

- [Create/Add new DNN Subscription Template](#)
- [Edit/Modify an existing DNN template](#)
- [Delete DNN template](#)
- [Search DNN template](#)

Create a Subscription DNN Template -

- Go to - Service Configuration > Subscription > DNN Templates.
- Click the 'Add' button to create a new DNN Template as is seen in the below screenshot.

DNN Template

Name *

Description

PDU Session Type

Default Session Type *

Allowed Session Types

Default SSC Mode *

SSC_MODE_2

Allowed SSC Modes

LBO Roaming Allowed

5G QoS Profile

Qi *

Qi Priority Level

ARP Priority Level *

Pre-emption Capability *

Pre-emption Vulnerability *

EPS Interworking Allowed

PDU Session Continuity Indicator *

Session AMBR

Downlink * Gbps

Uplink * Gbps

Static IP Address

IPV4 Address

IPV6 Address

IPV6 Prefix

3GPP Charging Characteristics

UP Security

UP Integrity *

UP Confidentiality *

NEF Selection

NIDD Information

AF Instance ID *

NIDD NEF ID

GPSI

CANCEL
CREATE

Field Information Table

Field Name	Field Description	Is Mandatory	Sample Value
Name*	The name of the DNN template being created.	Yes	Sample DNN Template
Description	The description of the DNN template being created. This is an expandable field.	No	This is a sample DNN Template.
PDU Session Type	Default Session Type*	Select the default session type from the available list options - IPv4, IPv6, IPv4v6, Unstructured, Ethernet.	Yes
	Allowed Session Types*	Select the additional (one or more) session types allowed for the data network from the list that includes - IPv4, IPv6, IPv4v6, Unstructured, Ethernet.	Yes
	Default SSC Mode*	SSC Mode is Session and Service Continuity Mode. Select the default SSC Mode from the available list options - SSC_MODE_1 or SSC_MODE_2 or SSC_MODE_3.	Yes
	Allowed SSC Modes*	Select the additional (one or more) SSC modes allowed for the data network from the available list options - SSC_MODE_1, SSC_MODE_2 or SSC_MODE_3	Yes
	LBO Roaming Allowed	LBO Roaming Allowed is a flag to enable/disable LBO Roaming.	No
5G QoS Profile	Qi	5G QoS Identifier	No
	Qi Priority Level	Qi Priority Level decides the priority of the Qi value of the DNN template, where Qi is the QoS category.	No
	ARP Priority Level	Allocation and Retention Priority Level. The range of the ARP priority level is 1 to 15 with 1 as the highest level of priority.	No
	Pre-emption Capability	The pre-emption capability information defines whether a service data flow may get resources that were already assigned to another service data flow with a lower priority level. The pre-emption capability can be either set to 'yes' or 'no'.	No

Field Name	Field Description	Is Mandatory	Sample Value
	Pre-emption Vulnerability	The pre-emption vulnerability information defines whether a service data flow may lose the resources assigned to it in order to admit a service data flow with a higher priority level. The pre-emption vulnerability can be either set to 'yes' or 'no'.	No
	EPS Interworking Allowed	Interworking Evolved Packet System Indicator. If this field is true then 4G interworking is allowed.	No
	PDU Session Continuity Indicator	When this is present, this will indicate how to handle a PDU session when UE moves to and from NB-IoT. If this is absent, it means that local policy will be used.	No
Session AMBR	Uplink	The maximum aggregated uplink bit rates to be shared across all Non-GBR QoS Flows in each PDU Session.	No
	Downlink	The maximum aggregated downlink bit rates to be shared across all Non-GBR QoS Flows in each PDU Session.	No
Static IP Address	IPV4 Address	IPV4 Address of the Network Function.	No
	IPV6 Address	IPV6 Address of the Network Function.	No
	IPV6 Prefix	IPv6 Prefix for NF/NF Service Address.	No
	3GPP Charging Characteristics	Specify the 3GPP characteristics to create the DNN template.	No
UP Security	UP Integrity	This is a drop-down menu with the options - Required, Preferred or Not Needed. Select the option based on whether the UP Integrity is required/ preferred or not needed at all for creating the DNN template.	No
	UP Confidentiality	This is a drop-down menu with the options - Required, Preferred or Not Needed. Select the option based on whether the UP Confidentiality is required/ preferred or not needed at all for creating the DNN template.	No
	NEF Selection	A flag to enable/disable NEF (Network Exposure Function)	No
	NIDD NEF ID	Indicates the identity of the NEF which is to be selected for this DNN. It is required if the "Invoke NEF Selection" indicator is set.	No
NIDD Information	AF Instance ID	AF Instance ID is the AMF Instance ID. It is in the UUID format.	No
	GPSI	General Public Subscription Identifier. The GPSI is used as a means of addressing a 3GPP subscription in data networks	No

Field Name	Field Description	Is Mandatory	Sample Value
	outside the realms of a 3GPP system. GPSI is a public identifier such as an MSISDN or an External Identifier.		

Click the 'Create' button.

View/Modify a Subscription DNN Template

- Navigate to - Service Configuration > Subscription > DNN Templates.
- Click the pencil icon (View/Modify button under the Action column) of the DNN Template that you want to view or modify. The window to view that DNN Template opens.
- To modify this DNN Template, click on the Modify button at the top right of the window.

DNN Template

Name * Description

PDU Session Type

Default Session Type * Allowed Session Types

Default SSC Mode *

SSC_MODE_2 Allowed SSC Modes

LBO Roaming Allowed

5G QoS Profile

Qi * Qi Priority Level

ARP Priority Level * Pre-emption Capability *

Pre-emption Vulnerability *

CANCEL **SUBMIT**

EPS Interworking Allowed

PDU Session Continuity Indicator *

MAINTAIN_PDUSSESSION

Session AMBR

Downlink * Uplink *

1 Gbps 1 Gbps

Static IP Address

IPV4 Address

IPV6 Address IPV6 Prefix

3GPP Charging Characteristics

UP Security

UP Integrity * UP Confidentiality *

REQUIRED REQUIRED

NEF Selection

NIDD NEF ID

NIDD Information

AF Instance ID *

1 GPSI

CANCEL SUBMIT

Make the required changes and click the 'Submit' button to save the modifications done to the DNN Template.

Delete Subscription DNN Template(s)

- Navigate to - Service Configuration > DNN Templates.
- The list of all the DNN Templates present in the system is displayed. To delete any single DNN Template in this list, click its delete icon in the Actions column. The Confirm dialog box opens to confirm the deletion of the selected DNN Template.
- Click the OK button to confirm. The selected DNN Template gets deleted.

The screenshot shows the Alepo SDM Agent Portal interface. On the left, there is a sidebar with various service configurations like Subscription, DNN Templates, DNN Groups, etc. The main area is titled 'DNN Template' and shows a list of two templates: 'DNN Gaming' and 'DNN-Internet'. A 'Confirm Dialog' box is overlaid on the page, asking 'Are you sure you want to delete selected template(s)?' with 'CANCEL' and 'OK' buttons. The bottom right of the screen displays the text 'SDM Agent Portal-v1.0.0'.

When deleting a DNN template, the system will first ensure that the template being deleted is not associated with any DNN group. If in case it is, the user needs to remove the DNN template from the group and thereafter proceed to delete it.

- To delete multiple DNN Templates in the list, select the checkboxes for those DNN Templates in the list that you want to delete.
- Click the DELETE button on the top right.

The screenshot shows the Alepo SDM Agent Portal interface. The left sidebar has a dark theme with white icons and text. The main content area has a light background. The title 'DNN Template' is at the top, followed by a breadcrumb trail: Home > Service Configuration > Subscription > DNN Templates. Below this is a table titled 'DNN Templates' with columns: Name, Description, Last Updated Date, and Actions. Two entries are listed: 'DNN Gaming' and 'DNN-Internet'. At the bottom of the table, it says '2 selected / 2 total'. Action buttons for 'ADD' and 'DELETE' are at the top right of the table. The bottom of the screen shows the user 'Alepo@2020' and the portal version 'SDM Agent Portal-v1.0.0'.

- Click the OK button in the delete confirmation dialog box.

Search Subscription DNN Template

Users can click the ▼ button to invoke the search filters using which they can search out DNN templates.

This screenshot is identical to the one above, but the search filter icon (a downward-pointing triangle) in the top right corner of the table header is highlighted with a red box. The rest of the interface, including the table data and footer, remains the same.

DNN Groups - Subscription

Navigation

Alepo SDM Portal > Service Configuration > Subscription > DNN Groups

Description

A DNN group is formed using one or more DNN templates.

The screenshot shows the Alepo SDM Portal interface. The left sidebar has a dark theme with white icons and text. It includes links for Dashboard, Service Configuration (expanded), Subscription (selected), DNN Templates, DNN Groups (selected), Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, APN Templates, APN Groups, and Policy. The main content area is titled 'DNN Groups' and contains a table with columns: Name, Description, Last Updated Date, and Actions. A single row is visible: 'Internet DNN Group' with description 'DNN Group for Internet', last updated on '09-18-2020 08:50:16', and actions represented by edit and delete icons. At the bottom of the content area, it says '0 selected / 1 total'. The bottom navigation bar shows 'Alepo@2020' on the left and 'SDM Agent Portal-v1.0.0' on the right. The top right corner shows a user icon with 'superadmin' and a red 'S'.

Name	Description	Last Updated Date	Actions
Internet DNN Group	DNN Group for Internet	09-18-2020 08:50:16	

Below user operations can be performed from this screen:

- Create/Add new DNN Group
- Edit/Modify an existing DNN Group
- Delete DNN Group
- Search DNN Group

Create a Subscription DNN Group

- Go to - Service Configuration > Subscription > DNN Groups.
- Click the Add button. The window to create a new DNN Group opens.

The screenshot shows the ALEPO interface with a dark sidebar on the left containing navigation items like Dashboard, Service Configuration, Subscription, DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, APN Templates, and APN Groups. The 'Subscription' item is currently selected. The main content area is titled 'DNN Group' and contains fields for 'Name *' (set to 'DNN Group Gaming') and 'Description' (set to 'DNN Group for Gaming'). There is also a checkbox for 'Wildcard DNN Allowed'. Below these fields is a section titled 'Templates List *' with a table header for 'Name', 'Is Default', 'Description', and 'Actions'. The table body shows a single row: 'No data to display'. At the bottom of this section is a message '0 selected / 0 total'. On the right side of the main content area are 'CANCEL' and 'CREATE' buttons. The top right corner of the interface shows the user 'superadmin'.

The screenshot shows a modal dialog box titled 'Select Templates'. The title bar has a gear icon. The main area is titled 'Templates' and contains a table with columns for 'Name', 'Description', and 'Actions'. The table has two rows: 'DNN Gaming' (Description: 'DNN for Gaming Usage') and 'DNN-Internet' (selected, indicated by a green checkmark). At the bottom of the table is a message '1 selected / 2 total'. On the right side of the dialog are 'CLOSE' and 'ADD' buttons. The background of the dialog is light gray.

Complete the fields required to create this new DNN Group as listed in the Field Information Table.

Field Information Table

Field Name	Field Description	Is Mandatory	Sample Value
Name*	The name of the DNN Group being created.	Yes	DNN Asia Group
Description	The description of the DNN Group being created. This is an expandable field.	No	DNN Asia Group
Wildcard DNN Allowed	Subscription Information may include a wildcard DNN per subscribed Slice (S-NSSAI). When a wildcard DNN is associated with a subscribed Slice (S-NSSAI), the subscription allows UE to establish a PDU Session using any of the available DNN template value (for the given Slice). This is particularly helpful in the case when the requested DNN template does not match with those that are available.	No	Yes <checked>
Templates	Add	No	DNN-IND
	Is Default	Yes	<checked> by default for the first DNN template associated with the group.

- Add the DNN templates to associate with this DNN Group.
- Click the Associate button.
- Click the Create button to create the DNN Group.

Edit/Modify a Subscription DNN Group

- Go to - Service Configuration > Subscription > DNN Groups.
- The list of all the DNN Groups present in the system is displayed. To view or modify any DNN Group in this list, click its pencil icon in the Actions column. The page to view and/or modify that DNN Group opens.

The screenshot shows the ALEPO Service Configuration interface. On the left is a sidebar with various navigation options: Dashboard, Service Configuration (selected), Subscription (selected), DNN Templates, DNN Groups (selected), Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, APN Templates, APN Groups, Policy, SIM Batch Management, and Subscriber Management. The main content area is titled 'DNN Group' and shows a form for modifying a DNN Group. The 'Name' field contains 'DNN Group Gaming' and the 'Description' field contains 'DNN Group for Gaming'. There is a checkbox for 'Wildcard DNN Allowed'. Below this is a 'Templates List' section with a table. The table has columns: Name, Is Default, Description, and Actions. One row is shown: 'DNN-Internet' (marked as Is Default) with a green checkmark in the Actions column. Below the table, it says '0 selected / 1 total'. At the bottom of the 'Templates List' section are fields for 'Template ID' (8d399964-f8b7-4d88-b685-7092889248d5), 'Create Date' (2020-09-18T08:59:32.436Z), 'Last Update Date' (2020-09-18T08:59:32.436Z), and 'Last Updated By'. At the top right of the main content area are 'CANCEL' and 'MODIFY' buttons. The top right corner of the interface shows the user 'superadmin'.

- To edit, click on the Modify button on the top right of the page. The fields of this DNN Group become editable.

When modifying a DNN group, we can also detach a DNN template from that group provided the DNN template being deleted is not marked as 'Is Default'. To delete such a DNN template, we have to first mark any other DNN template as 'Is Default' manually and then proceed to delete the prior template.

- Make the required changes to modify this DNN Group.

The screenshot shows the Alepo SDM Agent Portal version 1.0.0. The left sidebar contains navigation links: Dashboard, Service Configuration (Subscription, DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, APN Templates, APN Groups), Policy, SIM Batch Management, and Subscriber Management. The main content area is titled 'DNN Group' and shows a form with fields: 'Name *' (DNN Group Gaming) and 'Description' (DNN Group for Gaming). A checkbox for 'Wildcard DNN Allowed' is unchecked. Below this is a 'Templates List *' section with a table:

Name	Is Default	Description	Actions
DNN-Internet			

Below the table, it says '0 selected / 1 total'. At the top right of the form are 'CANCEL' and 'SUBMIT' buttons.

Alepo@2020 SDM Agent Portal-v1.0.0

- Click the Submit button to save the modifications of the DNN Group.

Delete Subscription DNN Group

- Go to - Service Configuration > Subscription > DNN Groups.
- The list of all the DNN Groups present in the system is displayed. To delete any single DNN Group in this list, click its delete icon in the Actions column. The Confirm dialog box opens to confirm the deletion of the selected DNN Group.

When deleting a DNN group, the system will first ensure that the group being deleted is not associated with any Slice template. If in case it is, the user needs to manually first remove the DNN group from the slice template and thereafter proceed to delete it.

- Click the OK button to confirm. The selected DNN Group gets deleted.

The screenshot shows the Alepo SDM Agent Portal interface. On the left is a navigation sidebar with sections like Dashboard, Service Configuration, Subscription (selected), DNN Templates, DNN Groups (selected), Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, APN Templates, APN Groups, Policy, SIM Batch Management, and Subscriber Management. The main content area is titled 'DNN Groups' and lists two entries: 'DNN Group Gaming' and 'Internet DNN Group'. A 'Confirm Dialog' box is overlaid on the page, asking 'Are you sure you want to delete selected group(s)?' with 'CANCEL' and 'OK' buttons. At the bottom of the list, it says '0 selected / 2 total'. The top right corner shows the user 'superadmin'. The footer includes 'Alepo@2020' and 'SDM Agent Portal-v1.0.0'.

- To delete multiple DNN Groups in the list, tick the checkboxes for those DNN Groups in the list that you want to delete.
- Click the DELETE button on the top right.

The screenshot shows the Alepo SDM Agent Portal interface. On the left, there is a navigation sidebar with various options like Dashboard, Service Configuration, Subscription, DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, APN Templates, APN Groups, Policy, SIM Batch Management, and Subscriber Management. The 'DNN Groups' option is currently selected. The main content area displays a table titled 'DNN Groups' with columns for Name, Last Updated Date, and Actions. Two rows are visible: 'DNN Group Gaming' (last updated 09-18-2020 09:02:20) and 'Internet DNN Group' (last updated 09-18-2020 08:50:16). A modal dialog box titled 'Confirm Dialog' is overlaid on the page, asking 'Are you sure you want to delete selected group(s)?' with 'CANCEL' and 'OK' buttons. At the bottom left of the main content area, it says '2 selected / 2 total'.

- Click the OK button in the delete confirmation dialog box.

Search Subscription DNN Group

Users can search existing DNN groups in the system by clicking the filter icon, entering the field/filter on which they want to search a DNN group.

The screenshot shows the Alepo SDM Agent Portal interface. On the left is a dark sidebar menu with various options like Dashboard, Service Configuration, Subscription, DNN Templates, DNN Groups (which is selected and highlighted in red), Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, APN Templates, APN Groups, and Policy. At the top right, there is a user profile for 'superadmin' with a 'Logout' button. The main content area has a header 'DNN Groups' with a search bar and filter icon. Below is a table with columns: Name, Description, Last Updated Date, and Actions. One row is visible: 'Internet DNN Group' with 'DNN Group for Internet' in the description, '09-18-2020 08:50:16' in the last updated date, and edit/delete icons in the actions column. A message at the bottom says '0 selected / 1 total'. The footer shows 'Alepo@2020' and 'SDM Agent Portal-v1.0.0'.

Name	Description	Last Updated Date	Actions
Internet DNN Group	DNN Group for Internet	09-18-2020 08:50:16	

Slice (S-NSSAI)

This section is used to configure Slice or S-NSSAI based configurations required for subscription data.

How Slice or S-NSSAI is setup in Alepo SDM Portal?

It involves the below steps:

- [Create Slice templates](#) - Allows system users to configure Slice or S-NSSAI templates with SST and SD values
- [Create a Slice Group](#) - A Slice group is formed by combining multiple slice templates.

Slice Templates - Subscription

Navigation

Alepo SDM Portal > Service Configuration > Subscription > Slice Templates

Description

Slice Template according to 3GPP is known as S-NSSAI or Single - Network Slice Selection Assistance Information. S-NSSAI is used to uniquely identify a network slice. S-NSSAI contains two components i.e. SST(Slice/Service Type) and SD (Slice Differentiator). An S-NSSAI also contains a DNN Group.

Name	Description	Last Updated Date	Actions
HDR Slice Template	HDR Slice Template	09-18-2020 09:19:37	
Gaming Slice	Slice Template for Gaming	09-18-2020 09:20:47	

Below user operations can be performed from this screen:

- Create/Add Slice Subscription Template
- Edit/Modify Slice template
- Delete Slice template
- Search Slice template

Create Subscription Slice Template

- Click the Add button. The window to create a new Slice Template opens.
- Configure the fields seen in the below screenshot

The screenshot shows the Alepo SDM Agent Portal interface. On the left is a dark sidebar with navigation options: Dashboard, Service Configuration (with Subscriptions), DNN Templates, DNN Groups, Slice Templates (selected), Slice Groups, PLMN Templates, PLMN Groups, APN Templates, APN Groups, and Policy. At the top right, there's a user icon labeled 'superadmin'. The main content area has a title 'Slice Template' with tabs for 'Slice Template' and 'Slice Group'. It contains fields for 'Name*' (Gaming Slice), 'Description' (Slice Template for Gaming), 'SD' (empty), 'SST*' (eMBB), and 'DNN Group Name*' (DNN Group Gaming). A 'CREATE' button is at the top right, and a 'CANCEL' button is to its left. At the bottom, it says 'Alepo@2020' and 'SDM Agent Portal-v1.0.0'.

Finally, click the 'Create' button.

Field Information Table

Field Name	Field Description	Is Mandatory	Sample Value
Name*	The name of the Slice Template being created.	Yes	Test Slice Template
Description	The description of the Slice Template being created. This field is expandable.	No	This is a test slice template.
SD	SD is a 3-octet string, representing the Slice Differentiator, in hexadecimal representation. Each character in the string will have a value between "0" to "9" or "A" to "F" and shall represent 4 bits. The most significant character representing the 4 most significant bits of the SD will appear first in the string, and the character representing the 4 least significant bit of the SD will appear last in the string. SD is an optional parameter that complements the Slice/Service type(s) to allow to differentiate amongst multiple Network Slices of the same Slice/Service type.	No	199
SST*	SST is Slice/Service type. Its value can be selected from - eMBB, URLLC, MIoT, and/or V2X.	Yes	MIoT

Field Name	Field Description	Is Mandatory	Sample Value
DNN Group Name*	Select the DNN Groups from the drop-down to associate to the Slice Template being created.	Yes	DNNG-IND

Draft

Edit/Modify a Subscription Slice Template

- Go to - Service Configuration > Subscription > PLMN Templates.
- Click the pencil icon (View/Modify button under the Action column) of the Slice Template that you want to view or modify. The window to view that Slice Template opens.
- To modify this Slice Template, click on the Modify button at the top right of the window.

ALEPO

superadmin

Slice Template

Name *: HDR

Description: HDR Slice Template

SD: V2X

SST *: V2X

DNN Group Name *: Internet DNN Group

ID: 8df17759-9040-4dfe-9b9b-e6fd2ad2be46

Create Date: 2020-09-09 18:50:46

Last Update Date: 2020-09-18 14:49:37

Last Updated By:

Alepo@2020 SDM Agent Portal-v1.0.0

- Make the required changes and click the Submit button at the top to save the modifications done to the Slice Template.

Delete Subscription Slice Template

- Go to - Service Configuration > Subscription > Slice Templates.
- The list of all the Slice Templates present in the system is displayed. To delete any single Slice Template in this list, click its delete icon in the Actions column. The Confirm dialog box opens to confirm the deletion of the selected Slice Template.

When deleting a Slice template, the system will first ensure that the template being deleted is not associated with any Slice group. If in case it is, the user needs to manually first remove the Slice template from the group and thereafter proceed to delete it.

- Click the OK button to confirm. The selected Slice Template gets deleted.

The screenshot shows the Alepo SDM Agent Portal interface. On the left, there is a navigation sidebar with various options like Dashboard, Service Configuration, Subscription, DNN Templates, DNN Groups, Slice Templates (which is currently selected), Slice Groups, PLMN Templates, PLMN Groups, APN Templates, APN Groups, and Policy. The main content area is titled "Slice Templates". It displays a table with two rows of data. The columns are "Last Updated Date" and "Actions". The first row has a date of "09-18-2020 09:22:29" and actions for "Delete" and "Edit". The second row has a date of "09-18-2020 09:20:47" and actions for "Delete" and "Edit". A modal dialog box titled "Confirm Dialog" is overlaid on the page, asking "Are you sure you want to delete selected template(s)?". It contains three checkboxes: "Name", "HDR", and "Gaming Slice", all of which are unchecked. At the bottom of the dialog are "CANCEL" and "OK" buttons. Below the dialog, a message says "0 selected / 2 total".

- To delete multiple Slice Templates in the list, select the checkboxes for those Slice Templates in the list that you want to delete.
- Click the DELETE button on the top right.

The screenshot shows the Alepo SDM Agent Portal interface. The left sidebar contains navigation links for Dashboard, Service Configuration, Subscription, DNN Templates, DNN Groups, Slice Templates (which is selected), Slice Groups, PLMN Templates, PLMN Groups, APN Templates, APN Groups, and Policy. The main content area is titled "Slice Templates" and displays a list of templates with columns for Name, Last Updated Date, and Actions. A modal dialog box titled "Confirm Dialog" is overlaid on the page, asking "Are you sure you want to delete selected template(s)?". The modal includes "CANCEL" and "OK" buttons. The footer of the page shows "Alepo@2020" and "SDM Agent Portal-v1.0.0".

- Click the OK button in the delete confirmation dialog box.

Search Subscription Slice Template

ALEPO

S superadmin

Dashboard

Service Configuration

Subscription

DNN Templates

DNN Groups

Slice Templates

PLMN Templates

PLMN Groups

APN Templates

APN Groups

Policy

Slice Templates

Name Description Last Updated Date Actions

HDR HDR Slice Template 09-18-2020 09:19:37

Gaming Slice Slice Template for Gaming 09-18-2020 09:20:47

0 selected / 2 total

Alepo@2020 SDM Agent Portal-v1.0.0

Slice Groups - Subscription

Navigation

Alepo SDM Portal > Service Configuration > Subscription > Slice Groups

Description

A Slice group is formed using one or more Slice or S-NSSAI templates.

Name	Description	Last Updated Date	Actions
HDR Slice Group	Slice Group for HDR	09-09-2020 13:21:24	
Gaming Slice Group	Slice groups for Gamers	09-18-2020 09:56:14	

Below user operations can be performed from this screen:

- [Create Subscription Slice Group](#)
- [View/Edit Subscription Slice Group](#)
- [Delete Subscription Slice Group](#)

Create Subscription Slice Group

- Navigate to - Service Configuration > Subscription > Slice Groups.
- Click the Add button. The window to create a Slice Group opens.

ALEPO

superadmin

Slice Group

Name *

Description

Templates List *

ASSOCIATE

Name	Is Default	Description	Actions
No data to display			
0 selected / 0 total			

Alepo@2020 SDM Agent Portal-v1.0.0

- Complete the fields listed in the Field Information Table and required to create this new Slice Group.

Field Information Table

Field Name	Field Description	Is Mandatory	Sample Value
Name*	The name of the Slice Group being created. This field is mandatory to create a slice group.	Yes	Test Slice Group
Description	The description of the Slice Group being created. This is an expandable field.	No	This is a test slice group
Templates Associate	The Associate button allows adding Slice Templates to the Slice group being created from the list of all the Slice templates present in the system.	Yes	Test Slice Template

- To add Slice Templates to this Slice Group, click on the Associate button.
- Here, we can select the slice templates to add/associate to our Slice Group as shown in the below screenshot.

Select Templates

<input type="checkbox"/> Name	Description	Actions
<input type="checkbox"/> HDR	HDR Slice Template	
<input checked="" type="checkbox"/> Gaming Slice	Slice Template for Gaming	
1 selected / 2 total		

CLOSE

- Click on the Add button to add the selected slice template to the slice group.

ALEPO

superadmin

Slice Group			
Name *	Description		
Gaming Slice Group	Slice groups for Gamers	C	S
Templates List * ASSOCIATE			
<input type="checkbox"/> Name	Is Default	Description	Actions
<input type="checkbox"/> Gaming Slice	✓	Slice Template for Gaming	
0 selected / 1 total			

Alepo@2020 SDM Agent Portal-v1.0.0

- Click the Create button.

View/Modify a Subscription Slice Group -

- Go to - Service Configuration > Subscription > Slice Groups.
- The list of all the Slice Groups present in the system is displayed. To view or modify any Slice Group in this list, click its pencil icon in the Actions column. The page to view and/or modify that Slice Group opens.

The screenshot shows the ALEPO Service Configuration interface. On the left, there is a navigation sidebar with the following menu items:

- Dashboard
- Service Configuration
 - Subscription
 - DNN Templates
 - DNN Groups
 - Slice Templates
 - Slice Groups** (selected)
 - PLMN Templates
 - PLMN Groups
 - APN Templates
 - APN Groups
- Policy

The main content area is titled "Slice Group". It displays a form with the following fields:

Name *	Description
HDR Slice Group	Slice Group for HDR

Below this is a section titled "Templates List *". It contains a table with the following data:

Name	Is Default	Description	Actions
HDR		HDR Slice Template	

At the bottom of the "Templates List" section, it says "0 selected / 1 total".

Further down, there are fields for "Template ID" (a36a3b0a-754c-4417-8dc0-1be4352343a4), "Create Date" (2020-09-09T13:21:24.069Z), "Last Update Date" (2020-09-09T13:21:24.069Z), and "Last Updated By" (empty).

At the top right of the main content area, there are "CANCEL" and "MODIFY" buttons, along with a "S" user icon and "superadmin" text.

- To edit, click on the Modify button on the top right of the page. The fields of this Slice Group become editable.
- Make the required changes to modify this Slice Group.

ALEPO

S superadmin

Dashboard

Service Configuration

Subscription

DNN Templates

DNN Groups

Slice Templates

Slice Groups

PLMN Templates

PLMN Groups

APN Templates

APN Groups

Policy

Slice Group

Name *

HDR Slice Group

Description

Slice Group for HDR

Templates List *

ASSOCIATE

Name	Is Default	Description	Actions
HDR	<input type="checkbox"/>	HDR Slice Template	

0 selected / 1 total

Alepo@2020

SDM Agent Portal-v1.0.0

- Click the Submit button to save the modifications of the Slice Group.

Delete Subscription Slice Group(s)

- Go to - Service Configuration > Subscription > Slice Groups.
- The list of all the Slice Groups present in the system is displayed. To delete any single Slice Group in this list, click its delete icon in the Actions column. The Confirm dialog box opens to confirm the deletion of the selected Slice Group.

When deleting a Slice group, the system will first ensure that the group being deleted is not associated with any PLMN template. If in case it is, the user needs to manually first remove the Slice group from the PLMN template and thereafter proceed to delete it.

- Click the OK button to confirm. The selected Slice Group gets deleted.

The screenshot shows the Alepo SDM Agent Portal interface. On the left is a navigation sidebar with options like Dashboard, Service Configuration, Subscription, DNN Templates, DNN Groups, Slice Templates, Slice Groups (which is selected), PLMN Templates, PLMN Groups, APN Templates, APN Groups, and Policy. The main content area is titled 'Slice Groups' and lists two items: 'Name' and 'HDR Slice Group'. A 'Confirm Dialog' modal is overlaid on the page, asking 'Are you sure you want to delete selected group(s)?' with 'CANCEL' and 'OK' buttons. At the bottom of the list, it says '0 selected / 2 total'. The top right corner shows a user profile for 'superadmin'. The footer includes the text 'Alepo@2020' and 'SDM Agent Portal-v1.0.0'.

- To delete multiple Slice Groups in the list, select the checkboxes for those Slice Groups in the list that you want to delete.
- Click the DELETE button on the top right.

The screenshot shows the Alepo SDM Agent Portal interface. On the left, a dark sidebar menu lists various configuration options under 'Service Configuration'. The 'Slice Groups' option is selected and highlighted in blue. The main content area is titled 'Slice Groups' and displays a list of two items: 'HDR Slice Group' and 'Gaming Slice Group'. A modal dialog box titled 'Confirm Dialog' is overlaid on the page, asking 'Are you sure you want to delete selected group(s)?' with 'CANCEL' and 'OK' buttons. At the bottom of the main content area, it says '2 selected / 2 total'. The top right corner shows a user profile for 'superadmin'. The footer of the page includes the text 'Alepo@2020' and 'SDM Agent Portal-v1.0.0'.

- Similarly, click the OK button in the delete confirmation dialog

PLMN

This section is used to configure PLMN based configurations required for subscription data.

How PLMN is setup in Alepo SDM Portal?

PLMN in the SDM Portal is configured with the help of templates and groups. A PLMN group will consist of one or more PLMN templates. Every subscription will be associated with a PLMN group.

- [Create PLMN templates](#) - Allows system users to configure PLMN templates
- [Create a PLMN Group](#) - A PLMN group is formed by combining multiple DNN templates

Note

During PLMN configuration for 4G subscription, APN group is associated with PLMN Template whereas, during PLMN configuration for 5G subscription, Slice group is associated with PLMN Template.

PLMN Templates - Subscription

Navigation

Alepo SDM Portal > Service Configuration > Subscription > PLMN Templates

Description

A PLMN Template includes different technical parameters to describe the geographical area within which a mobile subscription can identify the network.

Note

The slice groups or APN groups must be configured prior to PLMN template configuration for subscription data

Name	Description	MCC	MNC	Last Updated Date	Actions
PLMN-South-IN		400	50	09-18-2020 08:18:49	
India_PLMN	PLMN Template for India	404	25	09-10-2020 13:52:41	

System users can perform the below operations from the above screen

- [Create Subscription PLMN Template](#)
- [View/Edit Subscription PLMN Template](#)
- [Delete Subscription PLMN Template](#)

Create Subscription PLMN Template

- Go to - Service Configuration > Subscription > PLMN Templates.
- Click the Add button. The window to create a new PLMN Template opens.

- Complete the fields listed in the following Field Information Table and required to create and add this new PLMN Template.

Field Information Table

Field Name	Field Description	Is Mandatory	Sample Value
Name*	The name of the PLMN Template being created.	Yes	Sample PLMN Temp
Description	The description of the PLMN Template being created. This field is expandable.	No	This is a sample PLMN temp
MCC*	Mobile Country Codes.	Yes	40
MNC*	Mobile Network Codes.	Yes	200

Field Name	Field Description	Is Mandatory	Sample Value
PLMN Definition*	PLMN Definition can be HPLMN (Home Public Land Mobile Network) or VPLMN (Visited Public Land Mobile Network).	Yes	HPLMN
APN Group	Access Point Network Group. This is a drop-down field, having all the APN groups present in the system	Yes	APN Group
NSSAI Group*	NSSAI is Network Slice Selection Assistance Information. NSSAI group is a drop-down field, having all the names of the slice groups present in the system.	Yes	Slice Group
RAT Type Supported*	Select the RAT (Radio Access Technology) Type that will be supported by the PLMN template being created. The RAT Type Supported List includes - NR, EUTRA, WLAN, VIRTUAL and NB-IOT.	Yes	EUTRA, WLAN
Core Network Type Supported*	Select the Core Network Type that will be supported by the PLMN template being created. The list of Core Network Type Supported includes - 5GC and EPC.	Yes	5GC
AMF Group ID	AMF is Access and Mobility Function.	No	
SMSF Group ID	SMSF is Short Message Service Function.	No	
IMSVoPS	A boolean value. If yes - 3GPP, else non-3GPP. In 5G networks, the SMSF supports the transfer of SMS over NAS through interaction with the AMF.	No	
RFSP Index	RAT Frequency Selection Priority Index. The SGSN receives the subscribed RFSP Index from the HSS.	No	
Implicit Detach	Timer for expiry of registration in secs.	No	
P-CSCF Address	Proxy-Call Session Control Function Address.	No	
Supported Features	Specify the list of supported features required to create a PLMN template.	No	
MPS Priority Support	Multimedia Priority Support	No	
MCS Priority Support	Mission Critical Services	No	
MICO Allowed	MICO is Mobile Initiated Connection Only. MICO Allowed flag is used to enable/disable the mobile-initiated connection.	No	
RRM Configuration Support	RRM is Radio Resource Management.	No	

- Click the Create button.

View/Modify a Subscription PLMN Template

- Go to - Service Configuration > Subscription > PLMN Templates.
- Click the pencil icon (View/Modify button under the Action column) of the PLMN Template that you want to view or modify. The window to view that PLMN Template opens.
- To modify this PLMN Template, click on the 'Modify' button at the top right of the window.

The screenshot shows the ALEPO interface with a sidebar menu on the left containing options like Dashboard, Service Configuration, Subscription, DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates (selected), PLMN Groups, APN Templates, APN Groups, Policy, SIM Batch Management, Subscriber Management, Administration, and Log Out. The main content area is titled 'PLMN Template' and displays the following fields:

Name *	Description
PLMN-South-IN	
MCC *	MNC *
400	50
PLMN Definition *	Core Network Type Restricted
HPLMN	5GC
APN Group	NSSAI Group
4G APN Group	HDR Slice Group
RAT Type Restricted *	IMSVoPS
NR, EUTRAN	HOMOGENEOUS_SUPPORT
AMF Group ID	SMSF Group ID
P-CSCF Address	RFSP Index
Implicit Detach	Supported Features
0	
<input checked="" type="checkbox"/> MPS Priority Support	<input checked="" type="checkbox"/> MCS Priority Support
<input type="checkbox"/> Mico Allowed	<input type="checkbox"/> RRM Configuration Support
Template ID	Create Date
023bad65-6a12-4005-ba6d-60f226c956fb	2020-09-18 13:48:49
Last Update Date	Last Updated By

At the top right of the form, there are 'CANCEL' and 'MODIFY' buttons. The user 'superadmin' is logged in, as indicated by the user icon and name in the top right corner.

- Make the required changes.

ALEPO

PLMN Template

Name *	PLMN-South-IN	Description	
MCC *	400	MNC *	50
PLMN Definition *	HPLMN	Core Network Type	Restricted
APN Group	4G APN Group	NSSAI Group	5GC
RAT Type Restricted *	NR, EUTRAN	IMSVoPS	HOMOGENEOUS_SUPPORT
AMF Group ID		SMSF Group ID	
P-CSCF Address		RFSP Index	
Implicit Detach	0	Supported Features	
<input checked="" type="checkbox"/> MPS Priority Support	<input checked="" type="checkbox"/> MCS Priority Support		
<input type="checkbox"/> Mico Allowed	<input type="checkbox"/> RRM Configuration Support		

CANCEL SUBMIT

- Click the Submit button at the top to save the modifications done to the PLMN Template.

Delete Subscription PLMN Template(s)

- Go to - Service Configuration > Subscription > PLMN Templates.
- The list of all the PLMN Templates present in the system is displayed. To delete any single PLMN Template in this list, click its delete icon in the Actions column. The Confirm dialog box opens to confirm the deletion of the selected DNN Template.

When deleting a PLMN template, the system will first ensure that the template being deleted is not associated with any PLMN group. If in case it is, the user needs to manually first remove the PLMN template from the PLMN group and thereafter proceed to delete it.

- Click the OK button to confirm. The selected PLMN Template gets deleted.

The screenshot shows the ALEPO interface with the following details:

- Left Sidebar:** Contains navigation items like Dashboard, Service Configuration, Subscription, DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates (selected), PLMN Groups, APN Templates, APN Groups, and Policy.
- Top Bar:** Shows the ALEPO logo and a user session for "superadmin".
- PLMN Templates List:** A table with columns: Name, Description, MCC, Last Updated Date, and Actions. It lists three entries: "PLMN-South-IN", "PLMN Gaming", and "India_PLMN".
- Confirm Dialog:** A modal window titled "Confirm Dialog" with the message "Are you sure you want to delete selected template(s)?". It has "CANCEL" and "OK" buttons.
- Bottom Status:** Shows "0 selected / 3 total".

- To delete multiple PLMN Templates in the list, select the checkboxes for those PLMN Templates in the list that you want to delete.
- Click the DELETE button on the top right.

The screenshot shows the Alepo SDM Agent Portal interface. On the left is a navigation sidebar with various options like Dashboard, Service Configuration, Subscription, DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates (which is selected), PLMN Groups, APN Templates, APN Groups, Policy, SIM Batch Management, Subscriber Management, and Administration. The main content area is titled 'PLMN Templates' and displays a table with three rows. The columns are Name, Description, MCC, MNC, Last Updated Date, and Actions. The rows are: 'PLMN-South-IN' (Description: PLMN Template), 'PLMN Gaming' (Description: PLMN Template), and 'India_PLMN' (Description: PLMN Template). A modal dialog box titled 'Confirm Dialog' is overlaid on the table, asking 'Are you sure you want to delete selected template(s)?' with 'CANCEL' and 'OK' buttons. At the bottom of the table, it says '2 selected / 3 total'. The footer of the page shows 'Alepo@2020' and 'SDM Agent Portal-v1.0.0'.

- Click the OK button in the delete confirmation dialog box.

PLMN Groups - Subscription

Navigation

Alepo SDM Portal > Service Configuration > Subscription > PLMN Groups

Description

A PLMN group is formed using one or more PLMN templates

Name	Description	Last Updated Date	Actions
Country	PLMN group for Countries	09-18-2020 08:19:03	
PLMN Games	PLMN for Gamers	09-18-2020 10:35:51	

0 selected / 2 total

Below operations can be initiated from the above screen

- [Create Subscription PLMN Group](#)
- [View/Edit Subscription PLMN Group](#)
- [Delete Subscription PLMN Group](#)

Create Subscription PLMN Group -

- Go to - Service Configuration > Subscription > PLMN Groups.
- Click the Add button. The window to create a PLMN Group opens.

The screenshot shows the Alepo SDM Agent Portal interface. On the left, there is a sidebar with various service configuration options like DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups (which is currently selected), APN Templates, APN Groups, and Policy. The main content area is titled 'PLMN Group'. It has fields for 'Name *' (PLMN Games) and 'Description' (PLMN for Gamers). Below these are sections for 'Templates List *' and 'Actions'. A large table lists templates with columns for Name, Description, and Actions. At the bottom right of the main area is a red 'CREATE' button. The bottom of the screen shows the Alepo logo and the text 'SDM Agent Portal-v1.0.0'.

- Complete the fields listed in the Field Information Table required to create this new PLMN Group.
- Click on the Associate button to select the PLMN templates in the select templates window as shown in the below screenshot.

The screenshot shows a 'Select Templates' dialog box. It has a header 'Select Templates' and a title 'Templates'. At the top right are icons for refresh, filter, and settings. Below is a red 'ADD' button. The main area is a table with columns for 'Name', 'Description', and 'Actions'. It lists three templates: 'PLMN-South-IN', 'PLMN Gaming' (which is checked with a green checkmark), and 'India_PLMN'. The status bar at the bottom says '1 selected / 3 total'. At the bottom right is a red 'CLOSE' button.

- Click the Add button to add PLMN templates to this PLMN Group.
- The PLMN templates are added in the group as shown in the below screenshot.

ALEPO

superadmin

PLMN Group

Name *: PLMN Games

Description: PLMN for Gamers

Templates List *

ASSOCIATE

Name	Description	Actions
PLMN Gaming	PLMN Template for Gamers	

0 selected / 1 total

Alepo@2020 SDM Agent Portal-v1.0.0

Field Information Table

Field	Field Description	Is Mandatory	Sample Value
Name			
Name*	The name of the PLMN Group being created. This field is mandatory.	Yes	Test PLMN Group
Description	The description of the PLMN Group being created. This is an expandable field.		
Templates			
Add	The Add button allows to PLMN Templates to the PLMN group being created from the list of all the PLMN templates present in the system.	Yes	PLMN Templates added - Mumbai Pune

- Click the Create button.

View/Modify Subscription PLMN Group

- Go to - Service Configuration > Subscription > PLMN Groups.
- The list of all the PLMN Groups present in the system is displayed. To view or modify any PLMN Group in this list, click its pencil icon in the Actions column. The page to view and/or modify that PLMN Group opens.

The screenshot shows the ALEPO Service Configuration interface. On the left, there is a navigation sidebar with the following items:

- Dashboard
- Service Configuration
 - Subscription
 - DNN Templates
 - DNN Groups
 - Slice Templates
 - Slice Groups
 - PLMN Templates
 - PLMN Groups
 - APN Templates
 - APN Groups
- Policy

The main content area is titled "PLMN Group". It has fields for "Name *" (Country) and "Description" (PLMN group for Countries). There is a "Templates List *". Below it, a table lists templates with columns for Name, Description, and Actions. One template, "PLMN-South-IN", is selected. At the bottom, there are fields for Template ID (2face7d8-3632-4e7e-acc0-f2b54d065aea), Create Date (2020-09-09T13:22:46.039Z), Last Update Date (2020-09-18T08:19:03.681Z), and Last Updated By. Top right buttons include "CANCEL" and "MODIFY".

- To edit, click on the Modify button on the top right of the page. The fields of this PLMN Group become editable.
- Make the required changes to modify this PLMN Group. Here, we can choose to associate or disassociate any PLMN templates.

The screenshot shows the Alepo SDM Agent Portal interface. On the left, there is a dark sidebar with various navigation options: Dashboard, Service Configuration (with a dropdown menu), Subscription (selected), DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups (selected), APN Templates, APN Groups, and Policy. At the bottom of the sidebar, it says Alepo@2020. The main content area is titled 'PLMN Group'. It has fields for 'Name *' (Country) and 'Description' (PLMN group for Countries). There is a 'Templates List *' section with a table header: Name, Description, Actions. Underneath is a list item: PLMN-South-IN. A large red watermark 'DRAFT' is overlaid across the center of the page. At the top right of the main form, there are 'CANCEL' and 'SUBMIT' buttons.

- Click the Submit button to save the modifications of the PLMN Group.

Delete Subscription PLMN Group(s)

- Go to - Service Configuration > Subscription > PLMN Groups.
- The list of all the PLMN Groups present in the system is displayed. To delete any single PLMN Group in this list, click its delete icon in the Actions column. The Confirm dialog box opens to confirm the deletion of the selected PLMN Group.
- Click the OK button to confirm. The selected PLMN Group gets deleted.

The screenshot shows the Alepo SDM Agent Portal interface. On the left, there is a navigation sidebar with the following items:

- Dashboard
- Service Configuration
 - Subscription
 - DNN Templates
 - DNN Groups
 - Slice Templates
 - Slice Groups
 - PLMN Templates
 - PLMN Groups** (highlighted in blue)
 - APN Templates
 - APN Groups
- Policy

Alepo@2020 is listed at the bottom of the sidebar. On the right, the main content area displays a table titled "PLMN Groups". The table has columns for "Name", "Country", "PLMN Games", "Last Updated Date", and "Actions". A modal dialog box titled "Confirm Dialog" is overlaid on the table, containing the message "Are you sure you want to delete selected group(s)?". It includes "CANCEL" and "OK" buttons. At the bottom of the table, it says "0 selected / 2 total". The top right corner of the interface shows the user "superadmin".

- To delete multiple PLMN Groups in the list, select the checkboxes for those PLMN Groups in the list that you want to delete.
- Click the DELETE button on the top right.

The screenshot shows the Alepo SDM Agent Portal interface. On the left is a dark sidebar with various configuration options. The main area is titled 'PLMN Groups' and displays a list of groups. A modal dialog box titled 'Confirm Dialog' is overlaid, asking 'Are you sure you want to delete selected group(s)?' with 'CANCEL' and 'OK' buttons. At the bottom of the list, it says '2 selected / 2 total'. The table has columns for 'Last Updated Date' and 'Actions' (edit and delete icons). The bottom of the screen shows the user 'Alepo@2020' and the portal version 'SDM Agent Portal-v1.0.0'.

- Click the OK button in the delete confirmation dialog box.

APN

This section is used to configure APN based configurations required for subscription data.

How APN is setup in Alepo SDM Portal?

It involves the below steps:

- [Create APN templates](#) - Allows system users to configure APN templates with technical parameters tailored to provide the desired type of network service and quality.
- [Create a APN Group](#) - An APN group is formed by combining multiple APN templates.

APN Template - Subscription

Navigation

Alepo SDM Portal > Service Configuration > Subscription > APN Template

Description

An APN template is used to configure the technical parameters to establish 4G network sessions.

The screenshot shows the Alepo SDM Portal interface. The left sidebar has a dark theme with white icons and text. It includes links for Dashboard, Service Configuration (expanded), Subscription (selected), DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, and APN Templates. The main content area is titled 'APN Templates' and contains a table with two rows. The columns are Name, Description, Last Updated Date, and Actions. The first row is 'APN Voice Calling' with description 'APN Template for Voice Calling' and last updated date '09-18-2020 11:04:18'. The second row is '4G Data APN' with description 'APN template for 4G data service' and last updated date '09-10-2020 13:44:50'. Below the table, a message says '0 selected / 2 total'. The top right corner shows a user icon with 'superadmin' and a red 'ADD' button.

Name	Description	Last Updated Date	Actions
APN Voice Calling	APN Template for Voice Calling	09-18-2020 11:04:18	
4G Data APN	APN template for 4G data service	09-10-2020 13:44:50	

Below operations can be initiated from this screen

- [Add/Create APN Template](#)
- [View/Edit APN Template](#)
- [Delete APN Template](#)
- [Search APN Template](#)

Add/Create APN Template

APN Template

Name *

Description

PDN Type *

Context Identifier *

Charging Characteristics

Served Party IP Address (+) (-)

EPS Subscribed QoS Profile

QoS Class Identifier *

Priority Level

Preemption Capability

Preemption Vulnerability

CANCEL CREATE

AMBR

Max Requested Downlink Bandwidth bps

Max Requested Uplink Bandwidth bps

Extended Max Requested Downlink Bandwidth bps

Extended Max Requested Uplink Bandwidth bps

MIP6 Agent Info

Destination Host

Destination Realm

MIP Home Agent Address (+) (-)

VPLMN Dynamic Address Allowed

Visited Network Identifier

PDN Gateway Allocation Type

APN OI Replacement

SIP To Permission	SIP To Local Network Permission
None	None
LIPA Permission	Restoration Priority
None	
WLAN Offloadability	
WLAN Offloadability EUTRAN	WLAN Offloadability UTRAN
Non-IP PDN Type Indicator	Non-IP Data Delivery Mechanism
None	None
SCEF ID	SCEF Realm
Preferred Data Mode	PDN Connection Continuity
DISCONNECT-PDN-CONNECTION-WITH-REACTIVATION-REQUEST	
RDS Indicator	Interworking 5GS Indicator
None	NOT-SUBSCRIBED
Ethernet PDN Type Indicator	
None	

Field Information

Field Name	Description	Sample Value
Name	This is the name for the APN, it can be used for Service-Selection.	
Description	Description of the APN template.	
PDN Type	Indicates the address type of the PDN, when it is IP-based.	0 - IPv4 1 - IPv6 2 - IPv4v6 3 - IPv4_OR_IPv6
Context Identifier	This parameter shall identify the APN Configuration with which the selected PDN GW shall be correlated.	Any integer value > 0
Charging Characteristics	Holds the EPS PDN Connection Charging Characteristics data for an EPS APN Configuration.	
EPS Subscribed QoS Profile		
QoS Class Identifier	It determines the QoS Level	
Priority Level	It determines the allocation retention priority level	
Preemption Capability	This parameter defines if the pre-emption capability will be enabled or disabled.	1 - PRE-EMPTION_CAPABILITY_DISABLED0 - PRE-EMPTION_CAPABILITY_ENABLED
Preemption Vulnerability	This parameter defines if the pre-emption vulnerability will be enabled or disabled.	0 - PRE-EMPTION_VULNERABILITY_DISABLED1 - PRE-EMPTION_VULNERABILITY_ENABLED

Field Name	Description	Sample Value
		1 - PRE- EMPTION_VULNERABILITY_DISABLED
AMBR		
Max Requested Downlink Bandwidth	Indicates the maximum requested bandwidth in bits per second for an downlink IP flow.	512000
Max Requested Uplink Bandwidth	Indicates the maximum requested bandwidth in bits per second for an uplink IP flow.	1024000
Extended Max Requested Downlink Bandwidth	Indicates the maximum requested bandwidth in kbit per second for an downlink IP flow.	
Extended Max Requested Uplink Bandwidth	Indicates the maximum requested bandwidth in kbit per second for an uplink IP flow.	
MIP6 Agent Info		
Destination Host	Contains the hostname of the PDN-GW	
Destination Realm	MNC and MCC values indicate the PLMN where the PDN-GW is located.	
MIP Home Agent Address	Contains either IPv4 or IPv6 address of the PDN-GW and this IP address shall be used as the PDN-GW IP address. - an IPv4 address or an IPv6 address of the PGW contained in one MIP-Home-Agent-Address AVP; - both IPv4 address and IPv6 address of the PGW contained in two MIP-Home-Agent-Address AVPs.	
VPLMN Dynamic Address Allowed	Indicates whether for this APN, the UE is allowed to use the PDN GW in the domain of the HPLMN only, or additionally, the PDN GW in the domain of the VPLMN.	0 - NOTALLOWED 1 - ALLOWED
Visited Network Identifier	Contains the identity of the network where the PDN-GW was allocated, in the case of dynamic PDN-GW assignment.	
PDN Gateway Allocation Type	Indicates whether the PDN GW address included in mip6AgentInfo has been statically allocated (i.e. provisioned in the HSS by the operator), or dynamically selected by other nodes.	0 - STATIC 1 - DYNAMIC
APN OI Replacement	Indicates the domain name to replace the APN OI for the non-roaming case and the home routed roaming case when constructing the APN, and the APN-FQDN upon which to perform a DNS resolution.	

Field Name	Description	Sample Value
SIP To Permission	Indicates whether the traffic associated with this particular APN is allowed or not for SIPTO above RAN.	0 - SIPTO_above_RAN_ALLOWED 1 - SIPTO_above_RAN_NOTALLOWED
SIP To Local Network Permission	Indicates whether the traffic associated with this particular APN is allowed or not for SIPTO at the local network.	0 - SIPTO at Local Network ALLOWED 1 - SIPTO at Local Network NOTALLOWED
LIPA Permission	Indicates whether the APN can be accessed via Local IP Access.	0 - LIPA_PROHIBITED 1 - LIPA_ONLY 2 - LIPA_CONDITIONAL
Restoration Priority	Indicates the relative priority of a user's PDN connection among PDN connections to the same APN when restoring PDN connections affected by an SGW or PGW failure/restart	1-16
WLAN Offloadability		
WLAN Offloadability EUTRAN	Indicates that the traffic associated with the APN is allowed to be offloaded to WLAN from E-UTRAN using WLAN/3GPP ratio interworking feature. If not set, it means the traffic associated with the APN is not allowed to be offloaded to WLAN from E-UTRAN	
WLAN Offloadability UTRAN	Indicates that the traffic associated with the APN is allowed to be offloaded to WLAN from UTRAN using WLAN/3GPP ratio interworking feature. If not set, it means the traffic associated with the APN is not allowed to be offloaded to WLAN from UTRAN	
Non-IP PDN Type Indicator	Indicates whether the APN has a Non-IP PDN type.	0 - FALSE 1 - TRUE
Non-IP Data Delivery Mechanism	Indicates the mechanism to be used for Non-IP data delivery for a given APN.	0 - SGI-BASED-DATA-DELIVERY 1 - SCEF-BASED-DATA-DELIVERY
SCEF ID	Contains the identity of the SCEF to which monitoring events that are to be deleted are associated	
SCEF Realm	Contains the Diameter realm of the SCEF.	
Preferred Data Mode	Indicates that user plane or control plane is preferred for transmitting the traffic associated with the APN	0- Data over user plane preferred 1- Data over control plane preferred
PDN Connection Continuity	Indicates how to handle the PDN connection when the UE moves between "broadband" (WB-E-UTRAN, UTRAN) and "narrowband" (NB-IoT, GPRS, EC-GSM-IoT).	0 - MAINTAIN-PDN-CONNECTION 1 - DISCONNECT-PDN-CONNECTION-WITH-REACTIVATION-REQUEST 2 - DISCONNECT-PDN-CONNECTION-WITHOUT-REACTIVATION-REQUEST

Field Name	Description	Sample Value
RDS Indicator	Indicates whether the Reliable Data Service (RDS) is enabled or disabled for the APN.	0 - DISABLED 1- ENABLED
Interworking 5GS Indicator	Indicates whether the interworking between 5GS and EPS is subscribed or not subscribed for the APN.	0 - NOT-SUBSCRIBED 1 - SUBSCRIBED
Ethernet PDN Type Indicator	Indicates whether the APN has an Ethernet PDN type.	0 - FALSE 1 - TRUE

View/Edit APN Template

Users can view/edit APN templates. Click the  icon against the APN template record that needs to be viewed/edited. System will bring up the below screen.

APN Template

Name * APN Voice Calling Description APN Template for Voice Calling

PDN Type * IPv4 Context Identifier * 2

Charging Characteristics

Served Party IP Address + -

EPS Subscribed QoS Profile

QoS Class Identifier * 2 Priority Level 1

Preemption Capability PRE-EMPTION_CAPABILITY_ENABLED Preemption Vulnerability PRE-EMPTION_VULNERABILITY_ENABLED

AMBR

Max Requested Downlink Bandwidth bps

Extended Max Requested Downlink Bandwidth bps

Max Requested Uplink Bandwidth bps

Extended Max Requested Uplink Bandwidth bps

MIP6 Agent Info

Destination Host

MIP Home Agent Address + -

Destination Realm

VPLMN Dynamic Address Allowed

ALLOWED Visited Network Identifier

PDN Gateway Allocation Type

STATIC APN OI Replacement

SIP To Permission

None SIP To Local Network Permission

LIPA Permission

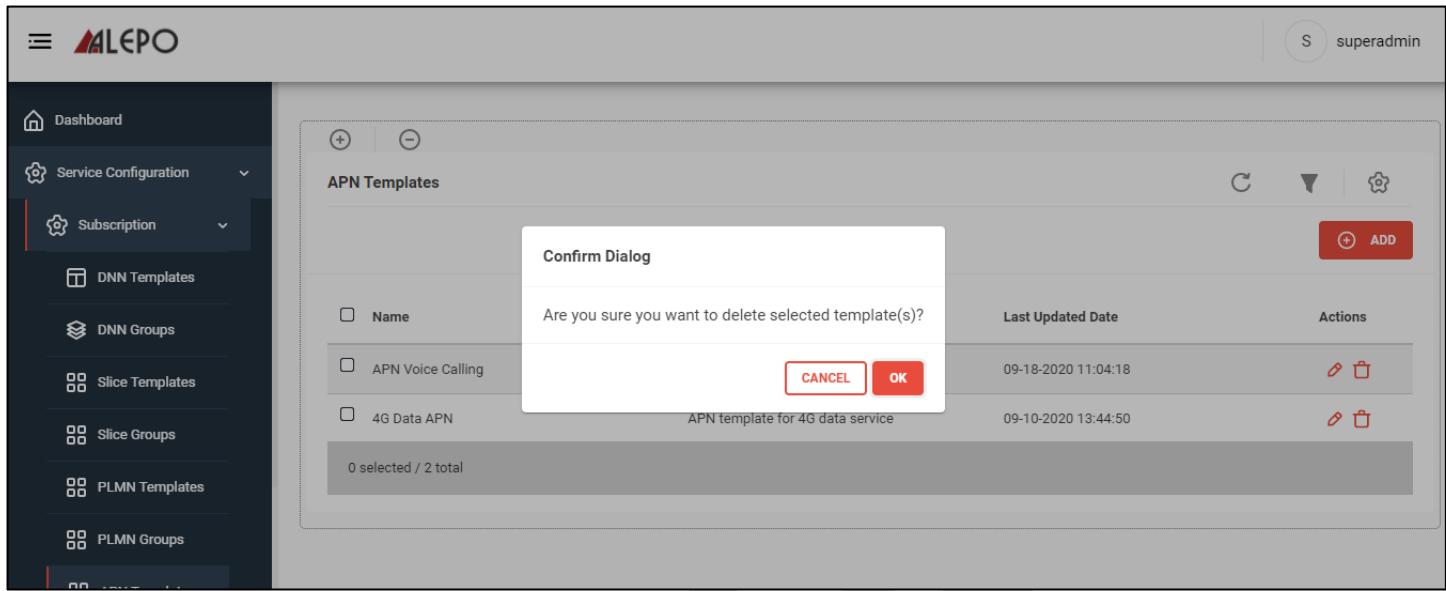
None Restoration Priority

WLAN Offloadability	
WLAN Offloadability EUTRAN	
Non-IP PDN Type Indicator	Non-IP Data Delivery Mechanism
None	None
SCEF ID	SCEF Realm
Preferred Data Mode	PDN Connection Continuity
	DISCONNECT-PDN-CONNECTION-WITH-REACTIVATION-REQUEST
RDS Indicator	Interworking 5GS Indicator
None	NOT-SUBSCRIBED
Ethernet PDN Type Indicator	Create Date
None	2020-09-18 16:34:18
ID	Last Updated By
5c2ec846-11ca-4f1c-9efefea151fce958	
Last Update Date	
2020-09-18 16:34:18	

Click 'Modify' to edit the data seen in the above screenshots and then click 'Submit' to save change made to the APN template.

Delete APN Template

Users can delete APN templates. Click the  icon against the APN template record that needs to be deleted. System will prompt the user for confirmation before deleting the template.



The screenshot shows the ALEPO web interface. On the left is a sidebar with navigation links: Dashboard, Service Configuration (selected), Subscription (selected), DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, and PLMN Groups. The main area is titled "APN Templates". It displays two rows of data:

Name	Last Updated Date	Actions
APN Voice Calling	09-18-2020 11:04:18	
4G Data APN	09-10-2020 13:44:50	

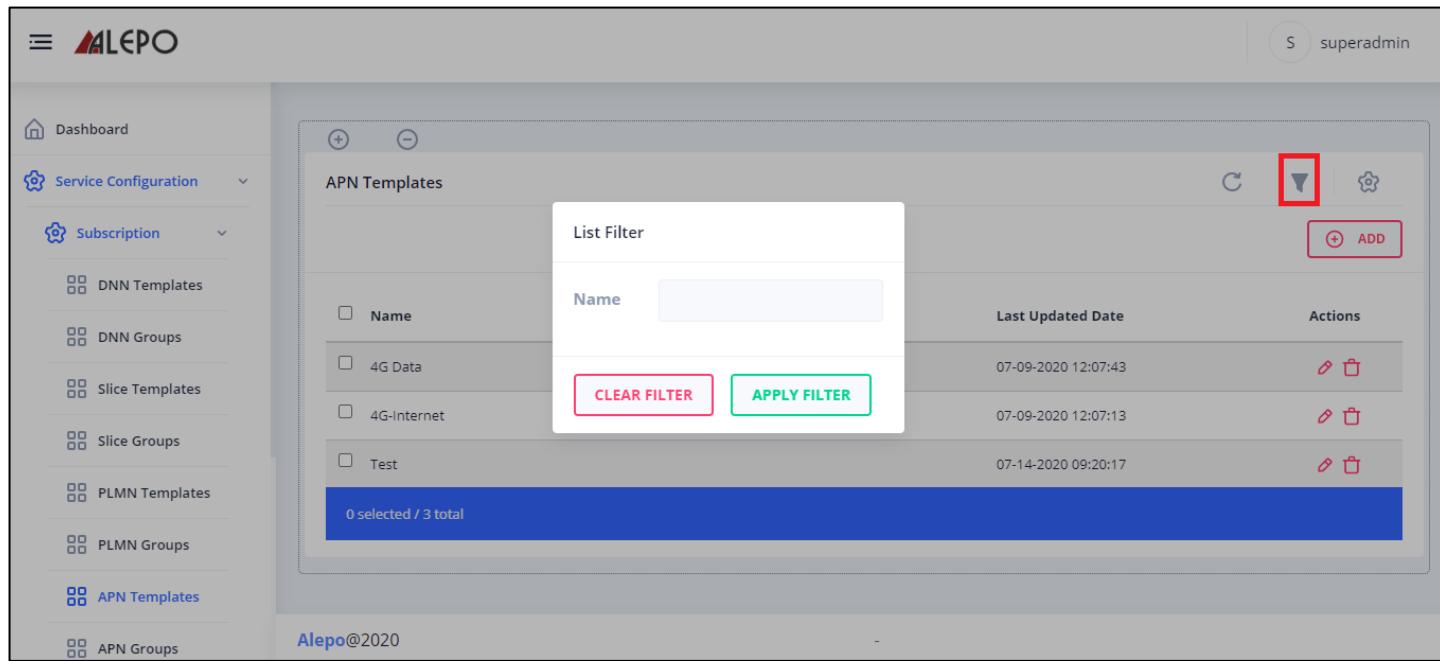
A modal dialog box titled "Confirm Dialog" is overlaid on the page, containing the message "Are you sure you want to delete selected template(s)?". It has "CANCEL" and "OK" buttons. Below the dialog, a status message says "0 selected / 2 total".

Note

Deletion of APN template will not be possible if it has been attached to a subscription.

Search APN Template

Users can search templates that are existing in the system. They can make use of filter available on the 'Template Name' field to search templates. Click  icon to invoke the search filter.



The screenshot shows the Alepo Service Configuration interface. On the left, there is a sidebar with navigation items: Dashboard, Service Configuration (selected), Subscription (with DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups), APN Templates (selected), and APN Groups. The main content area is titled "APN Templates". It features a "List Filter" section with a "Name" input field and checkboxes for "4G Data", "4G-Internet", and "Test". Below the filter are two buttons: "CLEAR FILTER" (red) and "APPLY FILTER" (green). A message "0 selected / 3 total" is displayed. To the right is a table with columns: "Last Updated Date" and "Actions". The table contains three rows: "07-09-2020 12:07:43" with edit and delete icons; "07-09-2020 12:07:13" with edit and delete icons; and "07-14-2020 09:20:17" with edit and delete icons. A red box highlights the search icon in the top right corner of the filter area.

Last Updated Date	Actions
07-09-2020 12:07:43	 
07-09-2020 12:07:13	 
07-14-2020 09:20:17	 

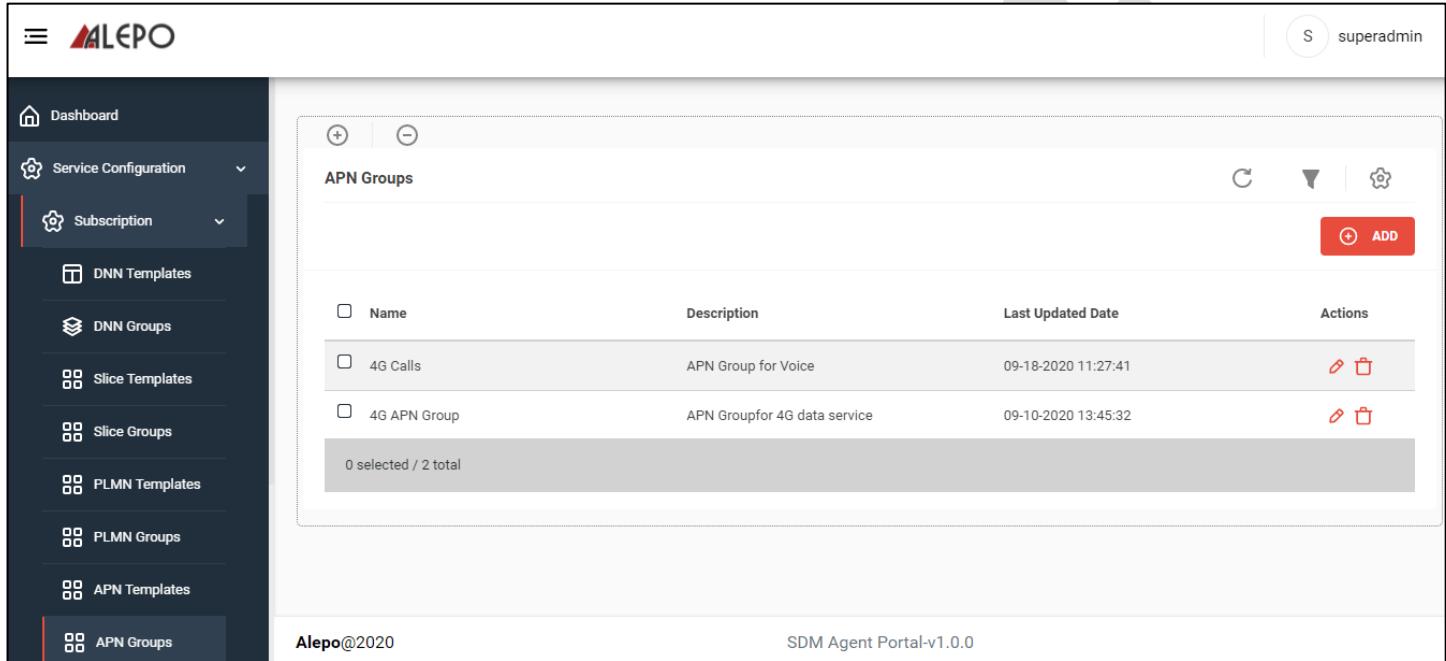
APN Group - Subscription

Navigation

Alepo SDM Portal > Service Configuration > Subscription > APN Groups

Description

An APN group is formed using one or more APN templates.



The screenshot shows the Alepo SDM Portal interface. The top navigation bar includes the Alepo logo, a user icon labeled 'superadmin', and a search bar. The left sidebar has a dark theme with white icons and text, showing categories like Dashboard, Service Configuration, Subscription (which is selected), DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, APN Templates, and APN Groups. The main content area is titled 'APN Groups' and contains a table with two rows. The columns are 'Name', 'Description', 'Last Updated Date', and 'Actions'. The first row is for '4G Calls' with the description 'APN Group for Voice' and last updated on '09-18-2020 11:27:41'. The second row is for '4G APN Group' with the description 'APN Group for 4G data service' and last updated on '09-10-2020 13:45:32'. Below the table, a message says '0 selected / 2 total'. The bottom of the screen shows the Alepo logo again and 'SDM Agent Portal-v1.0.0'.

Name	Description	Last Updated Date	Actions
4G Calls	APN Group for Voice	09-18-2020 11:27:41	
4G APN Group	APN Group for 4G data service	09-10-2020 13:45:32	

Users can perform below operations from this screen:

- [Add APN Group](#)
- [View/Edit APN Group](#)
- [Delete APN Group](#)

Add APN Group

Users can click the 'Add' button seen in the above screen to create a new APN group. Doing this will bring up the below screen.

The screenshot shows the ALEPO web interface. The left sidebar has a dark theme with categories like Dashboard, Service Configuration, Subscription, DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, and APN Templates. The 'Subscription' category is currently selected. The main panel title is 'APN Group'. It contains fields for 'Name *' (4G Calls) and 'Description' (APN Group for Voice). There is a checkbox for 'Wildcard APN Allowed'. Below this is a 'Templates List *' section with an 'ASSOCIATE' button. At the bottom, there is a table with columns: Name, Is Default, Description, and Actions. The table shows 'No data to display' and '0 selected / 0 total'. The top right corner shows the user 'superadmin'.

Field Information

Field Name	Description
Name	Name of the APN group
Description	Description for the APN Group
Wildcard APN Allowed	Subscription Information may include a wildcard APN per APN group. When a wildcard APN is associated with a PLMN template, the subscription allows UE to establish a PDU Session using any of the available APN template value (for the given PLMN). This is particularly helpful in the case when the requested APN template does not match with those that are available.

Users can click the 'Associate' button to attach APN templates to the APN Group. Doing this will bring up the below screen which will list the APN templates existing in the system.

Select Templates

<input type="checkbox"/> Name	Description	Actions
<input checked="" type="checkbox"/> APN Voice Calling	APN Template for Voice Calling	
<input type="checkbox"/> 4G Data APN	APN template for 4G data service	

1 selected / 2 total

ADD

CLOSE

Users can select the APN templates by ticking the check-box and click 'Add'. This will add the selected template to the APN group (ref below screenshot)

ALEPO

superadmin

Name *	Description
4G Calls	APN Group for Voice

Wildcard APN Allowed

CREATE

ASSOCIATE

<input type="checkbox"/> Name	Is Default	Description	Actions
<input type="checkbox"/> APN Voice Calling	<input checked="" type="checkbox"/>	APN Template for Voice Calling	

0 selected / 1 total

Finally, click the 'Create' button.

View/Edit APN Group

To View/Edit an APN Group, click the pencil icon against that APN group. System will display the below screen.

APN Group

Name * 4G Calls Description APN Group for Voice

Wildcard APN Allowed

Templates List *

Name	Is Default	Description	Actions
APN Voice Calling	<input checked="" type="checkbox"/>	APN Template for Voice Calling	ASSOCIATE

0 selected / 1 total

apnGroup.auditData.id: a0c2a417-e78e-425e-ac01-48f953668853 apnGroup.auditData.createDate: 2020-09-18T11:27:41.631Z

apnGroup.auditData.lastUpdateDate: 2020-09-18T11:27:41.631Z apnGroup.auditData.lastUpdatedBy:

Click the 'Modify' button to initiate editing the APN group.

APN Group

Name * 4G Calls Description APN Group for Voice

Wildcard APN Allowed

Templates List *

Name	Is Default	Description	Actions
APN Voice Calling	<input checked="" type="checkbox"/>	APN Template for Voice Calling	ASSOCIATE REMOVE

1 selected / 1 total

Alepo@2020 SDM Agent Portal-v1.0.0

Make desired changes to the APN group. As part of editing the APN group, users can also choose to associate new APN templates / disassociate existing templates from the group. Click 'Submit' once all changes have been made to the group.

Delete APN Group

To delete an APN Group, click the delete icon against that APN group. System will display the below screen seeking user conformation for deletion.

The screenshot shows the Alepo SDM Agent Portal interface. On the left, there is a sidebar with various configuration options: Dashboard, Service Configuration (selected), Subscription, DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, APN Templates, and APN Groups (selected). At the bottom of the sidebar, there is a Policy section. The main content area is titled "APN Groups". A modal dialog box is open in the center, titled "Confirm Dialog". It contains three checkboxes: "Name", "4G Calls", and "4G APN Group". Below the checkboxes, it says "Are you sure you want to delete selected group(s)?". At the bottom right of the dialog are two buttons: "CANCEL" and "OK". In the background, there is a table with columns "Last Updated Date" and "Actions". Two rows are visible: one from 09-18-2020 at 11:29:59 and another from 09-10-2020 at 13:45:32. Each row has edit and delete icons in the "Actions" column. At the bottom of the page, it says "Alepo@2020" and "SDM Agent Portal-v1.0.0".

Click 'OK' to confirm deletion of the APN Group.

CONFIGURATIONS FOR POLICY DATA

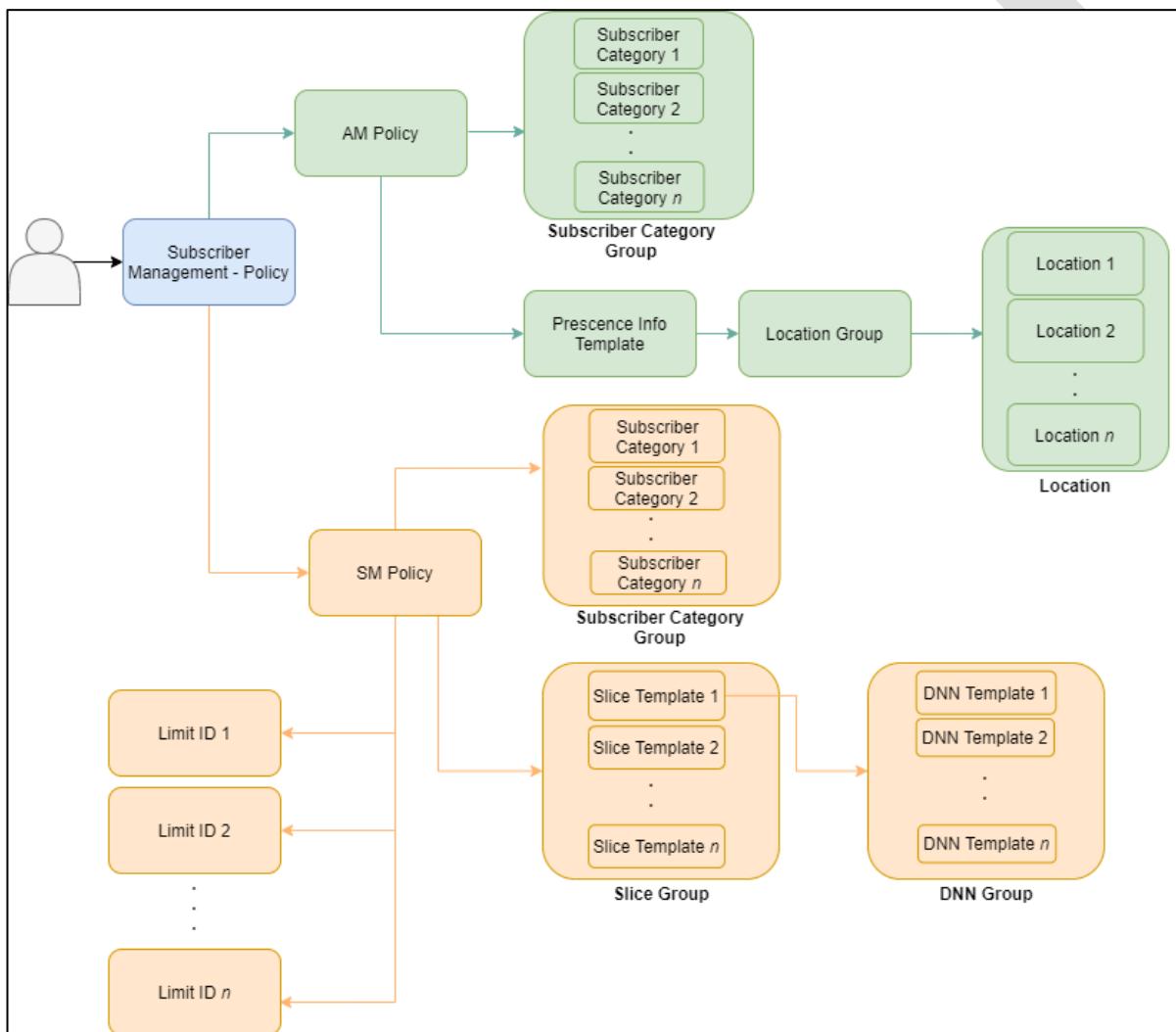
Navigation

Alepo SDM Portal > Service Configuration > Policy

Description

The Policy section of the 'Service Configuration' menu enables operator to carry out configurations for policy data. It allows user to configure different parameters for DNN, Slice, PLMN, Location, Subscriber Category, Usage Limit, Presence Information.

The association of policy data configurations with a subscription can be depicted using the below diagram.



The process of making policy configurations for subscriptions can be enumerated as below:

Step 1 : [Create DNN Policy Template](#)

Step 2 : [Create DNN Policy Group](#) and add DNN Policy templates into it.

Step 3 : [Create Slice Policy Template](#) and associate DNN group to it

Step 4 : [Create Slice Policy Group](#) and add Slice Policy templates into it.

Step 5 : [Create PLMN Template](#) and associate Slice group to it

Step 6 : [Create PLMN Policy Group](#) and add PLMN Policy templates into it.

Step 7 : [Create Subscriber Category Groups](#) and add Subscriber Categories to the group.

Step 8 : [Create Locations](#) and add home and visitor PLMN groups to it.

Step 9 : [Create Location Group](#) and add Locations to the group.

Step 10 : [Create Presence Info](#) and add Location Groups to it.

Step 12 : [Create Usage Limit](#) and add Limit IDs to the Usage limit.

DNN - Policy

This section is used to configure DNN based configurations required for policy data.

It involves the below steps:

- [Create DNN templates](#) - Allows system users to configure DNN templates with technical parameters tailored to provide the desired type of network service and quality.
- [Create a DNN Group](#) - A DNN group is formed by combining multiple DNN templates.

DNN Templates - Policy

Navigation

Alepo SDM Portal > Service Configuration > Policy > DNN Templates

Description

A DNN template is used to configure the technical parameters to establish network sessions. This page describes DNN template configuration for policy data.

The screenshot shows the Alepo SDM Portal interface. The left sidebar has a dark theme with white icons and text. It includes sections for Dashboard, Service Configuration, Subscription, Policy (which is currently selected and highlighted in red), DNN Templates (selected), DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, and Category Groups. The main content area has a light background. At the top right, there is a user icon with 'superadmin' next to it. Below the header, the title 'DNN Templates' is displayed. To the right of the title are three small icons: a circular arrow, a downward arrow, and a question mark. A large red 'ADD' button with a plus sign is located on the far right. The main table has columns for Name, Description, Last Updated Date, and Actions. One row is visible: 'DNN-1' with a description of '0 selected / 1 total', last updated on '09-08-2020 07:33:27', and actions represented by edit and delete icons. At the bottom of the table, it says '0 selected / 1 total'. The footer of the page shows 'Alepo@2020' on the left and 'SDM Agent Portal-v1.0.0' on the right.

The above screen enables users of the SDM portal to perform below operations with respect to Policy DNN Templates.

- [Add Policy DNN Template](#)
- [Edit Policy DNN Template](#)
- [Delete Policy DNN Template](#)

Add DNN Template (Policy)

Click the 'Add' button to create a new DNN Template (Policy).

DNN Template

Name *

Description

Subscriber Category

Downlink Bitrate bps

Uplink Bitrate bps

IPv4 Index

IPv6 Index

MPS Priority Level

MCS Priority Level

Application Detection Support

Offline

MPS Priority

IMS Signalling Prio

Subscriber Spending Limit

Online

MCS Priority

CANCEL CREATE

Complete the fields required to create and add a new DNN Template as listed in the Field Information Table.

Field Information Table

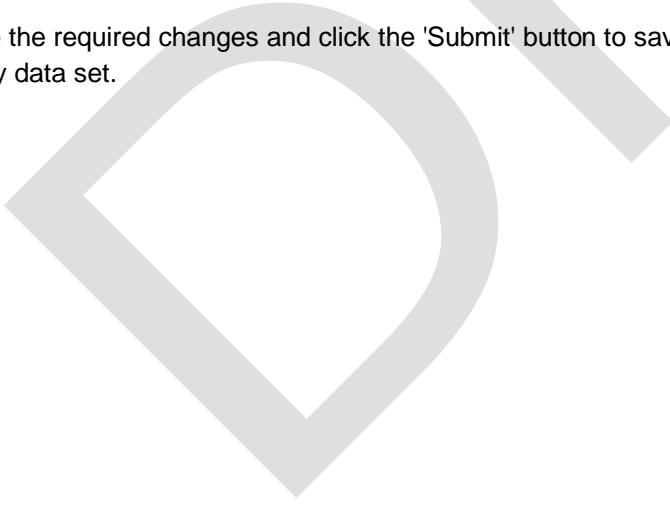
Field Name	Field Description		Is Mandatory
Name*	The name of the DNN template being created.		Yes
Description	The description of the DNN template being created.		No
Subscriber Category	The list of categories associated with the subscriber.		No
Uplink Bitrate	Value	The rate at which data can be uploaded	No
	Unit	The unit for measuring data upload	No
Downlink Bitrate	Value	The rate at which data can be downloaded	No
	Unit	The unit for measuring data download	No
IPv4 Index	The Information that identifies which IP pool or external server is used to allocate the IPv4 address.		No
IPv6 Index	The Information that identifies which IP pool or external server is used to allocate the IPv6 address.		No
MPS Priority Level	This indicates subscription to the MPS priority service; priority applies to all traffic on the PDU Session. The default value is "FALSE".		No

Field Name	Field Description	Is Mandatory
MCS Priority Level	This indicates subscription to the MCS priority service; priority applies to all traffic on the PDU Session. The default value is "FALSE".	No
Application Detection Support	This indicates whether application detection and control can be enabled for a subscriber. The default value is "FALSE"	No
Subscriber Spending Limit	This indicates whether the PCF must enforce policies based on subscriber spending limits. The default value is "FALSE".	No
Offline	This indicates the offline charging is applicable to the PDU session. The default value is "FALSE".	No
Online	This indicates the online charging is applicable to the PDU session. The default value is "FALSE".	No
MPS Priority	This indicates subscription to the MPS priority service; priority applies to all traffic on the PDU Session. The default value is "FALSE".	No
MCS Priority	This indicates subscription to the MCS priority service; priority applies to all traffic on the PDU Session. The default value is "FALSE".	No
IMS Signalling Prio	This indicates subscription to the IMS signalling priority service; priority only applies to IMS signaling traffic. The default value is "FALSE".	No

Click the create button once all the information has been entered.

View/Modify DNN Template (Policy)

- Go to - Service Configuration > Policy > DNN Templates.
- Click the icon  to View/Modify the desired DNN Template. The window to view that DNN Template opens.
- To modify this DNN Template, click on the 'Modify' button at the top right of the window.



ALEPO

superadmin

CANCEL MODIFY

DNN Template

Name *	Description
DNN-1	

Subscriber Category	Uplink Bitrate
Silver	20 Mbps

Downlink Bitrate	IPv6 Index
60 Mbps	

MPS Priority Level	MCS Priority Level
<input type="checkbox"/> Application Detection Support	<input type="checkbox"/> Subscriber Spending Limit
<input type="checkbox"/> Offline	<input type="checkbox"/> Online
<input type="checkbox"/> MPS Priority	<input type="checkbox"/> MCS Priority
<input type="checkbox"/> IMS Signalling Prio	

ID	Create Date
5e7c2b7e-cbf8-425a-bc8e-05098decbe13	2020-09-08 13:03:27

Last Update Date	Last Updated By
2020-09-08 13:03:27	

CANCEL

Make the required changes and click the 'Submit' button to save the modifications done to the DNN Template for the Policy data set.

Delete a DNN Template (Policy)

- Navigate to - Service Configuration > Policy > DNN Templates.
- The list of all the DNN Templates present in the system will be displayed. To delete any single DNN Template in this list, click its delete icon in the Actions column. The Confirm dialog box opens to confirm the deletion of the selected DNN Template.

The screenshot shows the Alepo SDM Agent Portal interface. On the left, there is a sidebar with navigation links: Dashboard, Service Configuration, Subscription, Policy (selected), DNN Templates (selected), DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, and Category Groups. The main area is titled "DNN Templates". It displays a table with one row, "DNN-1", which was selected. A confirmation dialog box is overlaid on the page, asking "Are you sure you want to delete selected template(s)?". The dialog has "CANCEL" and "OK" buttons. The table columns include "Name", "Last Updated Date" (09-08-2020 07:33:27), and "Actions" (a delete icon).

- Click the OK button to confirm. The selected DNN Template gets deleted.

When deleting a DNN template, the system will first ensure that the template being deleted is not associated with any DNN group. If in case it is, the user needs to manually first remove the DNN template from the group and thereafter proceed to delete it.

- To delete multiple DNN Templates in the list, select the checkboxes for those DNN Templates in the list that you want to delete.
- Click the DELETE button on the top right.
- Click the OK button in the delete confirmation dialog box.

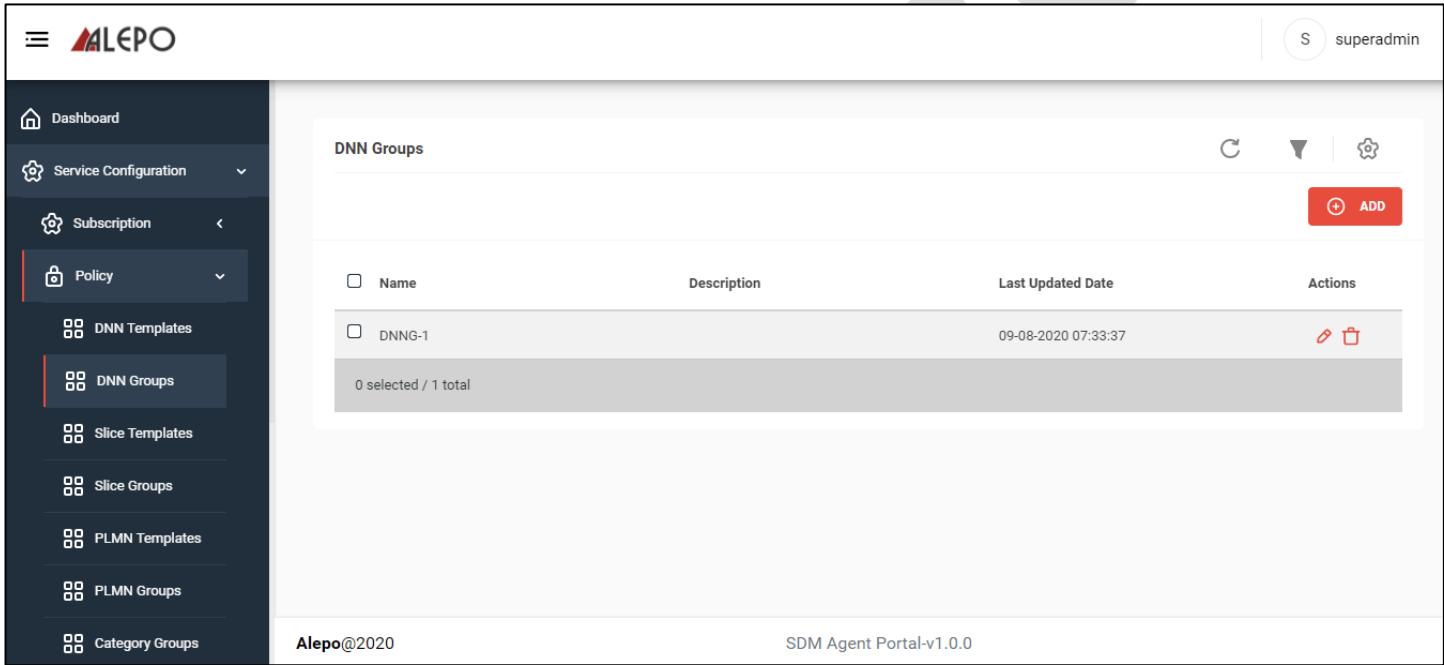
DNN Groups - Policy

Navigation

Alepo SDM Portal > Service Configuration > Policy >DNN Groups

Description

A DNN group is formed using one or more DNN templates. This page describes the DNN group configuration for policy data.



The screenshot shows the Alepo SDM Portal interface. The left sidebar has a dark theme with white icons and text. It includes links for Dashboard, Service Configuration, Subscription, Policy (which is expanded), DNN Templates, DNN Groups (which is selected and highlighted in blue), Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, and Category Groups. The main content area is titled 'DNN Groups'. It features a table with columns: Name, Description, Last Updated Date, and Actions. There is one entry: 'DNNG-1' with a description of '0 selected / 1 total'. The last updated date is '09-08-2020 07:33:37'. The Actions column contains edit and delete icons. At the top right of the content area are filter, sort, and settings icons. A red 'ADD' button is located at the top right of the table. The bottom of the screen shows the user 'Alepo@2020' and the portal version 'SDM Agent Portal-v1.0.0'.

Users of the SDM Portal can perform the below operations from the above screen that is used for creating and managing Policy DNN Template Groups.

- [Create Policy DNN Group](#)
- [View/Edit Policy DNN Template Group](#)
- [Delete Policy DNN Template Group](#)

Create DNN Group (Policy)

- Go to - Service Configuration > Policy > DNN Groups.
- Click the Add button. The window to create a new DNN Group opens.

The screenshot shows the ALEPO Service Configuration interface. On the left, there's a sidebar with various navigation items. The 'Policy' item is currently selected. In the main area, a window titled 'DNN Group' is open. It has fields for 'Name*' (containing 'Policy DNN Group - Internet') and 'Description' (containing 'Policy DNN Group for Internet'). Below these, there's a section for 'Templates List*' with an 'ASSOCIATE' button. A table below the button shows 'No data to display' and indicates '0 selected / 0 total'. At the top right of the window, there are 'CANCEL' and 'CREATE' buttons. The overall interface is clean and modern, with a dark header and light body.

- Complete the fields required to create this new DNN Group as listed in the Field Information Table.
- Click the 'Associate' button to link the DNN template (Policy) with the DNN Group (Policy).

Field Information Table

Field Name	Field Description	Is Mandatory
Name*	The name of the Policy DNN Group being created.	Yes
Description	The description of the Policy DNN Group being created. This is an expandable field.	No
Templates List	Associate The Associate button allows choosing the Policy DNN templates that need to be part of the group from the list of available Policy DNN templates in the system. This combination of Policy DNN templates is added as a Policy DNN group. Every Policy DNN group can have only one default Policy DNN template. The default Policy DNN template is specific to that particular Policy DNN group.	Yes

Select Templates

Templates

<input checked="" type="checkbox"/> Name	Description	Actions
<input checked="" type="checkbox"/> DNN-1		

1 selected / 1 total

ADD

CLOSE

Select the DNN Template ([Policy](#)) to be associated with the DNN group ([Policy](#)), by ticking the check-box and click 'Add'.

ALEPO

superadmin

Dashboard

Service Configuration

Subscription

Policy

DNN Templates

DNN Groups

Slice Templates

Slice Groups

PLMN Templates

PLMN Groups

Category Groups

DNN Group

Name *

Policy DNN Group - Internet

Description

Policy DNN Group for Internet

Templates List *

ASSOCIATE

<input type="checkbox"/> Name	Description	Actions
<input type="checkbox"/> DNN-1		

0 selected / 1 total

CANCEL **CREATE**

Note that the selected DNN template ([Policy](#)) appears within the DNN group ([Policy](#)) being created. Finally click the 'Create' button at the top to create the DNN Group.

View/Modify DNN Group (Policy)

Navigate to - Service Configuration > Policy > DNN Groups.

The screenshot shows the Alepo SDM Agent Portal interface. The left sidebar has a dark theme with various navigation options under 'Policy': DNN Templates, DNN Groups (which is selected and highlighted in blue), Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, and Category Groups. The main content area is titled 'DNN Groups' and lists two entries:

Name	Description	Last Updated Date	Actions
Policy DNN Group - Internet	Policy DNN Group for Internet	09-17-2020 04:29:09	
DNNG-1		09-08-2020 07:33:37	

At the bottom of the list, it says '0 selected / 2 total'. The top right corner shows a user profile for 'superadmin'.

The list of all the DNN Groups present in the system will be displayed. Click the icon adjacent to DNN Group that is to be modified. The screen to view and/or modify that DNN Group opens.

The screenshot shows the 'DNN Group' edit screen. The left sidebar is identical to the previous screenshot. The main content area is titled 'DNN Group' and shows the following details for the 'Policy DNN Group - Internet' entry:

Name *	Description
Policy DNN Group - Internet	Policy DNN Group for Internet

Below this is a section titled 'Templates List *' with a table:

Name	Description	Actions
DNN-1		

At the bottom of this section, it says '0 selected / 1 total'. Further down are fields for 'Template ID' (with value 'edd403bc-68eb-4230-a754-9f1e3ff6df44'), 'Create Date' (with value '2020-09-17T04:29:09.476Z'), 'Last Update Date' (with value '2020-09-17T04:29:09.476Z'), and 'Last Updated By' (empty). At the top right of this screen are 'CANCEL' and 'MODIFY' buttons.

To edit the DNN Group (**Policy**), click on the 'Modify' button on the top right of the page. The fields of this DNN Group become editable.

Make the required changes to modify this DNN Group. Click the 'Submit' button to save the modifications of the DNN Group.

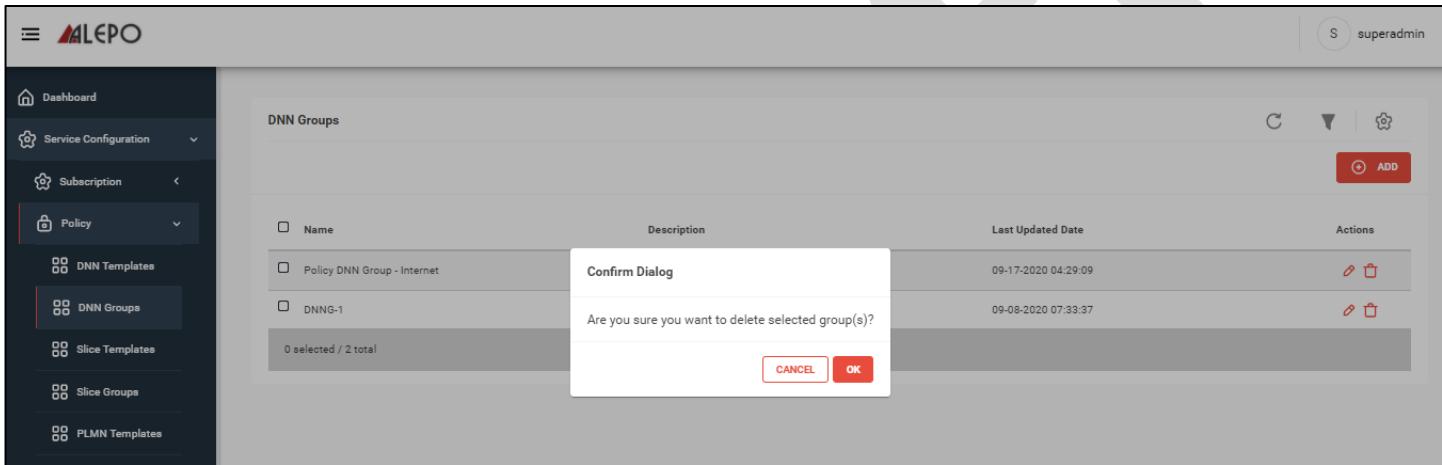
Draft

Delete DNN Group (Policy)

Navigate to - Service Configuration > Policy > DNN Groups.

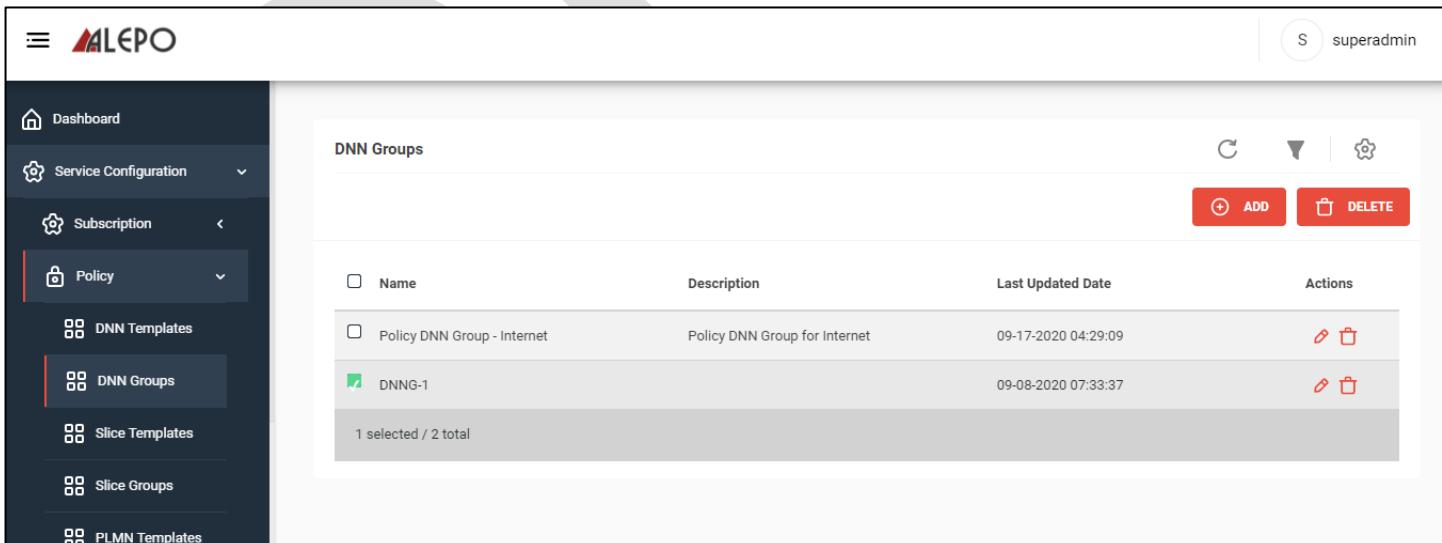
The list of all the DNN Groups present in the system is displayed. To delete any single DNN Group in this list, click its  icon in the Actions column. The Confirm dialog box opens to confirm the deletion of the selected DNN Group.

When deleting a DNN group, the system will first ensure that the group being deleted is not associated with any Slice template. If in case it is, the user needs to manually first remove the DNN group from the slice template and thereafter proceed to delete it.



Name	Description	Last Updated Date	Actions
Policy DNN Group - Internet	Confirm Dialog	09-17-2020 04:29:09	 
DNNG-1		09-08-2020 07:33:37	 

Click the OK button to confirm. The selected DNN Group gets deleted.



Name	Description	Last Updated Date	Actions
Policy DNN Group - Internet	Policy DNN Group for Internet	09-17-2020 04:29:09	 
DNNG-1		09-08-2020 07:33:37	 

To delete multiple DNN Groups in the list, select the check-boxes for those DNN Groups in the list that you want to delete.

Then click the 'DELETE' button on the top right. Click the OK button in the delete confirmation dialog box.

Slice (S-NSSAI) - Policy

This section is used to configure Slice or S-NSSAI based configurations required for policy data.

How Slice or S-NSSAI is setup in Alepo SDM Portal?

It involves the below steps:

- [Create Slice templates](#) - Allows system users to configure Slice or S-NSSAI templates with SST and SD values
- [Create a Slice Group](#) - A Slice group is formed by combining multiple slice templates.

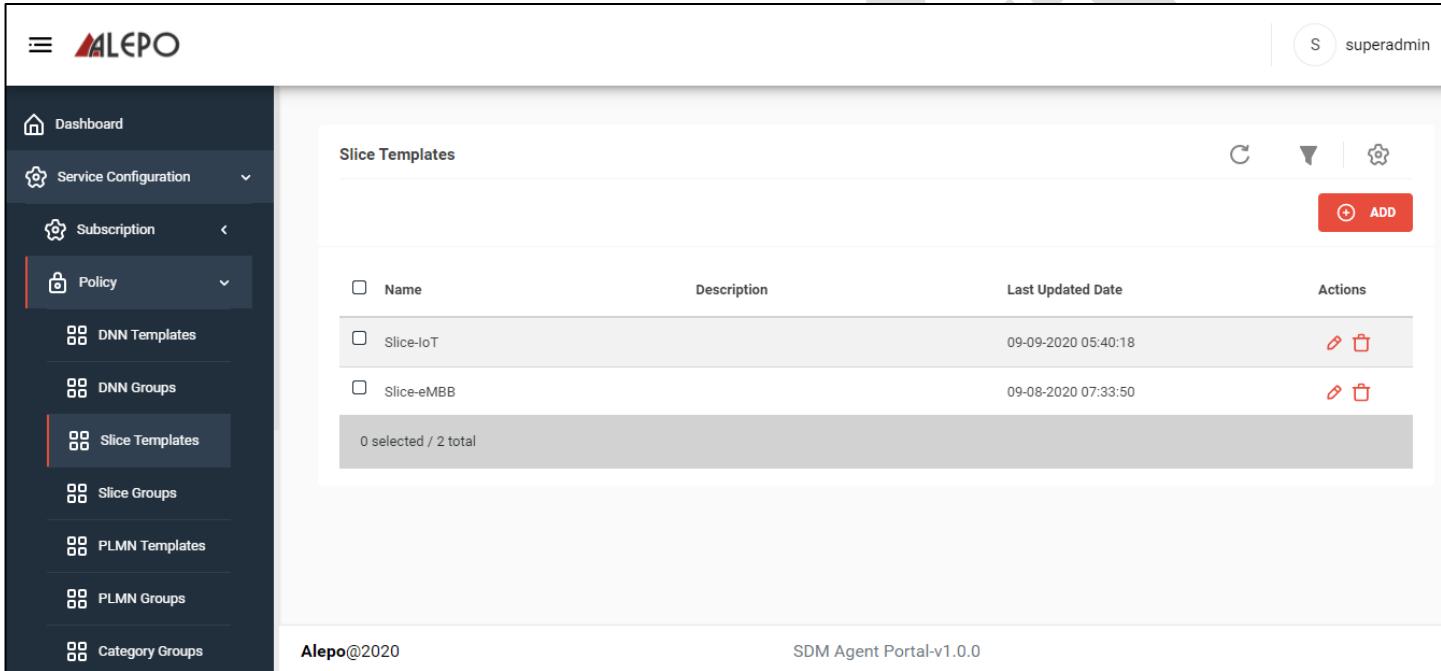
Slice Templates - Policy

Navigation

Alepo SDM Portal > Service Configuration > Policy > Slice Templates

Description

Slice Template according to 3GPP is known as S-NSSAI or Single - Network Slice Selection Assistance Information. S-NSSAI is used to uniquely identify a network slice. S-NSSAI contains two components i.e. SST(Slice/Service Type) and SD (Slice Differentiator). An S-NSSAI also contains a DNN Group. This page describes Slice template configuration for policy data.



The screenshot shows the Alepo SDM Portal interface. The left sidebar has a dark theme with white icons and text. It includes links for Dashboard, Service Configuration (expanded), Subscription, Policy (selected), DNN Templates, DNN Groups, Slice Templates (selected), Slice Groups, PLMN Templates, PLMN Groups, and Category Groups. The main content area is titled 'Slice Templates' and shows a table with two entries: 'Slice-IoT' and 'Slice-eMBB'. The table columns are Name, Description, Last Updated Date, and Actions (with edit and delete icons). At the bottom of the table, it says '0 selected / 2 total'. The footer of the page shows 'Alepo@2020' and 'SDM Agent Portal-v1.0.0'.

The 'Slice Templates - Policy' option will enable system users to perform below operations:

- [Add/Create Policy Slice Template](#)
- [View/Edit Policy Slice Template](#)
- [Delete Policy Slice Template](#)

Create Slice Template (Policy)

The screenshot shows the Alepo SDM Agent Portal interface. The left sidebar has a dark theme with a navigation menu. The 'Policy' section is expanded, and 'Slice Templates' is selected, indicated by a red border. The main content area is titled 'Slice Templates' and displays a table with two rows. The columns are 'Name', 'Description', 'Last Updated Date', and 'Actions'. The first row has a name of 'Slice-IoT', a description of '09-09-2020 05:40:18', and actions for edit and delete. The second row has a name of 'Slice-eMBB', a description of '09-08-2020 07:33:50', and actions for edit and delete. A message at the bottom says '0 selected / 2 total'. The top right corner shows a user icon with 'superadmin' and a red 'ADD' button.

Name	Description	Last Updated Date	Actions
Slice-IoT		09-09-2020 05:40:18	
Slice-eMBB		09-08-2020 07:33:50	

Click the 'Add' button to create a new Slice Template (Policy). This will bring up the below screen where user can fill out all relevant fields pertaining to creation of Slice Template (Policy).

The screenshot shows the 'Slice Template' creation form. The left sidebar is identical to the previous screenshot. The main form has a title 'Slice Template' with a gear icon and 'CREATE' and 'CANCEL' buttons. It contains several input fields: 'Name *' with 'Slice-Med' entered, 'Description' with 'Slice Template for Medical', 'SD' with a dropdown menu, 'SST *' with 'MIoT' selected, 'DNN Group Name *' with 'DNNG-1' selected from a dropdown, and a large text area for 'Notes' which is currently empty. The bottom of the form shows the Alepo version 'Alepo@2020' and the portal version 'SDM Agent Portal-v1.0.0'.

Field Information

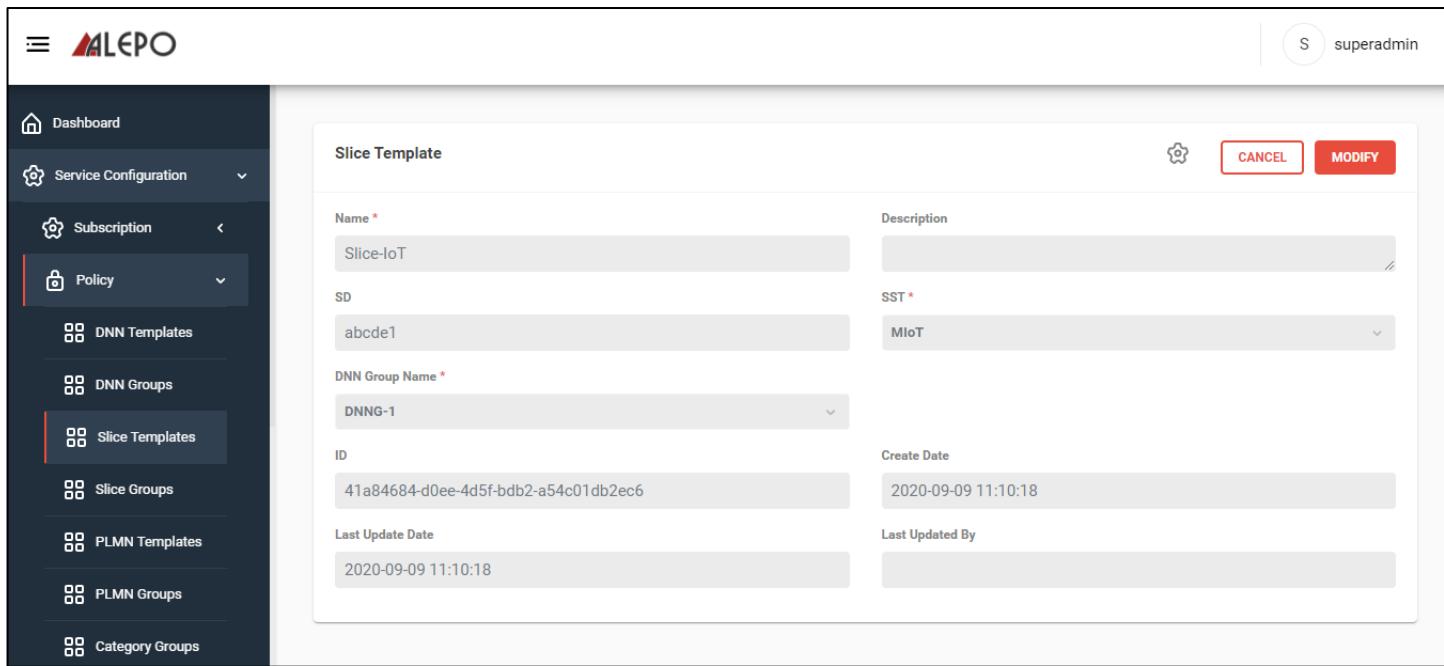
Field Name	Field Description	Is Mandatory
Name*	The name of the Slice Template being created.	Yes
Description	The description of the Slice Template being created. This field is expandable.	No
SD	<p>SD is a 3-octet string, representing the Slice Differentiator, in hexadecimal representation. Each character in the string will have a value between "0" to "9" or "A" to "F" and shall represent 4 bits. The most significant character representing the 4 most significant bits of the SD will appear first in the string, and the character representing the 4 least significant bit of the SD will appear last in the string.</p> <p>SD is an optional parameter that complements the Slice/Service type(s) to allow to differentiate amongst multiple Network Slices of the same Slice/Service type.</p>	No
SST*	SST is Slice/Service type. Its value can be selected from - eMBB, URLLC, MIoT, and/or V2X.	Yes
DNN Group Name*	Select the Policy DNN Group from the drop-down to add to the Slice Template being created.	Yes

Click the 'Create' button after entering all the desired information.

View/Modify a Slice Template (Policy)

Navigate to - Service Configuration > Policy > PLMN Templates.

Click the  icon to 'View/Modify' the desired policy slice template. The window to view the selected policy slice template will come up.

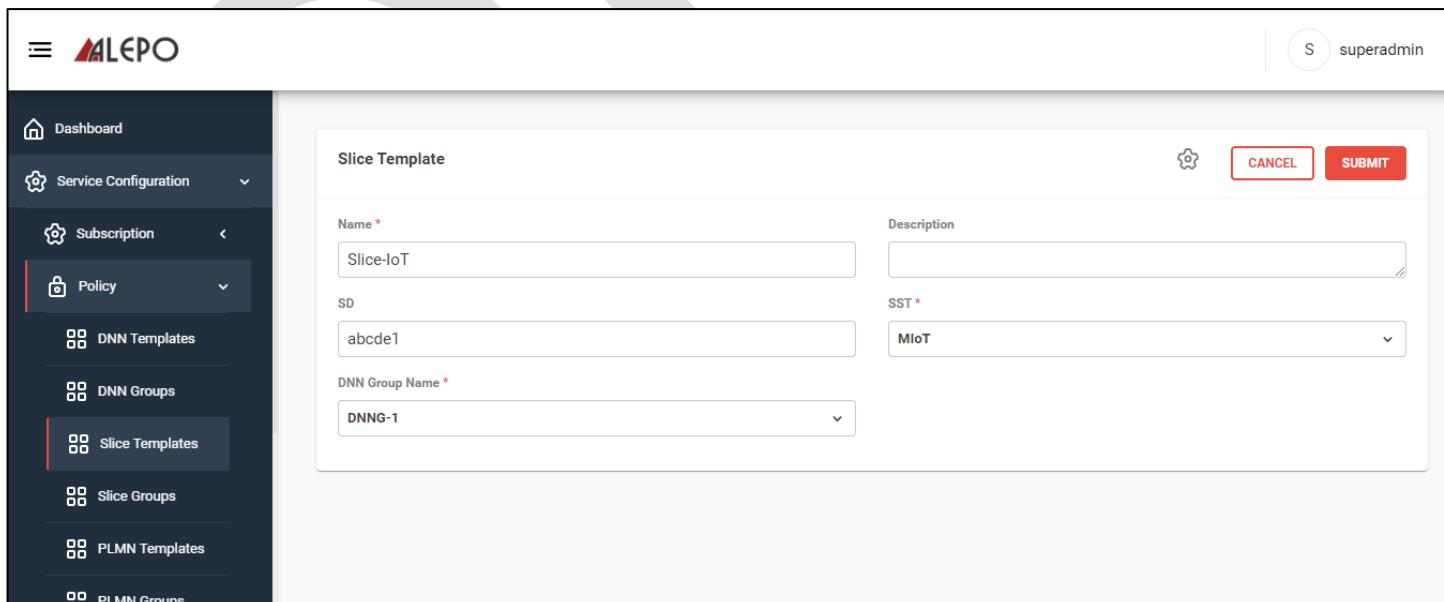


The screenshot shows the ALEPO web interface. The left sidebar is titled 'Service Configuration' with 'Policy' selected. The main content area is titled 'Slice Template'. The form fields are as follows:

- Name: Slice-IoT
- SD: abcde1
- DNN Group Name: DNNG-1
- ID: 41a84684-d0ee-4d5f-bdb2-a54c01db2ec6
- Description: (empty)
- SST: MIoT
- Create Date: 2020-09-09 11:10:18
- Last Update Date: 2020-09-09 11:10:18
- Last Updated By: (empty)

At the top right of the form are 'CANCEL' and 'MODIFY' buttons.

To modify this Slice Template, click on the Modify button at the top right of the window.



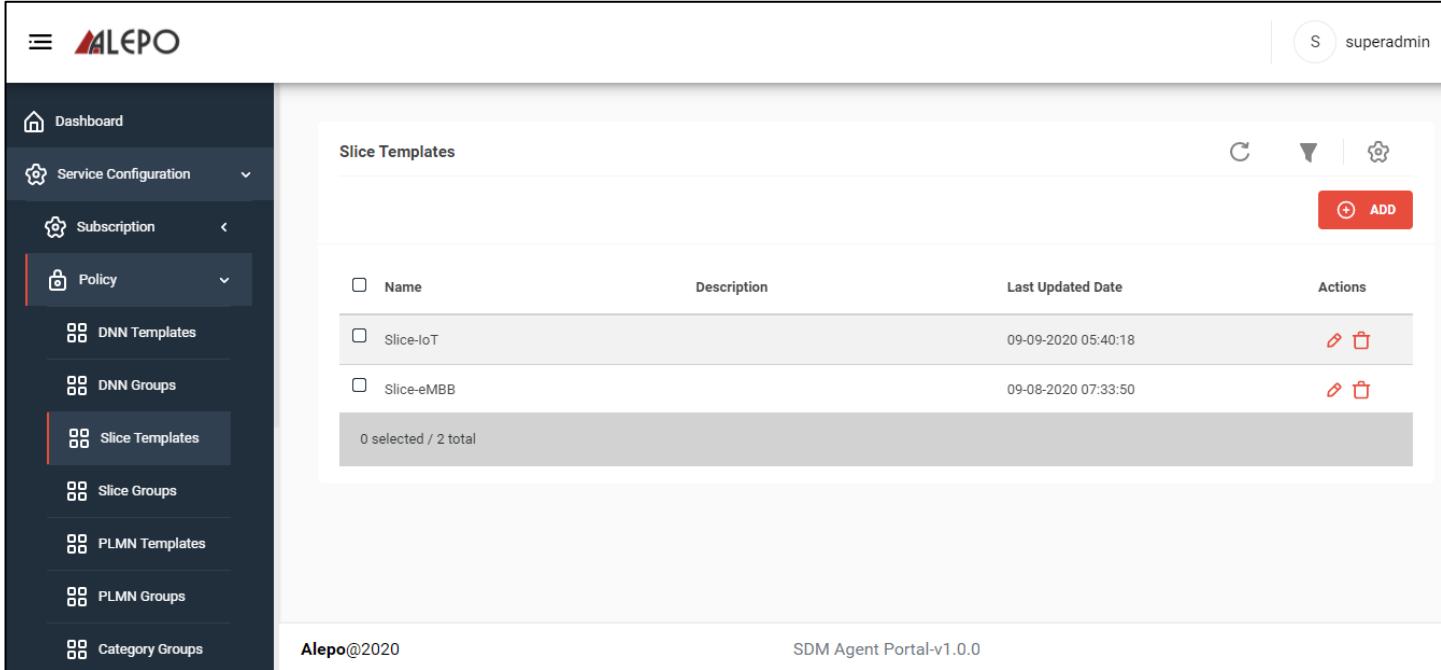
The screenshot shows the ALEPO web interface after modifying the Slice Template. The left sidebar is titled 'Service Configuration' with 'Policy' selected. The main content area is titled 'Slice Template'. The form fields are the same as in the previous screenshot, but the 'SUBMIT' button is now visible at the top right instead of 'CANCEL'.

Make changes to the desired fields and click the 'Submit' button at the top to save the modifications done to the slice template (Policy).

Draft

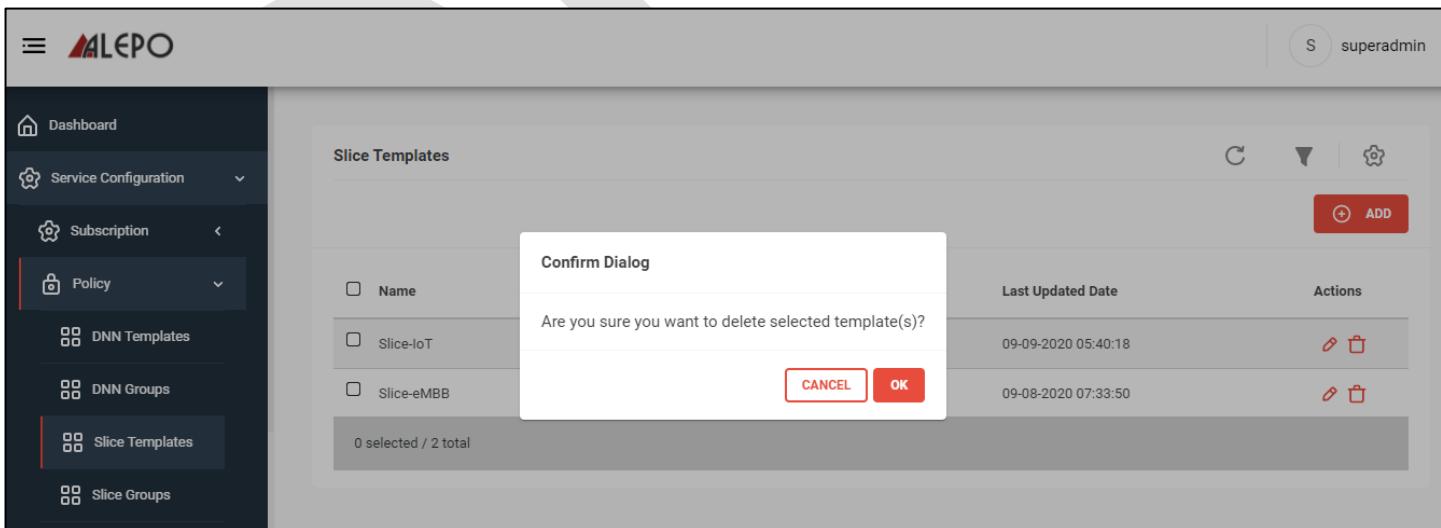
Delete Slice Template (Policy)

Navigate to - Service Configuration > Policy > Slice Templates.



The screenshot shows the Alepo SDM Agent Portal interface. The left sidebar has a dark theme with the Alepo logo at the top. Under the 'Policy' section, 'Slice Templates' is selected, highlighted with a red border. The main content area is titled 'Slice Templates' and displays a table with two rows of data. The columns are 'Name', 'Description', 'Last Updated Date', and 'Actions'. The first row contains 'Slice-IoT' with a description of 'Slice-IoT', last updated on '09-09-2020 05:40:18', and actions represented by edit and delete icons. The second row contains 'Slice-eMBB' with a similar description and last updated date, also with edit and delete icons. Below the table, a message says '0 selected / 2 total'. At the bottom of the page, it shows 'Alepo@2020' and 'SDM Agent Portal-v1.0.0'.

The list of all the Slice Templates present in the system is displayed. To delete a single Slice Template (Policy), click the  icon to the right of the desired slice template (Policy) record.



This screenshot is similar to the previous one, showing the 'Slice Templates' list. However, a modal dialog box titled 'Confirm Dialog' is overlaid on the table. The dialog contains the question 'Are you sure you want to delete selected template(s)?' with 'CANCEL' and 'OK' buttons. The background table remains visible, showing the same two entries as before.

The confirm dialog box opens to confirm the deletion of the selected Slice Template.

When deleting a Policy Slice template, the system will first ensure that the template being deleted is not associated with any Slice group (Policy). If in case it is, the user needs to first remove the Slice template (Policy) from the Slice group (Policy) and thereafter proceed to delete it.

Click the 'OK' button to confirm. The selected Slice Template gets deleted.



The screenshot shows the ALEPO web interface. The left sidebar has a dark theme with white icons and text. It includes links for Dashboard, Service Configuration, Subscription, Policy (which is currently selected), DNN Templates, DNN Groups, Slice Templates (which is highlighted with a red border), and Slice Groups. The main content area is titled "Slice Templates". It contains a table with columns: Name, Description, Last Updated Date, and Actions. There are two entries: "Slice-IoT" and "Slice-eMBB". Both entries have a small green checkmark icon next to their names. In the "Actions" column for each entry, there are two red icons: a trash can and a circular arrow. Below the table, a message says "1 selected / 2 total". At the top right of the content area, there are "ADD" and "DELETE" buttons. The "DELETE" button is highlighted with a red background and white text. The top right corner of the interface shows a user profile with the letter "S" and the text "superadmin".

To delete multiple Slice Templates (Policy) in the list, tick the check-boxes for those Slice Templates(Policy) desired for deletion. Then click the 'DELETE' button on the top right.

Click the 'OK' button in the delete confirmation dialog box.

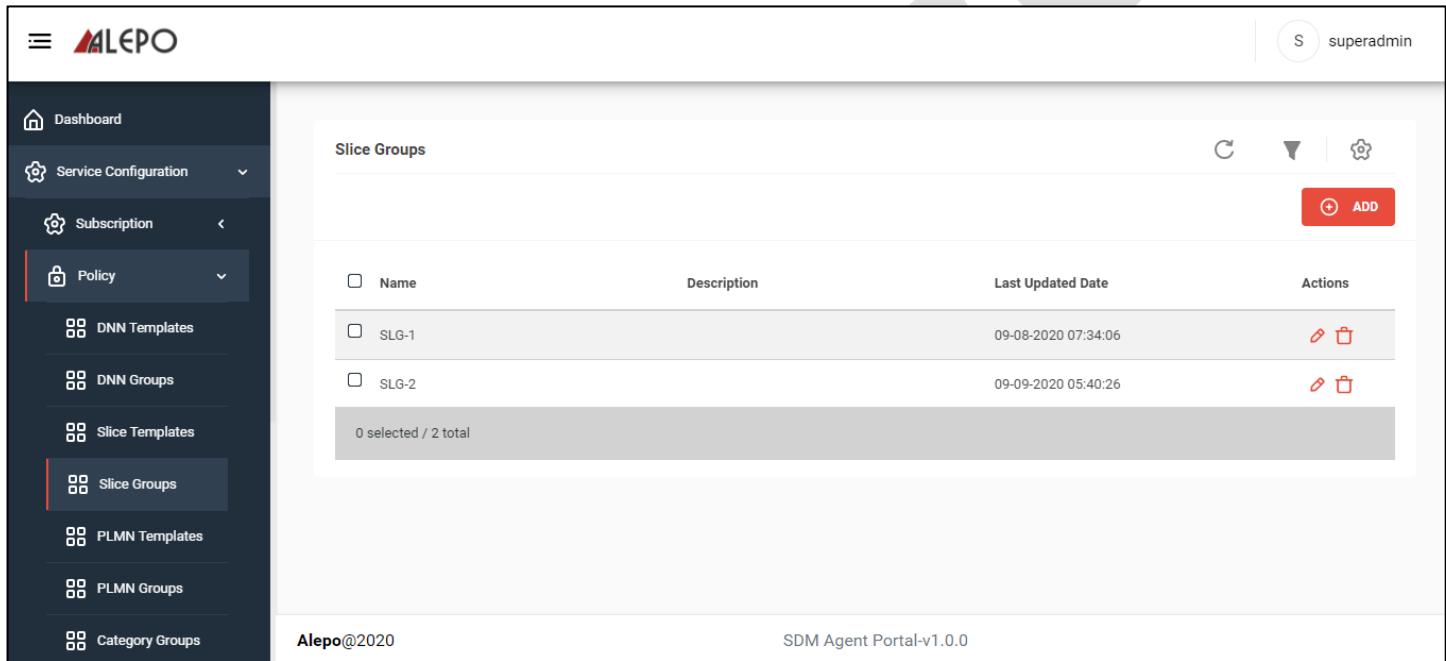
Slice Groups - Policy

Navigation

Alepo SDM Portal > Service Configuration > Policy > Slice Groups

Description

A Slice group is formed using one or more Slice or S-NSSAI templates. This page describes the slice group configuration for policy data.



The screenshot shows the Alepo SDM Portal interface. The left sidebar has a dark theme with white icons and text. It includes links for Dashboard, Service Configuration (expanded), Subscription, Policy (selected), DNN Templates, DNN Groups, Slice Templates, Slice Groups (selected), PLMN Templates, PLMN Groups, and Category Groups. The main content area has a light background. At the top right, there is a user icon labeled "superadmin". Below it, the title "Slice Groups" is displayed above a table. The table has columns for Name, Description, Last Updated Date, and Actions. Two entries are listed: "SLG-1" (Description: "SLG-1", Last Updated Date: "09-08-2020 07:34:06") and "SLG-2" (Description: "SLG-2", Last Updated Date: "09-09-2020 05:40:26"). The Actions column contains edit and delete icons for each row. A footer at the bottom of the main area shows "Alepo@2020" and "SDM Agent Portal-v1.0.0".

System users can perform the below operations in the Policy Slice Group screen.

- [Add/Create Policy Slice Group](#)
- [View/Edit Policy Slice Group](#)
- [Delete Policy Slice Group](#)

Create Slice Group (Policy)

The screenshot shows the Alepo SDM Agent Portal interface. The left sidebar is a navigation menu with the following items:

- Dashboard
- Service Configuration
- Subscription
- Policy** (selected)
- DNN Templates
- DNN Groups
- Slice Templates
- Slice Groups** (selected)
- PLMN Templates
- PLMN Groups
- Category Groups

The main content area is titled "Slice Groups". It displays a table with two entries:

<input type="checkbox"/>	Name	Description	Last Updated Date	Actions
<input type="checkbox"/>	SLG-1		09-08-2020 07:34:06	
<input type="checkbox"/>	SLG-2		09-09-2020 05:40:26	

At the bottom of the table, it says "0 selected / 2 total". There is a red "ADD" button in the top right corner of the main content area.

Click the 'Add' button seen in the above screen. The window to create a Slice Group (Policy) opens.

The screenshot shows the "Slice Group" creation form. The left sidebar is identical to the previous screenshot. The main content area is titled "Slice Group". It has fields for "Name *" (containing "SLG-3") and "Description" (containing "Policy Slice Group"). There is a "Templates List *". Below it is a table:

<input type="checkbox"/>	Name	Description	Actions
No data to display			

At the bottom of the table, it says "0 selected / 0 total". There are "CANCEL" and "CREATE" buttons in the top right corner of the main content area. A red "ASSOCIATE" button is located below the "Templates List".

To add Slice Templates (Policy) to the Slice Group (Policy) being created, click on the 'Associate' button. This will open up the below screen.

Select Templates

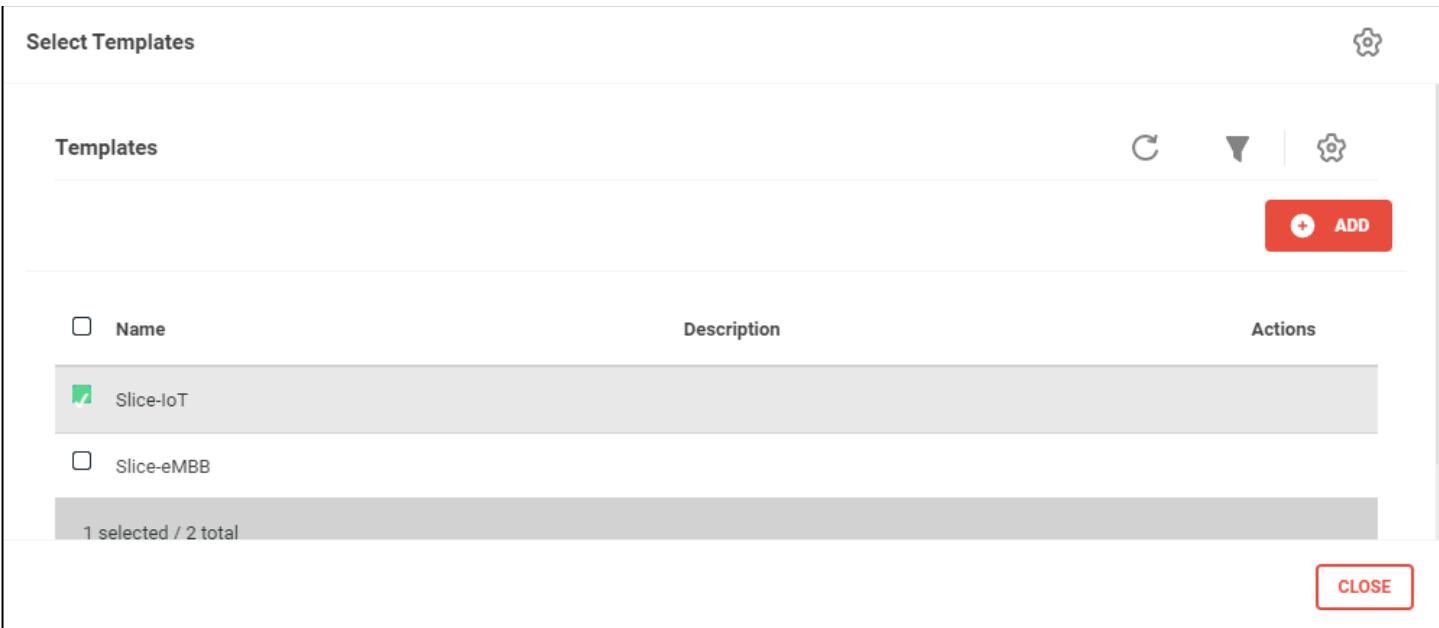
Templates

ADD

<input type="checkbox"/>	Name	Description	Actions
<input checked="" type="checkbox"/>	Slice-IoT		
<input type="checkbox"/>	Slice-eMBB		

1 selected / 2 total

CLOSE



Select the slice template(s) (Policy) to add/associate with the Slice Group (Policy) and click 'Add' button as seen in the above screenshot.

ALEPO

superadmin

Dashboard

Service Configuration

Subscription

Policy

DNN Templates

DNN Groups

Slice Templates

Slice Groups

PLMN Templates

PLMN Groups

Category Groups

Slice Group

Name * SLG-3

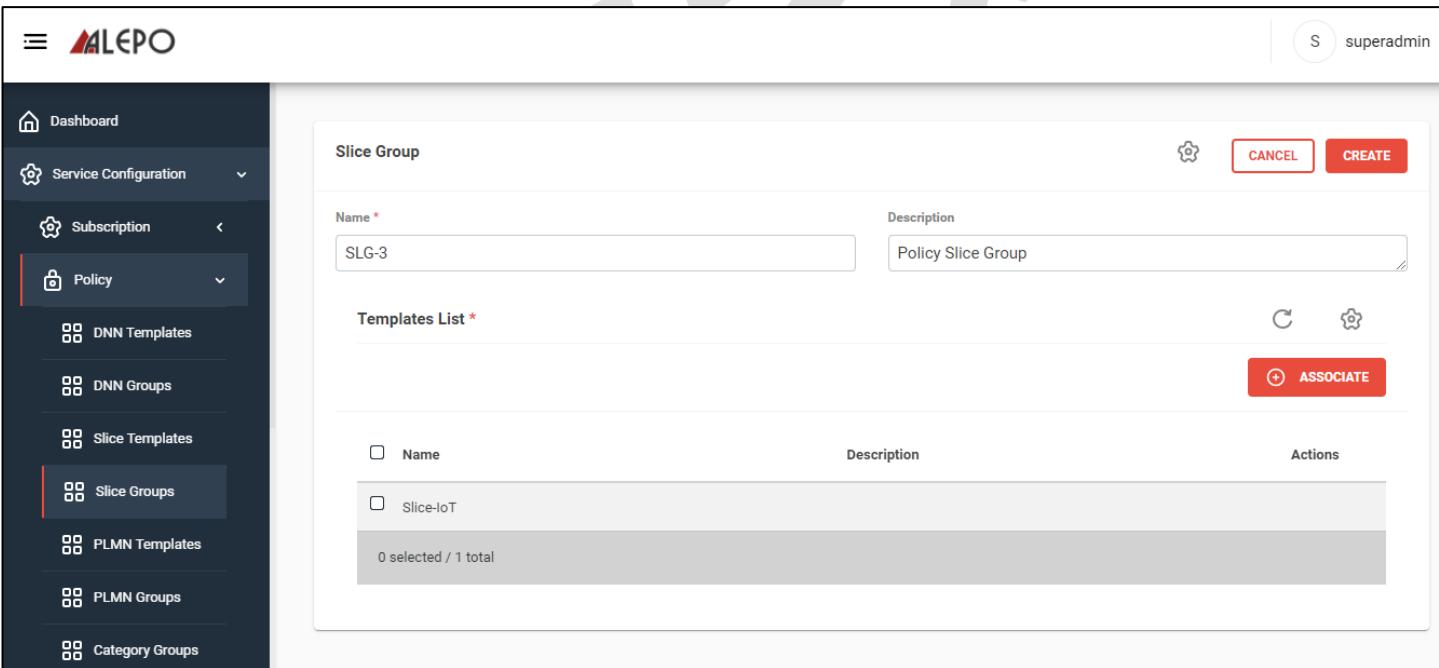
Description Policy Slice Group

Templates List *

ASSOCIATE

<input type="checkbox"/>	Name	Description	Actions
<input type="checkbox"/>	Slice-IoT		

0 selected / 1 total



We can see that the slice template (Policy) we selected has been attached to the new slice group (Policy) being created.

Finally, click the 'Create' button to create the Slice Group (Policy).

Field Information Table

Field Name	Field Description	Is Mandatory
Name*	The name of the Slice Group being created. This field is mandatory to create a slice group.	Yes
Description	The description of the Slice Group being created. This is an expandable field.	No
Templates Associate	The Associate button allows adding Slice Templates to the Slice group being created from the list of all the Slice templates present in the system.	Yes

View/Modify a Policy Slice Group

Navigate to - Service Configuration > Policy > Slice Groups.

The screenshot shows the Alepo SDM Agent Portal interface. On the left, a dark sidebar menu includes options like Dashboard, Service Configuration, Subscription, Policy (selected), DNN Templates, DNN Groups, Slice Templates, Slice Groups (selected), PLMN Templates, PLMN Groups, and Category Groups. The main content area is titled "Slice Groups". It displays a table with three rows of data:

Name	Description	Last Updated Date	Actions
SLG-3	Policy Slice Group	09-17-2020 06:13:47	
SLG-1		09-08-2020 07:34:06	
SLG-2		09-09-2020 05:40:26	

Below the table, a message says "0 selected / 3 total". At the top right of the content area are icons for refresh, sort, and search. A red "ADD" button is located in the top right corner of the main content area. The bottom of the screen shows the Alepo logo and the text "SDM Agent Portal-v1.0.0".

System will display the list of all existing Slice Groups (Policy). To view or modify a Slice Group (Policy) in this list, click the icon.

The screenshot shows the Alepo SDM Agent Portal interface, similar to the previous one but with a different focus. The sidebar menu is identical. The main content area is titled "Slice Group". It shows a form for editing a slice group named "SLG-3" with the description "Policy Slice Group". Below the form is a table titled "Templates List" with one row:

Name	Description	Actions
Slice-IoT		

Below the table is a section with two input fields: "Template ID" containing "1997d710-a561-402b-a54b-2c9b6d7af419" and "Create Date" showing "2020-09-17T06:13:47.792Z". Further down are "Last Update Date" (showing "2020-09-17T06:13:47.792Z") and "Last Updated By" (empty). At the top right of the content area are "CANCEL" and "MODIFY" buttons. A red "ASSOCIATE" button is located at the bottom right of the template list table.

To edit the selected slice group (Policy), click on the 'Modify' button on the top right of the page. The fields of this Slice Group (Policy) become editable.

The screenshot shows the ALEPO web interface. The left sidebar has a dark theme with the following navigation items:

- Dashboard
- Service Configuration
- Subscription
- Policy (selected)
- DNN Templates
- DNN Groups
- Slice Templates
- Slice Groups (selected)
- PLMN Templates
- PLMN Groups

The main content area is titled "Slice Group". It contains the following fields:

- Name *: SLG-3
- Description: Policy Slice Group

Below these fields is a section titled "Templates List *". It shows a table with one row:

Name	Description	Actions
Slice-IoT		

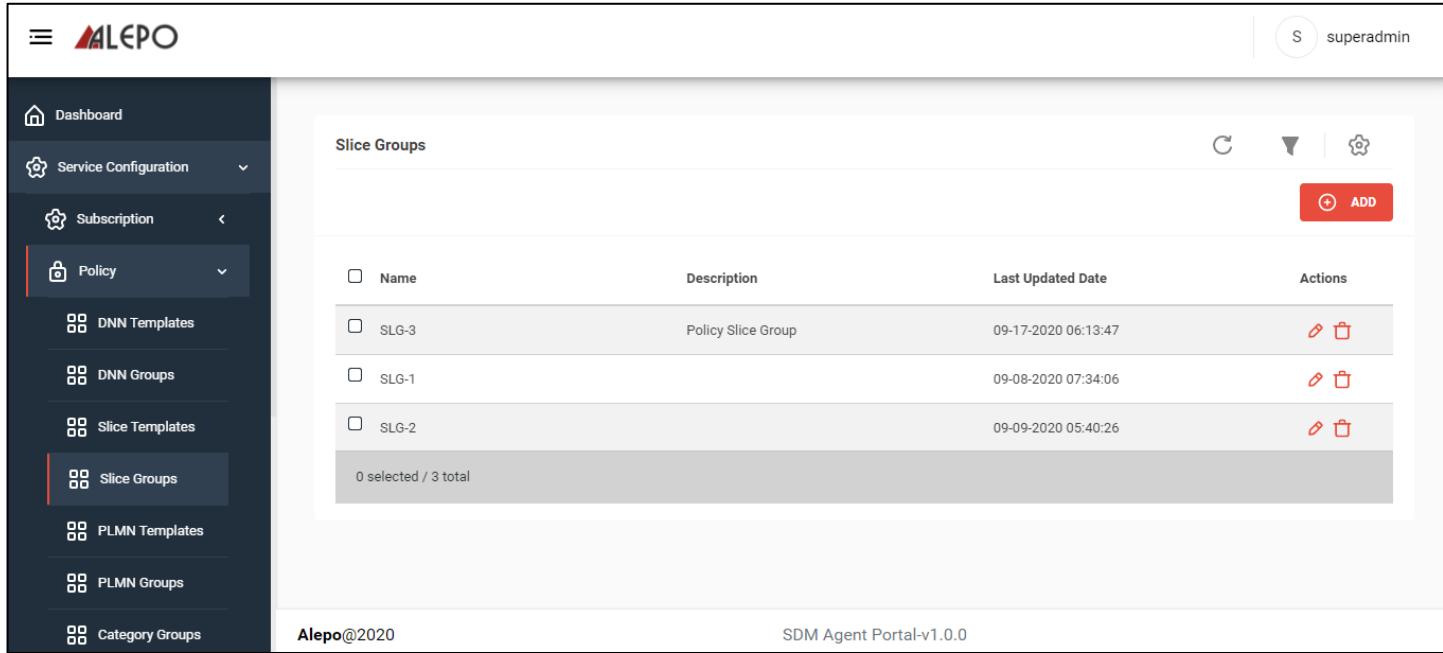
At the bottom of the "Templates List" section, it says "1 selected / 1 total". To the right of the table are two buttons: "ASSOCIATE" and "REMOVE". Above the table are "C" and "S" icons. At the top right of the main content area are "CANCEL" and "SUBMIT" buttons.

Make the required changes to modify the Slice Group (Policy). As part of editing/modifying the group, users can also associate/disassociate slice templates (Policy) from the group.

Click the 'Submit' button after making all desired changes to save the modifications made to the Slice Group (Policy).

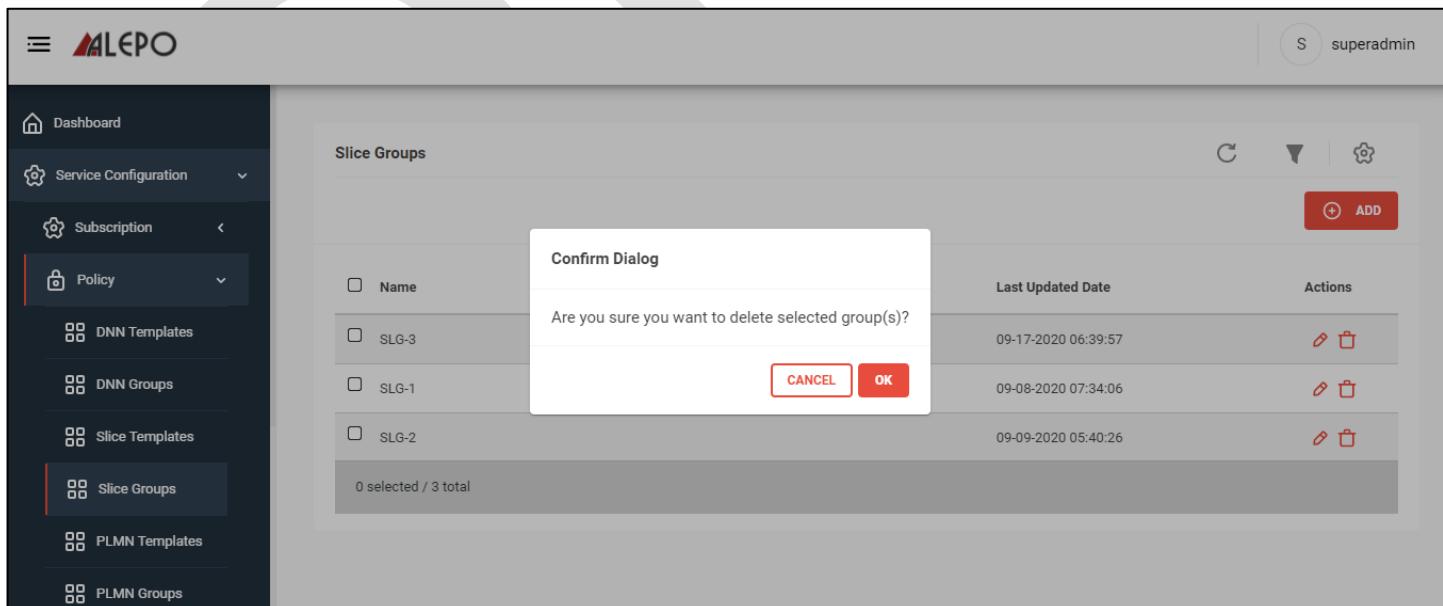
Delete Slice Group (Policy)

Navigate to - Service Configuration > Policy > Slice Groups.



The screenshot shows the Alepo SDM Agent Portal interface. The left sidebar has a dark theme with white icons and text. The 'Policy' section is expanded, and 'Slice Groups' is selected, which is highlighted with a red border. The main content area is titled 'Slice Groups'. It contains a table with columns: Name, Description, Last Updated Date, and Actions. There are three entries: SLG-3 (Policy Slice Group, 09-17-2020 06:13:47), SLG-1 (09-08-2020 07:34:06), and SLG-2 (09-09-2020 05:40:26). Each entry has a checkbox in the first column and edit (pencil) and delete (trash bin) icons in the 'Actions' column. A footer at the bottom shows the user 'Alepo@2020' and the portal version 'SDM Agent Portal-v1.0.0'.

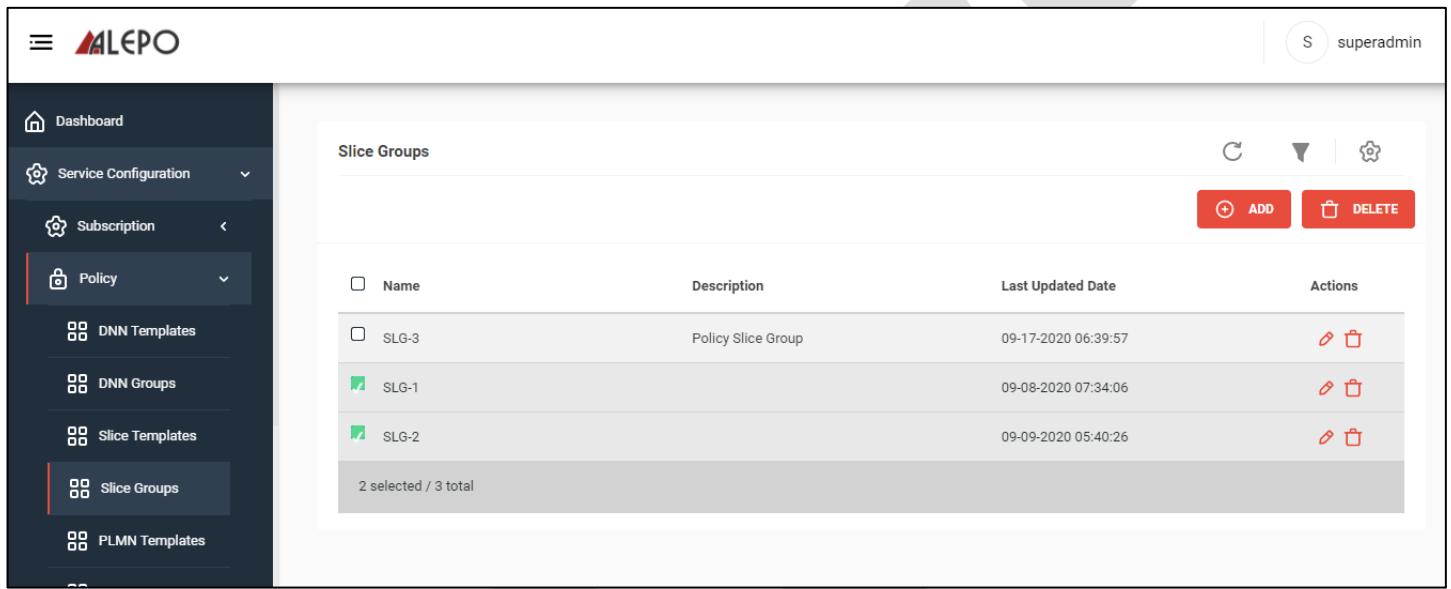
System will display list of all existing Slice Groups (Policy) present in the system. To delete a Slice Group (Policy), click the  icon against the slice group (Policy) name.



This screenshot is similar to the previous one but includes a modal dialog box titled 'Confirm Dialog'. The dialog asks 'Are you sure you want to delete selected group(s)?' with 'CANCEL' and 'OK' buttons. The rest of the interface is identical to the first screenshot, showing the list of Slice Groups and their details.

The confirm dialog box opens to seek confirmation of deletion for the selected Slice Group (Policy). Click the 'OK' button to confirm and delete the selected Slice Group (Policy).

When deleting a Slice group (Policy), system will first ensure that the group being deleted is not associated with any PLMN template. If in case it is, the user needs to first remove the Slice group (Policy) from the PLMN template and thereafter proceed to delete it.



The screenshot shows the ALEPO Policy interface. The left sidebar has a dark theme with a navigation menu. The 'Policy' section is expanded, and 'Slice Groups' is selected, indicated by a red border. The main area is titled 'Slice Groups' and contains a table with three rows. The table columns are 'Name', 'Description', 'Last Updated Date', and 'Actions'. The first row has an unchecked checkbox next to 'SLG-3'. The second and third rows have checked checkboxes next to 'SLG-1' and 'SLG-2' respectively. The 'Actions' column for each row contains edit and delete icons. At the bottom of the table, it says '2 selected / 3 total'. Top right of the main area has 'ADD' and 'DELETE' buttons. The top right corner of the interface shows the user 'superadmin'.

Name	Description	Last Updated Date	Actions
<input type="checkbox"/> SLG-3	Policy Slice Group	09-17-2020 06:39:57	 
<input checked="" type="checkbox"/> SLG-1		09-08-2020 07:34:06	 
<input checked="" type="checkbox"/> SLG-2		09-09-2020 05:40:26	 

To delete multiple Slice Groups (Policy) from the system, tick the check-box against the Slice Group(s) (Policy) desired for deletion. Then click the 'DELETE' button on the top right.

Click the 'OK' button in the delete confirmation dialog box.

PLMN - Policy

This section is used to configure PLMN based configurations required for policy data

How PLMN is setup in Alepo SDM Portal?

PLMN in the SDM Portal is configured with the help of templates and groups. A PLMN group will consist of one or more PLMN templates. Every subscription will be associated with a PLMN group

- [Create PLMN templates](#) - Allows system users to configure PLMN templates
- [Create a PLMN Group](#) - A PLMN group is formed by combining multiple DNN templates

PLMN Templates - Policy

Navigation

Alepo SDM Portal > Service Configuration > Policy > PLMN Templates

Description

A PLMN Template includes different technical parameters to describe the geographical area within which a mobile subscription can identify the network. This page describes the PLMN template configuration for policy data.

The screenshot shows the Alepo SDM Portal interface. The left sidebar has a dark theme with white icons and text. It includes links for Dashboard, Service Configuration, Subscription, Policy (which is selected and highlighted in blue), DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates (selected and highlighted in blue), PLMN Groups, and Category Groups. The main content area has a light gray background. At the top right, there is a user icon labeled "superadmin". Below the header, the title "PLMN Templates" is displayed. To the right of the title are several icons: a circular arrow, a downward arrow, a gear, and a red plus sign inside a box labeled "ADD". A table follows, with columns: Name, Description, MCC, MNC, Last Updated Date, and Actions. One row is visible: "INDIA PLMN" with MCC 405, MNC 53, and Last Updated Date 09-16-2020 06:29:26. The Actions column contains a trash bin icon and a red edit/cross icon. At the bottom of the table, it says "0 selected / 1 total". The footer of the page includes the text "Alepo@2020" and "SDM Agent Portal-v1.0.0".

System users can initiate the below operations related to Policy PLMN templates from the interface seen in the above screenshot:

- [Add/Create Policy PLMN Template](#)
- [View/Edit Policy PLMN Template](#)
- [Delete Policy PLMN Template](#)

Create PLMN Template (Policy)

To start creating a new PLMN template (Policy) click the 'Add' button (ref above screenshot). This will bring up the below screen.

The screenshot shows the Alepo SDM Agent Portal interface. On the left is a dark sidebar with navigation options: Dashboard, Service Configuration, Subscription, Policy (selected), DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates (selected), PLMN Groups, and Category Groups. At the top right, there is a user icon labeled 'superadmin'. The main content area is titled 'PLMN Template'. It contains several input fields: 'Name *' (North_India), 'Description' (North India Policy Template), 'MCC *' (405), 'MNC *' (034), 'PLMN Definition *' (HPLMN), and 'NSSAI Group *' (SLG-2). At the bottom right of the form are 'CANCEL' and 'CREATE' buttons. The footer of the page shows 'Alepo@2020' and 'SDM Agent Portal-v1.0.0'.

Field Information Table

Field Name	Field Description	Is Mandatory
Name*	The name of the PLMN Template being created.	Yes
Description	The description of the PLMN Template being created. This field is expandable.	No
MCC*	Mobile Country Codes.	Yes
MNC*	Mobile Network Codes.	Yes
PLMN Definition*	PLMN Definition can be HPLMN (Home Public Land Mobile Network) or VPLMN (Visited Public Land Mobile Network).	Yes
NSSAI Group*	NSSAI is Network Slice Selection Assistance Information. NSSAI group is a drop-down field, having all the names of the slice groups present in the system.	Yes

Click the Create button.

View/Modify PLMN Template (Policy)

Navigate to - Service Configuration > Policy > PLMN Templates.

Click the  icon pertaining to the PLMN Template (Policy) record that needs to be viewed/modified. This will open up the below screen that will show details of PLMN template (Policy) in question.



The screenshot shows the ALEPO software interface. On the left, there is a dark sidebar with the ALEPO logo at the top. Below it, the navigation menu includes: Dashboard, Service Configuration (with Subscription and Policy dropdowns), DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates (which is currently selected and highlighted in blue), PLMN Groups, and Category Groups. The main content area is titled "PLMN Template". It displays the following fields:

Name *	Description
North_India	North India Policy Template
MCC *	MNC *
405	034
PLMN Definition *	NSSAI Group *
HPLMN	SLG-2
ID	Create Date
77b37c7f-19ce-4aa7-844b-968561fd3dea	2020-09-17 12:55:25
Last Update Date	Last Updated By
2020-09-17 12:55:25	[Empty]

At the top right of the main content area, there are three buttons: a gear icon, a red "CANCEL" button, and a red "MODIFY" button.

To modify the PLMN Template (Policy), click on the Modify button at the top right of the window. This will enable the fields pertaining to the PLMN template (Policy) for modification/editing.

- Dashboard
- Service Configuration
- Subscription
- Policy
 - DNN Templates
 - DNN Groups
 - Slice Templates
 - Slice Groups
 - PLMN Templates
 - PLMN Groups
- Category Groups

PLMN Template

Name * North_India **Description** North India Policy Template

MCC * 405 **MNC *** 034

PLMN Definition * HPLMN **NSSAI Group *** SLG-2

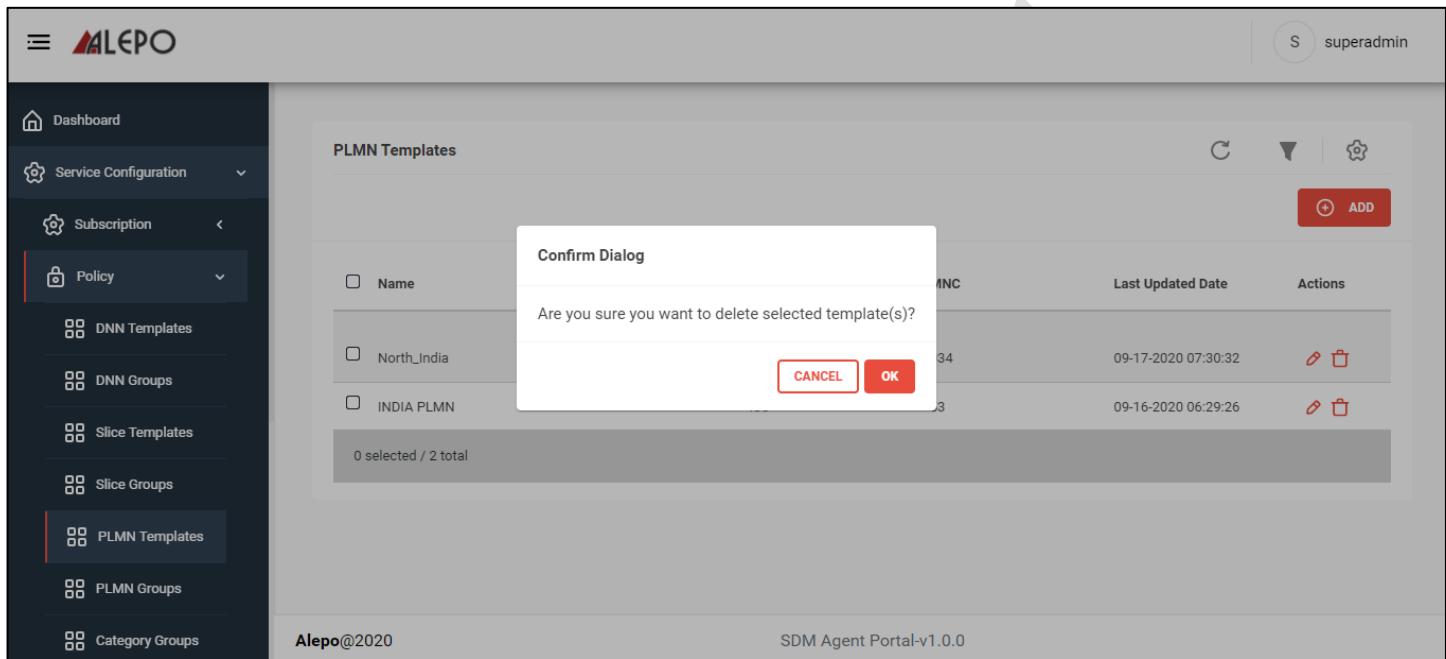
CANCEL **SUBMIT**

Make changes to all the desired fields the required changes and click the 'Submit' button at the top to save the modifications done to the PLMN Template (Policy).

Delete PLMN Template (Policy)

Navigate to - Service Configuration > Policy > PLMN Templates.

System will display all existing PLMN Templates (Policy) present in the system. To delete any single PLMN Template (Policy) in this list, click the  icon pertaining to the PLMN template (Policy) record that is to be deleted.



The screenshot shows the Alepo SDM Agent Portal interface. On the left, there is a navigation sidebar with the following items: Dashboard, Service Configuration (selected), Subscription, Policy (selected), DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates (selected), PLMN Groups, and Category Groups. The main content area is titled "PLMN Templates". It displays a table with two rows of data. The columns are labeled "Name", "Last Updated Date", and "Actions". The first row has a checkbox next to "Name" and the value "North_India". The second row has a checkbox next to "Name" and the value "INDIA PLMN". Below the table, it says "0 selected / 2 total". A modal dialog box titled "Confirm Dialog" is overlaid on the page, containing the message "Are you sure you want to delete selected template(s)?". It has two buttons: "CANCEL" and "OK".

The Confirm dialog box opens to seek confirmation of deletion of the selected PLMN Template (Policy). Click the 'OK' button to confirm. The selected PLMN Template (Policy) gets deleted.

When deleting a PLMN template, the system will first ensure that the template being deleted is not associated with any PLMN group. If in case it is, the user needs to manually first remove the PLMN template from the PLMN group and thereafter proceed to delete it.

- Dashboard
- Service Configuration
- Subscription
- Policy
 - DNN Templates
 - DNN Groups
 - Slice Templates
 - Slice Groups
 - PLMN Templates
- PLMN Groups
- Category Groups

PLMN Templates

C Filter ⚙️
+ ADD DELETE

<input type="checkbox"/>	Name	Description	MCC	MNC	Last Updated Date	Actions
<input checked="" type="checkbox"/>	North_India	North India Policy Template	405	034	09-17-2020 07:30:32	Edit Delete
<input checked="" type="checkbox"/>	INDIA PLMN		405	53	09-16-2020 06:29:26	Edit Delete

2 selected / 2 total

To delete multiple PLMN Templates (Policy) in the list, select the checkboxes for those PLMN Templates (Policy) in the list that you want to delete.

Click the 'DELETE' button on the top right. Click the 'OK' button in the delete confirmation dialog box.

PLMN Groups - Policy

Navigation

Alepo SDM Portal > Service Configuration > Policy > PLMN Groups

Description

A PLMN group is formed using one or more PLMN templates. This page describes the Slice group configuration for policy data.

The screenshot shows the Alepo SDM Portal interface. The left sidebar has a dark theme with white icons and text. It includes links for Dashboard, Service Configuration (expanded), Subscription, Policy (selected), DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups (selected), and Category Groups. The main content area has a light background. At the top, it says "PLMN Groups". Below that is a table with columns: Name, Description, Last Updated Date, and Actions. One row is visible: "INDIA PLMN Group" with description "PLMN Group for India", last updated "09-16-2020 06:30:04", and actions represented by a pencil icon and a trash bin icon. At the bottom of the table, it says "0 selected / 1 total". The bottom of the screen shows the Alepo logo, the date "Alepo@2020", and the text "SDM Agent Portal-v1.0.0".

The below screen interface will enable system users to perform the below operations:

- [Add/Create Policy PLMN Group](#)
- [View/Edit Policy PLMN Group](#)
- [Delete Policy PLMN Group](#)

Create PLMN Group (Policy)

In the screen shown in the above screenshot, click the 'Add' button. The window to create a new PLMN Group (Policy) will come up.

The screenshot shows the ALEPO web interface. On the left, there is a sidebar with the following navigation items:

- Dashboard
- Service Configuration
- Subscription
- Policy** (selected)
- DNN Templates
- DNN Groups
- Slice Templates
- Slice Groups
- PLMN Templates
- PLMN Groups** (selected)
- Category Groups

The main content area is titled "PLMN Group". It contains the following fields:

Name *	PLMN States Group	Description	PLMN Group for States
--------	-------------------	-------------	-----------------------

Below these fields is a section titled "Templates List *". It includes a "Name" column with checkboxes, a "Description" column, and an "Actions" column. The table shows the following data:

Name	Description	Actions
No data to display		
0 selected / 0 total		

At the top right of the main content area are three buttons: "CANCEL", "CREATE", and a gear icon.

Click the 'Associate' button to select the PLMN templates (Policy) from the select templates window as shown in the below screenshot.

The screenshot shows a modal dialog box titled "Select Templates". At the top right are three icons: a gear, a downward arrow, and a refresh symbol. Below the title is a section titled "Templates". At the bottom right of this section is a red "ADD" button with a plus sign. The main content area displays a table with the following data:

Name	Description	Actions
North_India	North India Policy Template	
INDIA PLMN		

At the bottom left of the table, it says "1 selected / 2 total". At the bottom right of the dialog is a red "CLOSE" button.

Tick the checkbox for the PLMN template (Policy) that is to be added to the PLMN group (Policy) and click the 'Add' button.

The selected PLMN template(s) (Policy) will be added to the PLMN group (Policy) as shown in the below screenshot.

ALEPO

superadmin

Dashboard

Service Configuration

Subscription

Policy

DNN Templates

DNN Groups

Slice Templates

Slice Groups

PLMN Templates

PLMN Groups

Category Groups

PLMN Group

Name *: PLMN States Group

Description: PLMN Group for States

Templates List *

Name	Description	Actions
North_India	North India Policy Template	

ASSOCIATE

0 selected / 1 total

Field Information Table

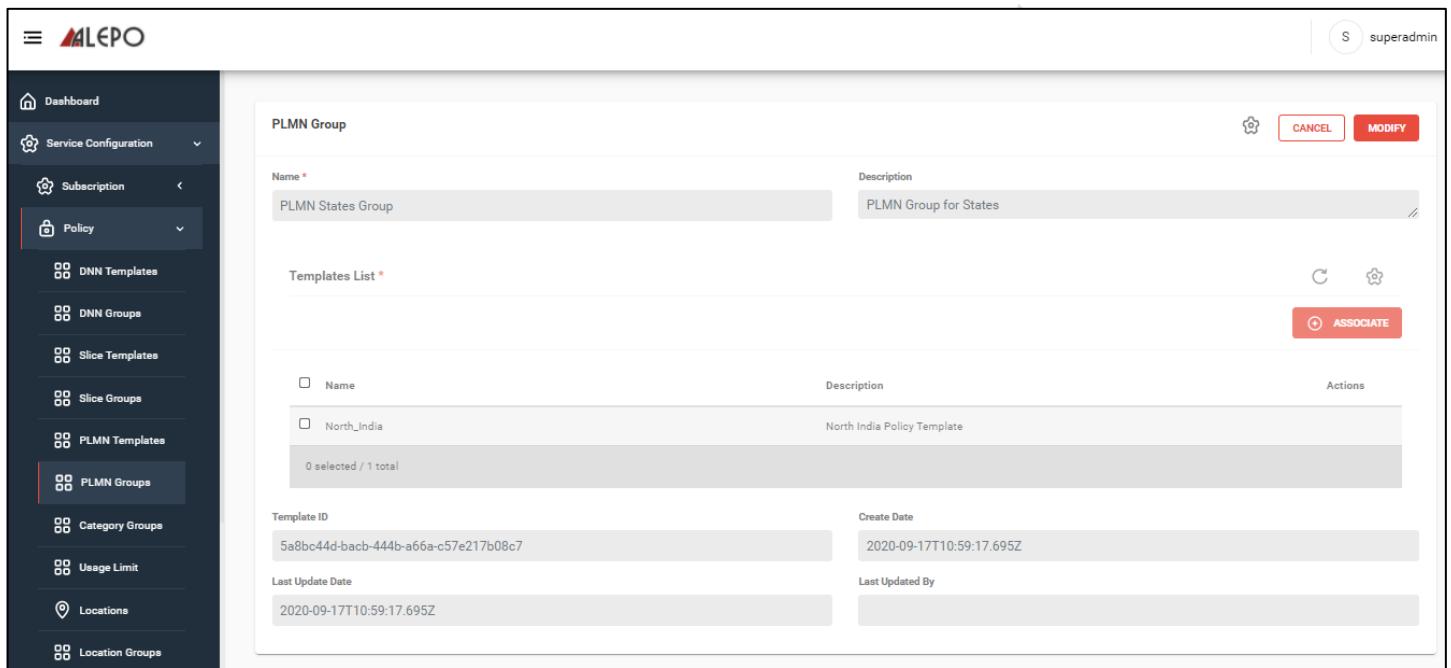
Field	Field Description	Is Mandatory
Name		
Name*	The name of the PLMN Group being created. This field is mandatory.	Yes
Description		
Description	The description of the PLMN Group being created. This is an expandable field.	No
Templates List		
Associate	The Associate button allows to PLMN Templates to the PLMN group being created from the list of all the PLMN templates present in the system.	Yes

Click the 'Create' button to create the PLMN Group (Policy) with its associated PLMN Template (Policy).

View/Modify a PLMN Group (Policy)

Navigate to - Service Configuration > Policy > PLMN Groups.

System will list all the PLMN Groups (Policy) present in the system. To view or modify any PLMN Group (Policy) in this list, click the  icon sitting against the PLMN record to be viewed/edited. Below screen to view and/or modify that PLMN Group will appear.



The screenshot shows the ALEPO application interface. On the left, there is a navigation sidebar with the following menu items:

- Dashboard
- Service Configuration
 - Subscription
 - Policy (selected)
 - DNN Templates
 - DNN Groups
 - Slice Templates
 - Slice Groups
 - PLMN Templates
 - PLMN Groups (selected)
 - Category Groups
 - Usage Limit
 - Locations
 - Location Groups

The main content area is titled "PLMN Group". It contains the following fields:

- Name *: PLMN States Group
- Description: PLMN Group for States
- Templates List *:
 - North_India (Description: North India Policy Template)
- Template ID: 5a8bc44d-bacb-444b-a66a-c57e217b08c7
- Create Date: 2020-09-17T10:59:17.695Z
- Last Update Date: 2020-09-17T10:59:17.695Z
- Last Updated By: (empty)

At the top right, there are "CANCEL" and "MODIFY" buttons. There are also icons for "ASSOCIATE" and "DELETE".

To edit the PLMN Group (Policy) record, click on the 'Modify' button on the top right of the page. The fields of this PLMN Group become editable as seen in the below screenshot.

The screenshot shows the ALEPO web interface. On the left, a sidebar menu is visible with the following items: Dashboard, Service Configuration (with a dropdown arrow), Subscription, Policy (selected), DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups (selected), Category Groups, and Usage Limit. The main content area is titled "PLMN Group". It has fields for "Name *" (PLMN States Group) and "Description" (PLMN Group for States). Below these are sections for "Templates List *", "Associate", and a table of templates.

<input type="checkbox"/>	Name	Description	Actions
<input type="checkbox"/>	North_India	North India Policy Template	

0 selected / 1 total

CANCEL **SUBMIT**

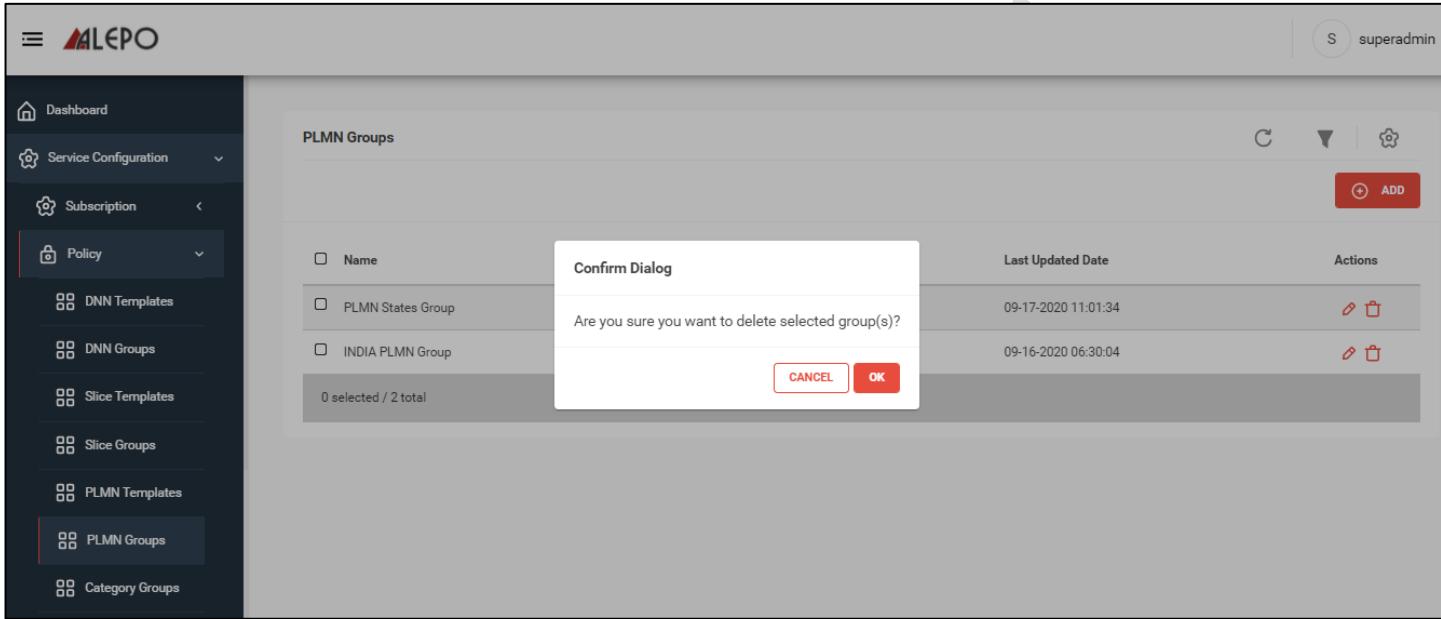
Make the required changes to modify this PLMN Group. Here, user can also choose to associate or disassociate any PLMN template(s) (Policy).

Click the 'Submit' button to save the modifications of the PLMN Group (Policy).

Delete PLMN Group (Policy)

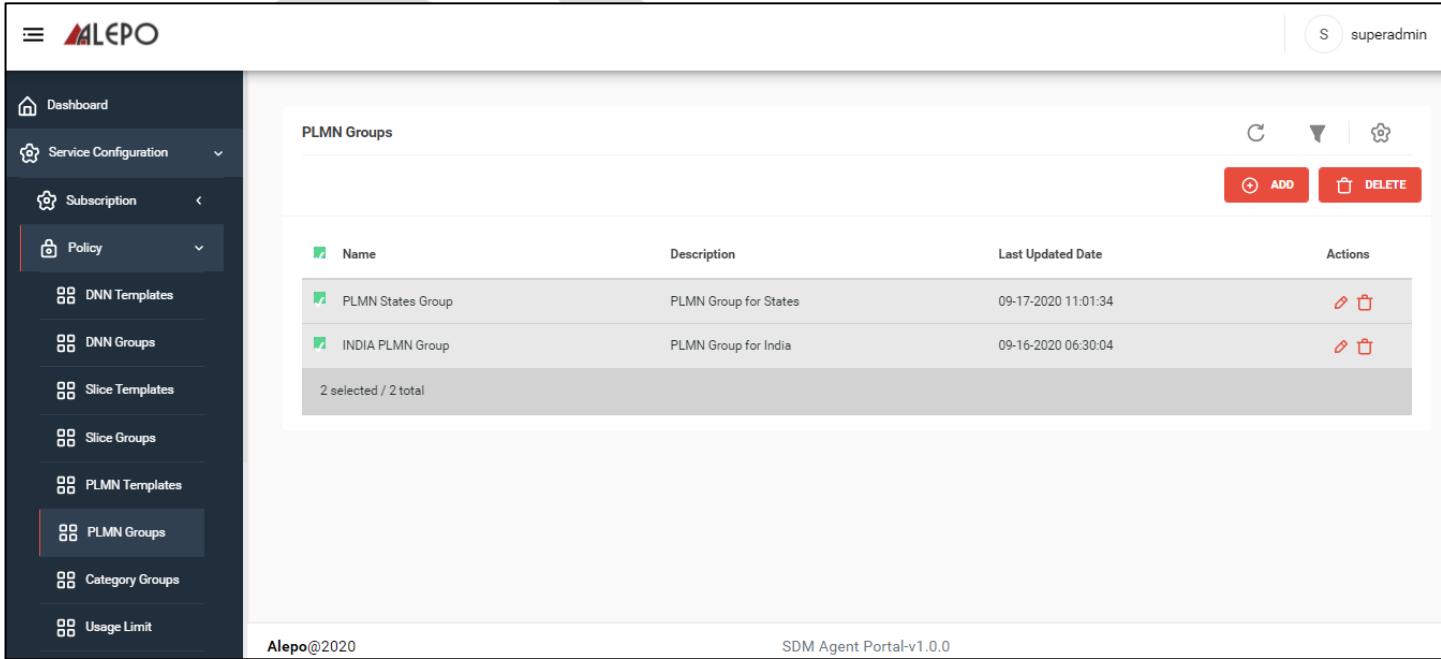
Navigate to - Service Configuration > Policy > PLMN Groups.

The list of all the PLMN Groups (Policy) present in the system is displayed. To delete a single PLMN Group (Policy) in this list, click the  icon for the PLMN Group (Policy) record that is to be deleted. The Confirm dialog box opens to confirm the deletion of the selected PLMN Group (Policy).



A screenshot of the Alepo SDM Agent Portal. The left sidebar shows a navigation menu under the 'Policy' section, with 'PLMN Groups' selected. The main content area displays a table titled 'PLMN Groups' with two entries: 'PLMN States Group' and 'INDIA PLMN Group'. A modal dialog box titled 'Confirm Dialog' is overlaid on the page, asking 'Are you sure you want to delete selected group(s)?' with 'CANCEL' and 'OK' buttons. At the bottom of the table, it says '0 selected / 2 total'.

Click the 'OK' button to confirm. The selected PLMN Group (Policy) gets deleted.



A screenshot of the Alepo SDM Agent Portal showing the same 'PLMN Groups' list after one item has been deleted. The table now only contains the 'INDIA PLMN Group' entry. The 'Actions' column for this row includes a trash icon. The footer of the page shows 'Alepo@2020' and 'SDM Agent Portal-v1.0.0'.

To delete multiple PLMN Groups in the list, tick the check-box for those PLMN Group (Policy) records desired for deletion. Then click the 'DELETE' button on the top right.

Click the 'OK' button in the delete confirmation dialog box.

Category Groups

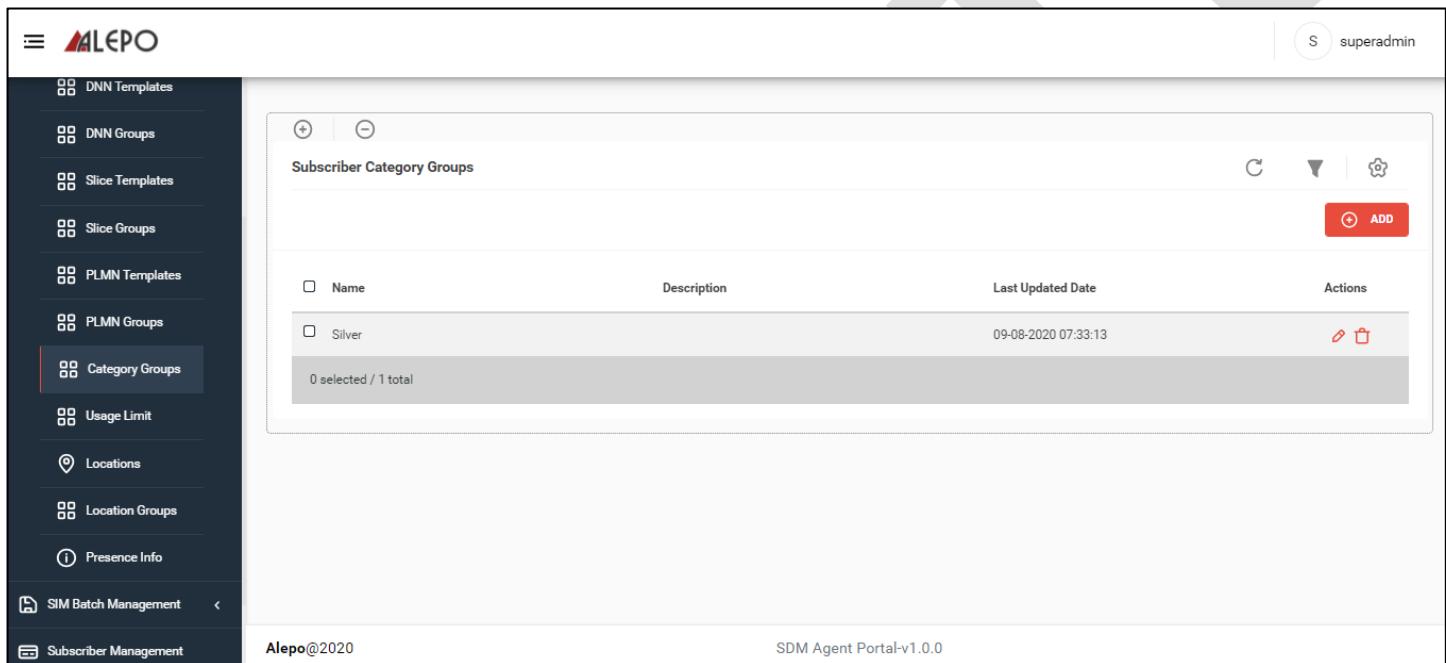
Navigation

Alepo SDM Portal > Service Configuration > Policy > Category Groups

Description

A Category Group is a collection of one or multiple 'Subscriber Categories'.

A subscriber category is created to cater to the needs of a specific subscriber segment. A specific subscriber category is associated to a subscriber during AM/SM policy configuration. e.g. If operator wants to differentiate subscribers as Premium, Gold, Silver based on the type of plan they have purchased, system user will create three subscriber categories in Alepo SDM portal : Premium, Gold and Silver.



The screenshot shows the Alepo SDM Portal interface. On the left, there is a sidebar with the following navigation items:

- DNN Templates
- DNN Groups
- Slice Templates
- Slice Groups
- PLMN Templates
- PLMN Groups
- Category Groups** (highlighted)
- Usage Limit
- Locations
- Location Groups
- Presence Info
- SIM Batch Management
- Subscriber Management

The main content area is titled "Subscriber Category Groups". It features a table with the following columns:

Name	Description	Last Updated Date	Actions
Silver		09-08-2020 07:33:13	

At the bottom of the main area, it says "0 selected / 1 total". The top right corner shows a user profile for "superadmin". The footer of the screen displays "Alepo@2020" and "SDM Agent Portal-v1.0.0".

System users can perform the below operations from the above screen

- [Create New Subscriber Category Group](#)
- [View/Edit Subscriber Category Group](#)
- [Delete Subscriber Category Group](#)

Create Subscriber Category Group

From the screen seen in the above screenshot, click on the 'Add' button at the top right.

The screenshot shows the ALEPO application interface. On the left is a sidebar with navigation links: DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, and Category Groups. The 'Category Groups' link is highlighted with a red border. The main content area is titled 'Subscriber Category Group'. It contains fields for 'Name *' (set to 'Countries') and 'Description' (set to 'Category for country information'). Below these is a 'Subscriber Categories *' section containing a list with 'silver-2 X' and '+ Tag'. At the top right of the form are 'CANCEL' and 'CREATE' buttons. In the top right corner of the page, there is a user profile icon with the letter 'S' and the text 'superadmin'.

The page to add a new 'Subscriber Category Group' will come up as shown in the above screenshot.

Field Information Table

Field Name	Description
Name*	Provide the name of the Subscriber Category Group being added. This is a mandatory field.
Description	Provide a brief description of the Subscriber Category Group being added.
Subscriber Categories	Enter the list of the Subscriber Categories that this Subscriber Category Group will contain.

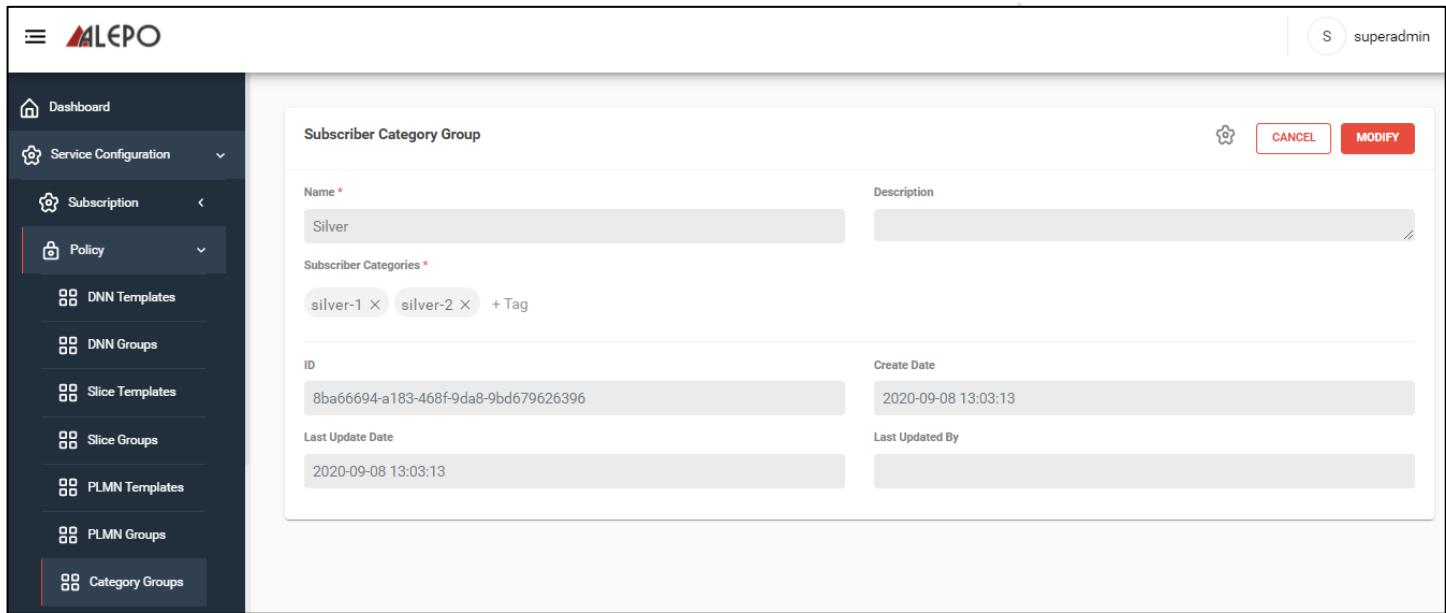
Complete all the fields required to add the Subscriber Category Group as listed in the above Field Information Table.

Click the 'Create' button to add a new Subscriber Category.

View/Edit Subscriber Category Group

Navigate to - Alepo SDM Portal > Service Configuration > Policy > Category Groups.

The list of all the 'Subscriber Category Groups' present in the system will be displayed. Click the  icon against the subscriber category group record desired for viewing/editing. Doing this will bring up the below screen that shows the Subscriber Category Group details.



Subscriber Category Group

Name *: Silver

Description:

Subscriber Categories *: silver-1 X, silver-2 X, + Tag

ID: 8ba66694-a183-468f-9da8-9bd679626396

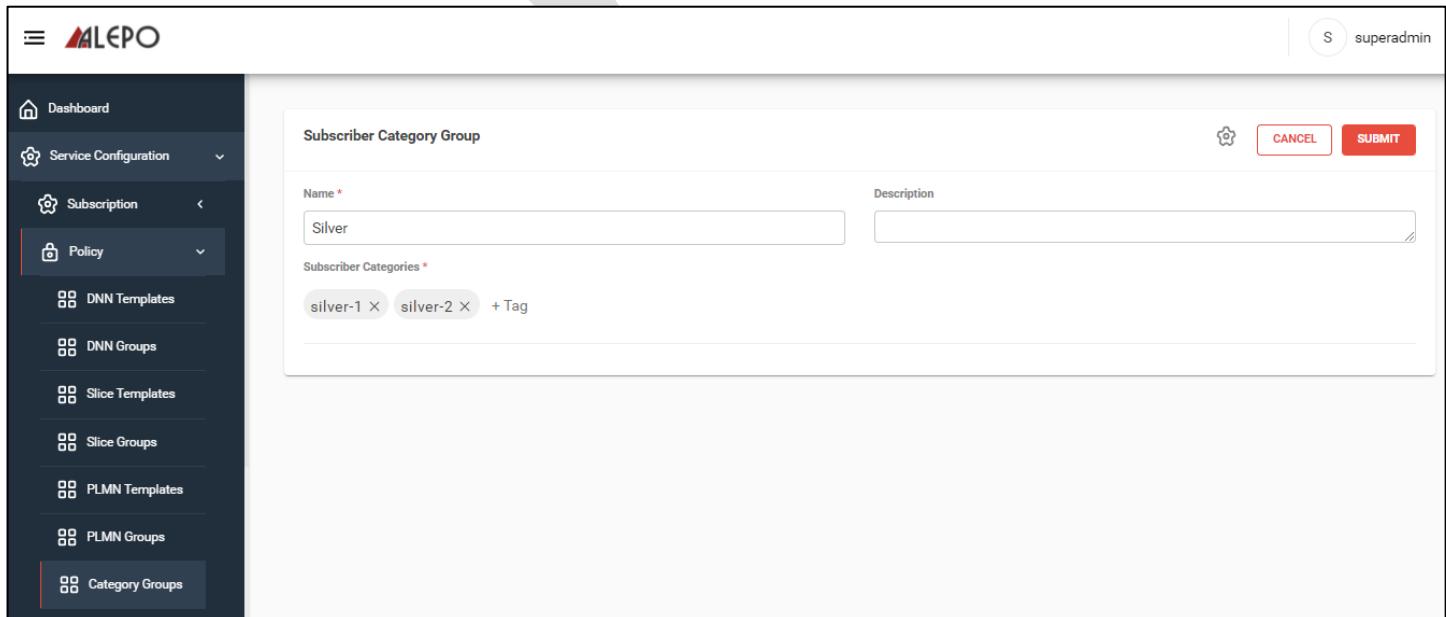
Create Date: 2020-09-08 13:03:13

Last Update Date: 2020-09-08 13:03:13

Last Updated By:

CANCEL MODIFY

Click the 'Modify' button to edit the subscriber category record. System will bring up the below screen.



Subscriber Category Group

Name *: Silver

Description: Edited Description

Subscriber Categories *: silver-1 X, silver-2 X, + Tag

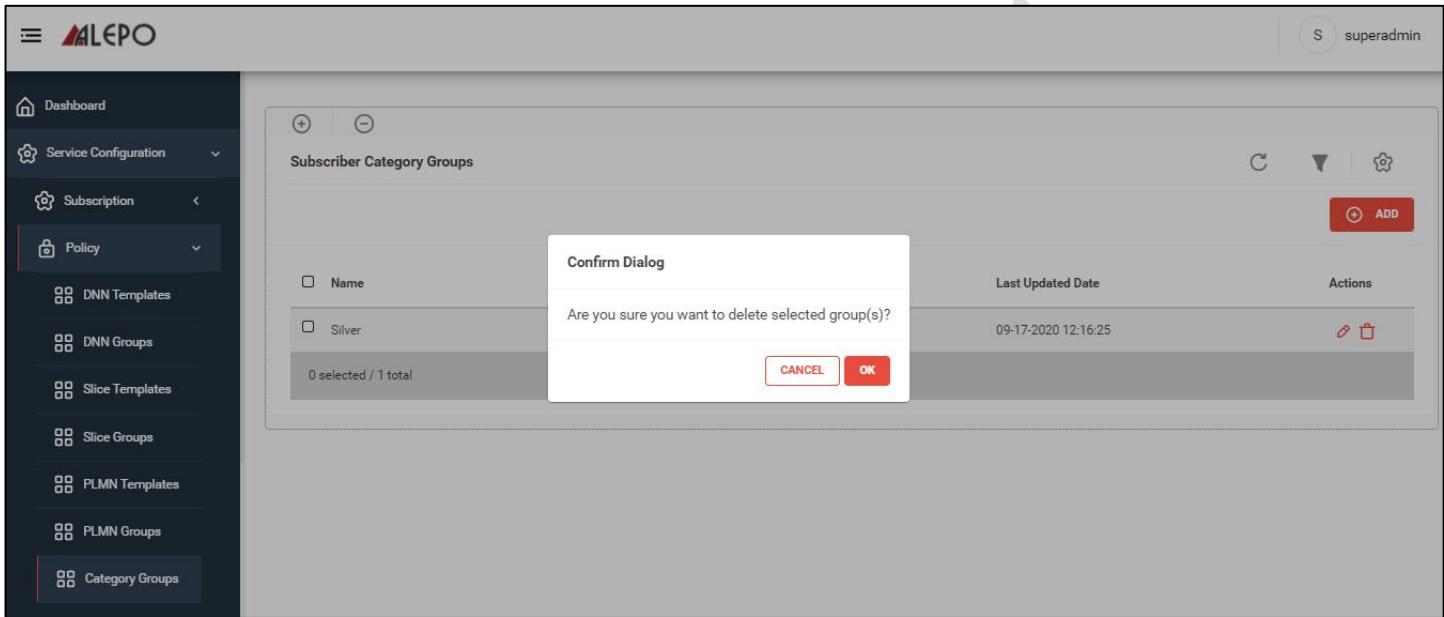
CANCEL SUBMIT

Make the desired changes to the subscriber category record and click 'Submit' to effect the changes made to the subscriber category group.

Delete Subscriber Category Group(s)

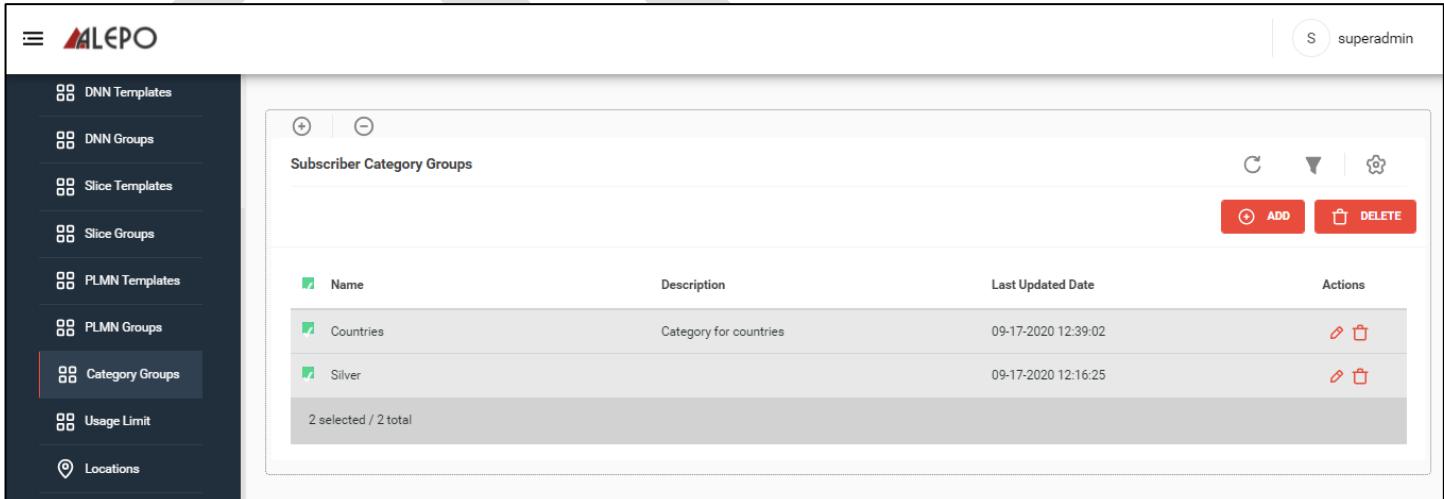
Navigate to - Alepo SDM Portal > Service Configuration > Policy > Category Groups.

The list of all the 'Subscriber Category Groups' present in the system will be displayed. Click the  icon against the subscriber category group record that is to be deleted. Doing this will bring up the below screen that will prompt the user for deletion confirmation.



A screenshot of the Alepo SDM Portal interface. The left sidebar shows navigation paths: Dashboard, Service Configuration, Subscription, Policy (selected), DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, Category Groups (selected). The main content area displays a table titled 'Subscriber Category Groups' with one row: 'Silver'. A modal dialog box titled 'Confirm Dialog' asks 'Are you sure you want to delete selected group(s)?' with 'CANCEL' and 'OK' buttons. The table has columns: Name, Description, Last Updated Date, and Actions (edit and delete icons).

To delete multiple Subscriber Category Groups at a single time, tick the check-box of those subscriber category records that are to be deleted in one go.



A screenshot of the Alepo SDM Portal interface. The left sidebar shows navigation paths: DNN Templates, DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, Category Groups (selected), Usage Limit, Locations. The main content area displays a table titled 'Subscriber Category Groups' with two rows: 'Countries' and 'Silver'. Both rows have a green checkmark icon next to their names. The table has columns: Name, Description, Last Updated Date, and Actions (edit and delete icons). A message at the bottom says '2 selected / 2 total'.

Then click the 'Delete' button and click 'OK' to conform deletion of the selected subscriber category records.

Presence Information

This section covers the Location Groups and their Presence state information for policy data . To create a Presence Information based configuration, user needs to follow below three steps

- [Locations](#) : Allows system users to configure locations in the system. A location can be added by importing a file containing location cell IDs or associating Network IDs of HPLMN and VPLMN.
- [Location Groups](#) : Group of multiple locations
- [Presence Info](#) : Allows system users to define the presence state for a group of location.

Locations

Navigation

Alepo SDM Portal > Service Configuration > Policy > Locations

Description

This option will enable system user to add location(s) for a subscriber/ SUPI. By adding Locations and Location Groups for an AM Policy, we can configure the Presence Information (Presence Info) category in the Service Configurations for SDM Portal.

Name	Description	Last Updated Date	Actions
Delhi	Delhi Location	09-17-2020 13:10:34	
Mumbai	Mumbai Location	09-17-2020 13:10:06	

The above screen will enable system user to perform the below operations

- [Add Location](#)
- [View/Edit Location](#)
- [Delete Location](#)

Add Location

In the first screenshot, click on the 'Add' button at the top right. The page to add a new Location opens as shown in the following screenshot.

The screenshot shows the ALEPO web interface. On the left is a dark sidebar with various navigation options under 'Service Configuration' such as 'Subscription', 'Policy', 'DNN Templates', 'DNN Groups', 'Slice Templates', 'Slice Groups', 'PLMN Templates', 'PLMN Groups', 'Category Groups', and 'Usage Limit'. The main area is titled 'Location Configuration'. It has fields for 'Name *' (containing 'Kerala') and 'Description' (containing 'Kerala State'). Below this is a section titled '+ Node ID Based' which contains fields for 'Home PLMN' and '5G Node ID'. The 'Home PLMN' section includes 'PLMN Group *' (set to 'PLMN States Group'), 'N3IWF ID', '4G Node ID', and 'Network ID'. The '5G Node ID' section includes 'Bit Length' and 'Value'. At the top right of the configuration form are 'CANCEL' and 'CREATE' buttons.

This screenshot shows a configuration form for 'Visitor PLMN'. It includes sections for 'PLMN Group *' (set to 'PLMN States Group'), 'N3IWF ID', '4G Node ID', 'Network ID', '5G Node ID', 'Bit Length', and 'Value'. Below these sections is a '+ Generic' button. The overall layout is similar to the 'Location Configuration' form above it.

Field Information Table

Field Name	Description
Name*	Specify the name of the Location being added. This is a mandatory field.
Description	Specify a brief description of the Location being added.

Note that there are two methods to upload locations - using network identifiers (Node IDs) OR using a file upload (having the cell IDs)

1. Node ID Based method

Field Name			Description
Home PLMN	PLMN Group*		Select from the drop-down, the Policy PLMN Group associated with Home PLMN for the location
	N3IWF ID		Non-3GPP inter-working function identifier for HPLMN
	4G Node ID		This field captures the next generation eNodeB Identifier (ng-eNB) for HPLMN
	Network ID		Network Identifier for Home PLMN
	5G Node ID	Bit Length	This field captures the bit length for gNB Identifier for HPLMN
		Value	This field captures the value for gNB Identifier for HPLMN
Visitor PLMN	PLMN Group*		Select from the drop-down, the Policy PLMN Group associated with Visitor PLMN for the location.
	N3IWF ID		Non-3GPP inter-working function identifier for VPLMN.
	4G Node ID		This field captures the next generation eNodeB Identifier (ng-eNB) for VPLMN
	Network ID		Network Identifier for Visitor PLMN
	5G Node ID	Bit Length	This field captures the bit length for gNB Identifier for VPLMN
		Value	This field captures the value for gNB Identifier for VPLMN

2. File Upload method

Field Name	Description
Choose File	Select the file that will have the list of locations with cell-ids
Download Sample file	This is the link clicking on which user can download the sample format of the file.

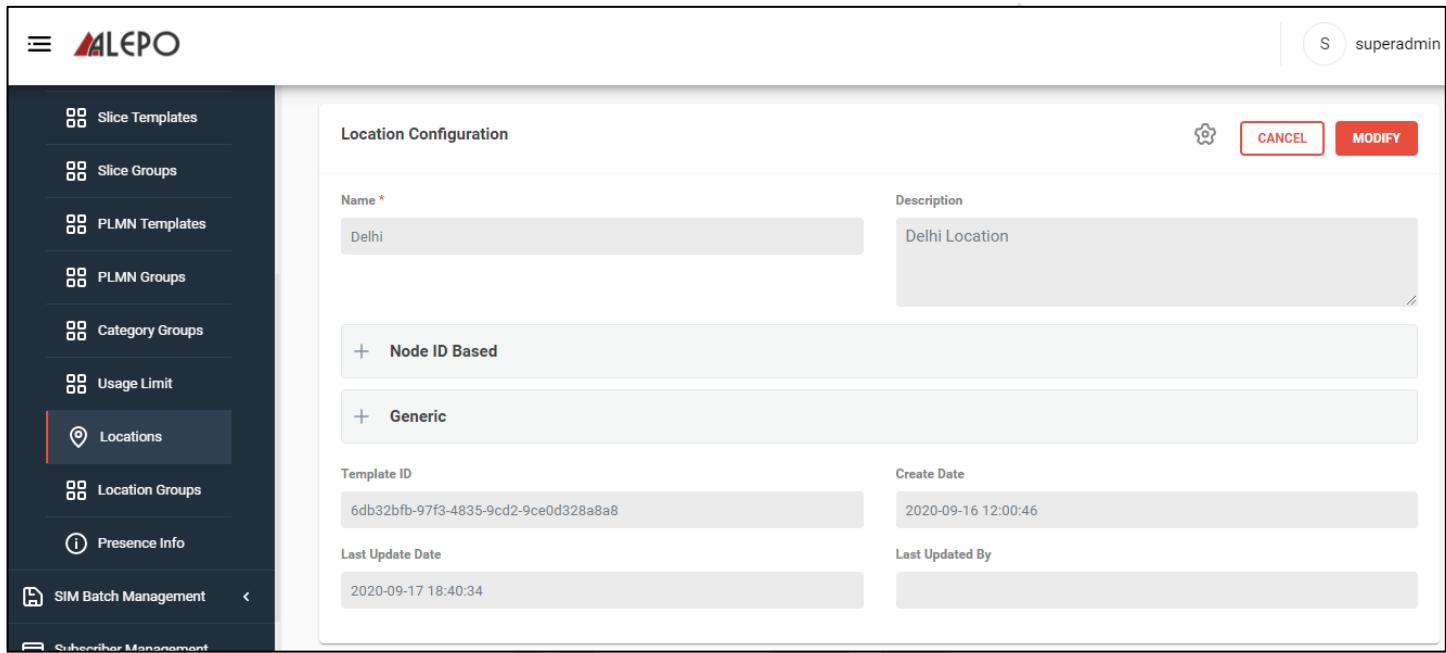
Enter all the desired fields required to add a Location as listed in the above Field Information Table

Click the 'Create' button to add a new Location.

View/Edit Location(s)

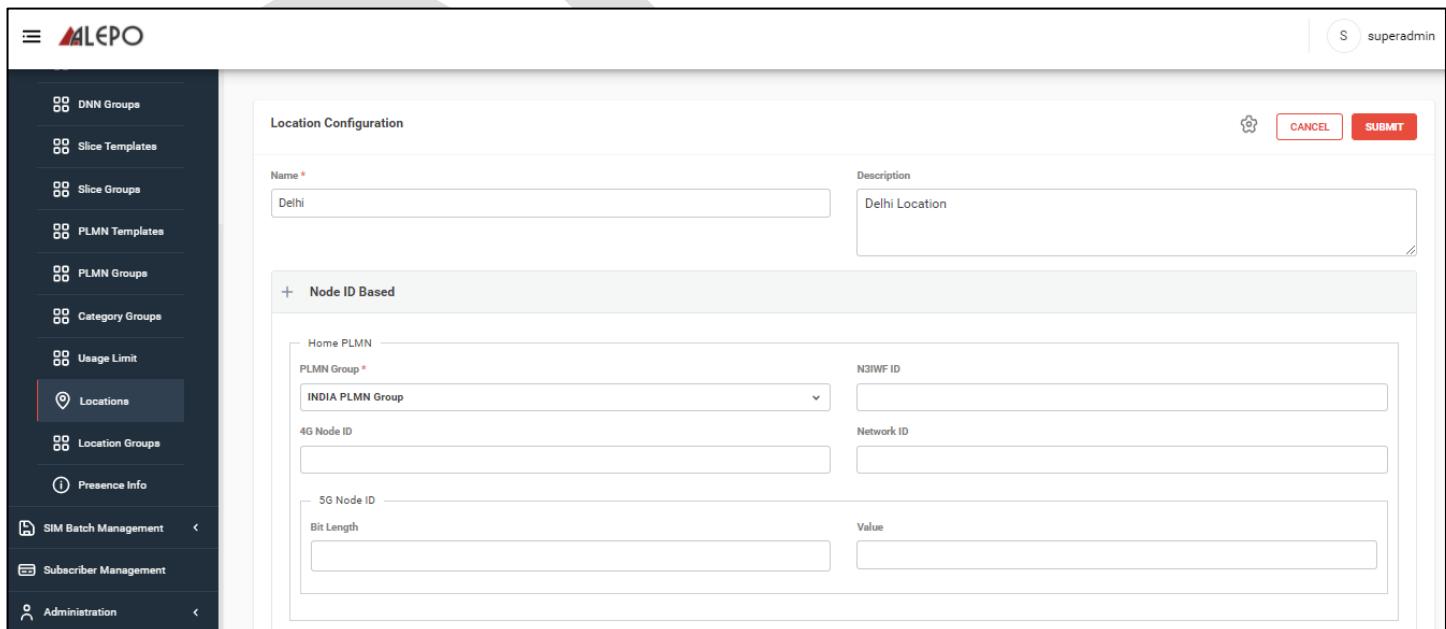
Navigate to - Alepo SDM Portal > Service Configuration > Policy > Locations.

The list of all the Locations is displayed as displayed in the below screenshot and with fields as listed in the following table. To edit a location, click the  icon for the pertaining location. System will bring up the below screen that will display the location's details.



Name *	Description
Delhi	Delhi Location

Click the 'Modify' button to enable editing of the location as seen in below screenshot.



Home PLMN	PLMN Group *	N3IWF ID
	INDIA PLMN Group	

4G Node ID	Network ID

5G Node ID	Bit Length	Value

Visitor PLMN

PLMN Group *

INDIA PLMN Group

4G Node ID

N3IWF ID

Network ID

5G Node ID

Bit Length

Value

+ Generic

Make changes to all the desired field and click 'Submit'

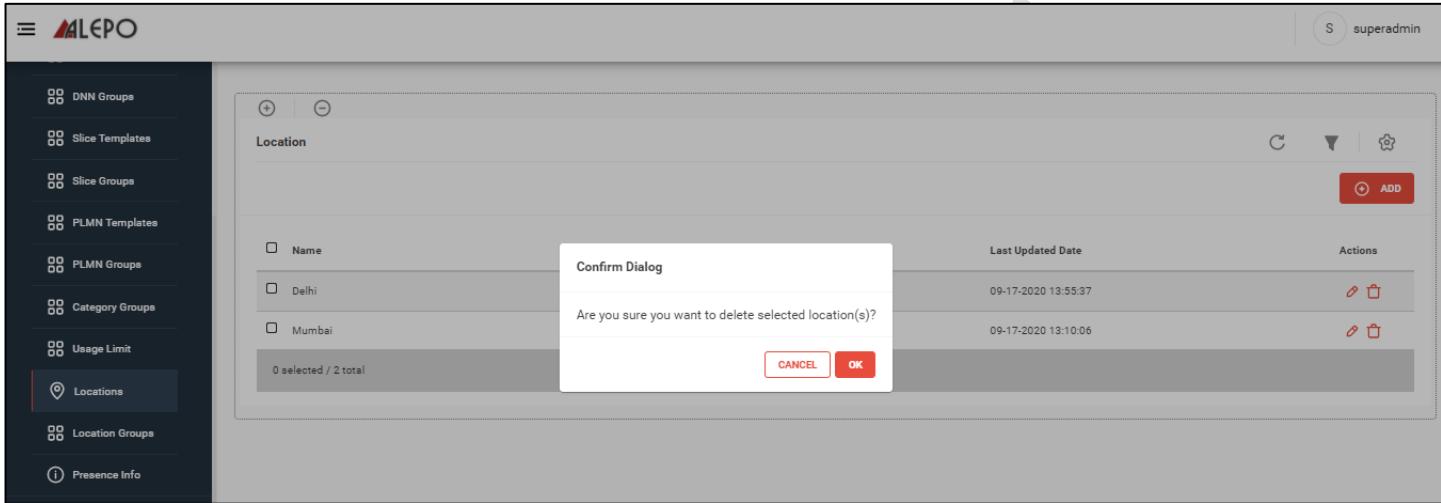


Delete Location

Navigate to - Alepo SDM Portal > Service Configuration > Policy > Locations.

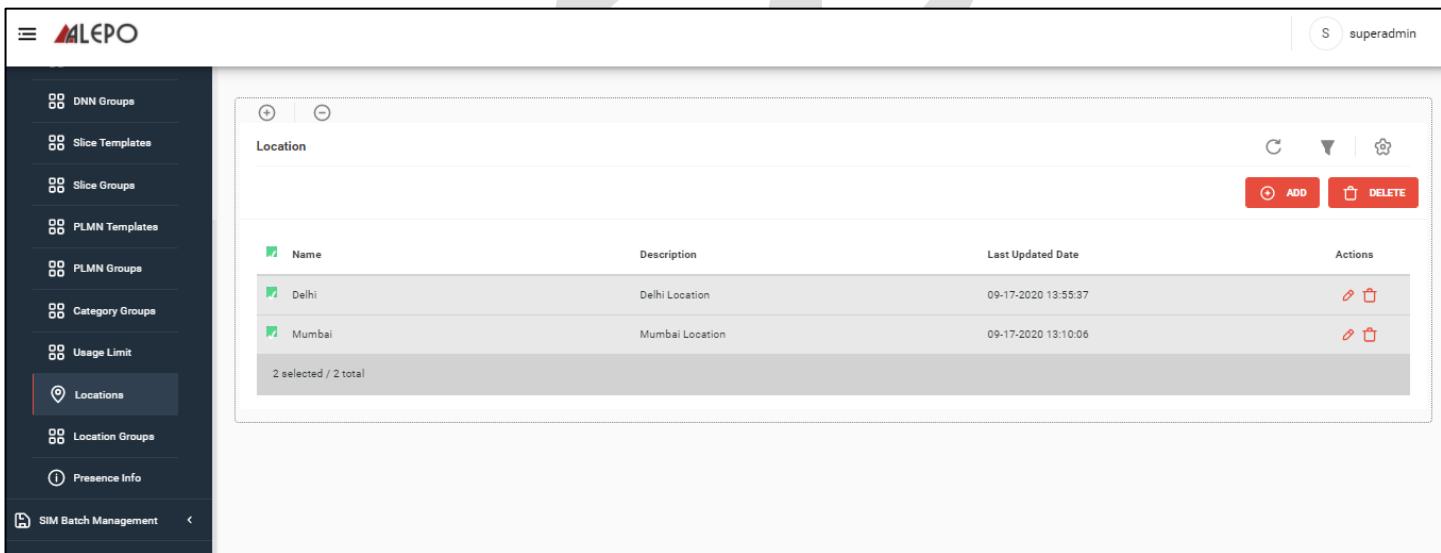
The list of all the Locations is displayed as displayed in the below screenshot and with fields as listed in the following

table. To delete a location, click the  icon for the pertaining location. System will bring up the below screen that will seek conformation from the user for deleting the location.



Name	Description	Last Updated Date	Actions
Delhi	Delhi Location	09-17-2020 13:55:37	 
Mumbai	Mumbai Location	09-17-2020 13:10:06	 

To delete multiple locations at a single time, tick the check-box of those location records that are to be deleted in one go.



Name	Description	Last Updated Date	Actions
<input checked="" type="checkbox"/> Delhi	Delhi Location	09-17-2020 13:55:37	 
<input checked="" type="checkbox"/> Mumbai	Mumbai Location	09-17-2020 13:10:06	 

Then click the 'Delete' button and click 'OK' to confirm deletion of the selected location records.

Location Groups

Navigation

Alepo SDM Portal > Service Configuration > Policy > Location Groups

Description

Location Groups is a group of multiple locations

Name	Description	Last Updated Date	Actions
North		09-16-2020 06:31:04	

Users can initiate the below operations from the above screen

- [Add/Create Location Group](#)
- [View/Edit Location Group](#)
- [Delete Location Group](#)

Add Location Groups

From the screen seen in the above screenshot, click the 'Add' button at the top right. The screen to add a new Location Group will open up as shown in the following screenshot.

The screenshot shows the ALEPO application interface. On the left, there is a sidebar with the following navigation items:

- Slice Templates
- Slice Groups
- PLMN Templates
- PLMN Groups
- Category Groups
- Usage Limit
- Locations
- Location Groups** (selected)
- Presence Info
- SIM Batch Management
- Subscriber Management
- Administration
- Log Out

The main content area is titled "Location Group". It has fields for "Name *" (Country Group) and "Description" (Location groups for countries). There is a "CREATE" button in the top right corner. Below these fields is a section titled "Locations List *". It contains a table with columns: Name, Description, and Actions. The table shows "No data to display" and "0 selected / 0 total". At the bottom right of this section is a "ASSOCIATE" button.

After providing the location group name and description, click the 'Associate' button to add locations to the location group using the screen seen in the below screenshot.

The screenshot shows a modal dialog box titled "Select Locations". It has a header with a "X" icon and a gear icon. Below the header is a section titled "Locations" with a table. The table has columns: Name, Description, and Actions. It lists two locations: "Delhi" (Description: Delhi Location) and "Mumbai" (Description: Mumbai Location). Both rows have a checked checkbox in the "Name" column. At the bottom of the table, it says "2 selected / 2 total". In the bottom right corner of the dialog is a red "ADD" button with a plus sign. In the bottom right corner of the entire page is a red "CLOSE" button.

Tick the check-box against the locations that are to be added under the location group to be created and press 'Add' button. This will add the location under the location group as seen in the below screenshot.

The screenshot shows the ALEPO web interface. On the left, there is a sidebar with various navigation options: Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, Category Groups, Usage Limit, Locations (selected), Presence Info, SIM Batch Management, Subscriber Management, Administration, and Log Out. The main area is titled 'Location Group' and contains fields for 'Name *' (set to 'Country Group') and 'Description' (set to 'Location groups for countries'). Below this is a table titled 'Locations List *' with columns for 'Name', 'Description', and 'Actions'. It lists 'Delhi' and 'Mumbai' with checkboxes checked. At the bottom of the table, it says '0 selected / 2 total'. There are 'CANCEL' and 'CREATE' buttons at the top right of the main form area.

To finish creating the location group click the 'Create' button.

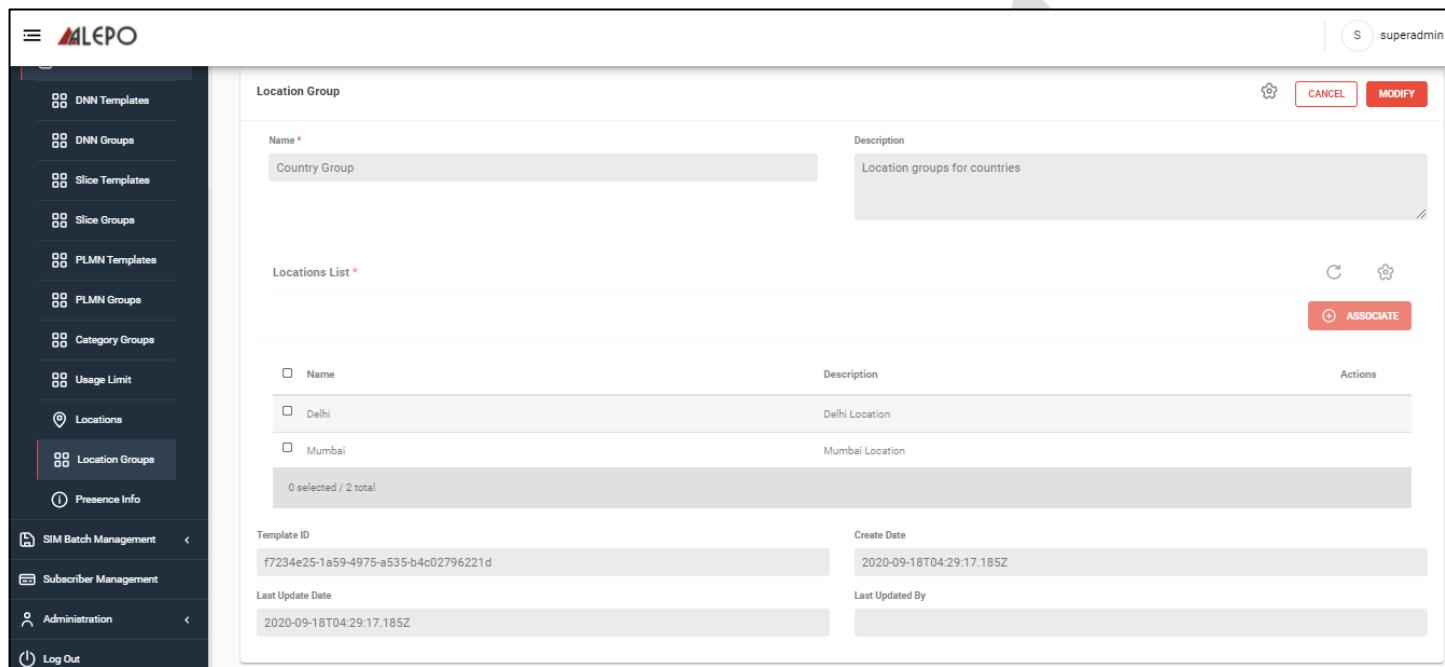
Field Information Table

Field Name	Description
Name*	Specify the name of the Location Group being added. This is a mandatory field.
Description	Specify a brief description of the Location Group being added.
Locations List	Specify the list of associated location identifiers.
Associate	The associate button will let us select the templates to be associated with the Location Group being created.

View/Edit Location Groups

Navigate to - Alepo SDM Portal > Service Configuration > Policy > Location Groups.

The list of all the Location Groups will be displayed. To edit a location group click the  icon adjacent to the location group record. This will bring up the below screen.



ALEPO

superadmin

Location Group

Name *: Country Group

Description: Location groups for countries

Locations List *

Name	Description	Actions
Delhi	Delhi Location	
Mumbai	Mumbai Location	

0 selected / 2 total

Template ID: f7234e25-1a59-4975-a535-b4c02796221d

Create Date: 2020-09-18T04:29:17.185Z

Last Update Date: 2020-09-18T04:29:17.185Z

Last Updated By:

CANCEL MODIFY

ASSOCIATE

Click 'Modify' button to initiate editing of the location group.

ALEPO

S superadmin

DNN Templates
DNN Groups
Slice Templates
Slice Groups
PLMN Templates
PLMN Groups
Category Groups
Usage Limit
Locations
Location Groups
Presence Info
SIM Batch Management
Subscriber Management
Administration
Log Out

Location Group

Name * Country Group Description Location groups for countries

CANCEL SUBMIT

Locations List *

+ ASSOCIATE

Name	Description	Actions
Delhi	Delhi Location	
Mumbai	Mumbai Location	

0 selected / 2 total

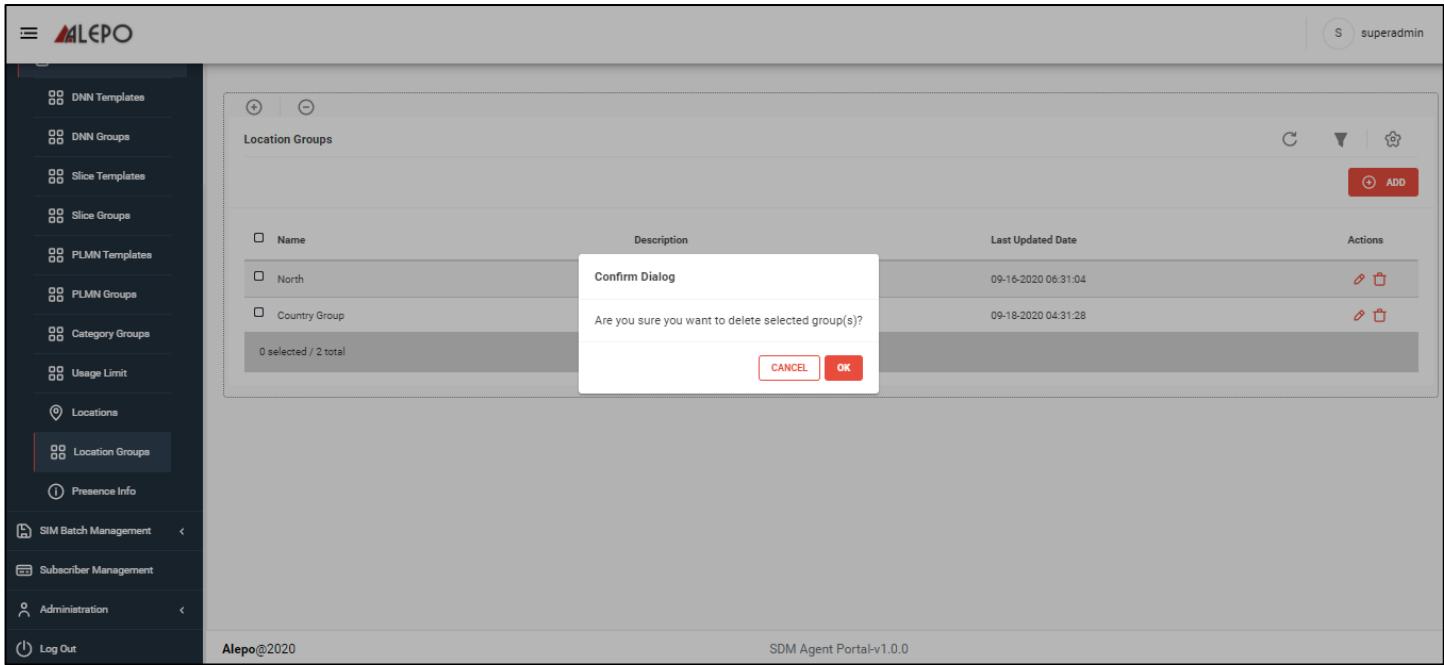
Alepo@2020 SDM Agent Portal-v1.0.0



Delete Location Groups

Navigate to - Alepo SDM Portal > Service Configuration > Policy > Location Groups.

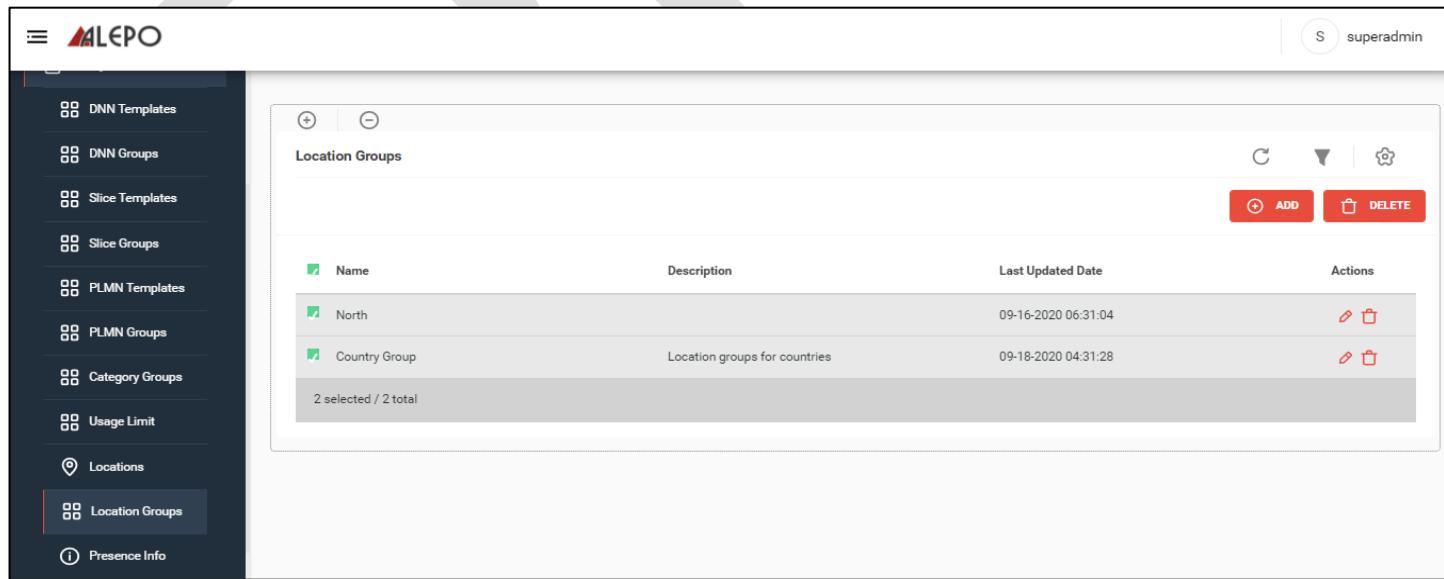
The list of all the Location Groups will be displayed. To delete a location group click the  icon adjacent to the location group record. System will prompt the user for deletion confirmation as seen in the below screen.



Name	Description	Last Updated Date	Actions
North		09-16-2020 06:31:04	 
Country Group	Location groups for countries	09-18-2020 04:31:28	 

Click 'OK' to confirm deletion.

To delete multiple location groups at a single time, tick the check-box of those location group records that are to be deleted in one go.



Name	Description	Last Updated Date	Actions
<input checked="" type="checkbox"/> North		09-16-2020 06:31:04	 
<input checked="" type="checkbox"/> Country Group	Location groups for countries	09-18-2020 04:31:28	 

Hit the 'Delete' button and click 'OK' to confirm deletion of the selected location groups.

Presence Info

Navigation

Alepo SDM Portal > Service Configuration > Policy > Presence Info

Description

Presence Info informs the UE's presence state for a group of locations. The presence state for location group can be -

- In Area : Indicates that UE is inside or enters the presence reporting area
- Out Area : Indicates that UE is outside or leaves the presence reporting area
- Unknown : indicates is is unknown whether the UE is in the presence reporting area or not
- Inactive : Indicates that the presence reporting area is inactive in the serving node

The screenshot shows the Alepo SDM Portal interface. The left sidebar contains navigation links for DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, Category Groups, Usage Limit, Locations, Location Groups, and Presence Info, with Presence Info selected. The main content area is titled "Presence Info Templates" and displays a table with one row. The table columns are Name, Description, Last Updated Date, and Actions. The single row shows "North_India_Presence" as the Name, an empty Description field, the date "09-16-2020 06:31:55" in the Last Updated Date column, and two icons in the Actions column: a pencil and a trash can.

Name	Description	Last Updated Date	Actions
North_India_Presence		09-16-2020 06:31:55	

The above screen will enable system users to perform the below operations:

- [Add Presence Info](#)
- [View/Edit Presence Info](#)
- [Delete Presence Info](#)

Add Presence Info

In the screen seen in the above screenshot, click the 'Add' button sitting at the top right. The screen to add a new Presence Info Template will come up as shown in the below screenshot.

The screenshot shows the ALEPO application interface. On the left is a sidebar with navigation items: DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, Category Groups, Usage Limit, Locations, Location Groups, Presence Info (which is selected), and SIM Batch Management. At the top right, there is a user icon labeled 'superadmin'. The main content area is titled 'Presence Info Template'. It has fields for 'Name *' (containing 'Country_Presence') and 'Description' (containing 'Country_Presence_Info'). Below these are sections for 'Location Groups *' and 'Associate'. The 'Associate' section contains a table with columns: Name, PralD, Presence State, and Actions. A message says 'No data to display' and '0 selected / 0 total'. At the bottom right of the main area is a red 'CREATE' button.

Field Information Table

Field Name	Description
Name*	Specify the name of the Presence Info Template being added. This is a mandatory field.
Description	Specify a brief description of the Presence Info Template being added.
Associate	The associate button will let us select the 'Location Groups' to be associated with the Presence Info Template being created.

After entering the Name and description, click the 'Associate' button to select the 'Location Groups' to be associated with the Presence Info Template being created.

Select Templates

Templates

<input checked="" type="checkbox"/> Name	Description	Actions
North		

1 selected / 1 total

ADD

CLOSE

Click the 'Add' button seen in the above screenshot to attach the location group to the presence info template. Doing this will bring up the below screen.

ALEPO

superadmin

Presence Info Template

Name *	Description	Actions	
Country_Presence	Country_Presence_Info	ASSOCIATE	

Location Groups *

Name	PralID	Presence State	Actions
North	5	IN_AREA	

0 selected / 1 total

CANCEL **CREATE**

Alepo@2020 SDM Agent Portal-v1.0.0

Now enter the below details for the location group that has just been attached to the presence info template.

Field Name	Description
PralID	Unique identifier for the locating group

Field Name	Description
Presence State	Indicates the state for the location group. Possible values are 'IN_AREA', 'OUT_OF_AREA', 'UNKNOWN', 'INACTIVE'

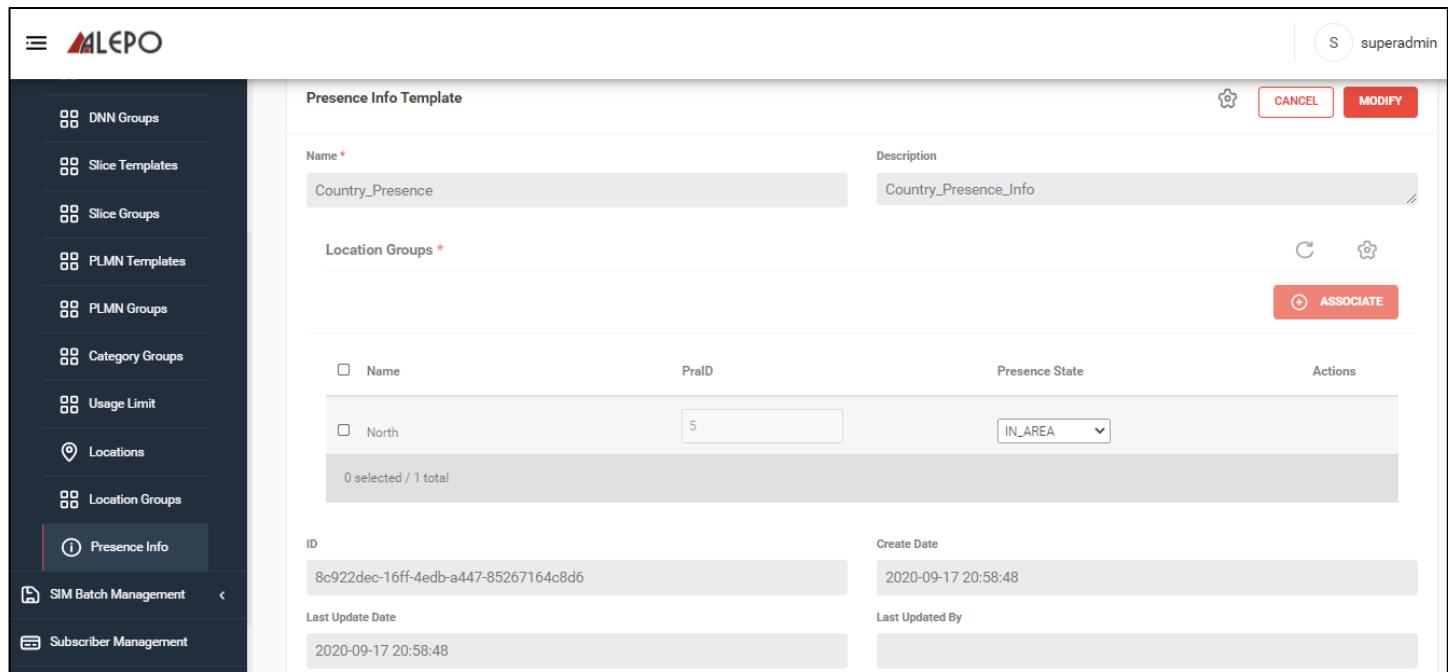
Finally, click the 'Create' button seen at the top right, to create the Presence Info Template.



View/Edit Presence Info Template

Navigate to - Alepo SDM Portal > Service Configuration > Policy > Presence Info.

The list of all existing Presence Info Templates in the system will be displayed. To edit a presence info template, click the  icon for the relevant record. This will bring up the below screen.



The screenshot shows the Alepo SDM Portal interface for editing a Presence Info Template. The left sidebar contains navigation links for DNN Groups, Slice Templates, Slice Groups, PLMN Templates, PLMN Groups, Category Groups, Usage Limit, Locations, Location Groups, and Presence Info (which is selected). The main content area is titled "Presence Info Template". It has fields for "Name *" (Country_Presence) and "Description" (Country_Presence_Info). Below these are sections for "Location Groups *", "ID", "Create Date", "Last Update Date", and "Last Updated By". A large "ASSOCIATE" button with a plus sign is visible. The "Actions" column in the location group table includes icons for edit, delete, and details.

Name	PrId	Presence State	Actions
North	5	IN_AREA	

0 selected / 1 total

ID	Create Date
8c922dec-16ff-4edb-a447-85267164c8d6	2020-09-17 20:58:48

Last Update Date: 2020-09-17 20:58:48

Last Updated By:

Click the 'Modify' button to enable editing of the presence info template record.

DNN Groups
Slice Templates
Slice Groups
PLMN Templates
PLMN Groups
Category Groups
Usage Limit
Locations
Location Groups
Presence Info
SIM Batch Management
Subscriber Management

Presence Info Template

Name * Country_Presence

Description Country_Presence_Info

Location Groups *

Name PraID Presence State Actions

<input type="checkbox"/> North	5	IN_AREA	
--------------------------------	---	---------	--

0 selected / 1 total

CANCEL SUBMIT

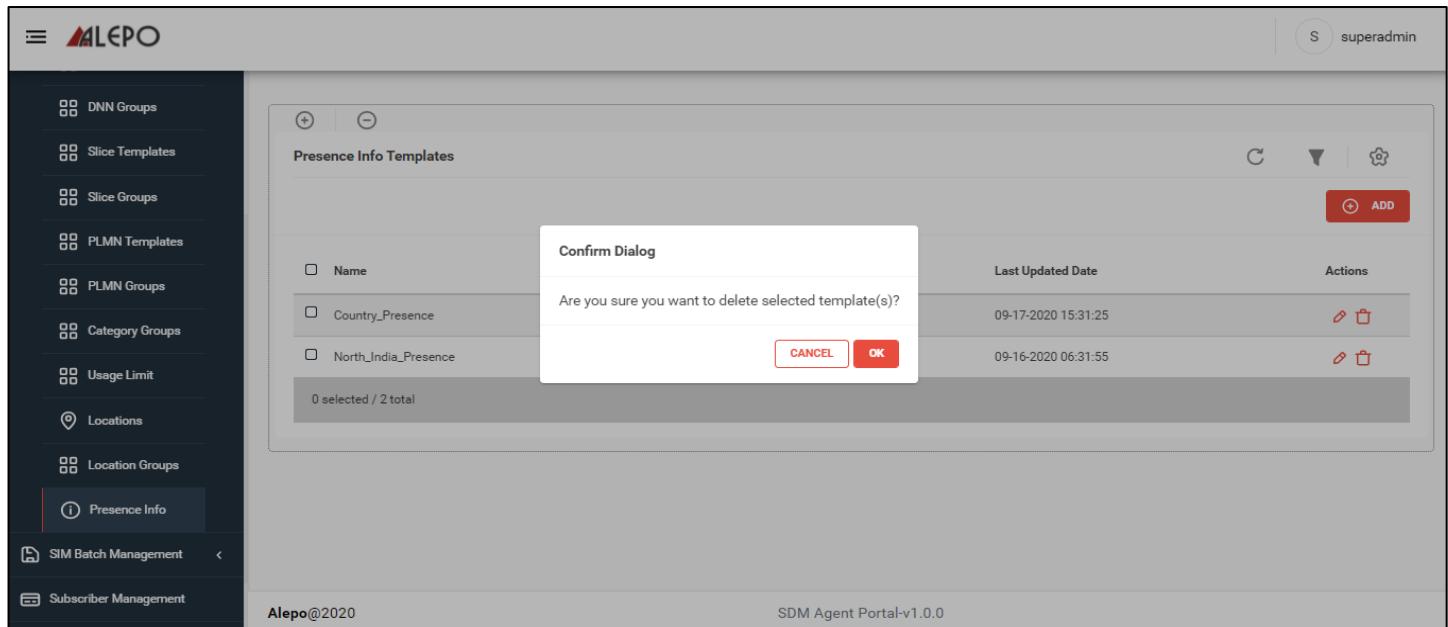
Alepo@2020 SDM Agent Portal-v1.0.0

Make changes to the presence info template record as desired and click 'Submit' to effect the changes made.

Delete Presence Info Template

Navigate to - Alepo SDM Portal > Service Configuration > Policy > Presence Info.

The list of all existing Presence Info Templates in the system will be displayed. To delete a presence info template, click the  icon for the relevant record. This will bring up the below window that will ask the user for deletion confirmation.



Click 'OK' to confirm deletion of the presence info template.

To delete multiple presence info templates at a single time, tick the checkboxes for those presence info templates records that are to be deleted in one go.

- DNN Groups
- Slice Templates
- Slice Groups
- PLMN Templates
- PLMN Groups
- Category Groups
- Usage Limit
- Locations
- Location Groups
- Presence Info

SIM Batch Management <

Subscriber Management

Presence Info Templates

Name	Description	Last Updated Date	Actions
Country_Presence	Country_Presence_Info	09-17-2020 15:31:25	
North_India_Presence		09-16-2020 06:31:55	
2 selected / 2 total			

ADD **DELETE**

Alepo@2020

SDM Agent Portal-v1.0.0

Click 'Delete' and 'OK' buttons to delete the presence info template records.

Usage Limit - Policy

Navigation

Alepo SDM Portal > Service Configuration > Policy > Usage Limit

Description

Policy Usage Limit lets system users configure and manage the usage limits for the subscribers - at Session level or Application level. Usage limits are counters to identify different types of session/service level usage of the subscribers.

Name	Description	Service Name	Service Group Name	Last Updated Date	Actions
UsageLimit1GB	Data			09-10-2020 10:42:28	
UsageLimit2GB	Data	Cap		09-10-2020 10:41:19	

System users can initiate below operations from the screen seen in the above screenshot.

- [Add/Create Policy Usage Limit](#)
- [View/Edit Policy Usage Limit](#)
- [Delete Policy Usage Limit](#)

Add a Usage Limit

From the screen seen in the above screenshot, click on the 'Add' button at the top right. System will bring up the screen to create/add a new usage limit as shown in the following screenshot.

Usage Limit

Name *: UsageLimit20GB

Description: 20GB Usage Limit

Service Name *: Broadband Data

Service Group Name:

Limit ID *: 20

Service UM Level *: SESSION_LEVEL

Usage Limit

Downlink Volume: 100 Megabyte

Uplink Volume: 90 Megabyte

Total Volume: Byte

Duration: Second

CANCEL **CREATE**

+ Scopes

Scopes (-)

SNSSAI: Slice-eMBB

DNN: DNN-1

Add New (+)

+ Limit ID Mapping with Monitoring Keys

Limit ID Mapping with Monitoring Keys (-)

Limit ID: 19299

MonKeys: 2

Add New (+)

Field Information Table

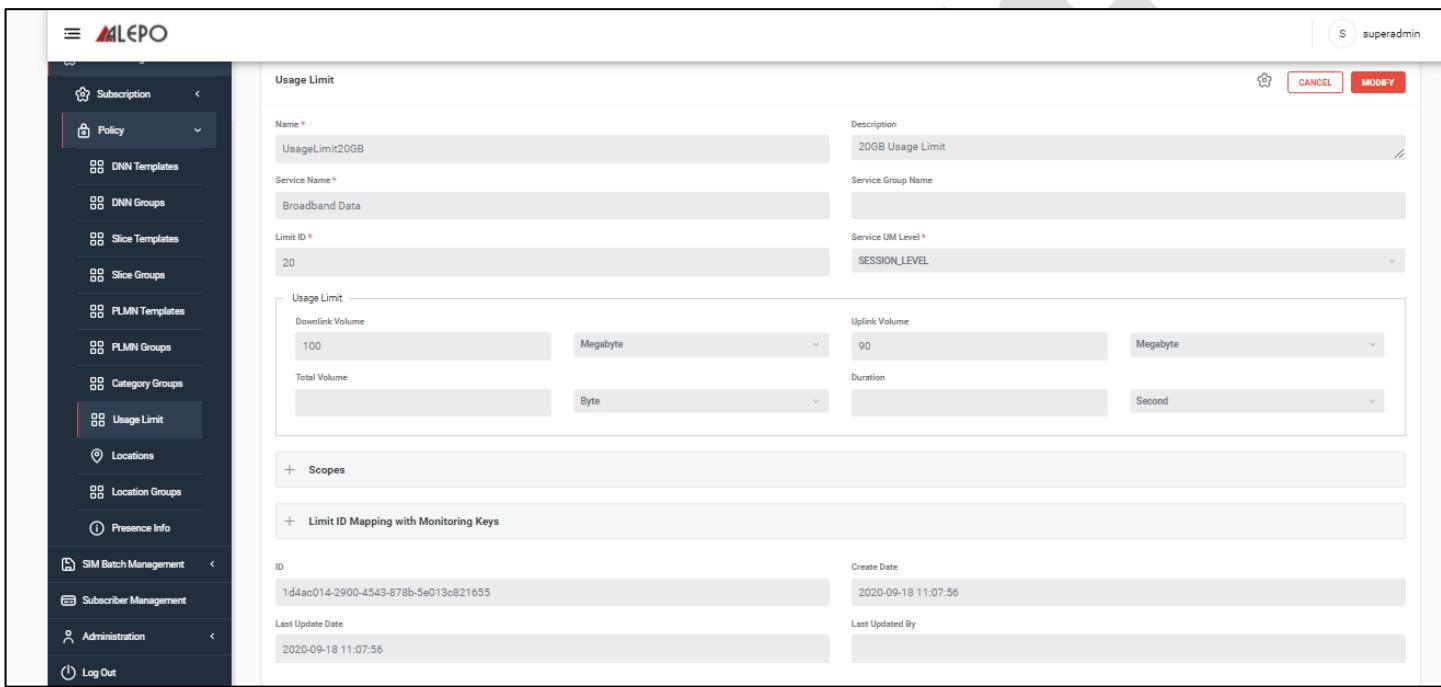
Field Name		Description	Is Mandatory
Name*		Provide a unique name for the usage limit being added.	Yes
Description		Provide a brief description of the usage limit being added.	No
Service Name*		Provide a service name of the usage limit being added.	Yes
Service Group Name		Provide a service group name of the usage limit being added.	No
Limit ID		Provide a Limit ID of the usage limit being added	No
Service UM Level		Provide a Service UM Level of the usage limit being added. Service UM Level can be selected from the options - None, SESSION_LEVEL, SERVICE_LEVEL.	No
Usage Limit	Downlink Volume	Value	Provide a downlink volume value of the usage limit being added.
	Volume	Unit	Provide a downlink volume unit of the usage limit being added. Select from the options - Byte, Kilobyte, Megabyte, Gigabyte, or Terabyte.
	Uplink Volume	Value	Provide an uplink volume value of the usage limit being added.
	Volume	Unit	Provide an uplink volume unit of the usage limit being added. Select from the options - Byte, Kilobyte, Megabyte, Gigabyte, or Terabyte.
	Total Volume	Value	Provide the total volume value of the usage limit being added.
	Volume	Unit	Provide the total volume unit of the usage limit being added. Select from the options - Byte, Kilobyte, Megabyte, Gigabyte, or Terabyte.
	Duration	Value	Provide the duration value of the usage limit being added.
	Duration	Unit	Provide the duration unit of the usage limit being added. Select from the options - Second, Minute, or Hour.
Scopes			
Add New 		The Add New button lets us add a new scope with its fields - SNSSAI and DNN.	No
SNSSAI		The Slice template for which the usage limit is applicable	No
DNN		The DNN template for which the usage limit is applicable	No
Limit ID Mapping with Monitoring Keys			
Add New 		The Add New button lets us add a new Limit ID Mapping with Monitoring Keys with its fields - Limit ID and MonKeys.	No
Limit ID		Limit ID	No
MonKeys		Monitoring key for the limit id mentioned	No

Click the Create button once all the required fields are completed to create and add the new Usage Limit.

View/Edit Usage Limits

Navigate to - SDM Portal > Service Configuration > Usage Limit

System will list all the usage limits already configured in the SDM Portal. To edit an existing Usage Limit, click the  icon for the relevant record. This will bring up the below screen.



The screenshot shows the 'Usage Limit' configuration page in the ALEPO SDM Portal. The left sidebar has a dark theme with white icons and text. The main area is titled 'Usage Limit' and contains the following fields:

- Name: UsageLimit20GB
- Description: 20GB Usage Limit
- Service Name: Broadband Data
- Service Group Name: (empty)
- Limit ID: 20
- Service UM Level: SESSION_LEVEL
- Usage Limit:
 - Downlink Volume: 100 Megabyte
 - Uplink Volume: 90 Megabyte
 - Total Volume: Byte
 - Duration: Second
- Scopes: (button)
- Limit ID Mapping with Monitoring Keys: (button)
- ID: 1d4ac014-2900-4543-878b-5e013c821655
- Create Date: 2020-09-18 11:07:56
- Last Update Date: 2020-09-18 11:07:56
- Last Updated By: (empty)

At the top right, there are 'CANCEL' and 'MODIFY' buttons. The 'MODIFY' button is highlighted with a red border.

Click the 'Modify' (at the top right) to initiate editing the Usage Limit.

ALEPO

S superadmin

Subscription

Policy

DNN Templates

DNN Groups

Slice Templates

Slice Groups

PLMN Templates

PLMN Groups

Category Groups

Usage Limit

Locations

Location Groups

Presence Info

SIM Batch Management

Usage Limit

Name * UsageLimit20GB

Description 20GB Usage Limit

Service Name * Broadband Data

Service Group Name

Limit ID * 20

Service UM Level * SESSION_LEVEL

Usage Limit

Downlink Volume 100 Megabyte

Uplink Volume 90 Megabyte

Total Volume

Duration

Scopes

Limit ID Mapping with Monitoring Keys

CANCEL SUBMIT

Click 'Submit' once all relevant details have been edited.

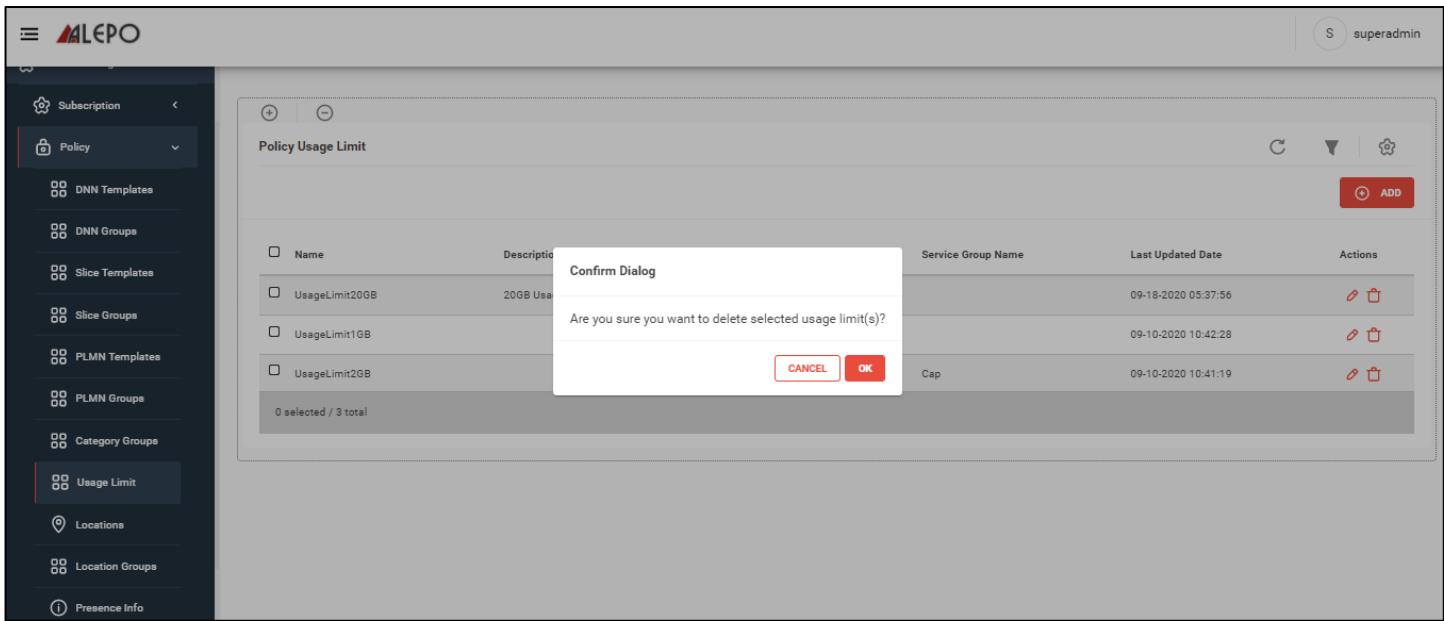
Note

System users can also add/remove SNSSAI templates (in Scopes section) to/from the Usage limit. Similarly, existing Limit-IDs can be removed and new Limit-IDs can be added to the Usage Limit (Limit ID mapping section).

Delete Usage Limits

Navigate to - Alepo SDM Portal > Service Configuration > Policy > Usage Limit

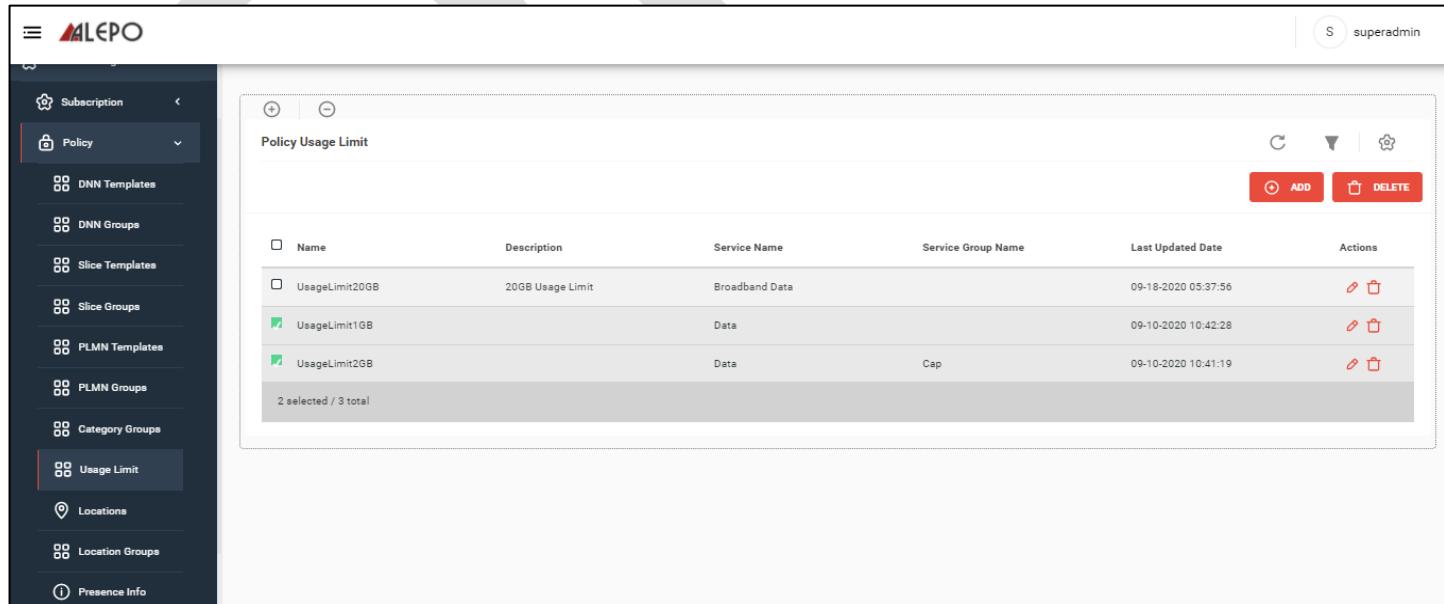
The list of all existing Usage Limits in the system will be displayed. To delete an existing Usage Limit, click the  icon for the relevant record. This will bring up the below window that will ask the user for deletion confirmation.



Name	Description	Service Name	Service Group Name	Last Updated Date	Actions
UsageLimit20GB	20GB Usage Limit	Broadband Data		09-18-2020 05:37:56	 
UsageLimit1GB		Data		09-10-2020 10:42:28	 
UsageLimit2GB		Data	Cap	09-10-2020 10:41:19	 

Click 'OK' to confirm deletion of the Usage Limit.

To delete multiple usage limits in one-go, tick the check-box for the usage limits that are to be deleted in one go.



Name	Description	Service Name	Service Group Name	Last Updated Date	Actions
UsageLimit20GB	20GB Usage Limit	Broadband Data		09-18-2020 05:37:56	 
UsageLimit1GB		Data		09-10-2020 10:42:28	 
UsageLimit2GB		Data	Cap	09-10-2020 10:41:19	 

Click 'Delete' and 'OK' buttons to delete the usage limit records.

SIM Batch Management



SDM PORTAL
SIM BATCH MANAGEMENT

WHAT DOES SIM BATCH
MANAGEMENT INCLUDE?



- Import SIM Cards
- View Status Of SIM Batch Import
- View SIM Information

INTRODUCTION

Navigation

Alepo SDM Portal > SIM Batch Management

Description

This section of the Alepo SDM Portal describes process to import the SIM batches into the system. Similar to the service configurations, SIM import is a mandatory step before adding new subscriptions into the system or before subscription provisioning.

How to import encrypted SIM batch?

A service provider will receive a file containing SIM card identities from SIM manufacturer along with physical SIM cards. Typically, this SIM file / batch is in encrypted format. The SDM portal supports the decryption of SIM batch at the time of import using K4 based decryption.

It also supports the import of SIM files/batches that are non-encrypted. In this case, system user does not require to enter any key to carry out the SIM import process.

- [SIM Batch](#)
- [SIM Info](#)

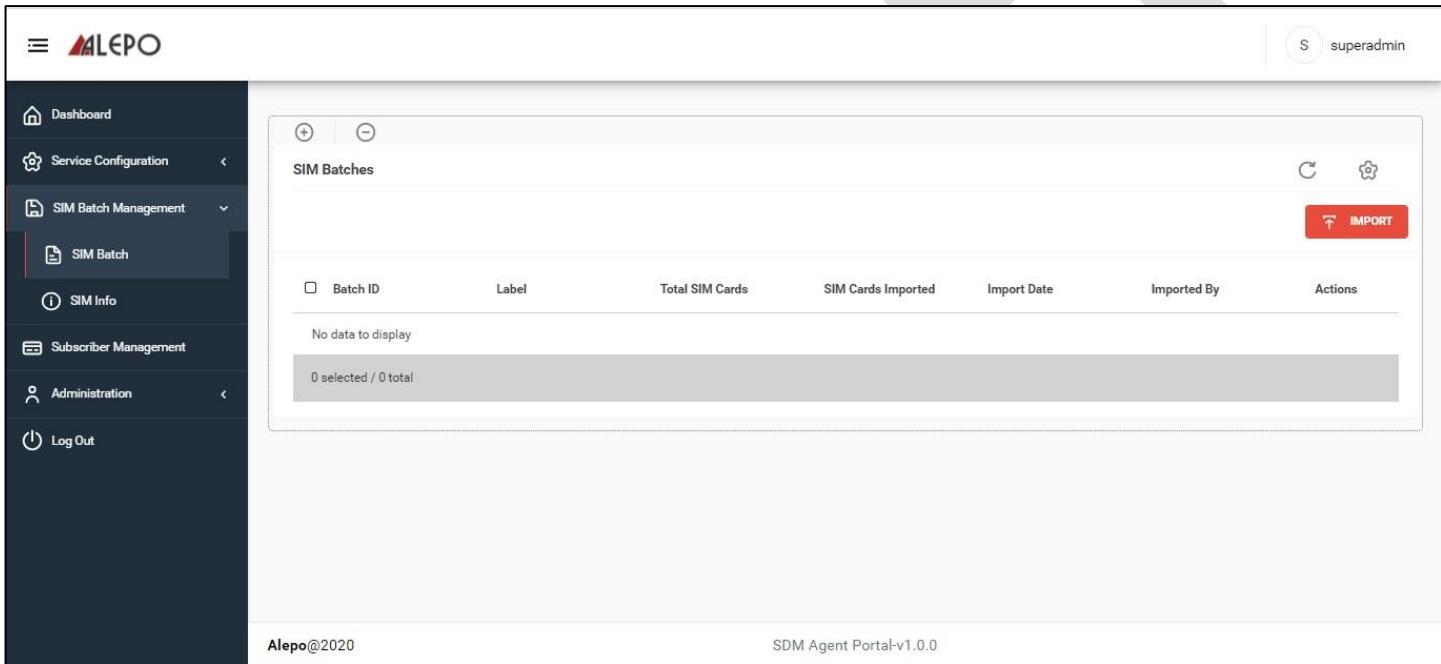
SIM BATCH

Navigation

Alepo SDM Portal > SIM Batch Management > SIM Batch

Description

This section covers steps to import and manage SIM card batches.



The screenshot shows the Alepo SDM Portal interface. On the left is a dark sidebar menu with options: Dashboard, Service Configuration, SIM Batch Management (selected), SIM Info, Subscriber Management, Administration, and Log Out. The main content area has a header 'SIM Batches' with a 'IMPORT' button. Below is a table with columns: Batch ID, Label, Total SIM Cards, SIM Cards Imported, Import Date, Imported By, and Actions. A message 'No data to display' is shown above the table, and '0 selected / 0 total' is at the bottom. The bottom of the screen shows 'Alepo@2020' and 'SDM Agent Portal-v1.0.0'.

On navigating to this option, system will list the existing SIM batches that have been imported in the system.

- To import a new batch, click the '[Import](#)' button.
- Clicking the  button of the batch record will enable user to view the SUPIs that exist in the batch.
- Clicking the  symbol will display the batch information as seen in SIM batch Import status section.

Import SIM Batch

Alepo@2020 SDM Agent Portal-v1.0.0

Field Information Table

Field Name	Description	Is Mandatory
Label *	Specify the label of the SIM Batch to be imported. Its important to provide a meaningful label for the batch import as users might need to revisit the import.	Yes
Upload Batch *	Clicking this button lets you choose the SIM Batch file to upload in .csv format. The SIM Batch file will have one or more SIM cards in it. The data in the import file need to follow the <u>template</u> specified here.	Yes
Action *	<p>Drop-down with a list of actions to be performed on the SIM Batch file.</p> <p>Add: Choosing this option will enable the user to add the SIM records contained in the file, to the system. As part of this operation, system will not add the record IF it detects that the SUPI is already existing in the system. Note that SUPI is unique and cannot be duplicated.</p> <p>Update: Choosing this option will enable user to edit the SUPI record(s) contained existing in the system. So prerequisite for update operation is that SUPI must exist in the system for update to take effect.</p> <div style="background-color: #e0f2e0; padding: 10px;"> <p>Tip</p> <p>It is also possible to import only a part of a SIM batch i.e. say that a batch has 100 SIM card records and the import process successfully uploaded only 95 records. The remaining 5 had</p> </div>	Yes

Field Name	Description	Is Mandatory
	<p>some erroneous data due to which it was rejected. After correcting the data for those 5 records, it is possible to import them into the system (using the corrected .csv file).</p> <p>Delete: Choosing this option will enable user to delete the SUPI record(s) in the system. Like for update, SUPI must exist in the system for update to take effect.</p> <p>Note Deletion of SUPI will not take place IF it has already been allocated to a subscriber. This means that only SUPIs which are in 'Available' or 'Inactive' status can be deleted from the system.</p>	
Decryption Algorithm	Generally, SIM information would be in encrypted format, so it is mandatory to select a decryption algorithm from the list available in the drop-down.	No
Decryption Key	<p>Info However, it is possible that SIM vendor may not supply SIM information (data file) in encrypted format. In such case, "None" can be chosen from the drop-down.</p> <p>Needs to be used when user has chosen a decryption algorithm. However, this will not be needed when there is no decryption algorithm chosen (i.e. when "None" is chosen as decryption algorithm)</p>	No

SIM Batch Import Status

View SIM Batch

Batch ID	Label
1be9e54f-831b-428f-8cab-0cc9494bc53d	Micro SIM Cards_06Jul
Total SIM Cards	SIM Cards Imported
4	4
Import Date	Imported By
2020-07-06 11:42:56	

CLOSE

This window enables users to view the status of a SIM batch import.

Field Information

Field Name	Description
Batch ID	Batch number for the SIM batch upload.
Label	Label of the batch.
Total SIM Cards	Total SIM cards present in the batch.
SIM Cards Imported	Total SIM cards imported in the system.
Import Date	Date on which the SIM batch was imported into the system.
Imported By	User who had carried out the SIM batch import.

SIM Batch Import Template

The import template of SIM batches need to have data in a .csv file in the below format:

Template Columns	
@SUPIC @encPermanentKeyC @authenticationManagementFieldC @encOpcKeyC @protectionParameterIdC	
Sample Data	
imsi33333333 4d66281adcc7503002b1f6011764730c5a32c601b7395825593c15fb1f836babe405dacb3991b22d b9b9 1e80377d3c9f430185c635501a28b22304f2b3d2090c53047c5030bb84c071c3e405dacb3991b22d key1	
Field Information Table	
Field Name	Description
SUPI	Subscription Identifier of the SIM.
PermanentKey	Key in encrypted form provided by the SIM vendor.
Authentication Method	The authentication method used/supported e.g. 5G-AKA.
Enc Opc Key	Encrypted operator key - stores the key that uniquely identifies the service operator.
Protection Parameter Id	The is used for decryption of encrypted key.

SIM INFO

Navigation

Alepo SDM Portal > SIM Batch Management > SIM Info



Description

The section covers the list of all the SIM Cards and their details.

The screenshot shows the Alepo SDM Portal interface. The left sidebar has a dark theme with white text and icons. It includes links for Dashboard, Service Configuration, SIM Batch Management (which is expanded to show SIM Batch and SIM Info), Subscriber Management, Administration, and Log Out. The main content area is titled 'SIMs' and contains a table with columns for SUPI, Batch ID, Status, and Actions. There are ten entries in the table, each with a checkbox next to the SUPI and a red eye icon in the Actions column. The entries show various SUPIs, Batch IDs, and statuses like Available, Out of service, Allocated, and Inactive.

SUPI	Batch ID	Status	Actions
imsi-234565433	3ade8198-4c6f-401e-bb08-95df360b304b	Available	
imsi-404201934567810		Out of service	
imsi-404201934567811		Out of service	
imsi-404201934567812	4ef894c8-4daf-41aa-ade5-928492312165	Allocated	
imsi-404201934567822	4ef894c8-4daf-41aa-ade5-928492312165	Allocated	
imsi-404201934567833	4ef894c8-4daf-41aa-ade5-928492312165	Allocated	
imsi-404201934567844	4ef894c8-4daf-41aa-ade5-928492312165	Available	
imsi-404201934567855	4ef894c8-4daf-41aa-ade5-928492312165	Available	
imsi-404201934567866	4ef894c8-4daf-41aa-ade5-928492312165	Available	
imsi-404201934567877		Allocated	

Field Information

Field Name	Description
SUPI	The subscription identifier of the SIM
Batch ID	The batch under which the SUPI has been imported
Status	Status of the SIM ("Available", "Allocated", "Inactive" or "Out Of Service")
Action	Enables to view the details of the SIM (ref below screenshot)

SIM Details

The screenshot shows the Alepo SDM Agent Portal interface. On the left is a dark sidebar with navigation links: Dashboard, Service Configuration, SIM Batch Management (selected), SIM Batch, SIM Info (selected), Subscriber Management, Administration, and Log Out. The main content area is titled "SIM Details". It contains the following fields:

SUPI	imsi-404201934567812	Batch ID	4ef894c8-4daf-41aa-ade5-928492312165
Authentication Method	5G_AKA	authentication.iteAuthenticationMethod	EPS_AKA
Permanent Key	b1358167ef526cb4b0be171f336a0e5c765a5da60eb8d4f8917a36b21e87e85b1	Sequence Number	0
Authentication Management Field	b9b9	Protection Parameter ID	key1
Algorithm ID	algo1	Enc Opc Key	776c68a5bd5b1b3b73dfc83c94ae6b331e19fcf0d36d0ccfca0917c991d07885c

At the bottom of the main content area, there are two footer links: Alepo@2020 and SDM Agent Portal-v1.0.0. In the top right corner, there is a user icon labeled "superadmin" and a red "CLOSE" button.

Field Information Table

Field Name	Description
SUPI	Subscription Identifier
Batch ID	Batch ID to which the SUPI belongs to
Authentication Method	5G authentication method associated with the SUPI
LTE Authentication Method	4G authentication method associated with the SUPI
Permanent Key	The encrypted value (hexstring) of the permanent authentication key (K)
Sequence Number	String containing the SQN
Authentication Management Field	Hexstring containing the Authentication management field
Protection Parameter ID	Identifies a parameter set securely stored in the UDM that can be used to decrypt the encPermanentKey
Algorithm ID	Identifies a parameter set securely stored in the UDM that provides details on the algorithm and parameters used to generate authentication vectors.
Encrypted OPC Key	Hex-string of the encrypted OPC Key.

Subscription Management



SDM PORTAL
SUBSCRIPTION MANAGEMENT

WHAT DOES SUBSCRIPTION
MANAGEMENT INCLUDE?



- View & Manage Subscription Data
- View & Manage Policy Data
- Associate 4G/5G Subscriptions
- Remove 4G/5G Subscriptions

INTRODUCTION

Navigation

Alepo SDM Portal > Subscription Management

Description

The Subscription Management section in the Alepo SDM Portal facilitates management of subscription profile for 4G, 5G subscription and policy data. The System supports two ways for adding new subscription profile in the system.

1. Using provisioning API

SDM Solution supports RESTful provisioning API that allows external system to add, update or delete subscription profile, profile parameters for 4G+5G subscriptions.

2. Manually creating new subscription profile using GUI

Alepo SDM portal allows system users to create new subscription profile in the system and associate 4G or 5G or both 4G+5G subscriptions. The system provides intuitive wizard that categorizes the parameters to ensure hassle-free configuration of subscription parameters while adding a new subscription in the system.

Subscriber ID	Status	Last Updated Date	Last Updated By	Actions
imsi-404201934567844	Active	09-19-2020 05:56:22	admin	

The above screen lets users perform below operations regarding subscriptions:

- View Subscription Profile: View 4G, 5G subscription data as well as policy data for a SUPI or subscription profile
- Associating 4G or 5G or both 4G+5G subscriptions to a SUPI or subscription profile
- Removing 4G or 5G or both 4G+5G subscription from an existing SUPI or subscription profile

Viewing / Editing a Subscription:

Users can search a subscription profile by entering a SUPI (Subscription Identifier). Based on the status of allocation of 4G/5G subscription to profile, the SUPI will have below status

- Available: This status means that no subscription is associated to this SUPI. (Blank SIM)
- Allocated: This status means that at least one subscription is associated to the SUPI
- Out of Service: This status means that the given SUPI is no longer in use.

Let's assume that user searches for a SUPI which is in allocated status and it has both 4G and 5G subscriptions.

- System will display the SUPI with status as Allocated. To view complete subscription profile, click on the  icon.
- In our example, since the SUPI has been associated with both 4G and 5G subscriptions, clicking the  icon will bring up 'Subscription Details' for the SUPI presenting two tabs - 4G and 5G.
- User can click on 4G tab to view the 4G subscription parameters and similarly on 5G tab to view the 5G subscription parameters.
- User can also change the dataset from subscription to policy to view the policy related parameters.

Associating a subscription:

SDM portal allows system users to associate 4G or 5G or both 4G+5G subscriptions to a SUPI. A subscription can be associated only to the SIM card with status available or allocated.

Note 1

Please note that only one 4G subscription and only one 5G subscription can be associated to a SUPI.

Also, system will show the status of SUPI as Allocated for below scenarios

- only 4G subscription associated
- only 5G subscription associated
- both 4G and 5G subscriptions associated

Note 2

If a user wants to replace 4G Subscription with 5G subscription for a SIM

In this case, user must follow below steps :

Step 1 : add new 5G subscription to the SIM

Step 2 : remove the existing 4G subscription from SIM

Below table explains if subscription association operation is allowed based on different use case scenarios

Use Case	Is adding new 4G subscription allowed ?	Is adding new 5G subscription allowed ?
a SIM with status= Allocated and SIM has only 4G subscription	No	Yes
a SIM with status= Allocated and SIM has only 5G subscription	Yes	No
a SIM with status = Allocated and SIM has both 4G & 5G subscriptions	No	No
a SIM with status = Available	Yes	Yes
a SIM with status = Out of Service	No	No

Removing a subscription:

SDM portal allows users to remove 4G or 5G or both 4G+5G subscriptions from a SUPI.

For this:

- User needs to search an existing SUPI
- Then, click on the  icon that will enable user to remove the 4G or 5G subscription from the given SUPI.
- If an IMSI/SUPI has both 4G and 5G subscriptions associated with it, and user clicks  icon, system will prompt user asking which of the two subscriptions is to be removed.
- If user removes both 4G and 5G subscriptions from a SUPI, its status will move to 'Out of Service'

Below table explains subscription removal and SUPI status relations.

Note

If a SIM has both 4G and 5G subscriptions and user removes only 4G subscription, the SIM status will still be 'Allocated', as the SIM still has 5G subscription associated with it. If user removes both 4G and 5G subscriptions then the SIM status will be 'Out of Service'

ASSOCIATE SUBSCRIPTION

To add/associate subscriptions in Subscription Management:

- Go to Subscription Management
- Search a subscriber ID (SUPI) to which the subscription needs to be associated.

The screenshot shows the ALEPO interface with the 'Subscriber Management' module selected. In the search bar, 'IMSI' is selected as the field and '404201934567811' is entered. The search results table displays one subscriber entry:

Subscriber ID	Status	Last Updated Date	Last Updated By	Actions
imsi-404201934567811	Active	09-15-2020 12:07:26	admin	

Below the table, it says '0 selected / 1 total'.

- The searched SUPI is displayed with an Associate action button.
- Click the Associate action button to add new subscription to the SUPI.

The screenshot shows the 'Add Subscription' modal open over the previous search results. The modal title is 'Add Subscription' and it asks 'Select a subscription to add'. It lists two options: '5G Subscription' and '4G Subscription'. At the bottom of the modal are 'CLOSE' and 'PROCEED' buttons.

- System will prompt user to choose a subscription to associate to the given SUPI. We can only associate one type of subscription at a given time.
- Please check below links for further steps
 - [Association of 4G subscription](#)
 - [Association of 5G subscription](#)

4G Subscriptions

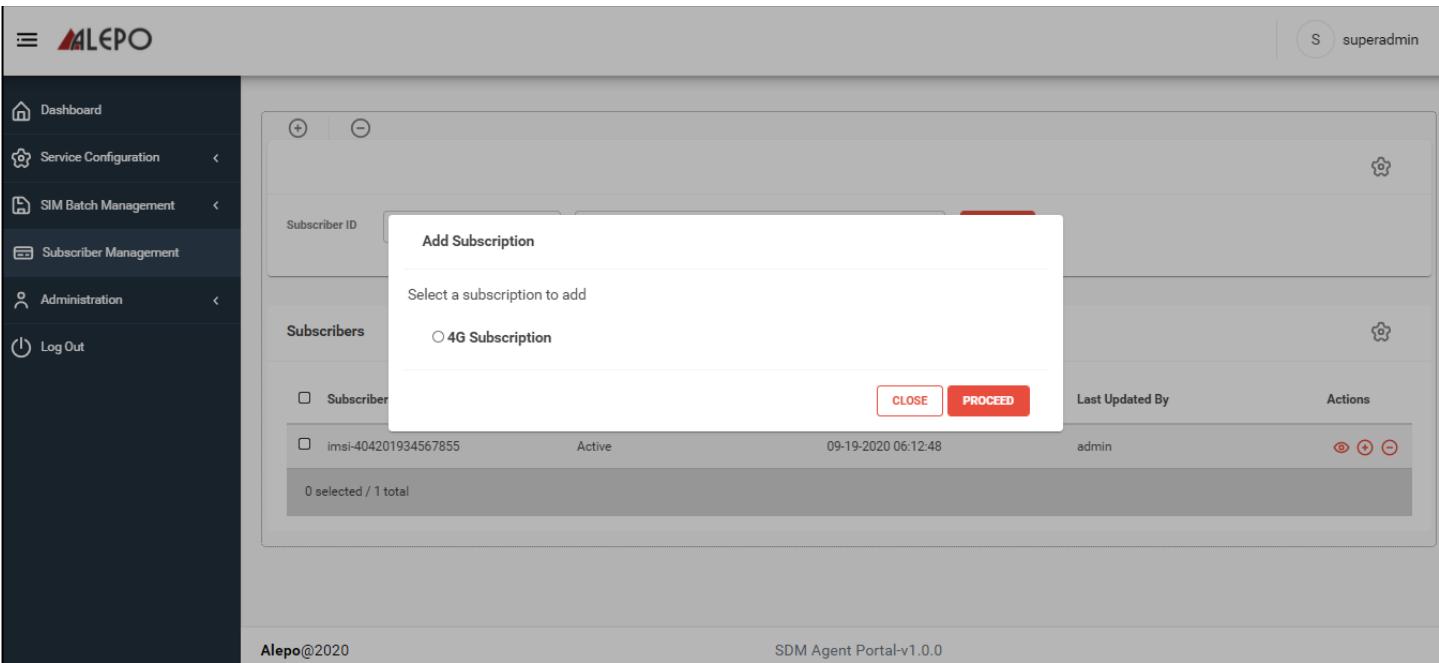
Description

This page describes about associating a 4G subscription to a SUPI.

Associate 4G Subscription

The screenshot shows the Alepo SDM Agent Portal interface. On the left is a dark sidebar with navigation links: Dashboard, Service Configuration, SIM Batch Management, Subscriber Management, Administration, and Log Out. The main area has a light gray header with a search bar containing 'IMSI' and the value '404201934567855', a 'SEARCH' button, and a user icon labeled 'superadmin'. Below the header is a section titled 'Subscribers' with a table. The table has columns: 'Subscriber ID', 'Status', 'Last Updated Date', 'Last Updated By', and 'Actions'. One row is visible: 'imsi-404201934567855', 'Active', '09-19-2020 06:12:48', 'admin', and three small red icons. At the bottom of the main area, it says 'Alepo@2020' and 'SDM Agent Portal-v1.0.0'.

Enter the IMSI for which 4G subscription is to be attached, and hit the 'Search' button. Then click the icon against the IMSI in question. This will bring up the below screen.



Select '4G Subscription' radio-button and click 'Proceed'.

Complete entering all necessary fields in the sections listed in the below table.

Subscription Management	Description
Module Name	
General	General information includes details for subscriber identifier, ODB data, PLMN Group, and other generic details.
RAT	this section includes access restriction data
Multi-SIM	The Multi-SIM Section includes additional MSISDN data.
Operator-Specific	Includes operator-Specific details

Once completed, click the 'Save' icon to save the changes.

General - Add 4G Subscription

The screenshot shows the ALEPO SIM Batch Management interface. The left sidebar includes options like Dashboard, Service Configuration, SIM Batch Management (selected), Subscriber Management, Administration, and Log Out. The main panel is titled "Associate Subscription" and contains four numbered tabs: 1 General, 2 RAT, 3 Multi-SIM, and 4 Operator Specific. Under tab 1, there are four expandable sections: "Subscriber Identifier", "ODB Data", "PLMN Group", and "General". A red "NEXT" button is located at the bottom right of the main panel.

This section contains the below sub-sections:

- [Subscriber Identifier](#)
- [ODB Data](#)
- [PLMN Group](#)
- [General](#)

The screenshot shows the "Subscriber Identifier" configuration screen. It has two input fields: "SUPI *" containing "imsi-404201934567811" and "MSISDN" which is currently empty.

Subscriber Identifier

Field Name	Description	Mandatory
SUPI	Subscription Identifier	Yes
MSISDN	MSISDN (Public identifier of subscription)	No

+ ODB Data

Operator Determined Barring	HPLMN ODB
All outgoing international calls	Type 1

ODB Data

Field Name	Description	Mandatory
Operator Determined Barring	<p>A bit mask indicating the services of a subscriber that are barred by the operator.</p> <ul style="list-style-type: none"> • 0- All Packet oriented service barred • 1- Roamer access to HPLMN-AP barred • 2- Roamer access to VPLMN-AP barred • 3- Barring of all outgoing calls • 4- Barring of all outgoing international calls • 5- Barring of all outgoing international calls except those directed to the HPLMN country • 6- Barring of all outgoing inter-zonal calls • 7- Barring of all outgoing inter-zonal calls except those directed to the HPLMN country • 8- Barring of all outgoing international calls except those directed to the HPLMN country and Barring of all outgoing inter-zonal calls 	No
HPLMN ODB	<p>A bit mask indicating the HPLMN specific services of a subscriber that are barred by the operator.</p> <ul style="list-style-type: none"> • 0- HPLMN specific barring type 1 • 1- HPLMN specific barring type 2 • 2- HPLMN specific barring type 3 • 3- HPLMN specific barring type 4 	No

+ PLMN Group

PLMN Group *
Country

PLMN Group

Field Name	Description	Mandatory
PLMN Group	The PLMN group associated with the subscription	

+ General

3GPP Charging Characteristics

RAT Frequency Selection Priority ID

Roaming Restricted Due To Unsupported Feature

None

MPS Priority

None

Subscription Data Flags

None

UE Usage Type

Subscribed ARPI

Teleservice List

TS Code

+ | -

Call Barring Info

SS Code

SS Status

AMBR

Max Requested Downlink Bandwidth

 bps

Max Requested Uplink Bandwidth

 bps

Extended Max Requested Downlink Bandwidth

 bps

Extended Max Requested Uplink Bandwidth

 bps

IMSI Group Id

Group Service ID

Group PLMN ID

Local Group ID

V2X Subscription Data	V2X Permission	UE PC5 AMBR
	None	
V2X Subscription Data NR	V2X Permission	UE PC5 AMBR
	None	
NEXT		

General		
Field Name	Description	Mandatory
3GPP Charging Characteristics	Subscriber level 3GPP Charging Characteristics <ul style="list-style-type: none">• 0800 - Normal Charging• 0400 - Prepaid Charging• 0200 - Flat Rate Charging• 0100 - Hot Billing	No
RAT Frequency Selection Priority ID	Contains the subscribed value of Subscriber Profile ID for RAT/Frequency Priority.	No
Roaming Restricted Due To Unsupported Feature	Indicates that roaming is restricted due to unsupported feature.	No
MPS Priority	MPS priority, contains a bit mask	No
Subscription Data Flags	Contains a bit mask	No
UE Usage Type	Indicates the usage characteristics of the UE that enables the selection of a specific Dedicated Core Network (DCN).	No
Subscribed ARPI	Contains the subscribed value of the Additional RRM Policy Index	No
TS Code	Tele-Services Code for all speech transmission, Telephony, emergency calls, SMS-MT, SMS-MO	Yes
Call Barring Info		
SS Code	Supplementary Service Code	Yes
SS Status	Supplementary Service Status	Yes
AMBR		
Max Requested Downlink Bandwidth	Indicates the maximum requested bandwidth in bits per second for an downlink IP flow.	Yes
Max Requested Uplink Bandwidth	Indicates the maximum requested bandwidth in bits per second for an uplink IP flow.	Yes

Extended Max Requested Downlink Bandwidth	Indicates the maximum requested bandwidth in kbit per second for an downlink IP flow.	No
Extended Max Requested Uplink Bandwidth	Indicates the maximum requested bandwidth in kbit per second for an uplink IP flow.	No
IMSI Group ID		
Group Service ID	Identifies the specific service for which the IMSI-Group-Id is used.	Yes
Group PLMN ID	Contains the concatenation of MCC and MNC	Yes
Local Group ID	Operator defined value	Yes
V2X Subscription Data		
V2X Permission	Contains a bit mask that indicates the permissions for V2X service subscribed by the user.	No
UE PC5 AMBR	Maximum bits delivered by UE over the PC5 interface within a period of time. The unit of UE-PC5-AMBR is bits/s.	No
V2X Subscription Data NR		
V2X Permission	Contains a bit mask that indicates the permissions for V2X service subscribed by the user.	No
UE PC5 AMBR	Maximum bits delivered by UE over the PC5 interface within a period of time. The unit of UE-PC5-AMBR is bits/s.	No

Click the 'NEXT' button once all relevant fields have been entered.

RAT - Add 4G Subscription

Field Name	Description	Mandatory
Access Restriction Data	<p>Shall contain a bit mask where each bit when set to 1 indicates a restriction.</p> <ul style="list-style-type: none"> • 0 - UTRAN not allowed • 1- GERAN not allowed • 2- GAN not allowed • 3- I-HSPA-A-Evolution not allowed • 4- WB-E-UTRAN not allowed • 5- HO-To-Non-3GPP access not allowed • 6- NB-IoT not allowed • 7- Enhanced coverage not covered • 8- NR as secondary RAT in E-UTRAN not allowed • 9- unlicensed spectrum as secondary RAT not allowed • 10- NR in 5GS not allowed • 11- LTE-M Not allowed • 12- WB-E-UTRAN Except LTE-M Not allowed 	No
Network Access Mode	<p>This field contains a bit for network access mode.</p> <p>0 - PACKET_AND_CIRCUIT 1 - Reserved 2 - ONLY_PACKET</p>	No
Core Network Restrictions	Contains a bit mask indicating the types of Core Network that are disallowed for a given user.	No

Broadcast Location	This bit when set indicates that the UE is subscribed to receive ciphering keys applicable to respective positining SIB type. Bit value = 0 to 26.	No
Adjacent Access Restriction Data	Contains a pair of PLMN ID and the associated Access Restriction Data for that PLMN.	Yes

Multi-SIM: Add 4G Subscription

The screenshot shows the ALEPO software interface for managing SIM cards. On the left is a dark sidebar with navigation links: Dashboard, Service Configuration, SIM Batch Management, Subscriber Management, Administration, and Log Out. The main area is titled "Associate Subscription" and displays a progress bar with four steps: General (step 1), RAT (step 2), Multi-SIM (step 3, currently active), and Operator Specific (step 4). Below the progress bar is a field labeled "Additional MSISDN" with an empty input box. At the bottom right are "PREV" and "NEXT" buttons.

Field Name	Description	Mandatory
Additional MSISDN	Additional MSISDN (Required in ULA)	No

Operator Specific - Add 4G Subscription

Associate Subscription

General RAT Multi-SIM Operator Specific (4)

UE SRVCC Capability UE-SRVCC-SUPPORTED	URRP MME DISABLED
STN SR	ICS Indicator TRUE
APN IO Replacement	Subscribed Periodic RAU TAU Timer
VPLMN LIPA Allowed LIPA_NOTALLOWED	Relay Node Indicator RELAY_NODE
MDT User Consent CONSENT_GIVEN	Subscribed VSRVCC None
DL Buffering Suggested Packet Count	External Identifier
Active Time	Service Gap Time

Aerial UE Subscription Information

AERIAL_UE_NOT_ALLOWED	IAB Operation Permission IAB_OPERATION_NOTALLOWED
-----------------------	--

Terminal Information

IMEI 12345678901234	Software Version 01
------------------------	------------------------

LCS Info

GMLC Number	LCS Privacy Exception
SS Code	SS Status

ProSe Subscription Data

ProSe Permission 1

AESE Communication Pattern

SCEF ID <input type="text" value="abcd.com"/>	SCEF Reference ID <input type="text" value="1"/>
SCEF Reference ID for Deletion <input type="text" value="1"/>	MTC Provider ID <input type="text"/>

Monitoring Event Configuration

SCEF ID <input type="text" value="abcd.com"/>	Monitoring Type UE_REACHABILITY
SCEF Reference ID <input type="text" value="1"/>	SCEF Reference ID for Deletion <input type="text" value="0"/>
Maximum Number of Reports <input type="text"/>	Monitoring Duration <input type="text"/>
Charged Party <input type="text"/>	SCEF Realm <input type="text"/>
External Identifier <input type="text"/>	MTC Provider ID <input type="text"/>
Service Selection <input type="text"/>	

UE Reachability Configuration

Reachability Type Reachability for SMS	Maximum Latency <input type="text" value="0"/>
Maximum Response Time <input type="text" value="0"/>	DL Buffering Suggested Packet Count <input type="text" value="0"/>

Location Configuration Information

MONTE Location Type CURRENT_LOCATION	Accuracy None
Periodic Time <input type="text" value="0"/>	

Emergency Info

MIP Home Agent Address <input type="text"/> + -	Destination Host <input type="text"/>	Destination Realm <input type="text"/>
--	--	---

EDRX Cycle Length	RAT Type	EDRX Cycle Length Value
<input type="text"/>	<input type="text"/>	<input type="text"/>
Paging Time Window	Operation Mode	Paging Time Window Length
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="button" value="PREV"/> <input type="button" value="SAVE"/>		

Field Name	Description	Mandatory
UE SRVCC Capability	Indicates if the UE supports or does not support the SRVCC capability.	No
URRP MME	User Reachability Request Parameter for MME	No
STN SR	Contains the Session Transfer Number for SRVCC.	No
ICS Indicator	ICS Indicator (0 - FALSE and 1 - TRUE)	
APN IO Replacement	Indicates the domain name to replace the APN OI for the non-roaming case and the home routed roaming case when constructing the APN, and the APN-FQDN upon which to perform a DNS resolution.	No
Subscribed Periodic RAU TAU Timer	Contains the subscribed periodic RAU/TAU timer value in seconds	No
VPLMN LIPA Allowed	Indicates whether the UE is allowed to use LIPA in the VPLMN where the UE is roaming.	No
Relay Node Indicator	Indicates whether the subscription data belongs to a Relay Node or not	No
MDT User Consent	Indicates whether the user has given his consent for MDT activation or not	No
Subscribed VSRVCC	Indicates that the user is subscribed to the vSRVCC	No
DL Buffering Suggested Packet Count	Indicates whether extended buffering of downlink packets at the SGW, for High Latency Communication, is requested or not.	No
External Identifier	External identifier of UE.	No
Active Time	Active time granted to the UE in seconds.	No

Field Name	Description	Mandatory
Service Gap Time	Indicates the minimum number of seconds during which the UE shall stay in ECM-IDLE mode, after leaving the ECM-CONNECTED mode, before being allowed to send a subsequent connection request to enter ECM-CONNECTED mode again.	No
Aerial UE Subscription Information	Indicates the subscription of Aerial UE function.	No
IAB Operation Permission	Indicates to the MME or SGSN whether the UE is allowed for IAB operation.	No
Terminal Information		
IMEI	Contains the International Mobile Equipment Identity,	No
Software Version	Indicates the maximum requested bandwidth in bits per second for an downlink IP flow	No
LCS Info		
GMLC Number	Contains the ISDN number of the GMLC in international number format	No
LCS Privacy Exception	Contains the classes of LCS Client that are allowed to locate any target UE.	No
SS Code	Supplementary Service Code	No
SS Status	Supplementary Service Status	No
ProSe Subscription Data		
ProSe Permission	Contains a bit mask that indicates the permissions for ProSe subscribed by the user.	Yes
AESE Communication Pattern		
SCEF ID	Contains the identity of the SCEF which has originated the service request towards the HSS.	Yes
SCEF Reference ID	Contains the identifier provided by the SCEF.	No
SCEF Reference ID for Deletion	Contain the SCEF-Reference-ID (in combination with the SCEF identified by the SCEF-ID) for the event to be deleted.	No
MTC Provider ID	Contains the information associated to the MTC Service Provider and/or MTC Application.	No
Monitoring Event Configuration		
SCEF ID	Contains the identity of the SCEF which has originated the service request towards the HSS.	Yes
Monitoring Type	<ul style="list-style-type: none"> • 0 - LOSS_OF_CONNECTIVITY • 1 - UE_REACHABILITY • 2 - LOCATION_REPORTING • 3 - CHANGE_OF_IMSI_IMEI(SV)_ASSOCIATION • 4 - ROAMING_STATUS • 5 - COMMUNICATION_FAILURE • 6 - AVAILABILITY_AFTER_DDN_FAILURE 	Yes

Field Name	Description	Mandatory
	<ul style="list-style-type: none"> • 7 - NUMBER_OF_UES_PRESENT_IN_A_GEOGRAPHICAL_AREA • 8 - UE_REACHABILITY_AND_IDLE_STATUS_INDICATION • 9 - AVAILABILITY_AFTER_DDNN_FAILURE_AND_IDLE_STATUS_INDICATION • 10 - PDN_CONNECTIVITY_STATUS 	
SCEF Reference ID	Contains the identifier provided by the SCEF.	No
SCEF Reference ID for Deletion	Contain the SCEF-Reference-ID (in combination with the SCEF identified by the SCEF-ID) for the event to be deleted.	No
Maximum Number of Reports	Contains the number of reports to be generated and sent to the SCEF.	No
Monitoring Duration	Contains the absolute time at which the related monitoring event request is considered to expire.	No
Charged Party	Holds the address (Public User ID: SIP URI, TEL URI, etc.) of the party to be charged.	No
SCEF Realm	Contains the Diameter realm of the SCEF.	No
External Identifier	External identifier of UE.	No
MTC Provider ID	Contains the information associated to the MTC Service Provider and/or MTC Application.	No
Service Selection	service selection for PDN connectivity status configuration	No
UE Reachability Configuration		
Reachability Type	<p>This bit, when set, indicates that the monitoring for reachability for SMS/Data of the UE is to be configured</p> <p>0- reachability for SMS 0- reachability for Data</p>	No
Maximum Latency	Contains the maximum acceptable delay time for downlink data transfer in seconds.	No
Maximum Response Time	Contains the maximum time in seconds for which the UE stays reachable.	No
DL Buffering Suggested Packet Count	<p>Indicates whether extended buffering of downlink packets at the SGW, for High Latency Communication, is requested or not.</p> <ul style="list-style-type: none"> • Extended DL Data Buffering NOT REQUESTED 0 • Extended DL Data Buffering REQUESTED, without a suggested number of packets -1 • Extended DL Data Buffering REQUESTED, with a suggested number of packets > 0 	No
Location Configuration Information		
MONTE Location Type	Indicates the type of location information to be provided.	No

Field Name	Description	Mandatory
Accuracy	Contains requested accuracy.	No
Periodic Time	The time in seconds of the interval for periodic communication.	No
Emergency Info		
MIP Home Agent Address	<p>Contains either IPv4 or IPv6 address of the PDN-GW and this IP address shall be used as the PDN-GW IP address.</p> <ul style="list-style-type: none"> • an IPv4 address or an IPv6 address of the PGW contained in one MIP-Home-Agent-Address AVP; • both IPv4 address and IPv6 address of the PGW contained in two MIP-Home-Agent-Address AVPs. 	No
Destination Host	Contains the hostname of the PDN-GW,	No
Destination Realm	MNC and MCC values indicate the PLMN where the PDN-GW is located.	No
EDRX Cycle Length		
RAT Type	Radio access type for extended DRX cycle	Yes
EDRX Cycle Length Value	Contains the extended DRX cycle value subscribed for this user for a given RAT type.	Yes
Paging Time Window		
Operation Mode	Indicates the operation mode for which the Paging-Time-Window-Length applies.	Yes
Paging Time Window Length	Contains the Paging time window length subscribed for this user for a given operation mode.	Yes

- Fill in the required details to add and associate the SUPI/IMSI to the 4G subscription.
- Once completed, click the 'Save' icon to save the changes.

5G Subscriptions

Description

This page describes about associating a 5G subscription to a SUPI.

Associate 5G Subscription

The screenshot shows the Alepo SDM Agent Portal interface. On the left is a dark sidebar with navigation links: Dashboard, Service Configuration, SIM Batch Management, Subscriber Management, Administration, and Log Out. The main area has a light gray header with a search bar containing 'IMSI' and the value '404201934567844', and a red 'SEARCH' button. Below this is a section titled 'Subscribers' with a table. The table has columns: 'Subscriber ID', 'Status', 'Last Updated Date', 'Last Updated By', and 'Actions'. One row is visible: 'imsi-404201934567844', 'Active', '09-19-2020 05:56:22', 'admin', and three small icons. At the bottom of the main area, it says 'Alepo@2020' and 'SDM Agent Portal-v1.0.0'. In the top right corner, there is a user icon with 'S' and 'superadmin' next to it.

Enter the SUPI for which 5G subscription is to be attached, and hit the 'Search' button. Then click the icon against the SUPI in question. This will bring up the below screen.

ALEPO

superadmin

Dashboard

Service Configuration

SIM Batch Management

Subscriber Management

Administration

Log Out

Add Subscription

Select a subscription to add

5G Subscription

Subscribers

imsi-404201934567844 Active 09-19-2020 05:56:22 admin

CLOSE PROCEED

Last Updated By Actions

0 selected / 1 total

Alepo@2020 SDM Agent Portal-v1.0.0

Select '5G Subscription' radio-button and click 'Proceed'. Complete entering all necessary fields in the sections seen in the below screenshot.

ALEPO

superadmin

Dashboard

Service Configuration

SIM Batch Management

Subscriber Management

Administration

Log Out

Associate Subscription

1 General 2 Access and Mobility 3 SMS 4 Multi-SIM 5 Operator Specific

Subscriber Identifier

ODB Data

PLMN Group

Timer

NEXT

Subscription Management Module Name	Description
<u>General</u>	The General section categorized under Subscriber Identifier, ODB Group, PLMN Group, and Timer.
<u>Access and Mobility</u>	Includes the access and mobility details of the subscription categorized under Default Subscription, and RAT.
<u>SMS</u>	The SMS section includes the SMS details including that of MT (Mobile Terminated) and MO (Mobile Originated) messages.
<u>Multi-SIM</u>	The Multi-SIM section includes the additional GPSI details for the subscription.
<u>Operator-Specific</u>	The Operator-Specific section provides Shared Data, Trace Data and Operator Specific additional fields.

- Complete the required details to add and associate the 5g subscription to SUPI.
- Once completed, click the Save icon to save the changes.

General

The General section under Add/Associate Subscription provides the general information of the Subscription categorized under Subscriber Identifier, ODB Group, PLMN Group, and Timer.

Section Name	Field Name	Description	Mandatory
Subscriber Identifier	SUPI	SUPI of the 5G Subscription	Yes
	GPSI	Subscription identifier	No
ODB Data	ODB Packet Services	Operator Determined Barring for Packet Oriented Services. • ALL_PACKET_SERVICES • ROAMER_ACCESS_HPLMN_AP • ROAMER_ACCESS_VPLMN_AP	Yes
	Roaming ODB	Operator Determined Barring options for roaming. • OUTSIDE_HOME_PLMN • OUTSIDE_HOME_PLMN_COUNTRY • ROAMER_ACCESS_VPLMN_AP	Yes
PLMN Group	PLMN Group	The PLMN Group to be associated with the subscription.	Yes
		Note	

Section Name	Field Name	Description	Mandatory
		'PLMN Group' will NOT appear if the SUPI/IMSI in question has already been associated with it (in a 4G subscription)	
Timer	Subs Registration Timer	Subscribed Periodic Registration Timer.	No
	Active Time	Subscribed Active Time for PSM UEs.	No
	Service Gap Time	Used to set Service Gap timer for service gap control.	No

Click the 'NEXT' button once done with filling all relevant fields.

Access and Mobility

The Access and Mobility section under Add/Associate Subscription provides the Access and Mobility details of the Subscription categorized under Default Subscription, and RAT.

Associate Subscription

General 2. Access and Mobility 3. SMS 4. Multi-SIM 5. Operator Specific

Default Subscription

Subscribed UE AMBR

Downlink: 100 Mbps Uplink: 80 Mbps

RFSP Index Internal Group IDs

UE Usage Type DL Packet Count

MPS Priority Indicator MCS Priority Indicator

Mico Allowed

RAT

RAT Restrictions: NR, EUTRAN, NB-IOT Core Network Type Restrictions: None

Add Forbidden Areas Service Area Restrictions: None

Max Number Of TAs Max Number Of TAs For Not Allowed Areas

Add Service Areas

PREV NEXT

Section Name	Field Name	Description	Mandatory
Default Subscription	Subscribed UE AMBR		
	Downlink (Bps/Kbps/Mbps/Gbps)	APN Aggregate Maximum Bit Rate or AMBR defines the maximum aggregated uplink and downlink bit rates which are to be shared across all Non-GBR QoS Flows in each PDU Session.	No
	Uplink (Bps/Kbps/Mbps/Gbps)		No
	RFSP Index	Index to RAT/Frequency Selection Priority.	No
	Internal Group IDs	List of Internal group identifiers.	No

Section Name	Field Name	Description	Mandatory
	UE Usage Type	Indicates the usage characteristics of the UE, enables the selection of a specific Dedicated Core Network for EPS interworking.	No
	DL Packet Count	The following values are defined: <ul style="list-style-type: none">• 0: "Extended DL Data Buffering NOT REQUESTED"• -1: "Extended DL Data Buffering REQUESTED, without a suggested number of packets"• n>0: "Extended DL Data Buffering REQUESTED, with a suggested number of n packets"	No
	MPS Priority Indicator	Indicates whether UE is subscribed to multimedia priority service.	No
	MCS Priority Indicator	Indicates whether UE is subscribed to mission-critical service.	No
	Mico Allowed	Indicates whether MICO mode is allowed for the UE.	No
RAT	RAT Restrictions	List of RAT Types that are restricted. <ul style="list-style-type: none">• NR• EUTRAN• WLAN• VIRTUAL• NB-IOT	Yes
	Core Network Type Restrictions	List of Core network Types that are restricted. <ul style="list-style-type: none">• 5GC• EPC	Yes
	Forbidden Areas	List of Forbidden Areas.	No
	Area Code	Operator Specific value, shall be present if and only if TACs is absent.	No
	TACs	List of TACs, shall be present if and only if Area Code is absent	No
	Service Area Restrictions	Subscribed Service Area Restriction	No
	Max Number Of TAs	Count of Maximum number of TAs Present only when Restriction Type="ALLOWED AREAS"	No
	Max Number Of TAs For Not Allowed Areas	Count of Maximum number of TAs for Not allowed areas	No

- Complete the required fields in the Access and Mobility section.
- Click on the button to go to the next section - [SMS](#).

SMS

The SMS section under Add/Associate Subscriptions contains the SMS details including that of MT (Mobile Terminated) and MO (Mobile Originated) messages.

Associate Subscription

General Access and Mobility **3 SMS** Multi-SIM Operator Specific

SMS Subscribed Shared SMS Subscribed Data Identification

MT Service

MT SMS Subscribed MT SMS Barring All

MT SMS Barring Roaming

MO Service

MO SMS Subscribed MO SMS Barring All

MO SMS Barring Roaming

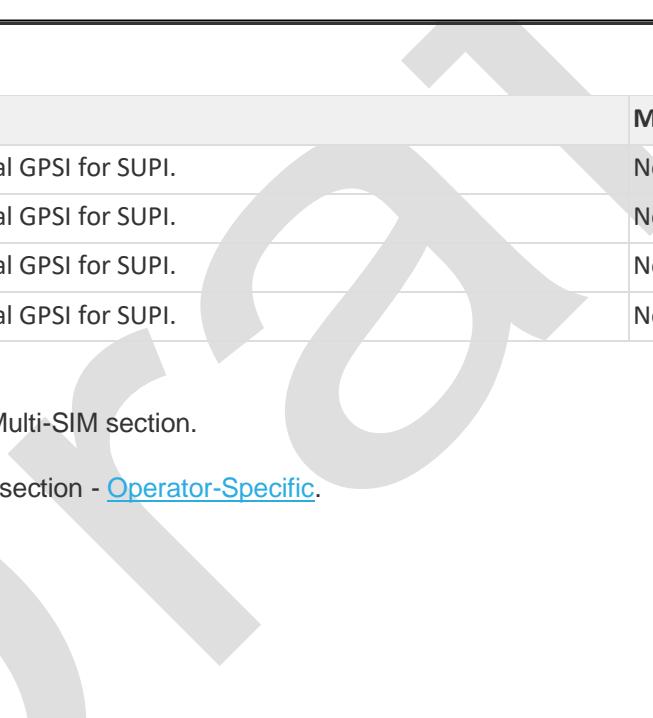
PREV **NEXT**

Field Name	Description	Mandatory
SMS Subscribed	Indicates whether the UE subscription allows SMS delivery over NAS.	No
Shared SMS Subscribed Data Identification	Identifier of shared data. Shall be present if smsSubscribed is absent	No
MT Service		
MT SMS Subscribed	Indicates the SMS teleservice subscription for MT-SMS. Shall not be absent unless the feature SharedData is supported and mtSmsSubscribed is present within shared data	No
MT SMS Barring All	Barring of All MT-SMS.	No
MT SMS Barring Roaming	Barring of MT-SMS when roaming outside the Home Public Land Mobile Network (PLMN) country.	No
MO Service		
MO SMS Subscribed	Indicates the SMS teleservice subscription for MO-SMS. Shall not be absent unless the feature SharedData is supported and mtSmsSubscribed is present within shared data.	No
MO SMS Barring All	Barring of All MO-SMS.	No
MO SMS Barring Roaming	Barring of MO-SMS when roaming outside the Home Public Land Mobile Network (PLMN) country.	No

- Complete the required fields in the Access and Mobility section.
- Click on the button to go to the next section - [Multi-SIM](#).

Multi-SIM

The Multi-SIM Section under Add/Associate Subscriptions contains the additional GPSI details for the subscription.



Associate Subscription

General Access and Mobility SMS Multi-SIM Operator Specific

GPSI 1: msisdn-123010000

GPSI 2:

GPSI 3:

GPSI 4:

PREV NEXT

Field Name	Description	Mandatory
GPSI 1	An additional GPSI for SUPI.	No
GPSI 2	An additional GPSI for SUPI.	No
GPSI 3	An additional GPSI for SUPI.	No
GPSI 4	An additional GPSI for SUPI.	No

- Complete the required fields in the Multi-SIM section.
- Click on the button to go to the next section - [Operator-Specific](#).

Operator Specific

The Operator-Specific section under View/Edit Subscriptions provides us the details of the Operator-Specific details of the Subscription categorized under Shared Data, Trace Data and Operator Specific Container.

Associate Subscription

General Access and Mobility SMS Multi-SIM Operator Specific (5)

+ Shared Data

+ Trace Data

+ Operator Specific Container

PREV SAVE



+ Shared Data

Shared Data ID: 3fa85f64-5717-4562-b3fc-2c963f66afa7

Shared AM Data

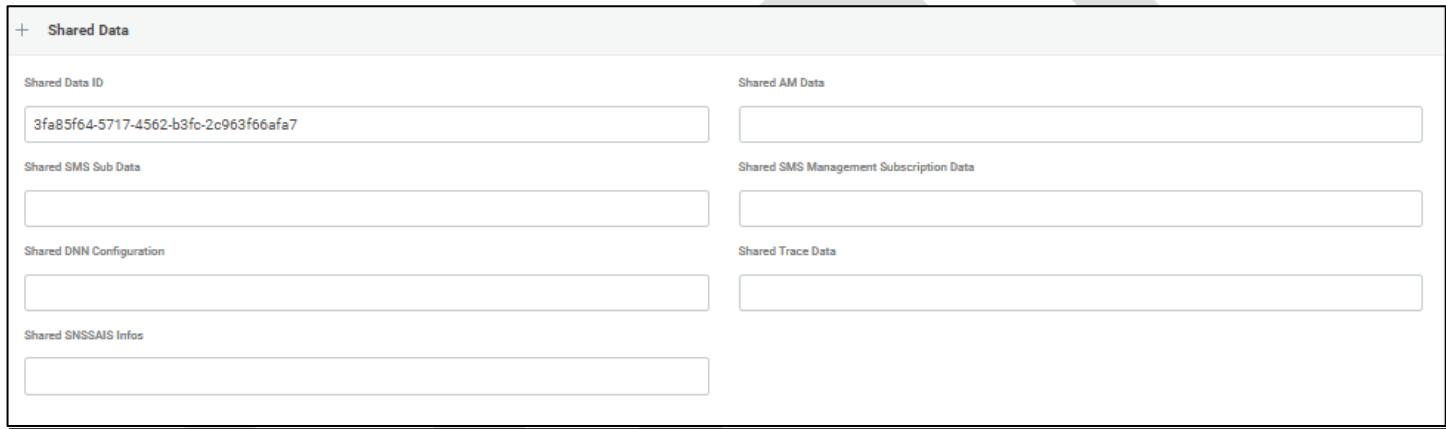
Shared SMS Sub Data

Shared SMS Management Subscription Data

Shared DNN Configuration

Shared Trace Data

Shared SNSSAIS Infos



+ Trace Data

Trace Reference: 40420-abc123

NE Type List: Ac2

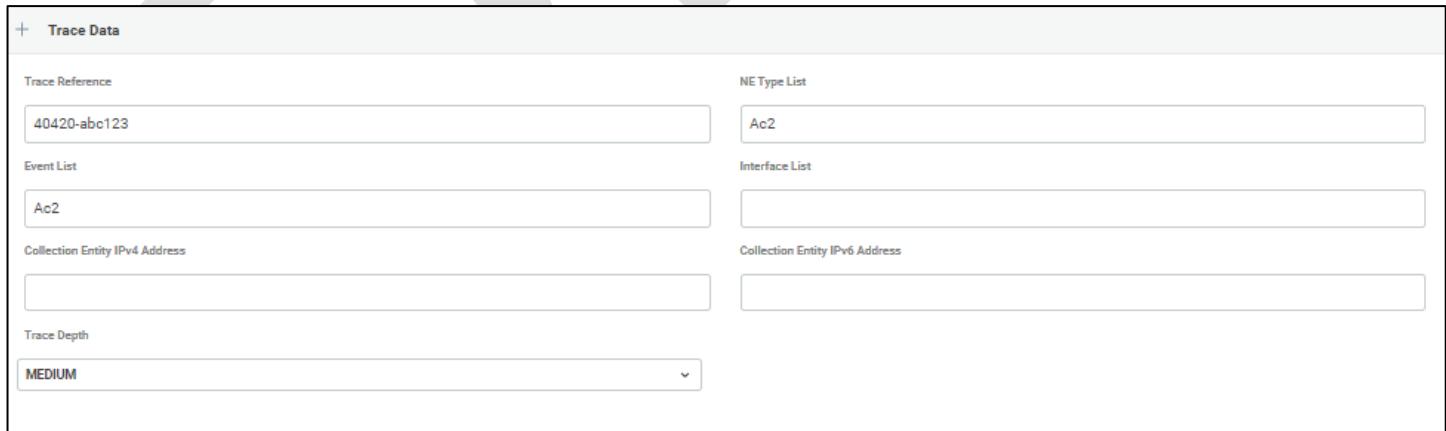
Event List: Ac2

Interface List

Collection Entity IPv4 Address

Collection Entity IPv6 Address

Trace Depth: MEDIUM



+ Operator Specific Container

Custom Fields

Custom Field 1	Custom Field 2
ausf1	udm2
Custom Field 3	Custom Field 4
Custom Field 5	

Custom Number Fields

Custom Number Field 1	Custom Number Field 2
1	2
Custom Number Field 3	Custom Number Field 4
Custom Number Field 5	

Custom Data Fields

Custom Data Field 1	Custom Data Field 2
2020-02-12T09:47:46Z	
Custom Data Field 3	Custom Data Field 4
Custom Data Field 5	

PREV
SAVE

Section Name	Field Name	Description	Mandatory
Shared Data	Shared Data ID	Identifier of the shared data	Yes
	Shared Data AM	Shared Access and Mobility Subscription Data	No
	Shared SMS Sub Data	Shared SMS Subscription Data	No
	Shared SMS Management Subscription Data	Shared SMS Management Subscription Data	No
	Shared DNN Configuration	Shared DNN configurations	No
	Shared Trace Data	Share Trace Data	No
	Shared SNSSAIS Infos	Shared Snssai Infos	No

Section Name	Field Name	Description	Mandatory
Trace Data	Trace Reference	Trace Reference. It shall be encoded as the concatenation of MCC, MNC and Trace ID as follows: <MCC><MNC>-<Trace ID> Pattern: '^[0-9]{3}[0-9]{2,3}-[A-Fa-f0-9]{6}\$'	Yes
	NE Type List	List of NE Types for encoding.	Yes
	Event List	Triggering events for encoding.	Yes
	Interface List	If this attribute is not present, all the interfaces applicable to the list of NE types indicated in the neTypeList attribute should be traced.	No
	Collection Entity IPv4 Address	IPv4 Address of the Trace Collection Entity	Yes
	Collection Entity IPv6 Address	IPv6 Address of the Trace Collection Entity	Yes
Operator Specific Container	Trace Depth	<ul style="list-style-type: none"> MINIMUM MEDIUM MAXIMUM MINIMUM_WO_VENDOR_EXTENSION MEDIUM_WO_VENDOR_EXTENSION MAXIMUM_WO_VENDOR_EXTENSION 	Yes
	Custom String Fields		
	Custom Field 1	Custom Field 1 with Input in String Format.	No
	Custom Field 2	Custom Field 2 with Input in String Format.	No
	Custom Field 3	Custom Field 3 with Input in String Format.	No
	Custom Field 4	Custom Field 4 with Input in String Format.	No
	Custom Field 5	Custom Field 5 with Input in String Format.	No
	Custom Number Fields		
	Custom Number Field 1	Custom Field 1 with Input in Numeric Format.	No
	Custom Number Field 2	Custom Field 2 with Input in Numeric Format.	No
	Custom Number Field 3	Custom Field 3 with Input in Numeric Format.	No
	Custom Number Field 4	Custom Field 4 with Input in Numeric Format.	No
	Custom Number Field 5	Custom Field 5 with Input in Numeric Format.	No
	Custom Date Fields		

Section Name	Field Name	Description	Mandatory
	Custom Date Field 1	Custom Field 1 with Input in Date Format.	No
	Custom Date Field 2	Custom Field 2 with Input in Date Format.	No
	Custom Date Field 3	Custom Field 3 with Input in Date Format.	No
	Custom Date Field 4	Custom Field 4 with Input in Date Format.	No
	Custom Date Field 5	Custom Field 5 with Input in Date Format.	No

- Complete the required fields in the Operator-Specific section.
- Click on the Save button to complete the association of the SUPI to a subscription.

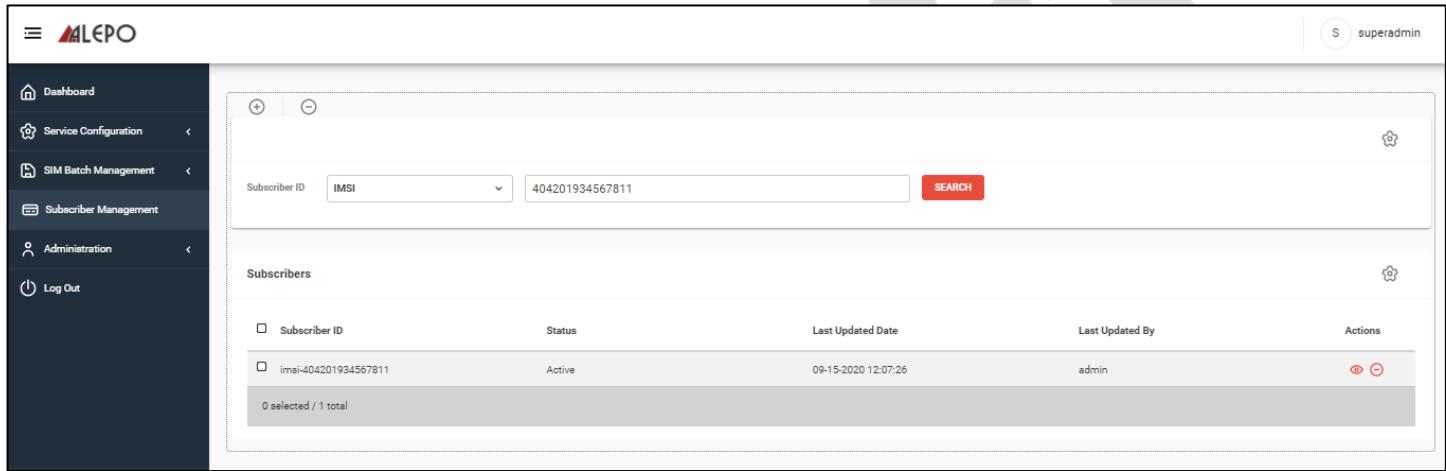
VIEW/MODIFY SUBSCRIPTIONS

View/Edit 4G Subscriptions

Description

This section will enable system users to view/modify the 4G subscription associated with an IMSI or SUPI.

To search a SUPI or IMSI, user can enter the subscriber ID (IMSI or SUPI number) and click the 'Search' button.



The screenshot shows the ALEPO Subscriber Management interface. On the left is a dark sidebar with navigation links: Dashboard, Service Configuration, SIM Batch Management, Subscriber Management (selected), Administration, and Log Out. The main area has a light gray header with a search bar. The search bar has 'Subscriber ID' dropdown set to 'IMSI' and the value '404201934567811'. Below the search bar is a 'Subscribers' table with columns: Subscriber ID, Status, Last Updated Date, Last Updated By, and Actions. One row is visible: 'imsi-404201934567811' (Status: Active, Last Updated Date: 09-15-2020 12:07:26, Last Updated By: admin). At the bottom of the table, it says '0 selected / 1 total'.

If both 4G and 5G subscriptions are present for the SUPI or IMSI searched, and user clicks on  icon, system will display the below screen that will show both 4G and 5G tabs.

Click the 4G tab to view the 4G subscription details of the IMSI or SUPI. System will display the below screen.

The screenshot shows the ALEPO Subscriber Management interface. The left sidebar includes links for Dashboard, Service Configuration, SIM Batch Management, Subscriber Management (selected), Administration, and Log Out. The main content area is titled "Subscriber Management" and shows "Subscription Details" for an IMSI number (404201934567811). The "Data Type" is set to "Subscription". The "4G" tab is active. On the left, a sidebar lists modules: General, Authentication, ODB Data, RAT, Multi SIM, PLMN Group, Operator Specific, and Context Management. The "General" module is expanded, showing "Subscriber Identifier" and "General" sections.

Subscription Management Module Name	Description
General	The General module provides the information of the Subscriber Identifier and
Authentication	The Authentication module provides the Status and Method Information of the Subscription.
ODB Data	The ODB Data module displays ODB related information including ODB Packet Services and Roaming ODB of the Subscription.
RAT	The RAT module displays the RAT Restrictions, Core Network Type Restrictions and Service Area Restrictions of the Subscription.
Multi-SIM	The Multi-SIM module displays the Subscription Multi-SIM information.
PLMN Group	The PLMN Group module displays the PLMN Group information of the Subscription.
Operator-Specific	The Operator-Specific module displays the Operator-Specific information categorized as: <ul style="list-style-type: none"> • Shared Data • Trace Data • Operator-Specific Container
Context Management	The Context Management module displays the Subscription Context Management information categorized as: <ul style="list-style-type: none"> • AMF Context • SMSF Context • SDM Subscription

Subscription Management	Description
Module Name	
	<ul style="list-style-type: none"> EE Subscription SMF Registration

General - 4G

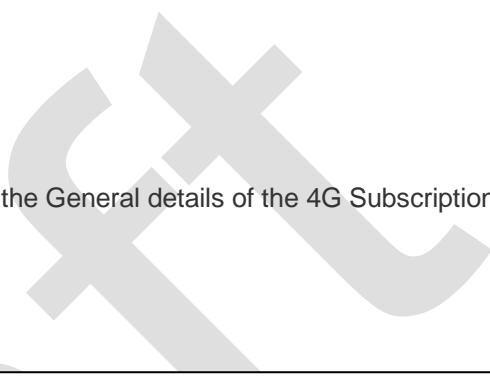
Navigation

SDM Portal>Subscription Management>View/Edit>General

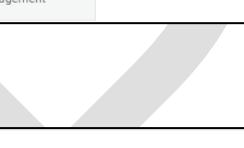
Description

The General section under the View/Edit Subscriptions provides us with the General details of the 4G Subscription. This section is further categorized under 'Subscriber Identifier' and 'General'.

To update, click the  icon.



A screenshot of the ALEPO SDM Portal interface. The left sidebar shows navigation options: Dashboard, Service Configuration, SIM Batch Management, Subscriber Management (selected), Administration, and Log Out. The main content area is titled 'Subscriber Management' and 'Subscription Details'. It displays 'Subscription Details of imsi-404201934567811'. The '4G' tab is selected. On the left, a sidebar lists categories: General, Authentication, ODB Data, RAT, Multi SIM, PLMN Group, Operator Specific, and Context Management. Below the sidebar, there are two expandable sections: 'Subscriber Identifier' and 'General'. The 'Subscriber Identifier' section contains fields for SUPI (imsi-404201934567811) and MSISDN. The 'General' section contains a field for '4G Subscription Status' set to 'Active'. Top right of the main area shows user information: superadmin.



A detailed view of the 'Subscriber Identifier' section from the previous screenshot. It shows the SUPI field containing 'imsi-404201934567811' and the MSISDN field (empty). Below these, the '4G Subscription Status' is shown as 'Active'. At the top right of this panel are edit and gear icons.

General

3GPP Charging Characteristics	RAT Frequency Selection Priority ID
<input type="text"/>	
Roaming Restricted Due To Unsupported Feature	MPS Priority
<input type="text"/> None	<input type="text"/> None
Subscription Data Flags	UE Usage Type
<input type="text"/> None	<input type="text"/>
Subscribed APPI	<input type="text"/>
Teleservice List	
TS Code	<input type="button"/> + <input type="button"/> -
<input type="text"/>	
Call Barring Info	
SS Code	SS Status
<input type="text"/>	<input type="text"/>
AMBR	
Max Requested Downlink Bandwidth	Max Requested Uplink Bandwidth
<input type="text"/>	<input type="text"/> bps
Extended Max Requested Downlink Bandwidth	Extended Max Requested Uplink Bandwidth
<input type="text"/> bps	<input type="text"/> bps
IMSI Group Id	
Group Service ID	Group PLMN ID
<input type="text"/>	<input type="text"/>
Local Group ID	<input type="text"/>
V2X Subscription Data	
V2X Permission	UE PC5 AMBR
<input type="text"/> None	<input type="text"/>
V2X Subscription Data NR	
V2X Permission	UE PC5 AMBR
<input type="text"/> None	<input type="text"/>

Update the required fields and click the  icon to save changes made.

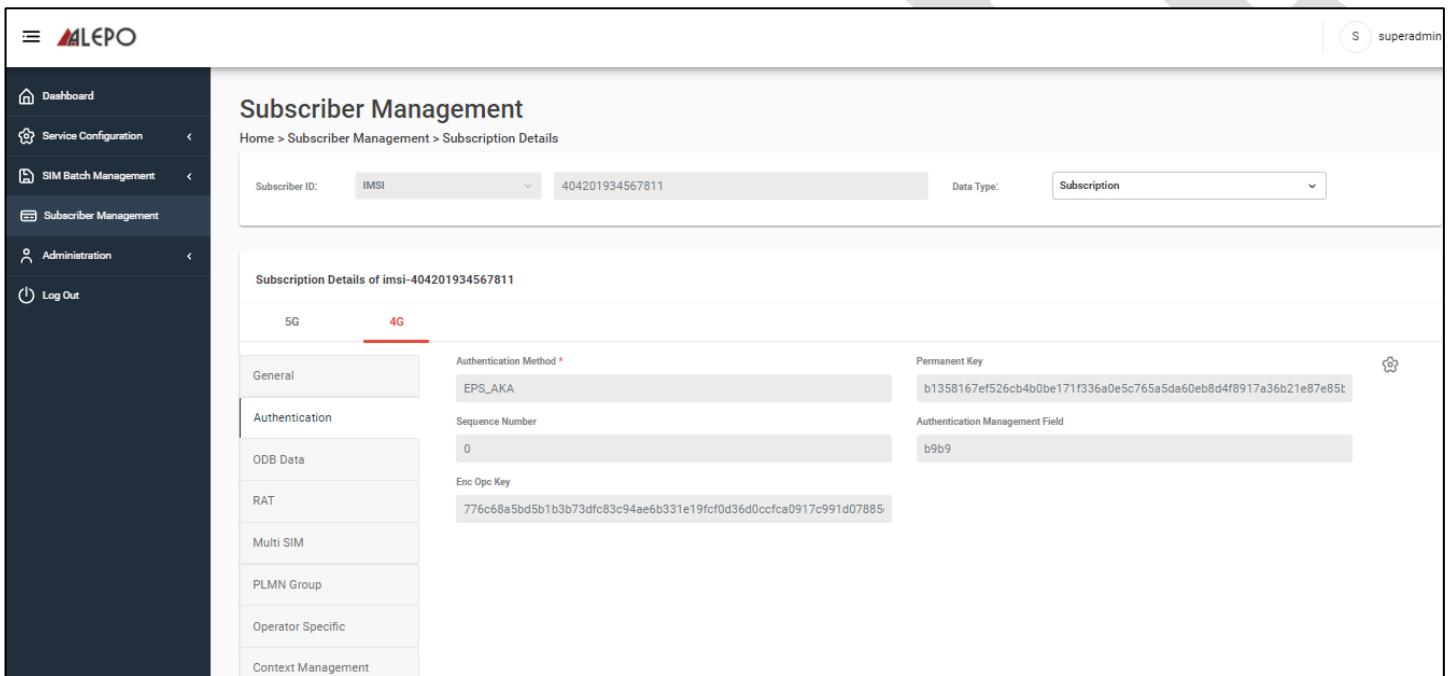
Authentication - 4G

Navigation

SDM Portal>Subscription Management>View/Edit>Authentication

Description

The Authentication section under the View/Edit Subscriptions provides system users with the authentication details of the 4G Subscription. Note that this section is not editable and can only be viewed.



The screenshot shows the 'Subscriber Management' page in the ALEPO SDM Portal. The left sidebar includes links for Dashboard, Service Configuration, SIM Batch Management, Subscriber Management (which is selected), and Administration. The main content area is titled 'Subscriber Management' and 'Subscription Details'. It displays 'Subscription Details of imsi-404201934567811'. The '4G' tab is active. On the left, there's a sidebar with categories: General, Authentication, ODB Data, RAT, Multi SIM, PLMN Group, Operator Specific, and Context Management. The 'Authentication' section contains fields for 'Authentication Method' (set to 'EPS_AKA'), 'Sequence Number' (set to '0'), and 'Permanent Key' (set to 'b1358167ef526cb4b0be171f336a0e5c765a5da60eb8d4fb917a36b21e87e85t'). The 'Enc Opc Key' field contains the value '776c68a5bd5b1b3b73dfc83c94ae6b331e19fcf0d36d0ccfca0917c991d07885'. There are also tabs for '5G' and 'General'.

ODB Data - 4G

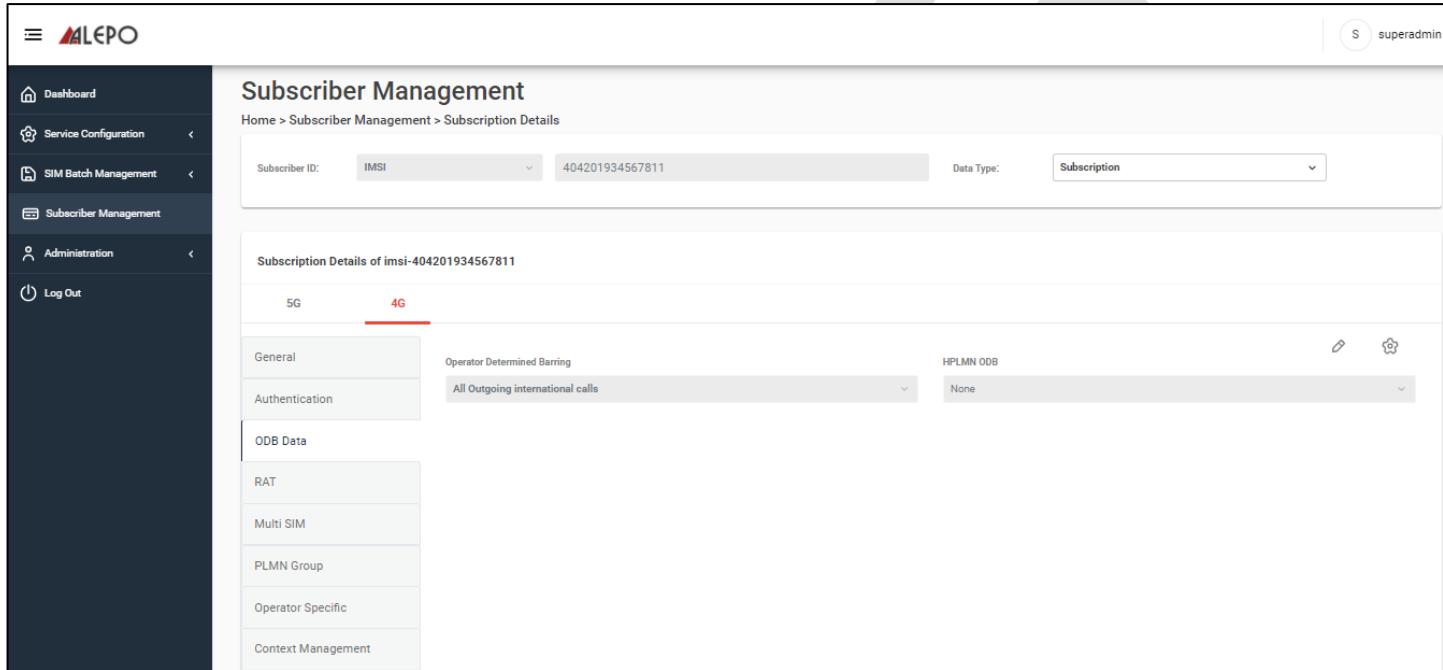
Navigation

SDM Portal>Subscription Management>View/Edit>ODB Data

Description

The ODB section under the View/Edit Subscriptions provides system users with the ODB details of the 4G Subscription.

To update existing fields, click the  icon.



The screenshot shows the ALEPO SDM Portal's Subscriber Management interface. On the left is a dark sidebar with navigation links: Dashboard, Service Configuration, SIM Batch Management, Subscriber Management (which is selected), Administration, and Log Out. The main area has a header "Subscriber Management" and a breadcrumb "Home > Subscriber Management > Subscription Details". Below this, there are search fields for "Subscriber ID" (IMSI) and "Data Type" (Subscription). The main content area is titled "Subscription Details of imsi-404201934567811" and is divided into tabs: 5G and 4G (the latter is selected). Under the 4G tab, there are sections for General (with a dropdown menu showing "All Outgoing international calls"), Authentication (with a dropdown menu showing "None"), and ODB Data (which is currently selected, indicated by a grey border). To the right of these sections are edit () and info () icons. On the far right of the page, there is a user profile for "superadmin".

After all required fields have been updated, click the  icon to save changes made.

RAT - 4G

Navigation

SDM Portal>Subscription Management>View/Edit>RAT

Description

The RAT section under the View/Edit Subscriptions provides system users with the RAT details for the 4G Subscription.

To update existing fields, click the  icon.

ALEPO

superadmin

Subscriber Management

Home > Subscriber Management > Subscription Details

Subscriber ID: IMSI 404201934567811 Data Type: Subscription

Subscription Details of imsi-404201934567811

5G 4G

General Access Restriction Data Network Access Mode

Authentication WB E-UTRAN not allowed, NB-IoT not allowed, Enhanced Coverage not allowed, NR as Seco... PACKET_AND_CIRCUIT

ODB Data Core Network Restrictions Broadcast Location Assistance Data Types

RAT None

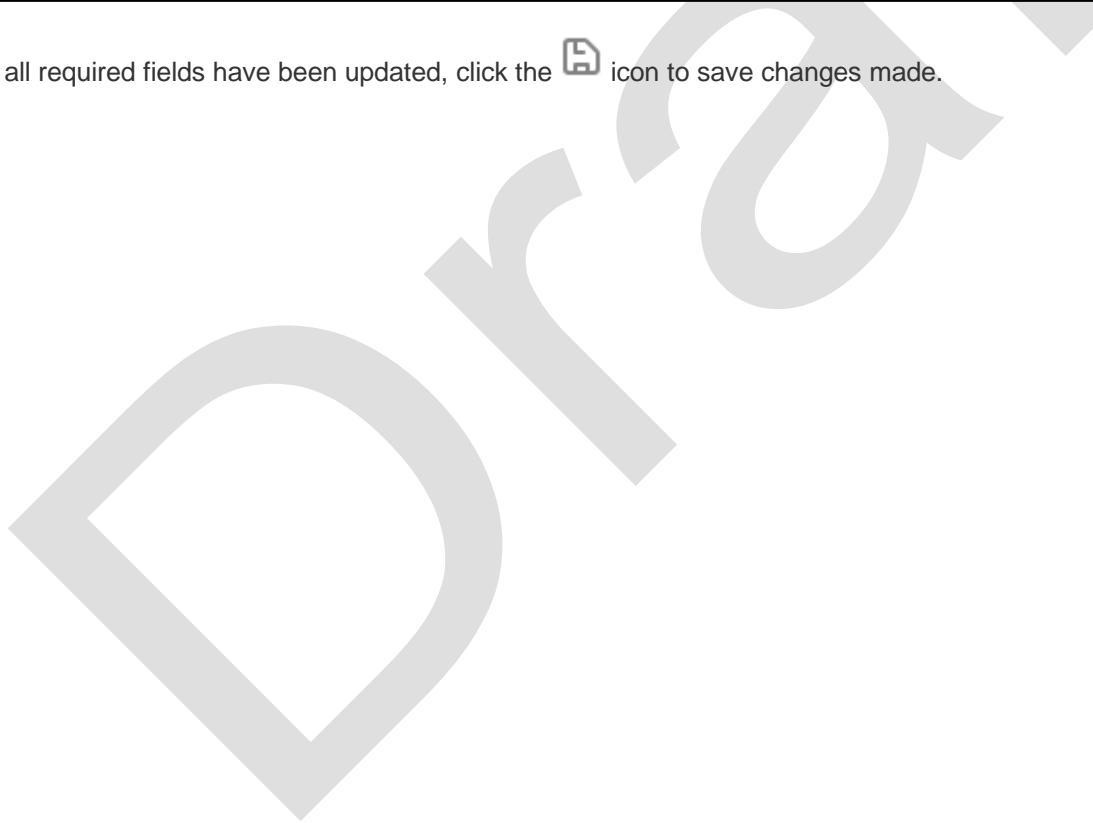
Adjacent Access Restriction Data

Multi SIM Visited PLMN ID Access Restriction Data

PLMN Group

Operator Specific

Context Management



After all required fields have been updated, click the  icon to save changes made.

Multi SIM - 4G

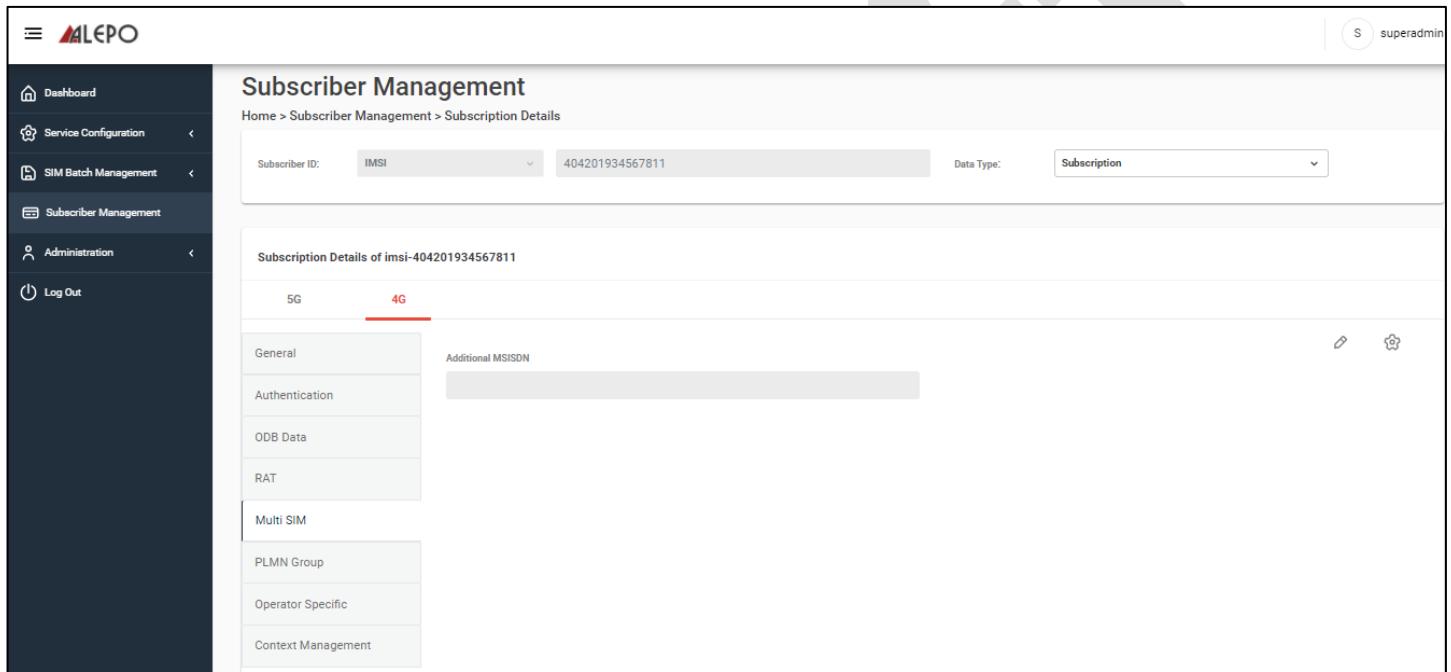
Navigation

SDM Portal>Subscription Management>View/Edit>Multi SIM

Description

The Multi SIM section under the View/Edit Subscriptions provides system users with the Multi SIM details for the 4G Subscription.

To update existing fields, click the  icon.



The screenshot shows the ALEPO SDM Portal's Subscriber Management interface. The left sidebar includes options like Dashboard, Service Configuration, SIM Batch Management, and the currently selected 'Subscriber Management'. Under 'Subscriber Management', there are tabs for General, Authentication, ODB Data, RAT, Multi SIM (which is selected), PLMN Group, Operator Specific, and Context Management. The main content area displays 'Subscription Details of imsi-404201934567811' with a '4G' tab selected. A sub-section titled 'Additional MSISDN' is visible. At the top, there are dropdowns for 'Subscriber ID' (IMSI) and 'Data Type' (Subscription). On the right side of the main content area, there are edit and star icons.

After all required fields have been updated, click the  icon to save changes made.

PLMN Group - 4G

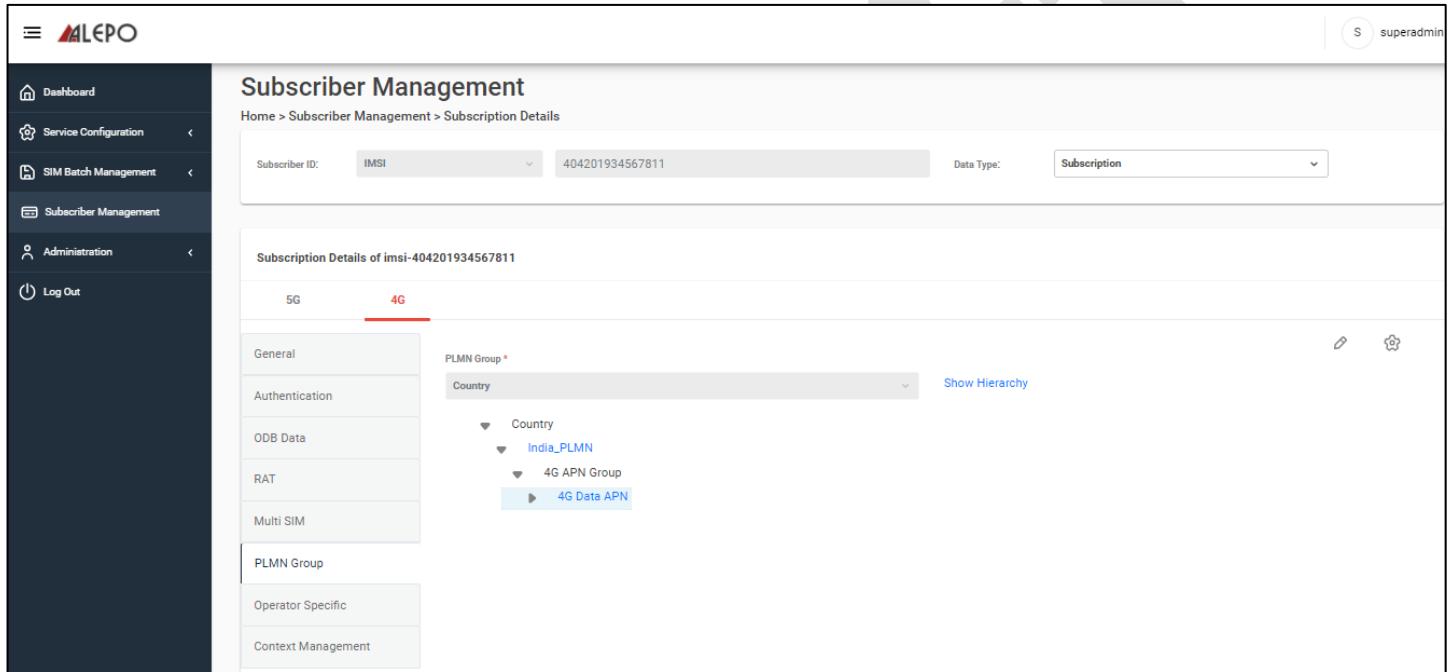
Navigation

SDM Portal>Subscription Management>View/Edit>PLMN Group

Description

The PLMN Group section under the View/Edit Subscriptions provides system users with the PLMN Group details for the 4G Subscription.

To update existing fields, click the  icon.



Clicking on 'Show Hierarchy' will show how the PLMN group is connected to its underlying PLMN template(s), APN group(s) and Template(s).

After all required fields have been updated, click the  icon to save changes made.

Operator Specific - 4G

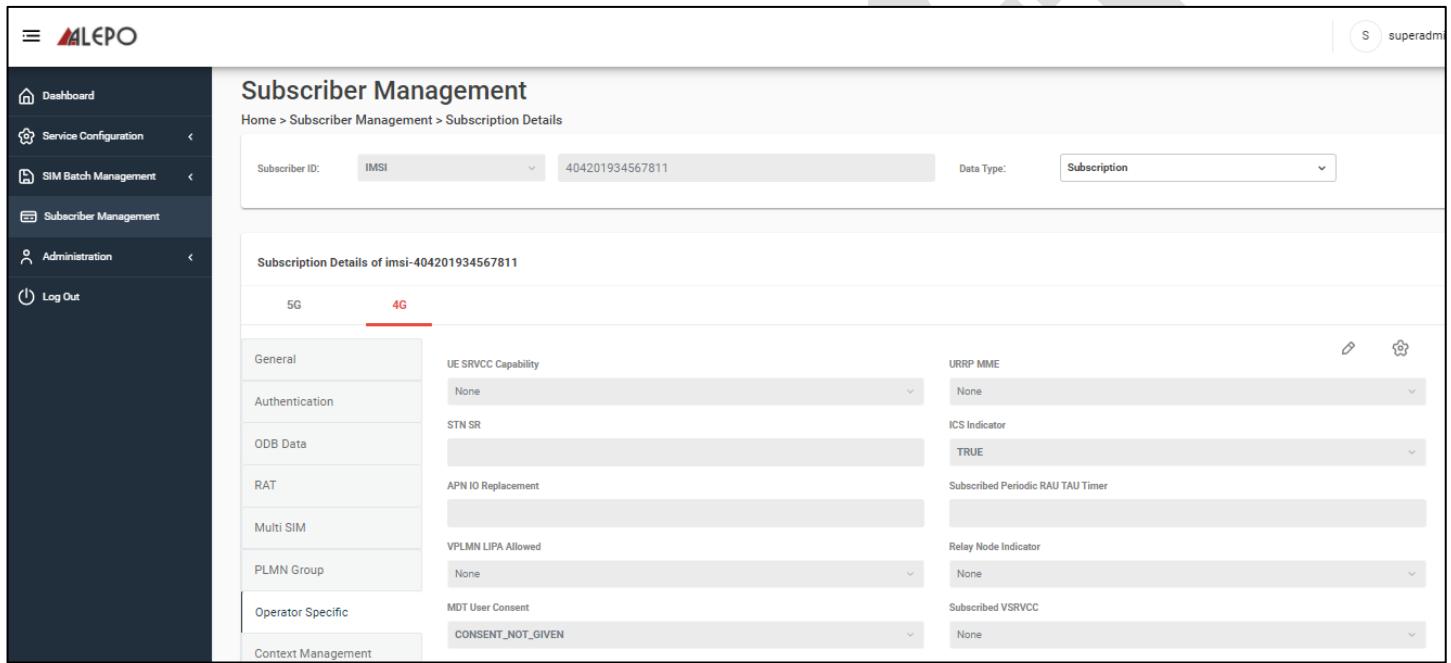
Navigation

SDM Portal>Subscription Management>View/Edit>Operator Specific

Description

The Operator Specific section under the View/Edit Subscriptions provides system users with the Operator Specific details for the 4G Subscription.

To update existing fields, click the  icon.



The screenshot shows the ALEPO SDM Portal's Subscriber Management interface. The left sidebar includes links for Dashboard, Service Configuration, SIM Batch Management, and Subscriber Management (which is currently selected). The main area is titled "Subscriber Management" and "Subscription Details". The "Subscriber ID" is set to "IMSI" with value "404201934567811" and "Data Type" is "Subscription". Below this, the "Subscription Details of imsi-404201934567811" section is displayed. The "4G" tab is active, showing various configuration parameters:

Category	Parameter	Value
General	UE SRVCC Capability	None
	STN SR	
	RAT	APN ID Replacement
	Multi SIM	
	PLMN Group	VPLMN LIPA Allowed
	Operator Specific	MDT User Consent
	Context Management	CONSENT_NOT_GIVEN
URRP MME	ICS Indicator	TRUE
	Subscribed Periodic RAU TAU Timer	
	Relay Node Indicator	
	Subscribed VSRVCC	
	URRP MME	None
	ICS Indicator	
	Relay Node Indicator	

DL Buffering Suggested Packet Count	External Identifier
<input type="text"/>	<input type="text"/>
Active Time	Service Gap Time
<input type="text"/>	<input type="text"/>
Aerial UE Subscription Information	IAB Operation Permission
AERIAL_UE_NOT_ALLOWED	IAB_OPERATION_NOTALLOWED
Terminal Information	
IMEI	Software Version
<input type="text"/>	<input type="text"/>
LCS Info	
GMLC Number	LCS Privacy Exception
<input type="text"/>	<input type="text"/>
SS Code	SS Status
<input type="text"/>	<input type="text"/>

ProSe Subscription Data	
ProSe Permission	
<input type="text"/>	
AESE Communication Pattern	
SCEF ID	SCEF Reference ID
abcd.com	1
SCEF Reference ID for Deletion	MTC Provider ID
1	<input type="text"/>
Monitoring Event Configuration	
SCEF ID	Monitoring Type
<input type="text"/>	<input type="text"/>
SCEF Reference ID	SCEF Reference ID for Deletion
<input type="text"/>	<input type="text"/>
Maximum Number of Reports	Monitoring Duration
<input type="text"/>	<input type="text"/>
Charged Party	SCEF Realm
<input type="text"/>	<input type="text"/>
External Identifier	MTC Provider ID
<input type="text"/>	<input type="text"/>
Service Selection	<input type="text"/>

UE Reachability Configuration

Reachability Type	None	Maximum Latency
Maximum Response Time		DL Buffering Suggested Packet Count

Location Configuration Information

MONTE Location Type	CURRENT_LOCATION	Accuracy
Periodic Time	0	

Emergency Info

MIP Home Agent Address	<input type="button" value="⊕"/> <input type="button" value="⊖"/>
Destination Host	Destination Realm

EDRX Cycle Length

RAT Type	EDRX Cycle Length Value
----------	-------------------------

Paging Time Window

Operation Mode	Paging Time Window Length
----------------	---------------------------

After all required fields have been updated, click the  icon to save changes made.

Context Management - 4G

Navigation

SDM Portal>Subscription Management>View/Edit>General>Authentication>ODB Data>RAT>SMS>Multi-SIM>PLMN Group>Operator-Specific>Context Management

Description

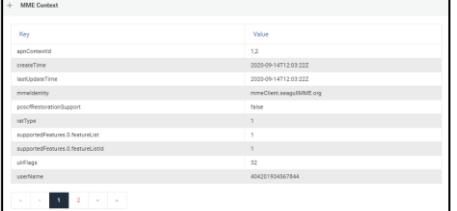
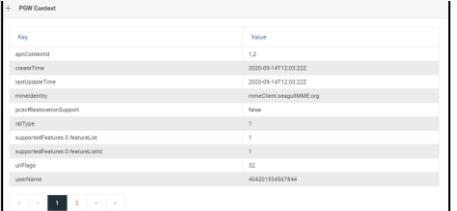
The Context Management section under View/Edit Subscriptions provides us with the Context Management details categorized under 'MME Context' and 'PGW Content'.

The screenshot shows the Alepo SDM Agent Portal interface. On the left is a dark sidebar menu with the following items:

- Dashboard
- Service Configuration
- SIM Batch Management
- Subscriber Management** (selected)
- Administration
- Log Out

On the right, the main content area displays "Subscription Details of imsi-404201934567844". A red bar at the top indicates the "4G" context. Below it, a sidebar lists categories: General, Authentication, ODB Data, RAT, Multi SIM, PLMN Group, Operator Specific, and Context Management (which is currently selected). To the right of this sidebar are two expandable sections: "MME Context" and "PGW Context". The bottom of the screen shows the Alepo logo and the text "SDM Agent Portal-v1.0.0".

Field Information

Field Name	Description	Screenshot																						
MME Context	MME Context or session that is currently active for the given IMSI	 <p>MME Context</p> <table border="1"> <thead> <tr> <th>Key</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>apnContextId</td> <td>1,2</td> </tr> <tr> <td>createTime</td> <td>2020-09-14T12:03:22Z</td> </tr> <tr> <td>lastUpdateTime</td> <td>2020-09-14T12:03:22Z</td> </tr> <tr> <td>mmeIdentity</td> <td>mmeClient.zeugnshkit.org</td> </tr> <tr> <td>pscRegistrationSupport</td> <td>false</td> </tr> <tr> <td>ratType</td> <td>1</td> </tr> <tr> <td>supportedFeatures.0.featureId</td> <td>1</td> </tr> <tr> <td>supportedFeatures.1.featureId</td> <td>1</td> </tr> <tr> <td>uiFlags</td> <td>32</td> </tr> <tr> <td>userName</td> <td>40420193467844</td> </tr> </tbody> </table>	Key	Value	apnContextId	1,2	createTime	2020-09-14T12:03:22Z	lastUpdateTime	2020-09-14T12:03:22Z	mmeIdentity	mmeClient.zeugnshkit.org	pscRegistrationSupport	false	ratType	1	supportedFeatures.0.featureId	1	supportedFeatures.1.featureId	1	uiFlags	32	userName	40420193467844
Key	Value																							
apnContextId	1,2																							
createTime	2020-09-14T12:03:22Z																							
lastUpdateTime	2020-09-14T12:03:22Z																							
mmeIdentity	mmeClient.zeugnshkit.org																							
pscRegistrationSupport	false																							
ratType	1																							
supportedFeatures.0.featureId	1																							
supportedFeatures.1.featureId	1																							
uiFlags	32																							
userName	40420193467844																							
PGW Context	PGW Context or session that is currently active for the given IMSI	 <p>PGW Context</p> <table border="1"> <thead> <tr> <th>Key</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>apnContextId</td> <td>1,2</td> </tr> <tr> <td>createTime</td> <td>2020-09-14T12:03:22Z</td> </tr> <tr> <td>lastUpdateTime</td> <td>2020-09-14T12:03:22Z</td> </tr> <tr> <td>mmeIdentity</td> <td>mmeClient.zeugnshkit.org</td> </tr> <tr> <td>pscRegistrationSupport</td> <td>false</td> </tr> <tr> <td>ratType</td> <td>1</td> </tr> <tr> <td>supportedFeatures.0.featureId</td> <td>1</td> </tr> <tr> <td>supportedFeatures.1.featureId</td> <td>1</td> </tr> <tr> <td>uiFlags</td> <td>32</td> </tr> <tr> <td>userName</td> <td>40420193467844</td> </tr> </tbody> </table>	Key	Value	apnContextId	1,2	createTime	2020-09-14T12:03:22Z	lastUpdateTime	2020-09-14T12:03:22Z	mmeIdentity	mmeClient.zeugnshkit.org	pscRegistrationSupport	false	ratType	1	supportedFeatures.0.featureId	1	supportedFeatures.1.featureId	1	uiFlags	32	userName	40420193467844
Key	Value																							
apnContextId	1,2																							
createTime	2020-09-14T12:03:22Z																							
lastUpdateTime	2020-09-14T12:03:22Z																							
mmeIdentity	mmeClient.zeugnshkit.org																							
pscRegistrationSupport	false																							
ratType	1																							
supportedFeatures.0.featureId	1																							
supportedFeatures.1.featureId	1																							
uiFlags	32																							
userName	40420193467844																							

View/Edit 5G Subscriptions

Description

This section will enable system users to view/modify the 5G subscription associated with a SUPI.

To search a SUPI, system user can enter the subscriber ID (SUPI number) and click the 'Search' button.

ALEPO

S superadmin

Dashboard

Service Configuration

SIM Batch Management

Subscriber Management

Administration

Log Out

IMSI

404201934567810

SEARCH

Subscribers

Subscriber ID	Status	Last Updated Date	Last Updated By	Actions
imsi-404201934567810	Active	09-11-2020 05:03:49	admin	

0 selected / 1 total

Alepo@2020 SDM Agent Portal-v1.0.0

If both 4G and 5G subscriptions are present for the SUPI searched, and user clicks on icon, system will display the below screen that will show both 4G and 5G tabs.

The 5G tab carries the below mentioned sections of the 5G configuration of the SUPI in question

Section	Description
General	The General module provides the information of the Subscriber Identifier, Default Subscription, and Timer.
Authentication	The Authentication module provides the Status and Method Information of the Subscription.
ODB Data	The ODB Data module displays ODB related information including ODB Packet Services and Roaming ODB of the Subscription.
RAT	The RAT module displays the RAT Restrictions, Core Network Type Restrictions and Service Area Restrictions of the Subscription.
SMS	The SMS module displays the Subscription SMS information.
Multi-SIM	The Multi-SIM module displays the Subscription Multi-SIM information.
Operator-Specific	The Operator-Specific module displays the Operator-Specific information categorized as: <ul style="list-style-type: none"> • Shared Data • Trace Data • Operator-Specific Container
Context Management	The Context Management module displays the Subscription Context Management information categorized as: <ul style="list-style-type: none"> • AMF Context • SMSF Context • SDM Subscription • EE Subscription • SMF Registration

Section	Description
<u>PLMN Group</u>	The PLMN Group module displays the PLMN Group information of the Subscription.

- We can view and update any field in any of the modules of its subscription.
- Once edited, click the Save icon to save the changes.

General - 5G

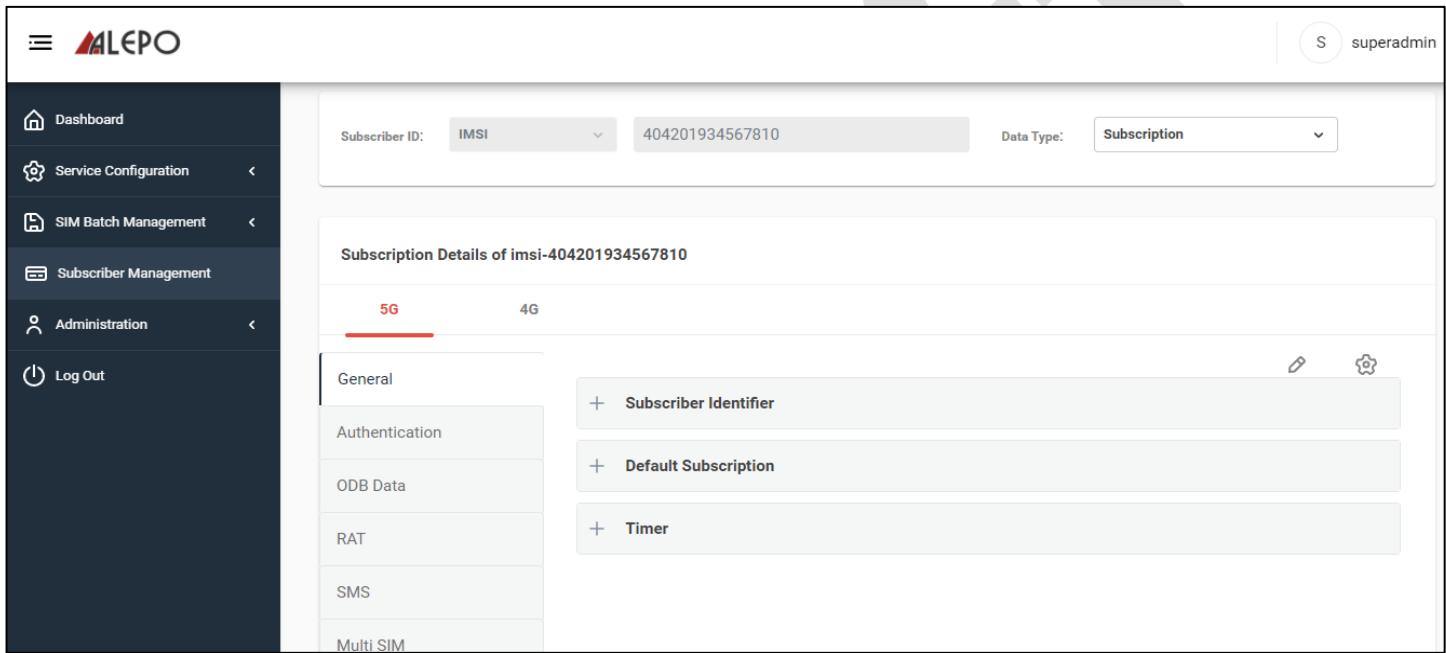
Navigation

SDM Portal>Subscription Management>View/Edit>General

Description

The General section under the View/Edit Subscriptions provides us with the General details of the 5G Subscription. This section is further categorized under 'Subscriber Identifier', 'Default Subscription' and 'Timer'.

To update, click the  icon.



The screenshot shows the ALEPO SDM Portal interface. The left sidebar contains navigation links: Dashboard, Service Configuration, SIM Batch Management, Subscriber Management, Administration, and Log Out. The main content area has a header with 'Subscriber ID: IMSI' set to '404201934567810' and 'Data Type: Subscription'. Below this is a section titled 'Subscription Details of imsi-404201934567810' with tabs for '5G' (selected) and '4G'. On the left, there's a vertical menu with 'General' selected, followed by Authentication, ODB Data, RAT, SMS, and Multi SIM. To the right, there are three expandable sections: 'Subscriber Identifier', 'Default Subscription', and 'Timer', each with an edit icon (pencil) and a gear icon for settings.

✎⚙️

+ Subscriber Identifier

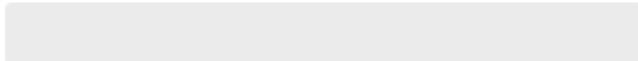
SUPI	GPSI
imsi-404201934567810	
5G Subscription Status	
Active	

+ Default Subscription

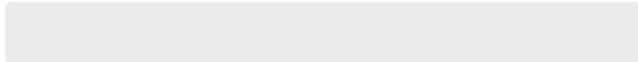
Subscribed UE AMBR	
Downlink	Uplink
100	80
bps	bps
RFSP Index	Internal Group IDs
1	
UE Usage Type	DL Packet Count
<input type="checkbox"/> MPS Priority Indicator	<input type="checkbox"/> MCS Priority Indicator
<input type="checkbox"/> Mico Allowed	

+ Timer

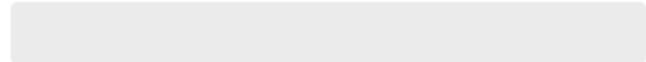
Subs Registration Timer



Active Time



Service Gap Time



Field Information

Field Name	Description				Is Mandatory				
Subscriber Identifier	SUPI	A globally unique, Subscription Permanent Identifier or SUPI. this value is provisioned in USIM.			Yes				
	GPSI	General public subscription identifier is a public identifier such as MSISDN.							
Default Subscription	Subscribed UE AMBR	Uplink	Value	APN Aggregate Maximum Bit Rate or AMBR defines the maximum aggregated uplink and downlink bit rates which are to be shared across all Non-GBR QoS Flows in each PDU Session.	No				
			Unit						
		Downlink	Value		No				
			Unit						
	RFSP Index		Index to RAT/Frequency Selection Priority.						
	Internal Group IDs		List of Internal group identifiers.						
	UE Usage Type		Indicates the usage characteristics of the UE, enables the selection of a specific Dedicated Core Network for EPS interworking.						
	DL Packet Count		The following values are defined: <ul style="list-style-type: none"> • 0: "Extended DL Data Buffering NOT REQUESTED" • -1: "Extended DL Data Buffering REQUESTED, without a suggested number of packets" • n>0: "Extended DL Data Buffering REQUESTED, with a suggested number of n packets" 						
	MPS Priority Indicator		Indicates whether UE is subscribed to multimedia priority service.						
	MCS Priority Indicator		Indicates whether UE is subscribed to mission-critical service.						
	Mico Allowed		Indicates whether MICO mode is allowed for the UE.						
Timer	Subs Registration Timer		Subscribed Periodic Registration Timer.						

Field Name	Description	Is Mandatory
Active Time	Subscribed Active Time for PSM UEs.	No
Service Gap Time	Used to set Service Gap timer for service gap control.	No

Update the required fields and click the  icon to save changes made.

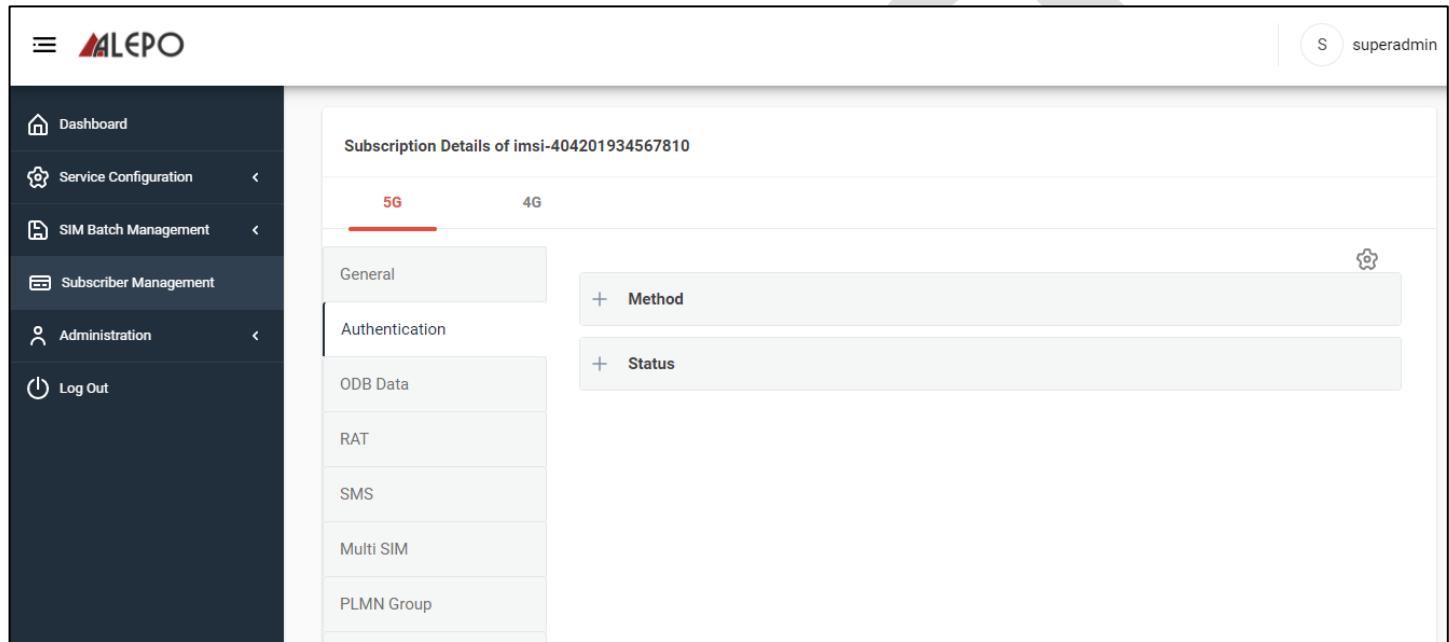
Authentication - 5G

Navigation

SDM Portal>Subscription Management>View/Edit>General>Authentication

Description

The Authentication section under View/Edit Subscriptions provides the details of the Authentication parameters. This section is further categorized into 'Method' and 'Status'. To update, click the  icon.



Subscription Details of imsi-404201934567810

5G 4G

General Authentication Method Status

ODB Data RAT SMS Multi SIM PLMN Group

Method

+ Method

Authentication Method *	Permanent Key
5G_AKA	b1358167ef526cb4b0be171f336a0e5c765a5da6
Sequence Number	Authentication Management Field
0	b9b9
Protection Parameter ID	Algorithm ID
key1	algo1
Enc Opc Key	
776c68a5bd5b1b3b73dfc83c94ae6b331e19fcf0c	

Status

+ Status

Instance ID	Status
	false
Serving Network Name	Authentication Event ID
Last Authentication Date	

Field Information

Field Name	Description	Is Mandatory
Method	Authentication Method* The method used for UE Authentication.	Yes
	Sequence Number SQN or Sequence number is generated for every authentication request. It shall be present if the authentication method is "5G_AKA" or "EAP_AKA_PRIME".	No
	Protection Parameter ID Identifies a parameter set securely stored in the UDM that can be used to decrypt the encPermanentKey (and encOpcKey or encTopKey if present). Values and their meaning are HPLMN-operator specific. It shall be present if the authentication method is "5G_AKA" or "EAP_AKA_PRIME"	No
	Enc Opc Key Hex string of the encrypted OPC Key. The presence of this value indicates that the provided value (decrypted) shall be used instead of the value derived from OP and K.	No
	Permanent Key The encrypted value (hex string) of the permanent authentication key (K). This value is present if the authentication method is "5G_AKA" or "EAP_AKA_PRIME".	No
	Authentication Management Field Hex string containing the Authentication management field. It shall be present if the authentication method is "5G_AKA" or "EAP_AKA_PRIME".	No
	Algorithm ID Identifies a parameter set securely stored in the UDM that provides details on the algorithm and parameters used to generate authentication vectors. Values and their meaning are HPLMN-operator specific. It shall be present if the authentication method is "5G_AKA" or "EAP_AKA_PRIME"	No
Status	Instance ID Identifier of the network function instance where authentication has occurred.	No
	Serving Network Name Name of the serving network for which the authentication has been carried out.	No
	Last Authentication Date The timestamp of the previous authentication event.	No
	Status Authentication status if - true = Success false = Failed.	No
	Authentication Event ID A unique ID to identify the UE Authentication event.	No

Update the required fields and click the  icon to save changes made

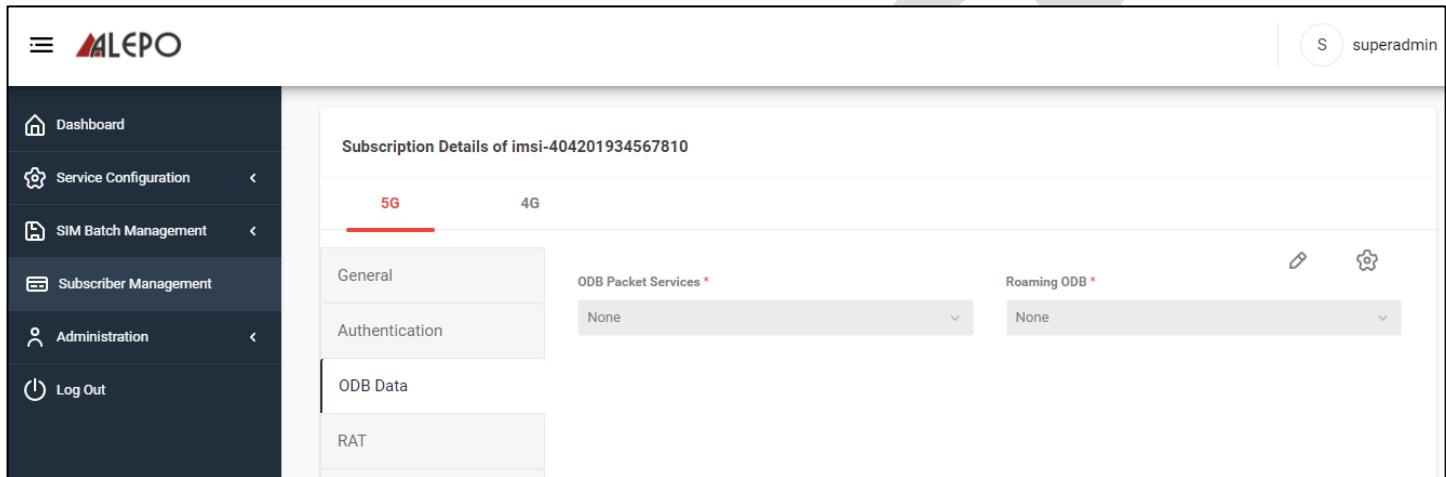
ODB Data - 5G

Navigation

SDM Portal>Subscription Management>View/Edit>General>Authentication>ODB Data

Description

The ODB section provides ODB details for the 5G subscription including ODB Packet Services and Roaming ODB. To update, click the  icon.



Subscription Details of imsi-404201934567810

5G 4G

General Authentication ODB Data RAT

ODB Packet Services *: None

Roaming ODB *: None

Field Information

Field Name	Description	Is Mandatory
ODB Packet Services	Operator Determined Barring for Packet Oriented Services. ODB Packet Services can be - <ul style="list-style-type: none">• ALL_PACKET_SERVICES• ROAMER_ACCESS_HPLMN_AP• ROAMER_ACCESS_VPLMN_AP	Yes
Roaming ODB	Operator Determined Barring options for roaming. Roaming ODB can be - <ul style="list-style-type: none">• OUTSIDE_HOME_PLMN• OUTSIDE_HOME_PLMN_COUNTRY	Yes

Update the required fields and click the  icon to save changes made

RAT - 5G

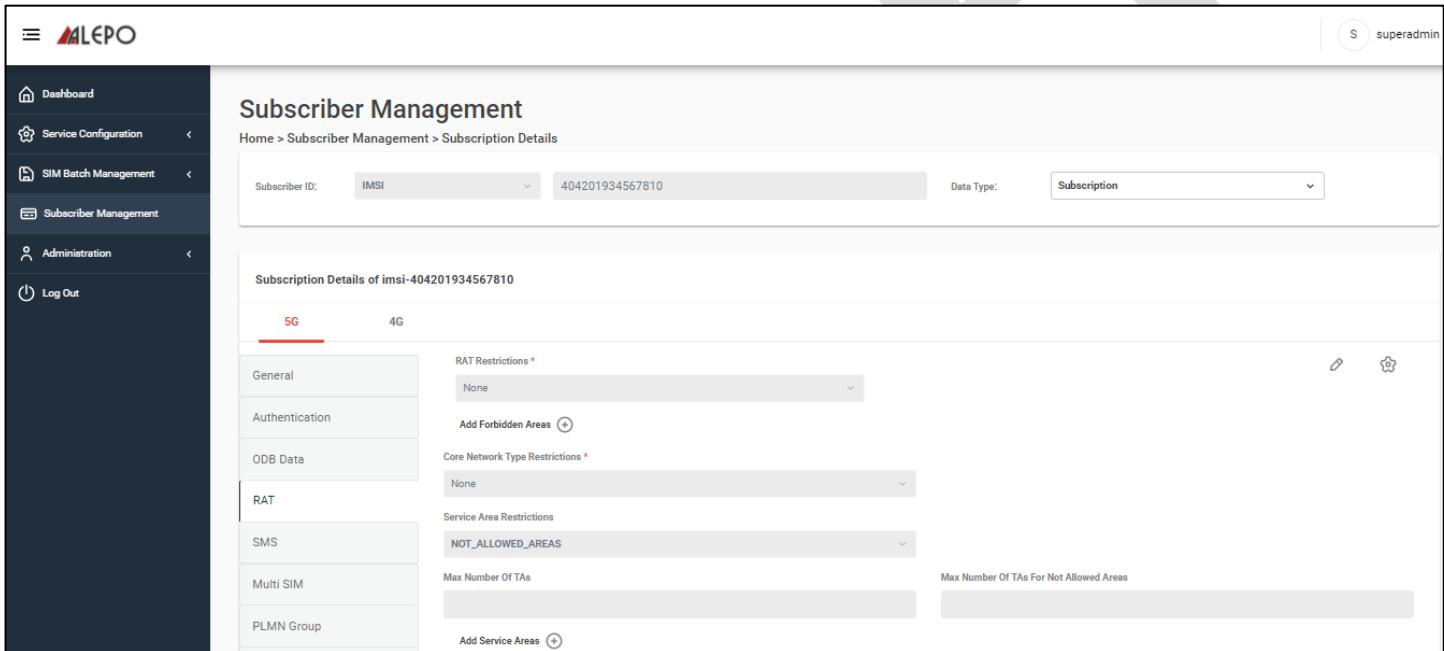
Navigation

SDM Portal>Subscription Management>View/Edit>General>Authentication>ODB Data>RAT

Description

The RAT section under View/Edit 5G Subscriptions provides details including RAT Restrictions, Core Network Type Restrictions and Service Area Restrictions.

To start updating, click the  icon.



The screenshot shows the ALEPO SDM Portal's Subscriber Management interface. On the left, a dark sidebar lists navigation options: Dashboard, Service Configuration, SIM Batch Management, Subscriber Management (which is currently selected), and Administration. The main area is titled "Subscriber Management" and shows "Subscription Details" for an IMSI number. The "Data Type" is set to "Subscription". The "5G" tab is active, and the "RAT" section is expanded. It contains fields for "RAT Restrictions" (set to "None"), "Core Network Type Restrictions" (set to "None"), and "Service Area Restrictions" (set to "NOT_ALLOWED AREAS"). There are also dropdowns for "Max Number Of TAs" and "Max Number Of TAs For Not Allowed Areas". A "Log Out" button is visible at the bottom of the sidebar.

Field Information

Field Name	Description	Is Mandatory
RAT Restrictions	List of RAT Types that are restricted	Yes
Core Network Type Restrictions	List of Core network Types that are restricted	Yes
Service Area Restrictions	Forbidden Area	List of Forbidden Areas
	Restriction Type	Subscribed Service Area restrictions
	Max Number of TAs	
	Areas	

Field Name	Description	Is Mandatory
	Max Number of TAs For Not Allowed Areas	No

Update the required fields and click the  icon to save changes made.

SMS - 5G

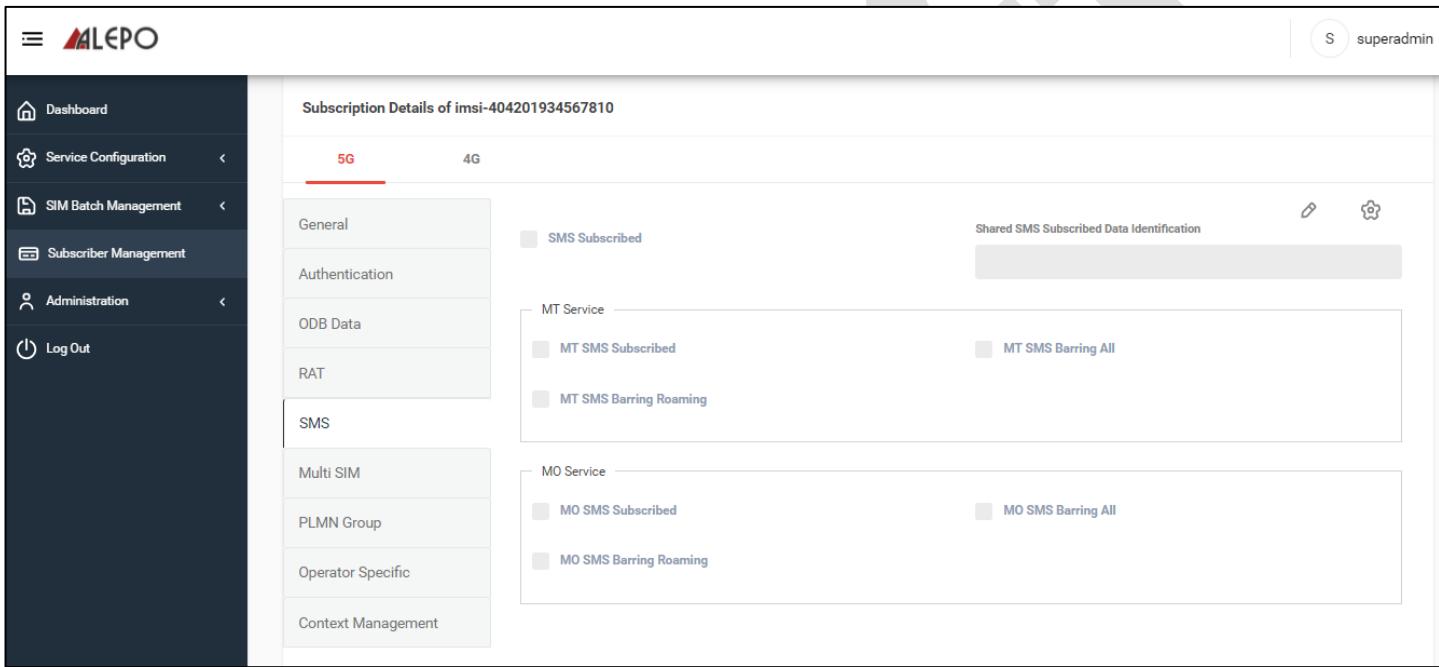
Navigation

SDM Portal>Subscription Management>View/Edit>General>Authentication>ODB Data>RAT>SMS

Description

The SMS section under View/Edit 5G Subscriptions contains the SMS details including that of MT (Mobile Terminated) and MO (Mobile Originated) messages.

To start updating, click the  icon.



The screenshot shows the 'Subscription Details' page for an IMSI. The left sidebar has a dark theme with white icons and text. The main area is titled 'Subscription Details of imsi-404201934567810'. It has tabs for '5G' (selected) and '4G'. Under '5G', there's a 'General' section with a 'SMS Subscribed' checkbox. To its right is a 'Shared SMS Subscribed Data Identification' field with a pencil icon. Below this are sections for 'MT Service' (with 'MT SMS Subscribed' and 'MT SMS Barring All' checkboxes) and 'MO Service' (with 'MO SMS Subscribed' and 'MO SMS Barring All' checkboxes). The 'SMS' section in the sidebar also lists 'Multi SIM', 'PLMN Group', 'Operator Specific', and 'Context Management'.

Field Information

Field Name	Description		Is Mandatory
SMS Subscribed	This flag indicates whether the UE subscription allows SMS delivery over NAS. This flag must be checked unless the feature SharedData is supported and smsSubscribed is present within shared data.		No
Shared SMS Subscribed Data Identification	Identifier of shared data. Shall be present if smsSubscribed is absent.		No
MT Service	MT SMS Subscribed	Indicates the SMS teleservice subscription for MT-SMS. Shall not be absent unless the feature SharedData is supported and mtSmsSubscribed is present within shared data	No

Field Name	Description	Is Mandatory
	MT SMS Barring All	Barring of All MT-SMS.
	MT SMS Barring Roaming	Barring of MT-SMS when roaming outside the Home Public Land Mobile Network (PLMN) country
MO Service	MO SMS Subscribed	Indicates the SMS teleservice subscription for MO-SMS. Shall not be absent unless the feature SharedData is supported and mtSmsSubscribed is present within shared data.
	MO SMS Barring All	Barring of All MO-SMS.
	MO SMS Barring Roaming	Barring of MO-SMS when roaming outside the Home Public Land Mobile Network (PLMN) country.

Update the required fields and click the  icon to save changes made.

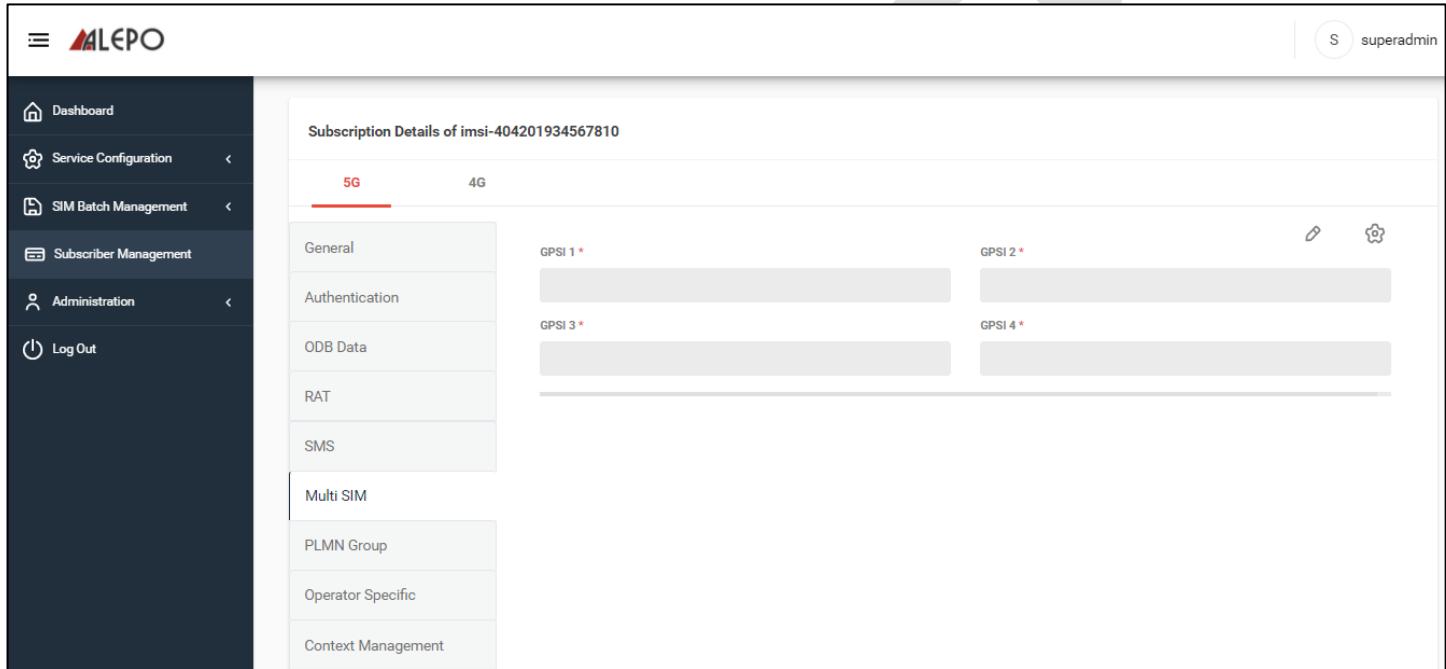
Multi-SIM - 5G

Navigation

SDM Portal>Subscription Management>View/Edit>General>Authentication>ODB Data>RAT>SMS>Multi-SIM

Description

The Multi-SIM Section under View/Edit Subscriptions contains the additional GPSI details for the subscription. To start updating, click the  icon.



The screenshot shows the ALEPO SDM Portal interface. The left sidebar has a dark theme with white icons and text. It includes links for Dashboard, Service Configuration, SIM Batch Management, Subscriber Management, Administration, and Log Out. The main content area is titled "Subscription Details of imsi-404201934567810". Below this, there are tabs for 5G and 4G, with 5G selected. Under the 5G tab, there are sections for General, Authentication, ODB Data, RAT, SMS, and Multi SIM. The Multi SIM section is expanded, showing fields for GPSI 1, GPSI 2, GPSI 3, and GPSI 4, each with a red asterisk indicating it is mandatory. There are also edit and delete icons next to each field. The top right corner shows a user profile for "superadmin".

Field Information

Field Name	Description	Is Mandatory
GPSI 1	An additional GPSI for SUPI.	Yes
GPSI 2	An additional GPSI for SUPI.	Yes
GPSI 3	An additional GPSI for SUPI.	Yes
GPSI 4	An additional GPSI for SUPI.	Yes

Update the required fields and click the  icon to save changes made.

PLMN Group - 5G

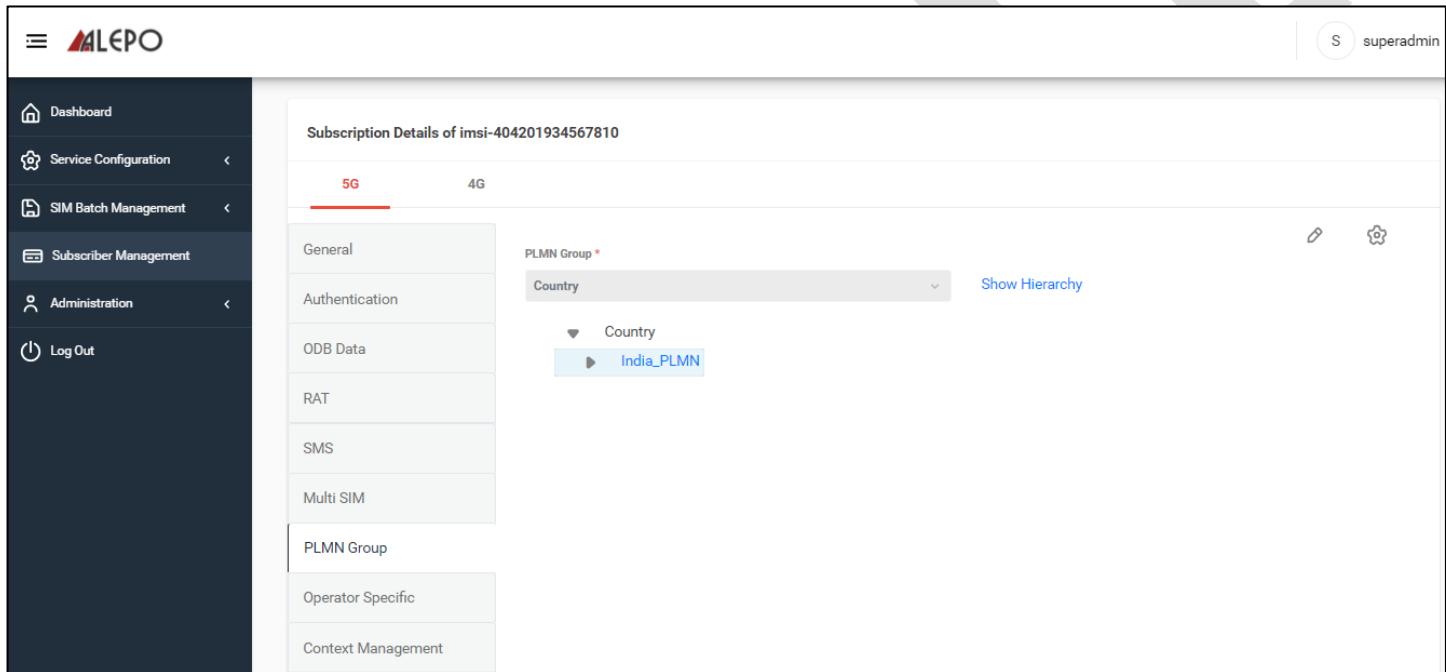
Navigation

SDM Portal>Subscription Management>View/Edit>General>Authentication>ODB Data>RAT>SMS>Multi-SIM>PLMN Group

Description

The PLMN Group section under View/Edit Subscriptions provides us the hierarchical details of the PLMN Groups associated with the subscription.

To start updating, click the  icon.



The screenshot shows the 'Subscription Details of imsi-404201934567810' page. The '5G' tab is selected. On the left, there's a sidebar with 'Dashboard', 'Service Configuration', 'SIM Batch Management', 'Subscriber Management', 'Administration', and 'Log Out'. The 'Administration' section is expanded, showing 'Country', 'Show Hierarchy', 'Country' dropdown (set to 'India'), and a tree view under 'India_PLMN'. The main content area has sections for 'General', 'Authentication', 'ODB Data', 'RAT', 'SMS', 'Multi SIM', 'PLMN Group', 'Operator Specific', and 'Context Management'. The 'PLMN Group' section is expanded, showing a dropdown menu for 'Country' with 'India' selected.

Field Information

Field Name	Description	Is Mandatory
PLMN Group*	Select the PLMN Group associated with the subscription. Show Hierarchy - Clicking on this link will show the hierarchy of the PLMN Group selected from the drop-down.	Yes

Update the required fields and click the  icon to save changes made.

Operator-Specific - 5G

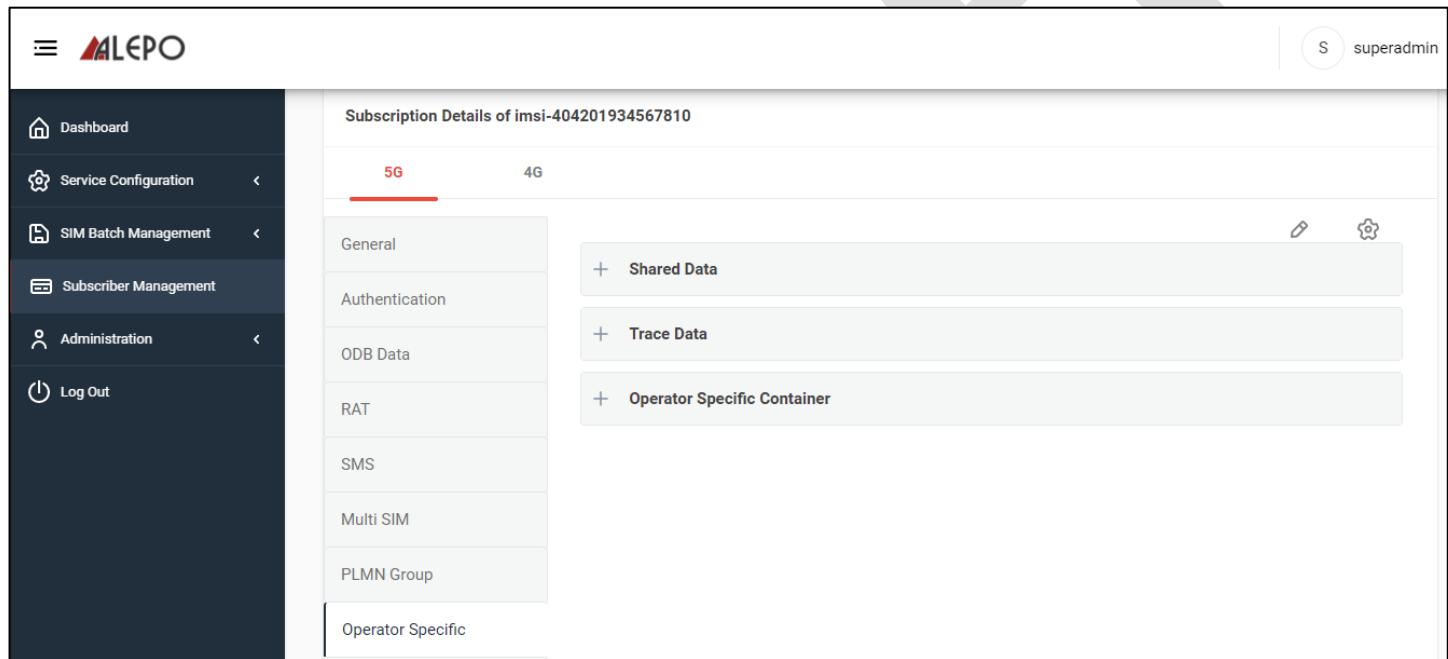
Navigation

SDM Portal>Subscription Management>View/Edit>General>Authentication>ODB Data>RAT>SMS>Multi-SIM>PLMN Group>Operator-Specific

Description

The Operator-Specific section under View/Edit Subscriptions provides us the details of the Operator-Specific details of the Subscription categorized under Shared Data, Trace Data and Operator Specific Container.

To start updating, click the  icon.



The screenshot shows the ALEPO SDM Portal interface. The left sidebar contains navigation links: Dashboard, Service Configuration, SIM Batch Management, Subscriber Management, Administration, and Log Out. The main content area is titled "Subscription Details of imsi-404201934567810" and is currently viewing the 5G tab. On the left, a vertical menu lists General, Authentication, ODB Data, RAT, SMS, Multi SIM, and PLMN Group. At the bottom of this menu is an "Operator Specific" section. To the right, there are three expandable sections: "Shared Data", "Trace Data", and "Operator Specific Container". Each section has a plus sign icon to its left and edit and settings icons at the top right. The "superadmin" user is logged in at the top right.

Shared Data

+ Shared Data

Shared Data ID *

Shared SMS Sub Data

Shared DNN Configuration

Shared SNSSAIS Infos

Shared AM Data

Shared SMS Management Subscription Data

Shared Trace Data

Trace Data

+ Trace Data

Trace Reference *

NE Type List *

Event List *

Interface List

Collection Entity IPv4 Address *

Collection Entity IPv6 Address *

Trace Depth *

Operator Specific Container

+ Operator Specific Container

Custom Fields

Custom Field 1	Custom Field 2
<input type="text"/>	<input type="text"/>
Custom Field 3	Custom Field 4
<input type="text"/>	<input type="text"/>
Custom Field 5	
<input type="text"/>	

Custom Number Fields

Custom Number Field 1	Custom Number Field 2
<input type="text"/>	<input type="text"/>
Custom Number Field 3	Custom Number Field 4
<input type="text"/>	<input type="text"/>
Custom Number Field 5	
<input type="text"/>	

Custom Date Fields

Custom Date Field 1	Custom Date Field 2
<input type="text"/>	<input type="text"/>
Custom Date Field 3	Custom Date Field 4
<input type="text"/>	<input type="text"/>
Custom Date Field 5	
<input type="text"/>	

Update the required fields and click the  icon to save changes made.

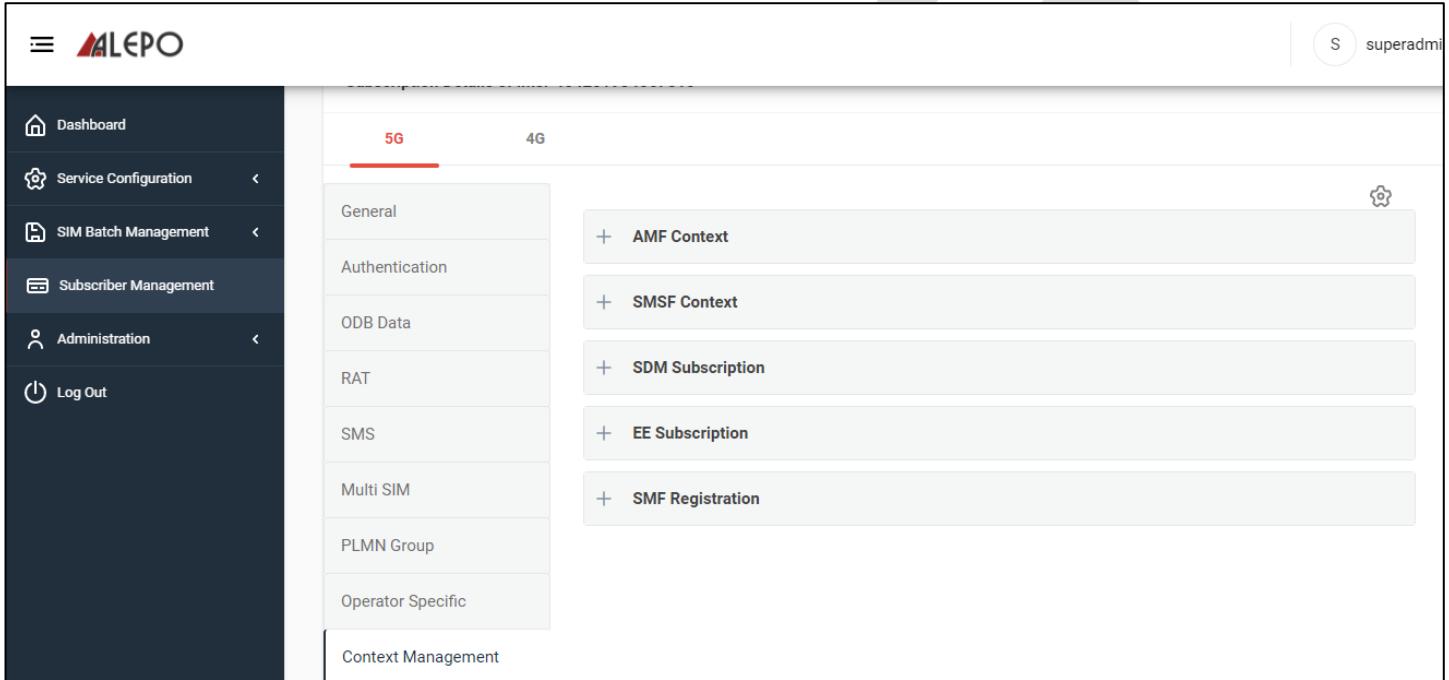
Context Management - 5G

Navigation

SDM Portal>Subscription Management>View/Edit>General>Authentication>ODB Data>RAT>SMS>Multi-SIM>PLMN Group>Operator-Specific>Context Management

Description

The Context Management section under View/Edit Subscriptions provides us with the Context Management details categorized under AMF Context, SMSF Context, SDM Subscription, EE Subscription, and SMF Registration.



Configuration

- Proceed to the Context Management section under the View/Edit Subscription after completing the fields for the General, Authentication, ODB Data, RAT, SMS, Multi-SIM, PLMN Group and Operator-Specific section.
- The Context Management section has fields shown in the below screenshot and listed in the following table.

Field Information Table

Field Name	Description	Screenshot
AMF Context	3GPP	AMF context or session that is currently active for the given SUPI
	Non-3GPP	AMF context (non-3GPP session) that is currently active for the given SUPI

Field Name	Description	Screenshot
SMSF Context	3GPP	SMSF context or session that is currently active for the given SUPI
	Non-3GPP	SMSF context (non-3GPP session) that is currently active for the given SUPI
SDM Subscription	3GPP	SDM Subscription context that is currently active for the given SUPI
	Non-3GPP	SDM Subscription context (non-3GPP session) that is currently active for the given SUPI
EE Subscription	3GPP	Event exposure subscription context that is currently active for the given SUPI
	Non-3GPP	Event exposure subscription context (non-3GPP session) that is currently active for the given SUPI
SMF Registration	3GPP	SMF context that is currently active for the given SUPI
	Non-3GPP	SMF context (non-3GPP session) that is currently active for the given SUPI

- Complete the required fields in the Context Management section.
- Click the Save button to save all changes made to the Subscription.

DELETE SUBSCRIPTIONS

Delete 4G Subscription

This section will enable system users to delete 4G subscription from an existing IMSI. Enter the subscriber ID (IMSI) from which 4G subscription is to be deleted and click the 'Search' button.

Alepo@2020 SDM Agent Portal-v1.0.0

Click the icon against the IMSI. This will bring up the below screen.

De-link Subscription

Select a subscription to de-link

5G Subscription
 4G Subscription

CLOSE **PROCEED**

Select 4G subscription and click the 'Proceed' button. This will de-link the 4G subscription from the IMSI.

Note

The status of the IMSI will change to 'Out Of Service', assuming it had only 4G subscription associated with it.

Draft

Delete 5G Subscription

This section will enable system users to delete an existing 5G subscription from SUPI.

To search a given SUPI, system user can enter the subscriber ID (SUPI) number and click the 'Search' button.

Alepo SDM Agent Portal - v1.0.0

Dashboard

Service Configuration

SIM Batch Management

Subscriber Management

Administration

Log Out

superadmin

IMSI

404201934567810

SEARCH

Subscribers

Subscriber ID	Status	Last Updated Date	Last Updated By	Actions
imsi-404201934567810	Active	09-11-2020 12:44:03	admin	

0 selected / 1 total

Alepo@2020

SDM Agent Portal-v1.0.0

To delete/disassociate an 5G subscription from SUPI, click the icon. This will bring up the below popup window asking the user which subscription does he want to disassociate.

De-link Subscription

Select a subscription to de-link

5G Subscription

4G Subscription

CLOSE **PROCEED**

Select the subscription type that system user would like to disassociate from the SUPI (in this case 5G) and click 'Proceed'.

The screenshot shows the ALEPO SIM Management interface. On the left, there is a sidebar with various navigation options: Dashboard, Service Configuration, SIM Batch Management (selected), SIM Batch, SIM Info (selected), Subscriber Management, Administration, and Log Out. The main area is titled 'SIMs' and contains a table with the following data:

SUPI	Batch ID	Status	Actions
imsi-404201934567810		Out of service	
imsi-404201934567811	4ef894c8-4daf-41aa-ade5-928492312165	Allocated	
imsi-404201934567812	4ef894c8-4daf-41aa-ade5-928492312165	Allocated	
imsi-404201934567822	4ef894c8-4daf-41aa-ade5-928492312165	Available	
imsi-404201934567833	4ef894c8-4daf-41aa-ade5-928492312165	Available	
imsi-404201934567844	4ef894c8-4daf-41aa-ade5-928492312165	Available	
imsi-404201934567855	4ef894c8-4daf-41aa-ade5-928492312165	Available	
imsi-404201934567866	4ef894c8-4daf-41aa-ade5-928492312165	Available	

Note that the SUPI has moved to 'Out Of Service' status after disassociation.

POLICY DATA MANAGEMENT

Description

This section includes the AM and SM policy related data associated with subscription profile.

To search the desired SUPI / IMSI for which we want to view policy data, enter the subscriber ID and click on search.

ALEPO

superadmin

Dashboard

Service Configuration

SIM Batch Management

Subscriber Management

Administration

Log Out

IMSI

404201934567812

SEARCH

Subscribers

Subscriber ID Status Last Updated Date Last Updated By Actions

imsi-404201934567812 Active 09-10-2020 12:38:33 admin

0 selected / 1 total

Alepo@2020 SDM Agent Portal-v1.0.0

Click the icon that will bring up the below screen where user needs to select "Policy" from the Data Type drop-down. This will bring up the Policy details for the given IMSI or SUPI.

ALEPO

superadmin

Dashboard

Service Configuration

SIM Batch Management

Subscriber Management

Administration

Log Out

IMSI

404201934567812

Data Type: Policy

Subscription

Policy

Policy Details of imsi-404201934567812

AM Policy

SM Policy

Subscriber Category *

None

Presence Info Template *

None

Note that the Policy section is divided into two main sections:

- AM Policy
- SM Policy

Draft

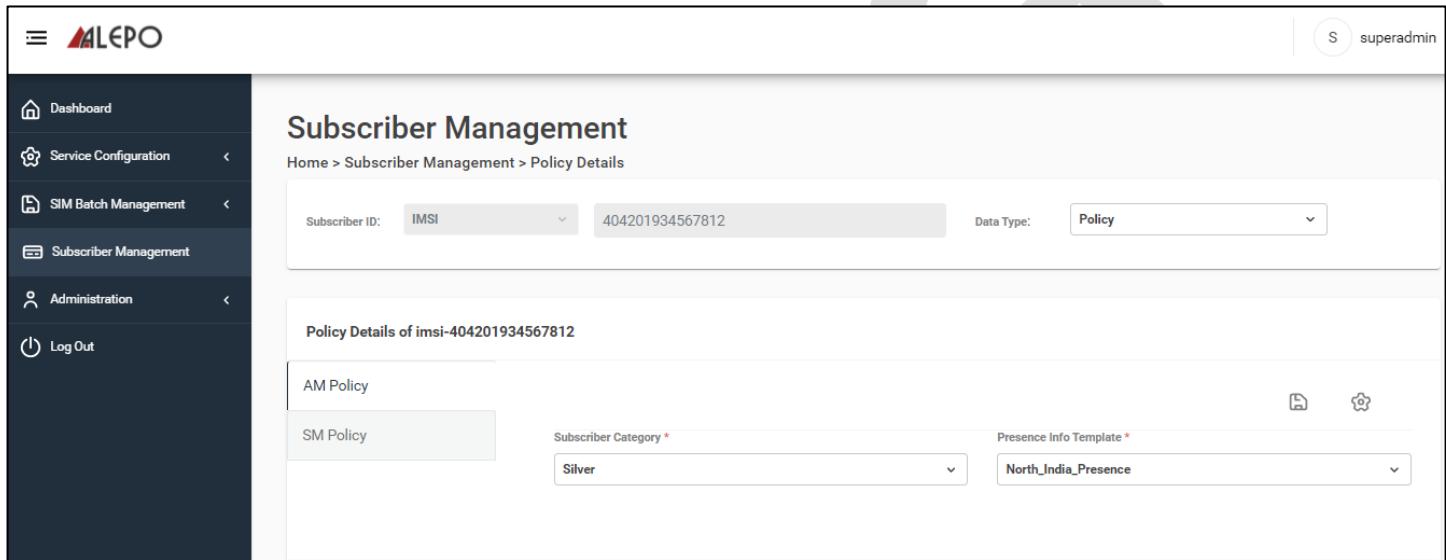
AM Policy

Navigation

SDM Portal >> Subscriber Management >> Policy >> AM Policy

Description

AM policy stands for 'Access and Mobility Policy' which basically tells for a subscription the different locations to which the subscription has access and also the type of access it has for a location.



AM Policy comprises of below fields that system users can update.

Field Information

Field Name	Description
Subscriber Category	Select the 'Subscriber Category' group with which the subscription can have access to. A 'Subscriber Category' group can have one or more subscriber categories that are defined in PCF. Click here to learn more about 'Subscriber Category Group'.
Presence Info Template	Select the 'Presence Info Template' from the drop-down which holds the location Group(s). Each location group will further be associated with multiple locations. Basically the 'Presence Info Template' will point to the different locations that a subscription has access to, along with the type of access to each location. Click here to learn more about 'Presence Info and Locations'

Click the 'Save' icon after updation.

SM Policy

Navigation

SDM Portal >> Subscriber Management >> Policy >> SM Policy

Description

This stands for Session Management Policy which defines for a subscription, the session level policy data.

The screenshot shows the ALEPO SDM Portal interface. On the left is a dark sidebar with navigation links: Dashboard, Service Configuration, SIM Batch Management, Subscriber Management (which is currently selected), Administration, and Log Out. The main content area has a light gray header with the title "Subscriber Management" and a breadcrumb trail: Home > Subscriber Management > Policy Details. Below the header, there are two input fields: "Subscriber ID" set to "IMSI" and "Data Type" set to "Policy". Underneath these fields, the text "Policy Details of imsi-404201934567812" is displayed. There are two tabs: "AM Policy" (which is active) and "SM Policy". To the right of the tabs is a "Slice Group" dropdown menu containing the option "SLG-1". At the bottom right of the main content area are several small icons for edit, delete, and other actions.

System will prompt user to select the slice group for which SM policy will be applicable.

Once slice group has been selected from the drop-down, user will have the option to add the 'Limit ID' from the drop-down.

ALEPO

S superadmin

Dashboard

Service Configuration

SIM Batch Management

Subscriber Management

Administration

Log Out

Subscriber Management

Home > Subscriber Management > Policy Details

Subscriber ID: IMSI 404201934567812 Data Type: Policy

Policy Details of imsi-404201934567812

AM Policy

SM Policy Slice Group SLG-1

ADD LIMIT ID

+ Limit ID None

+ UsageLimit1GB

UsageLimit1GB

Usage Limit ID

Service UM Level

11

SESSION_LEVEL

Service Name

Service Group Name

Data

Usage Limit ID

Downlink Volume

Uplink Volume

1

Byte

1

Byte

Total Volume

Duration

Byte

Second

Scopes

SNSSAI

DNN

Slice-IoT

DNN-1

Limit ID Mapping with Monitoring Keys

Limit ID

MonKeys

100

1

Start Date

End Date

Periodicity

Max Number of Periods

None

Field Name	Description
Usage Limit-ID	This is the name of the limit container (bank) that will monitor the usage of allowance subscribed to by the subscriber.
Service UM Level	Whether usage is Session level or Application level
Service Name	Name of the service associated with the usage limit.
Service Group Name	The Service group name associated with the usage limit.
Usage Limit ID	
Downlink Volume	The uplink and downlink volume defined for the usage limit-id.

Field Name	Description
Uplink Volume	
Total Volume	The total volume defined for the Usage limit-id.
Duration	The total duration value defined for the limit-id.
Scopes	
SNSSAI	The Slice Template associated with the Usage-Limit-ID
DNN	The DNN Template associated with the Usage-Limit-ID
Limit-ID Maping With Monitoring Keys	
Limit ID	Usage Limit-ID
MonKeys	Monitoring key for the limit-id
Start Date	The Start-date defined for the usage limit-id.
End Date	The End-date defined for the usage limit-id.
Periodicity	The time-period defined for the validity of usage limit (Daily, Monthly etc.)
Max Number of Periods	The number of times the validity period of usage limit gets repeated (e.g. 3. 5 etc.)

SDM Portal Navigation View

This section includes each menu with their respective menu options as it appears in the application. By clicking on the menu option, users can visit the required page in the documentation.

- [Dashboard](#)
- [Service Configuration](#)
 - [Subscription](#)
 - [DNN Template](#)
 - [DNN Group](#)
 - [Slice Template](#)
 - [Slice Group](#)
 - [PLMN Template](#)
 - [PLMN Group](#)
 - [APN Template](#)
 - [APN Group](#)
 - [Policy](#)
 - [DNN Template](#)
 - [DNN Group](#)
 - [Slice Template](#)
 - [Slice Group](#)
 - [PLMN Template](#)
 - [PLMN Group](#)
 - [Category Groups](#)
 - [Usage Limits](#)
 - [Location](#)
 - [Location Groups](#)
 - [Presence Info](#)
- [SIM Batch Management](#)

- [SIM Batch](#)
- [SIM Info](#)
- [Subscription Management](#)

Draft

About Alepo

At Alepo, we turn next-generation data opportunities into reality. Our software and services power operations and billing for digital service providers, enabling them to accelerate revenue growth, market share, and business success.

Through a lean and agile approach to digital transformation, we empower businesses to:

- Welcome disruptive technologies
- Orchestrate a unique customer experience
- Grow, adapt, and evolve with confidence in the network's performance, reliability, and security

Our award-winning technology has helped make Alepo the go-to partner for all things data at leading national service providers like Orange, Saudi Telecom, Digicel. We provide cutting-edge monetization models with business-focused user experiences that allow service providers to tap new markets and revenue sources, while delivering more value to their customers.

Our mature and proven solutions include advanced policy and charging control, convergent charging and billing, customer relationship management, device management, WiFi monetization, WiFi offload, AAA, and more. We offer expert professional services: consulting and design, managed services, training, and support – our solution integration team has a success record that is the envy of our peers.

Headquartered in Austin, Texas, Alepo has a presence in all regions of the world, including offices and representatives in Latin America, North America, Asia Pacific, Africa, the Middle East, and India.

Contact Alepo

Corporate HQ & North American Sales

Austin, TX, USA

sales@alepo.com

LATAM Regional Sales

Bogota, Colombia

latam.sales@alepo.com

APAC Regional Sales

Mumbai, India

apac.sales@alepo.com

Research & Development

Pune, India

Follow Us



www.alepo.com



AlepoUSA



@AlepoUSA



Company/Alepo