

Technical Bulletin floLIVE SIM Throttling Control Guide

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Introduction

This Quick Start Guide is designed to help customers implement SIM Throttling Control methods for the floLIVE Connectivity Management System. The guide outlines the two solutions available for managing SIM throttling; via API control or via the CMP portal and contains setup instructions and requirements for each method.

Key Concepts

Here is a description of the key concepts used in this guide:

- SIM Throttling Control: Refers to the management of data speed based on user-defined thresholds. The purpose of SIM Throttling Control is to ensure adherence to plan usage allocation and efficient use of network resources.
- Policy and Charging Rules Function (PCRF): This is a critical component in managing policy decisions and charging rules for SIMs. It allows for granular control over data usage, including throttling settings, ensuring that the SIM behaves according to defined rules
- Rules and Alerts (RA): This micorservice enables users to define rules for monitoring periodic data usage related to specific plans allocated to their SIMs. This applies to both API and CMP UI users, as they can create rules for monitoring usage across specified plans.
- IMSI Range Definition: Defining the IMSI range helps identify subscribers, manage data usage, organize accounts effectively, and facilitates efficient bulk configuration of settings for multiple SIMs.

SIM Throttling Methods

The floLIVE SIM Throttling Control can be implemented using these methods:

- API Control: This method allows customers to manage SIM throttling programmatically through API interactions. Customers must request support configuration for the PCRF ID options to utilize this method.
- **CMP Method:** This method (a.k.a Daily Threshold Throttling) leverages the Connectivity Management Platform (CMP) user interface to set daily usage limits for SIMs. When a specified threshold is met, data speed is automatically reduced until the next reset.

API Control Method

The API Control method enables programmatic management of SIM throttling through API interactions. This method requires support configuration for allocation of PCRF ID options and for access to specific tables governing throttling speed. With this method, users can set up notifications via HTTP push or email when usage limits are approached.

To implement the API Control method, make sure you fulfil these basic requirements:

1. **Prepare and Configure IMSI Ranges:** This step enables users to identify subscribers, manage data usage and apply different rules based on their usage or plans.



- 2. **Request for PCRF Configuration**: Contact floLIVE support to configure PCRF ID options essential for API control.
- Access PCRF Tables: Utilize the tables provided by the support team to define throttling speed configurations. For example, PCRF ID=1 is high speed data, while PCRF ID=8 is low speed 256 Kb/s)
- 4. **Execute API Calls:** Use the appropriate API calls with the PCRF IDs provided to set up throttling per your requirements.

NOTE: For more information refer to the "Modify Subscriber PCRF Settings" API.

5. **Create Notification Rules**: Set rules for notifications, ensuring HTTP push is configured to trigger when thresholds are met.

CMP Method

The Connectivity Management Portal (CMP) method is based on an intuitve, user-friendly interface for setting up daily usage thresholds without the need for API coding. Users can create rules and set thresholds directly via the CMP Rules and Alerts module. This method generates automated notifications and usage reduction based on the defined daily thresholds. The CMP returns the device back to normal speed automatically at the begining of the next day.

A screen capture of the Create New Rule dialog box is shown here.



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A description of the Create Rule fields is provided in this table.

	Feature	Description
А	Rule Type	Select the Usage, Rate or Plan Rate option.
В	Binding Type	Select preferred Binding Type option.
С	Calculation Type	Select the Accumulative option.
D	Account Name	The name of the selected account.
Е	Service Type	Select the Data option.
F	Reset Interval / Period	The reset interval is set for 1 day.
G	Accumulation Threshold	Defines the daily threshold allowed for maximum speed (i.e. no throttling).
Н	PCRF Rule ID	Defines the throttling speed associated with the group ID
J	Notification Type	Select HTTP Push API.
К	Notification Channel	Select PCRF Integration . This option requires floLIVE support to setup this channel