



Charging Action Configuration Change Support for Existing Sessions Gy and Gz Interface

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Revision History



Note Revision history details are not provided for features introduced before release 21.24.

Revision Details	Release
First introduced	Pre 21.24

Feature Description

Configuration gap leads to improper usage report being sent to Gy and Gz in CDR, and delay in checkpointing also results in data loss due to the SR/ICSR process.

To overcome the gaps in the existing Pure-P and collapsed calls for Gy/Gz charging, the following configuration changes are implemented:

- “Rated to Free” and “Free to Rated” mid-call in the charging-action.
- Addition of high priority rule mid-call with different charging-action that has different Rating Group.
- Charging-action mid-call for the ruledef.

How It Works

Support for the following is added in the existing calls for configuration change related to charging-action and addition of high priority rule within the Rulebase.

Configuration Change Under Charging Action from Rated to Free and Free to Rated Mid Call

For the configuration change under the charging-action from “free to rated”, the Control Plane (CP) applies the change and creates the required URR for the Gy/Gz components. And, when the User Plane reports the usage report, the same report goes to the Gy interface and in the CDR based on the new changes.

When configuration change under charging-action is done from “rated to free”, The User Plane (UP) sends the data usage only for the rated configuration in the usage report to CP. After receiving the usage report, the same is reported to the Gy/Gz interface as applicable.

Configuration Change for Addition of High Priority Rule with Different Charging Action with Different Rating Group

Once you apply the configuration changes in the rulebase by adding a high priority rule with different charging-action and with different rating group. The User Plane sends the separate URR for new charging-action rule and the CP compares the URR with the configuration and handles the new URR. The CP sends the corresponding information to the Gy/Gz interface as applicable.

Configuration Change for Charging-Action Mid Call for the Ruledef

When configuration change is done in the Rulebase by changing the charging-action with different charging-action and with a different rating group. The CP handles the new URR received and sends the proper LOSDV in the CDR with correct Rating Group. Also, when the User Plane sends the start of the traffic after configuration change to the CP, the CP sends the Gy to the CCR-U to request for the quota.

URR Bucket Checkpointing Enhancement for Gy

Whenever the “sx-session-usage-report” comes from User Plane to Control Plane, the checkpointing does not happen immediately. It is done as part of full checkpoint. In between, if there is session recovery, the intermediate details are missed out. To avoid this issue, the micro checkpointing is needed as and when the “sx-session-usage-report” reaches to the Control Plane.