

Gx RLS9 Interface Support

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Introduction

The Gx RLS9 interface uses only the Gx interface (no Gy interface) to provide support to the following scenarios:

- Fair usage at bearer level; requires reporting usage volume per subscriber session
- Fair usage at flow level; requires reporting usage volume per subscriber flow

Support for Gx RLS9 provides Gx enhancements that extend the Gx interface to support the new usage monitoring events. The Gx RLS9 interface supports a number of new events and AVPs. The new events are in 3GPP TS 29.212 V9.1.0 (Dec. 2009).



Although the Gx RLS9 enhancements are in conformance with 3GPP TS 29.212, the SCE platform is not fully compliant with the 3GPP TS 29.212 standard.

Usage Monitoring and Reporting

Figure 5-1 shows an example of usage monitoring—fair usage at bearer or flow level.

Usage monitoring events require a monitoring key to refer to the instance accounted. The monitoring key is set by the PCRF by using the Monitoring-Key AVP as part of the Usage-Monitoring-Information AVP. The SCE bucket ID is used as the monitoring key and is specified per package.

You can map an SCE bucket to:

- A single service
- A set of services
- All the traffic of a specific subscriber

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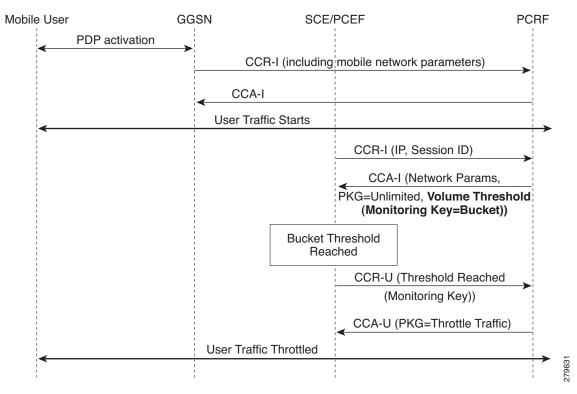


Figure 5-1 Usage Monitoring and Reporting

In this example, the events are as follows:

- 1. The SCE monitors user traffic reports to the PCRF.
- 2. The PCRF selects the traffic to be monitored by using the monitoring-key and a threshold.
- 3. The PCRF sends a reporting event to be notified when the threshold is crossed.

Configuring Usage Monitoring in the SCA BB Console

In the SCA BB GUI, you can create quota profiles that define the limits and action of each monitoring key (bucket) and assign specific services to that monitoring key. You must then attach the quota profile to a package and define a quota rule for the package for the relevant service.

Note

For more information on configuring and managing quotas, see the Cisco Service Control Application for Broadband User Guide.

To configure a Gx usage monitoring quota profile, complete the following steps. The steps are described in detail in the referenced sections.

- **Step 1** Select Gx Usage Monitoring as the External Quota Type (Configuring the External Quota Type, page 5-4).
- Step 2 Create the Gx Usage Monitoring Quota Profile (Adding a Quota Profile, page 5-5).
- **Step 3** Assign services to the profile (Editing a Gx Usage Monitoring Quota Profile, page 5-6).
- **Step 4** Assign the profile to the appropriate package (Attaching the Quota Profile to a Package, page 4-17).

Step 5 Configure a rule for the package defining the action of the bucket for the relevant service in that package (Defining a Rule Using the Quota Profile, page 4-19).

Accessing the Quota Profile Editor

You can access the Quota Profile Editor from the Configuration menu:

Choose Service Configuration > Configuration > Policies > Quota Settings.

🛠 Service Configuration Editor - <new ser<="" th=""><th>vice configuration> - SCA BB Console</th><th></th></new>	vice configuration> - SCA BB Console	
File Tools Preferences Window Help		
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Policies : Subscriber Policies		
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Filtered Traffic Classification		
Service Security Policies	weekly Calendars	
Global Policy	Subscriber Redirection	
E-Subscriber Policies	£⁰ VAS Settings	
Unknown Subscriber Package	🖉 ToS Marking Settings	
	🕄 Quota Settings	
	🔆 System Setting Open Quota Profile Editor	

Figure 5-2 Accessing the Quota Profile Editor

Configuring the External Quota Type

The external quota type options are displayed in the upper part of the Quota Profile Editor, as shown in Figure 5-3. The default quota type is Gy.

Figure 5-3	Quota Profile Editor Screen	
拜 Quota Profil	e Editor	
Quota Profile E	Editor	
Please Edit		
External Type -		
Ogy		
SCE Subscribe	er API	
🔘 Gx Usage Mo	nitoring	

When Gx Usage Monitoring is selected, you cannot configure the settings in the General Settings tab, because they are set to the following preconfigured values:

- Grace Period = 2 sec
- Error Handling = Grant

Changing the external quota type may result in the loss of the existing user-defined quota profile data. Therefore, if you change the quota type after creating any quota profiles, the system issues a warning and asks for confirmation, as shown in Figure 5-4.

Figure 5-4 Warning from Quota Editor Message

Warnin	g from Quota Editor 🛛 🛛 🕅	
⚠	Changing external data type will remove all external profiles. do you want to continue	
	Yes No	278261

Adding a Quota Profile

- **Step 1** In the Profile Edit tab, click **New**.
- **Step 2** Type in the profile name (or you can simply accept the default name suggested by the system) and select the profile type:

Figure 5-5 Adding a Quota Profile

🗚 Add Quota Profile	
Create New Quota Profile Choose Name and Type	
Define New Profile name Usage Monitoring1 Type: Gx Usage Monitoring V	
	Finish Cancel

Step 3 Click Finish.

Editing a Gx Usage Monitoring Quota Profile

After creating a quota profile, you can configure each monitoring key separately. For Gx Usage Monitoring quota profiles, you can map services to each monitoring key.

To configure a Gx Usage Monitoring quota profile, complete the following steps:

Step 1 Click on the profile name in the left pane of the Quota Profile Editor.

The profile name and the individual monitoring keys appear in the right pane. 127 monitoring keys are supported.

¥ Quota Profile Editor			
Quota Profile Editor Please Edit			
External Type Gy SCE Subscriber API G Gx Usage Monitoring Quota Profile Edit General Settings Add Remove Default Profile (Periodical) Usage Monitoring1 (Gx Usage Monitori	1onitoring1 Ty	pe: Gx Usage Monitoring	
click bucket line to			
Monitoring Key	Monitoring Name	Description	
	Bucket 1		
2	Bucket 2		
3	Bucket 3		
4	Bucket 4		
5	Bucket 5		
6	Bucket 6		
7	Bucket 7		
8	Bucket 8 Bucket 9		
9	Bucket 9 Bucket 10		
	Bucket 11		
11	Bucket 12		
13	Bucket 13		
14	Bucket 13 Bucket 14		
	Bucket 15		
	Duality 47		
		Finish	Cancel

Figure 5-6 Quota Profile Editor - Quota Profile Edit Tab

Step 2 Double-click the desired monitoring key to assign services.

The Quota Bucket Editor opens. The Bucket tab simply displays the monitoring key number and the bucket number.

Figure 5-7 Quota Bucket Editor - Bucket Tab

¥ Quota Bucket Editor	
Quota Bucket Profile Please Edit	
Gx Bucket Definition Bucket Service Monitoring Key Number: 4 Name: Bucket 4	
Finis	h Cancel

Step 3 Click the Service tab.

Step 4 Drag the service name from the left pane and drop it under Attached services.The services on the left pane are organized according to the service tree.If you drag a service then all its sub-services in the tree are dragged as well.



¥ Quota Bucket Editor		
Quota Bucket Profile Please Edit		
Gx Bucket Definition Bucket Service Default Service Browsing File Sharing Gaming Gaming Gaming Gaming Gaming Gaming Gaming Gaming Google Talk ICQ Windows Live Messenger Vahoo Messenger Other Instant Messaging Internet Privacy Internet Privacy Net Admin Newsgroups Trading Voice and Video Calls Other	Attached services E-Mail IMAP MS Exchange Desktop MS Push Mail POP3 SMTP Web-Based E-Mail Facebook IM	
	Finish	Cancel

Step 5	Click Finish.
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Step 6 Click Finish again.