

Dummy N7 Notify Request

- Feature Summary and Revision History, on page 1
- Feature Description, on page 2
- How it Works, on page 2
- Configuration Support for the Dummy N7 Notify Request, on page 2

Feature Summary and Revision History

Summary Data

Table 1: Summary Data

Applicable Products or Functional Area	PCF
Applicable Platform(s)	SMI
Feature Default Setting	Disabled – Configuration required to enable
Related Documentation	Not Applicable

Revision History

Table 2: Revision History

Revision Details	Release
Enhancement introduced. PCF supports N5 Interface.	2022.02.0
First introduced.	2020.01.0

Feature Description

PCF is equipped to retrieve the event triggers from the SMF by sending the N7 Notify Request. Certain features such as Rx or N5 bearer authorization, QoS derivation, and rule evaluation depends on specific event triggers such as RAT-Type and AccessType for taking the appropriate action. For instance, the RAT-Type event trigger lets you determine the Radio Access Technology (RAT) that is serving the User Equipment.

Typically, PCF does not subscribe to all the event triggers during the session initiation using N7 Create. If the features are dependent on specific event triggers and PCF did not subscribe to them, then PCF does not fetch the values associated with those events. With the dummy N7 Notify Request, you can send an intermediate request to fetch the event triggers corresponding to the configured Media-Type which is specified in the Rx AAR or N5 Create message from the IMS.

How it Works

This section describes how this feature works.

In the Dummy N7 Notify Request feature, the PCF interactions happen in the following sequence:

1. The SMF sends an N7 Create Request to PCF. The PCF responds to this request with the configured event triggers.
2. When IMS initiates multimedia calls containing the AAR message with the Media-Type, PCF initiates an N7 Notify Request to assign the PCC rules that are evaluated based on the media details received in the AAR message. However, in some situations PCF cannot compute the rules as it did not subscribe to the specific event triggers such as RAT-Change and AccessType AVP.
3. The PCF attempts to determine the corresponding event trigger from the SMF by sending an intermediate (dummy) N7 Notify Request to SMF.
4. The SMF responds with the applicable event triggers that are specified in the dummy N7 request.
5. The PCF uses these triggers to compute the PCC rules and transmits it to the SMF in the subsequent N7 Notify Request.

Configuration Support for the Dummy N7 Notify Request

This section describes how to configure the dummy Notify Request through which PCF retrieves the triggers for the AAR messages with Media-Type.

The configuration of the proxy N7 Notify Request involves the following steps:

1. Creating the STG for the N7 Notify Request
2. Configuring the Dummy N7 Notify Parameters
3. Configuring the Event Triggers

Creating the STG for the N7 Notify Request

This section describes how to create the STG N7 Notify request which is referred by the CRD.

1. Log in to Policy Builder.
2. Click the **Reference Data** tab, and from the left pane click **Custom Reference Data Tables** to view the options.
3. On the left pane, click the **Search Table Groups** folder. A default folder is created under the Search Table Groups folder.
4. Expand the default folder and select the table icon to view the Custom Reference Data Table parameters on the right pane. A default STG is created under the **Search Table Groups** folder.
5. Enter the parameters in the **Custom Reference Data Table** pane. Rename the CRD with a unique name.
6. Navigate to the **Column** field and click **Add**. In the **Columns** pane, click the row to enter the **Name**, **Display Name**, and **Type**. Select the **Use In Condition**, **Key**, and **Required** check box.
7. Specify a row for the Media-Type and a row for the event triggers that you want to fetch.

   The event triggers row does not require the **Use In Condition**, **Key**, and **Required** check box to be selected.
8. Save and publish the changes.

Configuring the Dummy N7 Notify Parameters

This section describes how to configure the dummy N7 Notify event trigger parameters through the PCF Central.

1. Log in to PCF Central.
2. Select the **Custom Reference Data**.
3. In the **Custom Reference Data Tables** pane, click the table that you have created in Creating the STG for the N7 Notify Request, on page 3.
4. In the dialgox box, click **Add Row** to include the Media-Type and event trigger. The information is populated based on the configured STG table.
5. Click **Done** to save your changes.

Configuring the Event Triggers

This section describes how to subscribe to the N7 event triggers through the dummy N7 Notify request.

1. Log in to Policy Builder.
2. Click the **Reference Data** tab.
3. In the left pane, choose **Diameter Defaults > Rx Profiles**.
4. In the **Rx Profiles Summary** pane, under **Create Child**, click **Rx Profile**.

5. On the left pane, choose **Rx Profiles > default**. In the **Rx STG lookup binding** pane, rename the default profile name.
6. In the **Stg Reference** field, click **select** to select the STG table that you have configured.
7. In the **List Of Input Column Avp Pairs** section, click **Add**.
   a. Click the row in the Avp Name to specify the media type.
   b. In the **Column** column, hover the cursor on the first row to click the ellipsis (...) and select the media type that you specified in the STG. For more information, see Creating the STG for the N7 Notify Request, on page 3.
8. In the **List Of Output Column Avp Pairs** section, click **Add**.
   a. Click the row in the Avp Name to specify the event trigger.
   b. In the **Column** column, hover the cursor on the first row to click the ellipsis (...) and select the event trigger that you specified in the STG. For more information, see Creating the STG for the N7 Notify Request, on page 3.
9. In the left pane, navigate to the **Diameter Client > Summary**. In the **Summary** pane, choose **Rx Client > default**.
10. In the **Rx Client** pane, navigate to **Request Gx RAA for Event-Triggers section** and select the check box in the corresponding row.
11. In the **Rx CRD AVP name to extract Event-Triggers** section, click **Add**.
12. In the **Add Values** dialog box, add the triggers. Specify the same values that you have entered for the **Diameter Defaults** parameters.

    The events in the list are populated based on the values of the CRD table (dummy notify table). The input columns of the CRD table are associated to the Rx media details such as Media-Type, and the output columns indicate the event trigger numbers that are to be subscribed or enabled on the SMF.