

MAPS[™] Diameter – Rx Interface (PKS139) Quick Verification Guide

If this is your First-Time-Use of MAPSTM Diameter application, then we recommend you follow all the steps explained in MAPS-Diameter-Quick-Install-Guide to install MAPSTM Diameter application before proceeding with the steps below.

Verification

Functional verification of MAPS-Diameter application for Rx interface requires a system with 2 NIC cards for loopback testing. MAPS-Diameter is configured as **PCRF** (Policy and Changing Rules Function) on one NIC and as **AF** (Application Function) on the other.

Note down the IP addresses of NIC1 and NIC2on the test PC, and in this example the IP addresses used and configured are:

- > NIC #1 IP address is 192.xx.xx.52, and configured as PCRF
- > NIC #2 IP address is 192.xx.xx.53, and configured as AF

Note: In this test scenario, we have configured MAPSTM Diameter as AF generating calls and PCRF to receive calls. It is assumed that both NIC cards on the test PC is connected to a switch or back-to-back using Ethernet cable.

First MAPS™ Diameter (GUI) – (PCRF)

- Right-click on the **MAPS-Diameter** shortcut icon created on the desktop and select 'Run as Administrator'. This instance of MAPS[™] is configured for *Call Reception*
- While invoking the first MAPSTM Diameter instance, verify the following in the Protocol Selection window -
 - > Protocol Standard is set to Diameter
 - Protocol Version is set to Rx
 - Select Node as PCRF. Click Ok
- By default, <u>Testbed Setup</u> window is displayed. Click *in and* select **TestBedDefault** configuration and check for the parameter default values as listed below:
 - > Set the **Transport Type** as **SCTP**
 - > Set the **Diameter Node Type** as **Server**
 - > Set PCRF IP Address to Source PC IP address (NIC #1)
 - > Set PCRF Port to 3868
 - > Set Destination Node to AF
 - Set Destination IP Address to Destination PC IP address (NIC #2)
 - Set Destination Port to 3868
 - Click on the Save 닖 button

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• From MAPSTM Diameter (PCRF) main window, select

Configuration > Incoming Call Handler Configuration. Verify that the **PCRF_SessionControl.gls** script is loaded against the **AA-Request** message. Also, verify other loaded scripts in the window as shown in the figure below. Exit from the window.

Incoming Call Hand	_ 🗆 🗙		
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Message Name	Script Name	Scripts	
AA-Request	PCRF_SessionControl.gls	PCRF_SessionControl.gls	Sequence
Capabilities-Exchange-Request	Diameter_Base.gls		0.0.1
Device-Watchdog-Request	Diameter_Base.gls		ORandom
Disconnect-Peer-Request	Diameter_Base.gls		
Accounting-Request	SplitAccounting.gls	-	



Second MAPS™ Diameter (GUI) – (AF)

- Right-click on the **MAPS-Diameter** application using shortcut icon created on the desktop and select 'Run as Administrator'. This instance of MAPS[™] is configured for *Call Generation*.
- While invoking the second MAPS[™] Diameter instance, verify the following in the Protocol Selection window -
 - > **Protocol Standard** is set to **Diameter**
 - Protocol Version is set to Rx
 - Select Node as AF. Click Ok
- By default, <u>Testbed Setup</u> window is displayed. Click *m* and select **TestBedDefault** configuration and check for the parameter default values as listed below:
 - > Set the **Transport type** as **SCTP**
 - > Set the **Diameter Node Type** as **Client**
 - Set AF IP Address to Source PC IP address (NIC#2)
 - Set AF Port to 3868
 - > Set Destination Node to PCRF
 - Set Destination IP Address to Destination PC IP address (NIC#1)
 - Set Destination Port to 3868
 - Click Save button.

Testbed Setup - TestBedDefault				
Config	Value			
AF Interfaces				
 Tranport type 	SCTP			
 Diamter Node Type 	Client			
- Interface	1			
L Interface 1				
- AF Parameters				
 AF IP Address 	192.168.12.53			
- AF Port	3868			
- AF Host	AF1.gl.com			
- AF Realm	gl.com			
Destnation Node Parameters				
 Destination Node 	PCRF			
 Destination IP Address 	192.168.12.52			
 Destination Port 	3868			
 Destination Host 	PCRF1.gl.com			
Destination Realm	gl.com			
└── End User Configurations	AF_Profiles.xml			

- Select Editor → Profile Editor, click and select AF_Profiles. and set the following parameters to support Rx interface procedures:
 - Set **ModifyProcedure** parameter to Enable.
 - Set the **Terminate** parameter to **AF**.
 - Set SubscriptionToNotification to Enable
 - > Set **ProvisioningSignallingInfo** to Enable.
- Click on Save 🗖 and Exit.
- Start the testbed on both the MAPS (AF and PCRF) instances.



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• From the MAPS instances main window, from *Reports* menu > select *Link Status* option to verify the link status. Verify that the *SCTP Link* Status is *UP* (indicated in Green color) before placing the call.

2	Link Status 🚽 🗖							
SCTP Connection	Association ID	Source IP	SourcePort	Destination IP				
	2	192.168.12.52	3868	192.168.12.53				

- On both instances of MAPS-Diameter (AF and PCRF) main window, click *Call Reception* icon and observe that the *Check_Link_Status.gls* script is activated.
- In the second MAPS-Diameter (AF) instance, click the *Call Generation* icon on main window, and invoke the *Call Generation* window.
- By default, you will observe that multiple call instance is loaded with **AF_SessionControl.gls** script and **AFProfile00**** profiles.
- Select the first call instance in the Call Generation window, and click <u>Start</u> button to initiate the call generation.
- Return to first instance of MAPS-Diameter (**PCRF**), in the **Call Reception** window, observe that the calls are automatically received running the Rx script.
- Wait for the calls to terminate, and verify the call flow under the Message Sequence tab at both generation and reception end.
- Select any message in the ladder diagram and observe the respective decode message on the right pane for the respective message.

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Scripts A Message Sequence / Event Config A Script Flow /												
					Initi	alisation	Errors	Error Events	9	Captured Errors	Link Status Up=1 Down=	• 0

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