

MAPS[™] ITU INAP IP (PKS136) Quick Verification Guide

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

Verification

Functional verification of MAPS-INAPIP application requires a system with 2 NIC cards for testing. MAPS-INAPIP is configured as **gsmSCF** (Service Control Function) on one NIC and as **gsmSSF** (Service Switching Function) on the other. Note down the IP address of NIC1 and NIC2, in this example the IP addresses used and configured are:

- NIC1 IP address is 192.xx.xx.195, and configured as gsmSCF
- NIC2 IP address is 192.xx.xx.219, and configured as gsmSSF

*Note: In this test scenario, we have configured MAPSTM INAPIP as gsmSSF generating calls and gsmSCF to receive calls.

<u>Note:</u> The **''Warranty Error''** as shown in the figure may be prompted, when the user tries to start the testbed, either the **Warranty licenses** are not installed or the license is expired.

<u>Note:</u> Ensure that the warranty license (GLSupportWarrantyLicenseInstaller.exe) is installed and also confirm that PKS136 (MAPSTM ITU INAPIP) is listed in Warranty Application List. Refer to *MAPS- ITU-INAP-IP-Quick-Install-Guide*



MAPS™ INAPIP (GUI) – (gsmSCF)

- Right click on **MAPS-INAPIP** application icon created on desktop and select "**Run as Administrator**". This instance of MAPS[™] is configured for **Call Reception**.
- While invoking the MAPSTM INAPIP instance, verify the following in the <u>Protocol Selection</u> window -
 - Protocol Standard is set to INAPIP
 - > Protocol Version to ITU
 - Select Node as gsmSCF
 - Select Transport as M3UA. Click Ok
- By default, <u>Testbed Setup</u> window is displayed. Click *in and* select **TestBedDefault** and check for the default parameter values as listed below:
 - Set SCF IP Address to 192.xx.xx.195 (NIC1 IP address) [Note: Primary and Secondary IP addresses configuration is
 - supported for backup and redundancy]
 - Set SCF Port to 3905
 - Set SCF Point Code to 3.3.3
 - Set SCF Subsystem Number to INAP ITU-12
 - > Verify if the **Node Type** is set to **SSF**
 - Set Source SCTP Mode to Client
 - Set Destination IP Address to 192.xx.xx.219 (NIC2 IP address)

[Note: Primary and Secondary IP addresses configuration is supported for backup and redundancy]

- Set Destination Port to 3905
- Set **Destination Point Code** to 2.2.2

Config	Value									
SCF Interfaces										
- SCF	1									
La SCF 1										
 SCF IP Address 	192.168.12.195									
 SCF Port 	3905									
 SCF Point Code 	3.3.3									
 SCCP Routing Indicator 	Route on SSN									
 SCCP Point Code Indicator 	Present									
 SCF Subsystem Number 	INAP - 12									
 SCF Global Title Address 	12345658578									
 SCF Address Indicator 	National									
 Nature Of SCF Address Indicator 	Unknown									
Connected Destination Nodes	1									
L Connected Destination Nodes 1										
– Node Type SSF – Source SCTP Mode Client										
									 Destination IP Address 	192.168.12.219
 Destination Port 	3905									
 Destination Point Code 	2.2.2									
 Source M3UA Termination Type 	SGP									
 Network Indicator 	National									
 Signaling Link Selection 	1									
 M3UA Routing Context Indicator 	Present									
 M3UA Routing Context 	1									
 Destination SCCP Routing Indicator 	Route on SSN									
 Destination SCCP Point Code Indicator 	Present									
 Destination Subsystem Number 	INAP - 12									
 Destination Global Title Address 	54321574578									
 Destination Address Indicator 	National									
Nature Of Destination Address Indicator	Unknown									
End User Configuration	MS_Profiles.xml									

818 West Diamond Avenue - Third Floor Gaithersburg, MD 20878 (V) 301-670-4784 (F) 301-670-9187 Web Page: http://www.gl.com/ E-Mail Address: info@gl.com

GL Communications Inc.



- Set M3UA Termination Type to IPSP
- > Set Destination Subsystem Number to INAP ITU-12
 - Click 료 Save button and overwrite the TestBedDefault file.
- From MAPS[™] ITU INAP main window, select Configuration → Incoming Call Handler Configuration from the main menu and verify that INAP_VoiceCall_Service_SCF.gls is loaded against the Initial DP message. Close the configuration window.

	-		×			
	Message Name	Script Name	Scripts			
	nitial DP	INAP_VoiceCall_Service_SCF.gls	INAP_VoiceCall_Service_SCF	0	🖲 Sec	uence
A	SP Up	M3UA.gls			5.	
A	SP Down	M3UA.gls		0	Bar	Idom
A	SP Active	M3UA.gls				

- In the MAPS (gsmSCF node) instance, from Editor → invoke Profile Editor window. Click i and select MS_Profiles, and choose MSProfile001 profile from the left pane and check for the following parameter values required to perform prepaid call:
 - Maximum Call Period Duration in sec = 30
 - Subscriber Call Period in sec = 100 (required for prepaid call)
 - Close the **Profile Editor** window.

🚾 MAPS (Message Automation Protocol Simulation) gsmSCF (INAPIP ITU M3UA) - [Profile Editor - MS_Profiles]

L	🥨 Configurations Emulator Reports Editor Debug Tools Windows Help								
	Q	<i>🖉</i> 🖌 🗣	9	s 🖡 🗰 📰 🧭 🐒 📰 🗟 🔓 🛃 👷	0				
	#	Profiles (Edit-F2)	^	Config Value					
	1	MSProfile001		MSProfile001					
	2	MSProfile002		– Connection Identifier 1					
	3	MSProfile003		Subscriber Information MSISDN 9176553423					
	4	MSProfile004		Called Party Number Toll Free 18003487900					
	5	MSProfile005		Assisting SSP IP Routing Address 919998756291					
	6	MSProfile006		 Max No Of Digits To Be Collected 5 					
	ľ	MOI TOILEODO		Toll Free Call Parameters					
	7	MSProfile007		└── Destination Routing Address 918764563271					
	8	MSProfile008		Le Charging Call Duration Parameters					
	9	MSProfile009		 Maximum Call Period Duration in sec 30 					
	Ŭ			 Subscriber Call Period in sec 100 					
	10	MSProfile010		Low balance call flow Play Announ	cement and Release				
	11	MSProfile011							



MAPS™ INAPIP (GUI) – (gsmSSF)

- To invoke another MAPS INAPIP instance, right click on MAPS INAPIP application icon created on desktop and select "Run as administrator". This instance of MAPS[™] is configured for Call Generation.
- While invoking the second MAPSTM instance, verify the following in the Protocol Selection window -
 - > Protocol Standard is set to INAPIP
 - > Protocol Version to ITU
 - Select Node as gsmSSF
 - Select Transport as M3UA. Click Ok
- By default, <u>Testbed Setup</u> window is displayed. Click *m* and select TestBedDefault configuration and check for the default parameter values as listed below:
 - Set **SSF IP Address** to 192.xx.xx.219 (NIC2 IP address)

[Note: Primary and Secondary IP addresses configuration is supported for backup and redundancy]

- Set SSF Port to 3905
- Set SSF Point Code to 2.2.2
- Set SSF Subsystem Number to INAP ITU-12
- Verify that the Node Type is set to SCF
- Set Source SCTP Mode to Server
- Set Destination IP Address to 192.xx.xx.195 (NIC1 IP address)

[Note: Primary and Secondary IP addresses configuration is supported for backup and redundancy]

- Set Destination Port to 3905
- Set Destination Point Code to 3.3.3
- > Set M3UA Termination Type to IPSP
- > Set Destination Subsystem Number to INAP ITU-12
- Click Save button and overwrite the **TestBedDefault** file.
- **Start** the test bed on both the MAPSTM instances
- On both the MAPS instances main window, from Reports menu → invoke Link Status window. Verify that the Link Status is UP (indicated in Green color) before placing the call.

5	L	ink Status		_ 🗆 🗙
SCTP Connection	Association ID	Source IP	SourcePort	Destination IP
UP UP	2	192.168.12.195	3905	192.168.12.219

- On both the MAPS[™] instances main window, click [≫] icon and invoke **Call Reception** window. Verify that M3UA script is activated.
- In the second MAPS[™] instance (gsmSSF) window, click icon and invoke Call Generation window.
- By default, you will observe a single call instance loaded with INAP_VoiceCall_Service_SSF.gls script and select
 MSProfile001 profile and click _______button to execute the script.
 - Double-click under Profile against INAP_VoiceCall_Service_SSF.gls script and select Profile0001 profile and click button to execute the script.

MAPS (Message Automation Protocol Simulation) gsmSSF (INAPIP ITU M3UA) - [Testbed S										
@ Configurations Emulator Reports Editor Debug Tools	Windows Help									
🎯 🖉 🖄 🔈 🗞 6 🗊 📰 🗹 🔮 📗	è è 🕹 🕹									
Config	Value									
SSE Interfaces										
HE SSE	1									
4 SSF 1										
 SSF IP Address 	192.168.12.219									
 SSF Port 	3905									
- SSF Point Code	2.2.2									
 SCCP Routing Indicator 	Route on SSN									
 SCCP Point Code Indicator 	Present									
 SSF Subsystem Number 	INAP - 12									
 SSF Global Title Address 	54321574578									
 SSF Address Indicator 	National									
 Nature Of SSF Address Indicator Unknown 										
Connected Destination Nodes	1									
Le Connected Destination Nodes 1										
– Node Type	SCF									
 Source SCTP Mode 	Server									
 Destination IP Address 	192.168.12.195									
 Destination Port 	3905									
 Destination Point Code 	3.3.3									
 Source M3UA Termination Type 	ASP									
Network Indicator Cinection Link Scienting	National									
Signaling Link Selection	l Docent									
MISUA Kouting Context Indicator	Present									
INISUA Routing Context Destination SCCD Resting Indicator	I Deute en CCNI									
Destination SCCP Routing Indicator Destination SCCP Routing Indicator	Route on SSIN									
Destination Subsystem Number	INAP - 12									
Destination Subsystem Rumber Destination Global Title Address	12345658578									
Destination of data in the statics Destination Address Indicator National										
Nature Of Destination Address Indicator	Unknown									
End User Configuration	MS Drofiles yml									



MAPS[™] ITU INAP IP (PKS136) Quick Verification Guide

- Wait for the calls to terminate and verify the **Message Sequence** flow at both generation and reception end. Uncheck the **Show** Latest option.
- Select any message in the ladder diagram and observe the respective decode message on the right pane for the respective message.

MAPS (Message Automation Protocol Simula	ation)	gsmSSF (INAPIP ITU M3UA) - [Call Generati	ion - Defa	ult]	- • ×						
😼 Configurations Emulator Reports Editor Debug Tools Windows Help											
X = x x x x 10 0 0 4	- 74										
Critic Control Control Control Control	Europuti	m Chabus Eucasta	E.u	Posult Total	Iterations Completed Iteratio						
orno ouppresente noise canno ouppresente accuse Events Events Events Events Events Events Events Events Compared International I											
I INAF_VOICECall_Service_SSF.gis WISFTOILE001 0x00000002	Statt	Call Released from Door side None		Fass							
<		III			>						
Add Delete Insert Refresh Start Start All Stop Stop All	۵b	at Abort All									
	no	BOICH									
Show Latest											
SSE SCE	^	============ MTP3 User Adaptation La	ayer =====		, o 🏠						
	_	0000 Version	-	00000001 Release	1.0						
Initial DP 11:25:40.535000		0003 Transfer Message Type	-	00000001 Pavload	Data						
		0004 Message Length	-	132 (x00000084)							
Hequest Heport BLSM Event 11:25:40.621000		Protocol Data	=								
		0008 Tag	=	x0210 Transfer Pr	otocol Data						
Hequest Heport BUSM Event		000A Length	=	115 (x0073)							
		Originating Point Code	=								
Apply Charging 11-25-40 622000	=	000E Point Code	=	2.2.2(010000 00	010010)						
11.23.40.022000		Destination Point Code	=								
continue		0012 Point Code	=	3.3.3(011000 00	0011011)						
11:23:40.624000		0014 Service Indicator	=	0011 SCCP							
Event Report BCSM		0015 Network Indicator	-	10 National	Network						
11:25:40.642000		0016 Message Priority	=	00 Priority	r Code 0						
Apply Charging Report		0017 Signalling Link Selection	=	1 (XOI)							
11:26:00.663000											
Applu Charging		Parameter Padding	-	x00							
11:26:00.681000		007C Tog		r0006 Bouting Cor	tort						
Applu Charging Beport		007E Length	-	20006 Routing Cor.	ICEXC						
11:26:20.702000		0080 Routing Context Value	_	1 (*00000001)							
Apply Charging		========= SCCP Laver =========		1 (#0000001)							
Apply Charging 11:26:20.720000		0018 Message Type	-	00001001 UDT unid	lata						
		Mandatory Fixed Parameters	=								
Apply Charging Report		Protocol Class Parameter	-								
		0019 Class	=	0001 Class 1							
Apply Charging 11:26:40.760000	~	0019 Message Handling (Class 0 and 1 o	only) =	0000 No Speci	al Options						
		COll Brinkin & Wendstein Brinstein	-	D							
	-										
Scripts > Message Sequence / Event Config > Script Flow /											
Initialisation Errors Error Events Captured Errors Link Status Up=1 Down=0											

• Return to MAPSTM INAPIP (gsmSCF) instance, in the Call Reception window, observe that the calls are automatically received running the Rx script.

🚰 MAPS (Message Automation Protocol Simulation) gsmSCF (INAPIP ITU M3UA) - [Call Reception] — 🗌										– 🗆 ×		
🥦 Configurations Emulator Reports Editor Debug Tools Windows Help										_ 8 ×		
Q: = 3, > 3, I = 4, I = 1, I =												
Sr No Script Name		Profile	Call Info		Script Exe	ecution	Status	Events	Event	Results	^	
1 M3U.	\.gls		1			Stop	ASP Active	Send-ASPDown		Pass		
2 SCM	ä.gls		1			Stop	Subsystem-Allowed	Initiate SST		Pass		
3 INAP_VoiceCall_	Service_SCF.gls		0xB527	0306	Co	mpleted	Call Released	None		Pass		
4 INAP_VoiceCall_	Service_SCF.gls		0xB527	03C7	Co	mpleted	Call Released	None		Pass		
5 INAP_VoiceCall_	Service_SCF.gls		0xB527	03C8	Co	mpleted	Call Released	None		Pass		
6 INAP_VoiceCall_	Service_SCF.gls		0xB527	03C9	Co	mpleted	Call Released	None		Pass		
7 INAP_VoiceCal_	Service_SCF.gls		0xB527	03CA	Co	npleted	Call Released	None		Pass		
8 INAP VoiceCall	Service SCF.gls		0xB527	03CB	Co	npleted	Call Released	None		Pass	•	
Stop Stop All At	h	Show Records	J Select Active	Call Auto T	rash	ash						
SSF			s	CF	^	<u> </u>	Find					
	Initi	ial DP	-	10:56:09.85.1	604	0000 Ve	======== MTP3 User Adaptati ersion	on Layer ====================================	 00001 R	elease 1.0	^	
Bequest Beport BCSM Event							0002 Message Class 0003 Transfer Message Tyme			= 00000001 Transfer = 00000001 Peyload Date		
●				10:56:09.96.4	0004 Message Length = 144 (x000000)			0090)				
	Request Rep	ort BCSM Event		10:56:09:101	1273 Protocol Data =							
	den ha	Changing				0008 1	lag Length	= 128	(x0080)	sier Protocol Data		
	Арруч	unaiging		10:56:09.107.	5391	0	Driginating Point Code	-				
	cor	ntinue				OOOE	Point Code	= 2.2.	2(01	0000 00010010)		
◀──				10:56:09.112.	5470	I I I I I I I I I I I I I I I I I I I	Destination Point Code					
	Event Re	eport BCSM		10.50.14.107	- 400	0012	Foint Lode Service Indicator	= 3.3.	0011 8	CCP (00011011)		
				10:56:14:127.3	0433	0015 1	Network Indicator	=	10 N	ational Network		
	Apply Cha	rging Report	b	10:56:34 134 :	2608	0016 1	Message Priority	=	00 P:	riority Code O		
		Changing				0017 \$	Signalling Link Selection	= 1 (;	(01)	00440101000044010100	COC258490400400449	
▲	Appiy	chaiging		10:56:34.136.	5968	R	outing Context	= 2050	103070	004401010000044012100	000238400408449	
	Apply Cha	raina Report				0088	Tag	= x000	6 Rout:	ing Context		
	- ppy one	and to be the		10:56:54.149.	629 🗸	008A 1	Length	= 8 ()	(0008)		~	
<					>	<	Neither Product Weiter	- 1 7.			>	
Scripts Message Sec	uence Event Con	fin Seriet Fl	ow /			0.						
						- 1. in its	information Frances 👘 France France		national C	mana 🚺 🗖 Lindu S	Natural In-1 Daym-0	

