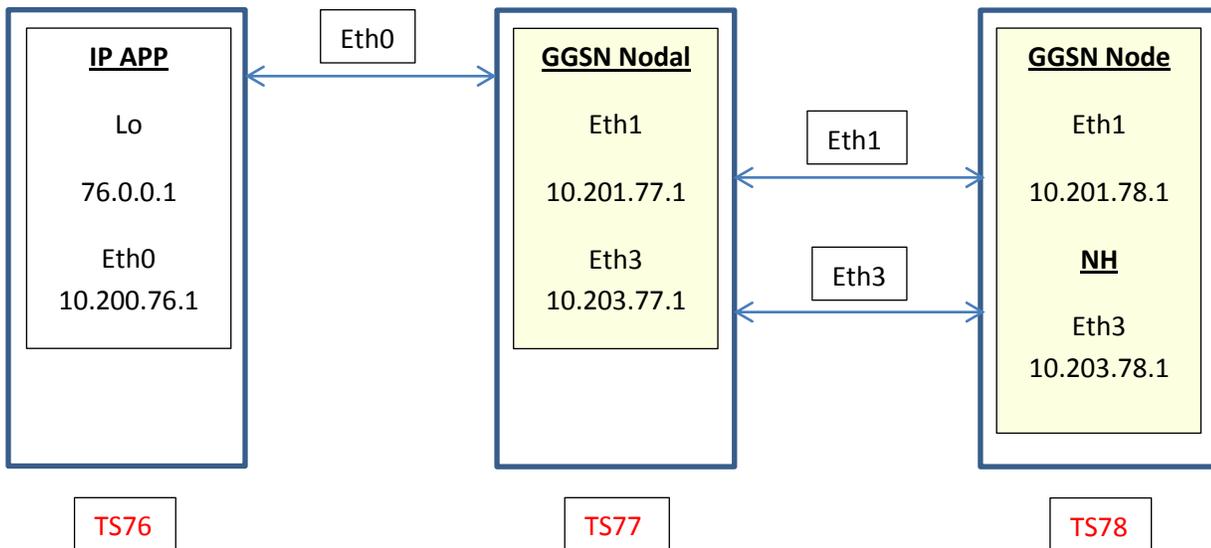


Landslide External Data Configuration

Spirent Global Services



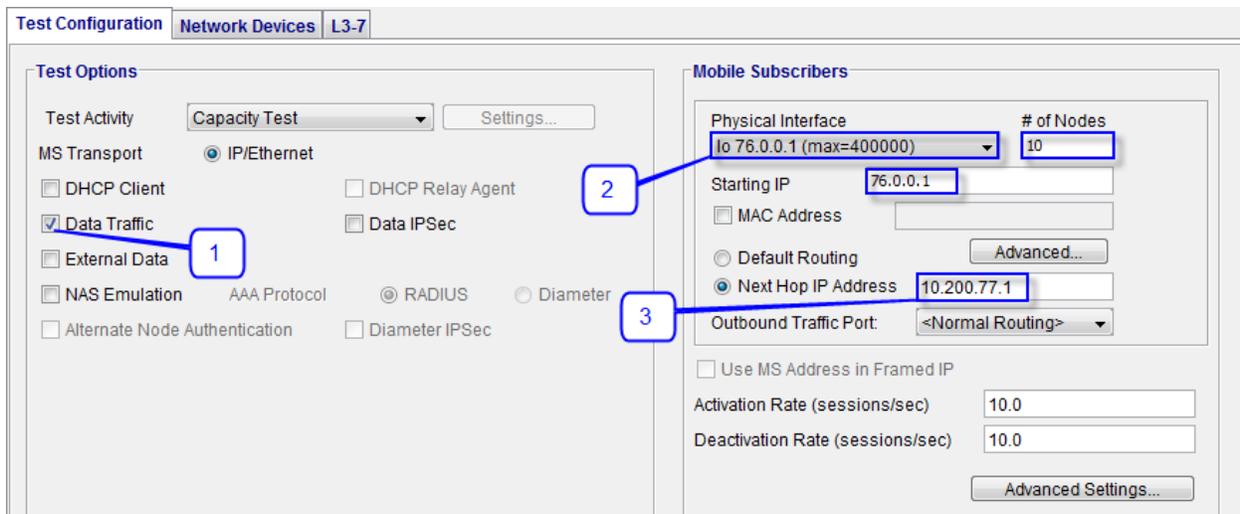


External data Test Server connection diagram

In order to use a back to back scenario in the lab to demonstrate Landslide external data capability, 3 Test Servers are required. IP Application and Network Host Test cases will be used to generate external data to the GGSN Nodal – Node Application.

On the first Test Server or TS76, configure the IP Application Node Test Case. On the Test Configuration tab:

1. Check Data Traffic option
2. Select the Loopback Address as Physical Interface with corresponding Starting IP Address with # of Nodes.
3. Configure the Next Hop IP Address to be the TS77 Eth0 IP Address which is 10.200.77.1



On the L3-7 tab,

1. Select Remote for the Network Host
2. Add the Remote Network Host Starting IP Address – 10.203.78.1 in the example.
3. Add the Data Message Flow to be used – Basic UDP in the example.

The screenshot shows the 'Test Configuration' window for 'Network Devices' and 'L3-7'. The 'Data Traffic' section is active. Under 'Network Host', the 'Host Type' is set to 'Remote' (1). A table lists network hosts with 'Index' 0 and 'IP' 10.203.78.1 (2). The 'Client' section shows 'Traffic Type' as 'Continuous' and 'Traffic Start' as 'When All Sessions Established'. Other settings include 'Data Start Delay (ms)' at 1000, 'Limit Ingress Link Speed (Kb/s)' at 16, 'Limit Egress Link Speed (Kb/s)' at 16, 'Maximum Transmission Unit' at 1400, and 'Do Not Fragment' checked. The 'Data Message Flows Used' section shows 'Basic/Basic UDP' selected (3).

On the second Test Server or TS77, configure the GGSN Nodal Test Case. On the Test Configuration tab:

1. Check External Data under the Test Options pane.
2. Configure the Number of Subscribers

The screenshot shows the 'Test Configuration' window for 'Network Devices' and 'Gn L3-7'. The 'Test Options' section shows 'Test Activity' as 'Capacity Test' and 'PDP Type' as 'IPv4'. Under 'Test Options', 'External Data' is checked (1). The 'Mobile Subscribers' section shows 'Number of Subscribers' set to 10 (2). Other settings include 'Number of Primary PDP Contexts' at 1, 'Number of Secondary Contexts' at 0, 'Activation Rate (contexts/sec)' at 1.0, and 'Deactivation Rate (contexts/sec)' at 1.0.

On the GGSN Nodal Network Devices tab,

1. Configure the Control Node Physical Interface/Starting IP Address – 10.201.77.1 in the example.
2. Configure GGSN SUT – 10.201.78.1 in the example.

Test Configuration Network Devices Gn L3-7

Systems Under Test

GGSN 2 TS78 10.201.78.1

Alternate User Address < Choose a SUT >

L2TP < Choose a SUT >

CGF < Choose a SUT >

APN DNS Lookup

DNS Server IP Address

APN Suffix

Perform DNS Lookup per APN Primary Context

Target User Node LNS Node DNS Query Node Ga Node

Control Node User Node Target Control Node

Physical Interface 1 eth1 10.201.77.1 (max=201) # of Nodes

Starting IP

MAC Address

Default Routing Next Hop IP Address

Outbound Traffic Port: <Normal Routing>

On the GGSN Nodal L3-7 tab,

1. Select Remote for the Network Host
2. Add the Remote Network Host Starting IP Address – 10.203.78.1 in the example. Note that enabling External Data on the GGSN Nodal Test Configuration tab, Test Options pane will greyed out the Data Message Flow Used.

Test Configuration Network Devices Gn L3-7

Data Traffic

Network Host

Host Type Local Remote 1

Index	IP
0	10.203.78.1 2

Reset Idle Host Traffic Session

Idle Time to Trigger Reset (s)

Apply Test Data File to Network Host Side

Client

Traffic Type Perform Verification

Traffic Start

Data Start Delay (ms) Auto Stop Control Layer

Limit Ingress Link Speed (Kb/s)

Limit Egress Link Speed (Kb/s)

Maximum Transmission Unit Do Not Fragment

Apply Test Data File to User Side

Data Message Flows Used

On the third Test Server or TS78, configure the GGSN Node Test Case. On the Test Configuration tab:

1. Configure the Number of Subscribers.
2. Enter the Starting PDP Context IP Address matching the Loopback Address configured as the IP Application Node Physical Interface – 76.0.0.1 in the example.

The screenshot shows the 'Emulator Configuration' window with the 'Network Devices' tab selected. The 'Gn' sub-tab is active. The 'Mobile Subscribers' section is highlighted with a blue box labeled '1'. It contains the following fields: 'Number of Subscribers' (text input: 10), 'Number of Primary PDP Contexts' (dropdown: 1), 'Number of Secondary PDP Contexts' (dropdown: 0), and 'Starting PDP Context IP Address' (text input: 76.0.0.1). A blue box labeled '2' points to the 'Starting PDP Context IP Address' field. Other sections include 'Emulator Options' (PDP Type: IPv4 selected, various checkboxes), 'Data Traffic' (Maximum Transmission Unit: 1400, VLAN ID: 0), and 'DHCP Relay Agent' (Relay Address and DHCP Server Address fields).

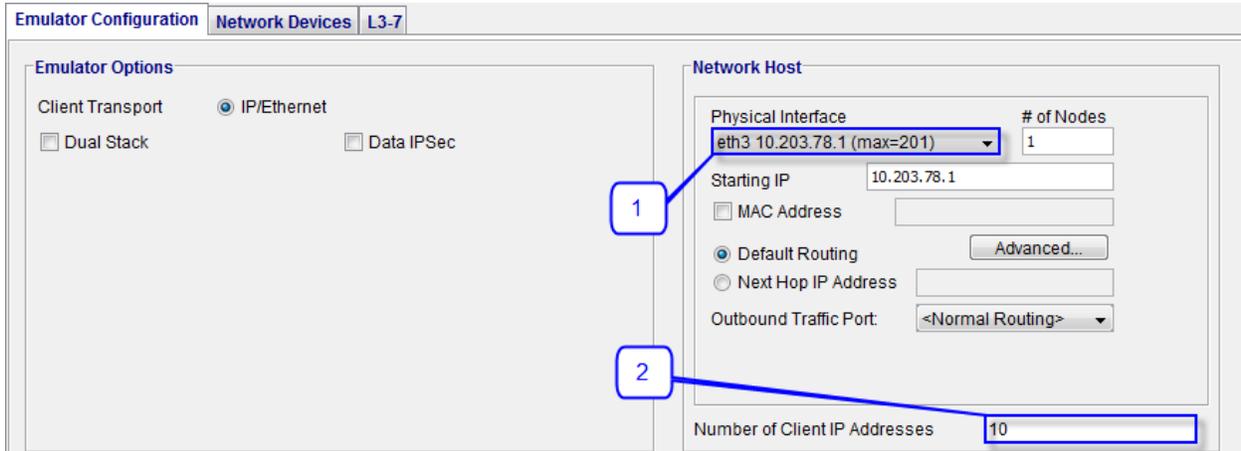
On the GGSN Node Network Devices tab,

1. Configure the Control Node Physical Interface/Starting IP Address – 10.201.78.1 in the example.
2. Configure GGSN SUT – 10.201.77.1 in the example

The screenshot shows the 'Emulator Configuration' window with the 'Network Devices' tab selected. The 'Gn' sub-tab is active. The 'Systems Under Test' section is highlighted with a blue box labeled '2'. It contains the following fields: 'SGSN' (dropdown: TS77 10.201.77.1), 'V0 Control Port' (text input: 3386), 'V1 Control Port' (text input: 2123), 'V0 User Port' (text input: 3386), and 'V1 User Port' (text input: 2152). The 'Control Node' sub-tab is active. The 'Physical Interface' section is highlighted with a blue box labeled '1'. It contains the following fields: 'Physical Interface' (dropdown: eth1 10.201.78.1 (max=201)), 'IP Address' (text input: 10.201.78.1), 'MAC Address' (checkbox: unchecked), 'Default Routing' (radio: selected), 'Next Hop IP Address' (text input: empty), and 'Outbound Traffic Port' (dropdown: <Normal Routing>). An 'Advanced...' button is also visible.

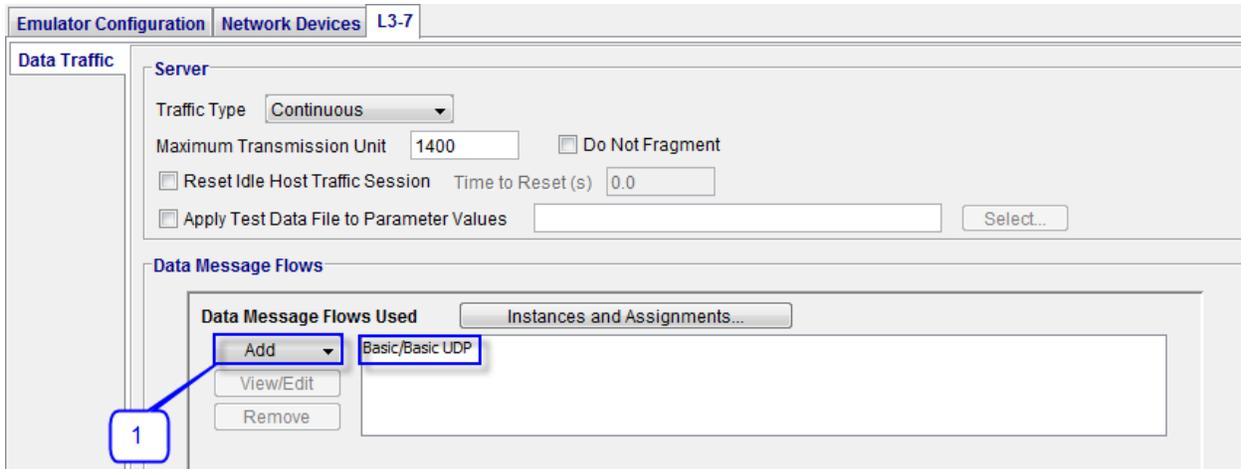
On the third Test Server or TS78, configure the Network Host Test Case. On the Emulator Configuration tab:

1. Configure the Network Host Physical Interface/Starting IP Address – 10.203.78.1 in the example.
2. Configure the Number of Client IP Addresses – 10 in the example.



On the Network Host L3-7 tab,

1. Add the same Data Message flow as the one used in the IP Application Node – Basic UDP in the example.



From the Landslide GUI Main menu, select Admin Test Servers. Once the TS Admin window is opened, select the Test Server with the GGSN Nodal test case – TS77 in the example.

Click Configure and enter the cfguser password (if the default password was not changed)

Select the Routing tab and enter the following:

1. Click Add
2. Enter the Destination (Loopback Address subnet 76.0.0.0/13) for the return traffic from the Network Host. As you are entering the static route on the TS77 Test Server the Gateway to reach the 76.0.0.0 subnet will be 10.200.76.1.

