

# NGTFF

Version 2.0.0.0

M3UA  
SCCP

Developer Guide

## CONFIGURATION TAGS

| TAG Name                    | Description  |
|-----------------------------|--|
| <b># Host Configuration</b> |  |
| HostAddressType             | IPv4 if the M3UA AS/ASP needs to listen on IP v4 address<br>IPv6 if the M3UA AS/ASP needs to listen on IP v6 address   |
| HostAddress                 | IPv4 or IPv6 of the host machine<br>Add another HostAddress for secondary HostAddress  |
| HostPort                    | The Port of the host machine, if configured, the host will be listening to this address, if et al, required, another instance of AS/ASP, configure separate node |
| HostApplicationId           | ApplicationId of Host  |
| HostAspUpAckTimer           | Default value is 2 for Timer in M3UA   |
| HostAspTrafficModeType      | 1    Override<br>2    Loadshare<br>3    Broadcast  |
| <b># ASP Configuration</b>  |  |
| ASPIId                      | int value  |
| ASPLocalPointCode           | Point Code of ASP  |
| ASPRoutingContext           | U16 value of RoutingContext, multiple RoutingContext can be configure.   |
| ASPSGAddressType            | Signaling Gateway IPAddress Type, IPv4 or IPv6   |
| ASPSGPrimaryAddress         | Signaling Gateway Primary Address  |
| ASPSGSecondaryAddress       | Signaling Gateway Secondary Address  |
| ASPSGConnect                | 0 - will not connect to signaling gateway<br>1 - connects to signaling gateway   |
| ASPSGPort                   | U16 - Signaling Gateway port, where ASP Needs to connect   |
| ASPSGClientPort             | U16 - When Connecting to Signaling Gateway, this port will be used to bind to local system   |

Multiple configuration entries of ASP are allowed.

## **Application Server/ Application Server Process - Development**

Step 1: Initialize SS7 Stack

Step 2: Load Stack Configuration File

Step 3: Hook Message Callback function to SS7 Stack

in the main function or application initialization block, call be the below stack functions to initialize and setup stack.

```
__ngtff_ss7__init();  
__ngtff_ss7__load_stackconfig( <stack config file>);  
__ngtff_ss7__onrecvmmsg( <function pointer to recv message>);
```

### **Receive Message**

Receive Callback Function Signature

syntax:

```
void <function-name>( uint8_t * msg);
```

eg:

```
void asp_onrecvmmsg( uint8_t * msg)
```

The Stack Calls the recv message callback function whenever it receives the M3UA SCCP Message from network,

The Messages will be encapsulated in *msg* parameter.

### **Protocol Data Information From M3UA**

The below function is to provide protocol information from M3UA Layer.

```
uint32_t aspId;  
uint32_t opc;  
uint32_t dpc;  
uint8_t ni;  
uint8_t mp;  
uint8_t sls;  
  
__ngtff_ss7__get_protocol_data( msg, &aspId, &opc, &dpc, &ni, &mp, &sls);
```

## Decode SCCP

```
NGTFF_SM sccpMsg;
memset( &sccpMsg, 0, sizeof( NGTFF_SM));

int decode_sts = __ngtff_ss7__decode_sccp( msg, &sccpMsg);

if( decode_sts != 1)
{
    //decoding failed
    return;
}
```

## Decode SCCP Address

```
NGTFFSA calledPartyAddress;
memset( &calledPartyAddress, 0, sizeof( NGTFFSA));

NGTFFSA callingPartyAddress;
memset( &callingPartyAddress, 0, sizeof( NGTFFSA));

decode_sts = __ngtff_ss7__sccp_decode_address( &calledPartyAddress,
sccpMsg.calledPartyAddress , sccpMsg.calledPartyAddresslen);

if( decode_sts == 1)
    asp_print_address( &calledPartyAddress);

decode_sts = __ngtff_ss7__sccp_decode_address( &callingPartyAddress,
sccpMsg.callingPartyAddress , sccpMsg.callingPartyAddresslen);

if( decode_sts == 1)
    asp_print_address( &calledPartyAddress);
```