

OsmoSTP - Bug #4247

XUA_ASP(asp-dyn-0){ASP_DOWN}: event ASPSM-ASP_UP not permitted in role ASP

11/06/2019 12:43 PM - fixeria

Status:	Resolved	Start date:	11/06/2019
Priority:	Normal	Due date:	
Assignee:	laforge	% Done:	100%
Category:			
Target version:			
Spec Reference:			
Description			
After upgrading everything to the recent master, I noticed that OsmoBSC fails to establish connection to OsmoMSC.			
Starting OsmoMSC:			
<pre>DLSS7 INFO osmo_ss7.c:1724 (r=127.0.0.1:51016<->l=127.0.0.1:2905): New m3ua connection accepted DLSS7 INFO osmo_ss7.c:1764 (r=127.0.0.1:51016<->l=127.0.0.1:2905): created dynamicASP asp-dyn-0 DLSS7 INFO osmo_ss7.c:1296 0: asp-asp-dyn-0: Restarting ASP asp-dyn-0, :0 ==> 127.0.0.1:51016 DLSS7 NOTICE osmo_ss7.c:1344 0: asp-asp-dyn-0: ASP Restart for server not implemented yet! DLSS7 DEBUG fsm.c:461 XUA_ASP(asp-dyn-0){ASP_DOWN}: Allocated DLSS7 DEBUG osmo_ss7.c:1797 XUA_ASP(asp-dyn-0){ASP_DOWN}: Received Event SCTP-EST.ind DLSS7 DEBUG xua_asp_fsm.c:118 0: asp-asp-dyn-0: No Layer Manager, dropping M-SCTP_ESTABLISH.indica tion DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-0: xua_srv_conn_cb(): sctp_recvmsg() returned 8 (flags= 0x80) DLM3UA DEBUG m3ua.c:722 0: asp-asp-dyn-0: Received M3UA Message (ASPSM:UP) DLSS7 DEBUG m3ua.c:686 XUA_ASP(asp-dyn-0){ASP_DOWN}: Received Event ASPSM-ASP_UP DLSS7 ERROR xua_asp_fsm.c:359 XUA_ASP(asp-dyn-0){ASP_DOWN}: event ASPSM-ASP_UP not permitted in ro le ASP DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-0: xua_srv_conn_cb(): sctp_recvmsg() returned 148 (flag s=0x8080) DLSS7 INFO osmo_ss7.c:1424 0: asp-asp-dyn-0: xUA SRV SCTP NOTIFICATION 32770 flags=0x0 DLSS7 INFO osmo_ss7.c:1437 0: asp-asp-dyn-0: xUA SRV PEER_ADDR_CHANGE DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-0: xua_srv_conn_cb(): sctp_recvmsg() returned 8 (flags= 0x80) DLM3UA DEBUG m3ua.c:722 0: asp-asp-dyn-0: Received M3UA Message (ASPSM:UP) DLSS7 DEBUG m3ua.c:686 XUA_ASP(asp-dyn-0){ASP_DOWN}: Received Event ASPSM-ASP_UP DLSS7 ERROR xua_asp_fsm.c:359 XUA_ASP(asp-dyn-0){ASP_DOWN}: event ASPSM-ASP_UP not permitted in ro le ASP DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-0: xua_srv_conn_cb(): sctp_recvmsg() returned 148 (flag s=0x8080) DLSS7 INFO osmo_ss7.c:1424 0: asp-asp-dyn-0: xUA SRV SCTP NOTIFICATION 32770 flags=0x0 DLSS7 INFO osmo_ss7.c:1437 0: asp-asp-dyn-0: xUA SRV PEER_ADDR_CHANGE DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-0: xua_srv_conn_cb(): sctp_recvmsg() returned 8 (flags= 0x80) DLM3UA DEBUG m3ua.c:722 0: asp-asp-dyn-0: Received M3UA Message (ASPSM:UP) DLSS7 DEBUG m3ua.c:686 XUA_ASP(asp-dyn-0){ASP_DOWN}: Received Event ASPSM-ASP_UP DLSS7 ERROR xua_asp_fsm.c:359 XUA_ASP(asp-dyn-0){ASP_DOWN}: event ASPSM-ASP_UP not permitted in ro le ASP DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-0: xua_srv_conn_cb(): sctp_recvmsg() returned 8 (flags= 0x80) DLM3UA DEBUG m3ua.c:722 0: asp-asp-dyn-0: Received M3UA Message (ASPSM:UP) DLSS7 DEBUG m3ua.c:686 XUA_ASP(asp-dyn-0){ASP_DOWN}: Received Event ASPSM-ASP_UP DLSS7 ERROR xua_asp_fsm.c:359 XUA_ASP(asp-dyn-0){ASP_DOWN}: event ASPSM-ASP_UP not permitted in ro le ASP DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-0: xua_srv_conn_cb(): sctp_recvmsg() returned 8 (flags= 0x80) DLM3UA DEBUG m3ua.c:722 0: asp-asp-dyn-0: Received M3UA Message (ASPSM:UP) DLSS7 DEBUG m3ua.c:686 XUA_ASP(asp-dyn-0){ASP_DOWN}: Received Event ASPSM-ASP_UP DLSS7 ERROR xua_asp_fsm.c:359 XUA_ASP(asp-dyn-0){ASP_DOWN}: event ASPSM-ASP_UP not permitted in ro le ASP ... </pre>			

```
DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-0: xua_srv_conn_cb(): sctp_recvmsg() returned 12 (flags=0x8080)
DLSS7 INFO osmo_ss7.c:1424 0: asp-asp-dyn-0: xUA SRV SCTP NOTIFICATION 32773 flags=0x0
DLSS7 NOTICE osmo_ss7.c:1437 0: asp-asp-dyn-0: xUA SRV SHUTDOWN_EVENT
DLSS7 INFO osmo_ss7.c:1687 asp-dyn-0: SCTP connection closed
DLSS7 DEBUG osmo_ss7.c:1693 XUA_ASP(asp-dyn-0){ASP_DOWN}: Received Event SCTP-COMM_DOWN.ind
DLSS7 ERROR xua_asp_fsm.c:614 XUA_ASP(asp-dyn-0){ASP_DOWN}: transition to state ASP_DOWN not permitted!
DLSS7 DEBUG xua_asp_fsm.c:118 0: asp-asp-dyn-0: No Layer Manager, dropping M-ASP_DOWN.indication
DLSS7 DEBUG xua_asp_fsm.c:118 0: asp-asp-dyn-0: No Layer Manager, dropping M-SCTP_RELEASE.indication
DLSS7 INFO osmo_ss7.c:1256 0: asp-asp-dyn-0: Destroying ASP
DLSS7 DEBUG osmo_ss7.c:1263 XUA_ASP(asp-dyn-0){ASP_DOWN}: Terminating (cause = OSMO_FSM_TERM_REQUEST)
DLSS7 DEBUG osmo_ss7.c:1263 XUA_ASP(asp-dyn-0){ASP_DOWN}: Freeing instance
DLSS7 DEBUG fsm.c:573 XUA_ASP(asp-dyn-0){ASP_DOWN}: Deallocated
DLSS7 INFO osmo_ss7.c:1724 (r=127.0.0.1:43829<->l=127.0.0.1:2905): New m3ua connection accepted
DLSS7 INFO osmo_ss7.c:1764 (r=127.0.0.1:43829<->l=127.0.0.1:2905): created dynamicASP asp-dyn-1
DLSS7 INFO osmo_ss7.c:1296 0: asp-asp-dyn-1: Restarting ASP asp-dyn-1, :0 ==> 127.0.0.1:43829
DLSS7 NOTICE osmo_ss7.c:1344 0: asp-asp-dyn-1: ASP Restart for server not implemented yet!
DLSS7 DEBUG fsm.c:461 XUA_ASP(asp-dyn-1){ASP_DOWN}: Allocated
DLSS7 DEBUG osmo_ss7.c:1797 XUA_ASP(asp-dyn-1){ASP_DOWN}: Received Event SCTP-EST.ind
DLSS7 DEBUG xua_asp_fsm.c:118 0: asp-asp-dyn-1: No Layer Manager, dropping M-SCTP_ESTABLISH.indication
DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-1: xua_srv_conn_cb(): sctp_recvmsg() returned 148 (flags=0x8080)
DLSS7 INFO osmo_ss7.c:1424 0: asp-asp-dyn-1: xUA SRV SCTP NOTIFICATION 32770 flags=0x0
DLSS7 INFO osmo_ss7.c:1437 0: asp-asp-dyn-1: xUA SRV PEER_ADDR_CHANGE
DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-1: xua_srv_conn_cb(): sctp_recvmsg() returned 148 (flags=0x8080)
DLSS7 INFO osmo_ss7.c:1424 0: asp-asp-dyn-1: xUA SRV SCTP NOTIFICATION 32770 flags=0x0
DLSS7 INFO osmo_ss7.c:1437 0: asp-asp-dyn-1: xUA SRV PEER_ADDR_CHANGE
```

OsmoMSC does not log any errors:

```
DLSS7 NOTICE osmo_ss7.c:439 0: Creating SCCP instance
DSGS NOTICE sgs_server.c:186 SGs socket bound to r=NULL<->l=0.0.0.0:29118
DMSC NOTICE msc_main.c:689 A-interface: SCCP user OsmoMSC-A:RI=SSN_PC,PC=(no PC),SSN=BSSAP, cs7-instance 0 ((null))
DMSC NOTICE msc_main.c:708 Iu-interface: SCCP user OsmoMSC-IuCS:RI=SSN_PC,PC=(no PC),SSN=RANAP, cs7-instance 0 ((null))
DLINP NOTICE input/ipa.c:128 127.0.0.1:4222 connection done
DLINP NOTICE input/ipaccess.c:720 received ID get from 0/0/0
```

Starting OsmoBSC:

```
DLSS7 INFO osmo_ss7.c:1724 (r=127.0.0.1:35754<->l=127.0.0.1:2905): New m3ua connection accepted
DLSS7 INFO osmo_ss7.c:1764 (r=127.0.0.1:35754<->l=127.0.0.1:2905): created dynamicASP asp-dyn-2
DLSS7 INFO osmo_ss7.c:1296 0: asp-asp-dyn-2: Restarting ASP asp-dyn-2, :0 ==> 127.0.0.1:35754
DLSS7 NOTICE osmo_ss7.c:1344 0: asp-asp-dyn-2: ASP Restart for server not implemented yet!
DLSS7 DEBUG fsm.c:461 XUA_ASP(asp-dyn-2){ASP_DOWN}: Allocated
DLSS7 DEBUG osmo_ss7.c:1797 XUA_ASP(asp-dyn-2){ASP_DOWN}: Received Event SCTP-EST.ind
DLSS7 DEBUG xua_asp_fsm.c:118 0: asp-asp-dyn-2: No Layer Manager, dropping M-SCTP_ESTABLISH.indication
DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-2: xua_srv_conn_cb(): sctp_recvmsg() returned 8 (flags=0x80)
DLM3UA DEBUG m3ua.c:722 0: asp-asp-dyn-2: Received M3UA Message (ASPSM:UP)
DLSS7 DEBUG m3ua.c:686 XUA_ASP(asp-dyn-2){ASP_DOWN}: Received Event ASPSM-ASP_UP
DLSS7 ERROR xua_asp_fsm.c:359 XUA_ASP(asp-dyn-2){ASP_DOWN}: event ASPSM-ASP_UP not permitted in role ASP
DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-2: xua_srv_conn_cb(): sctp_recvmsg() returned 8 (flags=0x80)
DLM3UA DEBUG m3ua.c:722 0: asp-asp-dyn-2: Received M3UA Message (ASPSM:UP)
DLSS7 DEBUG m3ua.c:686 XUA_ASP(asp-dyn-2){ASP_DOWN}: Received Event ASPSM-ASP_UP
DLSS7 ERROR xua_asp_fsm.c:359 XUA_ASP(asp-dyn-2){ASP_DOWN}: event ASPSM-ASP_UP not permitted in role ASP
DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-2: xua_srv_conn_cb(): sctp_recvmsg() returned 148 (flag
```

```

s=0x8080)
DLSS7 INFO osmo_ss7.c:1424 0: asp-asp-dyn-2: xUA SRV SCTP NOTIFICATION 32770 flags=0x0
DLSS7 INFO osmo_ss7.c:1437 0: asp-asp-dyn-2: xUA SRV PEER_ADDR_CHANGE
DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-2: xua_srv_conn_cb(): sctp_recvmsg() returned 8 (flags=
0x80)
DLM3UA DEBUG m3ua.c:722 0: asp-asp-dyn-2: Received M3UA Message (ASPSM:UP)
DLSS7 DEBUG m3ua.c:686 XUA_ASP(asp-dyn-2){ASP_DOWN}: Received Event ASPSM-ASP_UP
DLSS7 ERROR xua_asp_fsm.c:359 XUA_ASP(asp-dyn-2){ASP_DOWN}: event ASPSM-ASP_UP not permitted in ro
le ASP
DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-2: xua_srv_conn_cb(): sctp_recvmsg() returned 148 (flag
s=0x8080)
DLSS7 INFO osmo_ss7.c:1424 0: asp-asp-dyn-2: xUA SRV SCTP NOTIFICATION 32770 flags=0x0
DLSS7 INFO osmo_ss7.c:1437 0: asp-asp-dyn-2: xUA SRV PEER_ADDR_CHANGE
DLSS7 DEBUG osmo_ss7.c:1491 0: asp-asp-dyn-2: xua_srv_conn_cb(): sctp_recvmsg() returned 8 (flags=
0x80)
DLM3UA DEBUG m3ua.c:722 0: asp-asp-dyn-2: Received M3UA Message (ASPSM:UP)
DLSS7 DEBUG m3ua.c:686 XUA_ASP(asp-dyn-2){ASP_DOWN}: Received Event ASPSM-ASP_UP
DLSS7 ERROR xua_asp_fsm.c:359 XUA_ASP(asp-dyn-2){ASP_DOWN}: event ASPSM-ASP_UP not permitted in ro
le ASP

```

OsmoBSC logs:

```

DMSC NOTICE osmo_bsc_sigtran.c:495 Initializing SCCP connection to MSC msc-0
DMSC NOTICE osmo_bsc_sigtran.c:505 CS7 Instance identifier, A-Interface: 0
DLSCCP NOTICE sccp_user.c:515 msc-0: Using SS7 instance 0, pc:0.23.3
DLSCCP NOTICE sccp_user.c:533 msc-0: Using AS instance as-clnt-OsmoBSC-A
DLSCCP NOTICE sccp_user.c:538 msc-0: Creating default route
DLSCCP NOTICE sccp_user.c:597 msc-0: Using ASP instance asp-clnt-OsmoBSC-A
DLSS7 NOTICE osmo_ss7.c:439 0: Creating SCCP instance
DMSC NOTICE osmo_bsc_sigtran.c:556 (msc-0) A-interface: local (BSC) SCCP address: RI=SSN_PC,PC=0.2
3.3,SSN=BSSAP
DMSC NOTICE osmo_bsc_sigtran.c:558 (msc-0) A-interface: remote (MSC) SCCP address: RI=SSN_PC,PC=0.
23.1,SSN=BSSAP
DMSC NOTICE a_reset.c:106 A-RESET(msc-0)[0x102ac50]{DISC}: (re)sending BSSMAP RESET message...
DMSC NOTICE osmo_bsc_sigtran.c:102 Sending RESET to MSC: RI=SSN_PC,PC=0.23.1,SSN=BSSAP
DLSS7 ERROR m3ua.c:507 XUA_AS(as-clnt-OsmoBSC-A)[0x101fe60]{AS_DOWN}: Event AS-TRANSFER.req not pe
rmitted
DMSC NOTICE a_reset.c:106 A-RESET(msc-0)[0x102ac50]{DISC}: (re)sending BSSMAP RESET message...
DMSC NOTICE osmo_bsc_sigtran.c:102 Sending RESET to MSC: RI=SSN_PC,PC=0.23.1,SSN=BSSAP
DLSS7 ERROR m3ua.c:507 XUA_AS(as-clnt-OsmoBSC-A)[0x101fe60]{AS_DOWN}: Event AS-TRANSFER.req not pe
rmitted
DMSC NOTICE a_reset.c:106 A-RESET(msc-0)[0x102ac50]{DISC}: (re)sending BSSMAP RESET message...
DMSC NOTICE osmo_bsc_sigtran.c:102 Sending RESET to MSC: RI=SSN_PC,PC=0.23.1,SSN=BSSAP
DLSS7 ERROR m3ua.c:507 XUA_AS(as-clnt-OsmoBSC-A)[0x101fe60]{AS_DOWN}: Event AS-TRANSFER.req not pe
rmitted
DMSC NOTICE a_reset.c:106 A-RESET(msc-0)[0x102ac50]{DISC}: (re)sending BSSMAP RESET message...
DMSC NOTICE osmo_bsc_sigtran.c:102 Sending RESET to MSC: RI=SSN_PC,PC=0.23.1,SSN=BSSAP
DLSS7 ERROR m3ua.c:507 XUA_AS(as-clnt-OsmoBSC-A)[0x101fe60]{AS_DOWN}: Event AS-TRANSFER.req not pe
rmitted

```

Git bisect shows that the culprit is:

```

fixeria@DELL:~/osmocom/libosmo-sccp$ git bisect good
1a822635f8e5a389aaae68d2d4fed3e310739129 is the first bad commit
commit 1a822635f8e5a389aaae68d2d4fed3e310739129
Author: Harald Welte <laforge@osmocom.org>
Date: Tue Oct 29 21:55:49 2019 +0100

```

Allow ASP role to be configured

So far, we had a static role model:

- * SCTP servers (listening, such as OsmoSTP) are role SGW
- * SCTP clients (connecting, such as OsmoMSC) are role ASP

While this is customary, it is not actually required by the specification. The SGW can establish the SCTP connection to an ASP but still remain "SG" role.

Let's make things more flexible by having the role configurable.

Related: OS#2005

Change-Id: I2df9cd9747ad5c9a05d567d9a71bab6184c53674

```
include/osmocom/sigtran/osmo_ss7.h | 2 ++
src/osmo_ss7.c | 7 +-----
src/osmo_ss7_vty.c | 29 ++++++
src/sccp_user.c | 2 ++
tests/vty/ss7_asp_test.vty | 2 ++
5 files changed, 36 insertions(+), 6 deletions(-)
```

Related issues:

Related to libosmo-sccp + libosmo-sigtran - Bug #4260: regression: osmo-bsc c... **Resolved** **11/08/2019**

History

#1 - 11/06/2019 12:57 PM - fixeria

- % Done changed from 0 to 30

Please see <https://gerrit.osmocom.org/c/libosmo-sccp/+15987>. Fixes the problem for me, but I am not sure if this is the correct solution.

#2 - 11/06/2019 05:42 PM - fixeria

- Status changed from New to Resolved

- % Done changed from 30 to 100

Merged. Both OsmoMSC and OsmoBSC work fine now.

#3 - 11/08/2019 09:21 AM - fixeria

- Related to Bug #4260: regression: osmo-bsc cannot connect to osmo-stp after "ss7: Support multiple addresses in SCTP connections", when cs7 contains an 'asp' line added

Files

osmo-stp.cfg	502 Bytes	11/06/2019	fixeria
--------------	-----------	------------	---------