

OsmoSTP - Feature #4218

dynamic IPA ASPs

10/08/2019 03:00 PM - laforge

Status: Closed	Start date: 10/09/2019
Priority: Urgent	Due date: 10/09/2019
Assignee: pespin	% Done: 100%
Category:	
Target version:	
Spec Reference:	
Description	
<p>The traditional way of configuring ASP (Application Server Processes) in an STP/ITP, including osmo-stp is to manually / statically configure them in the configuration system. This doesn't easily scale.</p> <p>osmo-stp already implements some parts of dynamic ASP creation for the M3UA protocol by means of extending M3UA RKM (Routing Key Management).</p> <p>This feature seeks to implement dynamic ASPs using the IPA/SCCP lite protocol. The key question is how to identify/map a given incoming IPA connection (treated internally like a M3UA ASP) to a given AS. It is proposed to use the IPA CCM mechanism for this, so one of the UNIT_ID / SERIAL_NR tags exchanged at IPA connection setup can be used as a look-up key to find the AS to which this dynamic connection belongs.</p> <p>Implementation of this feature will include</p> <ol style="list-style-type: none">1. Detailed specification of mechanism to map incoming IPA connection to AS2. Implementation of auto-creating dynamic ASPs on incoming IPA connection3. Implementation of automatic test cases in TTCN-3	
Related issues:	
Follows OsmoSTP - Feature #4220: osmo_ss7: support traffic-mode load-share Closed 10/08/2019	

History

#1 - 10/18/2019 09:12 PM - laforge

some updates

- the lookup of the AS is already done in ipa_asp_fsm_wait_id_resp(), and the "IPA CCM unit name" is used as look-up key for the AS name

```
DLSS7 <000c> ipa.c:103 IPA_ASP(asp-dyn-3){WAIT_ID_RESP}: Received Event IPA_CCM_ID_RESP
DLSS7 <000c> osmo_ss7.c:1022 0: Adding ASP asp-dyn-3 to AS mahlzeit
```

- we already create dynamic ASPs within that AS after such a look-up, they are called "asp-dyn-NR" where NR is an incrementing integer

```
OsmoSTP# show cs7 instance 0 asp
```

ASP Name	AS Name	State	Type	Rmt Port	Effect Remote IP Addr	Primary SCTP
asp-dyn-3	?	WAIT_ID_ACK2	ipa	20000	127.0.0.1	
asp-dyn-4	?	WAIT_ID_ACK2	ipa	20001	127.0.0.1	
asp-dyn-5	?	WAIT_ID_ACK2	ipa	20002	127.0.0.1	

what is currently undefined is the behavior in presence of multiple IPA ASP for one AS. I think we should wait for this to work in M3UA (see [#4220](#)) and then re-visit this ticket.

#2 - 10/18/2019 09:12 PM - laforge

- Due date set to 10/09/2019

- Start date changed from 10/08/2019 to 10/09/2019

- Follows Feature #4220: osmo_ss7: support traffic-mode load-share added

#3 - 11/05/2019 04:48 PM - laforge

- Priority changed from Normal to Urgent

#4 - 11/07/2019 07:01 PM - pespin

I think this should already be working fine after last changes in osmo-stp and TTCN3.

May be worth adding a test in STP_Tests_IPA.ttcn similar to TC_tmt_override or TC_tmt_loadshare, but using ipa-as-dynamic-asp this time, similar to what TC_unknown_client_dynamic does.

#5 - 11/08/2019 08:17 AM - laforge

On Thu, Nov 07, 2019 at 07:01:02PM +0000, pespin [REDMINE] wrote:

May be worth adding a test in STP_Tests_IPA.ttcn similar to TC_tmt_override or TC_tmt_loadshare, but using ipa-as-dynamic-asp this time, similar to what TC_unknown_client_dynamic does.

yes, please take care of this so we can wrap this up.

#6 - 11/08/2019 03:16 PM - pespin

- Status changed from New to Feedback

- % Done changed from 0 to 90

Submitted following tests verifying everything's working fine:
STP_Tests_IPA.TC_unknown_client_dynamic_tmt_override
STP_Tests_IPA.TC_unknown_client_dynamic_tmt_loadshare

I also submitted a few osmo-stp patches with minor fixes/improvements in related code.

Once stuff from osmo-ttcn3-hacks.git (branch laforge/stp), docker-playground.git and libosmo-sccp.git are merged this ticket can be marked as resolved afaict.

#7 - 11/13/2019 04:49 PM - laforge

- Status changed from Feedback to Closed

- % Done changed from 90 to 100

all commits merged, tests pass. closing.