

20090323Call

When

Starting Time: March 23, 2009 at 1:00 PM, US/Eastern

Dial In Information

To join both the web and audio conference (recommended), click here: <https://edial.internet2.edu/call/0187242>

If you only want to participate in the audio conference, you may dial in with the following numbers:

Call: +1-734-615-7474 (PSTN CALL-OUT DOES NOT WORK) or +1-866-411-0013 (toll free US/Canada Only)

Enter access code: 0187242

Agenda

- Progress on Use Cases (All)
- IS-WG Session at Spring Member Meeting
 - Tues April 28, 12:00pm-1:15pm
 - Who would like to attend remotely (if this is more than a handful of people, we can request a phone, but the deadline is fast approaching)
- Summarizing IPv4 Data in the Global Lookup Service (Marcos/Martin/Jason)

Attendees

- Attending:
 - Jason
 - Martin
 - Aaron
 - Marcos
 - Ezra
 - Andy
 - Evangelos
- Apologies:
 - Jeff

Notes

Use Cases

Evangelos has updated the topology sharing case. Andy is in progress for the service location use case. Martin would like to get these in by next week so there is editing time before SMM. Will try to pull out common items as necessary. Action is for everyone to finish/edit in the next 2 weeks.

Face To Face Meeting

We will meet at the Internet2 Spring Member Meeting. Due to lack of response we will not be able to provide a phone for dial in. We have 2 meetings between the member meeting to finish some of the use case work.

IP Summarization

Marcos from UDel talked about some of his ongoing work on improving the IP Summarization algorithms used in the perfSONAR gLS. Background is [here](#). A quick summary of the current system and why it is necessary:

1. Each hLS will receive service registrations from perfSONAR services
2. Each registration contains items such as domain names, IP addresses, and keywords.
3. The IP Summarization process attempts to find CIDR representations of the registered data so each hLS can advertise as being authoritative over some given range.
 - a. Example: UDel has a class B address space (128.4.0.0/16). The DAMSL lab at UDel has a much smaller space (128.4.160.0/24). perfSONAR services will register items they control for each into an hLS and the hLS should be sure not to over advertise (say it has 128.0.0.0/8 for instance) or under advertise (claim it has 128.4.160.128/30 in another instance).
4. hLS summaries are shared with gLS instances to facilitate discovery

Marcos is currently comparing the original algorithm developed by Jason with an Algorithm developed by martin along with a new attempt he has devised. The algorithm uses elements of Patricia Trie and min cut theory to find the best summarizations.

Future plans including taking into account *tuning* parameters such as making a summary tighter or looser depending on the needs of the service and improving the query interface (e.g. no more cold searching the database - use a radix tree or similar).

Martin adds some thoughts on the process including the need to support (or not) overlapping summaries for different hLS/Service ranges. Also talks about the *point of view* problem for searches originating in far away locations. Ex:

- A search for 128.4.160.0/24 data from *close* to where it is actually located (topologically) should return a result that is as tight as possible
- The same search but originating *far* from where it is located (topologically) should return a *wider* result (e.g. possibly mentioning things that are 128.4.0.0/16 or larger).

This distinction will allow a smaller margin of error.

Evangelos asks some questions since he was not too familiar with the goal. Mentions trying to make these summarizations based on AS information instead. Martin responds that using AS alone would not be good, but we can consider this suggestion as we evaluate the algorithm(s). Evangelos also talks about an OSCARS layer 3 service that would need to do something similar based on edge points.

Future Directions

Discussion trailed into the need for Authentication Support for Summarization and Discovery activities. Martin mentioned some parallel work on signed SOAP messages for perfSONAR clients and the Lookup Service. These activities will be closely related to summarization (e.g. summarize wide for the un-authenticated or tighter for those you trust - also may not want to share anything for the un-authenticated). Martin mentions this as a thorny issue with Topology sharing in DCN.

Evangelos mentions that he and others would feel better if future iterations did consider the AA aspects very carefully as many technologies that use the IS frameworks will rely on AA internally.

Conclusions

Call in 2 weeks to discuss use case progress. Marcos will update on Summarization again. Looking for other topics ahead of the F2F meeting.

ACTIONS:

- **ALL** will finish Use cases they were assigned for next week
- **Martin** will amend charter (hold over)
- **Evangelos** will continue work on SDN use case (hold over)
- **Andy Lake** - Will continue work on a DCN use case for service discovery (hold over)
- **Martin/Aaron/Jason** - Will generalize the service discovery case that Andy creates (hold over)
- **Maxim/Andy/Evangelos/Aaron** - Will brainstorm/communicate on additional use cases for control plane (consider lambdastation/terrapaths) (hold over)
- **Aaron** - Will finish adding certain AA aspects to certain use cases. (hold over)
- **Aaron** - will update google [code page](#) (hold over)