IETF 96 LMAP WG Meeting
Date and Time: Friday 7/22/16, 10AM CET

Dan Romascanu chaired. JasonWeil was remote.

Barbara Stark coordinated note taking.

1. Note Well, Note Takers, Agenda Bashing - (Chairs, 5 min)

Chair slides: https://www.ietf.org/proceedings/96/slides/slides-96-lmap-0.pdf
No changes made to the published agenda.

2. WG Status - (Chairs, 5 min)

3 active working documents in WG (lmap-information model, lmap-yang, lmap-restconf)
https://datatracker.ietf.org/doc/draft-ietf-lmap-information-model/
https://datatracker.ietf.org/doc/draft-ietf-lmap-yang/
https://datatracker.ietf.org/doc/draft-ietf-lmap-restconf/

Non-chartered items:
Support documents:
https://datatracker.ietf.org/doc/draft-morton-lmap-examples/
New work:
http://datatracker.ietf.org/doc/draft-deng-lmap-collaboration/
https://datatracker.ietf.org/doc/draft-turaga-lmap-special-loop-address/
Several drafts have expired; chair has invited authors to reopen these if they want them to be
considered for the new charter

Jacobs University has an implementation of the LMAP work; chair requested group to let them
know about other implementations.

No questions on the WG status

3. IPPM relevant work Status - (Al, 5 min)

AL Morton provided a status of the current work in IPPM:
Primarily focus is the Registry

During IETF Meeting positive feedback by Berec (European regulator). Raised question on
calibration and information on accuracy of the metrics, in the registry.
IPPM is working on Ping and Trace route metrics
Work continues on the registry elements

IANA gave feedback on the registry. Still early review.
Chair asked about timelines for creation of the registry:
Al: Submission of the registry format is hold back, to incorporate feedback generated by filling out the initial registry.
Early 2017 might be a date of submission (to IESG)
Chair asked if the publication of LMAP would be in the same timeline as IPPM publication of the registry. Timeframes seem to be around the same timelines.
Juergen: states that LMAP's reference to the registry is only a informative one.
Chair: states that for a full standard it is required to have a formal reference.
Ahmed Aldabbagh asked if more discussion is necessary on the list about the IPPM metrics
Al: Anything related to the collection process and reporting should be discussed in LMAP. Discussion on metrics should be in IPPM.

4. LMAP Information Model- comments and open issues -(Juergen, 45 min)

Slides: https://www.ietf.org/proceedings/96/slides/slides-96-lmap-1.pdf
Juergen: Documents are in WG last call. WG needs the community to effectively read the docs. Juergen had a discussion with Al before the meeting, to sort out open issues, as laid out in the meeting slides. The result is documented in an email send to the list on 21/07/2016.
Juergen presents those results:
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a) We add ma-event-cycle-interval as an optional element to ma-event-obj.

   ma-event-cycle-interval: The optional ma-event-cycle-interval
                        defines the duration of the time
                        interval in seconds that is used to
                        calculate cycle numbers. No cycle
                        number is calculated if ma-event-
                        cycle-interval does not exist.

b) We add ma-report-result-event-time as a non-optional element to
 ma-report-result-obj.

   ma-report-result-event-time: The date and time of the event that
                        triggered the schedule of the action
                        that produced the reported result
                        values. The date and time does not
                        include any added randomization.

c) We add ma-report-result-cycle-number as an optional element to
 ma-report-result-obj.

ma-report-result-cycle-number: An optional cycle number derived from
ma-report-result-event-time. It is
the time closest to ma-report-result-
event-time that is a multiple of the
ma-event-cycle-interval of the event
that triggered the execution of the
schedule. The value is only present
in an ma-report-result-obj if the
event that triggered the execution of
the schedule has a defined ma-event-
cycle-interval. The cycle number is
represented in the format
YYYYMMDD.HHMMSS where YYYY represents
the year, MM the month (1..12), DD
the day of the months (01..31), HH
the hour (00..23), MM the minute
(00..59), and SS the second (00..59).

Tim: Reporting still contains the tag?
Juergen: Tag and cycle number are both optional and independent.

Gert Grammel: Suggests a mechanism to separate between cycle numbers of manually triggered and recurring actions.
Juergen: If you want to use cycle number to trigger something you could
If you want to trigger something without the cycle number just don't add the cycle number
Phil Eardley: Asked for clarification - In the report you want to know what has triggered the measurement to be done. This clarified Gert's question.
Gert: Affirms that the final requirement is to see in the report what triggered the measurement.
Al: Suggests usage of tags for this purpose.
Juergen: (Today we do not have tags on the event source)? (verify)
Al: Asked if a one-off measurement has an event source
Juergen: Yes but that event source is not reported in the results.
Juergen: We need to consider the context of how to report the event source
Ahmed: Questions what the WG does to guarantee the integrity of reported results.
Juergen: WG is not concerned with integrity of measurement, but of reporting. Usage of encryption.
Chair: Clarification of the question is asking about the reliability of the communication
Juergen: An additional point would be signage of results, for later verification.
Phil: Other aspects of integrity the report was out of scope - like prioritization of report in communication
Ahmed: Once the measurement is done how do you maintain the integrity of the measurement
Chair: Gaming the system was discussed and is out of scope of WG.
Alissa Cooper: Integrity and Confidentiality is always considered as part of the process

Ahmed: In multi-stakeholder environment the client and servers could be owned by different stakeholders. Signing the result before reporting might be effective.
Chair: Do we want to ask for an early security review from Sec
Barbara: Little potential of a security review in the context of an information model (verify if captured correctly)
Alissa: These documents don't seem to need an early security review
Chair: Send the issue to the list for more discussion.

Discussed second issue to see if the Channel option name should be removed:
Juergen would like to remove this option.

In general the information model is abstracting from parameter values.
Tim: Need for the channel either as an attribute or well-known option. Needs to reference it for pushing of data in multi-vendor environment. Do not get rid of it.
Juergen: Reporting is not run as a separate task in your case?
Tim: TR-069 has an existing model that supports setting bulk data collection configuration. Channel is needed in this context.
Bert: Questions why Juergen suggests removing the hardwired channel option name.
Juergen: Aim is to be consistent with treatment of options throughout the information model. For example with the task
Tim: Point is Channel is element of the information model.
Chair: Questions if anyone is opposed to keep the Channel and about preference of representation. Room consensus to keep

Discussed third issue:
Tim: Suggestion is fine

Discussed forth issue (add ma-capability-tags)
Bert: Questions if tags would be fixed options or flexible as in Ripe Atlas
Juergen: Suggested is a general mechanism (as in Ripe Atlas)
Ahmed, Bert, and Brian Trammel: State support for the ma-capability-tags mecanism.
Tim: Mechanism is not needed in TR-069 use case. TR-069 data models supply capabilities through existing parts of the TR-069 data model. Does not want to duplicate that. Suggests it is optional.
Chair: Mechanism must not be used.
Al Morton: In the LMAP framework, capabilities are mentioned in the privacy section, stating an explicit exchange of capability information. So should have a mechanism.
Tim: Capability information is already exchanged. "Capability" is overloaded and this is different types of capability being discussed in Juergen's issue, than what was mentioned in framework.
Chair: ma-capability-tags is about reporting capability.
Al: So the LMAP framework is about measurement capability. Should be stated that the ma-capability-tags is beyond measurement.
Brian: See it useful for information about the system as well as which metrics it exports
Alissa: Task capabilities are already in the IM
Brian: Should be free form.

Chair: Let's do this and see the text

Discussed fifth issue (definition of active schedule)
No comments

Discussed Secondary Storage issue:
Tim: Endorses the proposed resolution of the problem.

5. A YANG Data Model for LMAP Measurement Agents - comments and open issues (Juergen, 15 min)

Slides: https://www.ietf.org/proceedings/96/slides/slides-96-lmap-2.pdf

Discussed Issue about Configuration and Instruction schedules. Structurally configuration and instruction are equal.
Should the schedules be a single list or separate lists - instruction and configuration?

Juergen: Argument for separating in 2 lists, would be improved access control. The risk of conflicting names is an argument against.

Andy Berman: ACLs can be directed to a single instance in Yang

Juergen: Suggests keeping it as a single list.

Issue on Examples in Yang - Juergen would like to cut down the examples by just keeping in 1 type of encoding (XML or JSON) and which encoding should be used.
Juergen: Separation would keep the same example in XML and JSON.

Decision: Show one example in XML for Yang and JSON for Protocols

6. Using RESTCONF with LMAP Measurement Agents - comments and open issues (Juergen, 15 min)

Slides: https://www.ietf.org/proceedings/96/slides/slides-96-lmap-3.pdf

Juergen: What does this document need say relative to how RESTCONF is used - Simply say what drafts are needed or how the drafts are used.

Dan (as contributor): Inclined to a simple document, stating the use of RESTCONF, and containing an example, as WG took the decision to use an existing protocol.
Tim: When we did this for TR-069 we had to do a Theory of Operations to describe how this tied into the data model. Recommends documenting how call home is used. This will help people understand context of how it is used.

Juergen: RESTCONF is a blocking dependency (not finished by Netconf WG)
Tim: It's not just that you're behind the NAT, but that the MA needs to initiate the communication. Yes, behind the NAT case is normal usage. But where it is used for more than just that, it needs to be documented.
Juergen: Asks for concrete input. As a responsible document writer he is not sure about content.
Tim: Did you document everything that an MA would need for all types of interfaces (reporting, being configured, etc.)? This should be simple to describe.
Bert: Good to wait for RESTCONF get stable. Gain practical experience implementing. Endorses first option: pause the document and focus on information model and yang model.

Alissa: Questions about security related consideration on the protocol itself. There isn't any guidance on security related aspects for when information is communicated.
Juergen: We really only need to point to where the in the IM the information exists.
Chair: We should write the minimal document up and pause it.

7. European Commission Broadband Mapping project - Challenges in comparing heterogeneous data sets - (Olga van Zijverden, 15 min)

Slides: https://www.ietf.org/proceedings/96/slides/slides-96-lmap-4.pdf

Olga: Presented what the project was - Collects QoS and QoE for mapping from public and private initiatives and data providers

The project's goal is to merge existing measurement data produced by diverse initiatives on Europe. The project will not conduct measurements.

Final project is a public and expert portals for display of information

The public portal allows for restricted queries and drill down. The expert portal exposes all attributes.

There are 4 main user groups EU, Data Suppliers, General User and Decision-makers

Olga: Why she is here: The project could use the work of the IETF to have measurements using the same metrics and mechanisms. IETF could benefit as use the results of the project

The project's biggest obstacle is the heterogeneous nature of data sets. Looks for the IETF as a solution to walk towards homogeneous data sets.

Project already defined a data model for its repository (details in slide 9)

There is some tension between the European Comission's project and its member organizations. Members push towards minimal comparison, acknowledging the difficulty to compare data produced by different measurement initiatives.

Project is 3 years to setup the platform; work began in April 2016

Joachim Fabini: Is the visualization only provided or the data sets.
Olga: Expert portal will have the datasets
Joachim: Discussed challenges with usage of datasets
Al: Presentation refers to QoS and QoE
Olga: Is should only be QoS now
Christian Varas: Are you still looking for data providers
Olga: Yes
Dan: Have you reviewed the LMAP use cases
Olga: No
Dan: It might be useful to review them
Juergen: Do you collect raw or aggregated data
Olga: preference is aggregated data as a certain level but they can collect raw data with restrictions (e.g., IP Address)
Juergen: Are you concerned about the accuracy of the aggregated data
Olga: Rely on the data provider and their descriptions of the data. No validation.
Bert: You're providing the same thing.

Olga: Will send an invitation to workshop in December

8. Next steps (Chairs, 15 min)
Chair: 1 month for document updates
Juergen: 1 month is reasonable; could be sooner
Chair: short, 2 week, second working group last call
Chair: optionally a virtual interim meeting in late September, if needed
Chair: Best case scenario is documents to IESSG of PS in October
Chair: Need to discuss re-charting or concluding - take to mailing list
Chair: May not meet if we are finished or there are not new work proposals
Alissa Cooper: Suggested roadmap is good
Chair: There were proposal down the road but we didn't want consider a charter discussion; now is the time.

Juergen - Demonstration of Implementation:
- deamon reads configuration and instructions from an XML serialization
- lmapctl is a tool to validate the serialization file and interact with the deamon
- operational state is exported and can be queried with the lmapctl tool
- eposed are objects from the information model and principally the schedule
- each line of the exposed schedule is an action. columns capture: action-name, action-state, suppression count, ...

Code will be open sourced under a BSD license, and published on Github.

Chair: Concluded meeting