

LMAP Framework

draft-ietf-lmap-framework-01

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Framework

- Milestone
 - Dec 2013 Submit the LMAP Framework I-D to the IESG for consideration as Informational RFC
- Reviews needed!!

Framework

- Merger of 3 individual i-ds
 - Terminology from eardley-lmap-terminology
 - Simplifying constraints from eardley-lmap-framework
 - Detailed discussion of LMAP components from akhter-lmap-framework
- Several aspects updated,
 - Introduced protocol model
 - "an architectural model for how the protocol operates ... a short description of the system in overview form, ...
 - Trying to keep this aligned with burbridge-lmap-information-model-01
 - Better discussion about bootstrapping, starting & stopping tests, etc
 - New section on privacy considerations
- Many aspects unchanged,
 - For instance, Constraints:
 - Measurement system is under the direction of a single organisation
 - Each MA may only have a single Controller at any point in time
- Introduced a protocol model
 - Bootstrapping; control; report;
- Better discussion about bootstrapping, starting & stopping tests...

Bootstrapping

Notation:
(optional)

```
+-----+
| Measurement |
| Agent       |
+-----+
```

(Initial Controller details:

address or FQDN,

->

security credentials)

```
+-----+
| Initial   |
| Controller |
+-----+
```

<-

(register)

Controller details:

address or FQDN,

->

security credentials

```
+-----+
|           |
| Controller |
+-----+
```

<-

register

MA-ID, (Group-ID, report?)

->

Bootstrapping

Notation:
(optional)

(Initial Controller details:
address or FQDN,
security credentials)

```
+-----+
|   Initial   |
| Controller  |
+-----+
```

Controller details:
address or FQDN,
security credentials

```
+-----+
|           |
| Controller |
+-----+
```

MA-ID, (Group-ID, report?)

```
+-----+
| Measurement |
|   Agent     |
+-----+
```

-> May be a device/access specific mechanism

<- (register)

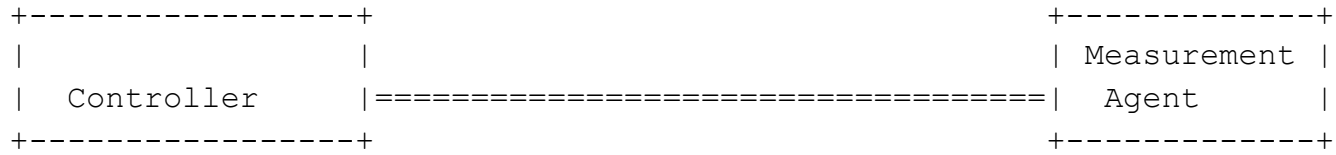
-> Typically there are NAT interactions
(not shown)

<- register

->

Notation:
[potentially repeated]
(optional)

Control protocol



Instruction:

[(Measurement Task (parameters)),
 (Measurement Schedule),
 (Report Channel(s))] ->

<- ACK

(Capability request)

->

<- List of Measurement
Methods

ACK

->

Suppress

->

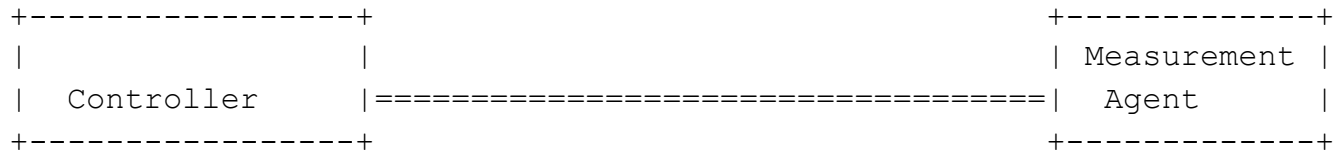
<- Failure report:
(reason)

ACK

->

Notation:
[potentially repeated]
(optional)

Control protocol



Instruction:

[(Measurement Task (parameters)),
 (Measurement Schedule),
 (Report Channel(s))] ->

<- ACK

(Capability request)

->

<- List of Measurement
Methods

ACK

->

Suppress

->

<- Failure report:
(reason)

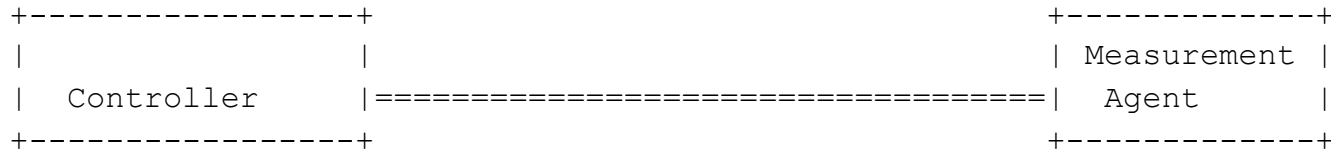
ACK

->

Nothing about progress of M. Task

Notation:
[potentially repeated]
(optional)

Control protocol



Instruction:

```
[ (Measurement Task (parameters)),
  (Measurement Schedule),
  (Report Channel(s)) ]
```

Can report to >1 Collector

No negotiation

Generalised to 'Channel'
in latest Info Model i-d

(Capability request)

ACK

Suppress

ACK

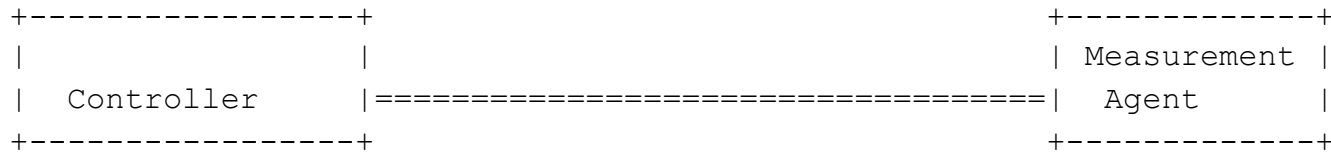
```

->
<- ACK
List of Measurement
Methods
->
<- Failure report:
    (reason)
->

```


Notation:
[potentially repeated]
(optional)

Control protocol



Instruction:

[(Measurement Task (parameters)),
 (Measurement Schedule),
 (Report Channel(s))] ->

<- ACK

(Capability request)

->

<- List of Measurement
Methods

ACK

->

Suppress

Controller asks MA to
stop doing M. Tasks

->

Not ACK'd

Open question:
Details of suppress (amber
state? Time limit?)

<-

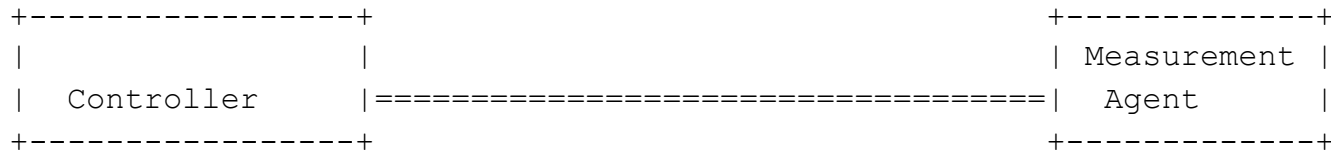
Failure report:
(reason)

ACK

->

Notation:
[potentially repeated]
(optional)

Control protocol



Instruction:

[(Measurement Task (parameters)),
 (Measurement Schedule),
 (Report Channel(s))] ->

<- ACK

(Capability request)

->

<- List of Measurement
Methods

ACK

->

Suppress

->

<-

Failure report:
(reason)

ACK

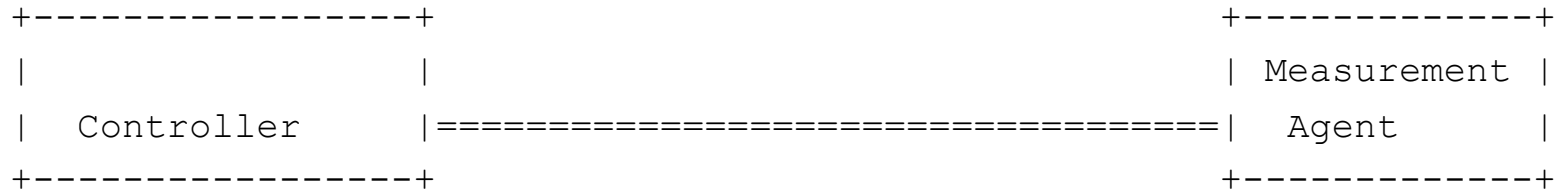
->

1. MA cannot action Instruction
2. M. Task could not be executed

Called 'logging' in
Info model i-d

Report protocol

Notation:
[potentially repeated]

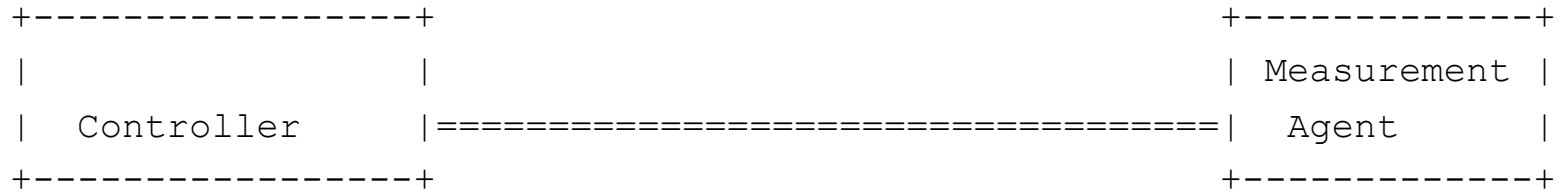


ACK

<- Report:
[MA-ID &/or Group-ID,
Measurement Results,
Measurement Task]
->

Report protocol

Notation:
[potentially repeated]



<- Report:
[MA-ID &/or Group-ID,
Measurement Results,
Measurement Task]

ACK

->

Open question:

How /if label M. Results impacted (potentially?) by cross-traffic

New privacy section

- Responds to Charter requirements
- Mostly follows outline of RFC 6973 & benefits greatly from its timely publication
 - "Privacy Considerations for Internet Protocols"
- Please review the section!
- Open question: should it be removed to a separate draft
- Open question: how useful is a Group-ID?

New privacy section

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Beyond scope of Imap

1. coordination process between MAs.
2. interactions between the Collector and Controller.
3. coordination between different measurement systems
 1. Including 2 independent MAs in a home
4. user-initiated measurements

Next steps

- Please review!
- (default) we'll create a separate i-d for privacy section
- (default) we'll ask for WGLC on next rev

Spare slides

Overall measurement system

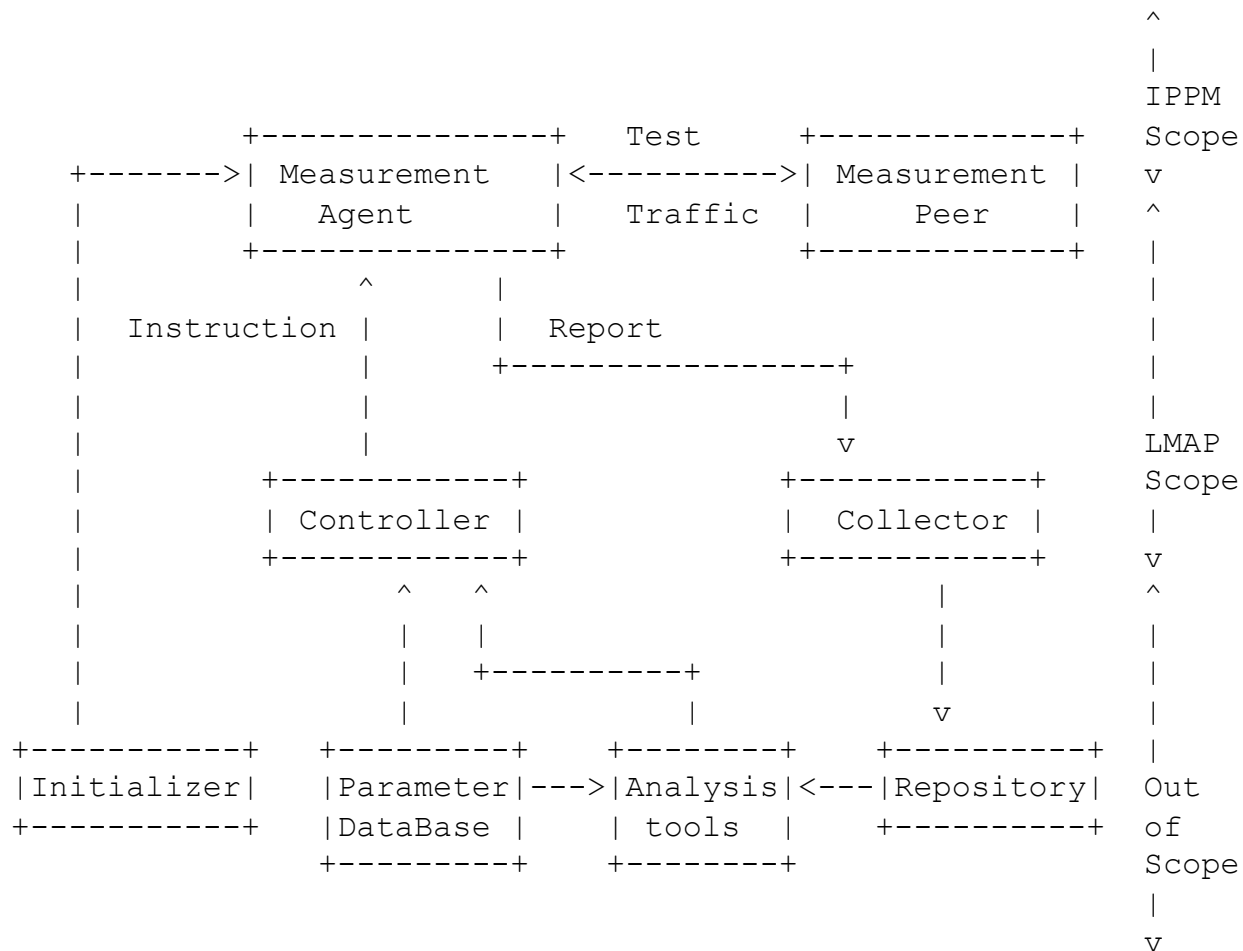


Figure 1: Schematic of main elements of an LMAP-based measurement system (showing the elements in and out of the scope of the LMAP WG)