FirstMILE security alerts

Automating the alerts into I2NSF Monitoring

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draft-moskowitz-firstmile-00.txt

What is the problem?

- No standard mechanism to inform NSF the policy (rules) on when/how to trigger security alerts/reports into the monitoring system, no mechanism for NSF to report the alerts/events to the monitor system (controller, or management system)
  - DOTS is only for DDoS alerting/mitigation and MILE for inter admin defense coordination
  - There are other events,
    - e.g. Ping of death, TCP SYN attack, …. Port scan,
- Reporting security events may occur at times where the networks is under attack
  - Some of those attacks are against the transport layer that is supposed to carry the reports the events
  - See draft-ietf-dots-requirements-01.txt

What is needed

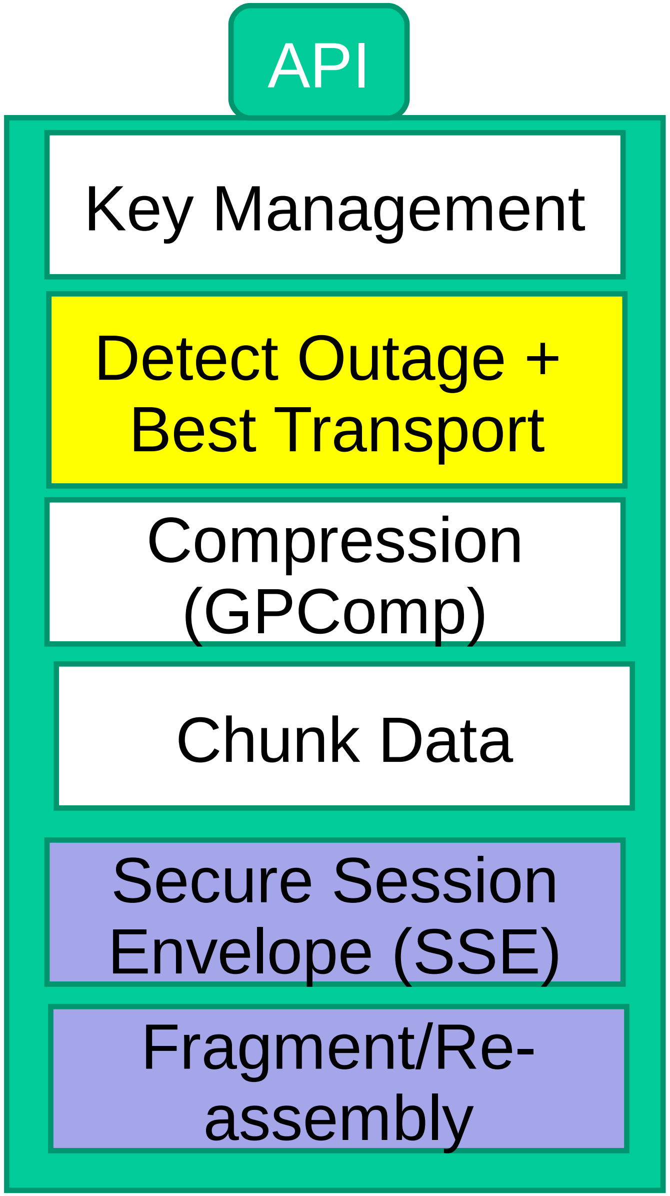
- A sub/pub reporting system
  - A security monitor subscribes to a security defense system for selected reports
  - The security defense system publishes events to all subscribed monitors
- But first needs a registration of defense system to monitor(s)
  - Support business model of ISP security monitor(s)
  - Establish trust between defense and monitor systems

Why does firstMILE use SSLS

- Same arguments as for DOTS
  - SSE moves the security context within the messaging, reducing the attack surface
  - Though does not need the bi-directionality that DOTS requires
    - But Subscribe process may be viewed as adding bi-directional

Why does firstMILE use SSLS

- If Sub process uses NETCONF
  - Use Chunking to packetize structure XML
  - Use Compression to reduce chunks
  - Same as I2RS



Compare to mile-xmpp-grid

- Mile-xmpp-grid is more extensive
- But
  - Use of TCP and TLS does not reflect the network conditions during an attack
- FirstMILE can be a communication service for mile-xmpp-grid to use
  - SSLS provides the transport uncoupling and message layer security desired.
- Xmpp can be the sub/pub function used

Next steps

- Either
  - Develop registration and sub/pub in firstMILE

  Or
  - Work with mile-xmpp-grid to merge documents

DISCUSSION