Updates: Information Distribution in Autonomic Networking

draft-liu-anima-grasp-distribution-10

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Recall: Draft Content and Scope

- **Specific ASAs**
  - (IGP-conifg/VPN-config/Slicing etc.)

- **ASA APIs**

- **Infrastructure ASAs**
  - **ASA Lifecycle Management**
  - **ASA Conflict**

- **Information Distribution**
  - Selective Flooding
  - Event Queue
  - Data Storage

- **GRASP Extention**: Un-solicited Sync/Sub-Pub

- **GRASP Basic**: Discovery/Negotiation/Sync

- **GRASP Protocol Stack**

**GRASP APIs**

- Our draft
Main change of 09&10 version (since IETF102)

- Added operations/procedures for Distributed Storage
  - Best-effort information ‘PUT’ and ‘GET’.
- Added operations/procedures for Event Queue
Best-effort PUT “Information”

1. PUT (“DATA”)
2. PROJECT (“DATA”) $\rightarrow$ #nodeID
3. Negotiation_Request (Size, SrcID, ...) $\rightarrow$ #nodeID
4. Negotiation_Response (“Accept”, ...) $\rightarrow$ #SrcID, IF “Rejected”, goto 7
5. Transfer (“DATA”, ...) $\rightarrow$ #nodeID
6. Write (“DATA”, ...)
7. Negotiation_Request(Size, SrcID, ...) $\rightarrow$ #nodeID’
Best-effort GET “Information”

1. GET (“DATA”)
2. Map (“DATA”) \( \rightarrow \) KEY \( \rightarrow \) #nodeID
3. Request (KEY, SrcID, …) \( \rightarrow \) #nodeID
4. Read (“DATA”, …)
5. Response (“Found”, DATA) \( \rightarrow \) #SrcID, IF “NOT Found”, goto 7
6. GET_ACK (“Found”, DATA)
7. Request (KEY, SrcID, …) \( \rightarrow \) #nodeID’
Event Queue

- Publish interests to DATA and link previously stored DATA to consumers

1. Event Generation ("DATA")
2. Generating EventID and specifying priority
3. Event propagation (to other nodes)
4. Event matching
5. Event notification

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Future Work

- Complete procedures of information distribution
- Extend GRASP APIs to support full information distribution
Thank You

As one of the milestones, adopt as a WG draft?

IETF104, @Prague