

Information Distribution in Autonomic Networking

(draft-liu-anima-grasp-distribution-09)

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Reminder

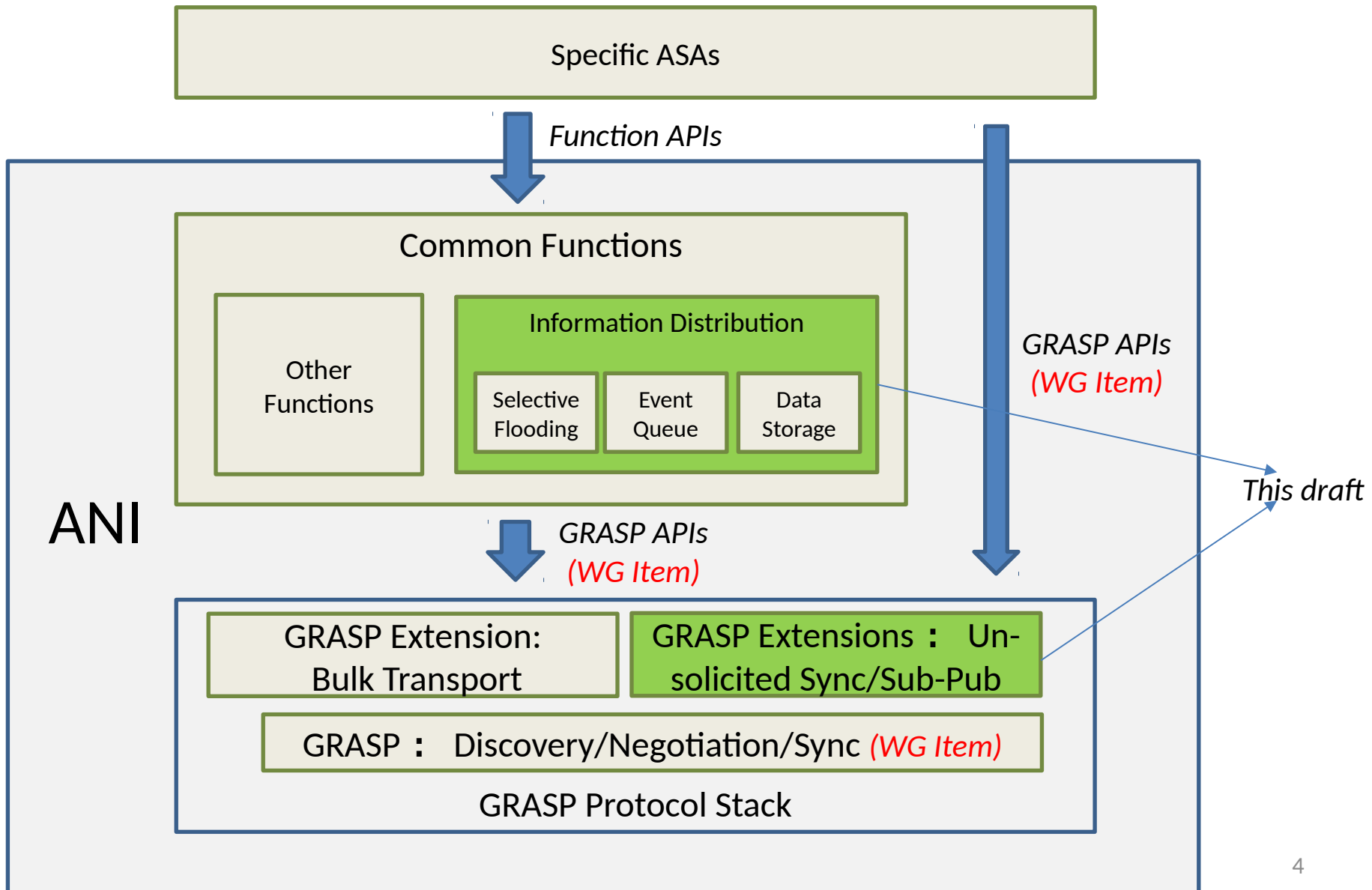
- Information distribution is a function to handle different patterns of information exchange between autonomous nodes
 - Using GRASP as bearing protocol
- Two basic patterns
 - Instant distribution (Synchronous)
 - Point-to-Point (one to one)
 - Flooding/Selective Flooding (one to many)
 - Asynchronous distribution
 - Sub/Pub (one to one/one to many)
 - Distributed Storage (one to one/one to many)

Recall: IETF102

GRASP Extensions :

- Un-solicited Synchronization Message (A new GRASP Message)
- Selective Flooding Option
- Subscription Objective Option
- Un_Subscription Objective Option
- Publishing Objective Option

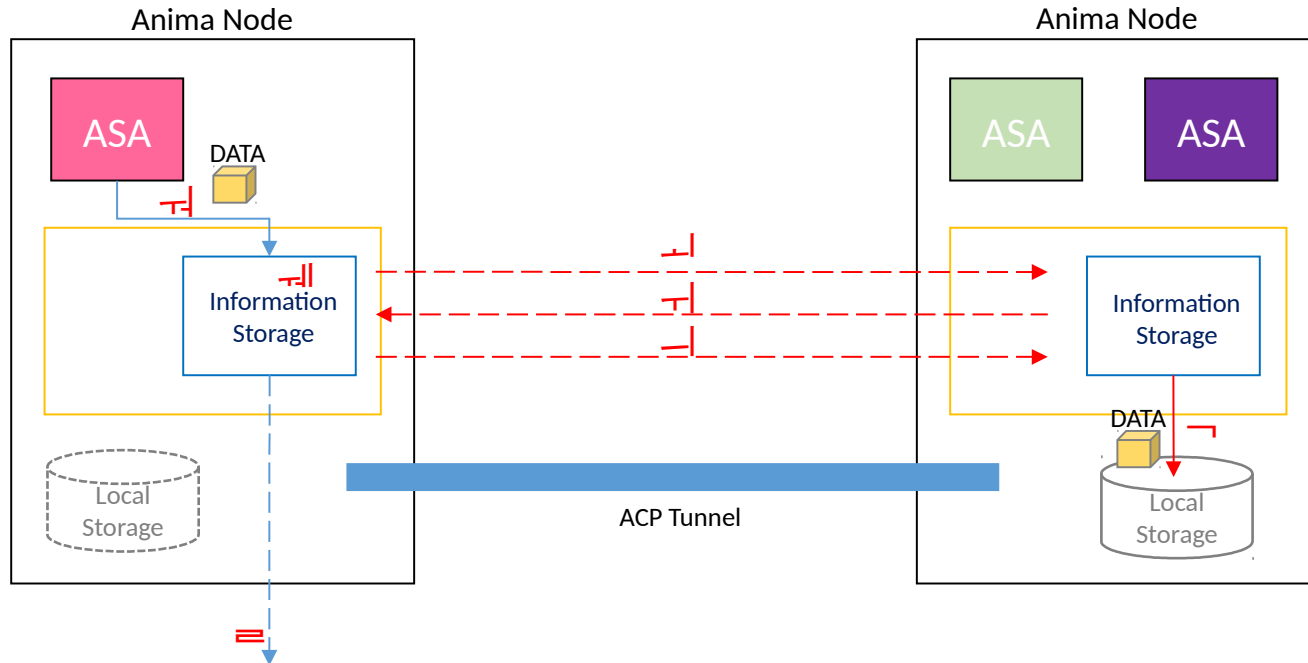
Revisit: Information Distribution in ANI



Update of 09 version

- Described how Information-Distribution fits in to ANI (as previous page)
- Described the “Distributed Storage” function as PUT and GET operations and corresponding messages

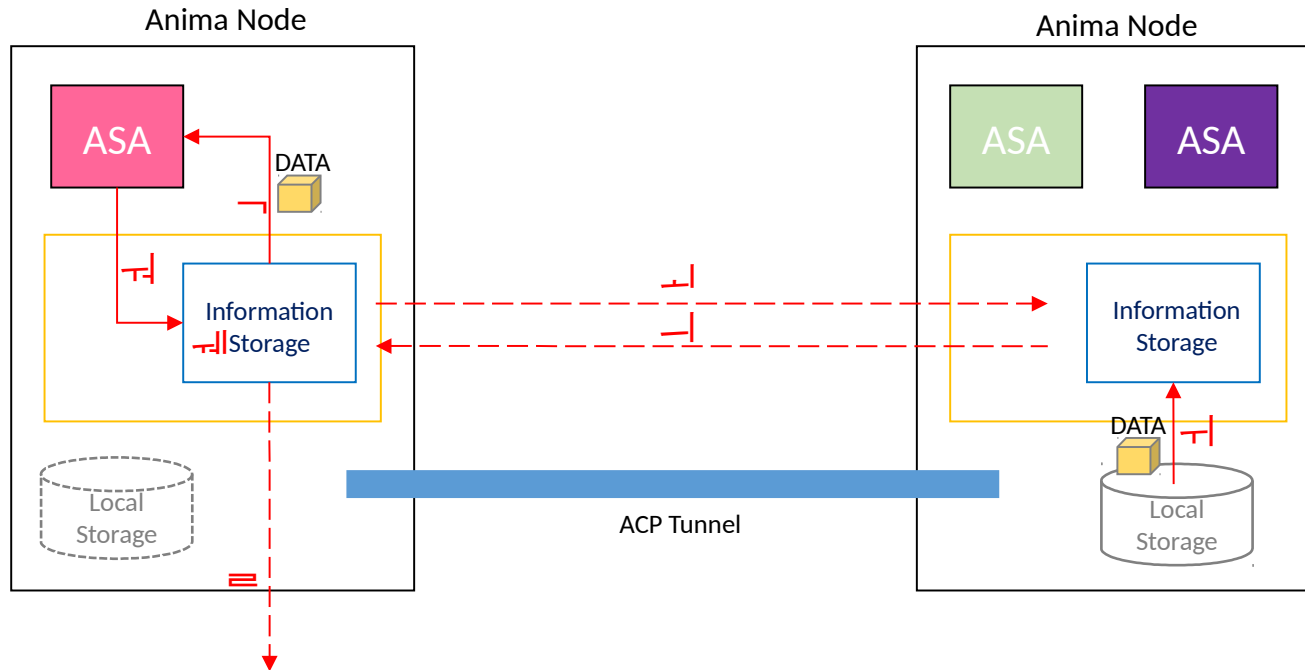
Distributed Storage: PUT “Information”



GRASP APIs

1. PUT (“DATA”)
2. PROJECT (“DATA”) $\hat{=}$ #nodeID
3. Negotiation_Request (Size, SrcID, ...) $\hat{=}$ #nodeID
4. Negotiation_Response (“Accept”, ...) $\hat{=}$ #SrcID, IF “Rejected”, goto 7 ➔
5. Transfer (“DATA”, ...) $\hat{=}$ #nodeID (GRASP Bulk Transport might be needed)
6. Write (“DATA”, ...)
7. Negotiation_Request(Size, SrcID, ...) $\hat{=}$ #nodeID'

Distributed Storage: GET “Information”



GRASP APIs

1. GET (“DATA”)
2. Map (“DATA”) $\hat{=}$ KEY $\hat{=}$ #nodeID
3. Request (KEY, SrcID, ...) $\hat{=}$ #nodeID
4. Read (“DATA”, ...)
5. Response (“Found”, DATA) $\hat{=}$ #SrcID, IF “NOT Found”, goto 7
6. GET_ACK (“Found”, DATA)
7. Request (KEY, SrcID, ...) $\hat{=}$ #nodeID'



Next Step

- Request the WG to consider adopting it as a WG item after re-charting
- Make the protocol/option designs more comprehensive

Thank you!

IETF103, Bangkok