Guidelines for Autonomic Service Agents

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Topics

- Reminder
- Recent changes
- Open issues
- Discussion, next steps
Reminder

- This document is intended to guide ASA writers in the general design of their code.
  - We expect ASAs to be written by a wide variety of programmers, specialised in the autonomic function concerned.
  - They are not expected to be GRASP experts. An API description will not be enough.
Recent changes

- Improved text about threading v event loop
  - Noted that simple ASAs may avoid this issue
- Added section about coordination with traditional tools.
- Added note about NFV/SFC services
- Added appendix with example logic flow (threaded model)
Simplified logic flow (1)

MAIN thread:
   initialise resource pool
   if master:
      start FLOODER to broadcast parameters
      start NEGOTIATOR and GARBAGE_COLLECTOR
   if not master:
      get resource parameters flooded by GRASP
      start ASSIGN thread (allocates resources)
   do forever:
      if resource pool is low:
         negotiate for more resource from GRASP peer(s)
Simplified logic flow (2)

FLOODER thread:
periodically flood resource parameters to all GRASP nodes

NEGOTIATOR thread:
wait for and satisfy negotiation requests from GRASP peers

GARBAGE_COLLECTOR thread:
periodically compact the resource pool

ASSIGN thread:
manage resource requests from non-autonomic devices & applications, assign resources from pool
To Be Done

- Additional text on coordination between autonomic functions
- Additional thoughts on typical interactions between ASAs: coordination, knowledge exchange, "governance" (intent), others?
- Example logic flow for event-loop model
- Reviews and WG adoption
Discussion + next steps

• Comments? Questions?