A Reference Model for Autonomic Networking

draft-behringer-anima-reference-model-00.txt

91th IETF, 10 Nov 2014
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Background

• History
  – A Framework for Autonomic Networking  Jun 2012
draft-behringer-autonomic-network-framework-00.txt
  – Bar Bof @ IETF (Berlin)  Jul 2013
  – Autonomic Networking - Definitions and Design Goals  Dec 2013
draft-irtf-nmrg-autonomic-network-definitions-00.txt

• Goal of this document:
  – “Define how the various elements in an autonomic context work together, to describe their interfaces and relations.”
Autonomic Networking means:
→ Minimize operator interventions
→ Minimize NMS dependencies
From draft-irtf-nmrg-autonomic-network-definitions:

Reference Model of an Autonomic Node

Autonomic Node

- Intent
- Feedback loops

Autonomic User Agent

Self-Knowledge

Autonomic Service Agents

Network-Knowledge (Discovery)

Autonomic Control Plane

Standard Operating System Functions
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Relationship with Homenet

- Homenet approach is essentially autonomic
  - This document should also "work" for homenet!
- Tries to avoid a central server ("god box")
- Personal opinion:
  - You need security, assert group membership
  - Domain certificate seems a good idea
  - This requires a trust anchor
- Protocols:
  - HNCP limited to homenet
  - GDN doesn’t exist yet
- Options:
  - Leave both approaches
  - HNCP++: make HNCP more scalable
  - Wait for GDN

We should explore!
Next Steps

• Homenet: Does this reference model fit homenet?
  – Please provide feedback!
• Incorporate feedback
• Keep document as concise as possible
• Goal:
  – Adoption as WG document
  – Informational RFC