

ANIMA recharter IETF 103 Bangkok

ANIMA chairs

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Recharter

- All initial charter round 1 documents in at least IESG review ?!
- Did start to write up proposed charter around IETF 102 and started to circulate on WG list
 - Need more on-list discussion to conclude
- One round of feedback received from AD (Ignas) worked into rev 2.0.1
 - Human operator relevance -> professional operated/developed/..
 - Relevance use of NOC -> NOC just example
 - OAM confusion (RTG iOAM) -> OAMP
 - Dates / Deliverables -> milestones and well scoped work we can do by default in ≤ 4 IETF cycles
 - Original charter 3 work items where too big documents each (should have cut into smaller chunks and sequentialized)

Individual drafts

- Presented to IETF in the past.
- Candidate interest by authors to be adopted by WG if/when in charter
- No decisions made. Instead want to ensure charter reflects scope and requirements against documents so they are
 - Best done in ANIMA (not another WG)
 - Can effectively be done in ANIMA (goals)
 - Relate to charter 1 work, framework:
 - ANI, Autonomic Functions, ASA

(potentially incomplete)

ANI+ related:

- draft-carpenter-anima-grasp-bulk (GRASP Transport)
- draft-liu-anima-grasp-distribution (Information Distribution)
- draft-friel-anima-brski-over-802dot11(BRSKI over IEEE 802.11)
- draft-rfmesh-anima-iot-management (GRASP used in IoT)
- draft-vanderstok-anima-constrained-join-proxy
- draft-eckert-anima-grasp-dnssd
- draft-choi-anima-trust-networking

ASA Common:

- draft-carpenter-anima-asa-guidelines
- draft-peloso-anima-autonomic-function (ASA lifecycle)
- draft-ciavaglia-anima-coordination

Specific ANI functions:

- draft-eckert-anima-noc-autoconfig
- draft-galis-anima-autonomic-slice-networking
- Self-Managed Networks with Fault Management Hierarchy (No draft, Mehmet Toy from Comcast)

Proposed 2nd Charter for ANIMA Working Group

The Autonomic Networking Integrated Model and Approach (ANIMA) working group is developing specifications and supporting documentation for interoperable protocols, implementations and operational procedures for automated network management and control mechanism for networks that are developed, build and operated by professional personnel.

The vision of ANIMA is the fully self-CHOP network (Configure, Heal, Optimize, Protect). The strategy is the incremental introduction of components to make it easier to evolve existing and next-generation networks into that direction **including the evolution of DevOps for networks through the support of more agile and modular developed and deployed networking automation.**

The basis for ongoing work in ANIMA are the framework and components developed by ANIMA so far, documented in draft-ietf-anima-reference-model. **Standalone work not relating to any component of this framework is welcome for review, but WG adoption of such work will be done through explicit rechartering.**

The components developed so far in this ANIMA framework constitute the Autonomic Networking Infrastructure (ANI): Autonomic Control Plane (ACP), Bootstrap over Secure Key Infrastructures (BRSKI) including the concept of Vouchers, and Generic Autonomic Signaling Protocol (GRASP) .

Proposed 2nd Charter for ANIMA Working Group

There are known **gaps in this framework**, including:

- * Defining the domain boundary, membership of the domain
- * Structure, life cycle, roles, authorisation and coordination of autonomic service agents
- * Integration with Network Operations Centers and reporting mechanisms
- * Information distribution within an autonomic network
- * Interaction with YANG-based management mechanisms
- * Additional generic use cases such as resource management or SLA assurance

ANIMA will work on these gaps and other aspects of the existing framework (more details below).

There are long term issues that are not yet well enough understood to consider specific technical solutions:

- * Intent (high level policy)
- * Tie in to machine learning and other AI techniques

ANIMA will not work on these issue without explicit rechartering.

Proposed 2nd Charter for ANIMA Working Group

ANIMA will continue to work on **fixes, extensions, variations and operational or implementation detailing of the overall ANI and its components**. Examples of such work is not limited to, but includes:

- * ANI OAMP interfaces (Operations, Administration, Management, Provisioning) (e.g.: Yang models for the ANI)
- * Structuring ANI (virtualization, compounding)
- * Variations of Voucher formats
- * BRSKI/Bootstrap protocol aspects (different proxies, extensions for wireless)
- * Common GRASP extensions for multiple use cases (Bulk transfer, DNS-SD compatible GRASP objectives)

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Autonomic Functions is the ANIMA framework term for distributed functions leveraging the ANI (preferably autonomically managed). The ANIMA working group will consider work items to specify individual autonomic functions including but not limited to:

- * Standardized autonomic functions/use-cases such as autodiscovery of (de)centralized services by ANI networks - such as those in Network Operations Centers (NOC).
- * Autonomic Slice Management and Autonomic SLA management.

Work on ANI use cases and Autonomic Functions must be detailed and complete enough to support implementation of solutions that can be deployed and operated. Standards track is preferred, but more exploratory experimental or informational work proposals will be accepted based on the expected operational benefits.

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Autonomic Software Agents are the ANIMA framework components representing software modules that implement Autonomic Functions. The ANIMA working group will consider work items relating to ASA and other aspects of autonomic functions that are applicable independent of a specific Autonomic Function and its ASA. These work items include, but are not limited to:

- * Design/Implementer guidelines for ASA
- * ASA Lifecycle management,
- * ASA coordination/dependency resolution.

Acceptance of work items will be based on the perceived value to implementers and/or operators. Status of work can be standards track if the work includes normative statements about node external interfaces (such as requirements for Yang interfaces on ASA). Exploratory work in this area can be experimental. Work describing node-internal only behavior will be informational.

Proposed 2nd Charter for ANIMA Working Group

ANIMA will **coordinate** with other IETF working groups and IRTF research groups and only accept work that is not better suited for other groups.

Examples include variations of components of the ANI in a solution owned by other working group (such as 6TISCH for specific variations of BRSKI mechanisms), details of ANI components owned by another working group (e.g.: ROLL for the ACP used RPL protocol extensions/modifications),

NMRG for definition of Intent terminology and taxonomy, and DINRG for definition of aspects of distributed autonomic functions not well enough understood to allow adoption by ANIMA (note: pending on DINRG being accepted as a RG).

Working group items accepted under this charter will be **tracked through milestones and have by default to be brought into WG last call in not more than 4 IETF cycles**. Work items expected to take longer time are subject to AD approval.