Speermint

Minimum Set of Requirements for SIP-Based VoIP Interconnection

draft-ietf-speermint-requirements-00

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IETF Speermint Working Group

Agenda

- **Clarify Scope of this Internet-Draft**
- **Review and Discuss Categories of Requirements**
- **Any other Feedback and Next Steps**

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Intended Scope of this Requirements ID (1)

- **From WG charter**
  - WG deliverable for March 2007
  - Proposed status: BCP
  - "Submit I-D on the **minimum** set of **requirements** for **SIP**-based **VoIP interconnection** (BCP)"

- **What does BCP mean?**
  - BCP 9 (RFC2026) guidelines
  - Do we document best current practices in today's SIP VoIP network?
  - De we state requirements because wg thinks they should be implemented and become best practices?
  - A bit of both?

Intended Scope of this Requirements ID (2)

Applicability of the Requirements

- **Who's the target of, or subject in the requirement sentences?**
  - IP nodes: e.g. nodes involved in L5 peering like SIP proxies at the "network boundary"?
  - Users or Providers involved in peering relationships?
  - WG? Some requirements seem more like design goals for the wg
  - Mix of the above?

- **Proposal:**
  - Requirements should primarily be written for IP nodes involved in session peering for VoIP interconnects
  - Separate sections could include design goals and VSP considerations

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Intended Scope of this requirements ID (3)

- **VoIP specific vs. generic speermint requirements**
  - No other requirements ID in the current charter
  - Current draft-00 inherited some generic requirements
    - » Source: Dave's old terminology-and-requirement wg draft
    - » What do we do about these?
  - Some requirements categories are not VoIP specific but apply to VoIP too
    - » DNS, Call Routing Data and ENUM
    - » Security requirements

- **Proposal: Two possible options**
  - One requirement document as pictured in the current draft
  - Two or more requirement documents
    - » Consolidate generic speermint requirements in a separate document
    - » Focus current ID on VoIP interconnect only

- **Thoughts?**

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Categories of Requirements

- DNS, Call Routing Data (CRD) and ENUM for VoIP interconnects
- SIP-SDP related requirements
- Media-related requirements
- Security

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DNS, Call Routing Data (CRD) and ENUM

- **Call Routing Data: Do we want to capture basic requirements? like**
  - Preferred use of SIP URIs vs. TEL; recommendations defined in [RFC3824] for using E.164 numbers with SIP
  - The use of DNS domain names and hostnames is RECOMMENDED in SIP URIs and they MUST be resolvable on the public Internet.
  - Use of RFC 3263 to resolve a SIP URI into a reachable host (IP address and port), and transport protocol

- **ENUM**
  - Any minimum recommendations on the ENUM client requirements for VoIP interconnects
    » Minimum ENUM Service types (E2U+sip, E2U+ voice:tel, etc.)
    » Pointers to DNS resolver requirements
  - What should be in/out of scope?

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What's the actual state of implementation and actual use of RFC3263 (June 2002) mechanisms?

- **Vendor poll**
  - Poked in IETF 65 SIPPING slides from Robert Sparks on SIPit interop testing:
    » Status of the implementation in sip interoperability testing events:
      - 40% of implementers showing up in SIPit do NAPTR
      - 50% do SRV
    » Is most of the use of NAPTR for ENUM queries?
    » How much of that ratio is for transport protocol selection a la RFC 3263?
  - Searched publicly available information from product vendors
    » NAPTR support for transport protocol selection not widely available
    » When it is implemented, as one would expect, ability to turn it off

- **Operator's pool**
  - 3 VoIP service providers or operators responded
  - One "thinks" that 3263 should be the way to go to do protocol selection but no info on whether it is in used or not, or in any future plans
  - Two have stronger opinions: no plans for it and prefer static TCP configuration
    » Use of TCP as transport for VoIP interconnect between peers
    » Recommend making use of RFC 3263 OPTIONAL for transport selection

- **Other source of feedback reviewed**
  - SIP Forum IP PBX to SP document
  - Mailing list: few responses, more based on what folks believe should be done than what they know based on field deployment feedback

- **Thoughts?**

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SIP-SDP related Requirements

What's the <u>common</u> <u>minimum</u> set of requirements for establishing SIP sessions for VoIP interconnects?

- **See list email exchanges, where do we place the bar?**

- **Proposal**
  - First agree on the set of RFCs that matter, then choose level of requirement (MUST/SHOULD)?
  - RFC 3261 and "Core SIP Specifications" in draft-ietf-sip-hitchhikers-guide which includes things like SDP (RFC 4566), offer/answer (RFC 3264), etc.
  - Others?
    - » Reliability of Provisional Responses in SIP - PRACK (RFC3262)
    - » SIP UPDATE method (RFC3311)
    - » Reason header field (RFC3326)
    - » Do we insist on some requirements buried in RFCs that may not be well understood or not implement with enough flexibility to optimize SIP interop?
    - » Do we lower the bar on some of the Core SIP Specs?

- **Feedback?**

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Media-related Requirements

- **For consideration**
  - Requirements on RTP and RTCP support
  - Codec requirements
    - » If not specific codecs, should there be any high-level requirements on media transcoding capabilities to enable VoIP interconnects with most networks?
    - » Many networks "wireline VoIP", soft clients, 3GPP, enterprise, etc. but common codecs exist in many subsets
  - Other recommendations like VoIP metrics (RFC 3611), use of sRTP (based on rtpsec work)?
- **What should be in-scope?**
- **What should be postponed for now but still captured later in the final draft?**

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Security

- **Long thread on level of TLS support without diverging views**
- **Lack of generally agreed requirements for speermint security**
  - Call Authentication, Confidentiality, Integrity, etc.
- **Many approaches possible**
  - Top-down approach:
    Agree on security requirement then analyze available solutions then capture the sub-set of requirements for VoIP interconnects
  - Bottom-up:
    Look at use of SIP security in VoIP today, between end-devices and servers, between VSPs and make appropriate recommendations

- **Proposals**
  - Review security threat model from 3261 in speermint context
  - Focis on the use of security mechanisms for speermint, not argue on RFC requirements or product capabilities
  - Need to keep the focus on L5 speermint requirements
    » SHOULD NOT assume lower layers' security
  - Recommendations:
    be pragmatic
    » Start security requirements but
    » Favor bottom-up approach given the goal of defining BCP and minimum set of requirements
    » Validate findings based on requirement

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Summary of Requirements Categories

- **Requirements proposed to be in-scope**
  - DNS, Call Routing Data (CRD) and ENUM for VoIP interconnects
  - SIP-SDP related requirements
  - Media-related requirements
  - Security
- **Requirements proposed to be out-of-scope because they do not qualify as part of the *minimum set* to establish VoIP interconnect**
  - Call Accounting?
  - Configuration or Provisioning?
  - QoS (per charter)
  - SPIT prevention (per charter)
- **Any other items in/out of scope?**
  - Special procedures for handling Emergency Services session across session peers?
    (Needs expressed in ECRIT-3GPP July 9 meeting)

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Thanks.
Other Feedback?

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