Overload Control Requirements

(draft-ietf-dime-overload-reqs-05)

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Changes since Atlanta

• General clarifications and wordsmithing
• Updated discussion of RFC 3539 (Transport Profile)
• Added 3GPP references
• Added discussion of DPR to section 3 (Existing Mechanisms)
• Added more details on extensibility
  – Made extensibility of scopes a MUST
Changes (cont)

• Clarified Req 20 to indicate that overload must not be confusable with non-overload related Diameter errors.

• Generalized several requirements to make sure they are “requirements” rather than “solution”

• Removed redundant requirements 23 and 29

• Mentioned end-to-end security concerns

• Added requirement for a MTI algorithm
Open Issue: Req 2

• Application Independence
  – The original intent was basic OC function could be implemented by any node:
    • Nodes that are not application aware (e.g. Relays)
    • Nodes that support arbitrary application (e.g. Clients, Servers, Proxies)
  – Adding OC support would not require updates to application specifications.
    • But does allow it.
Open Issue: Req 2 (cont)

• Comments that language is ambiguous:
  – Currently “… regardless of which Diameter applications they support”
  – “Application” interpreted to mean different things:
    • Application aware clients
    • Application “layer” in software
Open Issue: Req 2 (cont)

• Request for additional clause:
  – “It must be possible for clients to learn about overload”
  • Concern that only client may be able to do the right thing for some applications
  • Concern that the client has to gracefully degrade behavior toward its own users
  • But would this discourage allowing agents to resolve overload conditions?
Open Issue: Req 2 (Cont)

• Discussion: Can we require application independence?
  – Are there applications where only clients can handle overload? (e.g. agents can’t _ever_ redirect?)
  – Can anyone propose less ambiguous language?
Open Issue: Req 2 (Cont)

• Proposal:
  – Keep Application Independence, do some wordsmithing
  – Add requirements:
    • Diameter clients must receive sufficient information to correctly and gracefully handle
    • Solution must work with or without Diameter agents (including topology hiding agents.)
Open Issue: Req 35

• Req 35 says the mechanism SHOULD work across intermediaries that do not support it.
  – Some requests to make that a MUST
  – This doesn’t imply end-to-end, but it does mean communicating overload information between non-adjacent nodes.
  – Likely to add quite a bit of complexity
Open Issue: Req 35

• Discussion:
  – Is it possible to have a separate solution for non-adjacent overload?
  – Likely won’t work if the non-supporting intermediary does certain things like topology-hiding
  – SHOULD still provides a strong preference for solutions that meet the requirement.

• Proposal:
  – Leave as is (SHOULD)
Next Steps

• Resolve open issues
• 3GPP CT4 Discussion may uncover additional open issues.