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 exstensibility of scopes a MUST

Changes (cont)

- Clarifed 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.