SIP Session Policies

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New Draft Structure

• Session Policy Framework Draft
  – Session-specific and session-independent policies.
  – Model, overall architecture and protocol components.
  – Merges:
    • draft-hilt-sipping-session-spec-policy-03
    • (Parts of) draft-ietf-sipping-session-indep-policy-03

• Event Package for Session-Specific Policies Draft
  – Mechanism for subscribing to session-specific policies.

• Media Policy Data Set Draft
  – XML format for media policies.
  – Replaces (parts of):
    • draft-ietf-sipping-session-indep-policy-03
Media Policy Data Set Draft

draft-ietf-sipping-media-policy-dataset-00

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Status & Changes

• Few changes/additions to the XML format.
• Draft is stable with dependencies on UA profile data set framework.
  – XML schema structure.
  – Common attributes.
Changes to Media Policy Format

- `<codec>`
  - New sub elements `<mime-type>` and `<mime-parameter>`
  - Defines codecs more precisely than using the codec name only.
  - Mirrors the MIME type definition.
    - Example: `<mime-type>audio/PCMA</mime-type>`

- `<media-intermediaries>`
  - Individual sub elements for each intermediary type.
    - `<configured-intermediary>`, `<turn-intermediary>`, `<ipinip-intermediary>`, `<iploose-intermediary>`, …
  - Elements for intermediaries can define their own sub elements.
    - Example: credentials for TURN servers.
  - More extensible and flexible than previous approach.

- `<local-ports>`
  - Specifies a range of local ports a UA should use for media.
Session Policy Framework Draft

draft-hilt-sipping-session-policy-framework-00

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Status & Changes

• Merged
  – draft-hilt-sipping-session-spec-policy-03
  – Parts of draft-ietf-sipping-session-indep-policy-03

• Added model descriptions and clarifications.

• Reference to session-specific policy event package as the policy channel protocol.
Event Package for Session-Specific Policies
draft-hilt-sipping-policy-package-00

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Session-Specific Policies

• Session policy framework draft defines a mechanism for discovering policy server URIs in INVITE transactions.
• This draft defines an event package for subscriptions to session-specific policies.
Model

• Steps in setting up session-specific policies:
  1. UA submits a session description to the policy server and asks if this session is permissible.
  2. Policy server creates a policy decision for this session and returns it to the UA.
  3. UA applies the policy decision.
  4. Policy server updates the policy decision if necessary.

• Possible policy decisions:
  a) Reject the session.
  b) Propose changes with which the session is acceptable.
  c) Accept the session as proposed.
Event Package Definition (1)

• UA subscribes to session-specific policies.
  – Session description is submitted in the SUBSCRIBE body.

• The notifier (policy server) uses the body to generate the resource (policy decision) the subscription is for.
  – Policy decisions are generated on the fly based on the session description and potentially other information.
  – Policy decisions are maintained by the policy server.
  – Changes in the policy decision trigger a NOTIFY.

• SUBSCRIBE body format: application/sdp

• UA may submit local and remote session description.
  – New content disposition type identifies "local-description" and "remote-description".
The policy server returns the policy decision via a NOTIFY.

The policy decision consists of a (possibly modified) version of the submitted SDP announcements.
- Returned SDP announcement reflect the current policies.
- Can directly be used by the UA to set up a session.
- Example: G.711 is disallowed by removing it from the SDP announcement returned in the NOTIFY.

An unmodified announcement accepts a session.
An empty body rejects a session.
NOTIFY body format: application/sdp
Open Issues

• **SUBSCRIBE/NOTIFY** mechanism?

• Which format for policy decisions?
  – SDP, patch to SDP or XML policy format

• Security Model
  – Prevent submission of illegal policies to the UA.
  – Prevent illegal downloads of policies from the policy server.
  – Mutual authentication needed.