

Indication of support for keep- alive

draft-holmberg-sip-keep-02

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PROBLEM

- draft-ietf-sip-outbound-16 defines two functionally separated mechanisms:
 - Flow mechanism
 - SIP signalling keep-alive mechanism
- NOT possible for SIP entity to indicate explicit support of the keep-alive mechanism

OUTBOUND FLOWS

- **Outbound **registration** initiated flow:**
 - Outbound flow(s) established during registration
 - Keep-alives implicitly negotiated
- **Outbound **dialog** initiated flow:**
 - Outbound flow is established during dialog establishment
 - Keep-alives NOT implicitly negotiated

PREVIOUSLY IN IETF

- Consensus not to specify explicit keep-alive indication to draft-ietf-sip-outbound.
- Statement that such indication should be specified in a separate draft

NUTSHELL

- Allows SIP entities to indicate support of, and use, the NAT keep-alive mechanisms defined in draft-ietf-sip-outbound
- Hacks, e.g. based on frequent re-registrations (very common today), can be avoided if keep-alives can be negotiated.

USE CASE #1: Outbound not supported

- Outbound is not – for whatever reason – supported/implemented, but still requirement to negotiate keep-alives
- Hack solution: indicate support of Outbound even if only the keep-alive mechanism is supported

USE CASE #2:

Outbound dialog initiated flows

- When an outbound dialog initiated flow is established, keep-alive is not implicitly negotiated
- Keep-alive must be separately negotiated

USE CASE #3:

Non-registration emergency calls

- Emergency call made by non-registered user
- Keep-alive needed during the session

USE CASE #4:

Intermediate-to-intermediate

- "Heartbeat" type-of function between specific intermediates during a session
 - Not necessarily for NAT keep-alive purpose
- Useful for SIP provider peering, proxy-to-PSTN-GW, etc.

USE CASE #5: SIP IP-PBX Trunks

- Many Enterprises have fairly permanent PBX-to-Service-Provider connections
- IP-PBC and SP need to detect liveness of connections, even when no calls are being made
 - To choose alternate routing path
 - Don't want to wait for call request timeouts
 - Need some check to be able to revert when it's back up
- Today SIP OPTIONS is often used for this
 - Heavy, cumbersome, and has some interop issues

REQUIREMENTS

REQ 1: It shall be possible for a SIP entity acting as a UAC to indicate explicit support of the keep-alive techniques defined sip-outbound towards the next hop.

REQ 2: It shall be possible for a SIP entity acting as a UAS to indicate explicit support of the keep-alive techniques defined sip-outbound towards the previous hop.

REQ 3: It shall be possible for SIP entities to negotiate explicit usage of the keep-alive techniques defined in sip-outbound.

REQ 4: It shall be possible to negotiate whether the duration of the negotiated keep-alives is for a registration, a session, a certain amount of time, or until the cease of sending keep-alives is explicitly negotiated.

PROPOSAL

- Agree on use-cases and requirements
- Adopt the draft as a WG item

THANK YOU!