End-to-End Session-ID
at IETF83

draft-jones-ipmc-session-id-03

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Why an E2E Session-ID?

• Identify issues in the network (debugging)
• Track sessions as they move (e.g., transfer)
• Associate media flows with a session by inserting the Session ID into RTCP, RSVP, or other protocols
• Enable monitoring or recording of sessions (with proper end-to-end identification)
• Associate sessions that are related (e.g., participants in a multipoint conference or part of a targeted single or multi-party session to be recorded)
Existing Call Identifiers

• Both SIP and H.323 define identifiers that can identify a “call” or “session”

• None of the existing identifiers allow for an intermediary like a B2BUA or SBC to “join” call legs in the network and maintain and end-to-end identifier

• Often, B2BUAs or SBC modify call identification information
Illustrating the Problem: Alice and Bob via B2BUA or SBC

Alice and Bob via B2BUA or SBC

Call ID “X”

Call-ID “Y”

What is the end-to-end call identifier?

Alice thinks it is X and Bob thinks it is Y.

BOTH think they are communicating directly with the other
Let Each Endpoint Contribute

• Rather than having the calling device or called device assign a Session-ID, let each assign part of the end-to-end Session-ID
• We then concatenate the values (in a predictable manner)
The New Session ID

- Alice
- Carol
- B2BUA
- Bob

Session-ID part “A”
Session-ID part “B”
Session-ID is A || B

UUID A=0xaeffa652b22911dfa81f12313a006823
UUID B=0xbe11afc8b241e4512313a006823
Alice transfers Bob to Carol

Session-ID part “A”

Session-ID part “B”

Session-ID part “B”

Session-ID is A || B

Session-ID is B || C
Associating Participants in a Conference

MCU assigns the same Session-ID component “M” to each endpoint in the same conference.

Each endpoint assigns a unique Session-ID component, making each e2e Session-ID unique, but enabling the association of all entities in the same conference via “M”.

Alice

Bob

Carol

Dave

E | | M

MCU

F | | M

G | | M

Frank

Ed

Session-ID is A | | M

B | | M

C | | M

D | | M
Notes

• Each component of the Session-ID contributed by each endpoint is a UUID/GUID, so it is unique
• Each half Session-ID visible upon initial transmission of SIP message from that UA.
• UAS combines each Session-ID half to form full Session-ID in SIP response
• The Session-ID can be in session signaling, debugging logs, RTCP, RSVP, or other protocols to associate signaling and media, perform diagnostics, create CDRs, etc.
• ITU-T SG16 initiated parallel work to allow session identification even when interworking between H.323 and SIP networks