3GPP TS 29.163 is the latest of the interworking standards between ISUP and SIP. It is closely aligned with ITU-T Q.1912.5, but also supports some additional interworking use cases and supplementary services. On the SIP side, conventions of IMS SIP are often used.

This feature will add the interworking of the SIP precondition mechanism versus the SS7 continuity check protocol.

**Call Flow Diagrams**

The call flows displayed below are the supported call flows interworking the SIP preconditions versus the SS7 continuity check.

### Sending IAM before SIP preconditions are met

**Description**

- IMG decides to send the IAM before preconditions are met.
- This is illustrated by setting the continuity check indicator of the IAM to “Performed on previous circuit”.
- IMG sends Early 183 at reception of INVITE to complete SDP negotiation for preconditions.
- When the preconditions are finally met on the SIP side, IMG will send COT (success) indicating that call can resume.

---

**Hold IAM until SIP preconditions are met**
**IMG decides to hold the IAM until preconditions are met.**
- IMG issues Early 183 to complete SDP negotiation on the SIP side.
- Precondition negotiation complete either in the SIP 183 PRACK or in SIP UPDATE.
- IMG resumes call by sending IAM with continuity check indicator set to "Not required".

**Sending INVITE before continuity check is completed**

**Description**
- IMG decides to send the INVITE before the continuity check is completed.
- This is illustrated by setting the preconditions in the SDP of the INVITE as not fulfilled.
- When the continuity check finally completes successfully, IMG sends SIP UPDATE with precondition fulfilled in SDP indicating that call can resume.

**Hold INVITE until continuity check is completed successfully**
IMG decides to hold the INVITE until continuity check is completed successfully. The continuity check completes when SS7 side send COT with result. IMG resumes call by sending INVITE with precondition in SDP fulfilled.

**Configuration**

SIP configuration is done in SIP Profile - SGP:
- Set the Precondition Support to "Relay" or "Wait for fulfilled" depending on the desired behavior.
- Set the Early 183 to "Enabled" when Precondition Support is set to "Relay".

SS7 configuration is done in SS7 Destination - ISUP Group - ANSI/SS7 Destination - ISUP Group - ITU and SS7 ISUP to SIP Interworking panels:
- Set the Incoming Continuity Check to desired behavior.
- Select the "Q1912.5 procedure" for ISUP interworking.