

SBC as Access SBC with External P-CSCF Co-located with ATCF and EATF

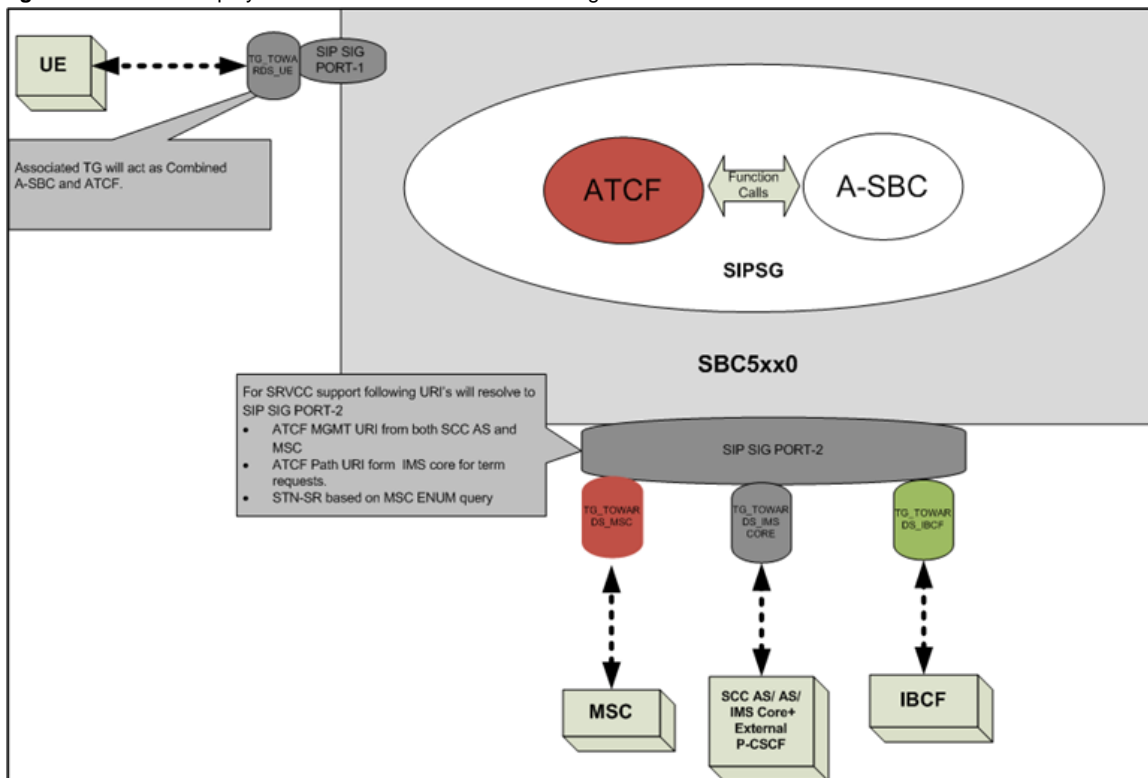
In Samsung deployment ATCF/ATGW and EATF functionalities are performed by the Access SBC. In this mode of VoLTE service deployment, ATCF inter-works with P-CSCF/I-CSCF and EATF inter-works with E-CSCF. In this deployment, ATCF/EATF is co-located with SBC along with an external P-CSCF.

As per 3GPP specification, ATCF/EATF is invoked after P-CSCF. As part of the registration procedure, P-CSCF decides whether to invoke ATCF/EATF or not based on the criterion that is local to P-CSCF. Once ATCF/EATF is invoked, ATCF/EATF is invoked both for originating calls from UE and incoming calls towards UE.

At a high level, the functions performed by the ATCF are:

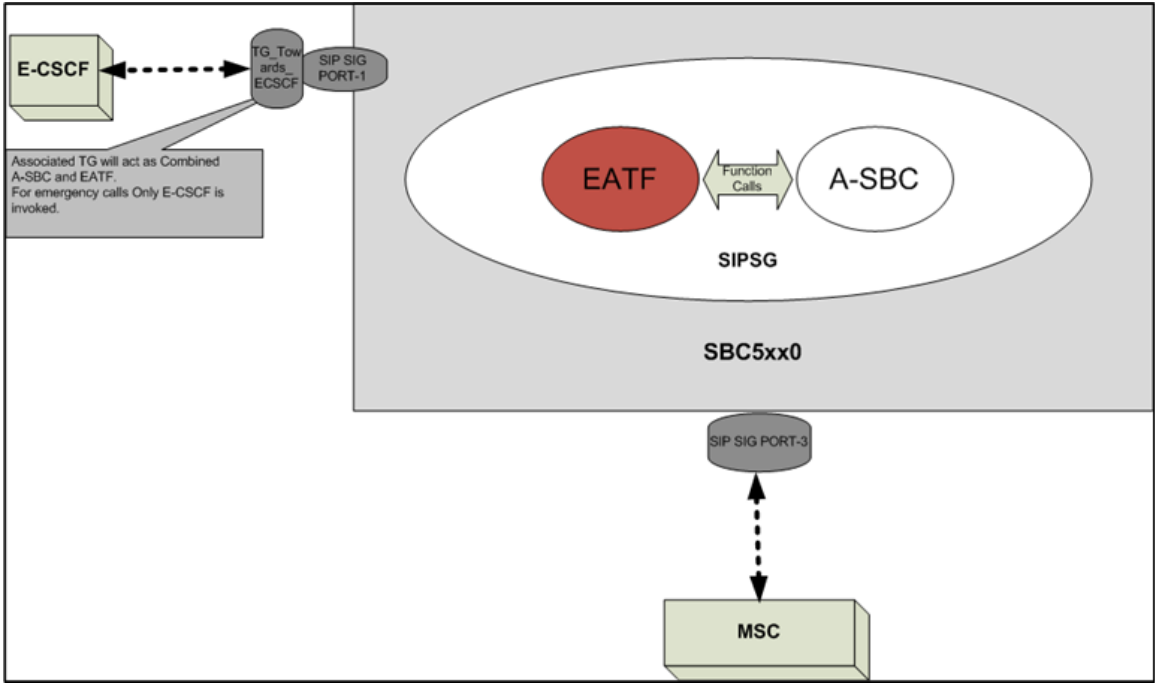
- The ATCF is a function in the serving (visited if roaming) network. When SRVCC enhanced with ATCF, the ATCF is included in the session control plane for the duration of the call before and after access transfer. The ATCF may be co-located with one of the existing functional entities within the serving network (that is, P-CSCF or IBCF).
- Allocates an STN-SR.
- Includes itself for the SIP sessions.
- Instructs the ATGW to anchor the media path for originating and terminating sessions.
- Keeps track of sessions (either in pre-alerting state, alerting state, active, or held) to perform access transfer of the selected session.
- Performs the access transfer and updates the ATGW with the new media path for the (for example, CS) access leg, without requiring updating the remote leg.
- After Access Transfer, updates the SCC AS that access transfer has taken place to ensure that T-ADS have the information on the currently used access.
- Handles failure cases during the access transfer.

Figure 1: SBC IMS Deployment - A-SBC as ATCF Provisioning



At a high level, the functions performed by the EATF are:

- The EATF provides IMS-based mechanisms for enabling service continuity of IMS emergency sessions. It is a function in the serving (visited if roaming) IMS network, which provides the procedures for IMS emergency session anchoring and PS to CS Access Transfer.
- The EATF acts as a routing B2BUA, which invokes third party call control (3pcc) to enable access transfer.
- The EATF performs the session continuity when the access transfer request indicated by the E-STN-SR is received.



For configuration details, see [Configuring SBC as Access SBC with External P-CSCF Co-located with ATCF and EATF](#)