

# SBC in NNI as IBCF

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## Scenario

The SBC provides the function of an integrated IBCF and IBGF in the IMS Network-Network Interface (NNI). Note that the SBC transparently handles both the control and the user plane in this context.

The SBC sits at the IMS edge and interconnects the operator to other IMS and fixed networks. It gets involved in the SIP signaling path in following situations:

- When the UE roams to other IMS networks and P-CSCF is located in the VPLMN, then as an I-BCF (exit point of the network) that connects to the home network of the subscriber.
- As an entry and exit point the IMCN network when the SIP message is routed between two different IMS operators or IMCN networks.

## Background Information

- The requirements specified in the section "Background Information and Dependencies" are met.
- Ports and IP Interface Groups have been configured as described in [NNI-Complex route selection](#) topic.
- The SBC/IBCF supports:
  - Topology hiding
  - IMS ALG: Translation between IPv4 and IPv6
  - Packet screening for source/destination address and SIP content
  - CDR generation

## Supported Interfaces

The following interfaces are supported:

Interface	SBCSupport Requirements	Sonus Compliance
Mx	Support Mx interface; SIP signaling between SBC and CSCF	Compliant
Mb	Support Mb interface; RTP media stream between the SBC and MGW, RTCP media control, associated with a particular RTP stream.	Partially compliant. Sonus' solution supports RTCP and RTP media stream between the SBC and MGW.
User plane Traffic	Support UDP/TCP and RTCP	Compliant
Gm (A-SBC)	Supports SIP signaling between UE and P-CSCF (except for SIP signaling compression).	Compliant
If-1 (A-SBC)	CSCF interact with ENUM/DNS for translation of E-164 numbers into routable SIP addresses.	Not compliant

Mw	Support Mw interface; P-CSCF interacts with I/S-CSCF via SIP-signalling shall be supported according to 3GPP TS 23.228 (Stage 2) and 3GPP TS 24.229 (Stage 3).	Partially compliant. Sonus supports Mw interface.
Rf	P-CSCF support of Rf interface as defined in 3GPP TS32.260, with respect to the content of CDR. Vendor support of Diameter on this interface.	Compliant
Rx	The Rx interface supports the QoS resource reservation for reserving bandwidth in the IP access network. The Rx reference point is used to exchange application level session information between the Policy and Charging Rules Function (PCRF) and the P-CSCF. The SBC, acting as P-CSCF creates a TCP connection with the configured PCRFs	Compliant

## Description

The SBC/IBCF is deployed at network boundaries, NNI and acts as a SIP B2B UA.

**Figure 1:** SBC in NNI as IBCF



