Product brief

Frequentis SBC

Strong security for VoIP networks and critical infrastructure

Organisations in the ATM, public safety, public transport and CRITIS sectors aim to achieve the highest possible resilience and reliability in network and voice communications, and the highest standards in data security and privacy. Frequentis Session Border Controller (SBC) empowers organisations to secure both signalling and media communications. By continuously monitoring and filtering incoming traffic, the Frequentis SBC reduces the risk of cyber-attacks, denial-of-service attacks and fraud attempts at the edge of the network. It protects internal services from the outside world and hides the internal topology from possible attackers, helping ATM, public safety, public transport and critical infrastructure (CRITIS) organisations maintain reliable and private communications.

Key features

State-of-the-art security

Frequentis SBC controls which users and what messages can cross the borders of a VoIP infrastructure and use the offered VoIP services. It provides access control, DoS and fraud protection and encryption.

High availability

With its active-standby concept, Frequentis SBC ensures the continuity of calls under all circumstances. Further, the Frequentis SBC enhances the availability of our customers' VoIP solutions by monitoring neighbouring nodes, detecting failures, and routing traffic only to available nodes.

Compliance with ATM standards

Frequentis SBC implements ED-137 and follows the EUROCONTROL SBC in ATM VoIP implementation guidelines. These include: compliance with multi-level redundancy, interoperability between the SIP/RTP and the ED-137 systems, and RTSP-based recording.

CRITIS deployment experience

The Frequentis SBC complies to the emergency call standards in Germany (1TR119 DTAG-Standard) and constitutes the core of the only EAL4+ BSI-certified SBC in Germany. This has enabled it to fulfill the needs of PSAP providers, police agencies and governmental institutions with the highest security requirements.

SBC at a glance

- Advanced denial of service (DoS) and overload protection
- Active-standby high availability and load balancing
- Detailed service monitoring, logging and CDR generation
- Flexible SIP-header normalisation
- WebRTC and MS-Teams direct routing support
- SIPREC and RTSP-based recording
- ED-137 compliance

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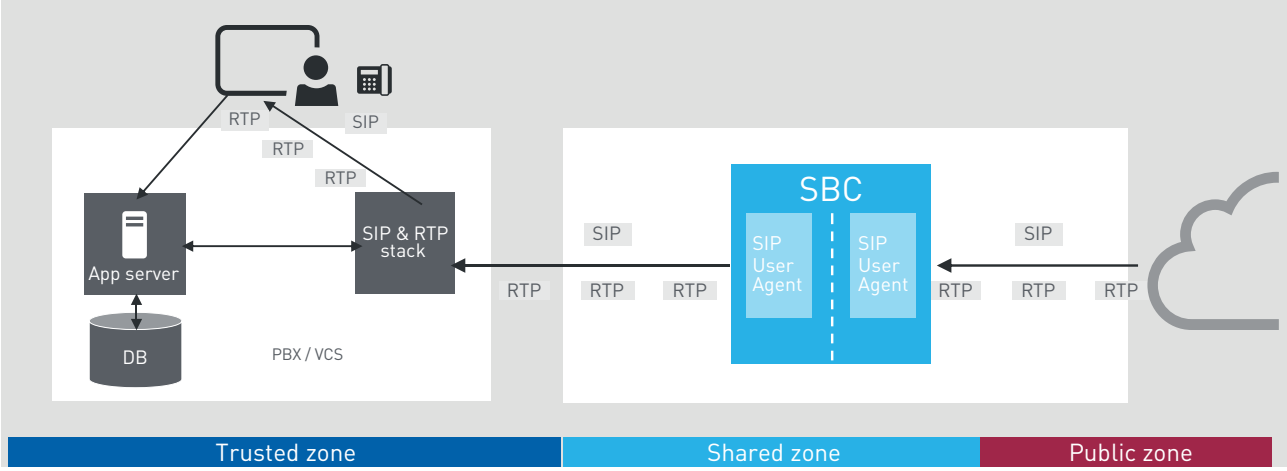
FOR A SAFER WORLD



Benefits

Assured interoperability

Frequentis SBC works seamlessly across multiple transport layers, protocols and encryption methods. It supports the manipulation, addition and deletion of SIP headers, SDP content and number adaptation. In the media layer it implements audio codec transcoding, DTMF interworking, and RTP/SRTP interoperability.

Detailed system monitoring

Frequentis' unique monitoring solution enables the detailed monitoring of all deployed SBCs. The monitor provides a highly interactive, near real-time view of the servive usage. This can be used for trend analysis of both short-term and long-term use patterns, troubleshooting, auditing server policies, and identifying user misconduct.

Simplified centralised management

Frequentis SBC provides a single, intuitive point of control for any number of session border controllers. Configurations can be backed up and restored, simplifying the assurance of stability and reliability across large networks.

Flexible routing framework

Frequentis SBC offers flexible routing capabilities. Signalling traffic can be routed according to pre-defined static routing rules with optional SIP Redirect mode; integrated routing tables can be provisioned remotely using the REST API, or the routing decision can be fully controlled by triggering a query to a remote third-party server that implements the routing logic itself.

Facts & figures

Number of installed sites	50+
Platform and management	Containerised architecture; runs on COTS server (applicance), virtualisation layer, cloud. Central GUI for configuration and monitoring; SSH access; SNMP v2/v3 status and logs; local logging of alarms, events and statistics
Signalling	SIP RFC compliant; B2BUA; per-source/destination configurable SIP header/body filtering and manipulation
Media services	WebRTC; software transcoding; DTMF interworking (in-band/ RFC2833/4733 / SIP INFO); SIPREC and ED-137 recording; announcements
Monitoring	Display of call and system KPIs; call statistics and sequence charts; collection of PCAP traces; call analysis and debugging
Security	Signalling and media encryption and topology hiding; RTP DoS protection and call rejection; call rate limitation

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