Mitel EX Controller

Multi-Service Business Platform - MiVoice Call Control

Key Features

- Robust multi-service platform
- Flexible architecture
- Survivability – service continuity
- Maximum 2000 IP user capacity
- Embedded virtualized environment for call server and/or applications
- Easy configuration and management

The Mitel EX Controller delivers a multi-service business controller capable of running MiVoice Business, MiVoice 5000 or MiVoice MX-ONE. It has been developed to continue Mitel's commitment to deliver simplified deployments and to drive efficiency. The Mitel EX controller provides up to a capacity of 2,000 IP users (depends on platform and implementation) and offers local survivability and PSTN access for analog users. The Mitel EX Controller also supports ISDN PRI and BRI, E&M, and R2 T1/E1 providing access to the local PSTN.

Main Location

Mitel EX Controller is a purpose designed appliance that provides IP telephony and gateway functionality in one. Available for multiple Mitel call control platforms - MX-ONE, MiVoice 5000 or MiVoice Business – the EX Controller provides full IP telephony call control while simultaneously supporting older telephony technology such as FXO, FXS, R2 and ISDN PRI and BRI. Scalable up to 8 x PRI, or to 24 analogue users and a significant number of IP users the EX can be used as the core telephony solution where support for legacy telephony is still of utmost importance.

Remote Users

Mitel EX Controller provides seamless communication service access to branch offices, as if the users were at the same site as the Mitel solution (MiVoice Business, MiVoice 5000 or MX-ONE) at the headquarters or main location.

Survivability

The Mitel EX Controller ensures service continuity by establishing external calls through the local PSTN and by routing internal calls when the primary central site network is temporarily unavailable.

Legacy and IP Systems Integration

With its flexible configuration of a virtual environment, FXS, FXO, and PRI/BRI telephony ports, call-switching, and user-defined call properties (including caller/calling ID), the EX Controller smoothly integrates into the family of Mitel call controllers.

Network Separation

The EX Controller creates a clear separation between the enterprise's and the operator's networks by hiding the topologies and credentials.

Mitel
Powering connections

Available Configurations

Mitel EX Controller supports two standard configurations with up to two virtual machines

- *EX 4/60; 4 GB RAM, 60 GB SSD, single PSU. KVM 4 vCPU's*
- *EX 16/120; 16 GB RAM, 120 GB SSD, dual PSU for redundancy. KVM 8 vCPU's*

(The EX unit is itself using one vCPU)

Capacity Configurations

Capacity depends on the version of EX controller used and the Mitel call server used.
(Please see the Mitel call server documentation for detailed information).

Carrier-Grade Features

- *T.38 and clear channel fax over IP*
- *High performance processing of up to 250 voice channels*

Robust Security

- *Enterprise communication encryption*

Easy Configuration and Management

- *For MiVoice Business this is managed through the ESM*

Media Processing

- *G.711 (A-law and μ-law), G722 and G.729a/b*
- *G.168 echo cancellation*
- *DTMF detection and generation*
- *Carrier tone detection and generation*
- *Silence detection/suppression and comfort noise*
- *Configurable de-jitter buffer and packet length*
- *Packet loss concealment*

Quality of Service (QoS)

- *Bandwidth limitation and traffic shaping*
- *TOS/DiffServ*
- *IEEE 802.1p/Q*

Enhanced Security

- *SIP over TLS*
- *SRTP with AES cipher – 128 bits*
- *SDES key management protocol (RFC 4568)*
- *TLS-encrypted configuration and management*
- *X.509 certificate management*
- *OCSP (Online Certificate Status Protocol) revocation status verification*
- *TLS 1.2*
- *Supported TLS key exchange mechanism:*
  - *RSA*
- *Supported TLS ciphers (minimum):*
  - *AES (128 and 256 bits)*
  - *SHA-384*

Session Boarder Controller

- *Back-to-Back user agent SIP header manipulation SIP registrar*
- *SIP authentication*
- *SIP failover*
- *Registration throttling/caching Call forking*
- *Advanced, rule-based, call routing*
- *Dynamic call routing based on:*
  - *Peer monitoring state*
  - *Registration cache*
- *Call Admission Control (CAC), per trunk, based on:*
  - *Call volume*
  - *Bandwidth usage*
- *Concurrent calls*
- *Near and far-end NAT traversal Audio and video media relay Codec filtering*
- *SIP and media encryption UDP/TCP/TLS interworking DTMF interworking*

Management

- *Web GUI*
- *SSH*
- *SMNP v2c, and v3*
- *Scripts/firmware files uploaded via HTTP, HTTPS, FTP, and TFTP*
- *Multiple levels of management access rights*
- *Event notifications via Syslog, SIP, log file, and SNMP traps*
- *Remote activation of service licenses*

IP Telephony Protocol

- *SIP (RFC 3261) over UDP, TCP, and TLS*
- *RTP (RFC 3550)*
- *SDP (RFC 4566)*
- *Multi-part body support*
- *Redundancy support via DNS SRV*
- *Multiple trunk support*
- *IPv4 and IPv6 dual stack signaling and media*

Networking

- *Dual Stack IPv4 – IPv6*
- *Multiple IP addresses per link or VLAN*
- *Multiple VLANs per link*
- *DHCP Client*
- *DHCP Server*
- *PPPoE (RFC 2516)*
- *IEEE 802.1q + DSCP QoS tagging (media, signaling, and mgmt)*
- *IEEE 802.1x wired authentication*
- *LLDP-med (ANSI/TIA-1057)*
- *QoS traffic shaping*
- *Static routing*

Power Supply

- *Single or dual internal 100-240 VAC power supply*

Physical Interfaces

- *5 x 10/100/1000 BaseT Ethernet RJ-45 connectors*
- *2 x TDM sync RJ-45 connectors*
- *2 x USB 2.0 Type-A connector*

Operating Environment

- *Operating temperature: 0°C to 40°C*
- *Storage temperature: -20°C to 70°C*
- *Humidity: up to 85%, non-condensing*

Dimension

- *Height: 4.4 cm*
- *Width (mounting brackets): 48.5 cm*
- *Depth: 33 cm*
- *Weight: Approx. 7 kg*

SBC Licensing

- *One license is needed for each concurrent call (calling party in the EX Controller)*
- *Up to 2000 concurrently registered SBC users.*