MiVoice MX-ONE

Driving the Mobile Enterprise

The MX-ONE is a complete SIP-based communications system scalable from 500 to 100,000+ users with a fully distributed architecture for deployment flexibility. The integration of voice, video and data with mobile capabilities provide increased efficiency and operation flexibility. The same wide range of services and features are available for both on-site or private cloud deployments of the MX-ONE solution.

Highlights

- Tailor-made solution for medium to large Enterprise
- MiVoice MX-ONE Service Node - different options depending on customer needs
- Application Server Unit - optional Service Node hardware platform (server board)
- MX-ONE Media Gateways - both software- and hardware-based options
- On-site or managed services deployment options
- Powerful redundancy options with high security
- Single point of entry for system management

Building Blocks

MiVoice MX-ONE consists of three basic components:

- *MiVoice MX-ONE Service Node*
- *MiVoice MX-ONE Media Gateway / Media Server (hardware/software-based)*
- *MiVoice MX-ONE Management Suite*

MIVOICE MX-ONE SERVICE NODE OPTIONS

The MX-ONE Service Node is the heart of the MX-ONE solution. The high-capacity MX-ONE Service Node call server software—either virtualized or running on a standard server platform—can handle up to 15,000 SIP users and 15 media gateways in a single server configuration. Multiple Service Nodes and media gateways can be combined to form a single logical system and deployed either as a large centralized system or as a distributed system with many servers and media gateways spread over a geographically dispersed area.

MX-ONE SERVICE NODE AS A "SOFTWARE-ONLY"

The MiVoice MX-ONE Service Node can be delivered as a "software only" option with media kits for standard servers or as virtual appliance for VMware environments.

TURN-KEY SERVER SOLUTION

The MX-ONE Service Node and MX-ONE Media Server software can be delivered in a turn-key server solution.

APPLICATION SERVER UNIT (ASU)

The ASU, an Intel-based server board, can be delivered as a part of MX-ONE Lite or MX-ONE Classic media gateway chassis, or standalone in a 19" chassis. It is primarily used to host the MiVoice MX-ONE Service Node and MX-ONE Media Server software, but can also be used for other applications.

MITEL EX CONTROLLER

The Mitel EX Controller is a compact multi-service communications appliance designed for smaller remote sites. The on-board Intel Celeron processor can host a MX-ONE SN and media server offering capacity for up to 1,000 SIP users. The EX Controller also comes with built in Media GW capability that provides survivability and local PSTN access for remote site users. The Mitel EX Controller can be configured with ISDN PRI/BRI, R2 T1/E1 and/or analog FXO modules providing access to the local PSTN. It also can support up to 28 analog FXS ports for local FAX or analog users.

MX-ONE Lite

MX-ONE Classic

Chassis with embedded Media Gateway unit

Mitel GX Gateway

Mitel EX Controller

Mitel®

Powering connections

MX-ONE Media Gateways

HIGH CAPACITY TDM MEDIA GATEWAYS

MX-ONE Lite – 3U chassis, more suitable for IP environments and branch office scenarios with the space for one MGU2 board, one ASU, plus three or five TDM boards, depending on whether an external server is used or not.

MX-ONE Classic – 7U chassis, fitted with an MGU2 board, targets mainly mixed environments with space for up to 16 legacy boards.

MEDIA GATEWAY UNIT (MGU)

The Media Gateway Unit version 2 (MGU2) is a compact media gateway board that is inserted in an MX-ONE chassis, providing DSP resources and access to the traditional PSTN network. Its primary function is to perform the transcoding between TDM and IP/SIP-based endpoints in an MX-ONE network. Additionally, it provides the switching fabric for legacy subscriber endpoints located in the MX-ONE chassis. Like the MX-ONE Media Server, the MGU2 also handles media services, such as conferencing, tone detection/sending and RVA.

MX-ONE MEDIA SERVER

The MX-ONE Media Server is a software-based media gateway that provides the Service Node with RTP media resources and manages protocol conversion between IP-based endpoints, using different protocols.
It resides either in the Service Node server or in a separate Linux server. In an IP/SIP deployment, it handles media services such as conferences, tone detection/generation and RVA. With the software-based media gateway, SIP trunks are used for access to the PSTN.

MX-ONE MANAGER SUITE

MX-ONE Manager Suite offers a complete range of applications for administrators and end-users. MiVoice MX-ONE appears as one single system regardless of the number of servers and media gateways (MGW).
For more information, please refer to the MiVoice MX-ONE Management Suite brochure.

BRANCH OFFICE SURVIVABLE MEDIA GATEWAY

Mitel GX Gateway - 1U chassis, a combination of Session Border Controller and Media Gateway. The system provides up to 120 simultaneous VoIP channels and offers local survivability and PSTN access for up to 500 SIP and 24 FXS users located in a remote site location. The GX also supports ISDN PRI, E&M, and R2 E1/T1 CAS providing access to the local PSTN.

Mitel EX Controller - Mitel EX Controller comes with an Intel Celeron processor with Linux OS, enabling MX-ONE Service node to run as a KVM machine offering local call control for up to 1000 users in remote site.

Virtualization

It is possible to run the MiVoice MX-ONE Service Node, MX-ONE Media Server and Mitel's Unified Communications and Collaboration (UCC) applications as virtual machines in a customer VMware, KVM or Hyper-V environment. This enables IT departments to integrate their real-time communications-as-a-service in the private cloud.
The consolidation of server hardware through virtualization reduces the server footprint, offering lower power consumption and cooling requirements as well as decreased physical space requirements. Virtualization using VMware also enables high availability options that can provide increased resiliency for real time applications.

SERVER OPTIONS

PROCESSOR OPTIONS	COMMON CHARACTERISTICS
ASU II - Intel 7 Quad Core Processor 2.4 GHz with 16 GB RAM	1 or 2 SSD, minimum 120 GB, 2 LAN ports (100 or 1000 MB/s); 1 VGA port; 4 USB 2.0 ports
Mitel EX Controller - Intel Celeron with 8 GB RAM	Up to 8 E1/T1 PRI; Up to 28 FXO and/or FXS lines Up to 240 PSTN channels; 2 x USB 2.0
Dell PowerEdge R440 - Intel Xeon Silver 4215 2.5 GHz, 11M cache, 4C/4T, turbo (85 W), 16GB RAM, 2400 (DDR4)	2 x 300 GB SAS HDD (RAID 1) 2 LAN ports (100 or 1000 MB/s); Internal DVD reader Up to 8 x E1/T1 PRI and/or 4 x ISDN BRI; Redundant power supply

MEDIA GATEWAY UNIT (MGU)	TECHNICAL CHARACTERISTICS
MGU2 board - Linux-based OS with Mindspeed processor for DSP services	4 E1/T1 PRI interfaces, 2 LAN ports (10/100/1000 GB) 128 RTP resources (concurrent gateway calls) DTMF reception/detection, tone generation, conference, echo cancelling Manages RVA and TDM legacy boards (in the chassis) in the MGW

Mitel

Powering connections

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