Mobility Virtualized Platform (MVP)®

iCore® in the Cloud

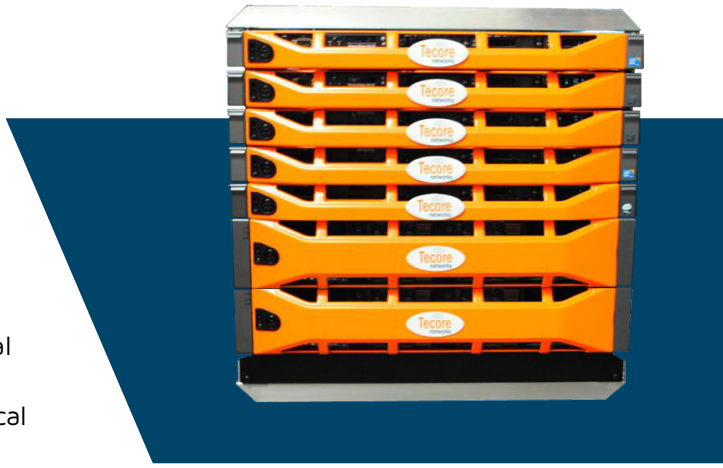
2G 3G 4G

MVP

Mobility Virtualized Platform

Tecore's Mobility Virtualized Platform (MVP)® delivers scalability and Cloud capability to the iCore family of products. With the MVP platform providing the consolidation of resources across multiple servers into a common pool, the virtualization package is able to partition resources into multiple virtual machines (VM) and provide the CPU, memory, and storage required in an encapsulated VM environment. The MVP provides a highly reliable platform that is expandable in processing capabilities and resource pools that can adjust as the network grows. This provides an upward scalability for the iCore suite of Core Network elements that was not possible on previous hardware platforms. The MVP platform leverages commercial off the shelf hardware and virtualization technology to create a flexible environment for the iCore Applications Suite. Ultimately, this translates into the most flexible Cloud based Core Network in the industry and future protection of CAPEX investment as the network grows.

Tecore's MVP architecture provides the customer with the following attributes:



- **Hardware Independence**—Virtual machines are completely independent from their underlying physical hardware, which increases the availability of hardware and applications for improved business continuity.
- **Compatibility**—Virtual machines are completely compatible with all standard next generation Intel processors, applications, and device drivers, so you can use a virtual machine to run all applications that you would run on a server based computing platform.
- **Isolation**—While virtual machines can share the physical resources of a single computer, they remain completely isolated from each other as if they were separate physical machines.
- **Encapsulation**—A virtual machine is essentially a software container that bundles or "encapsulates" a complete set of virtual hardware resources, as well as an operating system and all its applications, inside a software package. Encapsulation makes virtual machines incredibly portable and easy to manage.

Benefits & Features

- Full support for the iCore software defined core network product suite
- Processing scalability supporting 1,000 to 1,000,000 subscribers
- Scalable from 500 to 50,000 sessions
- Third party application support
- Multi-server architecture
- Geo-redundancy options

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MVP Model Options

The MVP is available in five models based on processing and storage capabilities. Each models targeted configuration is designed to support the capacity, feature set, and processing capabilities required for the specific iCore configuration.

MVP-1000
Entry Level Networks

MVP-2000
Entry Level Networks

MVP-3000
Mid Level Capacity Networks

MVP-4000
Mid-Large Scalable Networks

MVP-5000
Large Multi-Application Networks

Mirrored Run Time

The MVP supports mirrored virtual machines running in lock step within the hypervisors pooled resources. This capability provides run time protection for applications against the failure of a hardware node. The mirroring can be accomplished at the same physical location or for geo redundancy, mirrored images can be located at a separate physical facility providing additional run time protection for iCore applications.

VM Migration

The MVP platform also implements a migration capability for virtual machines that allows operators to migrate from one set of hardware resource to another for support of maintenance activities.

Third Party Application Hosting

The MVP Platform also provides the capability to host third party applications within an encapsulated virtual machine. These applications have access to the same mirrored run time and migration options available to the iCore.

Reporting and Management

The MVP series of products provide local management capabilities as well as web based utilities to monitor and configure via web based access. Additionally the platform supports north bound SNMP alarming allowing the MVP to integrate with higher order management systems.

Specifications

Multi-Technology Capabilities

- 4G LTE, HSPA+
- 3G WCDMA/HSPA
- 2G/GSM/GPRS/EDGE
- 2G/CDMA/1xRTT/EV-DO

Service Capabilities

- Packet data services
- Multi-media messaging services
- Voice services
- Short messaging services

Integrated Functional Capabilities

- UMSC/MSC/VLR
- GGSN/SGSN
- MME/S-Gateway/PDN-Gateway
- HLR/HSS, AuC/AC/AAA/PCRF
- SMSC/MMSC

Operations & Maintenance

- Platform-independent user interface
- Local or centralized management
- Fully operational in minutes

Physical Dimensions

- Server: 4.29 cm x 43.41 cm x 68.28 cm
- Storage: 8.68 cm x 44.63 cm x 56.1 cm

Voice Coding Capabilities

- G.711 PCM (mu/A-Law) at 64 Kbps
- G.729B CS-ACELP at 8 kbps
- GSM 6.10 Full Rate at 13.2 kbps
- EVRC at 4.0 kbps and 8.55 kbps
- AMR at 4.75-12.2 kpbs
- All vocoders are supported with: bundling, VAD, transcoder free operation (TrFO) and tandem free operation (TFO)

Power Capabilities

- AC Power - 120-240 VAC
- DC Power - 48 VDC

System Features

- Wireless Multi-Technology/ Multi Generation Support
- Media Gateway Function
- SIGTRAN/SS7 Signaling Gateway
- SIP Gateway Trunking (Including local VoIP Codecs)
- Wireless VoIP Codec Support
- Peer to Peer IP Switching
- Localized Call Routing
- Multi MCC/MNC