

## Oracle TimesTen In-Memory Database Inside VoIP

### Challenge

The need to innovate faster, reduce service delivery costs, and increase productivity is driving enterprises, service providers and operators to look at alternative technologies to support the convergence of voice and data networks.

### Solving the Challenge

Oracle TimesTen In-Memory Database provides Telecommunications Equipment Manufacturers (TEMs) and Independent Software Vendors (ISVs) building VoIP network elements with a foundation that delivers the scalability and reliability necessary to deliver carrier-grade services. Oracle TimesTen enables VoIP network elements to capture, store, use, and distribute information in real time, while preserving transactional integrity and ensuring continuous availability.

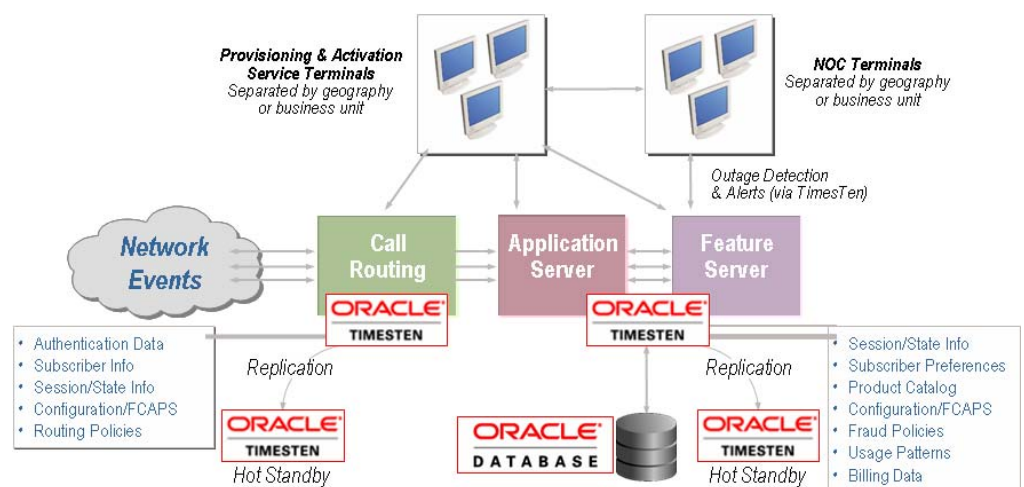
### Benefit

Oracle TimesTen inside VoIP network elements enables rapid service deployment, cost-effective scalability, and non-stop operation.

### VoIP Takes Hold

Voice over Internet Protocol (IP) or VoIP has been a hot topic for the better part of a decade. In fact, it has become one of the preferred transport methods for long distance voice traffic. VoIP has also penetrated the enterprise and is seen as a must have technology to converge voice and data networks. As a result, large incumbent service providers and operators are also converting their core networks to VoIP technology. VoIP enables these companies to reduce cost and improve the efficiency of delivering telephony services, which contributes to increased productivity. As the momentum moves VoIP into the mainstream, a new era in communication is ushered in, allowing consumers and businesses greater flexibility and richer services.

With VoIP becoming the preferred means to extend telephony services, its underlying network elements must deliver the same quality of service associated with traditional telephone services. Many VoIP network elements were developed a number of years ago, but most have not been engineered to meet the requirements of large enterprises and communication providers who plan to use it as the backbone of their offerings, supporting millions of subscribers. As a result, Telecommunications Equipment Manufacturers (TEMs) and Independent Software Vendors (ISVs) are reassessing their current solutions to ensure they can deliver speed of innovation, scalability, and reliability. The foundation for any VoIP network element necessitates a new breed of infrastructure software purpose-built to meet such requirements.



### Oracle TimesTen Powers VoIP

Oracle TimesTen at the core of VoIP network elements enables:

- Distributable and scalable architecture
- Real-time access to subscriber and system information
- Persistent storage of all mission critical system data
- The ability to capture and process network quality parameters in real time
- Integration with other applications
- Carrier grade uptime

### Oracle TimesTen Manages Time-Critical Data

Oracle TimesTen manages all performance and time-sensitive information used in VoIP:

- Subscriber profiles and preferences
- Call routing and session information
- FCAPS data
- Authentication and management policies
- Billing data

### Real-Time Infrastructure Software for VoIP

Oracle TimesTen is designed for applications, like those in VoIP that must be:

- Instantly responsive
- Highly scalable
- Continuously available

Oracle TimesTen can be found inside key VoIP network elements including:

- IP PBX and IP Centrex/Hosted PBX
- Softswitch/MGCF and Gateways
- SIP Servers and Proxy Servers
- Service Delivery Platforms
- Application Servers
- Network and Quality Management Systems
- IN SCP
- Session Border Controllers

Oracle TimesTen provides a reliable infrastructure software product on which to build VoIP network elements. Oracle TimesTen's real-time responsiveness and scalability is key to enabling fast access to subscriber profiles, call routing data, and authentication policies as well as persisting session and billing information. In addition, Oracle TimesTen's industry-standard interfaces provide the flexibility to evolve and to easily share data with other applications.

### Oracle TimesTen Ensures Continuous Availability

Service providers, operators and enterprises deploying VoIP network elements are more concerned than ever about the reliability and failover capabilities of their network elements. Oracle TimesTen plays a key role in ensuring reliability by eliminating any single point of failure through the distribution of workloads across multiple network elements for load balancing and fail-over protection, using built-in features for replication and data recovery. With Oracle TimesTen, no calls are lost, even during the peak usage times. Additionally, Oracle TimesTen dramatically simplifies maintaining carrier grade reliability and reduces maintenance costs.

### Oracle TimesTen Inside VoIP Applications

VoIP is taking hold as enterprises and service providers, from large incumbent operators to innovative startups, are looking to VoIP as the foundation for their converged networks. From softswitches to application servers, all VoIP network elements need robust and proven infrastructure software to manage mission-critical information. Oracle TimesTen enables network elements to scale gracefully, adapt to changing requirements, and maintain non-stop operation. In addition, Oracle TimesTen's low maintenance features contribute to delivering innovative services on cost-effective hardware platforms. By maximizing computing resources and minimizing the need for administration, Oracle TimesTen reduces the total cost of ownership of VoIP network elements.

### CONTACT US

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