ORACLE COMMUNICATIONS ELASTIC CHARGING ENGINE

Smart devices, increasing fixed and mobile broadband speeds, and data consumption are changing consumer’s behavior and the way businesses operate. Charging for service and data usage now requires extreme real-time processing, for instant and personalized customer notifications, policy-based quality of service, and hybrid prepaid and postpaid charging plans. The Oracle Communications Elastic Charging Engine redefines real-time charging with extreme performance, inherent high availability, dynamic scalability and low cost, efficient operations.

Always On, 100% Real-time Charging

Increasing data volumes, the transition to all-IP networks, competitive pressures, and increasing customer expectations, are placing higher demands on communications service providers. In the face of these demands, service providers are looking for ways to attract and retain customers, increase brand loyalty, satisfy customer needs and even influence customer’s behavior. And in a dynamic environment where customer behavior and the actual business models in which service providers operate constantly evolve (think the emergence of cloud and M2M for example), it’s imperative that underlying charging and billing systems must be able to evolve and support varying business requirements.

The Oracle Communications Elastic Charging Engine, the new rating, charging, and balance management application for Oracle Communications Billing and Revenue Management, Built upon proven Oracle technologies, such as Java and Oracle Coherence, it supports the demands of communications service providers today and tomorrow. As a 100 percent real time charging system, it’s designed to process the most demanding transaction volumes for any service, such as voice, data, cloud or M2M, and for any network. And, it’s “always on”, supporting the stringent online requirements of prepaid service providers, yet providing real-time benefits to postpaid subscribers as well, all within a single charging system.

Engineered for efficiency, the Oracle Communications Elastic Charging Engine is simple to operate, performs with blazing speed on a variety of hardware platforms, and deploys in literally minutes. Designed with patent-pending innovation, its unmatched performance and functionality is achieved with an extremely low total cost of ownership.

Extreme Performance

High transaction volumes. As subscriber volumes, the number of connected devices, and service usage increases, the ability to rate and charge for high volumes of transactions efficiently with minimal hardware is a necessity. Performance tests have proven that the Oracle Communications Elastic Charging Engine can process over 3 billion events per hour with an average latency of 5ms, equating to more than enough processing power to rate and charge for all of the world’s phone calls on a single rack Exalogic machine.¹

¹ Informa Telecoms and Media estimates that the world made 9.8 trillion phone calls in 2011. This equates to nearly 1.12 billion calls made globally every hour in real time. With each call representing an average of 2.1 billing events, this equates to approximately 2.4 billion events per hour.
Charging flexibility. Along with high performance characteristics, the ability to rate and charge for any service, using any rating metric or information that is part of the event stream, is an important capability of the Oracle Communications Elastic Charging Engine. This charging flexibility even allows for “intelligent rating”, using information introduced from analytics systems such as the Oracle Communications Data Model. And, with pre-built integration to the Oracle Communications Pricing Design Center, pricing management is simple and intuitive, allowing business users to create price plans for services in minutes.

Personalized notifications. Interacting with customers in a proactive manner is key to building customer loyalty, increasing brand value and reducing churn. The Oracle Communications Elastic Charging Engine introduces new functionality that goes beyond balance threshold notifications and simple advice-of-charge. “Advice-of-Promotion” proactively notifies customers when a more desirable rate plan may apply, for example, notifying a customer about to download a movie that it would cost less after 5 o’clock.

Unbreakable Proven Technology

The Oracle Communications Elastic Charging Engine is built upon proven Oracle technology. Written in 100 percent Java, it inherits exceptional capabilities from the underlying technologies of Oracle Coherence and Oracle NoSQL.

Built-in high availability. The foundation of Oracle Coherence is an in-memory data cache grid, which the Oracle Communications Elastic Charging Engine utilizes to achieve built-in high availability. Each processing node of the grid automatically creates replications of itself, so that in the event of server failure, the system automatically fails over to the replicated node – minimizing system downtime to meet the stringent demands of real-time online processing.

Rolling upgrades. This same technology allows for rolling upgrades, or zero-downtime upgrades. A new version of the Oracle Communications Elastic Charging Engine can be deployed throughout the grid while the previous version is still active and running. The new version can be activated at the time of the service provider’s choosing, with no system downtime.

Elastic scalability. In addition, service providers can easily adapt the system for periods of peak throughput and efficiently use computing resources only when needed. For example, with the anticipation of higher volumes of phone calls on New Year’s Day, a service provider can re-allocate existing servers, say from a test environment to the production environment, and add new nodes to the production grid, all through a simple configuration change, in a matter of minutes. When this peak demand subsides, the servers can be re-allocated to normal configuration, again with no system downtime.

Engineered Efficiency

Centralized management. Operational management of the Oracle Communications Elastic Charging Engine was designed to be extremely efficient. Management of the system is achieved through Oracle Enterprise Manager, and via a single console, a service provider can manage all aspects of the application management lifecycle, including deployment, applying upgrades, patches, and managing all system processes.

Rapid deployment. As an example of this engineered efficiency, deployment of the Oracle Communications Elastic Charging Engine is very rapid. The system literally installs in under ten minutes. It ships with simulators and staging data, so that the interfaces to surrounding applications to which it is integrated, such as Oracle Communications Billing and Revenue Management, can be simulated and are not required to be functionally running at the point of deployment.
Open and integrated. The Oracle Communications Elastic Charging Engine is pre-integrated with Oracle applications, such as Oracle Communications Billing and Revenue Management and Oracle Communications Pricing Design Center. In addition, its open, standards-based interfaces allow it to be integrated with 3rd party applications as well, giving service providers choice in a multi-vendor deployment environment.

The Oracle Communications Elastic Charging Engine runs on a variety of hardware platforms, including Oracle Exalogic, Oracle Sun hardware and X86 platforms, and runs on Oracle Solaris and Oracle Enterprise Linux operating systems.

Conclusion
The Oracle Communications Elastic Charging Engine was designed for the charging requirements of service providers today and tomorrow. Built using proven Oracle technology, it’s 100 percent real-time, with extreme performance enabling a service provider to achieve prepaid and postpaid processing on a single system. Designed for efficiency and maximum uptime, its flexibility and low total cost of ownership will benefit service providers of any size.

The Oracle Communications Elastic Charging Engine will:
• Process prepaid, postpaid and hybrid plans on a single system.
• Deliver exceptional performance with low latency on a minimal hardware footprint.
• Deploy rapidly in a matter of minutes.
• Scale dynamically to quickly and easily accommodate peak periods.
• Allow real-time, proactive interaction with customers, both prepaid and postpaid.
• Maximize uptime through built-in high availability and zero-downtime upgrades.
• Operate through efficient centralized systems management control.
• Provide extremely low total cost of ownership.
• Provide an evolutionary, non-invasive upgrade approach to existing support-paying Oracle Communications Billing and Revenue Management customers.

Contact Us
For more information about the Oracle Communications Elastic Charging Engine, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.