

Converged Charging Solution

Many carriers are looking to move to a single online charging system (OCS), handling all types of charging for all networks and services, and both prepaid and postpaid subscribers. This reduces costs and enables powerful real-time capabilities to improve differentiation and the promotion of new services. A big business driver for this is the growth in mobile broadband and the need to create profitable new data services. However, with serious capital tied up in current infrastructure, and with tight financial realities, providers today are hard-pressed to make the leap to a new single OCS, no matter how attractive the benefits may be. With the Converged Charging solution from Telcordia, you can now begin the evolution to a single OCS by gradually enhancing capabilities and profits from opportunities along the way, without having to replace your installed business support systems (BSSs) or taking the additional risk of replacing all your systems at the same time.

From a purely competitive standpoint, moving to a single OCS is an appealing goal. By improving time-to-market and helping you more easily offer new and differentiated services, the Telcordia Converged Charging solution can help you keep your customers happy and engaged, entice new customers, and help keep your rivals on their heels. But all too often, operational realities keep providers from being able to move — either now, or any time soon.

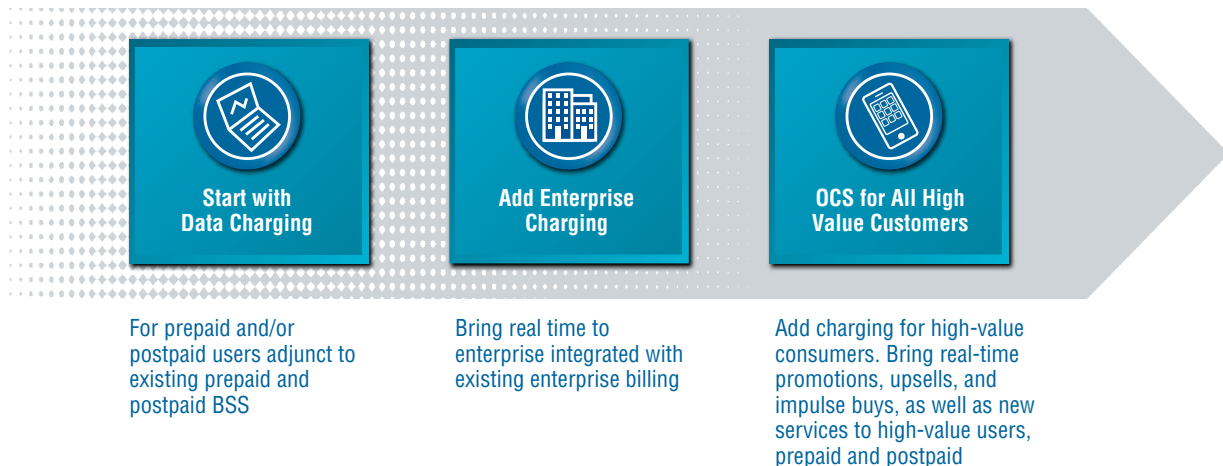
The Converged Charging solution gives you another option — a low-risk, high-value option. It creates an evolutionary path to a single OCS, allowing you to begin to enjoy the benefits, capabilities, and added revenues — all in a way that protects your capital investment while keeping your BSS running optimally, thus preserving, and even enhancing the experience of your customers.

Designed to reside alongside your current prepaid and postpaid BSSs, the Telcordia Converged Charging solution allows you to begin offering differentiated data charging services out of the gate. As you continue your evolution, you can integrate with your enterprise billing systems to add real-time functionality to your enterprise base and, finally, evolve the OCS for all your high-value customers.

ACCELERATE MARKETING PROMOTIONS

With the Converged Charging solution as an add-on, you can start to take advantage of converged, differentiated services and promotions. You can begin by tapping into the broadband explosion, creating new offerings based on data charging. You'll be able to create new levels of tiered pricing, and dynamic, personalized campaigns that entice customers to sample new services across all segments of your market.

Converged Charging Roadmap



DRIVE INCREASED REVENUES

The Converged Charging solution helps your company create new streams of revenue by developing new real-time services which customers value, and which can be made available to both prepaid and postpaid users. In addition, real-time interaction enables upselling your customers with personalized, real-time offers that they can accept immediately. It also allows for usage-based bonuses and notifications, and helps you keep in touch and foster goodwill with courtesy thank-you messages. You can continuously roll out new services, and target them more narrowly than ever before, as each customer now has the potential of becoming a “Market of One.”

REDUCE OPERATIONAL COSTS

Driving new revenue and new services can't be accomplished without ensuring operations have the ability to keep up with the demand. The Converged Charging solution is efficient and flexible. It has an advanced rating engine and robust graphical user interface (GUI) that help you turn the product requests you receive into in-the-market realities faster than ever before. In fact, with just a four-person team, one customer created an average of 250 new rating plans, discounts, and promotions each month. This sort of flexibility allows you to rapidly trial many new ideas and then decide which ones to roll out further, modify, or drop completely.

CREATE NEW SERVICES

A key to market differentiation is enabling the implementation of innovative ideas and keeping your competitors reacting. The Converged Charging solution allows an on-site service creation team to rapidly develop new services, whether large or small. In one customer, a two person service creation team creates an average of one service a week. This efficiency allows you to take services to market rapidly, efficiently, and with lower operational costs.

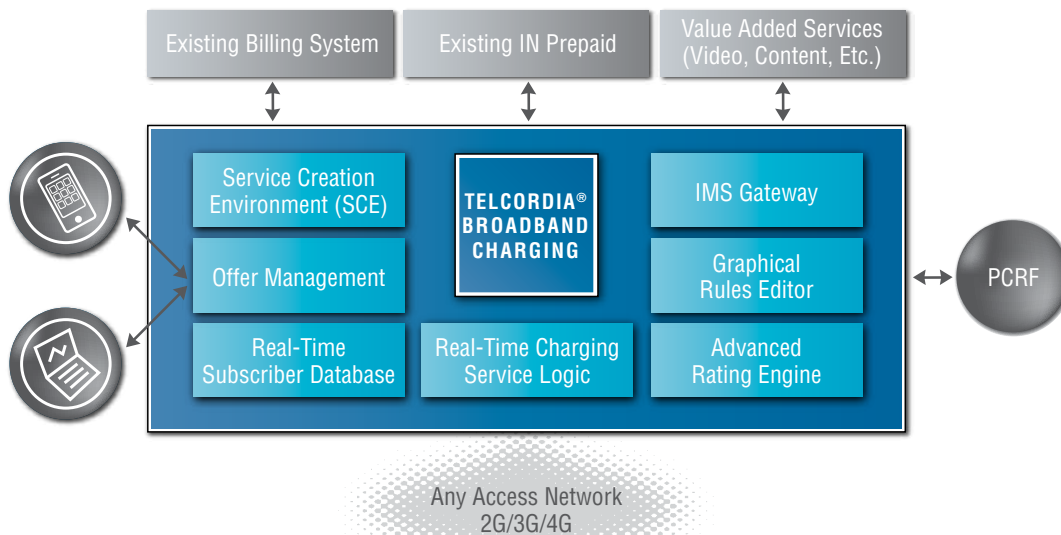
DELIVER QUALITY CUSTOMER EXPERIENCE

In an era of intense competition, delivering the best customer experience is paramount to your success. To help ensure that you keep your operation running smoothly and that your customers get the level of service they expect, the Converged Charging solution is built on the Telcordia® Converged Application Server, a highly reliable platform that achieves six-nines availability. It's scalable and flexible, too, so you can grow the system to meet your emerging needs. It also allows you to integrate account management capabilities into a web-based customer self care portal, so individual and enterprise customers can order services and manage their usage as they wish, decreasing the cost of customer service. As you evolve to a single OCS, you can't afford to put your user experience at risk, particularly high-value customers, who are more profitable, but more demanding, too. Entrust your migration to a system — and partner — that is proven, in real-world scenarios, with tens of millions of satisfied users.

PROTECT CURRENT INVESTMENTS

Your BSS is the foundation of your business. Simply ripping and replacing it with a new OCS is not feasible or realistic. Instead, you can protect your investment, but move forward toward achieving a single OCS with the Telcordia Converged Charging solution. It helps you reach your goal, but in a rational way, with much lower risk to customer satisfaction and network operations, and at a much lower cost than replacing your entire billing system. With Telcordia, you can evolve at your own pace, and retain control over the critical systems and processes upon which your business relies every day to stay competitive.

Converged Charging Solution Architecture



What problems do you need to solve?

The Telcordia Converged Charging solution was designed to leverage investment in BSS and legacy prepaid systems while introducing online charging solutions for mobile broadband, business broadband, and converged services. Here are some examples of how you can use the solution to turn broadband pricing into one of your most powerful differentiators.

PAY PER PERIOD-OF-USE

In some circumstances, it is important to be able to offer very fine-grained packages for data usage, limited to periods of time as short as one hour or as long as one month. For example, when selling a high-value premium service (like access to real-time streaming video of a major sports event) units of a single hour are suitable. However, a week may be more appropriate for a trial subscription to a data access service. The operator defines the duration for the package and can then use all the normal rating features during the duration of that package (for example, one-off fees, usage charges, overage charges, discounts, bonuses, etc). As the subscription is nearing its end, the system sends a notification to the user.

VAS AND CONTENT CHARGING

In order to maximize the return from value added services (VAS) and content supplied by third parties, it is critical that the converged charging system can handle both pre-rated requests, in which the content or VAS server has already determined the price for the event, and unrated requests, where the converged charging system will calculate the cost to the user. This real-time feedback of the actual cost, including the impact of promotions and bonuses, encourages use and gives customers confidence in their choices

BILL SHOCK AVOIDANCE

Monitor spending in real time for voice, data, and other transactions, and apply rules and thresholds defined by the communications service provider (CSP) and the user. Users can monitor and control spend for new services or features like data roaming, increasing their confidence in using the services. Actions can include notifications of usage and thresholds to the user or a third party, blocking transactions, and re-routing access to web pages.

ENTERPRISE USERS

Until now, enterprise users have not seen the advantages of innovative services and real-time control. The Converged Charging solution provides flexible accounts for enterprises (small to large) with a hierarchical account structure that can mirror the organization while providing real-time rating, charging, and controls. This allows features such as charging a transaction to a different billing department, inbound/outbound screening, and policy, including rules based on location and spending limits for individuals as well as for the enterprise as a whole.

PROMOTIONS

Promotional rate plans allow the operator to support short-term promotions without changing the base price plan for the subscriber. Promotional rate plans are associated with the account for a specified time — they may be activated using self-care, using a special voucher, or as the result of a bonus for other activity. The promotional rate plan overrides the base rate plan, while it is active. When the promotional plan expires, the user reverts to their normal base plan. Before the plan expires, the user receives a notification and can opt to continue the plan.

DEVICE-BASED CHARGING

Attract users of particular devices (for example, popular smartphones, tablets, or bookreaders) with free-of-charge basic service and then upsell. For example, offer an entry level which gives unlimited access to social networks at a low bandwidth — adequate for messaging and viewing photos but not enough for video; then, when they want to watch video or access other sites, offer the user an upgrade to a higher tariff which allows access to the whole Internet at a higher bandwidth; if they don't want to purchase, offer them a temporary upgrade, for the weekend for example, at one-third the price of the monthly fee for the higher tariff.



Features & Functions

CHARGING FEATURES

- Flexible rating and charging options such as flat rate plans, usage tiers, fair-usage policies, “pay as you go,” “pay by service,” and “pay by website”
- On-demand, recurring, or one-time offers including add-ons that target high-value market segments
- Flexible payment models including prepaid, postpaid, revenue sharing and sponsorships
- Instant activation of personalized services through tight integration between subscriber self-care and real-time charging
- Tiered data plans with optional overage including usage notifications to inform customers of their usage and avoid bill shock
- Pay-per-period-of-use to enable customers to buy on-demand, limited-duration access to data services (e.g., for an hour or day)
- Promotional rate plans
- Bonus rewards
- Special date rewards
- Location-based charging
- Multi-device and multi-user accounts

RATING CRITERIA

- Transaction/event type
- Base plans, boost plans, and subscriptions
- Time and volume
- Service identifier and rating group
- Content/VAS service and provider
- Website (URL) or Access Point Name (APN)
- Roaming and location
- Time of Day (TOD) or Day of Week (DOW)
- Peak and off-peak periods
- Telescopic rating
- Fixed or per-unit surcharges
- Setup and minimum charges
- Tiered rating and discounts
- Percentage or fixed discounts
- Usage-based discounts

STANDARDS-BASED ONLINE CHARGING SYSTEM (OCS)

- Data sessions
- Diameter Gy/Ro interface from Packet Switched (PS) domain network elements, such as the Public Data Network Gateway (PGW), Gateway GPRS Support Node (GGSN), etc.
- Content, value-added services, or data events
- Diameter Ro interface or web services interface from PS domain network elements, such as Application Servers, and from

Information Technology (IT) systems, such as Application Servers, VAS servers, content servers, etc.

- Voice over IP (VoIP) and multimedia sessions
 - Session Initiation Protocol (SIP) interface from the Serving Call
- Session Control Function (S-CSCF)
- SMS and MMS messaging
 - Diameter Ro interface

SYSTEM ARCHITECTURE

- Customer self-care via the web, USSD, or SMS
- Personalized packaging application
 - Web page GUI via mobile handset or PC
 - Web services integration with the operator web portal
 - Subscriber self-care
 - Browse available offers, check prices, and buy data services
 - Instant activation
- Rules-based rating engine
 - GUI-based rules editor
 - Functional rating
 - Rule versioning
 - Rule validation and activation
 - Table-based pricing and reference data
- Operational features
 - Account lifecycle management
 - MVNO capabilities
 - Dynamic bucket management
 - Event detail records
 - Subscriber alerts

CONVERGED APPLICATION SERVER

- Built on the Telcordia® Converged Application Server to minimize cost of ownership and maximize your solution value
- COTS hardware based on IBM blades, delivering an industry-leading price/performance advantage
- High-availability framework delivering near 99.9999% availability, with no planned downtime — ever
- Proven in-service scalability from less than one million to more than 100 million subscribers
- Overload controls
- Logs, alarms, and measurements
- Integrated element management system
- Centralized backup and restore
- Maintenance and operations console
- Data and reporting system



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MC-SDL-SB-004