

Oracle Cloud Scale Charging and Billing

Communications service providers (CSPs) are under pressure to monetize 5G, IoT, and B2B services while delivering digital-first customer experiences and improving efficiency through cloud native and agentic automation. Legacy charging and billing silos increase cost and risk, slow time to market, and struggle to support complex B2B hierarchies and modern 5G monetization models. Oracle Communications Cloud Scale Charging and Billing is an all-in-one monetization platform that unifies mediation, charging, billing, and revenue management—enabling CSPs to seamlessly charge and bill for any network, service, experience, or business model at any scale.

Why Cloud Scale Charging and Billing?

Oracle Communications Cloud Scale Charging and Billing provides an end-to-end monetization stack in one solution—so CSPs can design offers, manage hierarchies, and provision services through a unified, productized platform rather than coordinating decoupled charging and billing systems. This all-in-one approach streamlines monetization operations and accelerates time to market using reusable pricing building blocks, cloud native automation, and open APIs.

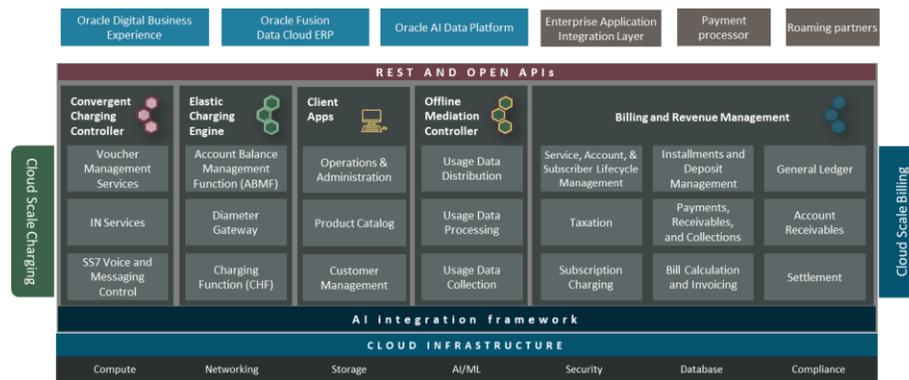


Image 1. The functional representation of Oracle Cloud Scale Charging and Billing.

Lower costs with converged charging

With an all-in-one, integrated cloud native mediation, charging, and billing solution, eliminating legacy silos and reducing complexity and risk.

Cloud Scale Charging and Billing lowers cost by consolidating capabilities into a single platform and removing the overhead of running and coordinating separate charging and billing stacks. Two drivers should be explicit:

Single design experience:

“With a modular, pre-integrated stack, we avoid the costly and time-consuming process of complex integrations and high level of customizations. This means we can launch, orchestrate, and monetize new offerings as the market demands while delivering an excellent experience for our customers in the process.”

Ahmed Al-Anqari
CEO, Salam

Key business benefits

- **Lower costs:** All-in-one, cloud native mediation + charging + billing reduces legacy silos and operational complexity. Single design experience (single product catalog, centralized price plans, single hierarchical structuring) plus pre-integration and single provisioning lowers integration effort and risk and reduces ongoing run costs.
- **Grow revenue:** Monetize 5G, IoT, and B2B/B2B2X models with flexible pricing and support for complex enterprise hierarchies, group account plans, hierarchy-level pricing/discounting, and reseller/partner billing models.
- **Increase speed and agility:** Reusable pricing building blocks, cloud native automation, and comprehensive billing modes accelerate offer launches and enable seamless scaling; open APIs simplify integration to

- **Single product catalog:** Use one catalog-driven approach to design and manage offers across charging and billing domains (instead of maintaining disconnected catalogs and synchronization logic).
- **Centralized price plans across charging + billing:** Create centralized price plans for both charging and billing components—reducing duplicated configuration and enabling faster time to market with lower operating cost.
- **Single hierarchical structuring:** Easily and rapidly create complex charging and billing hierarchies once—this eliminates the need to build and maintain identical structures across otherwise decoupled systems (e.g., deep enterprise parent/child hierarchies, group account plans, wholesale structures).

Cost savings through pre-integration:

- **Single solution provisioning:** Provision services, accounts, and offers through one integrated solution rather than stitching together multiple provisioning flows—alleviating duplicate data, operational friction, and reconciliation issues across otherwise decoupled charging and billing stacks.
- **Fewer integration points; fewer issues:** Pre-integration reduces interface points and potential failure risks versus siloed stacks.
- **Open APIs without customization:** Open API-based integration supports digital channels and enterprise systems while minimizing custom integration work typically required to connect disparate charging and billing systems.

Grow revenue

By enabling new business models, monetizing 5G, IoT, and diverse partner ecosystems, and supporting any hierarchy or payment structure.

Cloud Scale Charging and Billing is designed to monetize advanced 5G use cases (including slice-based models) and value-based offers using flexible pricing dimensions (e.g., speed/latency/QoE). It supports complex enterprise relationships via deep account hierarchies, group account plans, pricing/discounting at any hierarchy level, and wholesale parent bill unit flexibility.

Examples of monetization-ready capabilities:

- Monetize 5G and IoT services with flexible pricing models (one-time, usage, bundles, subscriptions) and 5G-aligned charging evolution.
- Support B2B/B2B2X models with deep parent/child hierarchies, group account plans, and hierarchy-level pricing and discounting.
- Enable reseller scenarios with “billing on behalf of” (using pre-rated amounts calculated externally).

Increase speed and agility

Through reusable pricing building blocks and cloud native automation, delivering rapid time to market and seamless scaling.

Oracle accelerates offer creation and change through reusable configuration and multi-dimensional offer design approaches, along with TM Forum-aligned product catalog integration patterns. The cloud native architecture supports Kubernetes-based

digital channels and enterprise systems.

- **Enhance customer experience:** Real-time spend control, balance visibility, threshold notifications, and engagement features (sharing/gifting/promotions) combined with modern billing (personalized invoices, proforma invoicing, flexible payments, collections/promise-to-pay) reduce confusion and improve satisfaction.
- **Accelerate AI-driven innovation:** Open, extensible AI/ML integration framework (data, training, prediction services + NBO reference implementation) speeds deployment of use cases like churn, bill shock, fraud/leakage, credit risk, collections optimization, and forecasting/CLV.

Solution components

Oracle’s Cloud Scale Charging and Billing is comprised of the following pre-integrated products:

- **Oracle Communications Elastic Charging Engine.** Providing 5G-ready converged charging capabilities, Elastic Charging Engine is built using mesh-based in-memory technology. It delivers high performance, resilient, linearly scalable charging with pre-integrations with Billing and Revenue Management. It enables service providers to monetize massive volumes of communications, data and media traffic while delivering a compelling customer experience.
- **Oracle Communications Billing and Revenue Management.** Supports the end-to-end revenue lifecycle—from subscriber, account, and subscription management through bill calculation, invoicing, and taxation. It streamlines payments, receivables, and collections (including installments and deposits), enables partner

deployment, autoscaling patterns, and DevOps-friendly operations. The unified solution supports comprehensive billing modes (bill-now, on-demand, in-advance, delayed, trial, corrective) to match commercial needs without re-platforming.

Key enablers:

- Faster offer rollout using reusable building blocks and configurable, productized capabilities.
- Cloud native deployment model (containerized, orchestrated) on choice of cloud infrastructure and tooling aligned with modern CI/CD and scaling needs.
- Comprehensive billing modes to support new commercial motions and operational flexibility.

Note: The “single design experience” and “single product catalog” referenced in Lower costs also directly contribute to speed/agility by reducing duplicated design effort and cross-system synchronization—so the same platform elements that lower run cost also shorten launch cycles.

Enhance customer experience

By integrating zero-confusion charging, billing, payment, and personalized notifications—plus gifting and sharing—across digital channels and external systems via open APIs.

Cloud Scale Charging and Billing enables real-time spend control, balance visibility, and threshold notifications via real-time session authorization and control. It also supports engagement features like sharing, gifting, promotions, and stacking. The solution supports accurate, personalized invoicing (single invoice across services), proforma invoicing to prevent small disputes from blocking high-value B2B payments, broad payment method support, installment/deposit management, and collections/promise-to-pay automation.

Customer experience highlights:

- Real-time spend control and balance updates for prepaid/postpaid/hybrid experiences.
- Sharing/gifting/promotions/stacking to stimulate usage, engagement, & retention.
- Clear billing experiences: personalized invoices, proforma invoicing, flexible payments, and structured collections strategies.

Deliver a 360° view across the front and back office:

Billing Care (front-line agents): A single customer service representative (CSR) portal to create and manage customer accounts, products/services and subscriptions; generate bills on demand; manage payments/deposits/installments; and handle adjustments, disputes, refunds, & write-offs.

Billing Operations Center (back-office): A centralized workspace to run and monitor billing operations (billing workflows, invoicing, collections, refunds, G/L reports, product catalog synchronization) with dashboards/templates to track trends across A/R & G/L, tax, remittance, revenue assurance, roaming, and more—plus role-based permissions and revenue assurance tracking.

settlement, and integrates with the general ledger and accounts receivable to unify customer balances and revenue.

- **Oracle Communications Offline Mediation Controller (optional).** This carrier-class convergent mediation and usage data control solution is designed for multiple network types, including 5G and hybrid 4G/LTE/5G networks, as well as non-telco applications. It provides comprehensive network data collection, aggregation, and correlation.
- **Oracle Communications Convergent Charging Controller (optional).** This highly scalable online charging control platform for SS7-based voice and messaging services, enhanced intelligent network services, and voucher management enables CSPs to consolidate traditional silos on a single, cost-efficient platform, providing continued support as they transition to 5G.

Verified cloud scale performance

Oracle has demonstrated telco-grade scale in benchmark testing on Oracle Cloud Infrastructure, including 2.29M billing accounts per hour and 680,000 invoice accounts in eight minutes.

[Read the 10 M billing performance test report.](#)

Charging performance benchmarks reference single-digit millisecond latency and large-scale TPS across dual-site deployments.

[Read the 100 M subscribers performance test report.](#)

Alignment with TM Forum Open APIs

- TMF 620 Product Catalog Management
- TMF 635 / TMF 677 Usage Management / Usage Consumption
- TMF 637 Product Inventory

Accelerate AI-driven innovation

With an open, extensible AI/ML integration framework to rapidly deploy high-value use cases using your preferred AI infrastructure.

Oracle provides an open AI/ML integration framework with data, training, and prediction services to ingest and engineer billing/usage data, train and version models, and serve real-time predictions via APIs to applications or AI agents. A reference implementation for next-best-offer (NBO) recommendations is included and extensible.

Example AI use cases supported:

- Churn prediction and retention intervention; bill-shock alerts; revenue assurance/fraud detection; usage anomaly detection; credit risk scoring; collections optimization; segmentation; revenue forecasting/CLV prediction; predictive maintenance.

Summary

Oracle Communications Cloud Scale Charging and Billing is an all-in-one monetization platform that unifies mediation, charging, billing, and revenue management to help CSPs modernize end-to-end monetization, support 5G/IoT/B2B growth, improve customer experience through real-time engagement and modern billing capabilities, and deploy high-value AI use cases faster using an open, extensible AI/ML framework.

- TMF 654 Prepay Balance Management
- TMF 666 Account Management
- TMF 670 / TMF 676 Payment Method / Payment Management
- TMF 678 Customer Bill Management

Start anywhere. Scale everywhere.

Launch with full Cloud Scale Charging and Billing as part of a BSS transformation project or begin with either Cloud Scale Charging or Cloud Scale Billing and expand as needs evolve while protecting your investment.

- **Billing-first rollout.** Cloud Scale Billing deployments can be expanded by deploying Cloud Scale Charging, using an out-of-the-box integration for an efficient evolution that maximizes ROI.
- **Charging-first rollout.** Cloud Scale Charging deployments can evolve into full Cloud Scale Charging and Billing by scaling up the billing, invoicing, and revenue management services.

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