

# Oracle Cloud Scale Charging

Communications service providers are under pressure to grow revenue from 5G, IoT, and B2B services, while improving digital-first customer experiences and controlling costs through cloud native transformation. Legacy charging stacks often create performance and scalability risks, slow time to market, and limit monetization of 5G SA capabilities such as network slicing and new charging trigger functions. Oracle Cloud Scale Charging addresses these obstacles with a cloud native, 3GPP-aligned converged charging system (CCS) designed for automation, resilience, and agility at scale.

## Charge for anything at any scale

Oracle Cloud Scale Charging is a next-generation, cloud native CCS that supports online and offline charging across any network, service, and business model—delivering the automation, resilience, and agility needed to monetize 5G and IoT at scale. Built on a 3GPP-aligned architecture with open APIs and an extensible AI/ML integration framework, it helps service providers reduce operational complexity, accelerate new offer launches, and enhance real-time digital customer experiences.

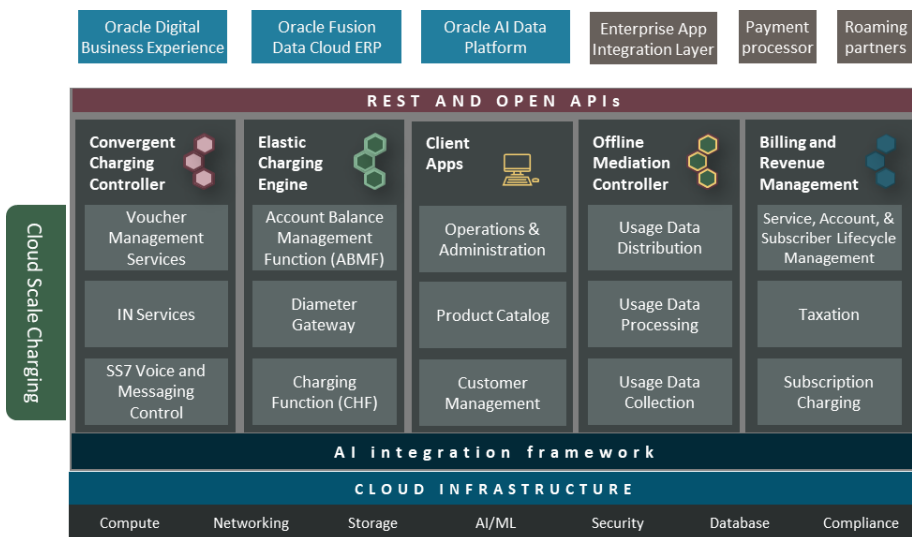


Image 1. The functional representation of Oracle Cloud Scale Charging.

## Lower costs with converged charging

A 3GPP-aligned solution delivers cloud native automation, low latency, efficient scaling, and active-active deployment to reduce infrastructure and operational cost.

- **Multigeneration offline and online charging system.** Consolidate, protect, and grow revenue with a single offline and online charging system. It is compatible with any fixed or 2G to 5G mobile network for any service, payment type, or business model and is aligned with 3GPP converged charging standards.

“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.** A unified, 3GPP-aligned CCS delivers cloud-native automation, low latency, efficient scaling, and dual-site active-active deployment.
- **Increase speed and agility.** Gain a competitive edge with extensible, productized features. Configure multidimensional offers using reusable building blocks to simplify catalogs.
- **Grow revenue.** Enable new business models and monetize 5G, IoT, and diverse partner ecosystems, with support for any hierarchy or payment structure.
- **Enhance customer experience.** Deliver personalized usage notifications, gifting, and sharing via digital channels powered by open APIs.
- **Enable comprehensive billing consolidation.** Evolve into full Cloud Scale Charging and Billing by scaling up the

- **Modern, cloud native automation.** Deploy in a containerized and orchestrated environment to harness cloud infrastructure and DevOps CI/CD tooling. Accelerate innovation, operate more efficiently, and scale as business needs grow.
- **Distributed in-memory charging grid.** Powered by industry-leading in-memory data grid technology, low-latency charging is accurately processed with complete transactional consistency regardless of pricing or account model complexity.
- **Active-active mode.** If there is a node, machine, or site failure, avoid disruption to business continuity. Federate the charging grid across a distributed dual-site deployment without dropping sessions or losing revenue or data.

## Increase speed and agility

Gain a competitive edge with extensible, productized features and reusable building blocks that simplify configuration and accelerate time to market.

- **Faster offer rollout:** Configure multidimensional offers using reusable components to simplify catalogs. TM Forum certified pricing design enables business users to rapidly configure new offers using intuitive, web-based navigation workflows.
- **Integrate with existing product catalogs.** Simplify operations and preserve investment in an existing TMF 620 product catalog with an integration framework that accepts state change notifications and provides data model support.
- **Full-featured, productized, and open.** Configurable experiences allow you to satisfy business requirements today and tomorrow without reliance on a vendor. Charging operations can also be extended with SDKs and custom applications.

## Grow revenue

Enable new business models and monetize 5G, IoT, and diverse partner ecosystems with support for any hierarchy level and payment structure.

- **5G monetization readiness:** Support charging evolution aligned to modern 5G architectures and use cases (including slice-based models).
- **Flexible pricing models:** Monetize one-time, usage, bundles, and subscriptions with rich pricing dimensions and new 5G levers.
- **Monetize beyond connectivity:** Enable value-based offers such as speed-tiering, experience packs, and differentiated services.

## Enhance customer experience with real-time usage experiences

Deliver personalized usage notifications, gifting, and sharing experiences via digital channels powered by open APIs.

- **Real-time spend control:** Balance visibility, thresholds, and notifications enabled by real-time authorization / control.
- **Payment flexibility:** Support prepaid, postpaid, and hybrid experiences with real-time balance updates.
- **Engagement features:** Sharing, gifting, promotions, and stacking to stimulate usage, repeat purchases, and retention.

billing, invoicing, and revenue management services.

- **Accelerate AI-driven innovation.** Harness an open, extensible AI/ML integration framework to rapidly deploy high-value use cases using your preferred AI infrastructure.

## Solution components

Oracle's Cloud Scale Charging solution is comprised of the following pre-integrated products:

- **Oracle Communications Elastic Charging Engine.** 5G-ready converged charging using mesh-based in-memory tech for high-performance, resilient, linearly scalable charging. Pre-integrated with Billing and Revenue Management to monetize large volumes and support strong customer experiences.
- **Oracle Communications Billing and Revenue Management.** Rich subscriber lifecycle, account management, and subscription charging for charging-only deployments; extendable to full billing and revenue management.
- **Oracle Communications Offline Mediation Controller (optional).** Carrier-class convergent mediation and usage data control for 5G, hybrid 4G/LTE/5G, and non-telco use cases; enables network data collection, aggregation, and correlation.
- **Oracle Communications Convergent Charging Controller (optional).** Scalable online charging control for SS7 voice/messaging, enhanced IN services, and voucher management; consolidates legacy silos onto one cost-efficient platform while transitioning to 5G.

- **Open integration:** REST and TM Forum Open APIs are used to integrate digital channels and external systems.

## Evolution path to full billing consolidation

Maximize ROI through end-to-end monetization by unifying billing silos onto the Oracle Cloud Scale Charging and Billing platform.

- Start with charging consolidation (e.g., new 4G/5G CCS while extending ROI of existing billing by feeding downstream systems with pre-rated CDRs).
- Progress to full legacy billing consolidation with Cloud Scale Charging + Cloud Scale Billing supporting networks and customer segments in a unified stack.

## Accelerate AI-driven innovation

Deploy AI use cases faster with an open, extensible AI/ML integration framework that supports your preferred AI infrastructure.

- **Framework services:** Data, training, and prediction services to ingest/engineer data, train/version models, and serve real-time predictions via APIs.
- **Reference implementation:** Next-best-offer recommendation service that can be extended for customer needs.
- **Example use cases:** Churn prediction, bill-shock alerts, revenue assurance/fraud detection, anomaly detection, credit risk scoring, collections optimization, segmentation, revenue forecasting/CLV prediction, and predictive maintenance.


## Summary

Oracle Cloud Scale Charging is a cloud-native, 3GPP-aligned converged charging system designed to reduce cost, improve resilience, and accelerate time to market—while enabling monetization of advanced 5G/IoT use cases and enhancing digital customer experiences. With open APIs, scalable microservices architecture, and a forward-looking AI/ML integration framework, it supports both near-term charging modernization and an evolution toward billing consolidation.

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## Charging-first rollout: Scale up into billing consolidation

Cloud Scale Charging deployments can evolve into full Cloud Scale Charging and Billing by scaling up the billing, invoicing, and revenue management services.

## Verified cloud scale performance

To demonstrate the power of Oracle's in-memory charging grid with dual-site deployment, traffic was distributed and charging updates federated across two data center cloud regions. Performance results measured more than 270,000 transactions per second across the two sites, with single-digit millisecond latency.

>> [Read the full report](#)