

Oracle Communications Offline Mediation Controller

The rapid evolution of complex multiservice networks makes it imperative for communications and digital service providers to find efficient ways to collect raw data from their networks and applications and transform it into useful information. Efficient mediation is critical for accurate billing, rapid data movement, and downstream reporting and analytics.

Rich offline mediation and data processing

As a key component within Oracle’s Cloud Scale Billing and Cloud Scale Charging solutions, Oracle Communications Offline Mediation Controller (OCOMC) is a carrier-class convergent charging mediation solution designed for wireless and wireline network types—including 5G and hybrid 4G/LTE/IMS/5G networks—as well as non-telco applications. OCOMC provides comprehensive network data collection, aggregation, correlation, and enrichment, and can also be deployed with third-party billing and charging solutions.

Deployed by service providers around the world, OCOMC supports multiple services, protocols, and formats. It enables rapid time to market with carrier-grade scalability and reliability.

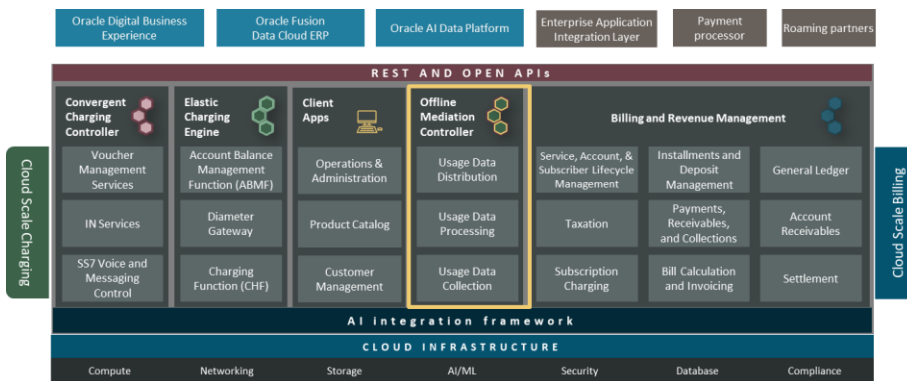


Image 1. OCOMC provides the functions circled in red within Oracle’s Cloud Scale Charging & Billing solution.

A flexible cartridge-based design

OCOMC provides a cartridge-based architecture that enables service providers to modify rules and mediation behavior to support flexible service packaging and evolving network use cases. Cartridges can be configured and chained to build end-to-end mediation flows—from collection and normalization to correlation and aggregation, to validation and enhancement, and finally to distribution to downstream systems.

OCOMC provides the following cartridge categories:

“Oracle is a global player, known for scalable solutions. Like us, it has a very large business footprint and long relationships with customers in almost every industry. It’s also a pioneer in data and databases. It makes sense to use Oracle to support billing and revenue management, which depends on information that is timely and transparent”.

Erik Brenneis
Internet of Things Director
Vodafone Business

Key benefits

Oracle Communications Offline Mediation Controller is a carrier-class convergent charging mediation solution designed for wireless and wireline network types including 5G and hybrid 4G/LTE/IMS/5G networks as well as non-telco applications. It provides the following key business benefits:

- Rapid time to market for all new services.
- Convergent support for multitude of services
- Easily configured and managed, highly extensible
- Carrier grade scalability and reliability
- Advanced functionality to meet the challenges of today and tomorrow

- Technology cartridge bundles supporting network technologies such as IMS (Diameter) and Packet Core (GTP/RADIUS).
- Collection cartridges to collect and normalize data.
- Aggregation processor cartridges to correlate records from multiple sources and manage aggregation for long-running sessions.
- Enhancement processor cartridges to add useful data and perform sequencing, tagging, filtering, validation, duplication removal, and record analysis.
- Distribution cartridges to deliver records to downstream operations support systems.

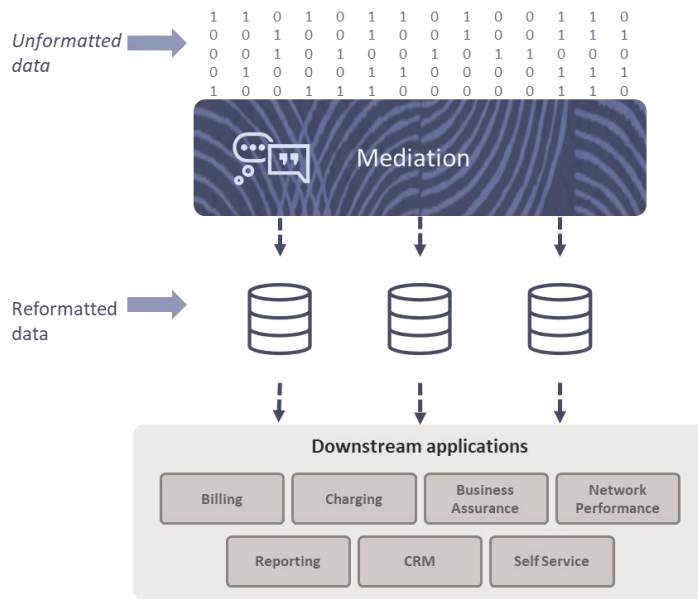


Image 2. OCOMC converts network and application usage events into downstream-ready formats.

OCOMC further provides:

- A record editor utility to correct attribute values and reprocess corrected records.
- A cartridge development kit to build cartridges when required functionality is not available out of the box.

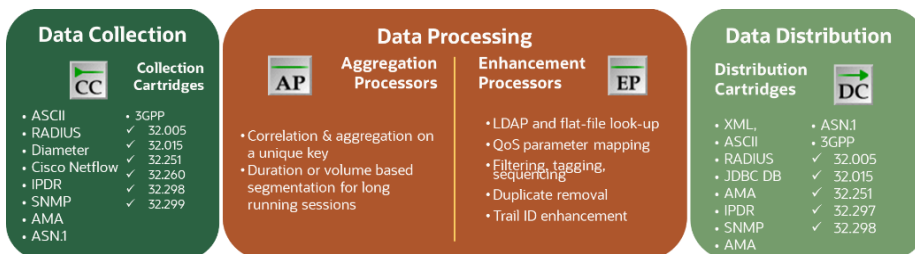


Image 2. Supported formats, protocols, and functions of OCOMC.

Easily configured and managed, highly extensible

OCOMC provides an intuitive, modern user experience to accelerate configuration and change. The solution offers a Redwood-based thin-client web UI that streamlines both

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Offline Mediation Controller / Version 15.2

Key features

- Highly flexible, configurable, extensible
- Intuitive GUI
- Record correction and editing
- Mediation assurance features
- Collect any usage type and source
- Rich mediation processing
- Distributed architecture for extreme robustness and scalability
- Secured deployments with role-based access control and SSL support

Recent release 15 innovations

- **Redwood web UI modernization:** New thin-client, Redwood-based UI for design plus Redwood UI for operations (e.g., editor/logs) and improved design workflows.
- **Expanded REST APIs for automation/integration:** New REST endpoints for key product operations (e.g., node state changes, importing customizations/configurations) plus additional operational endpoints (log retrieval, user roles).
- **Improved security model:** Modern authentication / authorization models for a more secure deployment.
- **More cloud-native operability:** Deployed as Kubernetes statefulsets with optional autoscaling via HPA (CPU/memory) and easier day-2 operations.
- **Observability starter content:** Sample JVM metrics dashboard for monitoring REST Services Manager.
- **Platform certifications & compliance updates:** Java 21, Helidon 4.1.6, OL9; plus Oracle DB 26ai (23.26), VPAT, and third-party dependency updates.

design-time configuration and operations workflows (for example, editor and log access), helping improve usability and speed time to market.

Users can easily configure end-to-end mediation chains (collection → correlation → aggregation → validation → enhancement → distribution) using drag-and-drop configuration and rule-driven processing. Cartridges also include inbuilt routing to send data using modes such as multicast, round robin, directed, or modulus.

To support automation and integration, OCOMC provides expanded REST APIs through its REST Services Manager for key product and operational actions—such as node state changes, importing customizations/configurations, log retrieval, and user role management—enabling easier day-2 operations and improved access control. OCOMC also supports modern authentication and authorization models for a more secure deployment.

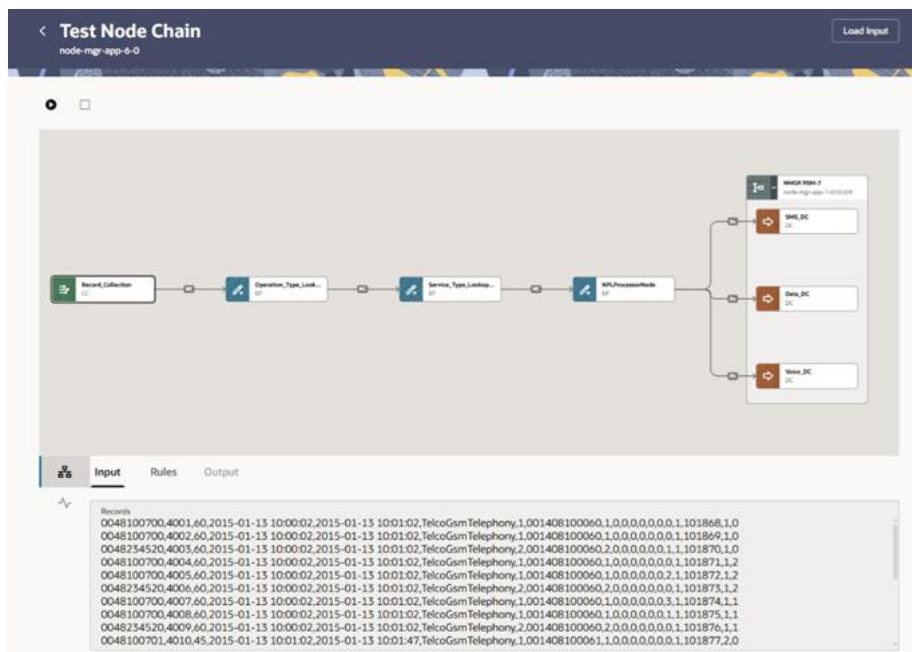


Image 3. OCOMCs graphical user interface provides ease of configuration

Rapid customization

OCOMC ships with pre-built rule files that can be used as-is or modified to match deployment-specific requirements. Rule files are defined using Node Programming Language (NPL)—a simple programming language like Java—and can also call Java methods or hook requests. Rules can be configured through the UI or edited in text form without needing to compile or rebuild, improving agility while decreasing operational effort.

Architectural agility

Designed with a distributed architecture and centralized administration and management, OCOMC can meet extreme scalability requirements. The product is architected to collect once—for any source, any format, and any protocol—and distribute many times. OCOMC provides role-based access control and supports secure deployments with SSL for mediation process communications.

Key cloud native features

- Kubernetes-orchestrated containerized multi-service architecture
- Choice of Open Container Initiative based Kubernetes runtime
- Helm charts simplify installation of BRM and its dependencies into a Kubernetes cluster
- Observability and logging framework support
- Choice of Oracle database: physical or containerized
- Utilize any CI/CD pipeline to support the rapid launch of differentiating services
- Incorporate BRM configuration and extension support
- Deployable on private clouds behind a firewall or public cloud infrastructure
- Supports industry standard cloud native technologies for volume / cluster networking and logging and monitoring
- Kubernetes services and deployments to enable simpler upgrades and configuration changes
- Efficient scaling utilizing Kubernetes inbuilt horizontal scaling

Carrier-grade reliability

Reliability is mission-critical when collecting and transmitting records tied directly to revenue. OCOMC includes mediation assurance capabilities such as alarms that trigger after a configurable time period with no records or record counts collected throughout the mediation chain. It provides fail-safe mediation to help ensure records are not lost, and a record editor supports manual correction of failed records with a full audit trail and the ability to lock fields.

Cloud native agility

Service providers and enterprises are increasingly adopting cloud-native architectures to modernize and automate IT operations. OCOMC provides a cloud-native deployment option supporting a Kubernetes-orchestrated, containerized multi-service architecture to facilitate CI/CD and DevOps practices. In Release 15, OCOMC also improves cloud-native operability by supporting deployment as Kubernetes statefulsets with optional autoscaling via HPA (CPU/memory), helping streamline day-2 operations in customer environments.

This approach enables increased agility and automation, higher availability, and lower operating costs. OCOMC can also be deployed as a non-containerized application if required.

Summary

Oracle Communications Offline Mediation Controller is a carrier-class convergent charging mediation solution designed for wireless and wireline network types—including 5G and hybrid 4G/LTE/IMS/5G networks—as well as non-telco applications. It provides comprehensive mediation for usage data collection, processing, and distribution, enabling rapid time to market with carrier-grade scalability and reliability.

Related Solutions


OCOMC provides an optional and pre-integrated component of the following solutions:

- **Cloud Scale Billing.** Bill for anything at any scale with a cloud native mediation, billing, and revenue management system to invoice payments and manage subscriptions, collections, receivables, and settlements.
- **Cloud Scale Charging.** Charge for anything at any scale with a cloud native, network agnostic mediation and converged charging system powered by an in-memory grid. Interoperates with third party billing systems.
- **Cloud Scale Charging and Billing.** Monetize anything at any scale using pre-integrated charging, offer design, billing, revenue, and account management for accelerated time to cash and accountability across the entire revenue lifecycle for any service and business model.

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