

Oracle Communications Order and Service Management

Oracle Communications Order and Service Management (OSM) enables Communications Service Providers and large enterprises to design and manage the fulfilment of customer orders for both traditional and increasingly digital services through their entire lifecycle. As a fully cloud native application supporting DevOps practices, OSM is a key component of Oracle Communications' "Concept to Cash" solutions which enable service providers to quickly design and launch new B2B, B2C and B2B2X services and manage the delivery of customer orders across participating business and operational systems as well as partners to fulfil the order.

Context within Oracle Communications Solutions

Oracle Communications Order and Service Management is a key component within Oracle Unified Orchestration solution depicted below.

Key benefits

- Synchronized product design with DX4C / CRM and billing
- Unified design experience across participating systems
- Zero configuration offer introduction for "more of the same" offers
- Multi-channel order capture support
- Flexible order decomposition
- Dynamic order orchestration
- Flexible, configurable order lifecycle policies
- Intuitive order lifecycle management (OLM) user Interface
- Fully automated in-flight order revisions (including revision on revision)
- Order fallout management
- Order status management

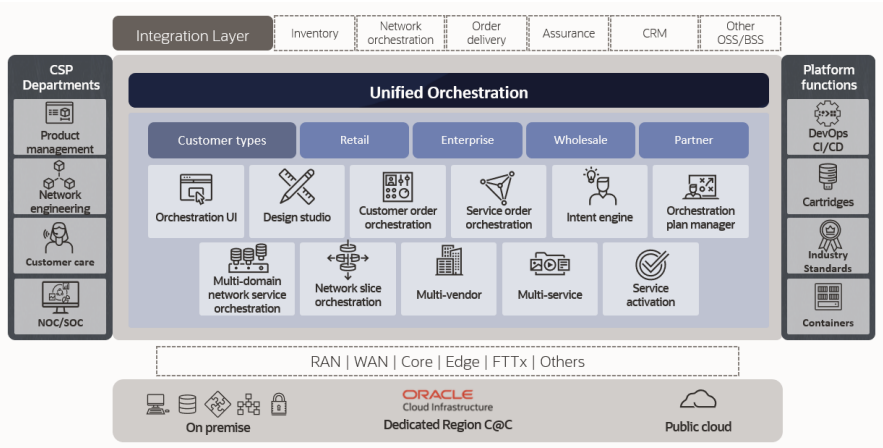


Image 1. OSM context within Oracle's Unified Orchestration solution

OSM works with, and complements, upstream SaaS solutions including Oracle's Digital Experience for Communications (DX4C) and more traditional CRM solutions such as Oracle Siebel CRM, as well as billing, inventory, activation, supply chain and field service supporting the coordinated delivery of customer services. In each case, it plays distinct but complementary roles to help service providers address their order lifecycle management challenges as part of broader solution footprints:

Digital Experience for Communications (DX4C) – complementing DX4C, OSM performs the role of Central Order Management (OSM COM) managing the delivery of the customer order. It is deployed in conjunction with Oracle Customer Experience (CX) Cloud solutions and Oracle Communications Billing and Revenue Management (BRM). DX4C enables service providers to innovate, transform and engage their customers with compelling experiences anchored by underlying support for the lead-to-quote, order-to-cash, order-to-activate and cash-to-care processes.

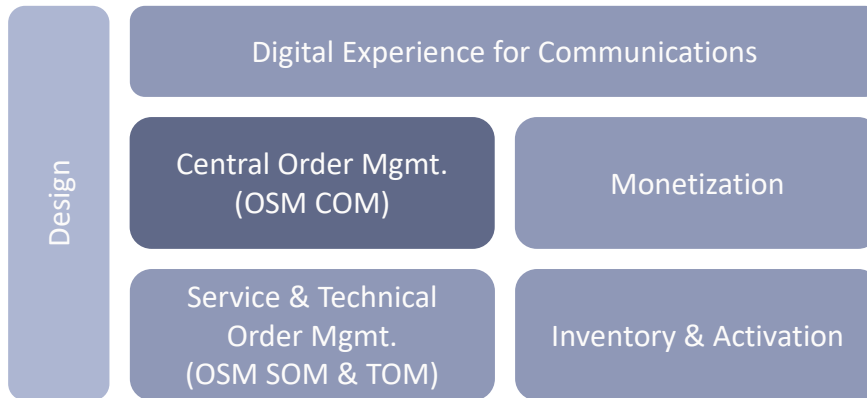


Image 2. OSM COM in context with Oracle's Digital Experience for Communications (DX4C)

Within the DX4C context, OSM COM supports the following key capabilities:

- Synchronizes product class definitions with DX4C Launch and defines fulfilment patterns for each net new product class
- Decouples the creation of commercial DX4C offerings (containing existing products) from their fulfilment enabling faster time to market
- Decouples the fulfilment topology of participating systems from fulfilment flows for greater IT flexibility (e.g., when transitioning across and / or retiring multiple billing systems)
- Supports advanced order qualification including feasibility and reservations
- Decomposes and dynamically creates an orchestration plan for each order providing line-item level order status visibility upstream during order execution
- Transforms the customer order containing products into one or more service orders containing services for fulfilment
- Integrates with upstream DX4C / CRM systems supporting multiple deployment modes

“As service providers continue to roll out new services and support more online digital channels, they need to be able to launch and deliver new services quickly, which requires a fully automated, scalable and available order orchestration solution over which they have full control.

Oracle’s open cloud-native approach helps such forward looking providers meet and accelerate this vision and be more responsive to their customers.”

Martina Kurth

AVP, Head of Telco 2025
Research Europe, IDC

Unified Orchestration – in this context, OSM performs the role of Service Order Management (SOM) and Technical Order Management (TOM).

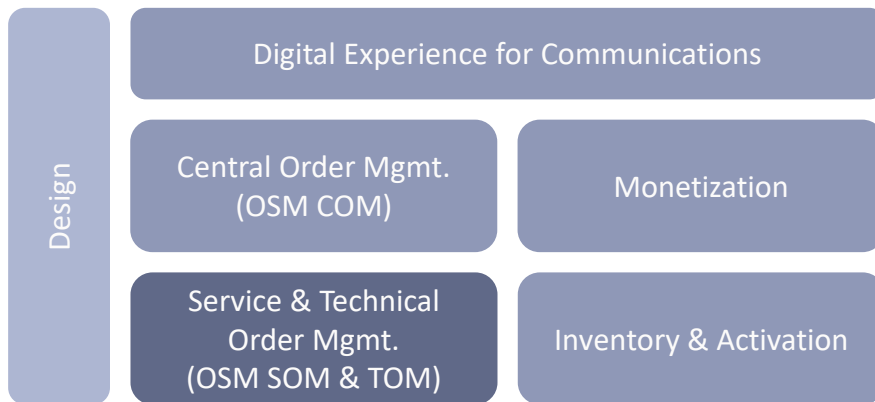


Image 3. OSM SOM & TOM in context with Oracle's Unified Orchestration

It does so in conjunction with Oracle Communications Unified Inventory Management (UIM) and Oracle Communications ASAP / IPSA to fulfill services on the network, IT applications and the underlying IT infrastructure. In this role, OSM provides the following key capabilities:

- Supports the flexible definition of, and fulfilment patterns for, both customer and resource facing services enabling catalog driven fulfilment
- Supports technical service qualification and resource reservation during order negotiation / capture in coordination with DX4C
- Dynamic creation of an orchestration plan for each service order which may include the design of the service, assignment of resources for the service and calculation of the actions required to deliver the service - resulting in one or more technical orders
- Dynamic creation of an orchestration plan for each technical order which may typically include activities such as supply chain management, work force management, service activation, assurance activation, etc.
- Provides full order status visibility upstream during order execution

Introduction to Order and Service Management

OSM has a rich set of capabilities that enables both technical and commercial control of deployment footprints.

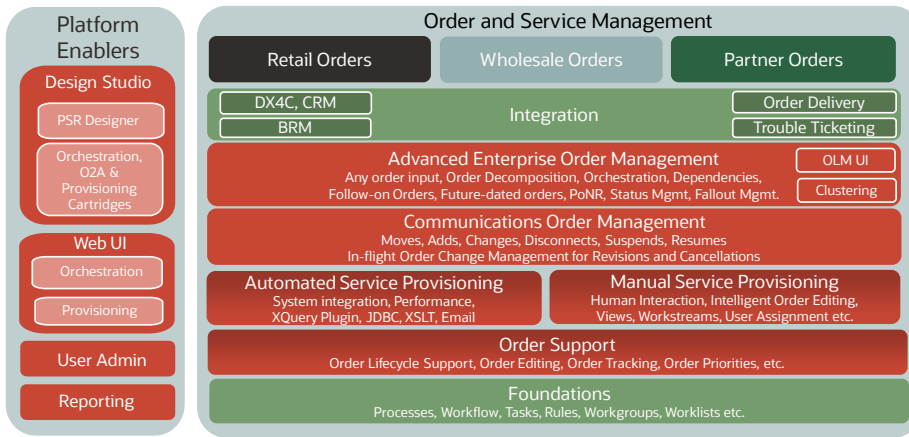


Image 4. Order and Service Management Functional Capabilities

The application consists of:

- A Core platform with design time modelling of fulfilment patterns, processes, tasks, and rules for the fulfilment of customer, service, and technical orders. Such design time configuration is enabled through Design Studio, whose PSR Designer offers an intuitive, graphical modelling environment. Design Studio drives best-practices modelling of fulfilment patterns for customer orders, service orders and technical orders. It is also the single, integrated design time environment across a range of Oracle Communications applications.
- A set of functional modules that can be used selectively to address individual requirements. The key ones include:
 - **Orchestration Plan Manager (OPM)** – this provides dynamic order orchestration capabilities at multiple levels within the order processing.
 - **Order Transformation Manager (OTM)** – this performs the state-less transformation of customer orders containing products into one or more service orders containing services – typically involved within the DX4C solution context.
 - **Order Lifecycle Management (OLM) UI** - this UI is orientated to the business and provides a view of order fulfilment progress, fulfilment status and scheduling status. The UI presents the user with the most relevant information and the ability to drill down on order details. Features of the OLM UI include detailed visual order delivery timelines with information on Requested, Promised and Projected delivery dates.
 - **Order Change Management (OCM)** - this automatically perform delta analysis for order revisions supporting multiple revisions including revision on revision to customer's "in-flight" orders and dynamically generates and executes compensation changes. This industry-unique intelligent order change management capability supports Point-Of-No-

Key benefits

- Rapid time to market with integrated design methodology across enterprise catalog, CX/CRM, Billing, Inventory, Activation, etc.
- Zero OSM configuration required to launch new offers containing pre-existing products - decoupling "what gets sold" from "how it gets delivered"
- Accurate order capture with support for order qualification / feasibility
- Simplifies the handling of all orders, channels, products, and customer types
- Efficient, assured end to end order delivery with full order status updates and visibility
- Fully configurable support for automation of in-flight order changes as routine, not an exception
- Improved agent experience through exposed order care capability to CX / CRM
- Fast and consistent design and rollout of new order management processes in the front and back office
- Faster resolution to fallout incidents eliminating unnecessary operational and IT costs
- Widely deployed with tier 1 CSPs inc. Vodafone, Bell Canada, KT, Charter, Telia, etc.
- Proven globally at scale - multiple customers processing > 2 million orders / day
- Choice of deployment - Oracle Cloud Infrastructure, 3rd party IaaS, or service provider data center

Return configuration eliminating unnecessary fulfilling of revised orders
 - even supporting management of stacked revisions.

- Additional optional cartridges that provide pre-built integrations and process orchestration across specific Oracle products in the context of the solutions mentioned above. The upstream integration with DX4C and Siebel CRM provides support for product catalog synchronization, order capture, order submission, order status visibility and order fallout trouble ticket creation. The integration with BRM provides support for initiating the creation of billing accounts and purchase of products against such accounts driven from the customer order.

Order and Service Management Cloud Native Deployment

OSM has been re-architected to be deployed using Container Images in a Kubernetes-orchestrated Cloud Native Environment to facilitate continuous integration, continuous delivery, and DevOps practices.

The Case for Cloud Native

As the principal order management application in many service providers, OSM manages the orchestration of the received order – from the customer order, services order(s) and technical order(s) in turn – through its end-to-end lifecycle.

This order management role has become increasingly mission critical in large service providers as customer orders are increasingly received through digital / online / unassisted channels that need to be highly available, support responsive low latency customer interactions with full automation and support planned or unplanned order volumes during busy periods or seasonal campaigns, etc.

In addition, there is a need to manage many OSM environments across dev / test / prod with configuration discipline and the control to be able to deploy across cloud and on-prem environments. Coincident with that is the service provider adoption of contemporary technologies and approaches inc. Cloud Native and DevOps practices.

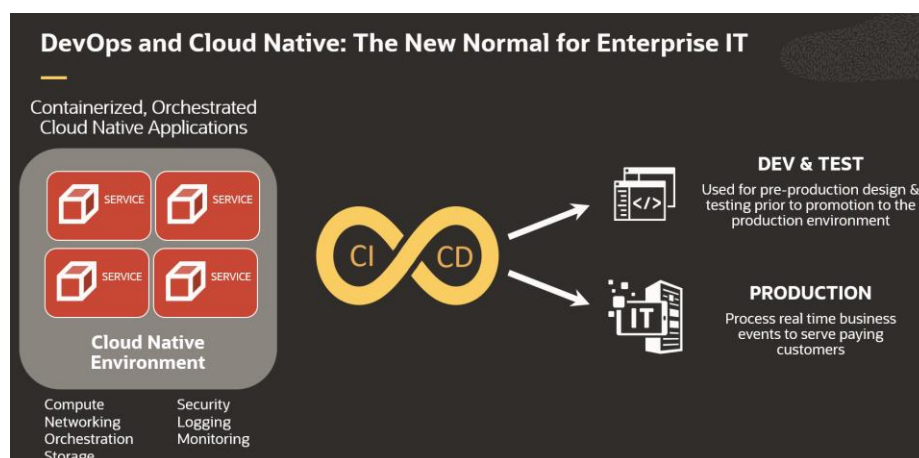


Image 5. Contemporary Approach using DevOps and Cloud Native.

Leader in cloud native

- Oracle is a Platinum member of the Cloud Native Computing Foundation (CNCF)
- Deep experience in cloud native development and deployment inc. several open-source Cloud Native contributions inc.
- OSM Cloud Native leverages:
 - OCI Container Engine for Kubernetes (OKE)
 - Oracle WebLogic Server Kubernetes Operator
 - Oracle WebLogic Server Deploy Tooling

Value of OSM Cloud Native

- Enables adoption of DevOps practices, CI/CD Pipeline – enables service providers to transition their operations from manual, slow, and costly to automated, fast, cost-efficient
- Operational benefits
 - Faster installs – from several hours to 10-30 mins with on-demand installation (lower TCO)
 - Faster environment replication – from several days to 10-30 mins
 - On-demand JIT scaling – from 3-4 weeks (with downtime) to 2 mins (with no downtime)
 - Reduced maintenance downtime – from several hours to less than one hour (zero for some scenarios)
 - Self-healing upon service failure – on both cloud and on-prem deployments

Introducing OSM Cloud Native

The OSM Cloud Native deployment option enables OSM to be deployed using container images (supporting Docker and CRI-O for Container Runtime) that are then orchestrated in a Kubernetes environment. It supports a full DevOps implementation approach through a rapid, consistent & auditable installation & configuration process with configuration externalized in Helm scripts. It supports dynamic clustering using WebLogic Kubernetes Operator to easily create, manage & scale OSM and supports metrics using Prometheus and Grafana. This deployment option takes advantage of Open-Source Cloud Native tooling and achieves operational efficiency while maintaining full control of IT operations.

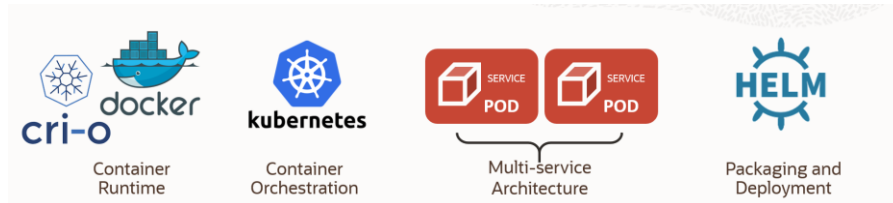


Image 6. DevOps and Cloud Native.

Helping Service Providers Adopt OSM Cloud Native

In addition to enablement training and documentation, Oracle Communications Consulting enables customers to adopt OSM Cloud Native and increase their maturity with Cloud Native and DevOps practices in several ways:

- Pre-sales – run discovery workshops, implementing an OSM CN sandbox in OCI or other cloud infrastructure of the customer's choice
- Deployment – at 3 levels of maturity
 - Low Cloud Native, Low DevOps
 - Deploy OSM CN images on pre-configured K8s cluster (OSM CN Start-up Package) and setup separate K8S cluster for production & non-production environments (Cluster Setup Full Package) with an optional Full CI/CD DevOps Package
 - High Cloud Native, Low DevOps
 - Deploy OSM CN images on pre-configured K8s cluster (OSM CN Start-up Package) with an optional Full CI/CD DevOps Package
 - High Cloud Native, High DevOps
 - Deploy OSM CN images on pre-configured K8s cluster (OSM CN Start-up Package) with a CI/CD DevOps Integration Package to setup OSM Cloud Native with the customer's existing CI/CD tools

- Dynamic clustering using WebLogic Kubernetes Operator
- Improved order distribution algorithm reduces redistribution of orders during cluster resizing
- Agile service development and launch benefits
 - More intuitive and graphical service design with PSR Designer
 - Faster (> 50%) cartridge deployment over prior releases
 - Just in time scaling to support rapid uptake of newly introduced offer campaigns - from 3-4 weeks to few mins - enabling incubation and innovation

In Summary

OSM Cloud Native is of most value to IT teams in service providers who are self-development orientated, who want to fully control their solution deployments themselves, accelerate the introduction of new services and seek to leverage a functionally robust, proven at scale Cloud Native solution - the "best of both worlds."

OSM Cloud Native recognizes the increasingly mission critical nature of order management for service providers, esp. the non-functional requirements to support increasingly unassisted digital channels that require an online, real-time, automated, fully available, and elastically scalable order management solution.

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