ORACLE COMMUNICATIONS

UNIFIED INVENTORY MANAGEMENT

Oracle Communications Unified Inventory Management (UIM) is an open, standards-based application that provides an intelligent inventory of communications services and resources. Its flexible, extensible architecture enables the rapid design and efficient delivery of customer-centric services and the management of current and next-generation resources and technologies. With inventory federation and pre-built support for multiple communications service domains, UIM is designed for cost-effective deployment to address either a discrete requirement in an existing environment or alternatively as the strategic inventory application across the enterprise.

UIM’s within Oracle’s Rapid Offer Design and Order Delivery (RSDOD) Solution
Oracle Communications’ Rapid Service Design and Order Delivery (RSDOD) solution is the industry’s leading COTS products based solution that can truly enable a service provider to deploy a convergent platform across his entire range of services and network configurations to support the rapid design and delivery of new technical services and commercial bundles across all customer service channels. UIM is deployed as part of RSDOD to achieve the following:

- **RSDOD Solution** – in conjunction with Oracle’s Siebel CRM, Oracle Communications Order & Service Management and Oracle Communications ASAP / IPSA, UIM supports the following service inventory key capabilities:
  - At service design time, a rich catalog of consumer and business service patterns.
  - At order capture time, support for technical service qualification, resource reservations, etc.
  - At order delivery time, a high-performance service and resource inventory repository with service design and assignment functions.

This UIM context within the RSDOD solution together with complementary Oracle applications is depicted as follows:

![Figure 1. UIM context within Oracle Communications RSDOD Solution.](image-url)
Key Capabilities of Oracle Communications Unified Inventory Management:

- Manage Location – model and interact with geocoding systems (i.e. Oracle Spatial) to provide strong location validation
- Manage Assets – model and track virtually any type of physical and logical inventory including network addresses and Telephone Numbers
- Manage Connectivity – model channelized SONET/SDH, and T/E/J-Carrier connectivity with a complete standards-based signal architecture to work cohesively with packet connectivity
- Manage Networks – model virtually any type of network and track capacity when services are allocated to network resources
- Manage Services – model virtually any type of service and assign services over available resource capacity
- Manage Network Topology – design and maintain network connectivity in a graphical view rendered with maps at different view levels
- Manage Extensible Resource Life Cycle – transition resources through various states and keep historical versions of changes to resources and services
- Provide Business Planning – plan equipment build outs by creating business interactions to track planned equipment resources and enable them at a later date
- Manage Reservations – reserve resources for projects or customers for allocation at a later date

UIM’s Context within Oracle’s Network Resource Management Portfolio

UIM can be deployed in conjunction with Oracle Communications Network Intelligence and Network Integrity applications to address network resource management challenges.

- **Network Resource Management** – in this role, UIM supports the following key capabilities:
  - Network capacity planning and design – integrated with Oracle Communications Network Intelligence for agile network planning and network optimization.
  - Logical and physical resource management – integrated with Oracle Communications Network Integrity ensuring accuracy of inventory data.
  - Network asset lifecycle management – in conjunction with Oracle E-Business Suite for integrated network asset lifecycle management across operations and finance reducing network costs and providing financial control and compliance.

This UIM context in this role together with complementary Oracle applications is depicted as follows:

![UIM context within Oracle Communications Network Resource Management Context.](image)

**UIM Introduction**

As part of the Oracle Communications OSS (Operational Support Systems) application suite, UIM and other OSS applications are designed to work together seamlessly on a common technology platform – Oracle Communications OSS Foundation Stack based on Oracle Fusion Middleware. The other applications in the suite are Oracle Communications Network Intelligence, Oracle Communications Network Integrity, Oracle Communications Order and Service Management, and Oracle Communications Design Studio. The UIM application employs a highly modular architecture enabling both technical and commercial control of deployment footprints, illustrated below.
Figure 3. UIM architecture.

The UIM application consists of:

- A Core platform with design time modeling of complex inventory structures and behavioral rules through their complete lifecycle together with a technical service catalog to enable service fulfillment of customer services. Such design time configuration is enabled through Design Studio, a graphical resource and service modeling environment. Design Studio offers best-practices modeling of customer services and resources and is also the single, integrated design time environment across UIM and complementary Oracle applications. The core platform also provides a set of Web services APIs for service-oriented architecture (SOA) integration.

- A set of functional managers that can be deployed individually or in sets to manage certain entities such as telephone numbers, logical and physical resources within the network and IT infrastructure or to enable service fulfillment through the service catalog.

- A number of optional Technology Packs that provide pre-configured support for specific domains of network and service technologies. Oracle offers a growing library of these modules, which include specifications, characteristics, rules, capacity models, etc., as typically used for the targeted domain. In general, customers may license such Technology Packs and extend them or develop their own custom Technology Packs as part of their solution using Design Studio for UIM.

The information model in UIM is based directly on the industry-standard TM Forum’s (TMF) Frameworx Shared Information Data (SID) model. This information model:

- Enables the representation of practically any communications inventory object – current and next generation.

- Leverages significant and ongoing contributions and best practices from the communications industry into the TMF SID.

- Uses a common language representation that greatly simplifies standards-based integration between systems reducing cost, time and risk in integration.

The alignment between UIM’s information model and TMF SID is portrayed below.
Strategic Advantages of Deploying UIM

Modular deployment approach: UIM is designed for modular deployment which enables initial adoption for a specific and bounded business problem often in close proximity with incumbent inventory solutions. It may then be easily expanded as required to provide additional capabilities as required. For example, it may initially be deployed to manage logical resources, and then expand to manage customer services and associated physical resources.

Flexibility with inventory federation: UIM provides a flexible inventory federation framework that complements and leverages existing inventory investments avoiding the need for an inventory migration or transformation program. This framework supports three implementation scenarios illustrated using Oracle Communications applications as follows:

- In the first scenario, existing inventory systems manage the network connectivity for connection oriented technologies and UIM integrates with them to holistically manage the services and connectivity – helping to rapidly introduce next-generation services by leveraging existing inventory investments.
- In the second scenario, UIM manages service configurations and federates to Oracle Communications Internet Name & Address Management which serves as a master resource repository for IP addresses.
- In the third scenario, Oracle Communications MetaSolv Solution manages service configurations and federates to UIM as the resource repository of VLAN ID pools.

Unified, convergent inventory: Increasingly convergent services must be delivered with inventory distributed across multiple sources with differing, non-standard data structures – UIM provides a unified view of inventory using a common, standard information model, without requiring the expense, time, and risk of inventory consolidation.

Customer-centric inventory: Next-generation services require customer-centric rather than network-centric views of inventory information – UIM fully enables a customer-centric view through inherent, standard support for customers, products, services, and resources. It has the flexibility to support complex relationships for next-generation IP services.
Accurate, consistent inventory information: UIM provides trusted, consistent inventory information to key business processes that span engineering, IT, operations, and finance.

Business Insight from rich inventory information: UIM provides open, standards-based access to its inventory data and integrates with Oracle Business Intelligence Enterprise Edition (OBIEE), to provide flexible, configurable inventory reporting capabilities to the numerous stakeholders.

Contact Us
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