

# ORACLE PRODUCT DATA SYNCHRONIZATION FOR GDSN AND UCCnet SERVICES

## KEY FEATURES

ORACLE PDS PROVIDES THE FOLLOWING CAPABILITIES:

- Product information management for GDSN / 1SYNC (UCCnet)
  - Pre-built attributes for items and GTINs
  - User-defined product (UDEX/GPC) catalogs
  - Auto GTIN number
  - User-configurable packaging hierarchies
  - Data validations with user-defined, EAN.UCC checks
- Product data registration management system
  - Customer GLN
  - 'Add', 'Change', 'Correct' Registry Catalog Item Registry (RCIR) messages
  - Mass registration process
- Product data syndication management system
  - 'Add', 'Change', 'Initial Load', 'Withdraw' and 'De-list' Notifications (CIN)
  - Mass syndication process
  - Customer product information comparison
- Item / GTIN change management
  - Streamlined product change management
  - Individual and / or mass updates via Excel
  - Register mass changes to GDSN / 1SYNC(UCCnet)
  - Syndicate mass changes to customers
- 1SYNC(UCCnet) Compliance / Technology Support
  - Certified with 1SYNC Network Release 3.0
  - Support for 1SYNC (UCCnet) Adaptor using HTTP / HTTPS
  - Support for AS2 / 3rd-party integration

*Oracle® Product Data Synchronization for GDSN and UCCnet Services (PDS) enables companies to securely deliver product information to 1SYNC(UCCnet) V3.0 via the Global Data Synchronization Network (GDSN), and then to syndicate that data to trading partners. Oracle PDS extends Oracle's Product Information Management (PIM) solution to provide companies with a complete solution for managing their product information and delivering relevant product data to their trading partners.*

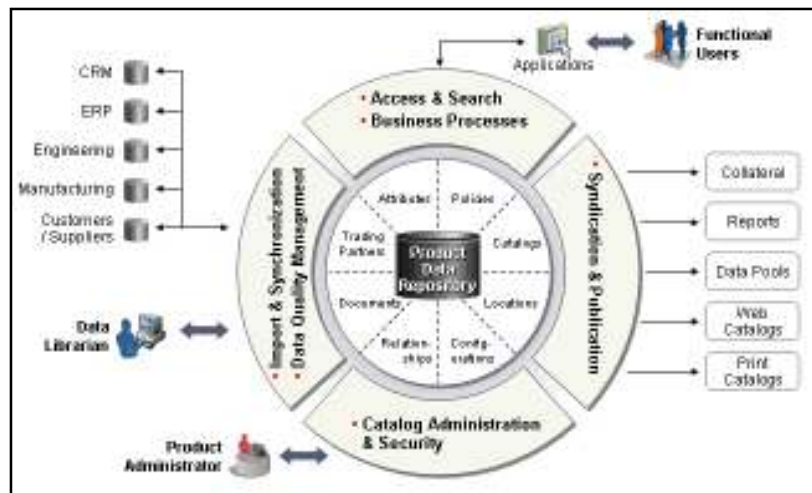


Figure 1. Oracle Product Information Management Solution

## Product Overview

Oracle PDS delivers a complete portfolio of capabilities and features required to help assure that companies seamlessly share the highest quality and most accurate data with their trading partners. Oracle PDS comes with pre-built item attributes that map to the attribution defined for product data synchronization by GDSN and UCCnet. This capability is supported by extensive validation checks against the approved formats for these attribute definitions to help assure that only clean data is sent. Using specialized structure (available with license of Product Information Management Data Librarian [PIMDL]), Oracle PDS allows companies to model their exact packaging contents and hierarchy.

In addition, Oracle PDS also provides a complete messaging framework solution architected to formats mandated by GDSN and 1SYNC (UCCnet). Oracle PDS is compatible with 1SYNC Network Release 3.0 assuring compliance with 1SYNC Release 3.0 Network parameters.

Oracle PDS is designed to help make sure that companies avoid both the direct and indirect costs of sending incorrect product data to 1SYNC(UCCnet) and their trading partners. Direct costs include the fines imposed by 1SYNC(UCCnet) for sending 'dirty data', and indirect costs include delayed or lost sales, etc. For example, Oracle PDS' out-of-the-box item attributes come with extensive data validation checks to make sure that input data is clean.

### **Ensure compliance with trading partners' mandates for product data synchronization**

Oracle PDS allows companies to efficiently synchronize accurate product data with customers and suppliers, providing a complete solution for companies for managing product information and delivering relevant product data to trading partners, for example, by enabling them to register Global Trade Item Numbers (GTINs) associated with one or many customer sites (Global Location Numbers, GLNs) to 1SYNC(UCCnet). The importance of these services is further highlighted by the fact that leading retailers like Wal-Mart have asked all its suppliers to standardize item information with 1SYNC(UCCnet).

Oracle PDS provides business solutions related to both an initial 'go live' for a product supplier, as well as on-going maintenance and syndication of items / GTINs. The key features of Oracle PDS are:

- Author and manage items / GTINs, attributes and associated packaging hierarchies
- Registration process of items / GTINs to the Global Registry
- Manage trading partner subscriptions
- Publication / Syndication of items / GTINs to trading partners
- Manage on-going changes to product data and appropriate re-syndications to trading partners

Oracle PDS also allows customers to define new or use existing catalog as a UDEX or GPC catalog. Customers can add UDEX or GPC classifications to the catalog as relevant to their business. Assigning an item to the UDEX or GPC catalog automatically enables the GDSN attributes for the item.

For example, in the UDEX Catalog, 'Non-Alcoholic Beverages' has two sub categories: Hot Beverages, and Non-Alcoholic Beverages Ready-to-Drink. If the company makes Coke and Sprite, the catalog Administrator sets up a category hierarchy that has at its top node as 'Non-Alcoholic Beverages Ready-to-Drink'.

Change management for GDSN attributes allows users to manage changes to these attributes through change orders regardless of user role / privilege. This change control process ensures that maintenance of key syndication attributes is controlled and proposed changes are reviewed by appropriate stakeholders before they are implemented and propagated to data pools and trading partners.

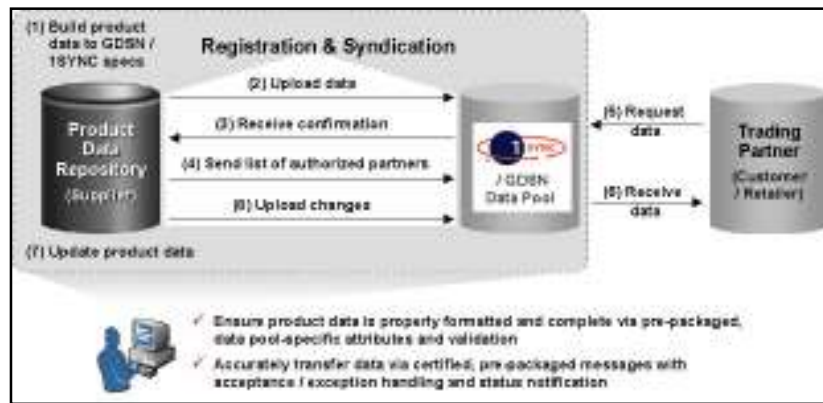


Figure 2. Global Data Synchronization Process

### Increase revenues through timely and accurate product data syndication with trading partners

Oracle PDS enables you to syndicate product information to customers, retailers, and partners. It serves as an efficient platform for all publication processing and messaging while maintaining a complete publication event history, with transaction disposition, for every item / GTIN - customer combination. Oracle PDS provides pre-built GDSN / 1SYNC(UCCnet) attributes for items and GTINs that include:

- Registration attributes
- Industry-neutral extension attributes
- Industry-specific attributes
- Customer-specific attributes

In addition, Oracle PDS also supports industry-neutral extension attributes and industry-specific attributes for Hardlines, SBDH, and FMCG (Fast Moving Consumer Goods) industries. However, depending on the business needs, customers can disable these GDSN / 1SYNC(UCCnet) attributes. End users will neither see nor be able to update attributes that have been disabled by the catalog administrator.

For example, Drained Weight is an attribute in the Trade Item Measurements attribute group. Drained weight is not a mandatory GDSN / 1SYNC(UCCnet) attribute and may not be needed for a company in the Hardlines business. Customer in a Hardlines business can disable this attribute in Oracle PDS.

Oracle PDS also supports customer- and trading partner-specific attributes. For example, order quantity minimum and maximum attributes can vary by customer. For a given product, manufacturers can effectively manage the amount of product that any particular customer can buy per order.

In addition, change management for GDSN attributes allows users to manage changes to these attributes through change orders regardless of user role / privilege. This change control process ensures that the proposed attribute values have been reviewed before they are changed.



Figure 3. Pre-built GDSN Attributes and Validation

### Lower direct and indirect costs via robust validation and syndication to reduce data errors

Oracle PDS comes pre-built with extensive data validation mechanisms to provide system checks to make sure that transmitted data is ‘clean’ so that users can avoid data quality issues and errors in outbound 1SYNC(UCCnet) service transactions.

The validations mechanisms provided are:

- EAN.UCC validation checks
- Implementation level attribute values
- Propagated attributes
- Computed attributes
- User-defined attribute value validations

Oracle PDS provides the ability to automatically generate and assign GTINs to products depending on the product classification or attributes such as UPC or EAN codes. Oracle PDS validates the GTIN check digit, which is an essential part of the GTIN structure.

Oracle PDS also assures lower cost by reducing data errors posted to 1SYNC with supported compatibility to and compliance with 1SYNC Network Release 3.0.

### Reduce manual effort with automatic synchronization

Oracle PDS provides a highly automated, efficient means for suppliers to manage their registration process to the Global Registry:

- Use advanced parametric search on ‘Registration Status’ to find new or updated items / GTINs that need to be re-registered because of some change to the product’s information; use advanced search on other attributes to find items / GTINs that have not been registered at all or that need to be re-registered due to attribute change.
- Oracle PDS performs extensive data validations before the system allows

item registration messages to be sent. Validations errors are displayed in a user-friendly UI allowing that makes it easy to find and fix any problems with the information.

- A collaboration event number is generated for each RCIR message, which provides a full audit trail of all information related to this exchange of information with GDSN / 1SYNC(UCCnet).

In addition to supporting the individual registration of selected items / GTINs, Oracle PDS provides a registration workbench that supports batch processing of multiple registrations. When attributes that affect the product’s registration are modified, Oracle PDS detects the change and flags the 'Registration Status' for that item / GTIN as 'Re-registration Needed'. Upon re-registration, the 'Register to GDSN' defaults the appropriate actions for the message to ‘Change’ or ‘Correct’.

Similarly, Oracle PDS leverages specialized packaging structures that allow for automatic calculation and propagation of certain parameters throughout the hierarchy, to eliminate errors caused by multiple re-entries of data. The messaging system also provides robust error-handling and full audit trail of all communications with data pools and trading partners.

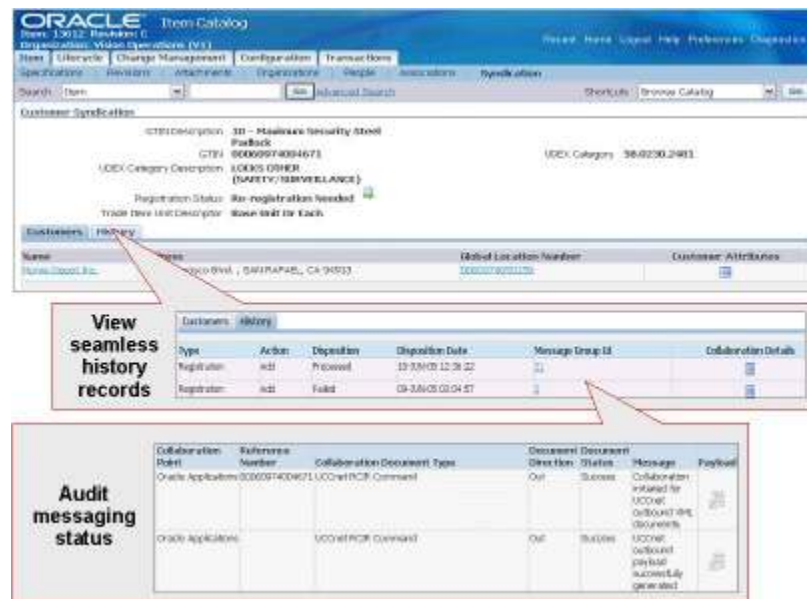


Figure 5. Managing syndication from a single dashboard

**Oracle messages for 1SYNC(UCCnet)**

PDS is built on the 1SYNC(UCCnet) and GDSN XML and Business Process standards to provide an out-of-the-box data synchronization solution. Oracle PDS leverages Oracle's comprehensive technology stack by incorporating the XML Gateway and the Workflow and Business Event Systems to seamlessly integrate the syndication process with Oracle PIMDL and the E-Business Suite.

Oracle PDS uses pre-defined 1SYNC(UCCnet) XML messages to share information with customers via the 1SYNC(UCCnet) data pool or other GDSN-certified access points. A complete collaboration history is maintained in the E-Business Suite to track message exchanges with trading partners. Notification

processing can be configured to handle alerts, exceptions and actions resulting from message exchange.

### **1SYNC Network Release Certification**

Oracle PDS is compatible with 1SYNC Network Release 3.0 assuring compliance with 1SYNC Release 3.0 Network parameters.

### **Support for 1SYNC(UCCnet) Adaptor using either HTTP or HTTPS**

The solution allows packaging and transport of data using the 1SYNC(UCCnet) HTTP Adaptor in both secure and un-secure modes.

### **Oracle Application Development Framework (ADF) Support**

Oracle PDS is built using the Oracle Application Development Framework to provide an intuitive Self Service HTML user interface.

## **Oracle Product Information Management Data Librarian is foundation for Oracle PDS**

Oracle PDS uses Oracle Product Information Management Data Librarian (PIMDL) to build and maintain a single item record with attribution that has been mapped to definitions mandated by GDSN / 1SYNC(UCCnet). This eliminates costly data extraction and cleansing efforts that are typical in environments where product information is stored in multiple databases. Data security and change control help in maintaining a clean and consistent product repository.

Oracle Product Information Management speeds identification, communication and resolution of product changes. Change Management provides a flexible and scalable way of defining different types of changes; capture user-defined attributes for those changes; secure collaboration and flexible approval routing definition. You can create complex parallel and serial approval routes as predefined templates to enforce strict approval processes, or create ad hoc routings to obtain additional approvals within your enterprise.

### **Pre-built BC4J Java API Support**

Oracle PIMDL was built using Oracle Business Components for Java (BC4J). Oracle Business Components for Java is a standards-based, server-side framework for creating scalable, high-performance J2EE applications. The framework provides design-time facilities and runtime services to simplify the task of building, debugging, customizing, and reusing business components. Oracle PDS's BC4J API's can be accessed from a wide variety of clients including Web browsers, professional desktop clients, XML clients, and wireless devices.

Enforcing business rules is a critical part of any application and BC4J provides a framework to consistently develop and enforce validation rules. With Business Components for Java, rather than coding business logic into each client, Customers can reuse Oracle PDS's BC4J API's. Oracle PDS's BC4J API's can perform validation at different levels in BC4J.

## KEY BENEFITS

Deploying the Oracle Product Data Synchronization solution helps your business achieve the following benefits:

- Ensure compliance with trading partners' mandates for product data synchronization
- Increase revenues through timely and accurate product data syndication with trading partners
- Lower direct and indirect costs via robust validation and syndication to reduce data errors
- Reduce manual effort with automatic synchronization

## RELATED PRODUCTS AND SERVICES:

Complementary products most often used with this product are:

- Oracle Product Information Mgmt Data Hub
- Oracle Product Information Mgmt Data Librarian
- Oracle Product Lifecycle Management

The following related services are also available from Oracle:

- Oracle Support Services
- Oracle Consulting Services
- Oracle On Demand

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