Oracle Utilities Analytics Warehouse

Getting Started Guide

Release 2.8.0.0

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ORACLE®

Oracle Utilities Analytics Warehouse Getting Started Guide, Release 2.8.0.0

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Contents

Preface

Welcome to the Oracle Utilities Analytics Warehouse Getting Started Guide.

This guide helps you to get started with Oracle Utilities Analytics Warehouse 2.8.0.0 and provides a detailed overview about the product.

The preface includes:

- Audience
- Documentation Accessibility
- Related Documents
- Acronyms
- Conventions
- Documentation Roadmap

Audience

The guide is intended for anyone interested in installation, administration, configuration, customization or to use Oracle Utilities Analytics Warehouse Dashboards.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For more information, visit My Oracle Support or Oracle Accessibility Learning and Support if you are hearing impaired.

Related Documents

Refer to the Oracle Utilities Analytics Warehouse Installation and Configuration Checklist for high-level steps to install and configure the Oracle Utilities Analytics Warehouse product. **Note** that this checklist includes information for 2.7.0.2 and is applicable for 2.8.0.0 also.

The following documentation is included in this release.

Installation, Administration, and Release Notes

- *Oracle Utilities Analytics Warehouse Release Notes*

- *Oracle Utilities Analytics Warehouse Getting Started Guide*

- *Oracle Utilities Analytics Warehouse License Information User Manual*

- *Oracle Utilities Analytics Warehouse Installation and Configuration Guide*

- *Oracle Utilities Analytics Warehouse Quick Install Guide*

- *Oracle Utilities Analytics Warehouse Developer's Guide*

Metric Reference Guides

Refer to the Oracle Utilities Analytics Warehouse documentation on Oracle Help Center for details about the metric reference guides included in this release.

Data Mapping Guides

Refer to the Oracle Utilities Analytics Warehouse documentation on Oracle Help Center for details about the data mapping guides included in this release.

Acronyms

The following table lists the commonly used acronyms and terms in this guide:

Convention	Meaning
APEX	Oracle Application Express
CDC	Changed Data Capture
ELT	Extraction, Loading and Transformation
ETL	Extraction, Transformation, and Loading
OAS	Oracle Analytics Server
BI	Business Intelligence
ODI	Oracle Data Integrator
OGG	Oracle GoldenGate
OUAW	Oracle Utilities Analytics Warehouse
WAM	Oracle Utilities Work and Asset Management
CC&B	Oracle Utilities Customer Care and Billing
MDM	Oracle Utilities Meter Data Management
NMS	Oracle Utilities Network Management System
ODM	Oracle Utilities Operational Device Management
OSDC	Oracle Software Delivery Cloud

Conventions

The following notational conventions are used in this document:

Notation	Indicates
boldface	Graphical user interface elements associated with an action, terms defined in text, or terms defines in the glossary
italic	Book titles, emphasis, or placeholder variables for which you supply particular values
monospace	Commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter

Documentation Roadmap

This section provides references to get started with the Oracle Utilities Analytics Warehouse product.

About Oracle Utilities Analytics

See the Overview chapter for a detailed overview about the product.

System Requirements

See System Requirements for the browser, operating system, and database combination details for which this Oracle Utilities Analytics Warehouse release has been tested and supported.

Licensing and Copyright

See License Information for Oracle license agreement details.

Media Pack Components

See Media Pack Components for a complete list of installation and documentation packages.

User Information

See User Information for details about users of the product and the skill set needed for using it.

Chapter 1

Overview

This chapter provides an overview of the following:

- Data Warehouse
- Oracle Utilities Analytics Warehouse

Data Warehouse

The data warehouse is a database primarily used for reporting and analysis purpose. It is a central repository for the current, as well as historical data from various operational applications. Data from transactional or operational applications is extracted, transformed, and loaded into the star schema in the data warehouses.

The components of a typical data warehouse environment are:

- Source Application: The source application from where the data is transferred to the data warehouse.

- ETL/ELT: The Extract, Transform and Load (ETL) tools move the data from the source application to the target data warehouse.

- Staging Area: The staging area is a database that stores the raw data extracted from the source application.

- Data Presentation Area: The data storage architecture in the data warehouse such as the star schema.

Source Application

The day-to-day transactions of the system is captured in the source application. Data in the source application is stored in a way that allows for the fast reads and updates. Queries are not expected to be in bulk, but typically arranged, row by row. To achieve this, data is stored in a normalized form in the source application. Generally, the source system does not store historical data.

ETL/ELT

The process of identifying data to be transferred from the source to the data presentation area, extracting the data, and transforming and loading into the data warehouse is called Extraction, Transform and Load (ETL). There are many tools available in the industry. Based on the complexity of the ETL, you need to choose the tools or write the ETL programs.

Staging Area

The data warehouse stores data from various operational sources. The staging area is a database that stores the raw data extracted from the source application. The replication area is similar to the source application in the structure. This area can be used for cleansing the data, resolving domain conflict, merging or combining data from the multiple source applications, data duplication, etc.

Data Presentation Area

Once data is cleansed in the staging area, it is ready to be moved to presentation area. The data is organized in such a way that it is easily available for the presentation. The data is stored in dimensional model, typically in the star schema.

Oracle Utilities Analytics Warehouse

This section provides an overview of Oracle Utilities Analytics Warehouse, including:

- Introduction
- Architecture

Introduction

The purpose of the data warehouse is to publish the organization's data assets for supporting the decision making. Oracle Utilities Analytics Warehouse consists of the pre-built analytics applications, as well as a collection of the Extractors and Schema products.

Oracle Utilities Analytics Warehouse is a suite of pre-built analytics applications for the utilities industry. It is a single data repository with pre-built data integration to the Oracle Utilities source applications listed below:

- Oracle Utilities Customer Care and Billing (CC&B)
- Oracle Utilities Customer To Meter (C2M)
- Oracle Utilities Meter Data Management (MDM)
- Oracle Utilities Network Management System (NMS)
- Oracle Utilities Work and Asset Management (WAM)
- Oracle Utilities Operational Device Management (ODM)
- Oracle Utilities Mobile Workforce Management (MWM)

Built on world class Oracle Analytics Server (OAS) platform with integrated spatial features, Oracle Utilities Analytics Warehouse supports end-to-end analytic workflows including the ability to drill back to the source applications. The extractors and schema are designed with the pre-built mapping between the source and the target. They support schema extensibility with built-in user-defined fields, dimensions and measures.

Oracle Utilities Analytics Warehouse data warehouse is a separate database from the operational database. The data warehousing involves large volumes of data used primarily for analysis. The data warehouse includes the following features:

- Includes pre-built star schemas, pre-built metrics, pre-built reports, and pre-built dashboards.
- Makes the data structures easily accessible for reporting needs of the end users.
- Retrieves the large volumes of data quickly. This in turn allows fast rendering of the graphics that showcase the Key Performance Indicators (KPIs).
- Contains star schemas and graphics suited for data retrieved from the various Oracle Utilities source applications.
- Provides you with the ability to add additional star schemas and graphics as per the requirement using the necessary development tools.

Architecture

This section provides details on the product architecture and how the different components work together. The objective of this section is to provide you a high level understanding of the key components of the Oracle Utilities Analytics Warehouse product and how these components work together.

It covers the following topics:

- Product Overview
- Deployment

Product Overview

The selected tables from the edge applications are replicated to the corresponding replication schema using Oracle GoldenGate. The data in the replication area is transformed into appropriate star schemas using Oracle Data Integrator. Oracle Data Integrator is utilized to generate the aggregated materialized views based on the star schemas. Oracle Analytics Server is used for presenting the data in the star schemas and associated materialized views on dashboards for each subject area.

The following diagram illustrates the solution components of Oracle Utilities Analytics Warehouse.
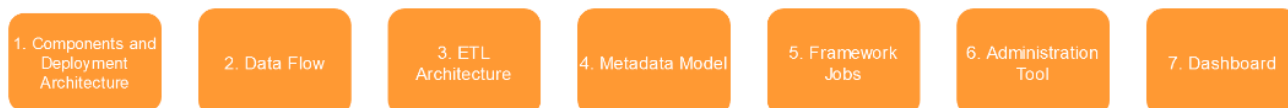
1. Components and Deployment Architecture	2. Data Flow	3. ETL Architecture	4. Metadata Model	5. Framework Jobs	6. Administration Tool	7. Dashboard

Diagram 1: Oracle Utilities Analytics Warehouse Solution Components

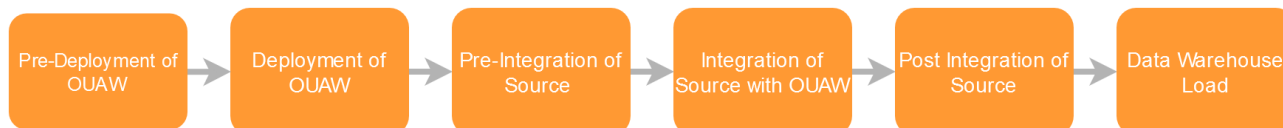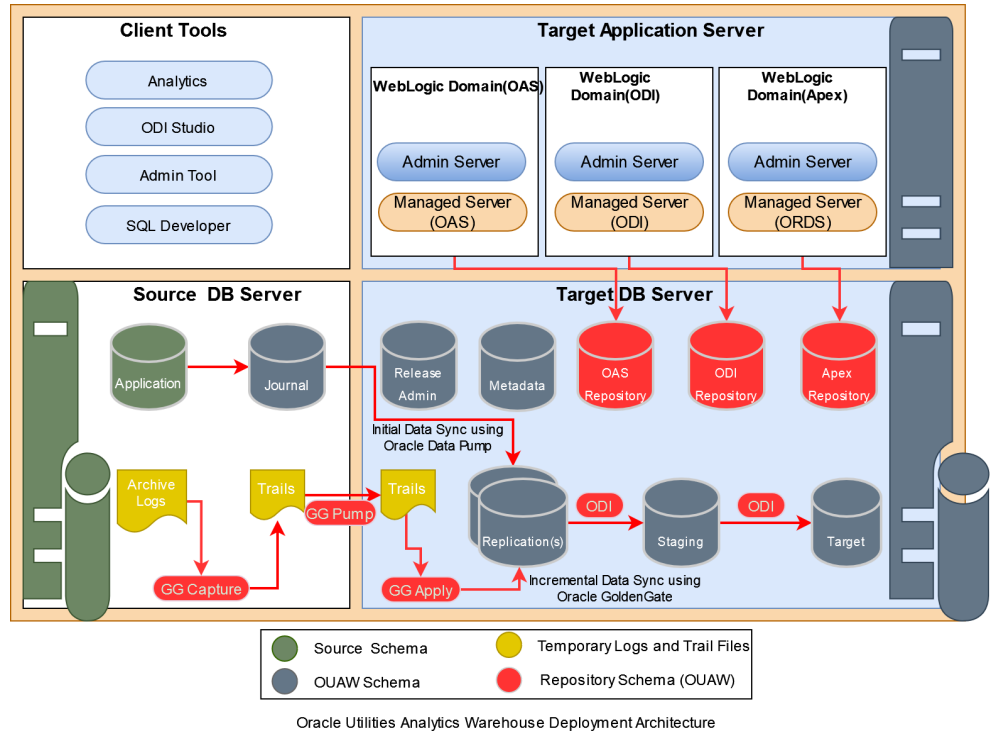| Pre-Deployment of OUAW	→	Deployment of OUAW	→	Pre-Integration of Source	→	Integration of Source with OUAW	→	Post Integration of Source	→	Data Warehouse Load

Diagram 2: Oracle Utilities Analytics Deployment and ETL (Roadmap)

Deployment

A standard deployment of the Oracle Utilities Analytics Warehouse product consists of a database and an application server. Two WebLogic installations are performed on the application server, one for Oracle Analytics Server and another for Oracle Data Integrator. And, Oracle GoldenGate is installed on the source database server and on the target database server.

The following diagram shows the standard Oracle Utilities Analytics Warehouse deployment.

Oracle Utilities Analytics Warehouse Deployment Architecture

For more information about the components related to extractors and schemas within Oracle Utilities Analytics Warehouse and pre-built analytics delivered with the product, refer to *Oracle Utilities Analytics Warehouse Installation and Configuration Guide* included in the Oracle Utilities Analytics Warehouse documentation.

Chapter 2
System Requirements

For recommended hardware specifications and details about the operating systems, application servers and supported source application versions, refer to the *Oracle Utilities Analytics Warehouse Release Notes* included in the Oracle Utilities Analytics Warehouse 2.8.0.0 documentation.

Chapter 3

License Information

Oracle Utilities Analytics Warehouse is a collection of separately licensed products. These products can be broadly classified into two groups:

- Oracle Utilities Analytics Warehouse Extractors

- Oracle Utilities Analytics Warehouse Dashboards

For detailed information about licensed products within each of these groups, refer to the *Oracle Utilities Analytics Warehouse License Information User Manual* included in the Oracle Utilities Analytics Warehouse documentation.

Chapter 4

Media Pack Components

The Oracle Utilities Analytics Warehouse Media Pack consists of the following:

- Oracle Utilities Analytics Warehouse NMS BI Publisher Reports

- Oracle Utilities Analytics Warehouse 2.8.0.0 Multiplatform

- Oracle Utilities Analytics Warehouse 2.8.0.0 Oracle Database Multiplatform

- Oracle Utilities Analytics Warehouse 2.8.0.0 Demo Data

Chapter 5

User Information

This chapter lists the different phases involved in bringing the Oracle Utilities Analytics Warehouse product up and running. The table below provides detailed information about the user group involved in each of the phases, as well as points to the documents with necessary detail.

Phase	User Group	Recommended Documents
Installation	System Administrator	Oracle Utilities Analytics Warehouse Installation and Configuration Guide
	Implementor	Oracle Utilities Analytics Warehouse Quick Install Guide
	Product Administrator	
Extending Functionality	Developer	Oracle Utilities Analytics Warehouse Developer's Guide
	Implementor	Metric Reference Guide
		Data Mapping Guide
n/a	End Users	Metric Reference Guide
		Data Mapping Guide