



ORACLE®

Oracle Online Training Materials – Usage Agreement

Use of the information, documents and online training courses (collectively, “Materials”) found on this area of the Site constitutes agreement with the following terms and conditions (as well as those set forth in the Purpose and Disclaimer sections below):

1. Oracle is pleased to allow its business partner (“Partner”) to download and copy the Materials found on this area of the Site. The Materials are proprietary information of Oracle. Partner or other third party at no time has any right to resell, redistribute or create derivative works from the Materials. The use of the Materials is restricted to the non-commercial, internal training of the Partner’s employees only. The Materials may not be used for training, promotion, or sales to customers or other partners or third parties.
2. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

Oracle Online Training Materials – Usage Agreement (cont)

3. Oracle disclaims any warranties or representations as to the accuracy or completeness of any Materials. Materials are provided "as is" without warranty of any kind, either express, implied or statutory, including without limitation the implied warranties of merchantability, satisfactory quality, fitness for a particular purpose, accuracy, timeliness and non-infringement of third-party rights. The information contained herein is subject to change without notice.
4. Under no circumstances shall Oracle be liable for any loss, damage, liability or expense incurred or suffered which is claimed to have resulted from use of these Materials. As a condition of use of the Materials, Partner agrees to indemnify Oracle from and against any and all actions, claims, losses, damages, liabilities and expenses (including reasonable attorneys' fees) arising out of Partner's use of the Materials.

Purpose



This document provides an overview of the functional features in the Oracle Utilities Meter Data Management Integration to SAP MDUS 11.1. It is intended solely to help you assess the business benefits of this release prior to implementing the Oracle developed products, and planning your I.T. Projects.

Disclaimer



This document in any form, software or printed matter, contains proprietary information that is the exclusive property of Oracle. Your access to and use of this confidential material is subject to the terms and conditions of your Oracle Software License and Service Agreement or other applicable contract with Oracle, with which you agree to comply. This document and information contained herein may not be disclosed, copied, reproduced or distributed to anyone outside Oracle without Oracle's prior written consent. This document is not part of your license agreement nor can it be incorporated into any contractual agreement with Oracle or its subsidiaries or affiliates.

This document is intended to outline our general product direction. It is intended for informational purposes only and solely to assist you in planning for the implementation and upgrade of the product features described. Release information contained in this document is not a firm development plan. This is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality, and inclusion or not thereof in the commercially available version of the Software, if any, is subject to change at any time and is always at Oracle's sole discretion. This document is not considered part of the applicable program documentation.

Due to the nature of the product architecture, it may not be possible to safely include all features described in this document without risking significant destabilization of the code.

ORACLE

Oracle Utilities Meter Data Management Integration to SAP for Meter Data Unification
and Synchronization Version 11.1 Transfer of Information
Functional Overview

Objectives



—
This session will prepare you to:

- Understand the business functionality covered in this release
- Learn how the integrated features address business needs
- Find additional release information and resources

Agenda



- Software Requirements
- Release Themes
- Market Drivers / Business Need
- Integration Overview
- Business Flow / Business Process
- MDM Application Enhancements
- Additional Resources

Software Requirements



Oracle Utilities Meter Data Management 2.0.1

- Minimum Service Pack 6

SAP for Utilities 6.0.5 with AMI 2.0 Enterprise Services

SOA Suite 11g R1 PS4 (11.1.1.5.0) on Weblogic Server 11gR1 (10.3.5.0) and Oracle Database Version 11gR2

Notes:

- Refer to the Installation Guide for specific edge application patch levels and other details

Release Themes

Product Overview

SAP has published a standard enterprise service bundle for AMI “Advanced Metering Infrastructure” that is also referred to as MDUS “Meter Data Unification and Synchronization” integration. Several MDM software vendors have also developed connectors to SAP using these open interfaces. Oracle’s MDM integration to SAP uses these same services to enable utilities business processes across

Oracle Utilities Meter Data Management (MDM)

+

SAP Customer Relations and Billing (CRB)

A Direct Integration Pack uses Oracle Fusion Middleware between two applications to support defined business processes.



Release Themes

Business Processes

MDUS is a published interface to allow SAP to make use of usage data and AMI capabilities from a unified MDM system. This release supports the following business processes:

- Notify the MDM system of device installations and configurations
- Notify the MDM system of measurement profiles for devices
- Request aggregated usage from time series interval profiles
- Initiate commands based on customer service requests



Release Themes

Oracle Utilities MDM Integration to SAP MDUS 11.1

Enables Next Generation MDM from Oracle with SAP

- Primary information sharing between the applications to enable meter operations, billing, customer service, and demand management
- Helps utilities to keep large volumes of data and grid interactions contained in a system designed for this purpose

Leverages Oracle Fusion Middleware and AIA

- Oracle SOA Suite is the foundation technology for Oracle Application Integration Architecture
- Latest technology automates pre-defined business processes with extension capabilities built into the solution

Maintained and Supported by Oracle

- Lowers risk and total cost of ownership for utilities that run SAP for their enterprise systems

Oracle Utilities Next Generation MDM

MDM V2 Highlights

A **comprehensive Meter Data Management system** that supports and adapts to mission critical business processes and initiatives, like **Smart Grid and Smart Metering**

Reduced total cost of ownership and project risk by providing standard out-of-the-box functionality

Standard bill determinant processes that provide the **most complete and accurate meter-to-bill solution**

Standard bill determinant rules that allow customers **to quickly and easily** build **complex usage transactions**

Standard **aggregation processes** to provide **summarized** data to down-stream systems

A **Customer Information System integration foundation** to reduce the cost of integration

A **360° Device Portal** that provides **advanced navigation and operational analytics** to improve operational efficiency

A system that **scales to support Smart Metering for the largest utilities** in the world



Market Drivers/Business Needs



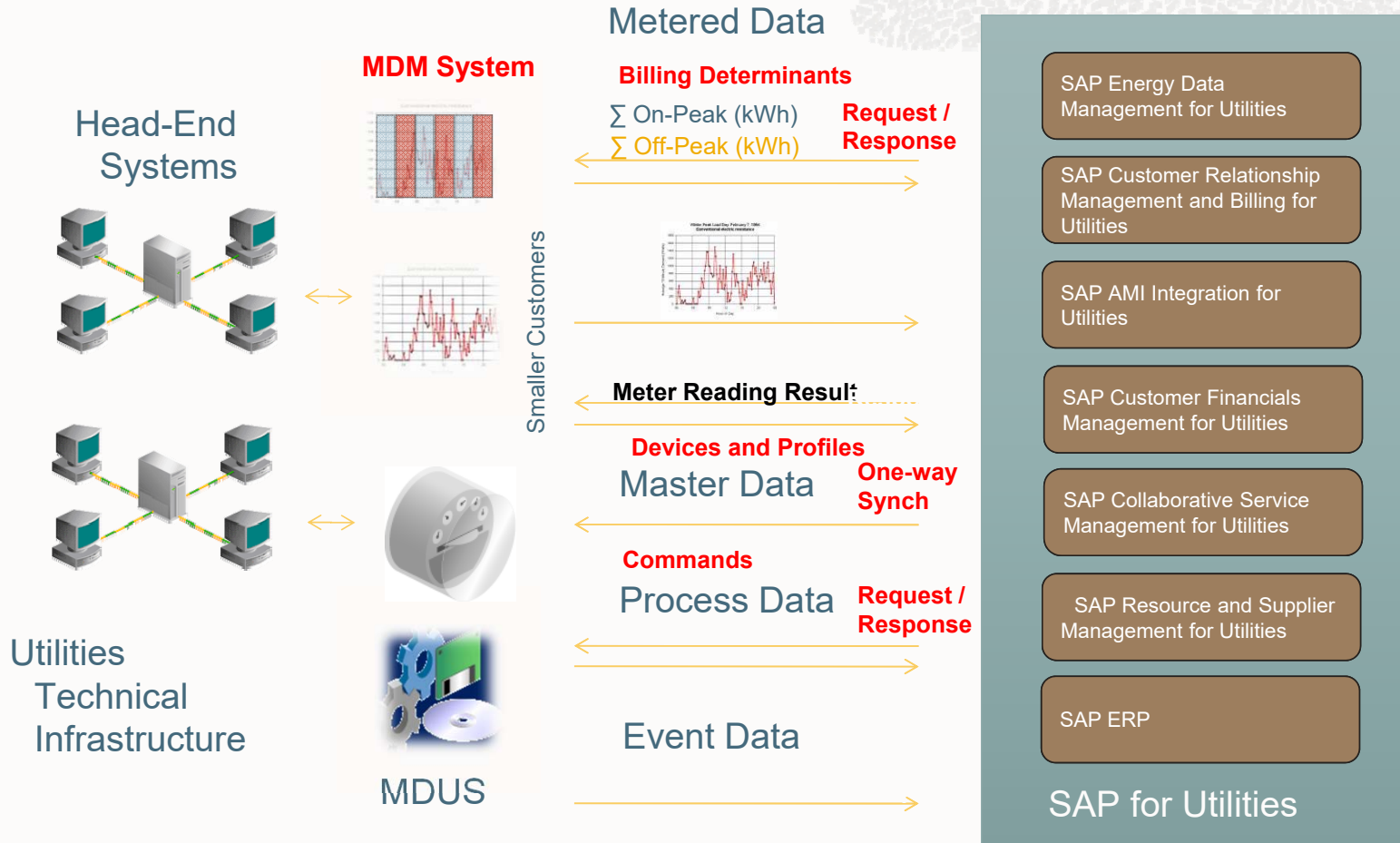
Smart meter and smart grid projects

- SAP has a significant share of the utility billing market, but does not offer a stand-alone MDM system
- Oracle has made significant investments in a next generation MDM application for utilities that is optimized for increasing data volumes and offers supported integration gateways to AMI vendors

Productized integration to enable implementations

- By building and supporting integration to SAP's MDUS interface, Oracle lowers risk and total cost of ownership
- Includes AMI 1.0 and new AMI 2.0 services that were introduced in SAP's latest enhancement pack 5 release for the utilities specific industry solution

MDUS Integration Overview



SAP & MDM: Integration Overview

SAP CRM / IS-U / ERP



Customer Contacts



Billing / Invoices



Customer Contracts



Revenue



Grid Connections



Meter Devices

MDUS Integration

Billing Requests

Technical Master Data

AMI Commands

Oracle Utilities Meter Data Management



Usage Data



VEE Rules

AMI Communication



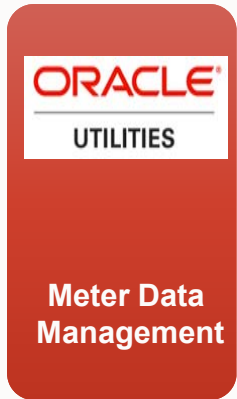
Meter Devices



Smart Grid Gateway



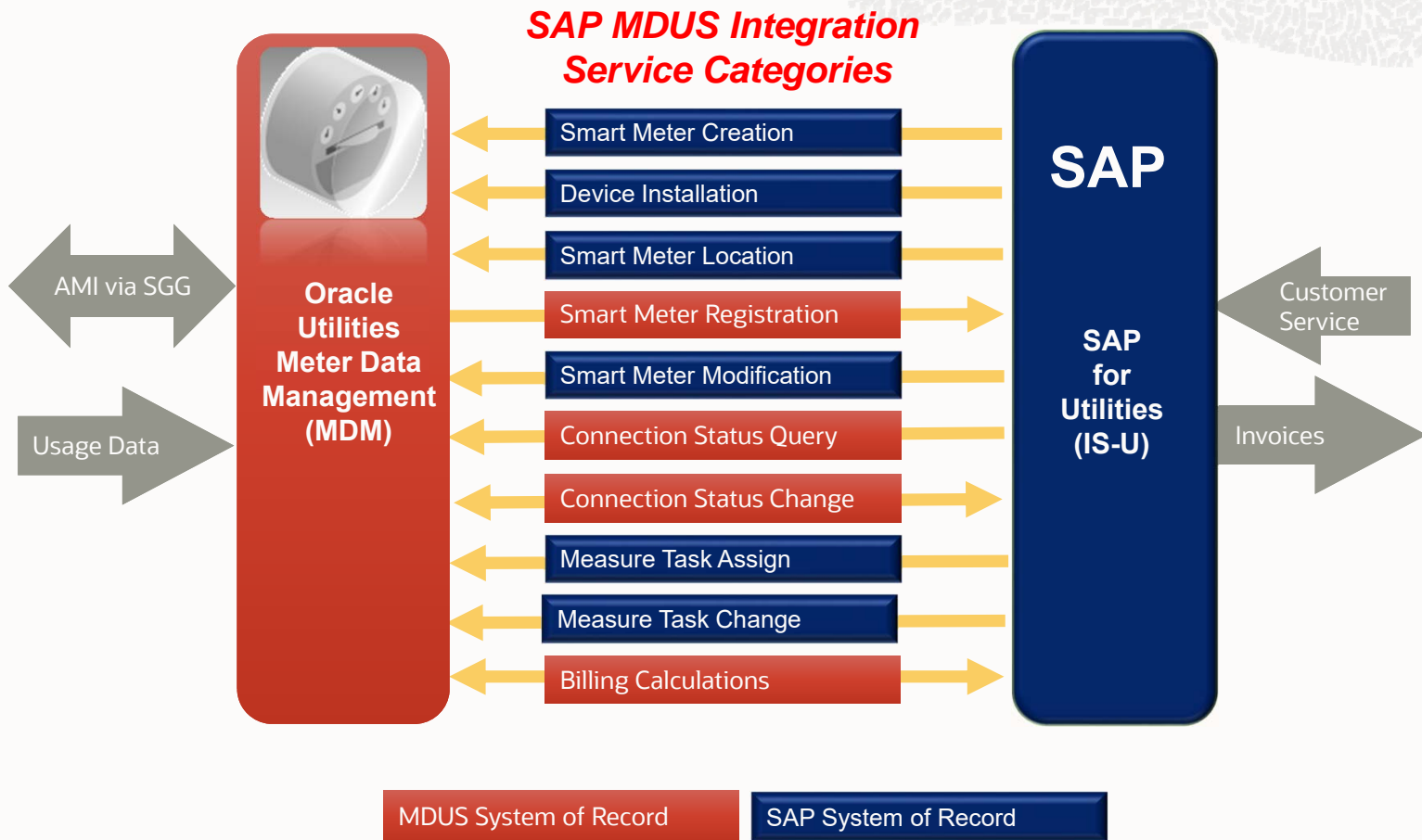
SAP & MDM: System Data Ownership



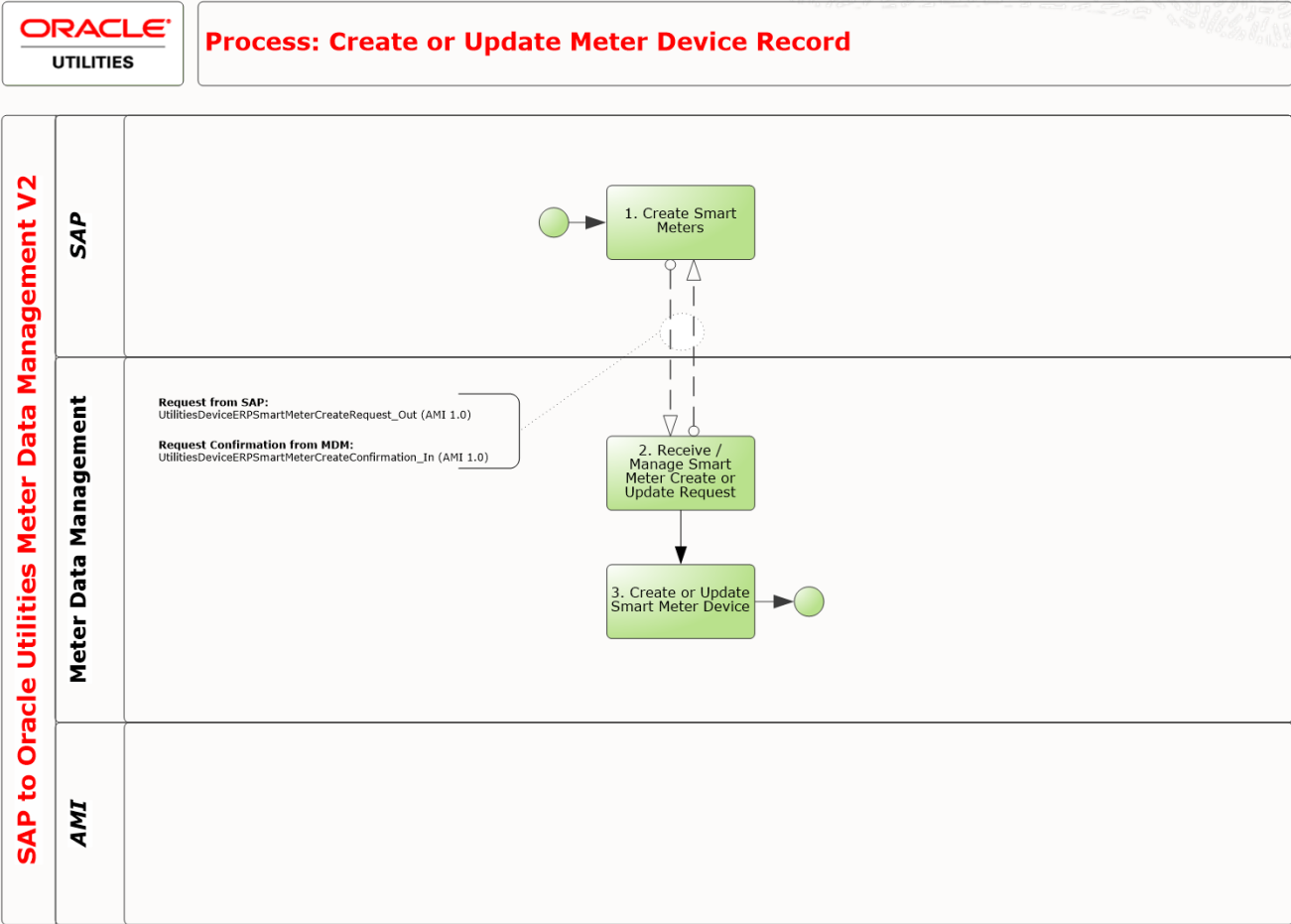
Data Objects	SAP	MDM
Customers, Business Partners	Master	
Billing Contract Accounts	Master	
Service Locations / Connection Points	Master	Child
Meter / Install / Configuration	Master	Child
Billing Installations / Usage Subscriptions	Master	
Rates / Terms of Service	Master	
Billing / Payments	Master	
Head End System Connections	Child	Master
Meter Readings / Interval Usage	Child	Master
VEE Rules		Master
Billing Determinants / Usage (calculation)	Child	Master
Meter Commands	Child	Master



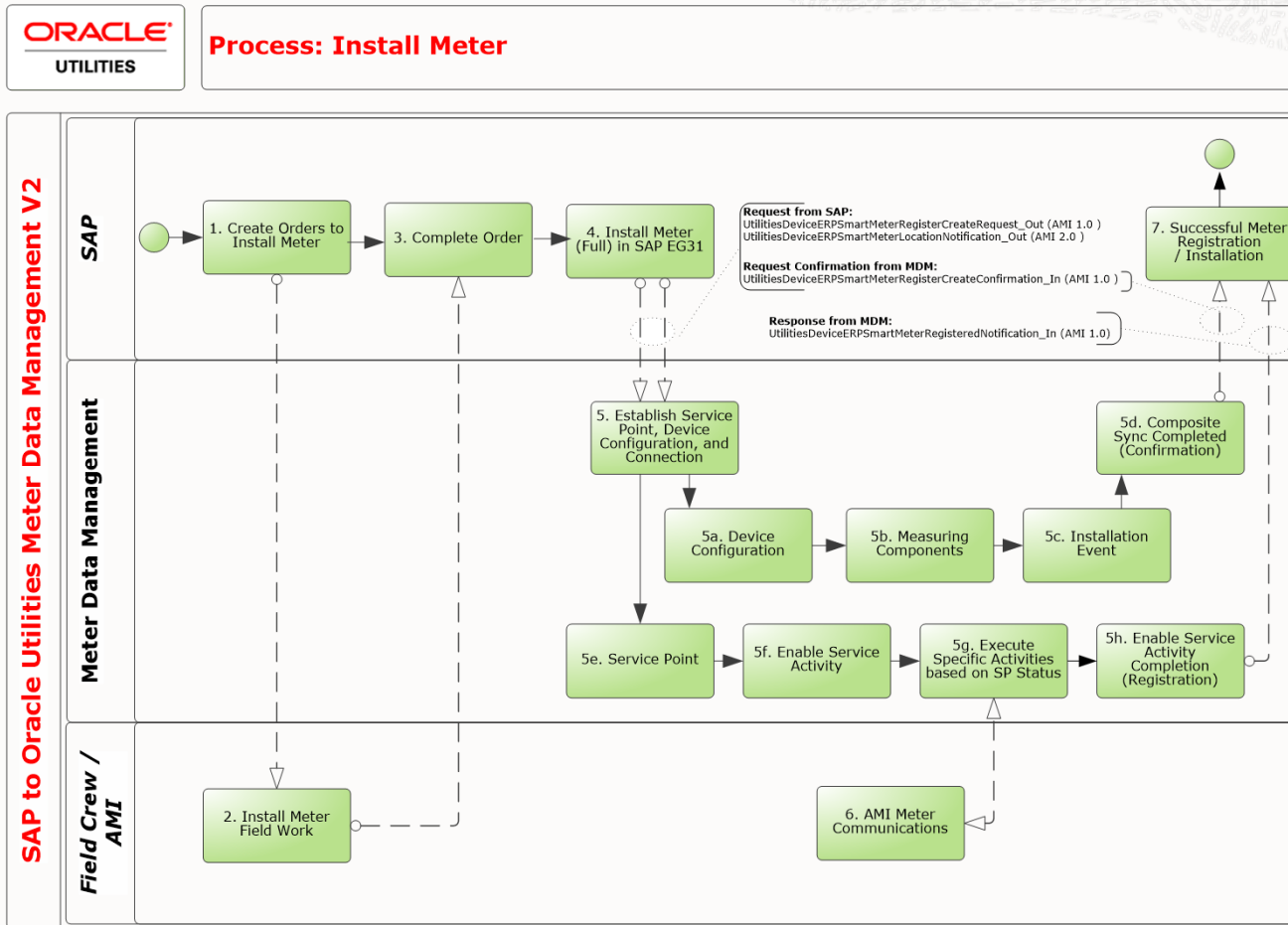
MDUS Integration Flows



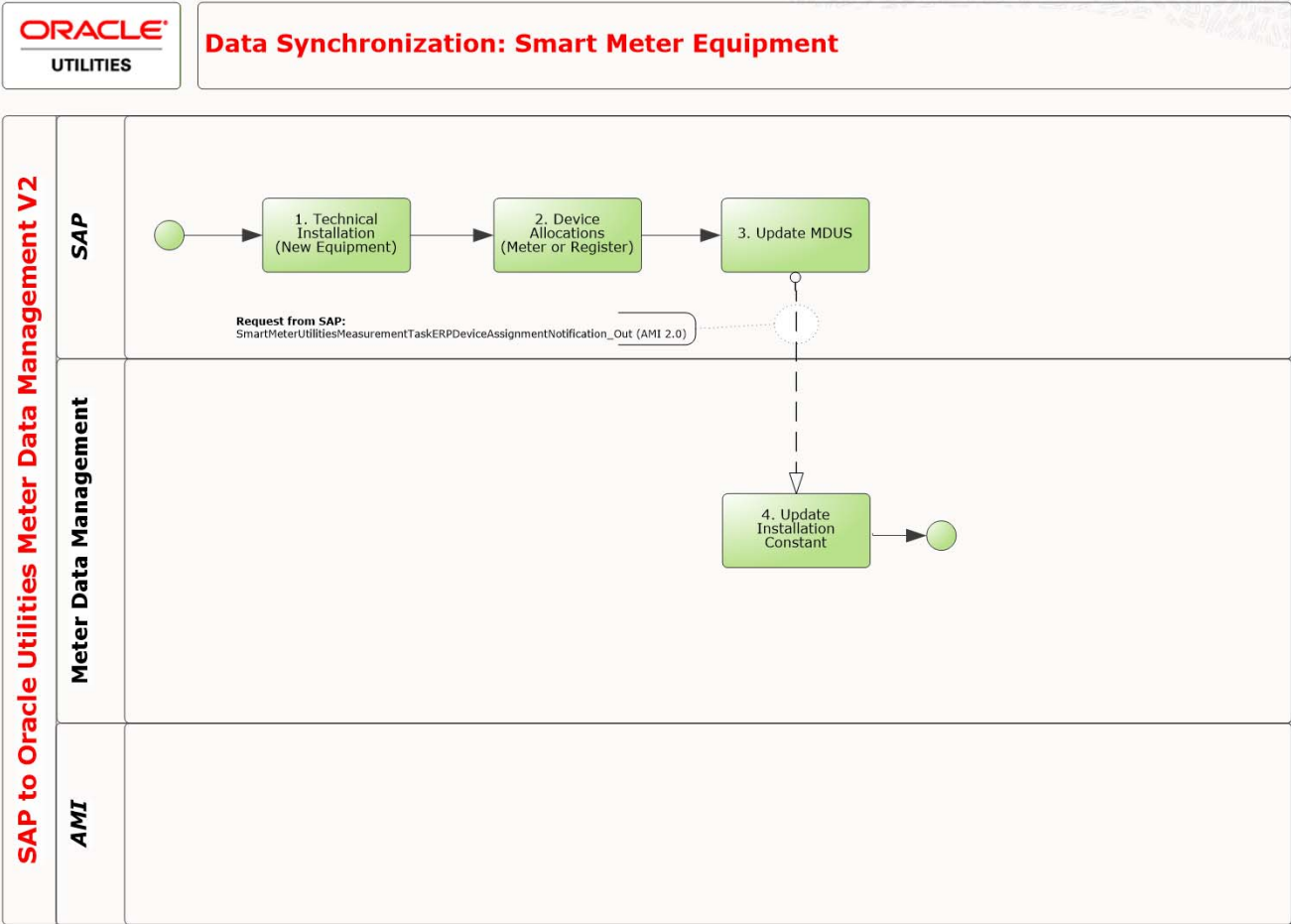
Business Process Flow Overview



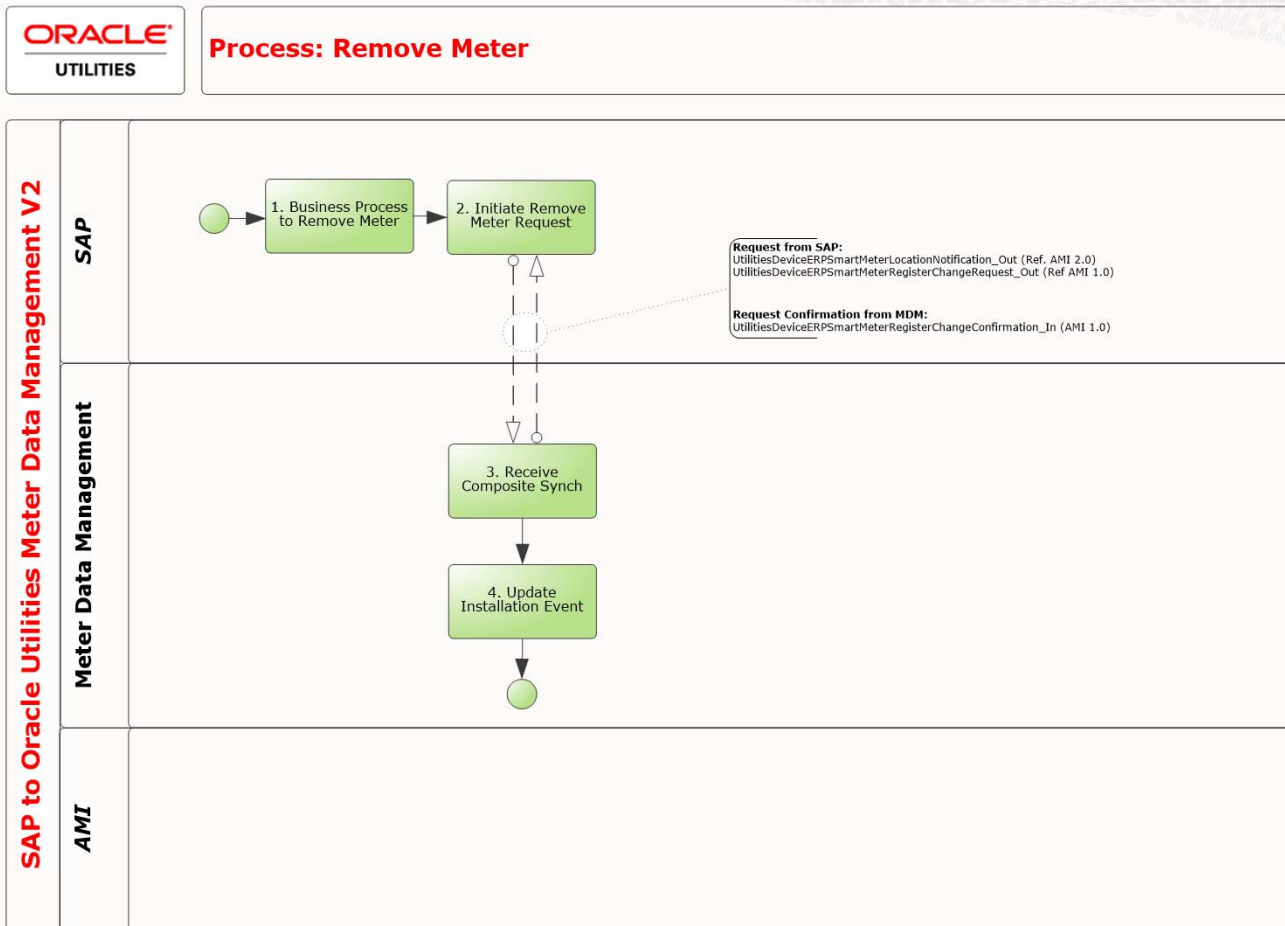
Business Process Flow Overview



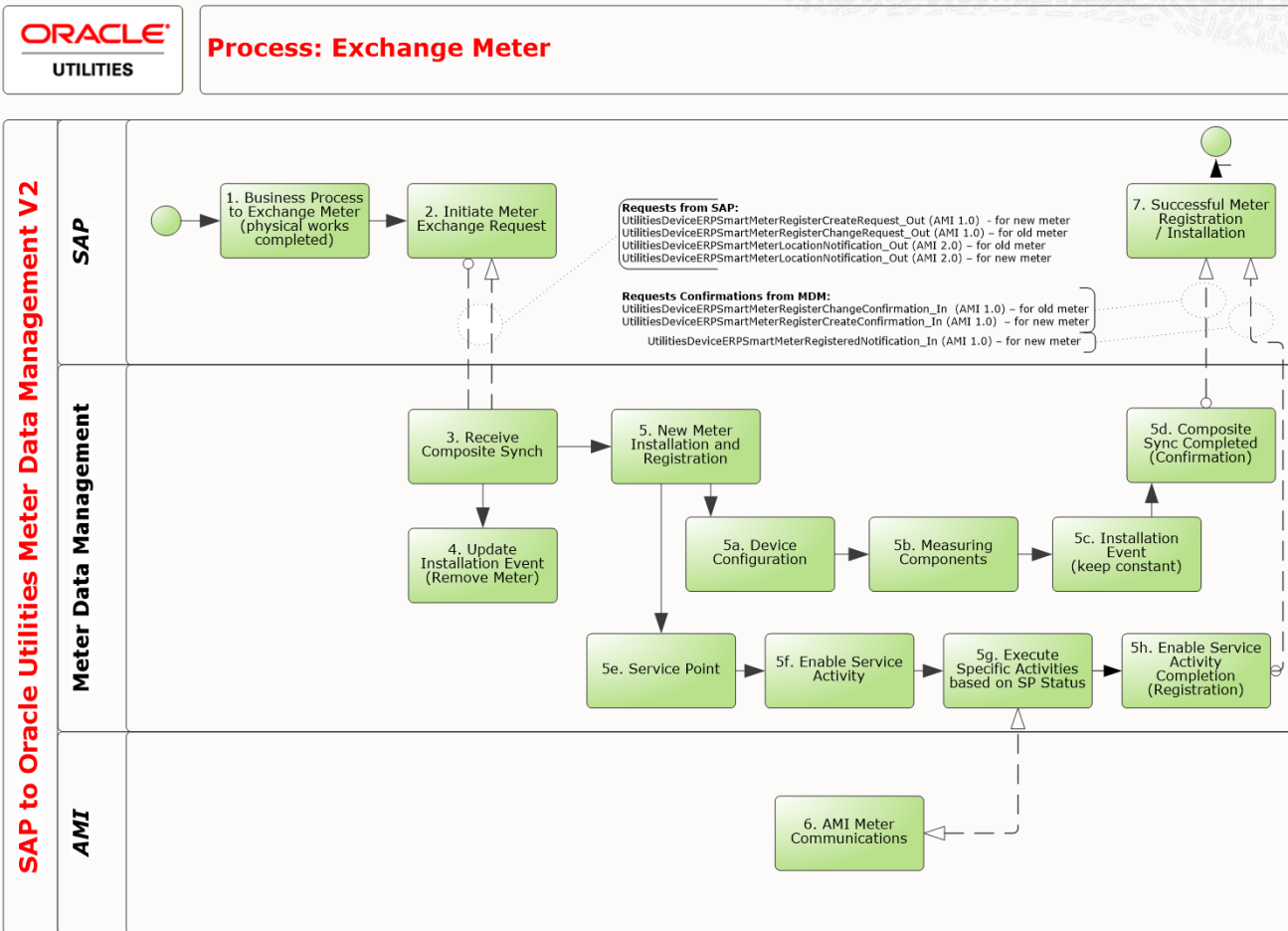
Business Process Flow Overview



Business Process Flow Overview



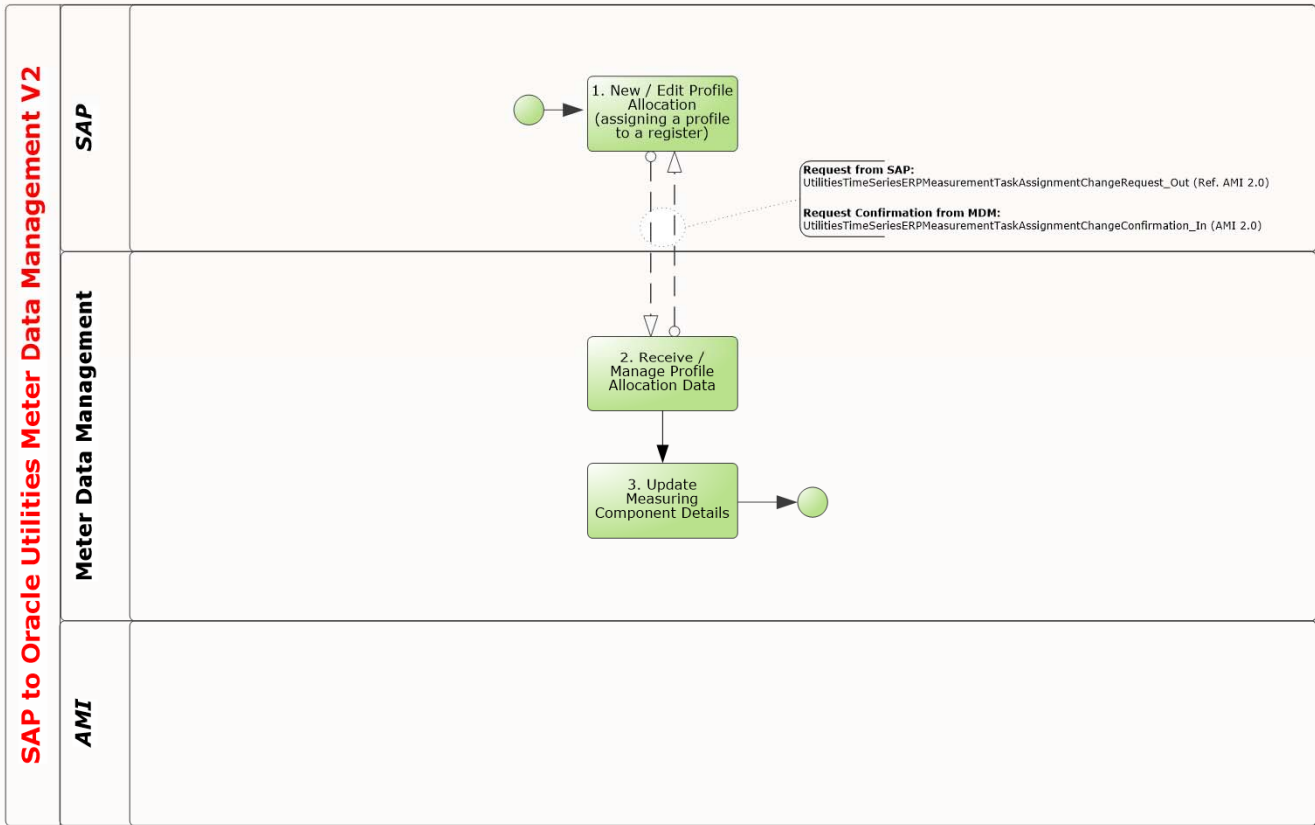
Business Process Flow Overview



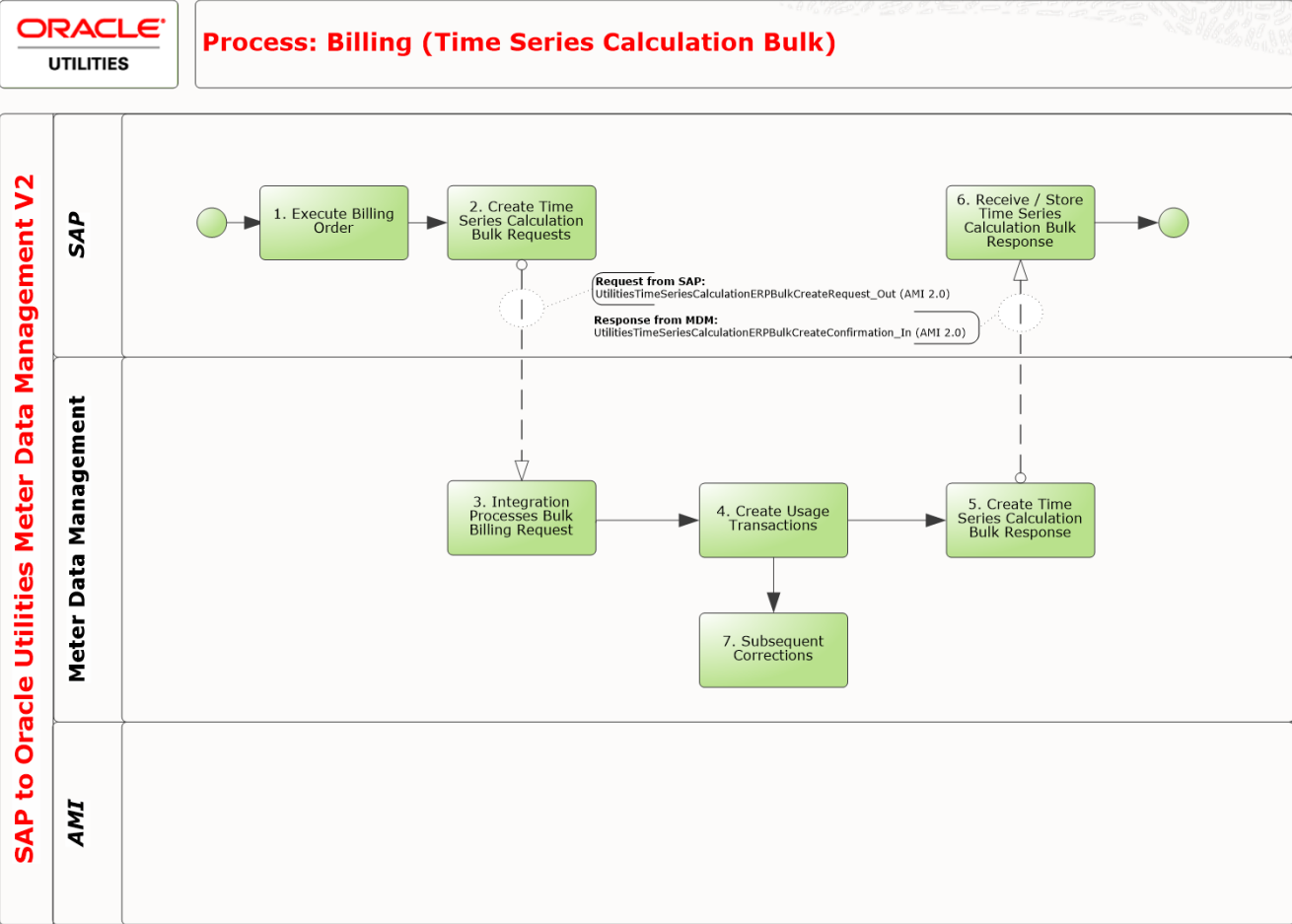
Business Process Flow Overview



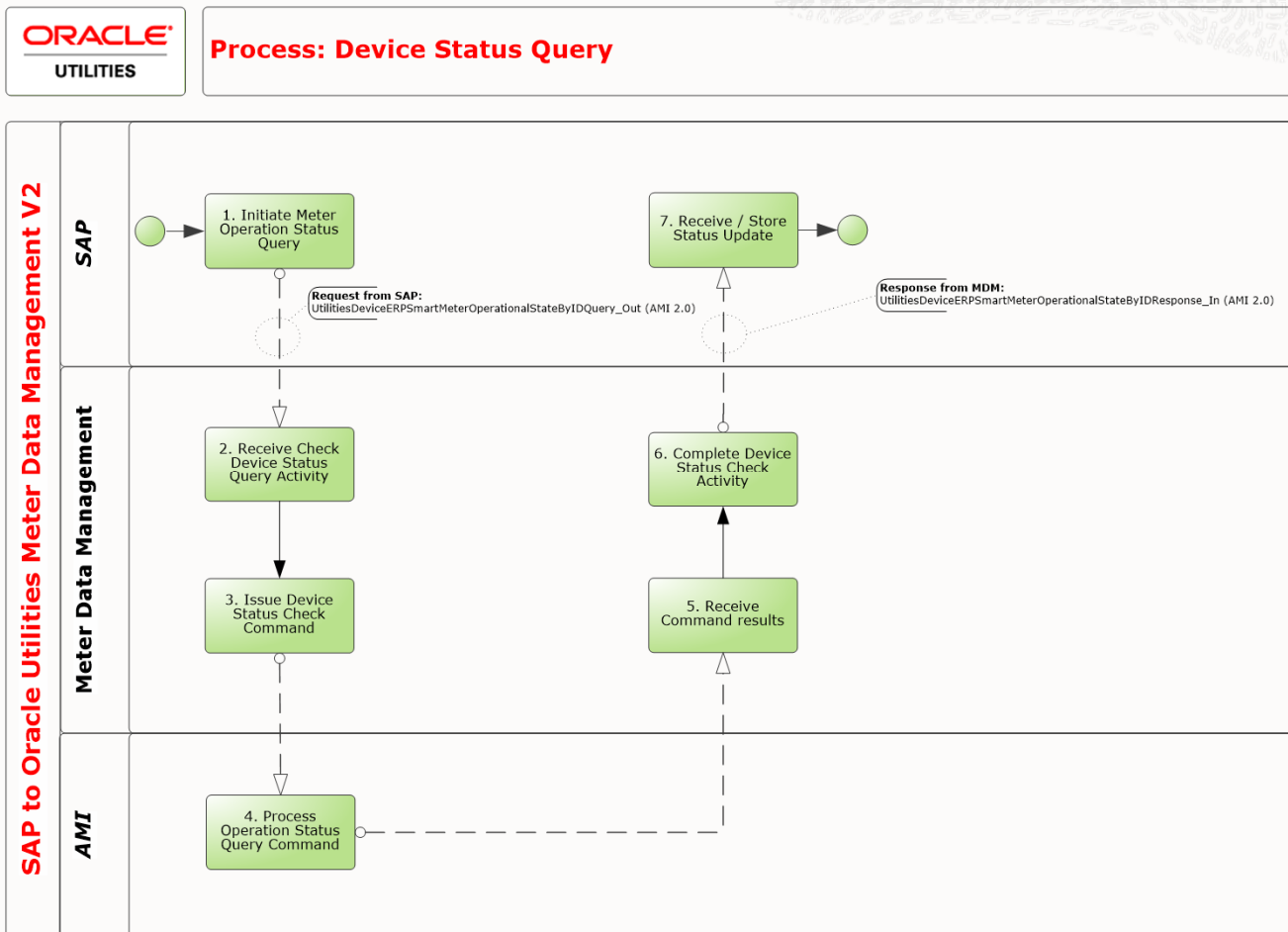
Process: Data Synchronization: Profile Allocation



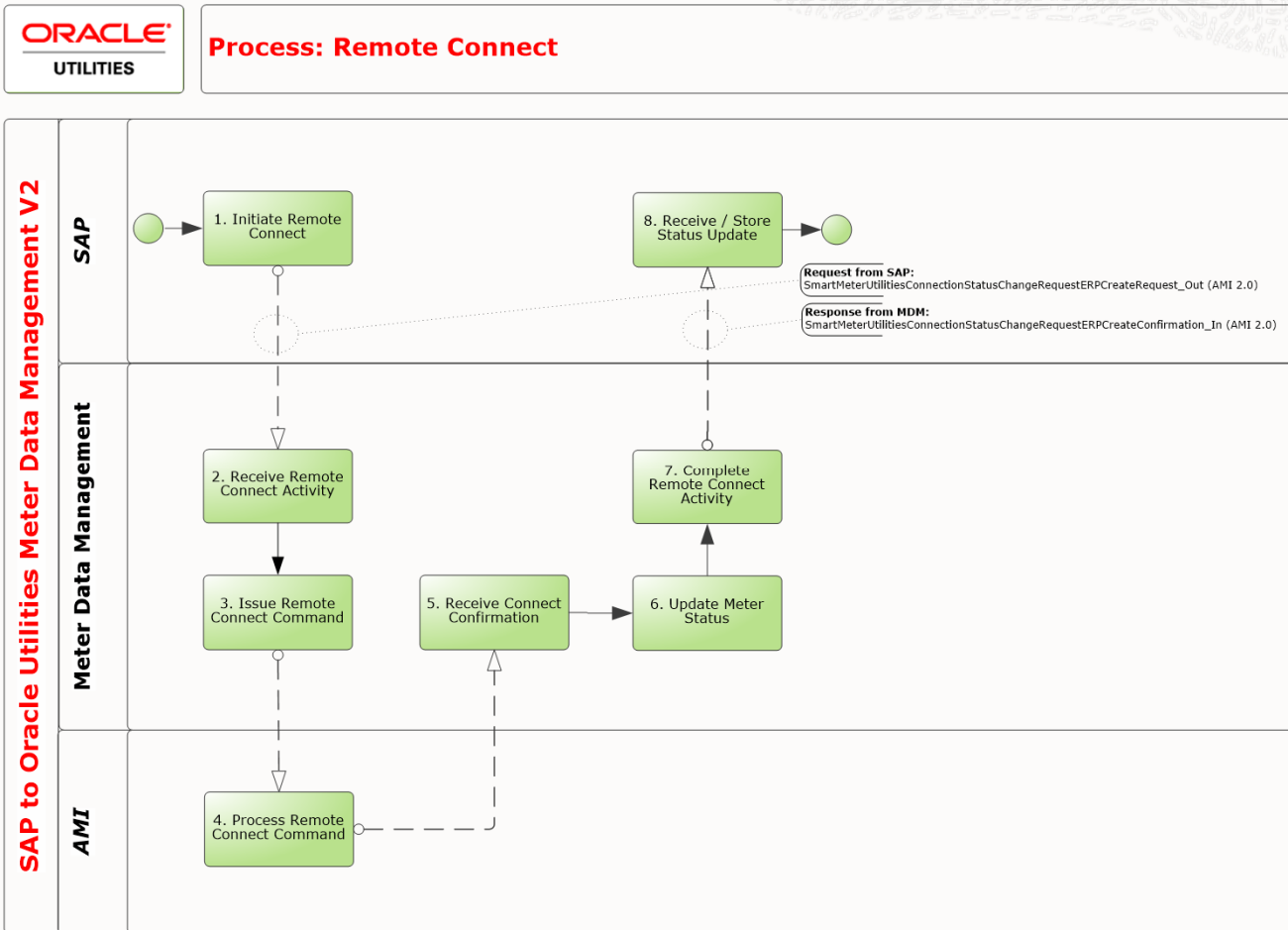
Business Process Flow Overview



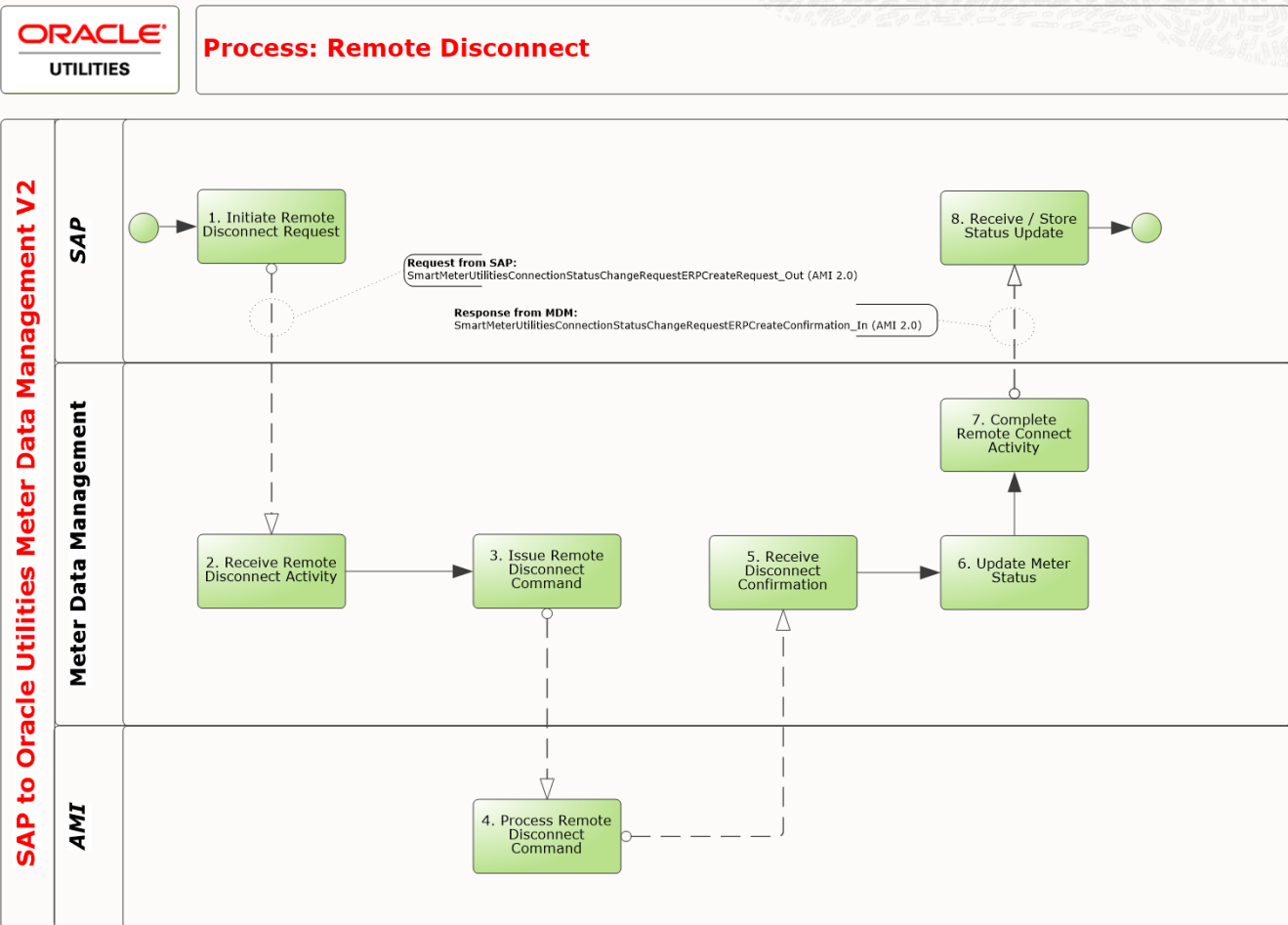
Business Process Flow Overview



Business Process Flow Overview



Business Process Flow Overview



MDM Application Enhancements



New MDM features have been developed that are available as an adapter with this integration product.

Features include new:

- Business Objects (including UI maps and zones)
- Algorithms
- XAI Inbound Services / Outbound Messages
- Master Configuration
- BPA Scripts (to assist with admin configuration)

Additional Resources



Glossary

TERM	DEFINITION
AIA	Oracle Application Integration Architecture
AMI	Advanced Metering Infrastructure
BPEL	Business Process Execution Language
CIS	Customer Information System
CRB	SAP's Customer Relationship and Billing
DB	Database
DI	AIA Direct Integration Pack
ECC	Enterprise Central Component of SAP
EHP	Enhancement Pack for SAP Enterprise Central Component
EM	Enterprise Manager
IS-U	Industry Solution – Utilities: SAP's industry-specific solution
JMS	Java Message Service

Glossary

TERM	DEFINITION
MDM	Meter Data Management
MDUS	Meter Data Unification and Synchronization
SGG	Smart Grid Gateway
SOA	Service Oriented Architecture
SP	Service Point
TOU	Time of Use
UOM	Unit of Measure
UT	Usage Transaction
VEE	Validation, Editing, Estimation
WLS	WebLogic Server



Additional Resources

For more information about Oracle Applications for Utilities

- <http://www.oracle.com/us/industries/utilities/index.html>

For more information about Education

- <http://www.oracle.com/education/index.html>

For more information about Support

- <http://www.oracle.com/support/>

My Oracle Support Login

- <https://support.oracle.com/>

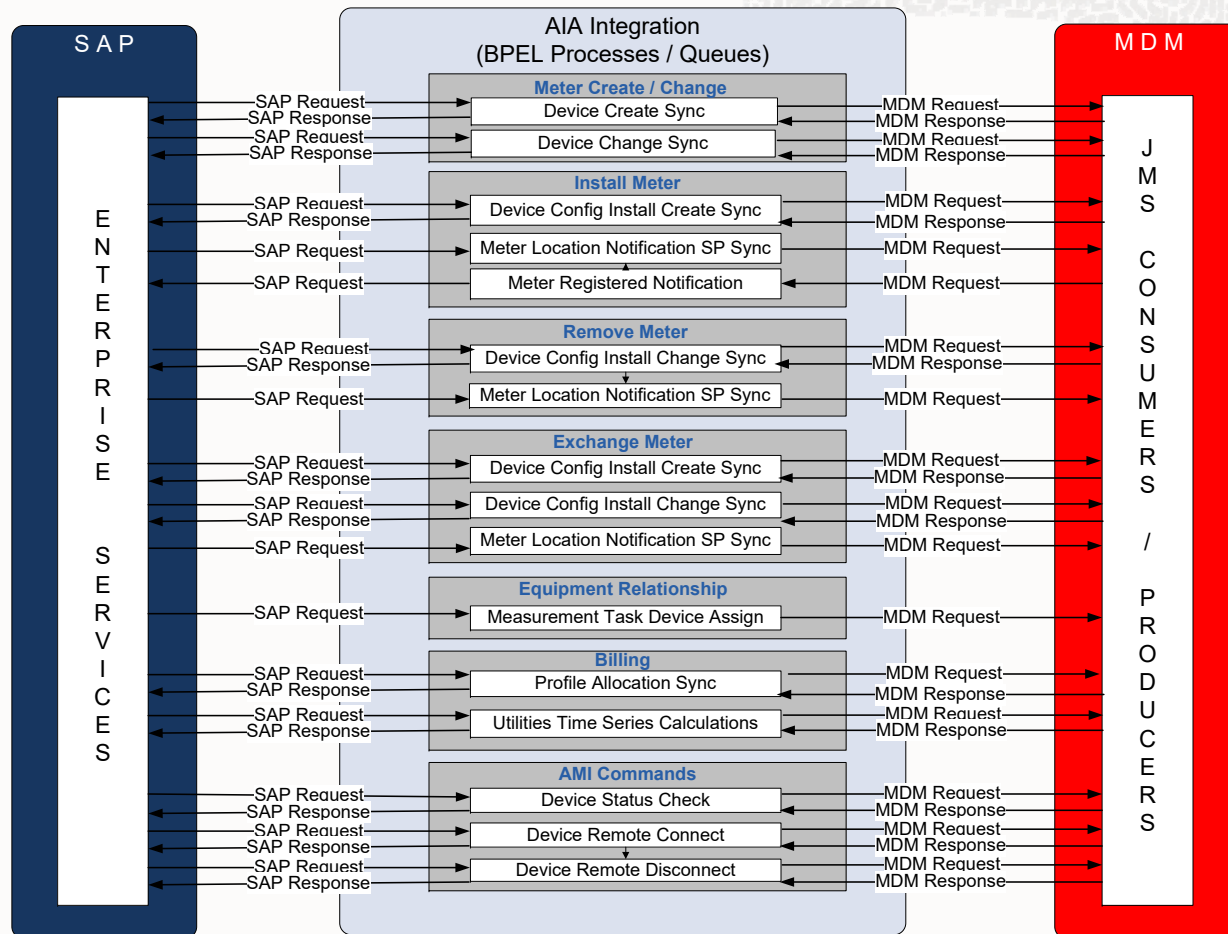
For Oracle Product documentation:

- <http://www.oracle.com/technology/documentation/applications.html>

For SAP published MDUS interfaces

- <http://wiki.sdn.sap.com/wiki/display/ESpackages/Advanced+Meter+Infrastructure>

Appendix: MDUS Integration Services



ORACLE®