Oracle Utilities Meter Data Management Release 2.0.1

Utility Reference Model

5.6.3.2 Manage Device Installation and Commissioning

February 2014

ORACLE

Oracle Utilities Meter Data Management Utility Reference Model 5.6.3.2

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Chapter 1

Overview

This chapter provides a brief description of the Manage Device Installation and Commissioning business process and associated process diagrams. This includes:

- **Brief Description**
  - **Actors/Roles**

Brief Description

Business Process: 5.6.3.2 Manage Device Installation and Commissioning

Process Type: Sub-Process

Parent Process: 5.6.3 MDM Manage Supplies/Devices

Sibling Processes: 5.6.3.1 MDM Manage Device and SP, 5.6.3.3 MDM Manage Device De-installation, Decommissioning and Retirement, 3.3.1.1. Maintain Contact

This process describes how to manage device installation and device commission in MDM. Device installation and Device commissioning can be initated by Authorized User using user interface or automatically using interface with a 3rd party application. The process assumes that the device and service point have already been setup in MDM - refer to Manage Device and Manage SP process for more information. Installation event is the process of connecting the device to the service point. For those smart meters and head-end systems that are part of Oracle Smart Grid Gateway, the process commissioning the device with the head-end system including the ability for the device to communicate (take commands) between the two systems (MDM and the head-end system).

Installation events capture the history of the devices that have been installed at a service point. In technical terms, installation events (or install events) link a specific device configuration to a service point. While a device is installed at a service point, it may be turned off (and back on again). The installation event that records the original installation date and time also records the dates and times when the device has been turned on and off. When a device is removed, the original installation event is updated with the removal date and time.

Device Commission is a command issued to establish communication between a device and the head-end system.

Commissioning of a Device is reserved for Smart Meters. A Commissioned device is an active device found on the smart grid. Arming status is set (either Armed or blank) and the On/Off history is created. Device Commissioning is a part of the Install Event process.

> **Note**: Current document represents complete process for Device Commissioning .The MDM as an application provides ability to initiate command, orchestrate processing and record results. However the actual communication with any Head End System requires integration with Head End system(s) that could be implemented by using Oracle SGG or any other similar software or custom development.

Actors/Roles

The Manage Device Installation and Commissioning business process involves the following actors and roles.

- **Third Party CIS Application:** The system that initiated the request to add or update a contact
- **MDM Authorized User:** An authorized user of the Meter Data Management application
- **MDM Application:** The Meter Data Management system

Chapter 2

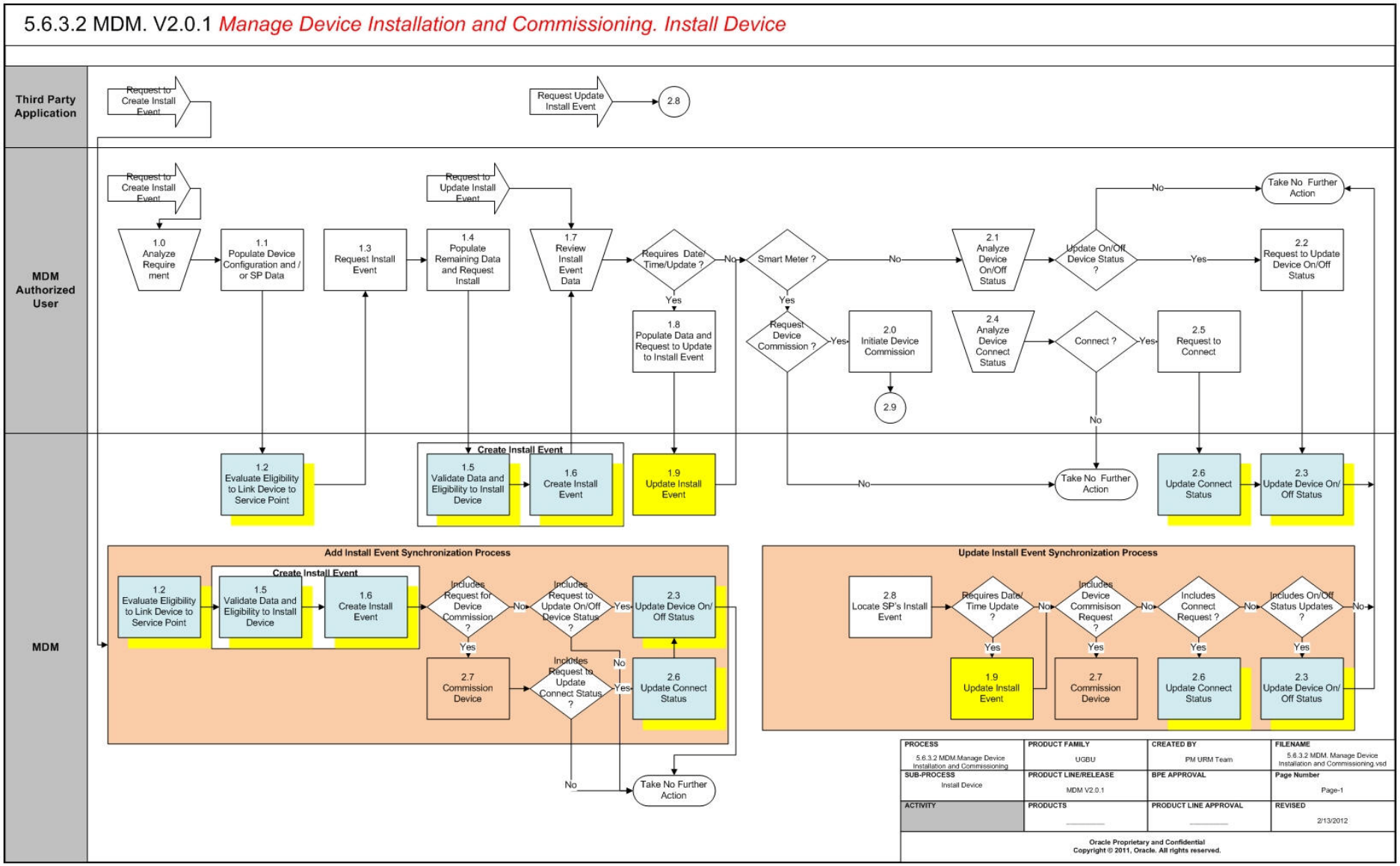
Detailed Business Process Model Description

This chapter provides a detailed description of the Manage Device Installation and Commissioning business process. This includes:

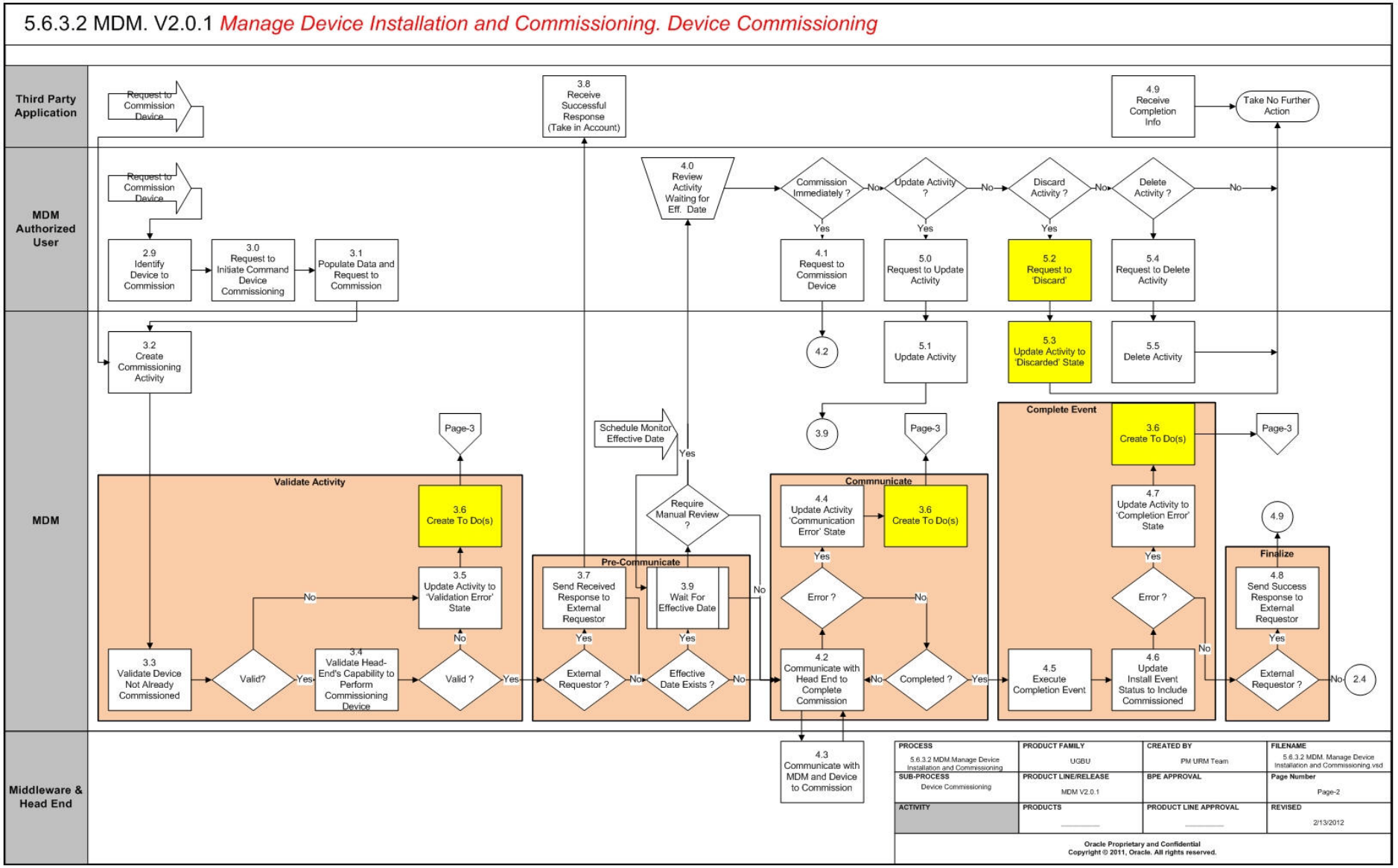
- **Business Process Diagrams**
  - **Manage Device Installation and Commissioning Page 1**
  - **Manage Device Installation and Commissioning Page 2**
  - **Manage Device Installation and Commissioning Page 3**
- **Manage Device Installation and Commissioning Description**
- **Business Objects Lifecycle**
  - **D1-SmartMeterInstallEvent**
  - **D1-ManualMeterInstallEvent**
  - **D1-DeviceCommission**
- **Related Training**

Business Process Diagrams

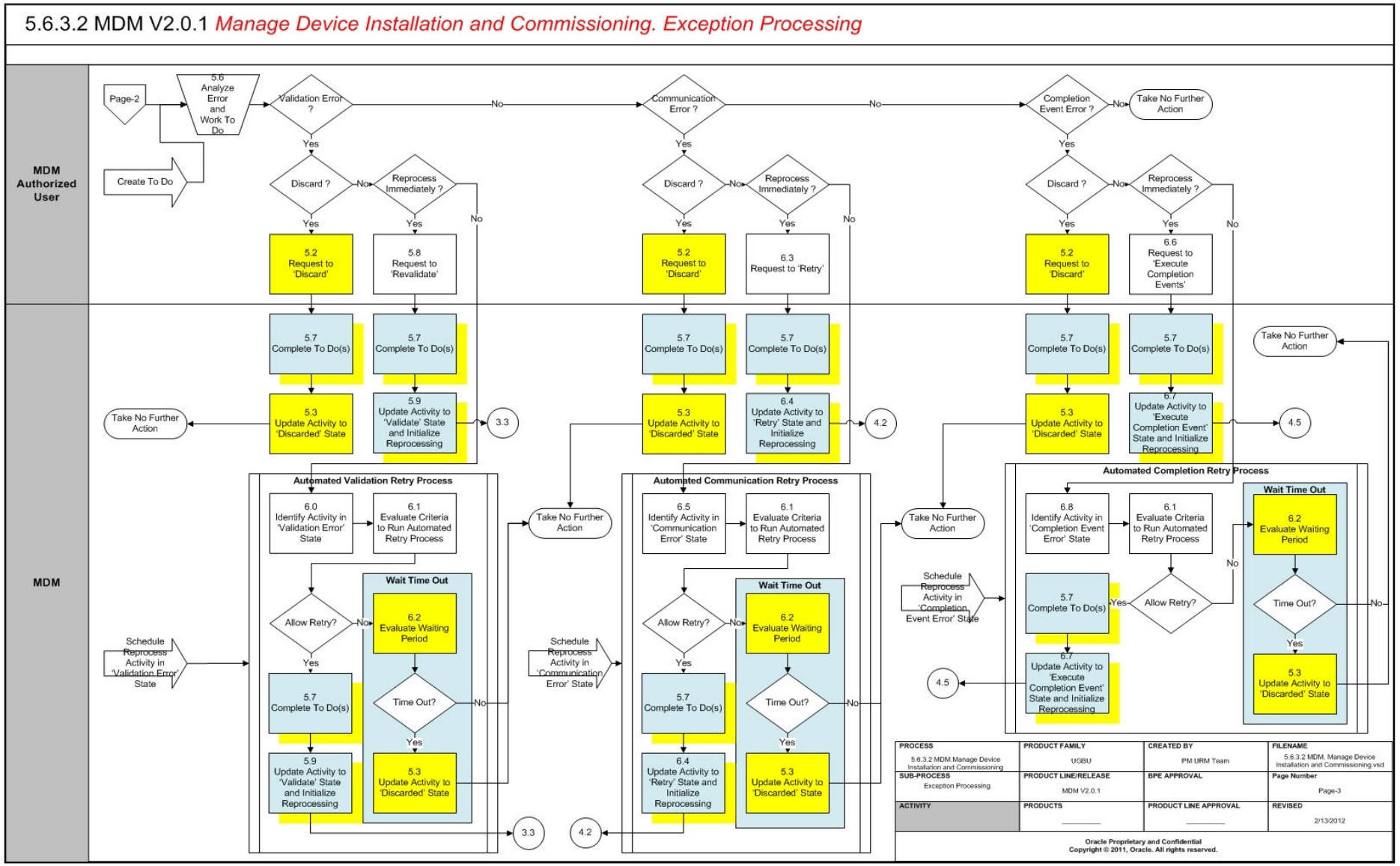
Manage Device Installation and Commissioning Page 1



Manage Device Installation and Commissioning Page 2



Manage Device Installation and Commissioning Page 3



Manage Device Installation and Commissioning Description

This section includes detailed descriptions of the steps involved in the Manage Device Installation and Commissioning business process, including:

- **1.0 Analyze Requirement**
- **1.1 Populate Device Configuration and /or SP Data**
- **1.2 Evaluate Eligibility to Link Device to Service Point**
- **1.3 Request Install Event**
- **1.4 Populate Remaining Data and Request Install**
- **1.5 Validate Data and Eligibility to Install Device**
- **1.6 Create Install Event**
- **1.7 Review Install Event Data**
- **1.8 Populate Data and Request to Update to Install Event**
- **1.9 Update Install Event**
- **2.0 Initiate Device Commission**
- **2.1 Analyze Device On/Off Status**
- **2.2 Request to Update Device On/Off Status**
- **2.3 Update Device On/Off Status**
- **2.4 Analyze Device Connect Status**
- **2.5 Request to Connect**
- **2.6 Update Connect Status**
- **2.7 Commission Device**
- **2.8 Locate SP's Install Event**
- **2.9 Identify Device to Commission**
- **3.0 Request to Initiate Command Device Commissioning**
- **3.1 Populate Data and Request to Commission**
- **3.2 Create Commissioning Activity**
- **3.3 Validate Device Not Already Commissioned**
- **3.4 Validate Head-End's Capability to Perform Commissioning Device**
- **3.5 Update Activity to 'Validation Error' State**
- **3.6 Create To Do(s)**
- **3.7 Send Received Response to External Requestor**
- **3.8 Receive Successful Response (Take in Account)**
- **3.9 Wait For Effective Date**
- **4.0 Review Activity Waiting for Eff. Date**
- **4.1 Request to Commission Device**
- **4.2 Communicate with Head End to Complete Commission**
- **4.3 Communicate with MDM and Device to Commission**
- **4.4 Update Activity 'Communication Error' State**

- **4.5 Execute Completion Event**
- **4.6 Update Install Event Status to Include Commissioned**
- **4.7 Update Activity to 'Completion Error' State**
- **4.8 Send Success Response to External Requestor**
- **4.9 Receive Completion Info**
- **5.0 Request to Update Activity**
- **5.1 Update Activity**
- **5.2 Request to 'Discard'**
- **5.3 Update Activity to 'Discarded' State**
- **5.4 Request to Delete Activity**
- **5.5 Delete Activity**
- **5.6 Analyze Error and Work To Do**
- **5.7 Complete To Do(s)**
- **5.8 Request to 'Revalidate'**
- **5.9 Update Activity to 'Validate' State and Initialize Reprocessing**
- **6.0 Identify Activity in 'Validation Error' State**
- **6.1 Evaluate Criteria to Run Automated Retry Process**
- **6.2 Evaluate Waiting Period**
- **6.3 Request to 'Retry'**
- **6.4 Update Activity to 'Retry' State and Initialize Reprocessing**
- **6.5 Identify Activity in 'Communication Error' State**
- **6.6 Request to 'Execute Completion Events'**
- **6.7 Update Activity to 'Execute Completion Event' State and Initialize Reprocessing**
- **6.8 Identify Activity in 'Completion Event Error' State**

1.0 Analyze Requirement

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: When creating a new device online, the authorized user gathers all the required attributes for adding the device.

1.1 Populate Device Configuration and /or SP Data

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: The authorized user populates and/or updates the maintenance object with the analyzed service point requirements.

Note: Contact on the SP for smart meters is important when the device has arming required set to "arming required".

1.2 Evaluate Eligibility to Link Device to Service Point

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: MDM checks to see if the meter type and service point type match.

Business Object	Available Algorithms
D1-SmartMeterInstallEvent **D1-ManualMeterInstallEvent**	D1-DEVCFGVAL (Validate the Device Configuration)

Note: There is a validation to check if the meter type and the service point type match.

1.3 Request Install Event

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: MDM Authorized makes a request by clicking "Save" - which is the actual request to create the Service Point.

1.4 Populate Remaining Data and Request Install

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: The MDM Authorized User enters the remaining install event data and clicks "Save" - which is the actual request to create install event.

1.5 Validate Data and Eligibility to Install Device

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Create Install Event

Actor/Role: MDM

Description: MDM runs several validations to check the device and service point.

Business Object	Available Algorithms
D1-SmartMeterInstallEvent **D1-ManualMeterInstallEvent**	D1-DEVCFGVAL (Validate the Device Configuration)

Note: Validations include the following:

- Check if Device Configuration is installed at another Service Point for the same install date/time

- Determine if any other install event exists for the SP, where the install date/time lies between the current install date/time and removal date/time.
- Device Configuration has "Active" status
- Device Configuration Install on Another SP

1.6 Create Install Event

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Create Install Event

Actor/Role: MDM

Description: MDM creates the install event.

Business Object	Available Algorithms
D1-SmartMeterInstallEvent **D1-ManualMeterInstallEvent**	D1-CREINSEVT (Create Install Event)

1.7 Review Install Event Data

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: The MDM Authorized User reviews the data after the install event has been added.

1.8 Populate Data and Request to Update to Install Event

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: The MDM Authorized User enters the required data and save the data to update the install event.

1.9 Update Install Event

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: MDM updates the install event.

Business Objects
D1-SmartMeterInstallEvent **D1-ManualMeterInstallEvent**

2.0 Initiate Device Commission

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: The MDM Authorized User selects the Commission button to trigger the device commission request in MDM.

2.1 Analyze Device On/Off Status

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: The MDM Authorized User determines the On/Off status.

2.2 Request to Update Device On/Off Status

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: The MDM Authorized User makes the request to update the status.

2.3 Update Device On/Off Status

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: The status is updated in MDM to the request.

Business Object	Available Algorithms
D1-SmartMeterInstallEvent **D1-ManualMeterInstallEvent**	D1-CRONOFHIS (Create On/Off History Based on Status)

2.4 Analyze Device Connect Status

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: The MDM Authorized User determines the Connect status.

2.5 Request to Connect

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: The MDM Authorized User makes the request to update the status.

2.6 Update Connect Status

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: The status is updated in MDM to the request.

Business Object	Available Algorithms
D1-ConnectDevice	D1-CONNDEV (Connect Device)

Note: The request to update the Connect Status also updated the On/Off status for a Smart Meter

2.7 Commission Device

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Add Install Event Synchronization Process

Actor/Role: MDM

Description: On the Install Event, the request for commission is initiated. This then allows the user to view the connect button.

2.8 Locate SP's Install Event

See **Manage Device Installation and Commissioning Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Update Install Event Synchronization Process

Actor/Role: MDM

Description: During the sync process, MDM looks for the Maintenance Object (MO) that needs to be updated.

2.9 Identify Device to Commission

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: MDM Authorized User analyzes the requirements and identifies the device to be commissioned.

3.0 Request to Initiate Command Device Commissioning

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: The MDM User will select the Device Commissioning command and populate the data acquired during analyzing the requirements.

3.1 Populate Data and Request to Commission

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: MDM Authorized User populates the needed data based on analysis and selects the appropriate activity to make a request for device commission.

3.2 Create Commissioning Activity

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: MDM creates the maintenance object with the data provided. When the activity is created, MDM creates an Activity ID.

Business Objects
D1-DeviceCommission

3.3 Validate Device Not Already Commissioned

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Validate Activity

Actor/Role: MDM

Description: MDM checks whether the device referenced in the current commissioning request (activity) has already been commissioned.

Business Object	Available Algorithms
D1-DeviceCommission	D1-VALDVCNAC (Validate Device Not Already Commissioned)

3.4 Validate Head-End's Capability to Perform Commissioning Device

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Validate Activity

Actor/Role: MDM

Description: MDM checks to ensure that the head-end (AMI) system has the capability to support the command request.

Business Object	Available Algorithms
D1-DeviceCommission	D1-VHCPCOMMS (Validate Head-End's Capability to Commission Device)

3.5 Update Activity to 'Validation Error' State

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Validate Activity

Actor/Role: MDM

Description: MDM updates the status to 'Validation Error' if any of the validations fail.

Business Objects
D1-DeviceCommission

3.6 Create To Do(s)

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Validate Activity

Actor/Role: MDM

Description: MDM attempts to create a To Do entry using the To Do type and role specified by the first and second algorithm parameters.

Business Object	Available Algorithms
D1-DeviceCommission	D1-CTDEBOE (Create To Do Entry for BO in Error)

3.7 Send Received Response to External Requestor

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Pre-communicate

Actor/Role: MDM

Description: MDM creates the message and sends Response to the External Requestor .

Business Object	Available Algorithms
D1-DeviceCommission	D1-RRER (Send Received Response to External Requester)

3.8 Receive Successful Response (Take in Account)

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: Third Party Requestor

Description: The 3rd Party request receives a response from MDM in regards to the initial request.

3.9 Wait For Effective Date

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Pre-communicate

Actor/Role: MDM

Description: MDM transitions the activity to a state configured with a transition condition of F1OK when the activity's effective date time is reached (process date time >= effective date time). If the activity's effective date time is not provided, the application initiates execution of the command and transitions - the activity to a state configured with a transition condition of F1OK without waiting.

Business Object	Available Algorithms
D1-DeviceCommission	D1-WAITEFFDT (Wait for Effective Date)

4.0 Review Activity Waiting for Eff. Date

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Validate Activity

Actor/Role: MDM Authorized User

Description: The MDM Authorized User reviews the data after the activity has been created.

Business Objects
D1-DeviceCommission

4.1 Request to Commission Device

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: The MDM Authorized User makes the request to commission the device.

Business Objects
D1-DeviceCommission

4.2 Communicate with Head End to Complete Commission

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Communicate

Actor/Role: MDM

Description: The application creates Outbound communication.

Business Object	Available Algorithms
D1-DeviceCommission	D1-CMSOBCOMM (Commissioning Outbound Communication Creation)

4.3 Communicate with MDM and Device to Commission

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: Middleware & Head-End

Description: Head-End communicates with MDM via Middleware on one-side and with Device on the other side to communicate the Commissioning Instructions/Information between MDM and Devices.

Business Objects
D1-DeviceCommission

4.4 Update Activity 'Communication Error' State

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Communicate

Actor/Role: MDM

Description: MDM send a response to the initiator of the device commission request.

Business Object	Available Algorithms
D1-DeviceCommission	D1-RBOE (Retry BO in Error)

4.5 Execute Completion Event

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Complete Event

Actor/Role: MDM

Description: MDM transitions all completion events associated to the current activity Business Object (BO) to their executed state.

Business Object	Available Algorithms
D1-DeviceCommission	D1-EXCMPEVTS (Execute Completion Events)

4.6 Update Install Event Status to Include Commissioned

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Complete Event

Actor/Role: MDM

Description: MDM updates the Install Event to have a status of Commission.

Business Objects
D1-SmartMeterInstallEvent

4.7 Update Activity to 'Completion Error' State

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Complete Event

Actor/Role: MDM

Description: MDM updates the Install Event to have a status of Commission.

Business Object	Available Algorithms
D1-DeviceCommission	D1-CTDEBOE (Create To Do Entry for BO in Error)

4.8 Send Success Response to External Requestor

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Finalize

Actor/Role: MDM

Description: MDM sends a response to the initiator of the device commission request.

Business Object	Available Algorithms
D1-DeviceCommission	D1-SRER (Send Success Response to External Requester)

4.9 Receive Completion Info

See **Manage Device Installation and Commissioning Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: Third Party Requestor

Description: The Third Party system receives the data provided by MDM.

5.0 Request to Update Activity

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: The MDM Authorized User makes the request to update an existing device commission activity.

Business Objects
D1-DeviceCommission

5.1 Update Activity

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: MDM accepts the changes made by the user for the device commission.

Business Objects
D1-DeviceCommission

5.2 Request to 'Discard'

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: MDM Authorized User when reviews the Activity in current state and decides that the Activity cannot be used, can manually make a request to discard it.

Business Objects
D1-DeviceCommission

5.3 Update Activity to 'Discarded' State

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: MDM transitions Activity to 'Discarded' state indicating that it cannot be used further. However it remains in the system.

Business Object	Available Algorithms
D1-DeviceCommission	D1-COOC (Cancel Outstanding Outbound Communication) D1-FRER (Send Fail Response to External Requester)

5.4 Request to Delete Activity

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: The MDM Authorized User makes the request to delete an existing device commission activity.

5.5 Delete Activity

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: MDM updates removes activity that was created.

Business Objects
D1-DeviceCommission

5.6 Analyze Error and Work To Do

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: MDM Authorized User analyzes the error logged and respective 'To Do' created to determine the corrective action. User performs work to resolve the error.

Business Objects
D1-DeviceCommission

5.7 Complete To Do(s)

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: MDM find all non-completed 'To Do' entries and completes them before reprocessing.

Business Object	Available Algorithms
D1-DeviceCommission	D1-GTDCBO (Generic To Do Completion for BOs)

5.8 Request to 'Revalidate'

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: When the Activity is in 'Validation Error' state and MDM Authorized User has corrected the error, can manually make request to 'Revalidate'.

Business Objects
D1-DeviceCommission

5.9 Update Activity to 'Validate' State and Initialize Reprocessing

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: MDM transitions the Activity to 'Revalidate' state and initializes reprocessing.

Business Object	Available Algorithms
D1-DeviceCommission	D1-RBOE (Retry BO in Error)

6.0 Identify Activity in 'Validation Error' State

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: MDM identifies all Device Commission Activities in 'Validation Error' state.

Customizable Process
D1-CRERR (Command Request Error - Retry)

Business Object	Available Algorithms
D1-DeviceCommission	D1-RBOE (Retry BO in Error)

6.1 Evaluate Criteria to Run Automated Retry Process

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: Batch process is configured for this automated retry process. Batch parameters govern whether the processing is further restricted by maintenance object, batch code, command request type, business object, status, etc. Currently, the Batch process used for reprocessing the Activity is "Command Request Error - Retry (D1-CRERR)". This batch process invokes monitoring rules associated with the current state of Activity.

Customizable Process
D1-CRERR (Command Request Error - Retry)

Business Object	Available Algorithms
D1-DeviceCommission	D1-RBOE (Retry BO in Error)

6.2 Evaluate Waiting Period

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: MDM evaluates the waiting period to ensure that the Activity does not stay in its current state for too long. On the expiration of the wait time, it transitions the Activity to 'Discard' State.

Customizable Process
D1-CRERR (Command Request Error - Retry)

Business Object	Available Algorithms
D1-DeviceCommission	D1-WTTMOUT (Wait Time Out - Transition to Rejection)

6.3 Request to 'Retry'

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: When the Activity is in 'Communication Error' state and MDM Authorized User has corrected the error, can manually make request to 'Retry'.

Business Objects
D1-DeviceCommission

6.4 Update Activity to 'Retry' State and Initialize Reprocessing

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: MDM transitions the Activity to 'Retry' state and initializes reprocessing.

Business Object	Available Algorithms
D1-DeviceCommission	D1-RBOE (Retry BO in Error)

6.5 Identify Activity in 'Communication Error' State

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: MDM identifies all Device Commission Activities in 'Communication Error' state.

Customizable Process
D1-CRERR (Command Request Error - Retry)

Business Object	Available Algorithms
D1-DeviceCommission	D1-RBOE (Retry BO in Error)

6.6 Request to 'Execute Completion Events'

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM Authorized User

Description: When the Activity is in 'Completion Event Error' state and MDM Authorized User has corrected the error, can manually make request to 'Execute completion events'.

Business Objects
D1-DeviceCommission

6.7 Update Activity to 'Execute Completion Event' State and Initialize Reprocessing

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM

Description: MDM transitions the Activity to 'Execute Completion Event' state and initializes reprocessing.

Business Object	Available Algorithms
D1-DeviceCommission	D1-RBOE (Retry BO in Error)

6.8 Identify Activity in 'Completion Event Error' State

See **Manage Device Installation and Commissioning Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: MDM

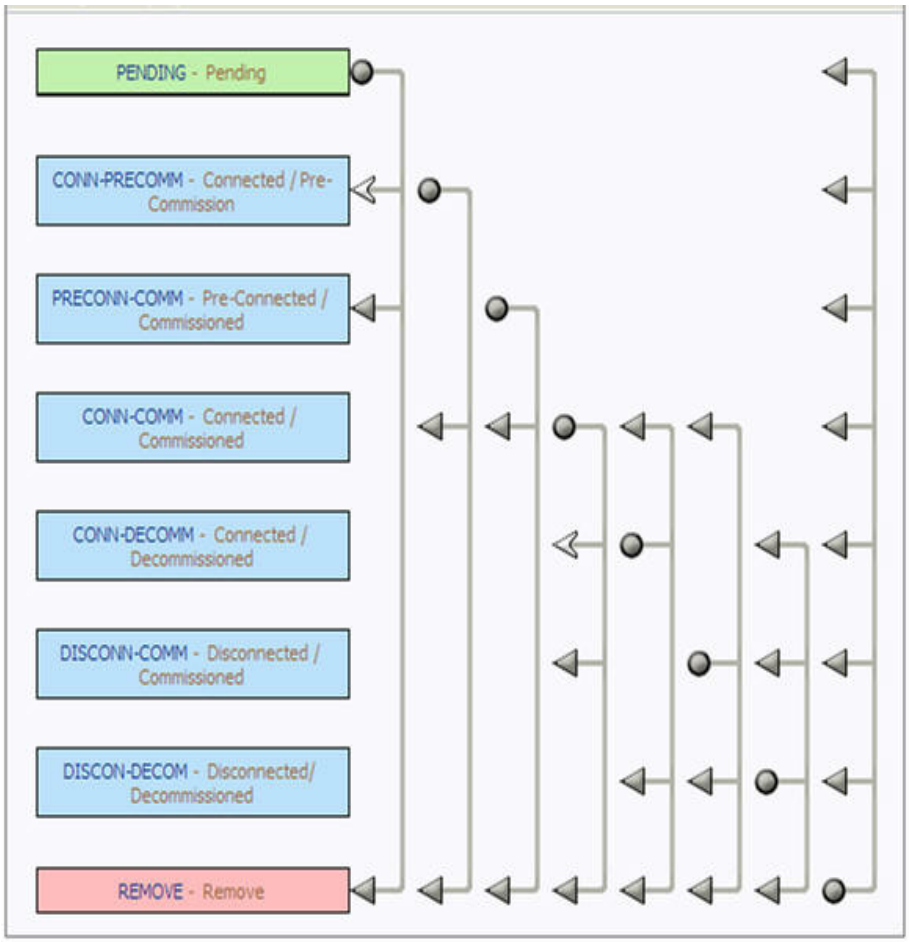
Description: MDM identifies all Device Commission Activities in 'Completion Event Error' state.

Customizable Process
D1-CRERR (Command Request Error - Retry)

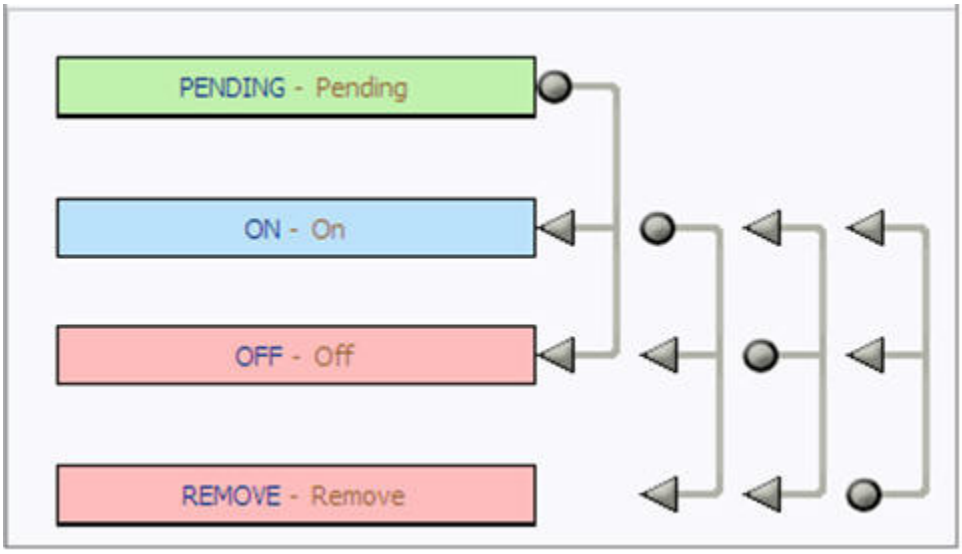
Business Object	Available Algorithms
D1-DeviceCommission	D1-RBOE (Retry BO in Error)

Business Objects Lifecycle

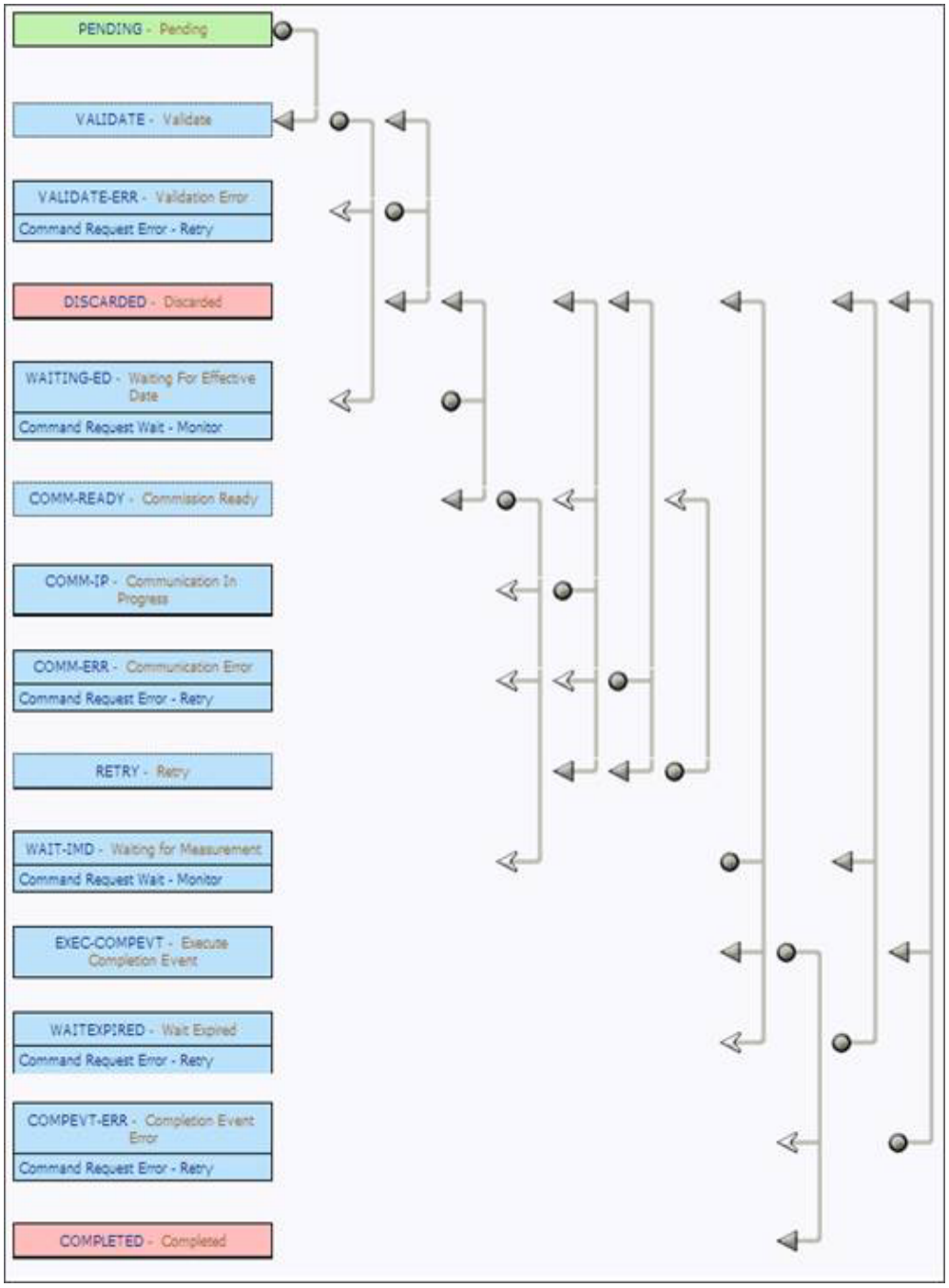
D1-SmartMeterInstallEvent



D1-ManualMeterInstallEvent



D1-DeviceCommission



Related Training

The following User Productivity Kit (UPK) modules provide training related to this business process:

- Oracle Utilities UPK for Meter Data Management User Tasks