Oracle Utilities Network Management System

Release Notes

Release 1.12.0.2.0

E61793-01

April 2015

ORACLE®

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E61793-01

Preface

These release notes provide an overview of the known issues in Oracle Utilities Network Management System Version 1.12.0.2.0.

This preface contains these topics:

- **Audience**
- **Related Documents**

Audience

Oracle Utilities Network Management System Release Notes is intended for anyone installing or using Oracle Utilities Network Management System Version 1.12.0.2.0.

Related Documents

For more information, see these Oracle documents:

- *Oracle Utilities Network Management System Adapters Guide*
- *Oracle Utilities Network Management System Configuration Guide*
- *Oracle Utilities Network Management System Quick Install Guide*
- *Oracle Utilities Network Management System Installation Guide*
- *Oracle Utilities Network Management System User's Guide*

Release Notes

Known Issues in Version 1.12.0.2.0

This section describes known issues in Oracle Utilities Network Management System Version 1.12.0.2.0.

No significant known issues at the time of this document.

Enhancements in Release 1.12.0.2.0

New and enhanced features in Oracle Utilities Network Management System Release 1.12.0.2.0.

Configuration Assistant

Add Ability to Configure DMS Application Modes by Feeder

A new tab is added to the Configuration Assistant that contains a table with feeders and their DMS application statuses. The user can select one or more feeders and disable or enable a given DMS application for the selected feeder row(s). If the DMS application supports both a Manual and an Automatic mode, the user can select which of the modes to enable, as well as other modes that the DMS application may support.

Add Ability to Configure Feeder Source Color

A new tab is added to the Configuration Assistant that contains a table with feeders and their source color. The user can select a feeder row and change the color-coding used for conductors and cables when coloring by the source feeder, to help in areas where adjacent feeders may have somewhat similar coloring.

Add Ability to View State Transitions

A new tab is added to the Configuration Assistant that provides both a tabular and graphical view of supported state transitions. This is supported for Trouble Event (TE), Switch Sheet (WSW), Safety Documents (SF) and Damage Assessment (DA) state transitions.

Distribution Management System Enhancements

Support for Distributed Energy Resources (DERs) as a Source

Distributed Energy Resources (DERs) are now supported as a source node capable of supplying energization to the operations model when islanded from upstream SRC nodes.

Customer(s) that have connectivity to DER feeds would not automatically be de-energized when traditional feeder supplies have been lost. The DER can maintain the energization status. In the case where DERs become overloaded, appropriate events would be created to allow the operator to manage the potential or real outage.

Distributed Energy Resources (DERs) to Provide Operational Status Details

Distributed Energy Resources (DERs) can report their operational status (*e.g.*, Connected, Disconnected, Available, Unavailable, Charging, Discharging, Idle, etc.).

Distributed Energy Resources (DERs) to Provide Time-to-Live (TTL)

Distributed Energy Resources (DERs) can report a Time-to-Live (TTL) value that will indicate to the user when the fuel/power is expected to be depleted such that the DER is no longer capable of providing energization.

DMS Summary Status Display

A new display is added that summarizes several aspects of the electrical distribution network. Information available includes overall distribution grid load, DERs, distribution feeders, substation transformers, and shunt compensation.

Fault Location Analysis Enhancements

Ability for FLA to Ignore Phase

A new configuration option allows single or two-phase faults to be treated as if they were on any phase. This allows FLA to better perform in situations where the model may contain phase errors.

Fault Location, Isolation, and Service Restoration Enhancements

Capture and Display More Details About FLISR Execution

Previously not much information was readily available about when FLISR attempted to solve, attempted to execute, whether it was successful, etc. The FLISR Report now contains additional details about when FLISR solution begins, completes, or fails; when FLISR automatic execution begins, completes, or fails; reasons for any failure; and if a user generates a switch plan from a FLISR plan (who, when, and plan #).

Have FLISR Account for DER and Required Disconnect Times After De-Energization

When Distributed Energy Resources (DERs) are present and a section of network is de-energized due to failure of the primary energy source, FLISR must take into account IEEE1547. That standard requires that DER able to be interrupted must then remain off for a period of time after the primary energization is restored. This period defaults to 5 minutes but is configurable, and is also configurable whether regular or emergency limits should be used during this initial period without DER.

Allow FLISR to Ignore Missing Fault Indicators

A configuration option is added that can allow FLISR to ignore missing fault indicators if a protective device trips but does not report any SCADA fault indicators. In this situation, FLISR will only run in manual mode and the FLISR report would indicate the lack of a fault indicator.

Feeder Load Management Enhancements

Allow FLM to Open with Multiple Feeders Based on Viewer Selections

Previously when opening Feeder Load Management based on Viewer device selection, it only would open for one feeder regardless of how many devices were selected (from potentially multiple feeders). Now FLM will open and display for multiple feeders, similar to if multiple feeder rows are selected from the Feeder Load Summary table.

Ability to launch FLM from a Switch Sheet

The ability to open FLM from a switch sheet has been added. If one or more switch steps are selected, FLM can be opened for the associated feeder(s).

FLM Ability to Display Values for Downstream Devices

Normally FLM displays graphical values based on the feeder breaker. A new drop-down allows the display of values from a configurable set of downstream primary devices such as capacitors and switches.

Allow a User to Link Additional Devices to FLM Load Details

When a user is in study mode, allow them to link an additional device to the Load Details screen dynamically. This additional device will be included in the next FLM solution and will also be added to the drop-down of primary devices when in graphical mode as described in the previous feature.

Integration Enhancements

Ability to Export As-Built Model to an External System

When the model build service (MBService) runs, there is now an option to have the generated map files copied to a standard directory where an external system can access them. By default, the copied files are in the internal NMS model build (.mb) format, but they can also be converted to .xml format.

Ability to Export As-Switched Status and Tags to an External System

The NMS MultiSpeak-based SCADA adapter is enhanced to support additional tag and device status flows to an external system. This includes initiating tag reads by point IDs, SCADA tag change notifications (bulk and by point IDs), SCADA device status updates, pending construction updates, and switching and safety state transitions.

Ability to Receive Notifications from an External System

NMS now has the ability to receive certain notifications from an external system such as requests to shed or restore load for areas that may be controlled by an external system.

Ability to Externalize Switch Plan Data to an External System

The ability now exists for NMS to respond to requests to send switch sheets, safety documents, and the specific safety documents for a given switch sheet to an external system.

Ability to Send/Receive DER Switch Plan State Changes to/from an External System

NMS can update a specified switch sheet to a status specified by an external system. This is used when the external system is actually in charge of managing and executing the switch plan.

Ability to View Device Data from an External System

An NMS user can select a device and then can request to see information for that device that is stored in an external system such as a historian. The default web browser will be opened to display the information for the selected device.

NMS - MWM Integration

Initial Integration between NMS and Oracle Utilities Mobile Workforce Management

The service pack provides the NMS-side support for the initial integration between NMS and Oracle Utilities Mobile Workforce Management v2.2.0.2. The supported flows between the systems are:
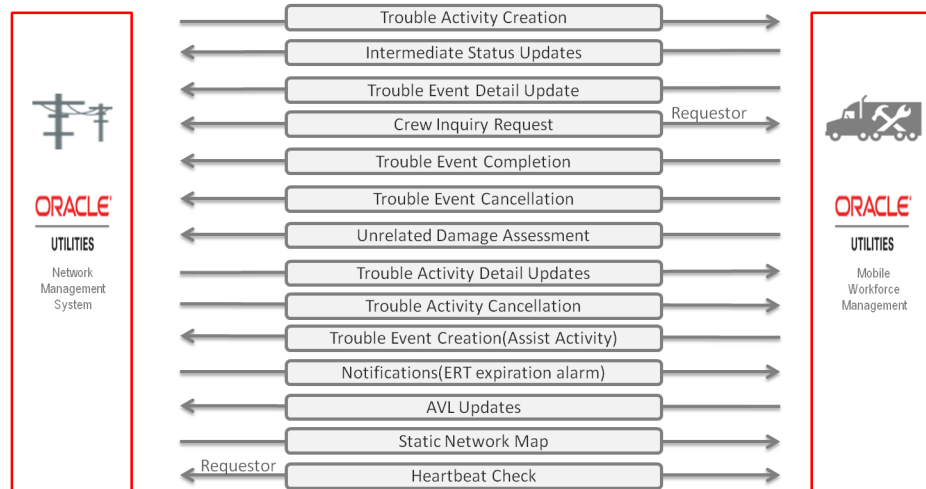
NMS - DataRaker Integration

Import DataRaker Calculation Results for Specific Conditions

This feature provides a standard mechanism for NMS to ingest and display DataRaker information for suspect devices in the NMS Conditions Summary window as well as in related feeder diagrams in the Viewer. Examples of DataRaker conditions can be detection of multiple sags or swells, low voltages, or high voltages for meters.

Navigate to Condition Details within DataRaker

This feature allows a user to select a DataRaker condition that is displayed in the NMS Conditions Summary or Viewer and navigate to a browser display of the condition details within DataRaker.

Model Management Enhancements

Add and Delete DERs as Temporary Generation Model Objects

This feature adds the ability to configure additional Control Tool options to place DERs such as gas and diesel generators in the model as temporary generation sources.

Edit Attributes of Temporary Generation Model Objects

This feature adds the ability to edit the attributes of a previously defined temporary generation model object. For example the capacity or whether it is a fixed output rate could be modified.

Temporarily Change the Phase Attributes of a Model Object

At times a model object may have incorrect phase attributes defined in the GIS and subsequently in the NMS model. This feature allows a user to temporarily correct the phase information within NMS until it can be permanently corrected in the GIS and re-extracted and built into NMS.

Power Flow (PF) Enhancements

Support Segregation of Load versus Generation Profiles

Support is added to Power Flow to account for distributed generation below the service transformer, for example with residential photovoltaic (PV) panels. Net metered profiles also are supported.

Support Additional Power Flow Day Types

Previously load profiles were primarily for weekday vs. weekend scenarios, and did not account for distributed generation options. With the possibility of different types of distributed generation (e.g., solar, wind, battery, diesel), additional day types were needed. Support now exists for multiple profiles for each fuel type (e.g., sunny vs. partly cloudy vs. mostly cloudy vs. cloudy for PV; calm vs. breezy vs. windy for wind turbines).

Support Generation Profiles Based on Area

For utilities that encompass a fairly large service territory, the weather forecast and resulting impact on generation can vary significantly across the territory. For example, one area may be cloudy and therefore have low PV generation, whereas another area may be mostly sunny and have fairly high PV generation. This feature takes into account the area for a DER and allows different generation profiles based on area. In addition, the default profile can be updated by an external system to account for changing conditions over the course of the day.

Support Enabling/Disabling Individual SCADA Points from Use in Power Flow

While SCADA telemetry is generally helpful in providing a more accurate Power Flow solution, there are times when a given SCADA point may actually hinder Power Flow in solving. This could be due to a point mapping issue, a transducer issue or a temporal issue such as scan cycle timing. Therefore, an ability has been added for a user to select one or more SCADA points and disable them from being used in Power Flow solutions, or enabling SCADA points that had been disabled.

Support DER Disconnects Due to Upstream De-Energization (IEEE 1547)

IEEE1547 (and similar state PSC rules) require various DER units to disconnect from the network when upstream energization is lost. This is due the fact that these units can't maintain voltage and frequency by themselves, typically because they don't have the ability to control reactive power.

There are also safety reasons why these units need to disconnect. The utility will be sending crews out to fix problems on what should be a dead network segment. If the DER is energizing the network segment, this could lead to personnel safety issues.

D units that fall into this classification are:

- Inverted based units - battery and PV.

- Induction generators - Some wind turbines.

Support Sending Set Point Controls for SCADA Devices

Previously support existed for sending position controls such as step changes for LTC transformers, regulators, and voltage controlled shunt capacitors. Support has now been added for set point controls such as target voltage or on/off thresholds.

Security Enhancements

Support New LDAP Group with Read-Only Access to WebLogic for View-Only Users

To increase the system security for view-only users who do not have the ability to update NMS, a new LDAP group is supported that only has read-only access to WebLogic. This limits any possibility of such users from being able to modify anything within NMS.

Suggested Switching (SS) Enhancements

Additional Data Capture/Display of Suggested Switching Plan Use

Continuing the theme of improved tracking of DMS application performance and use, a feature has been added to track when Suggested Switching is used to generate proposed plans, how long the proposed plan took to generate, and if/when the plan was accepted and used.

Add Support for DER Disconnected Load Scenarios (IEEE 1547)

Suggested Switching now supports a load scenario that has DER devices disconnected (IEEE 1547) and cold load pickup factored in. This allows Suggested Switching to handle a scenario that involves load being out for an extended period of time. This enables an operator to properly evaluate circuits that have DER penetration where hidden load is prevalent under restore scenarios.

Trouble Management Enhancements

Improve Configurability of Automatic ERT Updates

Utilities have variations in their business processes for how they want default and automated ERT updates to occur. This feature adds more flexibility in configuring when and how system-generated ERT updates occur by creating several additional configuration rules. Additional options include excluding events from system-wide or control zone ERT overrides if a crew is en route or onsite, not repredicting when an override is removed, calculating ERTs from when a device reprediction occurs rather than from the outage start time, and specifying a minimum time into the future for calculated/set ERTs.

Volt/VAr Optimization (VVO) Enhancements

Additional Data Capture/Display of VVO Plan Use

Previously, when VVO and CVR are executed the only information stored was the plan results, switch sheet, and associated event. Additional information is now captured about the data measurements before and after the plan is executed, when the plan was executed, the execution mode, and other details.

Ability to Set CVR Solution Frequency on a Per-Feeder Basis

Normally, CVR solves automatically on an hourly basis after each completion of FLM hourly forecasts. However, for some feeders with more rapidly-changing load profiles, solutions based on each hour may not have sufficient granularity. This feature allows designation of specific feeders to have solutions based on 15-minute intervals rather than hourly intervals.

Web Switching (WSW) Enhancements

Allow Multi-Step Instructs to Consider Previous Instructs during Validation

When trying to instruct a large number of steps at one time, some of the later steps may be a go-back of an earlier step. However, since the earlier step is merely instructed and the model isn't updated to reflect the step being completed, the validation of the instruct for the later step would fail because it is trying to remove a condition that doesn't yet exist. Also, the Look Ahead for any instructed actions could provide mistaken indications of customers impacted, loops and parallels, etc. if previous instructs are not considered This feature allows consideration of all existing instructs within the switch plan as "complete" for the purposes of step instruct validation and impacts on loops, parallels, customer counts, etc.

Allow Multi-Select and Update of Step Instructed Dates

The process of instructing, reviewing, and confirming a large set of steps at one time can be time-consuming. As a result, the generated instruct timestamps may vary across a set of steps even though they were actually instructed at the same time, and the actual instruct time to the crew may be several minutes after the user completes their instruct activity in the switching sheet. This feature allows the user to easily multi-select and set/correct the Instructed Date field for a set of steps.

Add the Impacted Customers Tab to Outage Correction Sheets

Previously a user was only able to generate impacted customers for the planned and emergency switching sheet types. There was no option to see the impacted customers list for outage correction sheets. The Impacted Customers tab has now been implemented for the outage correction sheet type.

Copy Data from a Switching Sheet into an Associated Safety Document

NMS V1.12.0.2 adds the ability to copy data from a switching sheet into an associated safety document. The data will then be retained with the document and will be carried along with the document if it is disassociated or associated to a new switching sheet.

Decouple Safety Documents from Specific Conditions

Safety documents previously had hard links to specific condition instances, and if it was necessary to replace the condition (tag, ground, etc.) with another of the same type, the link was no longer valid and the safety document would need to be redone. This feature now provides more flexibility by allowing the safety document to be able to work with any condition of the correct type and status that is on the device.

Add Support for Control Points List Containing a Subset of Overall Devices

A new Control Points list is supported that allows a user to specify which devices need their associated conditions updated. In most cases, the status of the conditions will be set to zero so that the conditions can be removed from a switching sheet or the control tool. Another configurable option allows the conditions to be updated to a non-blocking status so that they can be left on the devices if that is desired.

Web Workspace (WW) Enhancements

Preview of Impacted Area from Look Ahead

This feature enables the user to see the impacted area traced in the Viewer before performing an Open device operation. The Look Ahead dialog will still be displayed as normal, but an option now exists to preview the entire affected area for this proposed operation highlighted in the Viewer with the Trace color. In addition, the option will refocus the Viewer to show the complete extent of the impacted area.

Support Configurable Summary Counts on Work Agenda

The summary at the top of Work Agenda was previously restricted to only supporting certain columns/counts, and it always summarized information based on whatever filters were applied to Work Agenda. However, it can be desirable to maintain awareness of some system-wide counts, and be able to configure in additional counts. The summary has been enhanced to allow configuration of additional counts (# of rows or summary of columns containing integer values) and be able to designate whether the counts should reflect the system-wide values or take into account any current filters..

Allow Multi-Select of Work Agenda Rows and Print Associated Calls and Comments

When preparing work packets for crews, utilities often want to print out all associated calls for the assigned events, including any call comments. Previously this required opening Trouble Info for each event and doing a print command within Trouble Info. Now a user can select one or more Work Agenda rows and print the calls and comments for all selected rows with a single action.

Add a Trace Option to All Open Points

When a crew is doing work on a feeder or in a substation it is common for an operator to tag all open points on the feeder being worked for safety. A new option to trace to all open points has been added to make it easier to find all the open points that needed to be tagged.

Allow Multi-Select and Subscribe/Unsubscribe from Authority Tool

This feature allows a user to select one or more control zones from the control zone tree in the Authority tool and then right-click to Subscribe or Unsubscribe for the selected control zone(s).

Allow Highlight Event to Work from Devices with Calls instead of Events

The Highlight Event option from the Viewer and Control Tool will highlight the associated Work Agenda event when an event symbol or device with an event is selected. However, there was no convenient mechanism when displaying calls in the Viewer to easily highlight the upstream event for an associated call. This new option will highlight an event in the Work Agenda that is associated with the call(s) on a transformer if there is no event on that device, generally when the actual event is upstream.

Make the Viewer Device Selection Accessible to other Web Workspace Windows

When the user selects an event in the Viewer, it can be desirable to display or trigger off that selection in other Web Workspace windows such as the SCADA Summary. A feature has been added to display the Viewer device selection in the SCADA Summary and allow the user to then load in the associated SCADA information for that selected device.

Supported Integrations in Version 1.12.0.2

The following integrations are supported in this version of Oracle Utilities Network Management System:

Oracle Product Integrations

Oracle Product	Version(s) Supported
Oracle Utilities Analytics (OUA)	2.5.1+[†]
Oracle Utilities Customer Care and Billing (CC&B)	2.4.0+, 2.5.0+
Oracle Utilities Customer Self Service (CSS)	2.1.0+
[New] Oracle Utilities Mobile Workforce Management (MWM)	2.2.0.2+
Oracle Utilities Smart Grid Gateway (SGG)	2.1.0.3+
[New] Oracle DataRaker (ODR)	3.8.0+
Oracle BI Publisher	11.1.1.7+

Additional Integrations

Product	Version(s) Supported
Esri	9.x, 10.0
Intergraph	9.3.x
Smallworld	4.x- sample template provided
IBM WebSphere MQ	7.1

De-Supported Integrations in Version 1.12.0.2.0

- None

De-Supported Platforms in Version 1.12.0.2.0

- None