Oracle Utilities Network Management System

Release Notes

Release 1.12.0.3.0

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Preface

These release notes provide an overview of the known issues in Oracle Utilities Network Management System Version 1.12.0.3.0.

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 1.12.0.3.0.

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*
- *Oracle Utilities Network Management System Operations Mobile Application Installation and Deployment Guide*
- *Oracle Utilities Network Management System OMS for Water User's Guide*

Release Notes

Known Issues in Version 1.12.0.3.0

This section describes known issues in Oracle Utilities Network Management System Version 1.12.0.3.0.

The Application Management Pack that will support NMS in Oracle Enterprise Manager will not be available until sometime after the 1.12.0.3 service pack is released, but is planned by the end of 2015.

Enhancements in Release 1.12.0.3.0

New and enhanced features in Oracle Utilities Network Management System Release 1.12.0.3.0.

Application Management Pack

Initial Support for Oracle Enterprise Manager (OEM) for NMS

Support within NMS was added for an Application Management Pack for Oracle Utilities NMS. This is expected to enable the administrator/support staff at a utility to more easily monitor and manage all of their production and non-production NMS environments. Initial capabilities include monitoring overall NMS environment status, version, loads, and various activity volumes. Controls include stopping/restarting services, re-caching of services, changing debug levels, and navigating to the associated Oracle database and WebLogic environments.

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Configuration Assistant

Add Support for Mobile Application Crews Administration

Crews that are using the new Operations Mobile Application can include mutual aid or other temporary crews that need to be authorized on the fly to download the application and start working. Configuration Assistant was enhanced to specify a download key with a number of users limit, specify permissions, and support other administrative functions for the mobile application crews.

Configure Feeders to use Full Powerflow or a kVA-based Solution

The user can use Configuration Assistant to set the mode preference (kVA or full Powerflow) for each feeder. This will affect DMS applications and other parts of NMS which are able to show powerflow results. Setting the mode on a per-feeder basis is helpful when complete impedance data needed for a full powerflow solution is not available for all feeders in the network.

Fault Location, Isolation, and Service Restoration

Make FLISR Prioritization Parameters Configurable by User

Previously, there was no facility to prioritize the various FLISR plans generated. This feature now enables the user to use Configuration Assistant to assign weights to prioritization parameters (*e.g.*, same substation, no co-generation) so that FLISR can prioritize and identify the preferred plan when multiple candidate plans are generated.

Installation

Allow Client-side Configuration Updates without WebLogic Server Restart

A new nms_config.jar file can now be deployed without restarted the WebLogic Managed Server. This allows client-side layout and text configuration changes (.xml, .properties, images) to be updated as they are specific to the client applications. Changes that impact the services (e.g., SQL file changes that impact the database tables) cannot be deployed this way.

NMS Training Simulator (NTS)

Ability to Load Historical Data into the Training Simulator

Previously the NMS training simulator required the user to record any calls, device operations, etc. for playback as part of training scenarios. While this was useful for specific functional scenarios, it was not practical for recording high volumes to simulate major events.

A new capability provides the ability to run a script against a database of historical information and record into a "storm file" the calls, the AMI power-offs (if desired), and SCADA device operations (if desired) from a user-specified time period. Multiple storm files can be created, and the trainer can choose one to start playing during a training session, or cancel the playback of the storm file.

Operations Mobile Application

Create initial Operations Mobile Application for NMS

Utilities often need to mobilize additional crews to perform damage assessment after major storms or similarly damaging events. These crews need access to some NMS information and the ability to report damage, ideally without needing to take laptops into the field.

This initial Operations Mobile Application allows a utility to have temporary crews download an app to their iOS or Android device, become dynamically created in NMS, view assigned outages or regions, update their status, report blocked roads, enter damage information, and interact with a graphical map of the utility's network based on the NMS network model.

Additionally, the mobile application allows viewing and updating of NMS event information such as:

- Operations Event Notes
- Job Completion dropdowns
- Estimated Restoration Time (ERT)
- Actual restoration time
- Event completed status

Power Flow (PF)

Allow Feeders to be Configured to use kVA or Powerflow mode

The ability to run DMS applications on top of a simpler kVA engine for the entire network or parts of the network was added. The kVA mode is a simplified power flow analysis that does not require an impedance model.

Device Details Balloon to Support kVA mode

The functionality of the Device Details Balloon has been enhanced to support kVA mode. The Power Flow results show that the solution has been solved using kVA mode for devices that are present on a Feeder configured for kVA mode.

Look Ahead to Support kVA Mode

The ability to compute and display Power Flow results based on kVA mode has been added to the Look Ahead window. The power flow solution results display information related to making/ breaking current, violations, and warnings in the window.

FLM to Support kVA Mode

Power Flow solutions based on kVA are significantly faster and require less data compared to full power flow solutions. FLM functionality is enhanced to support kVA mode in addition to existing Power Flow mode. Additionally, the FLM user interfaces are enhanced to display the operating mode in the Feeder Load Summary and the Feeder Load Overview tab of Feeder Load Management.

Support Power Flow Details in Switching

Switching Management now has the capability to run a power flow analysis in study mode on all or up to a certain step in a switching plan. The Power Flow analysis will provide the user information regarding voltage and overload violations for each step of the plan. The user has the ability to use real time loading, or any desired load and generation profile for this analysis. The results can be

based on a full power flow analysis, or kVA mode. After a Power Flow analysis has been ran on a switching plan, the results are saved and can be refreshed at a later time.

Support Line to Line Voltages in Viewer Balloon

Previously in the NMS Viewer, the balloon details for a device did not support display of line-to-line voltages. Now a capability has been provided for NMS to compute the line-to-line voltages based on A, B and C voltages, and displays them as an option.

Isolate DER after Momentary Outage

This feature aids support for adhering to adhere IEEE standard 1547 and to California Public Utilities Commission (CPUC0 Rule 21, wherein when a primary source of energy supply is interrupted all interruptible DER (wind, PV, etc.) isolate themselves from the de-energized network and remain "Off" for a configurable period of time. This will allow the distribution network to stabilize. This helps the system operators to make a decision with respect to the execution of a restoration plan.

SCADA Integration Enhancements

Enable Tighter Integration with SCADA Systems

Several enhancements were made to improve the table-based NMS RTAdapter option for SCADA integration. These include:

- Navigation from the NMS SCADA Summary or a SCADA device to view displays in the SCADA system such as trends or other historian-based information.
- Ability from a SCADA system to select a device and request the NMS Viewer to target/focus on that device, to simplify navigation between systems.
- Streamlined ability to initiate SCADA device operations from NMS, still subject to appropriate checks and validation.
- Capturing nominal substation and feeder information as well as whether a SCADA device is phase-operable or gang-operated, to simplify mapping between the NMS and SCADA models.
- Notifications about changes to the measurement points to better ensure consistency between the NMS and SCADA system models.
- Improved tracking of any system or adapter restarts to ensure synchronization occurs between the NMS and SCADA system.

Suggested Switching (SS) Enhancements

Suggested Switching to Support KVA Mode

Previously Suggested Switching only supported solutions based upon a full Power Flow analysis. With new ability to support Power Flow engine based on kVA, Suggested Switching is also enhanced to suggest switching scenarios based on Power Flow or kVA based analysis. The mode selected for analysis is displayed on feeders, plans, and summary page.

Suggested Switching Show DERS Affected

Suggested Switching now shows the user which DERs (primary and secondary) are affected by a switching plan. In the plans step of the Suggested Switching wizard the plan summary will show the total number of DERs that are affected by that plan. In the plan details, the user can get the details of which DERs are affected by each step, or at the feeder level. A DER is considered to be affected if it is isolated, re-energized, brought into parallel, or transferred onto another feeder.

Water Network OMS

Develop Initial Water Network Support

This service pack includes the initial support for water utilities. This includes basic symbology and connectivity information for water networks, including water main segments, valves, regulators, pumps, and other water network assets.

Additionally, a default "water" configuration for other parts of NMS is provided to change terminology (*e.g.*, feeders become pressure zones, wire downs become main breaks), remove irrelevant concepts (*e.g.*, phases), and otherwise make NMS more relevant to water utilities. Other changes include modified logic to account for water being the inverse of electricity (in water, open valves promote flow and closed valves restrict flow, whereas in electricity closed switches enable current and open switches interrupt current).

The initial functionality is focused on being able to generate a plan to isolate around a water main break by determining the necessary valves to be operated, as well as impacted customers and assets such as fire hydrants.

Web Switching (WSW)

Add Capability to Automatically Populate Certain Switch Sheet Request Fields

The new feature adds a capability in Switch sheet to automatically populate the Feeder, Substation, Voltage, and Location information in Request tab of a Switch sheet based on the master Device as well as devices listed in steps. A similar capability to update feeder information in Safety Document also is provided.

Web Switching Should Maintain Counts of the Steps

A new capability is added to determine the number of steps in a switching sheet and display the count on the Switching sheet list.

Record Real-time Model Edits into a Switching Sheet or Misc Log

A new ability has been added to record Real Time model edit actions into a switching sheet or the Misc Log. This allows auditing of model edit changes within a switching sheet and also track model edit changes that were required to carry out the switching steps. The real-time completed model edit actions will also show up in the User Log.

Allow Steps to be Copied from a Selection in the Switching Sheet List

Previously there was no option to copy all steps directly from a switching template or another switch sheet selected in the Switch Sheet list into a switching sheet.

A new ability is added to copy to the clipboard all steps from the selected switching sheet without needing to open the sheet and select the steps. The steps can then be pasted into another switch sheet and edited as needed.

Creating a Safety Document Should Include Crews from Associated Switch Sheet

A configurable option has been added to automatically populate a safety document with all or selected crews from the associated switch sheet. When selecting steps from which to create a safety document, any crews associated with the selected steps by default would be added to the new safety document. This alleviates the need to manually add the appropriate crews to safety documents in most cases, but manual addition and removal is still supported.

Allow Switching Extension Attributes to be Shown in Overlaps Table

Configuration options have been added to display more attributes of switch plans that contain overlaps. By default, the Status, # of Steps, and Description is displayed from each overlapping plan. The set of displayed columns can now be modified by an end user using standard "Select Columns…" functionality, and the dynamic filter row is also available.

Allow Safety Document Creation and Device Population from Any Switch Sheet Steps

By default, a new Safety Document can only be created from switch sheet steps that involve defined tags, and a Safety Document of that type will be created. A new configuration option would allow any switch sheet steps to be used to create a new Safety Document, with a prompt for what type of Safety Document and including all devices from the selected steps.

Web Workspace (WW)

Look Ahead to Show DERS being Dropped or Picked Up

The Look Ahead Dialog now has the ability to display information about DERs that are affected by a switching operation. The information displayed includes device name, rated size, unit count, phasing, and location (upstream/downstream).

Option for Isolation Tracing to Skip Tagged Devices

Previously there was no option to skip the tagged devices while generating isolation steps. Now an ability is added to Generate Isolate Steps option to bypass/ignore devices with a certain tag type and continue to the next eligible device. The set of tag types are configurable. Various options now available are Consider All Switches, Ignore Tagged Disabled, Ignore Tagged HOLD, and Ignore Tagged DCZ.

Option to Retain Cell Coloring when Row is Selected

If a row in a table has cell coloring configured (*e.g.*, color code based on status or exceeding a threshold), that cell coloring is overridden by the row selection highlight color. A configuration option has been added to allow the cell coloring to be retained for that cell when the row is selection. Other cells in the selected row without a specific cell coloring set will still show the selection highlight coloring.

Increase Scalability of Study Mode Sessions

Study mode is used to perform "what-if" analysis within the NMS network model without impacting the global view of the network seen by other users. When many users are in study mode, especially if some are requiring power flow solutions, these copies of the NMS model can become sizable and impact performance. Efficiency improvements were made in how study sessions are created and updated that should decrease the performance impact and allow more concurrent study mode users than were previously recommended to be allowed.

Supported Integrations in Version 1.12.0.3.0

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.x, 2.5.x
Oracle Utilities Customer Self Service (CSS)	2.1.0.2+
Oracle Utilities Mobile Workforce Management (MWM)	2.2.0.2+
Oracle Utilities Smart Grid Gateway (SGG)	2.1.0.3+
Oracle DataRaker (ODR)	3.8+

Additional Integrations

Product	Version(s) Supported
Oracle BI Publisher	11.1.1.7+
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 1.12.0.3.0

- None

New Platforms in Version 1.12.0.3.0

- Oracle WebLogic Server 12.1.3.0.0 (12c)

De-Supported Platforms in Version 1.12.0.3.0

- None

De-Supported Platforms in Future Releases

- Oracle WebLogic Server 10.3.6 (11gR1)
- Oracle RDBMS 11.2.0.x (11gR2)
- Oracle Linux 6.x
- Microsoft Internet Explorer versions 8, 9, 10