MMS Data Model Release Notes

MMS Data Model version 5.1

19 September 2021

Important release information

Important Notice

PURPOSE

This MMS Data Model Release Notes, prepared by the Australian Energy Market Operator (AEMO), provides guidance for the Gas or MMS Data Model under the National Electricity Rules or National Gas Rules (Rules).

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Available to the public.

DOCUMENT IDENTIFICATION

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VERSION HISTORY

Updated with AEMO branding and style

DOCUMENTS MADE OBSOLETE

The release of this document changes only the version of MMS Data Model Release Notes.

FEEDBACK

Your feedback is important and helps us improve our services and products. To suggest improvements, please contact AEMO's Support Hub.

Contents

Introduction

FTP Access

Pre-production: 146.178.211.25

Production: 146.178.211.63

Release Location

Software and documentation are available on Pre-production 'Releases' folder.

FTP \Releases\MMS Data Model\PreProduction\v5.1

FTP \Releases\MMS Data Model\Production\v5.1

Data Subscriptions

PreProduction: https://portal.preprod.nemnet.net.au

Production: https://portal.prod.nemnet.net.au

Follow web menu:

EMMS->Data Interchange->Data Subscription->Data Model Changes

Guides

The PDF documentations are available in the releases folder and AEMO Nemweb Data Interchange Online Help: https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/data-nem/nemweb-help.

Important Information

Participants can either subscribe to LEGACY or the CURRENT version of files. If both versions of files are subscribed, then LEGACY version will be automatically unsubscribed by AEMO after a period of time. To comply with latest Data Model release, CURRENT version of file subscriptions is required.

Unsubscribe LEGACY version of a file when the CURRENT version of the file is successfully loaded.

Steps to note during the upgrade

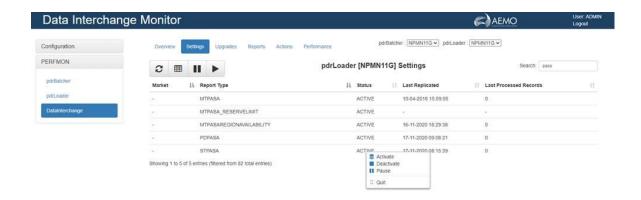- Check your installed Data Model version by running the below query in your database:

  select a.installation_date,a.install_type,a.script_version from mms_data_model_audit a order by a.installation_date desc ;

- Check pdrLoader Configuration is available for this upgrade

  select * from PDR_REPORT_RECORDS
  where destination_table= 'BILLING_SUBST_DEMAND';

  AEMO automatically pushes the PdrLoader Configurations for this upgrade to participant databases. If no records are found please apply the PUBLIC_PDR_CONFIG_*_UPGRADE.zip relevant to this Data Model release available from above release location.

- Apply data model upgrade using CLI/GUI installers.

- From DM5.1 release AEMO will be providing generic installers for each Oracle and SLQSERVER instead of separate for each version. We have certified these on the versions mentioned below.

- It is assumed pdrLoader is turned off during the Data Model upgrade. Alternatively, selective Report Types can be PAUSED using pdrMonitor, allowing other Report Types to be loaded. Please make sure the paused reports are ACTIVE once the upgrade is completed.

- The pdrLoader should be restarted after this operation completes as it caches table/PK definitions in memory for performance.

Oracle PDR loader properties file changes

- For participants running Oracle databases with pdrLoader v7.4.1 or earlier, to accommodate the new Timestamp data type you must add the following statement to the pdrLoader properties file:

  db_conn_init_sql=ALTER SESSION SET NLS_TIMESTAMP_FORMAT='YYYY/MM/DD HH24:MI:SS.FF3'

- This is not required for participants running SQL databases or pdrLoader v7.4.2. Display of decimals in reports and tables.

Other Changes

To receive the updated changes for the NETWORK tables

- Ensure that you are subscribed to the latest NETWORK_OUTAGE file and unsubscribed from the _legacy version.

- Stop the pdrLoader application.

- Upgrade to Electricity Data Model v5.1.

    - We have added a new column ELEMENTID as part of Primary Key in NETWORK_EQUIPMENTDETAIL and NETWORK_OUTAGEDETAIL tables.

    - This upgrade will truncate these tables and add the ELEMENTID column.

- To populate these tables

    - Place the PUBLIC_NETWORK_*_BASELINE file available in below location from the Production participant file server in your pdrLoader\Reports directory

    \MarketData\Baseline\PUBLIC_NETWORK_*_BASELINE.zip

    - This will load the baseline data in your database.

- Start the pdrLoader application

- Wait for some time for the above file to load.

- Run the following query to verify of the baseline file has loaded successfully:

    select * from pdr_report_audit a where a.file_id in ('NETWORK_OUTAGE','PART_BASE_NETWORK') order by file_receive_time desc;

- Once this file gets processed, NETWORK_EQUIPMENTDETAIL and NETWORK_OUTAGEDETAIL should get populated with the baseline data.

- Also, to populate the NETWORK_OUTAGEDETAIL table since the time BASELINE was generated till the data model was upgraded, copy all the NETWORK files since 2AM from Archive folder and place it in the pdrLoader\Reports directory.

In Depth Info

CLI upgrade

MMS Data Model Oracle/ MSSQLServer v5.1

- Please allow sufficient time to complete the upgrade install.

- The sample log files do not necessarily reflect the current release (e.g. NO_OF_TABLES may be different).

Previous Release: 5.0

- The v5.0 release of the MMS Data Model was for the Apr2021 Wholesale Market Systems (MMS) Software Release.

- For a description of the changes, refer to Change Notice EMMSDMv5.00 and subsequent updates.

- If your database is not consistent with MMS Data Model v5.0, the result of running this upgrade is unreliable.

- You need to schedule moving to the current MMS Data Model to ensure you can successfully apply future releases of 5MS upgrade scripts.

- If you are intending to run this upgrade, review the upgrade carefully.

Details of the v5.1 upgrade

- Run the v5.1 upgrade only on tables compliant with MMS Data Model v5.0.

- For a description of the changes, refer to Change Notice EMMS1021 and subsequent updates.

Pre- Run Tasks:

- Ensure you have a current backup of your database. For much of the time in the upgrade process, the database is not in a useable state, so any major failure can leave your database as useless.

- Update the MMS data model pdrLoader Configuration (automatic delivery or apply manually)

- Apply the MMS Data Model Database changes

- Subscribe to the new and/or changed reports

- Activate any new reports

- Unsubscribe from the legacy reports

Instructions:

- Copy the scripts from the \Build directory into a local directory, so the path contains no spaces. (Not all the scripts are needed for the upgrade; some are for a full create.)

- Switch off any applications (e.g. pdrLoader) which modify the tables in question.

- Run the UPGRADE_MMS_DATA_MODEL_MAIN.bat script.

- WARNING! Run only when you have time and space available.

- Enter database connection/user login details, Log directory location for upgrade installer output.

- Check the logfiles being produced in the Log directory.

- If an error occurs in any script other than the pre_alter_mms_data_model.sql and post_alter_mms_data_model.sql, the main log has a line containing the string "*** ERROR". You can then check the relevant log file(s) for more details.

- When you are satisfied the upgrade is successful:

  ○ Apply any required updates to applications (e.g. Parser and PDR) for modifying any of the affected tables.

  ○ Re-enable any applications (e.g. PdrLoader) modifying any of the affected tables. Consider creating another backup.

GUI upgrade

ALTERNATIVELY using GUI (simple and clean upgrade)

- Turn off pdrLoader, so no data updates occur during upgrade.

- Extract the Data model GUI installer zip specific to your database platform and run the executable jar file.

- After accepting the License agreement, select 'MMSDM Upgrade' option.

- Select Installation path directory. (e.g. C:\Temp , Installer will extract all the installer files to this directory).

- You may want to review the alter_mms_data_model.sql for the intended data model changes.

- Proceed only when you have time and database free space available.

- On Next, enter database credentials and connection details for the upgrade instance.

- Check installer log files generated at Log directory(e.g. C:\Temp\Log).

Affected Tables

New Tables:

BILLING_WDR

BILLING_WDR_DETAIL

BILLING_SUBST_DEMAND

BILLING_SUBST_RUN_VERSION

METERDATA_WDR_READS

SET_WDR_RECON_DETAIL

SET_WDR_TRANSACT

SET_SUBSTITUTE_DEMAND

SET_SUBST_RUN_VERSION

SET_RECOVERY_ENERGY

SETCFG_WDR_REIMBURSE_RATE

SETCFG_WDRRR_CALENDAR

PMS_GROUP

PMS_GROUPSERVICE

PMS_GROUPNMI

Altered Tables:

BIDOFFERFILETRK

BILLINGREGIONFIGURES

MTPASA_DUIDAVAILABILITY

MTPASA_REGIONAVAILABILITY

PDPASA_REGIONSOLUTION

STPASA_REGIONSOLUTION

DISPATCHREGIONSUM

DISPATCHLOAD

PREDISPATCHREGIONSUM

P5MIN_REGIONSOLUTION

P5MIN_UNITSOLUTION

SET_FCAS_REGULATION_TRK

DEMANDOPERATIONALACTUAL

INTERMITTENT_CLUSTER_AVAIL

MTPASA_INTERMITTENT_AVAIL

DUDETAIL

DUDETAILSUMMARY

GENUNITS_UNIT

GENUNITS

NETWORK_EQUIPMENTDETAIL

NETWORK_OUTAGEDETAIL

NETWORK_SUBSTATIONDETAIL

Database versions supported

Oracle	Oracle 12c , 19c
MSSQLServer	2014/2017/2019

- Currently we have certified DM5.1 in Oracle 12c, 19c and SQL Server versions – 2014/2017/2019.
- From DM5.2 we will be discontinuing support for SQLSERVER 2014.
- Having said that we do not anticipate any issues running these in other versions as these are mainly DDL and DML scripts.