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## **Release Notes**

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### **EMMS Data Model v5.0**

Last Updated: 30/03/2020



## Data Model Release Location:

- FTP Access:
  - PreProduction- 146.178.211.25
  - Production - 146.178.211.63
- Releases Location:
  - PreProduction FTP- \Releases\MMS Data Model\PreProduction\v5.0
  - \Releases\MMS Data Model\Production\v5.0
- With this release, we have moved the PDF documentation out from the respective installers and now will be available in the releases folder and also published on AEMO web –
  - o <https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/data-nem/nemweb-help>
- Also, the readme.txt is renamed to ReleaseNotes.pdf and available in the above Releases folder.



## Important Information:

- **As of this release Participants can either subscribe to LEGACY or the CURRENT version of files. If both versions of files are subscribed, then the LEGACY will be **automatically unsubscribed after a period of time.****

Note	Steps to follow	Comments
Participants who does not upgrade to the latest DM5.0 by 5MS start date, will need to run the path script to keep their settlements files loading.	Run the patch script: <ul style="list-style-type: none"> <li>• For Oracle- ORACLE_PATCH_SETTLEMENTS.sql</li> <li>• For SQLSERVER: MSSQLSERVER_PATCH_SETTLEMENTS.sql</li> </ul> Patch script contains updated to below Settlements tables:  ALTER TABLE SETIRAUCSURPLUS MODIFY PERIODID NUMBER(3,0);  ALTER TABLE SETIRNPSURPLUS MODIFY PERIODID NUMBER(3,0);  ALTER TABLE SETIRPARTSURPLUS MODIFY PERIODID NUMBER(3,0);	<ul style="list-style-type: none"> <li>• Participants haven't done the upgrade before the 5MS start date.</li> <li>• <b>If PATCH script is not applied, then SETTLEMENTS file will fail to load.</b></li> <li>• Patch script can be fetched from Releases folder path.</li> <li>• Discontinued tables will not be populated. Please refer to discontinued tables section below</li> </ul>



## Steps to Note during 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 ;
```

- This DM5.0 Upgrade will take more time compared to other upgrades as there are changes in Primary key columns for the below tables.
- Please ensure that the Upgrade process is **NOT** interrupted. This is applicable to the participants subscribed to the below tables.

Table Name	No of rows	Runtime (Oracle)	Task Details
STPASA_CONSTRAINTSOLUTION	40 million	Approx 20min	add STUDYREGIONID, update column value to 'MARKET', drop existing PK and create new PK
STPASA_INTERCONNECTORSOLN	38 million	Approx 25min	add STUDYREGIONID, update column value to 'MARKET', drop existing PK and create new PK

- 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 screenshot shows the 'pdrLoader [NPMN11G] Settings' window. The table below is a representation of the data shown in the screenshot:

Market	Report Type	Status	Last Replicated	Last Processed Records
-	MTPASA	ACTIVE	10-04-2018 15:59:05	0
-	MTPASA_RESERVELIMIT	ACTIVE	-	-
-	MTPASAREGIONALAVAILABILITY	ACTIVE	16-11-2020 18:25:38	0
-	PDPASA	ACTIVE	17-11-2020 09:06:21	0
-	STPASA	ACTIVE	17-11-2020 08:15:39	0

- The pdrLoader should be restarted after this operation completes as it caches table/PK definitions in memory for performance.
- Participants should examine the size of tables of above tables STPASA\_CONSTRAINTSOLUTION and STPASA\_INTERCONNECTORSOLN in the Pre 5MS (before upgrading to DM 5.0), and if the number of rows is large or if an outage cannot be taken on the Data Interchange facility then proceed with pre/post steps as described or otherwise implement 5MS upgrade (during upgrade to DM 5.0) only

### **Pre 5MS (before upgrading to DM 5.0)**

- Stop pdrLoader application.
- Copy the table structure (**including indexes and primary key definition**) of STPASA\_CONSTRAINTSOLUTION and STPASA\_INTERCONNECTORSOLN

- Rename tables STPASA\_CONSTRAINTSOLUTION and STPASA\_INTERCONNECTORSOLN . and **also, Primary Key and indexes**. You can append tablename with “\_BACKUP”
- Create the same tables using the structure that you copied in step 2
- Limited back population of new table for operational purposes
- Start pdrLoader application

#### **SMS upgrade (during upgrade to DM 5.0)**

- Stop pdrLoader
- Upgrade your database to DM5.0 if you are on DM4.30. This upgrade should be quick now.
- Start pdrLoader.

#### **Post SMS (post upgrade to DM 5.0)**

- Back populate remainder of the data from the backup table. You can run this script to run overnight. The new column that is added will get populated with default value “MARKET”
- Drop renamed table.

- **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**

- There is an issue identified with GENUNITS\_UNIT table where the UNIT\_COUNT column data can have higher value than defined. To handle this, we have placed a patch script in production and preproduction Releases folder for ORACLE and SQLSERVER. These scripts will be made available in DM v5.0 as well. Kindly run this script on your local database if you are using this table. This will be included in the next DM release.

Run the patch script in your database:

- For Oracle- ORACLE\_PATCH\_GENUNITS\_UNIT.sql
- For SQLSERVER: MSSQLSERVER\_PATCH\_GENUNITS\_UNIT.sql

Patch script contains update as below:

```
alter table Genunits_unit alter column unit_count numeric(10,0);
```



## In Depth Info

### CLI Upgrade

MMS Data Model Oracle 12c/19c, MSSQLServer 2014/2017 v5.0 ReleaseNotes.pdf, last updated 20201125

List of files in this release: MMS Data Model Oracle 12c/19c, MSSQLServer 2014/2017

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#### Special Note:

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1. Please allow sufficient time to complete the upgrade install.
2. The sample log files do not necessarily reflect the current release (e.g. NO\_OF\_TABLES may be different).

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Previous Release: 4.30  
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The v4.30 release of the MMS Data Model was for the Mar2020 Wholesale Market Systems (MMS) Software Release.

For a description of the changes, refer to Change Notice EMMSS5MSSET10420 and subsequent updates.

If your database is not consistent with MMS Data Model v4.30, 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.

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Details of the v5.0 upgrade  
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Run the v5.0 upgrade only on tables compliant with MMS Data Model v4.30.

For a description of the changes, refer to Change Notice EMMSS521 and subsequent updates.

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#### Pre- Run Tasks:

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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.

Ensure PDR\_CONFIG\_\*\_UPGRADE is applied, reflecting the pdrLoader configurations for this release.

Note: pdrLoader Configurations for new/updated MMS data model tables are delivered separately. Apply MMS data model changes first, then apply PdrLoader Config upgrade manually.

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Instructions:

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1. 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.)
2. Switch off any applications (e.g. pdrLoader) which modify the tables in question.
3. 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.

4. 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:

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

1. Turn off pdrLoader, so no data updates occur during upgrade.
2. Extract the Data model GUI installer zip specific to your database platform and run the executable jar file.
3. After accepting the License agreement, select 'MMSDM Upgrade' option.
4. 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.
5. Proceed only when you have time and database free space available.
6. On Next, enter database credentials and connection details for the upgrade instance.
7. Check installer log files generated at Log directory(e.g. C:\Temp\Log).



## Affected Tables

<b>NEW TABLES</b>	
<b>5MS</b>	AVERAGEPRICE30
	BIDOFFERPERIOD
	MNSP_BIDOFFERPERIOD
	BILLRESERVETRADERPAYMENT
	BILLRESERVETRADERRECOVERY
	SETLOCALAREAENERGY
	SETLOCALAREATNI
<b>NON 5MS</b>	MTPASA_DUIDAVAILABILITY
	PDPASA_CONSTRAINTSOLUTION
	PDPASA_INTERCONNECTORSOLN
	P5MIN_INTERSENSITIVITIES
	P5MIN_PRICESENSITIVITIES
	P5MIN_SCENARIODEMAND
	P5MIN_SCENARIODEMANDTRK
<b>ALTERED TABLES</b>	
<b>5MS</b>	BIDDAYOFFER
	BIDOFFERFILETRK
	MNSP_DAYOFFER
	BILLINGCPDATA
	DAYTRACK
	SETCPDATA
	SETIRAUCSURPLUS
	SETIRNSPSURPLUS
	SETIRPARTSURPLUS
	SETMARKETFEEES
	DISPATCHOFFERTRK
	DISPATCH_MNSPBIDTRK
	PREDISPATCHOFFERTRK
	PREDISPATCH_MNSPBIDTRK
<b>NON 5MS</b>	DEMANDOPERATIONALACTUAL
	MTPASA_REGIONAVAILABILITY
	MTPASA_REGIONRESULT
	STPASA_CONSTRAINTSOLUTION
	STPASA_INTERCONNECTORSOLN
<b>DISCONTINUED TABLES</b>	

BIDPEROFFER	SETAGCPAYMENT
BILLING_MR_PAYMENT	SETAGCRECOVERY
BILLING_MR_RECOVERY	SETLUNLOADRECOVERY
BILLING_MR_SHORTFALL	SETLUNLOADPAYMENT
BILLING_MR_SUMMARY	SETLUNLOADRECOVERY
BILLINGSMELTERREDUCTION	SET_MR_PAYMENT
BILLING_RES_TRADER_PAYMENT	SET_MR_RECOVERY
BILLING_RES_TRADER_RECOVERY	SETVICBOUNDARYENERGY
GENUNITMTRINPERIOD	SETVICENERGYFIGURES
INTERCONNMWFLOW	SETVICENERGYFLOW
METERDATA	SETINTERVENTION
METERDATA_TRK	SETINTERVENTIONRECOVERY
METERDATATRK	SETFCASCOMP
MNSP_FILETRK	SETIRFMRECOVERY
MNSP_OFFERTRK	TRADINGREGIONSUM
MNSP_PEROFFER	TRADINGLOAD



**Database version supported:**

<b>Oracle</b>	<b>Oracle 12c , 19c</b>
<b>MSSQLServer</b>	<b>2014/2017</b>