MMS DATA MODEL GUI INSTALLER GUIDE

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PREPARED BY:	Information Management Technology (IMT) - Electricity IT Solutions (EITS)
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Final

For MMS Data Model version 4.17 or later

Disclaimer

In this document, references to the 'software' are to the MMS Data Model, unless specified otherwise. References to associated materials include this document, *MMS Data Model GUI Installer Guide.*

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This Document Identification

Title: MMS Data Model GUI Installer Guide

Version: 1.00

Document ID: ELECMARKDEV-9-536

Responsible Department: Information Management Technology (IMT) - Electricity IT Solutions (EITS)

Notes: first release for MMS Data Model version 4.17 or later.

Documents made obsolete: The release of this document is the first version of the *MMS Data Model GUI Installer Guide.* No documents are made obsolete by releasing this document.

Contents

1 Introduction

1.1 Purpose

The *MMS Data Model GUI Installer Guide* is for use with the *MMS Data Model GUI Installer* for each supported database platform.

1.2 Audience

This document is intended for registered participants' technical and software development staff who are responsible for systems implementation.

1.3 Scope

This guide covers the installation of the MMS Data Model, specifically using one of the *MMS Data Model GUI Installers*.

This document assumes you have knowledge of:

- The Java application environment.
- The operating system your organisation is using.
- How the NEM systems operate.
- The database platform.

1.3.1 Related resources

The *MMS Data Model GUI Installers* are available on the "EITS Publications" secured webpage (http://www.aemo.com.au/eits/eits.html).

Detailed information relating to usage and the published data dictionary is contained in the .PDF documentation within the `Documentation` subdirectory of your local installation. Please retain this documentation for future reference. The same information is also available from the "EITS Publications" secured web page (http://www.aemo.com.au/eits/eits.html) under the heading *MMS Data Model.*

The following resources may be useful in addition to the information contained in this guide:

- "Oracle JRE 6" download: http://www.oracle.com/technetwork/java/javase/downloads/index.html.
- *EMMS Data Interchange Guide*, available on the "EITS Publications" secured web page (http://www.aemo.com.au/eits/eits.html).
- *Guide to Market Systems: Maintaining and Extending Access*, available on the "EITS Publications" secured web page (http://www.aemo.com.au/eits/eits.html).

1.4 Conventions

Important Note: important information is in this style.

Note: additional information is in this style.

Button: text formatted in this style refers to a button to click on a screen.

Screen: text formatted in this style refers to a field or description on a screen.

"Reference": text formatted in this style refers to a defined term, or another section in this document.

Document: text formatted in this style refers to another document or software package.

2 Context

2.1 What the software is for

Each *MMS Data Model GUI Installer* creates the database tables, indexes and primary keys in the relevant database platform to implement the *MMS Data Model*. The *MMS Data Model* is the definition of the interface to participants of data published by AEMO from the NEM system.

The implementation of the *MMS Data Model* is a database repository hosted at a participant's site that is used to publish electricity MMS data feeds. The interface to the database is SQL, so access to data can be via any tool accepting standard SQL constructs.

2.2 How do you use the software?

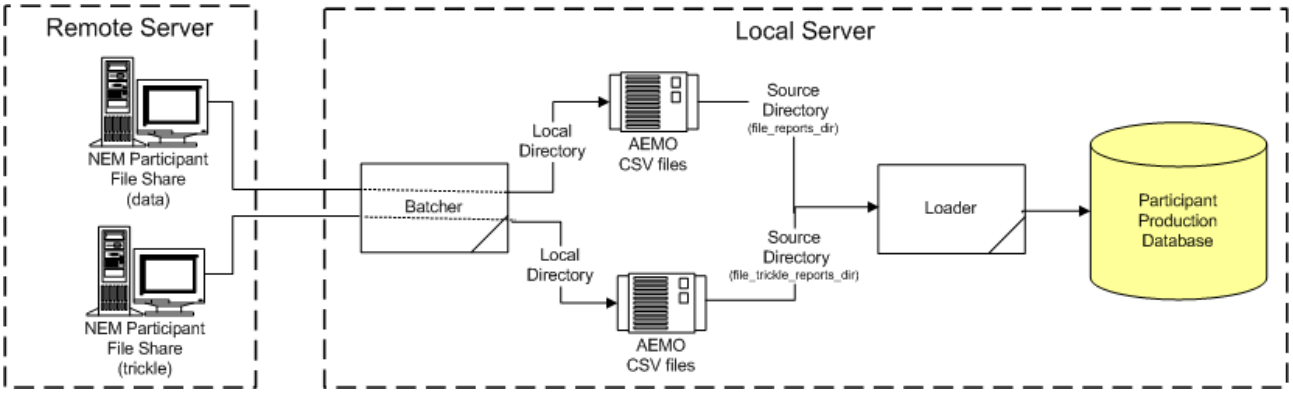
Each *MMS Data Model GUI Installer* is used to install a new implementation of the *MMS Data Model*, and to update an existing implementation of the *MMS Data Model* to the version of the GUI Installer.

Important Note: Upgrade only from the immediately preceding version. AEMO tests upgrades from one version to the next, but is unable to support any out-of-sequence updates.

The *MMS Data Model* is an industry standard data model for electricity data. It is hosted within a supported database environment (Oracle or SQL Server) that is provided and managed by the participant.

Access to the *MMS Data Model* is managed by a local Database Administrator within the participant organisation. Participants can choose appropriate data access mechanisms to suit their business, for example, direct table access using SQL tools; a business intelligence/reporting layer; integration with other business applications; etc.

Typically, the *MMS Data Model* implementation is part of setting up a data interchange system with AEMO. As described in more detail in the *EMMS Data Interchange Guide* (see §1.3.1), data is populated into the *MMS Data Model* by the *Participant Data Replication Loader* application that is also supplied by AEMO as part of the *Data Interchange* product suite. Alternative uses of the *MMS Data Model GUI Installer* include setting up a local test database for downstream system development and testing, and to have a selected subset of AEMO data available for local production or testing uses.



2.3 Who can use this software?

This software is for each participant in the National Electricity Market (NEM). For further information, see the *EMMS Data Interchange Guide* (see §1.3.1).

Important Note: Before proceeding with the installation, users of this software must have access to a database administrator to assist with resolving any installation problems. A partially completed installation may require database administrator intervention to restore the target environment to a pre-install state.

2.4 Software requirements

AEMO supplies an *MMS Data Model GUI Installer* software package for installing the *MMS Data Model* on each of the following supported database platforms:

- Oracle 10g.
- Oracle 11g.
- SQL Server 2005.
- SQL Server 2008.

3 Installation

3.1 Downloading the application

The latest version of each GUI installer is available on the "EITS Publications" secured web page: http://www.aemo.com.au/eits/eits.html, with a title beginning with “MMS Data Model GUI Installer for”. Download the installer suitable for your database platform.

3.2 Installing the application

Decompress the .ZIP file to a working folder to create a .JAR file, ready for use.

4 Operation

4.1 Environment pre-requisites

An *MMS Data Model GUI Installer* requires the following pre-requisites to run:

- Oracle's JRE 6.
- A database instance running a supported database platform and version.
- Administrator level credentials to the database.
- For an Oracle installation:
  - Oracle client install.
  - Target database configured in `tnsnames.ora` file.
  - `sqlplus` application in the PATH environment variable.
- For an SQL Server installation:
  - SQL Server Management Studio install.
  - `sqlcmd.exe` in the PATH environment variable.

In unix environments, installations involving shell scripts require the `dos2unix` command to be available on the target platform and configured within the `PATH` environment variable. To confirm that this is available on the target platform, executing the following shell command:

```
which dos2unix
```

4.2 Running the application

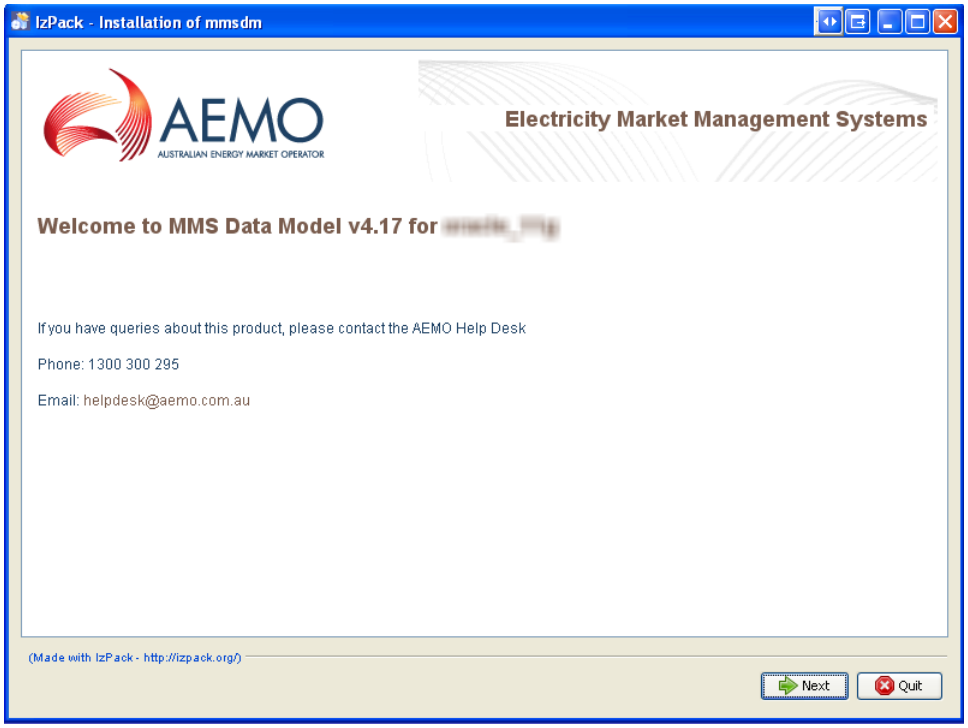
This section outlines the steps required to successfully run an *MMS Data Model GUI Installer* to implement a database conforming to the *MMS Data Model*.

1. In Windows environments, double-click the installation file, `mmsdm_<DB>_<version>.jar` to start the installer

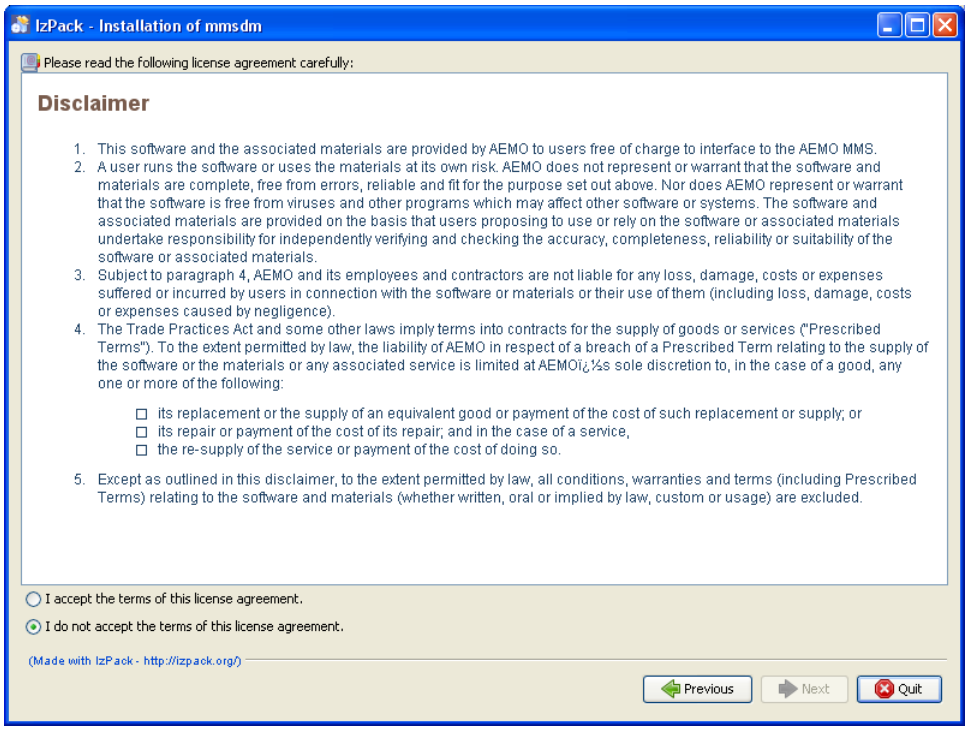
   In unix environments, execute the following shell command:

```
java –jar FileServerPasswordChanger_<version>.jar
```

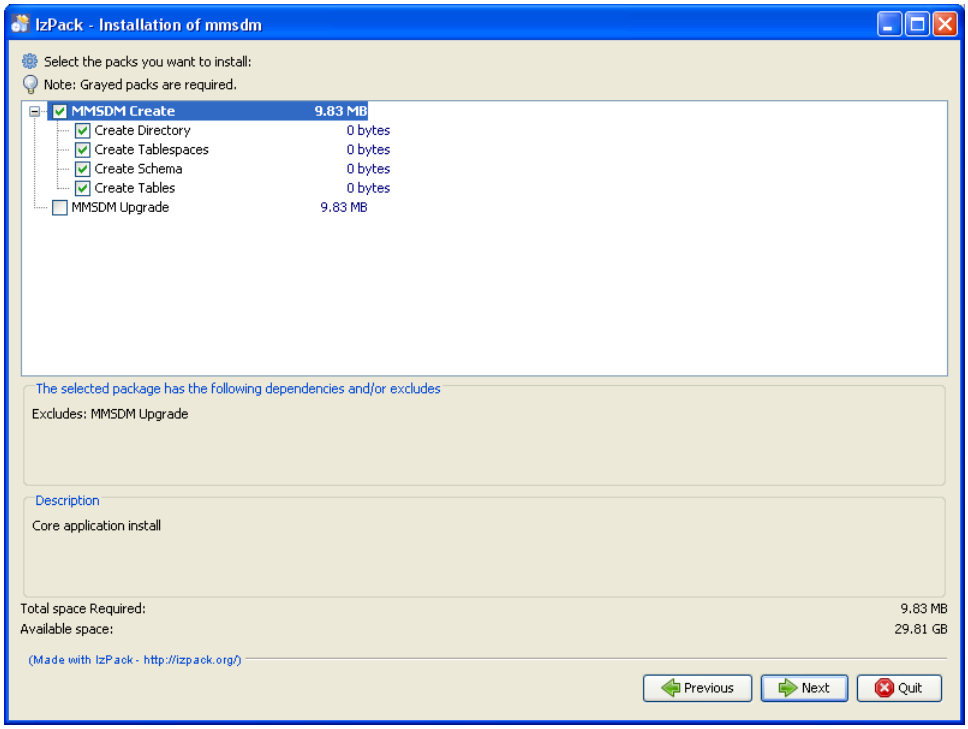
   This is the .JAR file decompressed in "Downloading the application" on page 8.



2. Click **Next** to see the disclaimer.



3. Select “I accept the terms of this licence agreement.” and click **Next** to see the packs to install.

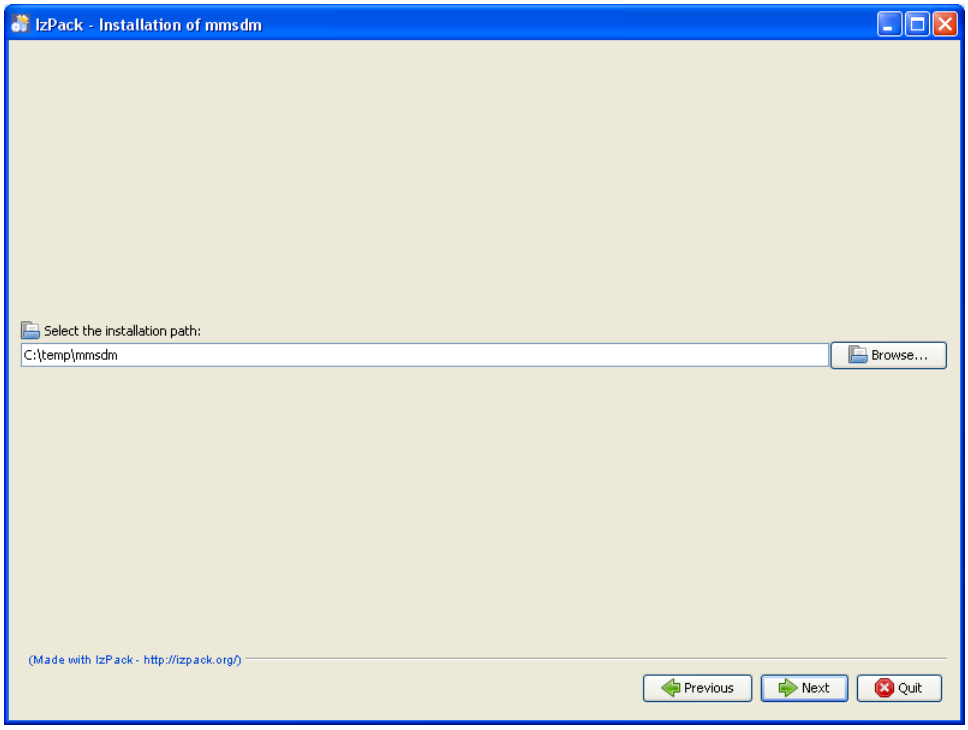


4. Select the required checkboxes for the installation detail:

Note: not all database platforms support all features for creating a new installation. Any unsupported features are greyed out.

- **MMSDM Create** - select this option for creating a new database.
  - **Create Directory**: select this option to create a folder on the database server to store the database files. The *MMS Data Model GUI Installer* software must be running on the database server hardware for this option to be supported.
  - **Create Tablespace**: select this option to create tablespaces to store the database objects. If the tablespaces already exist within the database instance due to another MMS Data Model installation already being present, ensure this option is de-selected.
  - **Create Schema**: select this option to create a new schema to contain the MMS Data Model tables. If the installation is into an existing and empty schema, then de-select this option.
  - **Create Tables**: to create the MMS Data Model objects. When creating a new installation, always select this option.
- **MMSDM Upgrade** - select this option to upgrade an existing installation to this version.

5. Click **Next** to see the selection of the installation path.



6. Identify the location to install the scripts used to complete the installation.\

Important Note: The path for the folder location must not contain any spaces.

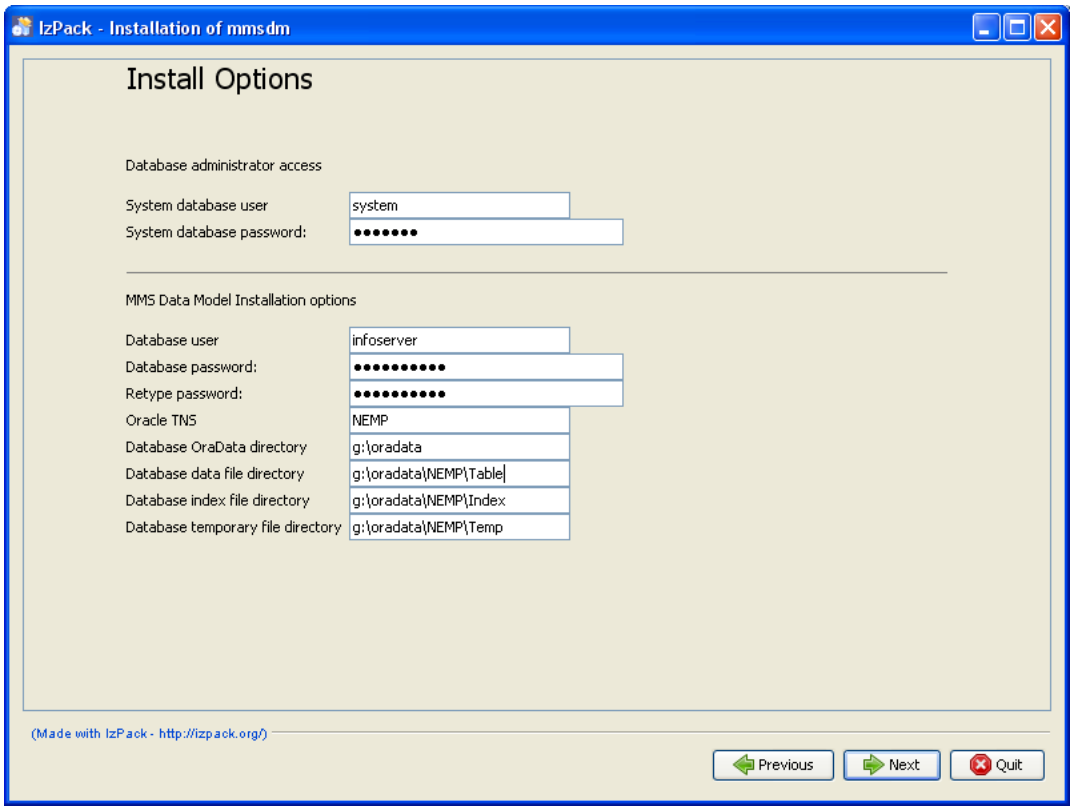
To create a new folder location, type in the path.

Using an existing folder is inadvisable. However, to use an existing folder location, use the **Browse** button to select the installation location.

The installation resources are extracted to the chosen location with the following folder structure:

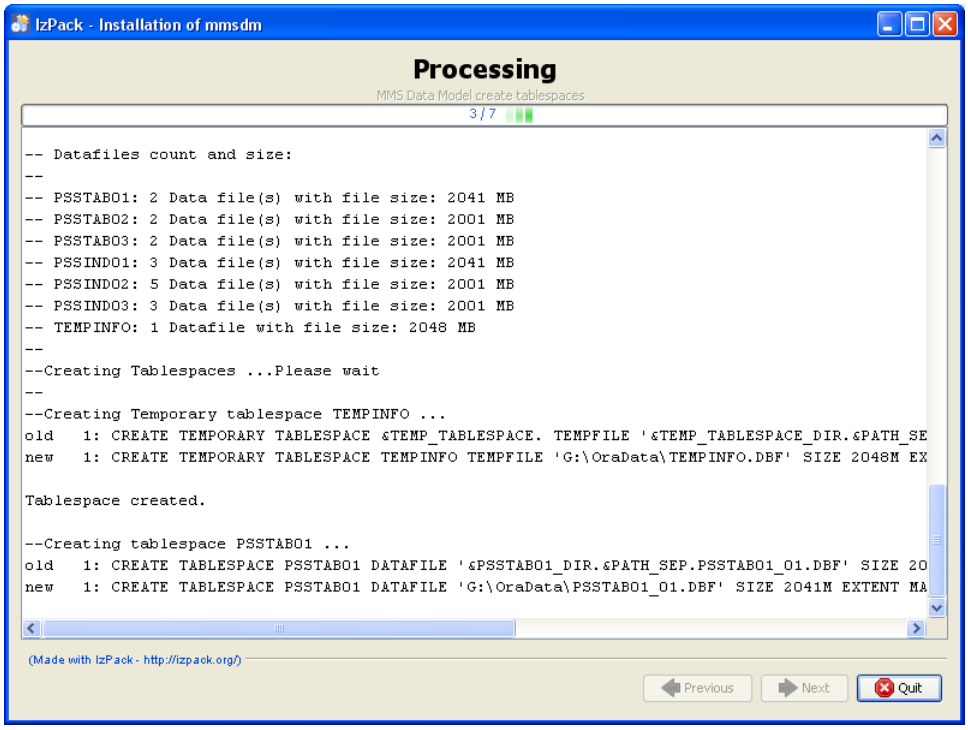
Folder	Description
`Build`	The Build folder contains the SQL scripts that are used to generate the database installation. The GUI installer calls the SQL scripts using command line interfaces appropriate to the target database environment.
`Documentation`	The Documentation folder contains the MMS Data Model, and data dictionary documents to assist users to interpret the published data. Be sure to retain the documentation in this folder for future reference.
`Log`	Log files generated during the installation process are stored here. Refer to the log files after the installation is complete to confirm there are no errors. You can clean up this folder when the installation is successful.

7. Click **Next** to see the Install Options window.



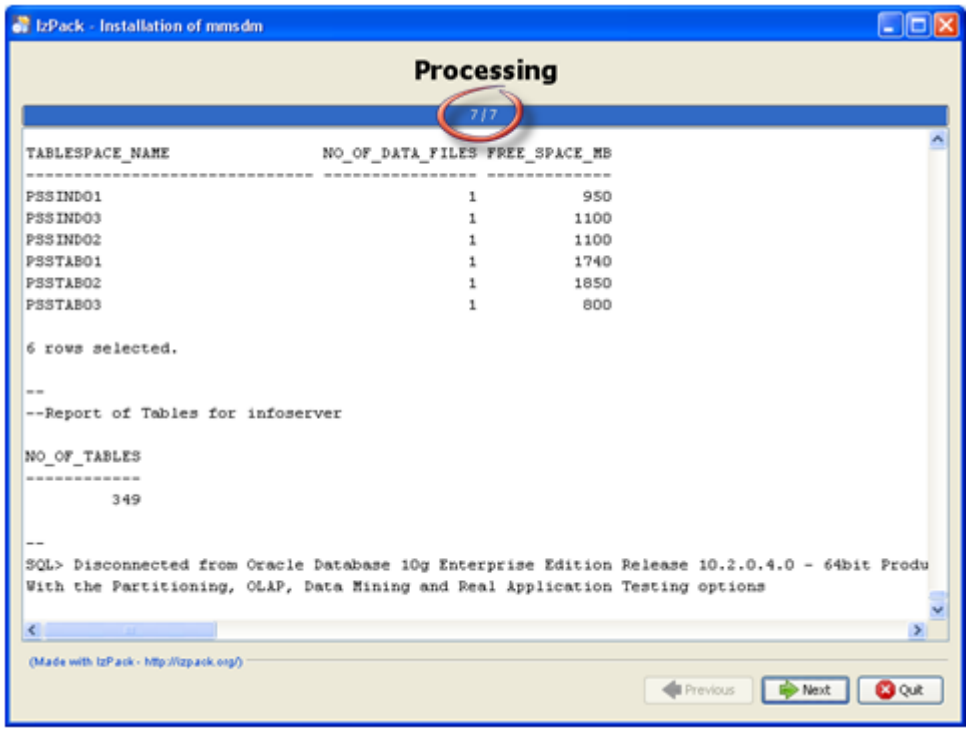
Note: the **Install Options** window adjusts fields to suit the connection parameters to the specific target database environment (Oracle or SQL Server) and nature of the install (create or update).

8. Enter the required configuration details:
   - **System database user:** the username for an administrator account. Required only if the **MMSDM Create** installation option is selected.
   - **System database password:** the password associated with the system user. Required only if the **MMSDM Create** installation option is selected.
   - **Database user:** the name of the schema to contain the *MMS Data Model*.
   - **Database password:** the password associated with the database user.
   - **Oracle TNS:** the TNS name that defines the Oracle connection.
   - **Database data file directory:** The home folder for data for the database instance. Data files are created in a subfolder under this location being named the same as the Oracle TNS entry.
   - **Database data file directory:** The folder for database data files (default value inserted when **Database data file directory** value is entered).
   - **Database index file directory**: The folder for database indexes (default value inserted when **Database data file directory** value is entered).
   - **Database temporary file directory**: The folder for database temporary files (default value inserted when **Database data file directory** value is entered).
9. Click **Next** to see the **Processing** window, showing the progress for configuring your software installation according to the selected options and settings.

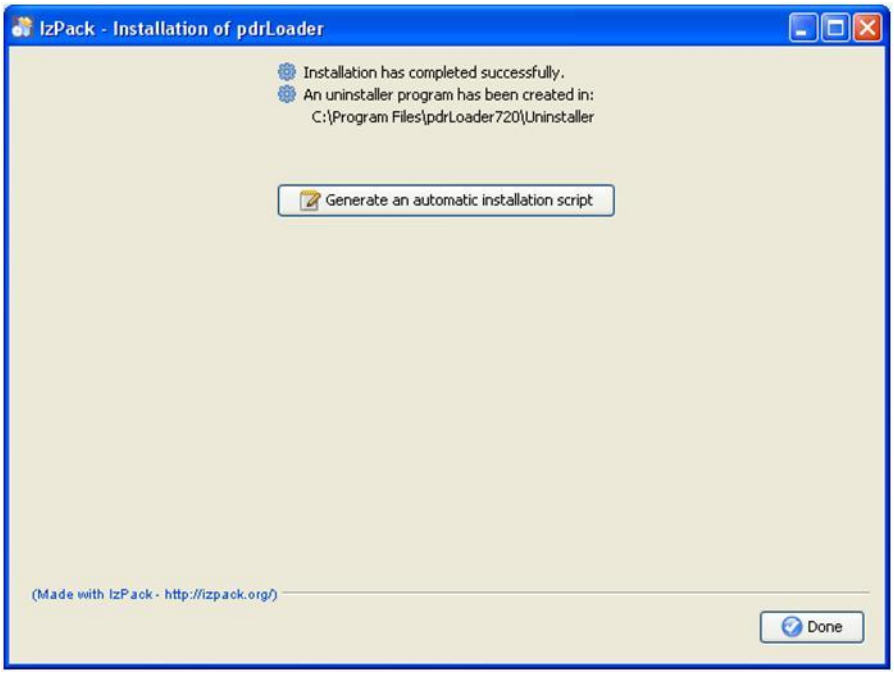


If an error occurs, click **Previous** and correct the required settings.

10. When the processing completes, expect screen to show the page number being the same as the last page number and to show disconnection from the database.



Click **Next,** and expect to see the **installation has competed successfully** window.



Note: the **Generate an automatic installation script** button is an advanced option used to generate a configuration file that can be used for silent installs. It is only recommended for advanced users running multiple installations.

11. To close the installer, click **Done**.

4.3 Testing your installation

When your installation is complete, use the following steps to test if the installation has worked correctly:

1. Verify there are no errors in the installation log files. The log files are located in the Log subfolder of the installation path. If error messages are generated, check all parameters, your environment, and repeat the installation, if necessary. Manual intervention by a Database Administrator may be required to remove a partially created installation.
2. Connect to the database using the database user configured to contain the MMS Data Model tables and confirm the expected database tables exist.

5 Glossary

Term	Explanation
CLASSPATH	The CLASSPATH is an environment variable telling the Java compiler (javac.exe) where to look for class files to import or telling the Java interpreter (java.exe) where to find class files to interpret.
CSV	Comma-separated values.
DBA	Database Administrator
DI	Data Interchange.
FTP	File transfer protocol: a very common method of moving files between two Internet sites.
GUI	Graphical User Interface
Hexadecimal digits	Characters 0-9 and A-F only
IP address	Internet protocol address is a unique string of numbers identifying a computer on the Internet. These numbers are usually shown in four groups separated by periods (for example, 123.123.23.2).
Java	Oracle's trademark for a set of technologies to create and safely run software programs in both stand-alone and networked environments.
log4j	A Java logging facility, enabling logging at runtime without modifying the application binary.
MarketNet	A private computer network for participants and AEMO.
MMS	Market Management System; software, hardware, network and related processes to implement the National Electricity Market (NEM).
NER	National Electricity Rules; also often just called the Rules.
NetBIOS	Network Basic Input Output System, an API that augments the DOS BIOS by adding special functions for local area networks (LANs). Almost all LANs for PCs are based on the NetBIOS protocol. AEMO’s file servers exclude support for NetBIOS.
Rules	National Electricity Rules (NER).
ZIP	A compressed file, possibly containing one or more files.

6 Needing Help?

Installer won't start?

- Ensure Java runtime environment is installed, Oracle JRE 6 download: http://www.oracle.com/technetwork/java/javase/downloads/index.html.

Not connecting or locked out?

- Check database credentials (passwords do expire).

Observing abnormal behaviour?

- Check release of MMS Data Model matches the target database platform.
- Check release of MMS Data Model is the latest.
- Check logs.
- Check with local IT support.
- Check reproducible in a test environment.
- Attempt a restart.

6.1 Support

If you need more technical support than is available locally, please contact AEMO's Help Desk - telephone: 1300 300 295 (option 2), e-mail: helpdesk@aemo.com.au. When requesting support for installing the supplied software, provide at least (after checking each thoroughly):

- Version of MMS Data Model.
- Database platform.
- Logs showing the abnormal behaviour (compressed in .ZIP format).

6.2 Feedback

To suggest corrections to this document, please contact AEMO's Helpdesk—Telephone: 1300 300 295 (option 2), e-mail: helpdesk@aemo.com.au.