



Version:

August 2013  
Version 1.3



# LYNX Data Importer

## Client User Guide

## Disclaimer

PSMA Australia believes this publication to be correct at the time of printing and does not accept responsibility for any consequences arising from the use of information herein. Readers should rely on their own skill and judgement to apply information to particular issues.

This work is copyright. Apart from any use as permitted under the Copyright Act 1968, no part may be reproduced by any process without prior written permission of PSMA Australia Limited.

## Revision History

Date	Version	Change	Author
August 2013	1.3	Update	Darryl Gibson

# Contents

<b>Introduction.....</b>	<b>1</b>
Document Purpose.....	1
Audience.....	1
References .....	1
Support .....	1
<b>Overview.....</b>	<b>2</b>
<b>Installation.....</b>	<b>3</b>
Obtaining the Installer.....	3
Running the Installer.....	5
<b>Obtaining PSMA Data.....</b>	<b>6</b>
<b>Importing PSMA Data.....</b>	<b>7</b>
Import Using the LYNX Importer Application.....	7
Import via Batch Script .....	9
Database Drivers .....	11
<b>Supported Data Profiles.....</b>	<b>12</b>
<b>Troubleshooting Guide.....</b>	<b>13</b>

# Introduction

## Document Purpose

This document provides instructions on installing and using the PSMA LYNX Data Importer application for use with PSMA data provided in the LYNX proprietary format.

## Audience

This document is intended to be used by any person with access to PSMA data in LYNX format as a guide and reference to using the associated Importer application.

## References

- PSMA Online Data Delivery System User Guide

## Support

### **PSMA Australia Support**

PSMA Australia Limited

Email: [support@psma.com.au](mailto:support@psma.com.au)

Web: [www.pdma.com.au](http://www.pdma.com.au)

# Overview

PSMA's LYNX Data Importer is a utility that can be used directly or via a batch script to import data held in PSMA's LYNX proprietary format into a database.

The current supported databases are:

<b>MySQL</b>	An ANSI SQL-92 compliant database. For more information see <a href="http://www.mysql.com">http://www.mysql.com</a> .
<b>Oracle</b>	An ANSI SQL-92 compliant production-level database from Oracle. For more information see <a href="http://www.oracle.com/database">http://www.oracle.com/database</a> . (Oracle 9.x, 10.x and 11g Release 2 have been used successfully with the Importer)
<b>SQLServer 2000</b> <b>SQLServer 2005+</b>	A production-level database from Microsoft. Not ANSI SQL-92 compliant. For more information see <a href="http://www.microsoft.com/sql/default.asp">http://www.microsoft.com/sql/default.asp</a> . (SQLServer 2000, 2005 and 2008 R2 have been used successfully with the Importer).
<b>PostgreSQL</b>	An open-source ANSI SQL-92 compliant database. For more information see <a href="http://www.postgresql.org">http://www.postgresql.org</a> . (PostgreSQL 8.1 to 9.2 have been used successfully with the Importer).
<b>ODBC Connection</b>	The destination database must be ANSI compliant.

Compatibility with future database releases is likely but not guaranteed.

To load LYNX proprietary format data into your database you will need to do the following:

- Ensure that a database is available for the data to be loaded into
- Install the LYNX Data Importer application
- Run the LYNX Data Importer application (via user interface or batch script)

If you do not have an ANSI-compliant database you can download a free open source database system such as:

- **MySQL** - available from [www.mysql.com](http://www.mysql.com)
- **PostgreSQL** – available from [www.postgresql.org](http://www.postgresql.org)

# Installation

## Obtaining the Installer

LYNX Data Importer application installers are available for the following platforms:

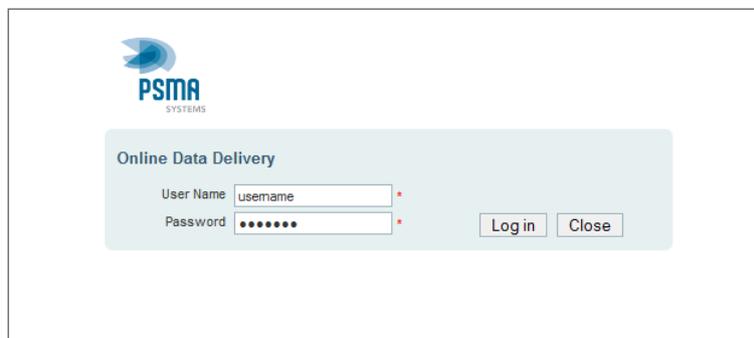
- Windows (includes Java VM)
- Mac OS X
- Linux (includes Java VM)
- Oracle Solaris (includes Java VM)
- Other Java-enabled Platforms

The installers are included with data DVDs in the *LYNX Importer Installer* folder or through the PSMA Online Data Delivery System.

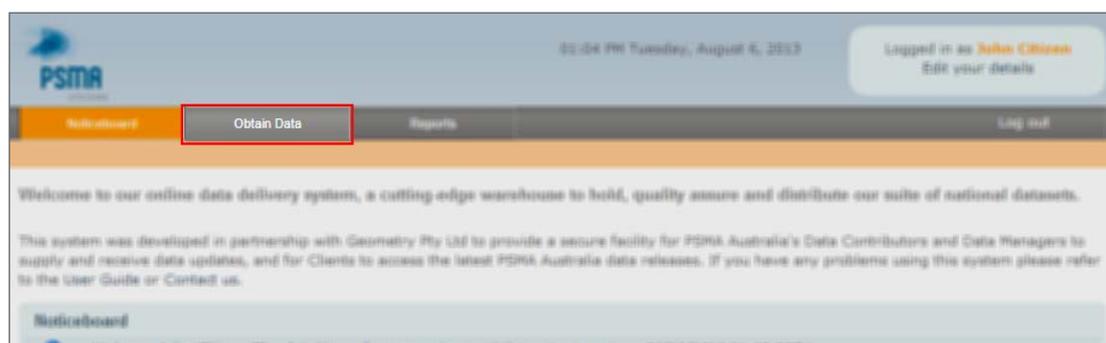
For additional information on accessing and using the PSMA Online Data Delivery System see the PSMA Online Data Delivery System User Guide

From the PSMA Online Data Delivery System, installers and instructions can be accessed by following these steps:

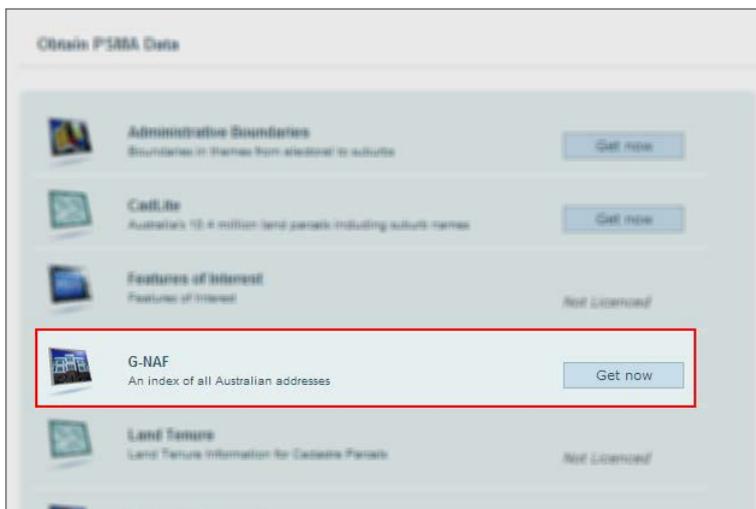
1. Log into the Online Data Delivery System (requires a username and password).



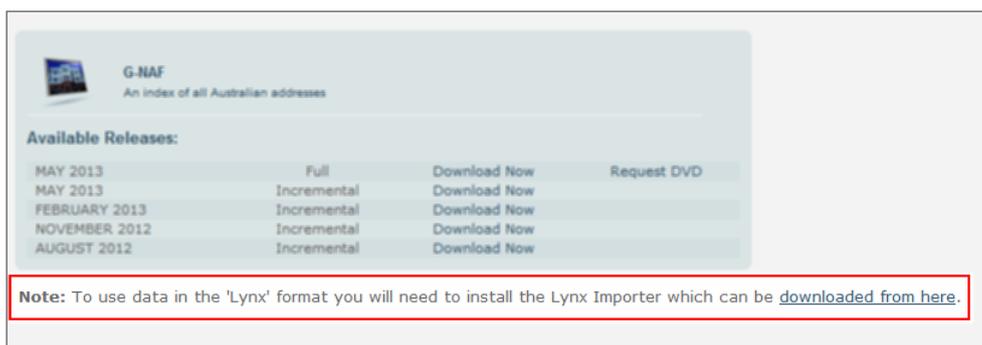
2. From the menu, select *Obtain Data > PSMA Data*.



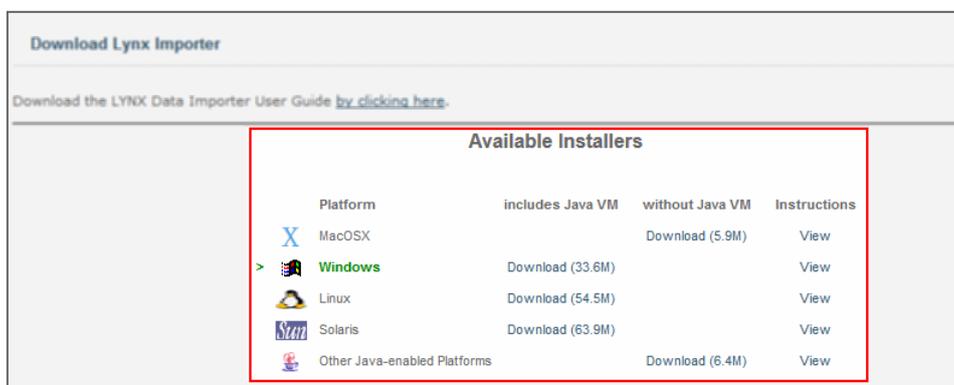
3. Select a dataset eg. G-NAF. This will open the *Available Releases* page.



4. Select the download link on the *Available Releases* page.



5. Select the required installer to download.



## Running the Installer

If you have downloaded the installer you may need to unzip the file provided.

### Windows

Double click the file `install.exe`

#### Notes

- For Vista and Windows 7 you will need to run the installer as an Administrator.
- You do not need to install any other software. A Java virtual machine is included with the download.

### Mac OS X

Double click `install`

#### Notes

- Be sure you have Java installed. You can download Java for free from the Java website ([www.java.com](http://www.java.com))
- The compressed installer should be recognised and automatically expanded after downloading.
- If you have any problems launching the installer make sure that the compressed installer was expanded. If problems persist, please contact technical support ([support@psma.com.au](mailto:support@psma.com.au))

### Solaris/ Linux

Open a shell and `cd` to the directory where the installer is located.

At the prompt type: `sh ./install.bin`

#### Notes

- A Java virtual machine is included with the download. It will run automatically with the shell script.

### Other Platforms (Java enabled)

In a console window, `cd` to the directory where the installer `install.jar` is located.

Add `install.jar` to your `CLASSPATH`.

Start the main class of the installer named `install`.

#### Notes

- Be sure you have Java installed. You can download Java for free from the Java website ([www.java.com](http://www.java.com))

# Obtaining PSMA Data

When obtaining data in the LYNX format the directory structure is very important as the LYNX Data Importer relies on a particular structure for loading.

Once you have obtained your PSMA data in LYNX format there will be a directory titled with the dataset name and release (eg. G-NAF FEBRUARY 2010).

This directory will contain the following directories and files:

Name	Date modified	Type	Size
Files Currently on the Disc (7)			
Authority Code	27/05/2013 1:48 PM	File folder	
Standard	27/05/2013 1:48 PM	File folder	
add_fk_constraints.sql	22/05/2013 5:13 PM	SQL File	11 KB
alter_tables_ansi.sql	22/05/2013 5:13 PM	SQL File	1 KB
alter_tables_sqlserver.sql	22/05/2013 5:13 PM	SQL File	1 KB
create_tables_ansi.sql	22/05/2013 5:13 PM	SQL File	10 KB
create_tables_sqlserver.sql	22/05/2013 5:13 PM	SQL File	10 KB

The directories *Authority Code* and *Standard* will contain the LYNX format (\*.lynx) files.

### **Important Note for Mac OS X Users**

*If you are an OS X user please be aware that data downloaded from the LYNX website come as Windows archive files. The default OS X archive utility may not preserve the archive files original directory structure and may instead extract the files to a single directory with file names reflecting the original directory structure. In this case, please use an archive utility that preserves the original directory structure as seen above. (For example, the free iZip archiver application available from the OS X App Store).*

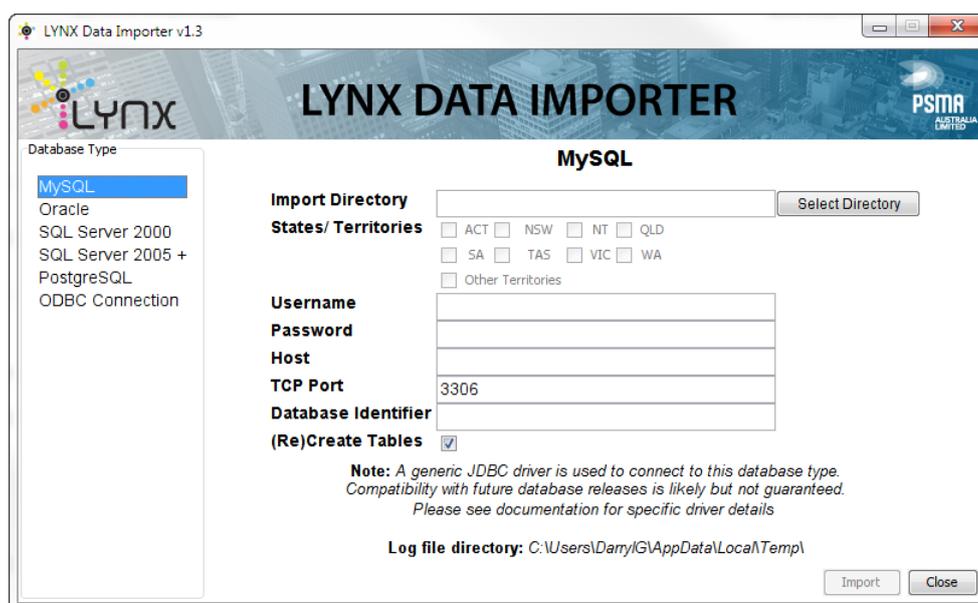
# Importing PSMA Data

## Import Using the LYNX Data Importer Application

### Note for MySQL database users

The LYNX Data Importer provides MySQL databases with ANSI compliant SQL. Later versions of the MySQL database may not operate in ANSI SQL mode by default and may require you to configure this mode prior to running the LYNX Data Importer. Instructions for checking and configuring SQL modes are detailed in the following MySQL article: <http://dev.mysql.com/doc/refman/5.0/en/ansi-mode.html>

1. Open the LYNX Data Importer application

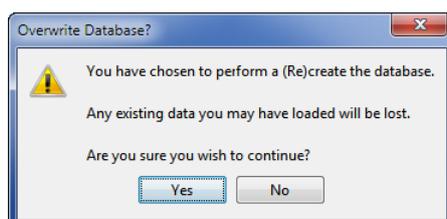


2. Enter the Import Parameters:

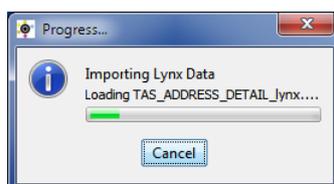
<b>Database Type</b>	Select the database type from the 'Database Type' panel.
<b>Import Directory</b>	Select the import directory. This is the directory containing the *.sql files (eg. 'G-NAF FEBRUARY 2010')
<b>States/Territories</b>	After selecting the Import Directory some/all of the States/ Territories checkboxes will be enabled based on the data available. This determines which jurisdiction data will be imported. Select at least one.
<b>Username/Password</b>	The database user must already exist and have the ability to create tables.
<b>Host</b>	Enter the IP address or name of the server that hosts the database.

<b>TCP Port</b>	Defaults to the port value associated with the selected 'Database Type'. Only change if necessary.
<b>Database Identifier</b>	Identifier for the database. The database must exist on the database server.
<b>[Instance]</b>	[Optional] Only enabled when the Database Type of 'SQL Server 2005+' is selected. Enter the database instance.
<b>(Re)Create Tables</b>	<p>Deselect this checkbox if you are appending data to a database that contains existing PSMA data tables eg. adding another state's data.</p> <p>If selected, all previous tables and data will be overwritten with the new data.</p>

- Click the  button.
- Click  to continue.

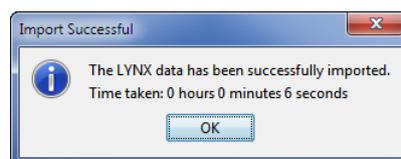


- Wait for the load to complete...



**Note**  
*The LYNX Data Importer will write a log file to the location specified by **Log file directory**. (eg. import\_20130226\_134831.log)*

- Success Message



## Import via Batch Script

Sometimes it is more convenient to automate the loading of data. To support this, the LYNX Data Importer supports command line mode operation. This mode is only supported if you have Java SE 6.0 (or greater) installed on your machine.

The command line syntax is:

```
java
-cp <required classpath>
au.com.geometry.lynx_distribution.importer.Importer
-I <import directory>
-J <JDBC connection string>
-D <driver>
-U <username>
[-P <password>]
-T <import type (F)>
-O <overwrite_existing_tables? (true/false)>
-S <states>
```

Parameters:

I	The location of the import directory. (Use quotes if the directory path contains spaces).
J	The JDBC connection string. This will be different for each type of database. MySQL = jdbc:mysql:// <b>server:port/db</b> Oracle = jdbc:oracle:thin:@ <b>server:port:db</b> SQL Server 2000 = jdbc:microsoft:sqlserver:// <b>server:port;DatabaseName=db</b> SQL Server 2005+ = jdbc:jtds:sqlserver:// <b>server:port/db</b> PostgreSQL 8.1 = jdbc:postgresql:// <b>server:port/db</b> ODBC = jdbc:odbc: <b>odbcName</b>
D	The Java Class to use as the database driver. This will be different for each type of database. MySQL = com.mysql.jdbc.Driver Oracle = oracle.jdbc.driver.OracleDriver SQL Server 2000 = com.microsoft.jdbc.sqlserver.SQLServerDriver SQL Server 2005+ = net.sourceforge.jtds.jdbc.Driver PostgreSQL 8.1 = org.postgresql.Driver ODBC = sun.jdbc.odbc.JdbcOdbcDriver
U	The name of the database user.
P	The password for the database user (This can be ignored if there is no password)
T	F = Full import.
O	Overwrite_existing_tables? Values are true or false
S	States/territories to be imported separated by comma. eg. ACT, NSW, QLD, VIC

For example, to perform a full import of the states ACT and NSW on an Oracle9i database the following command line would be used:

```
java -cp .;\lib\lynx_distribute.jar;
.\lib\dbtf.jar;
.\lib\gutil.jar;
.\jdbc_drivers\PostgreSQL8_1\postgis_1_0_0.jar;
.\jdbc_drivers\PostgreSQL8_1\postgis_debug_1_0_0.jar;
.\jdbc_drivers\PostgreSQL8_1\postgresql-8.1-404.jdbc2.jar;
.\jdbc_drivers\PostgreSQL8_1\postgresql-8.1-404.jdbc2ee.jar;
.\jdbc_drivers\PostgreSQL8_1\postgresql-8.1-404.jdbc3.jar;
.\jdbc_drivers\MySQL\mysql-connector-java-3.0.10-stable-bin.jar;
.\jdbc_drivers\Oracle9i\ojdbc14.jar;
.\jdbc_drivers\SQLServer2000\msbase.jar;
.\jdbc_drivers\SQLServer2000\mssqlserver.jar;
.\jdbc_drivers\SQLServer2000\msutil.jar;
.\jdbc_drivers\SQLServer2005\jtds-1.2.jar;
au.com.geometry.lynx_distribution.importer.Importer
-I "D:\G-NAF\G-NAF FEBRUARY 2010"
-J jdbc:oracle:thin:@krypto:1521:kryptodb
-D oracle.jdbc.driver.OracleDriver
-U test
-P test
-T F
-S ACT,NSW
-O true
```

Note, this example is called from the LYNX Data Importer directory. Paths to .jar files are relative. The script will output a message at the end describing if the import was successful or not. It also writes a log file to the directory specified by *Log file directory*.

Please ensure you are using the correct JDBC driver for the destination database. If your database is different to those supported by the installer then please make sure you change the command line classpath to use the appropriate JDBC driver.

## Database Drivers

The LYNX Data Importer uses Java database drivers to communicate with your database. The default drivers provided are:

<i>MySQL</i>	mysql-connector-java-3.0.10-stable-bin.jar
<i>Oracle</i>	ojdbc14.jar
<i>SQLServer 2000</i>	msbase.jar mssqlserver.jar msutil.jar
<i>SQLServer 2005+</i>	jtds-1.2.jar
<i>PostgreSQL</i>	postgis_1_0_0.jar postgis_debug_1_0_0.jar postgresql-8.1-404.jdbc2.jar postgresql-8.1-404.jdbc2ee.jar postgresql-8.1-404.jdbc3.jar
<i>ODBC Connection</i>	sun.jdbc.odbc.JdbcOdbcDriver

If you discover that the LYNX Data Importer cannot communicate with your database using these default drivers you will need to supply your own JDBC driver and start the LYNX Data Importer from the command line with this driver in the classpath.

For example, to start the LYNX Data Importer with a different database driver:

```
java -cp .;\lib\lynx_distribute.jar;
.\lib\dbtf.jar;
.\lib\gutil.jar;
<path(s) to your JDBC driver library(s) goes here>;
au.com.geometry.lynx_distribution.importer.Importer
-I "D:\G-NAF\G-NAF FEBRUARY 2010"
-J <JDBC connection string for this driver>
-D <the java class to use for this driver>
-U test
-P test
-T F
-S ACT,NSW
-O true
```

# Supported Data Profiles

## Fully Supported

The current version of the LYNX Data Importer (v1.3) fully supports the import of:

- Standard extracts
- Test & Development extracts

## Limited

The current version of the LYNX Data Importer (v1.3) has limited support for the loading of Buffer extracts. It can handle loading each state into its own separate schema. Data from states cannot be loaded into the same schemas as there will most likely be duplicate addresses between the buffer extracts and this will cause a primary key error.

## Unsupported

The current version of the LYNX Data Importer (v1.3) does not support the import of:

- Incremental extracts
- Any profile other than the Standard, Buffer or Test & Development extracts

# Troubleshooting Guide

Issue	Solution
<p>Database is not ANSI SQL-92 compliant and isn't Microsoft SQL Server. (For example, Microsoft Access is not ANSI compliant).</p>	<p>Import into another database type.</p>
<p>Database is not running</p>	<p>Please refer to the appropriate database reference manual for instructions on how to start the database</p>
<p>User does not have sufficient privileges</p>	<p>Ensure the user for the database has the appropriate privileges (eg. create table, insert, update etc.)</p>
<p>Unsupported database version</p>	<p>You may not be able to load into a database version that is not supported by the LYNX Data Importer</p>
<p>Importer will not enable the State/Territories checkboxes</p>	<p>The import directory you have specified is invalid. This could be because:</p> <ul style="list-style-type: none"> <li>• the directory does not include Standard extracts directory</li> <li>• the directory does not contain *.lynx files in its sub-directories</li> <li>• the directory has special characters in the path</li> </ul>
<p>Changing the default memory settings for the Importer application.</p>	<p>To change the memory settings, go the LYNX Data Importer application directory and edit the file: Lynx Data Importer.lax Add the parameter lax.nl.java.option.additional with the desired memory settings. For example, to set the LYNX Data Importer memory allowance to a minimum of 200 MB and a maximum of 500 MB: lax.nl.java.option.additional=-Xms200M -Xmx500M</p> <p><b>Note</b> If you make the minimum value too high the LYNX Data Importer may not run because the system is unable to assign the required minimum amount of memory at initialisation.</p>