

# DataFlux Data Management Server User's Guide



YOUR DATA.  
YOUR BUSINESS.  
ONE SOLUTION.



This page is intentionally blank



# DataFlux Data Management Server

## User's Guide

---

Version 2.2

October 20, 2011

This page is intentionally blank

# Contact

## DataFlux Corporate Headquarters

Toll Free: (877) 846-3589  
Tel: (919) 447-3000  
Fax: (919) 447-3100  
940 NW Cary Parkway, Suite 201  
Cary, NC 27513  
USA

## DataFlux United Kingdom

Tel: +44 (0) 20 3176 0025  
Fax: +44 (0) 20 3411 8382  
Enterprise House  
1-2 Hatfields  
London  
SE1 9PG  
United Kingdom

## DataFlux Germany

Tel: +49 (0) 69 66 55 42 04  
In der Neckarhelle 162  
69118 Heidelberg  
Germany

## DataFlux West

Tel: (818) 906-7638  
Fax: (818) 907-6012

15300 Ventura Boulevard, Suite 523  
Sherman Oaks, CA 91403  
USA

## DataFlux France

Tel: +33 (0) 4 72 91 31 42

Immeuble Danica B  
21, avenue Georges Pompidou  
69003 Lyon  
France

## DataFlux Australia

Tel: +61 2 9428 0553  
300 Burns Bay Road  
Lane Cove, NSW 2066  
Australia

## Technical Support

Phone: 919-531-9000  
Email: [techsupport@dataflux.com](mailto:techsupport@dataflux.com)  
Web: <http://dataflux.com/MyDataFlux-Portal.aspx>

## Documentation Support

Email: [docs@dataflux.com](mailto:docs@dataflux.com)

# Legal Information

Copyright © 1997 - 2011 DataFlux Corporation LLC, Cary, NC, USA. All Rights Reserved.

DataFlux and all other DataFlux Corporation LLC product or service names are registered trademarks or trademarks of, or licensed to, DataFlux Corporation LLC in the USA and other countries. ® indicates USA registration.

The scanning, uploading, and distribution of this book via the Internet or any other means without the permission of the publisher is illegal and punishable by law. Please purchase only authorized electronic editions and do not participate in or encourage electronic piracy of copyrighted materials. Your support of others' rights is appreciated.

[DataFlux Legal Statements](#)

[DataFlux Solutions and Accelerators Legal Statements](#)

## DataFlux Legal Statements

### Apache Portable Runtime License Disclosure

Copyright © 2008 DataFlux Corporation LLC, Cary, NC USA.

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

### Apache/Xerces Copyright Disclosure

The Apache Software License, Version 3.1

Copyright © 1999-2003 The Apache Software Foundation. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. The end-user documentation included with the redistribution, if any, must include the following acknowledgment:

"This product includes software developed by the Apache Software Foundation (<http://www.apache.org>)."

Alternately, this acknowledgment may appear in the software itself, if and wherever such third-party acknowledgments normally appear.

4. The names "Xerces" and "Apache Software Foundation" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact [apache@apache.org](mailto:apache@apache.org).
5. Products derived from this software may not be called "Apache", nor may "Apache" appear in their name, without prior written permission of the Apache Software Foundation.

THIS SOFTWARE IS PROVIDED "AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE APACHE SOFTWARE FOUNDATION OR

ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This software consists of voluntary contributions made by many individuals on behalf of the Apache Software Foundation and was originally based on software copyright (c) 1999, International Business Machines, Inc., <http://www.ibm.com>. For more information on the Apache Software Foundation, please see <http://www.apache.org>.

## **DataDirect Copyright Disclosure**

Portions of this software are copyrighted by DataDirect Technologies Corp., 1991 - 2008.

## **Expat Copyright Disclosure**

Part of the software embedded in this product is Expat software.

Copyright © 1998, 1999, 2000 Thai Open Source Software Center Ltd.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

## **gSOAP Copyright Disclosure**

Part of the software embedded in this product is gSOAP software.

Portions created by gSOAP are Copyright © 2001-2004 Robert A. van Engelen, Genivia inc. All Rights Reserved.

THE SOFTWARE IN THIS PRODUCT WAS IN PART PROVIDED BY GENIVIA INC AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

## **IBM Copyright Disclosure**

ICU License - ICU 1.8.1 and later [used in DataFlux Data Management Platform]

COPYRIGHT AND PERMISSION NOTICE

Copyright © 1995-2005 International Business Machines Corporation and others. All Rights Reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, provided that the above copyright notice(s) and this permission notice appear in all copies of the Software and that both the above copyright notice(s) and this permission notice appear in supporting documentation.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

## **Microsoft Copyright Disclosure**

Microsoft®, Windows, NT, SQL Server, and Access, are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

## **Oracle Copyright Disclosure**

Oracle, JD Edwards, PeopleSoft, and Siebel are registered trademarks of Oracle Corporation and/or its affiliates.

## **PCRE Copyright Disclosure**

A modified version of the open source software PCRE library package, written by Philip Hazel and copyrighted by the University of Cambridge, England, has been used by DataFlux for regular expression support. More information on this library can be found at:  
<ftp://ftp.csx.cam.ac.uk/pub/software/programming/pcre/>.

Copyright © 1997-2005 University of Cambridge. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the University of Cambridge nor the name of Google Inc. nor the names of their contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

## **Red Hat Copyright Disclosure**

Red Hat® Enterprise Linux®, and Red Hat Fedora™ are registered trademarks of Red Hat, Inc. in the United States and other countries.

## **SAS Copyright Disclosure**

Portions of this software and documentation are copyrighted by SAS® Institute Inc., Cary, NC, USA, 2009. All Rights Reserved.



## **SQLite Copyright Disclosure**

The original author of SQLite has dedicated the code to the public domain. Anyone is free to copy, modify, publish, use, compile, sell, or distribute the original SQLite code, either in source code form or as a compiled binary, for any purpose, commercial or non-commercial, and by any means.

## **Sun Microsystems Copyright Disclosure**

Java™ is a trademark of Sun Microsystems, Inc. in the U.S. or other countries.

## **Tele Atlas North American Copyright Disclosure**

Portions copyright © 2006 Tele Atlas North American, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

## **USPS Copyright Disclosure**

National ZIP®, ZIP+4®, Delivery Point Barcode Information, DPV, RDI. © United States Postal Service 2005. ZIP Code® and ZIP+4® are registered trademarks of the U.S. Postal Service.

DataFlux holds a non-exclusive license from the United States Postal Service to publish and sell USPS CASS, DPV, and RDI information. This information is confidential and proprietary to the United States Postal Service. The price of these products is neither established, controlled, or approved by the United States Postal Service.

## **VMware**

DataFlux Corporation LLC technical support service levels should not vary for products running in a VMware® virtual environment provided those products faithfully replicate the native hardware and provided the native hardware is one supported in the applicable DataFlux product documentation. All DataFlux technical support is provided under the terms of a written license agreement signed by the DataFlux customer.

The VMware virtual environment may affect certain functions in DataFlux products (for example, sizing and recommendations), and it may not be possible to fix all problems.

If DataFlux believes the virtualization layer is the root cause of an incident; the customer will be directed to contact the appropriate VMware support provider to resolve the VMware issue and DataFlux shall have no further obligation for the issue.

## **Solutions and Accelerators Legal Statements**

Components of DataFlux Solutions and Accelerators may be licensed from other organizations or open source foundations.

## **Apache**

This product may contain software technology licensed from Apache.

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at:  
<http://www.apache.org/licenses/LICENSE-2.0>.

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and limitations under the License.

## **Creative Commons Attribution**

This product may include icons created by Mark James <http://www.famfamfam.com/lab/icons/silk/> and licensed under a Creative Commons Attribution 2.5 License: <http://creativecommons.org/licenses/by/2.5/>.

## **Degrafa**

This product may include software technology from Degrafa (Declarative Graphics Framework) licensed under the MIT License a copy of which can be found here: <http://www.opensource.org/licenses/mit-license.php>.

Copyright © 2008-2010 Degrafa. All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

## **Google Web Toolkit**

This product may include Google Web Toolkit software developed by Google and licensed under the Apache License 2.0.

## **JDOM Project**

This product may include software developed by the JDOM Project (<http://www.jdom.org/>).

## **OpenSymphony**

This product may include software technology from OpenSymphony. A copy of this license can be found here: <http://www.opensymphony.com/osworkflow/license.action>. It is derived from and fully compatible with the Apache license that can be found here: <http://www.apache.org/licenses/>.

## **Sun Microsystems**

This product may include software copyrighted by Sun Microsystems, `jaxrpc.jar` and `saaj.jar`, whose use and distribution is subject to the Sun Binary code license.

This product may include Java Software technologies developed by Sun Microsystems, Inc. and licensed to Doug Lea.

The Java Software technologies are copyright © 1994-2000 Sun Microsystems, Inc. All rights reserved.

This software is provided "AS IS," without a warranty of any kind. ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE HEREBY EXCLUDED. DATAFLUX CORPORATION LLC, SUN MICROSYSTEMS, INC. AND THEIR RESPECTIVE LICENSORS SHALL NOT BE LIABLE FOR ANY DAMAGES SUFFERED BY LICENSEE AS A RESULT OF USING, MODIFYING OR DISTRIBUTING THE SOFTWARE OR ITS DERIVATIVES. IN NO EVENT WILL SUN MICROSYSTEMS, INC. OR ITS LICENSORS BE LIABLE FOR ANY LOST REVENUE, PROFIT OR DATA, OR FOR DIRECT, INDIRECT, SPECIAL, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, HOWEVER CAUSED AND REGARDLESS OF THE THEORY OF LIABILITY, ARISING OUT OF THE USE OF OR INABILITY TO USE SOFTWARE, EVEN IF SUN MICROSYSTEMS, INC. HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

## **Java Toolkit**

This product includes the Web Services Description Language for Java Toolkit 1.5.1 (WSDL4J). The WSDL4J binary code is located in the file `wsdl4j.jar`.

Use of WSDL4J is governed by the terms and conditions of the Common Public License Version 1.0 (CPL). A copy of the CPL can be found here at <http://www.opensource.org/licenses/cpl1.0.php>.

# Table of Contents

<b>Introduction .....</b>	<b>1</b>
Accessibility .....	1
Conventions Used In This Document .....	1
DataFlux Reference Documentation .....	2
<b>Overview .....</b>	<b>3</b>
Data Management Server User Interface .....	3
Setting Options for Data Management Server.....	5
<b>Using Data Management Server .....</b>	<b>6</b>
Register Data Management Server.....	6
Logging On to Data Management Server .....	8
Data Connections .....	9
Deploying Jobs on the Data Management Server .....	10
Importing and Exporting Repository Items.....	15
Real-Time Data Services .....	17
Deleting Jobs and Services .....	20
<b>Troubleshooting .....</b>	<b>22</b>
<b>Glossary .....</b>	<b>23</b>



# Introduction

This section provides basic information about the DataFlux® Data Management Server (Data Management Server) product and documentation. Data Management Server supports all features available in the corresponding Data Management Studio release.

- [Accessibility](#)
- [Conventions Used in This Book](#)
- [DataFlux Reference Documentation](#)

## Accessibility

DataFlux® Data Management Server (Data Management Server) includes features that improve usability of the product for users with disabilities. These features are related to accessibility standards for electronic information technology that were adopted by the United States (U.S.) Government under Section 508 of the U.S. Rehabilitation Act of 1973, as amended.

If you have questions or concerns about the accessibility of DataFlux products, send an e-mail to [techsupport@dataflux.com](mailto:techsupport@dataflux.com).

## Conventions Used In This Document

This document uses several conventions for special terms and actions.

### Typographical Conventions

The following typographical conventions are used in this document:

Typeface	Description
<b>Bold</b>	Signifies a button or action.
<i>Italic</i>	Identifies arguments or values that you supply, such as version numbers.
Monospace	Indicates filenames, directory paths, and examples of code.

### Syntax Conventions

The following syntax conventions are used in this document:

Syntax	Description
#	The pound # sign at the beginning of example code indicates a comment that is not part of the code.
>	The greater than symbol is used to show a browse path. For example, <b>Start &gt; Programs &gt; DataFlux &gt; License Manager version.</b>

## Path Conventions

Various products and operating systems may use different paths for default locations. This document uses the path for the 64-bit version of Microsoft® Windows® 7 in examples. The following examples display the differences in paths for three different operating systems:

### Windows XP

*drive:\Program Files\DataFlux\DMServer\version*

### Windows 7

32-bit – *drive:\Program Files (x86)\DataFlux\DMServer\version*

64-bit – *drive:\Program Files\DataFlux\DMServer\version*

### UNIX®

*/opt/dataflux/dmserver*

## DataFlux Reference Documentation

This document may reference other DataFlux documentation, including:

*DataFlux Authentication Server Administrator's Guide*

*DataFlux Authentication Server User's Guide*

*DataFlux Data Management Server Administrator's Guide*

*DataFlux Data Management Studio Installation and Configuration Guide*

*DataFlux Data Management Studio Online Help*

*DataFlux Expression Language Reference Guide*

*DataFlux Federation Server Administrator's Guide*

*DataFlux Federation Server User's Guide*

*DataFlux Quality Knowledge Base Online Help*

*Dataflux Secure Administrator's Guide*

# Overview

Working in unison with DataFlux Data Management Studio, DataFlux® Data Management Server (Data Management Server) is a critical component of the Data Management Platform. Using Service-Oriented Architecture (SOA), Data Management Server addresses the challenges of storing consistent, accurate, and reliable data across a network by integrating data quality and data integration business rules throughout your IT environment. Using Data Management Server, you can replicate your business rules for acceptable data across applications and systems, enabling you to build a single, unified view of the enterprise.

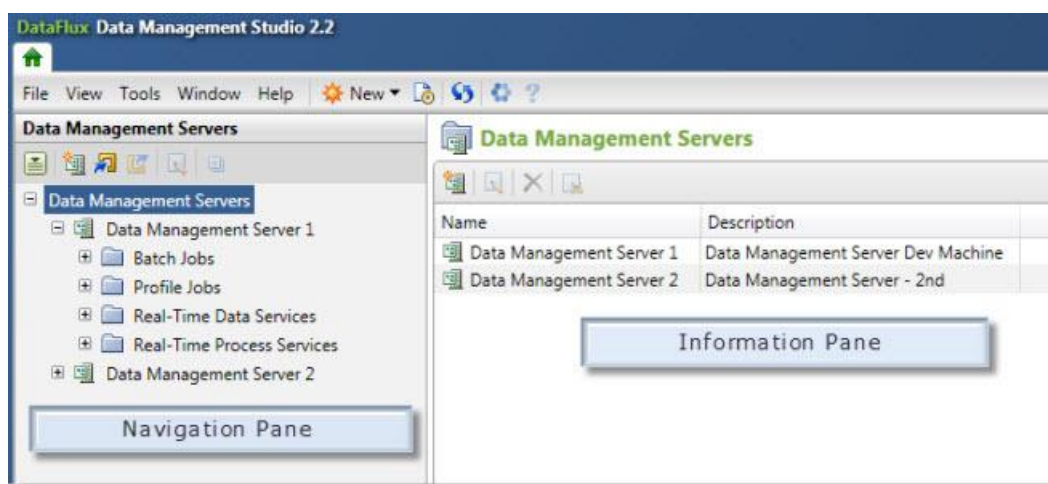
The *DataFlux Data Management Server User's Guide* is intended for users of Data Management Studio who will be deploying and running jobs on a Data Management Server. This guide explains how to register your Data Management Server and import, export and run real-time services and batch jobs using the server. This guide does not address administration of the Data Management Server. For server administration, refer to the *Data Management Server Administrator's Guide* available in the Documentation Portlet of Data Management Studio.

## Data Management Server User Interface

Data Management Server is accessed through Data Management Studio using the **Data Management Servers** riser bar. From the Data Management Servers interface you can perform several tasks, including managing server instances, importing and exporting repository items, running jobs, and testing services. Following is a brief explanation of the user interface for Data Management Server.

### Navigation and Information Panes

The Data Management Servers user interface consists of two panes; the navigation pane on the left, and the information pane on the right.



*Data Management Server User Interface*

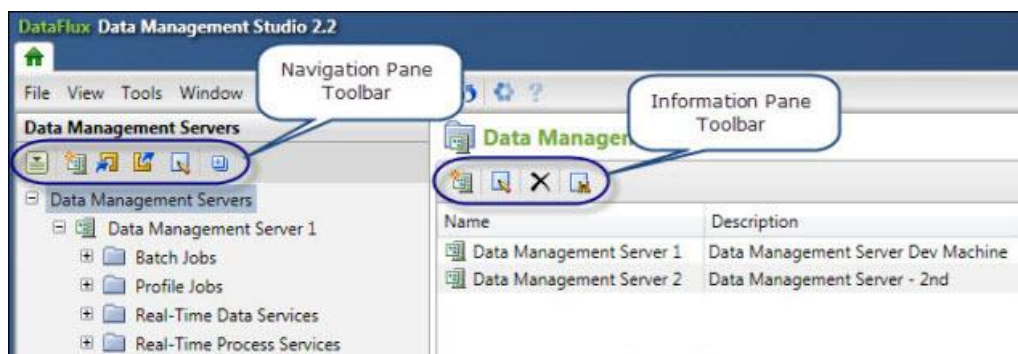
The navigation pane contains the Data Management Servers riser bar from which you can register and configure your Data Management Server:



*Data Management Servers Riser Bar*

## Toolbars

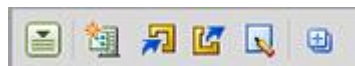
The Data Management Servers interface has two toolbars. One toolbar is displayed in the navigation pane and the second toolbar is displayed in the information pane.



*Navigation and Information Pane Toolbars*

## Navigation Pane Toolbar

The navigation pane toolbar contains the items needed to manage your Data Management Servers and their associated jobs and services. Following are explanations of the toolbar icons in the order in which they appear.



*Navigation Pane Toolbar*

**Action Menu** - Presents a list of tasks that you can perform on the Data Management Server.

**New** - Used to create a new Data Management Server.

**Import** - Allows you to import items from a repository.

**Export** - Allows you to export the selected object to a repository.

**Edit** - Allows you to edit information for the selected object..

**Expand** - Allows you to expand all folders in the navigation pane.



## Information Pane Toolbar

When you select the top-level **Data Management Servers** item in the navigation pane, a list of servers is displayed in the information pane. From this list, you can create, edit, and delete servers. Following are explanations of the toolbar icons in the order in which they appear.



*Information Pane Toolbar*

**New** - Allows you to create a new Data Management Server.

**Edit** - Allows you to edit the selected object. If this option is not available, you cannot edit the object.

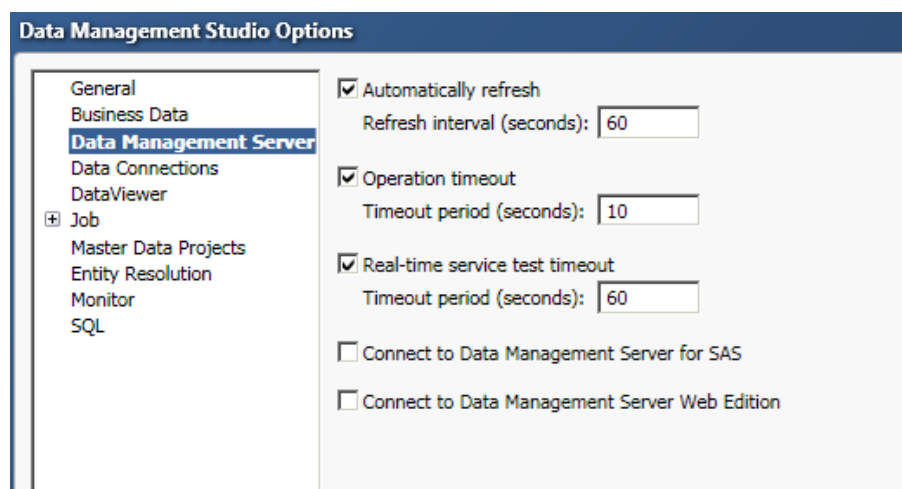
**Delete** - Allows you to delete one or more Data Management Servers.

**Find** - Allows you to find objects in the left navigation pane.

## Setting Options for Data Management Server

You can set options for Data Management Server such as the automatic refresh interval and operation timeout.

1. Using the toolbar in Data Management Studio, select **Tools > Data Management Studio Options** to open the **Data Management Studio Options** dialog.
2. Select **Data Management Server** from the list on the left and edit the options that apply in your environment.



*Data Management Studio - Data Management Server Options*

# Using Data Management Server

You can use the **Data Management Servers** interface in Data Management Studio to deploy and execute jobs. The following topics outline information and tasks to perform using Data Management Server:

- [Register Data Management Server](#)
- [Logging On to Data Management Server](#)
- [Data Connections](#)
- [Deploy and Execute Jobs](#)
- [Importing and Exporting Repository Items](#)
- [Testing Real-Time Services](#)
- [Deleting Jobs and Services](#)

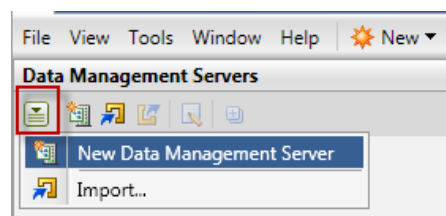
## Register Data Management Server

Before you can work with DataFlux Data Management Server, you need to register the server in Data Management Studio. Your DataFlux server administrator should be able to provide the required information for Data Management Server registration.

If your Data Management Server is secured and requires logon credentials using a DataFlux Authentication Server, you will need the name of the domain that your administrator set up for the Data Management Server. You will also need to register your Authentication Server and enter your credentials for that domain. Your administrator should be able to provide the required information for registration of the Authentication Server also. For additional information, refer to the *DataFlux Authentication Server User's Guide*.

To register a Data Management Server:

1. In Data Management Studio, click the **Data Management Servers** riser bar to open the Data Management Servers interface.
2. Click **Action Menu**, the first icon in the toolbar, and select **New Data Management Server** from the drop-down menu. The **Management Server** dialog appears.



Action Menu: New Data Management Server

3. In the **Management Server** dialog,
  - Enter a name for the server in the **Name** field.
  - Enter a description for the server in the **Description** field.

- Enter the server host name in the **Server** field.
- Port **21036** is the default port number for Data Management Server. If you are using a different port, enter the port number in the **Port** field.
- If you are using DataFlux Authentication Server enter a domain name in the **Domain name** field.

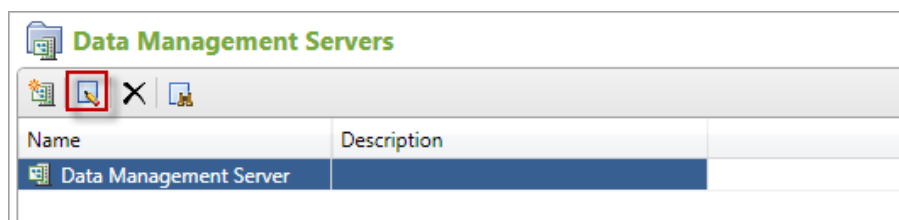
*Data Management Server: New Management Server Dialog*

4. Click **Test Connection** to verify that you can connect to the server.
5. Click **OK**. The new Data Management Server is now listed in the navigation pane.

## Editing a Server

To edit information for a Data Management Server:

1. Click **Data Management Servers** in the navigation pane to display a list of servers in the information pane.
2. In the information pane, select the name of the server that you want to edit and click **Edit** on the toolbar.




*Edit Data Management Server*

3. In the **Edit Management Server** dialog, make the desired changes.
4. To test the connection to the server, click **Test Connection**. If you are prompted, log on to the server by entering your user ID and password, and click **Log On**.
5. Click **OK**.

## Deleting a Server

To delete a Data Management Server:

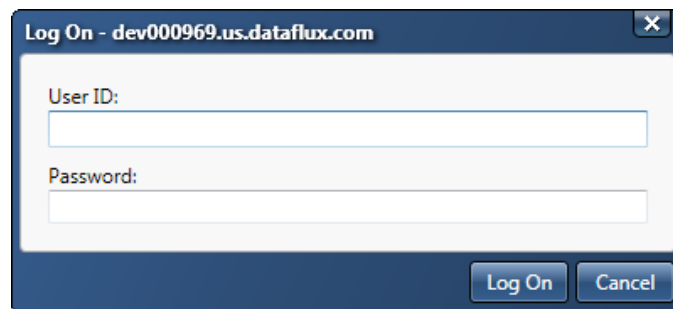
1. Click **Data Management Servers**. In the information pane, click the name of one or more servers you want to delete.
2. Click **Delete**.
3. Confirm that you want to delete the servers by clicking **Yes**.

 **Note:** Deleting a server instance in Studio does not remove the actual Data Management Server from the network.


## Logging On to Data Management Server

If your location has enabled security, you will be prompted to enter a user id and password when connecting to the Data Management Server. If you entered a Domain name when your Data Management Server was registered, your logon credentials are passed to the DataFlux Authentication Server automatically.

1. Click the **Data Management Servers** riser bar in Data Management Studio.
2. Select a Data Management Server in the navigation pane. A **Log On** dialog appears.
3. Enter your *User ID* and *Password* and click **Log On**.




*Data Management Server: Log On Dialog*

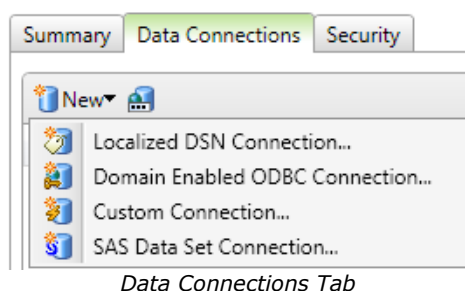
 **Note:** Your logon credentials are usually those that are used to log in to your workstation. If you have problems logging in, check with your DataFlux Server Administrator to verify your user ID and domain name.

Once you are logged on to Data Management Server, you are ready to deploy and execute jobs.

# Data Connections

Data Management Studio (Studio) allows you to create and maintain data source name (DSN) connections, which are also referred to as data connections. Data connections can be used to access ODBC, localized DSN, SAS data sets, and custom non-ODBC connections. For data connections that require credentials, you can save your credentials. If you are deploying jobs from the Studio client to the Data Management Server, contact your server administrator to create, or duplicate, the required data connections for the jobs on the server.

 **Note:** Data connections on the Data Management Server are created and managed by your server administrator. While Studio users can create data connections within Studio, they do not have the permissions to manage data connections at the server level.



*Data Connections Tab*

The data connections available from the Data Management Server are:

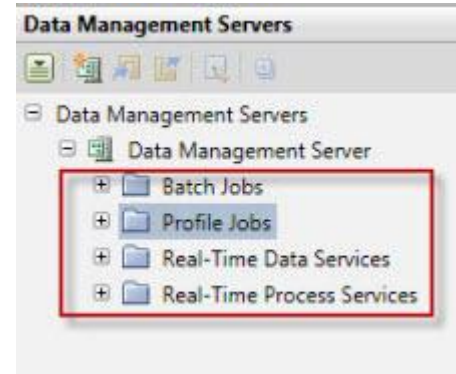
- Localized DSN Connection
- Domain Enabled ODBC Connection
- Custom Connection
- SAS Data Set Connection


ODBC Connections are created using the ODBC Data Source Administrator available through the Control Panel or Administrative Tasks on the Server. ODBC connections created through Data Management Studio are 32-bit connections that might need to be duplicated to the Data Management Server if the server is running a 64-bit platform. e.g. MS Access Database connections. This is handled by your Data Management Server Administrator.

# Deploying Jobs on the Data Management Server

After the Data Management Server is registered, you are ready to deploy and run jobs. There are four top-level folders listed for each registered Data Management Server:

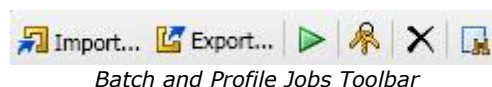
- The **Batch Jobs** folder corresponds to the batch\_jobs folder located in the Data Management Repository and is used to deploy data and process jobs in batch mode.
- The **Profile Jobs** folder contains any profiles that exist in the Data Management Repository that the Data Management Server installation points to. Profiles cannot be imported or exported within Data Management Server.
- The **Real-Time Data Services** folder corresponds to the data\_services folder in the Data Management Repository and is used to deploy data jobs as a real-time service.
- The **Real-Time Process Services** folder corresponds to the process\_services folder in the Data Management Repository and is used to deploy jobs as a real-time service.



 **A note about Profile Jobs:** Only profiles that are resident in the Data Management Repository for your Data Management Server are visible in the Profile Jobs folder for the Data Management Server.

## Batch and Profile Jobs

When you select the Batch Jobs folder or the Profile Jobs folder in the Data Management Server folders list, a list of jobs displays in the right information pane exposing the following toolbar:

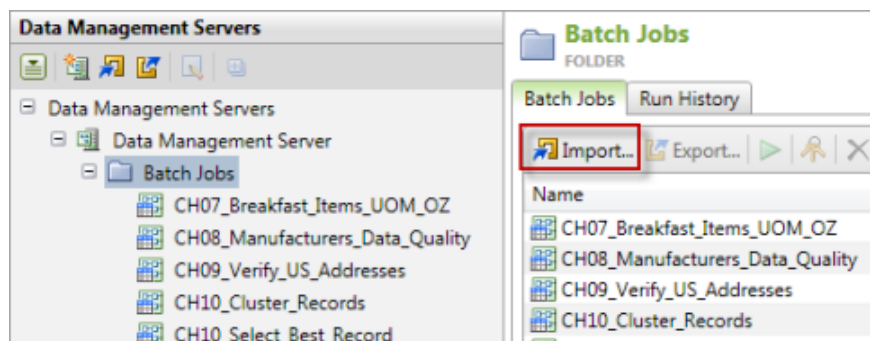


- **Import:** Allows you to import items from the repository. The import icon becomes active when you select a jobs folder under the Data Management Server.
- **Export:** Allows you to export the selected object to a repository.
- **Run:** Allows you to run the selected job.
- **Permissions:** Allows you to view permissions, or grant permissions to a job if you are the job owner. You cannot grant permissions for a Profile Job.
- **Delete:** Allows you to delete one or more selected objects.
- **Find:** Allows you to locate the selected item in the tree and display it.

## Deploy a Batch Data Job

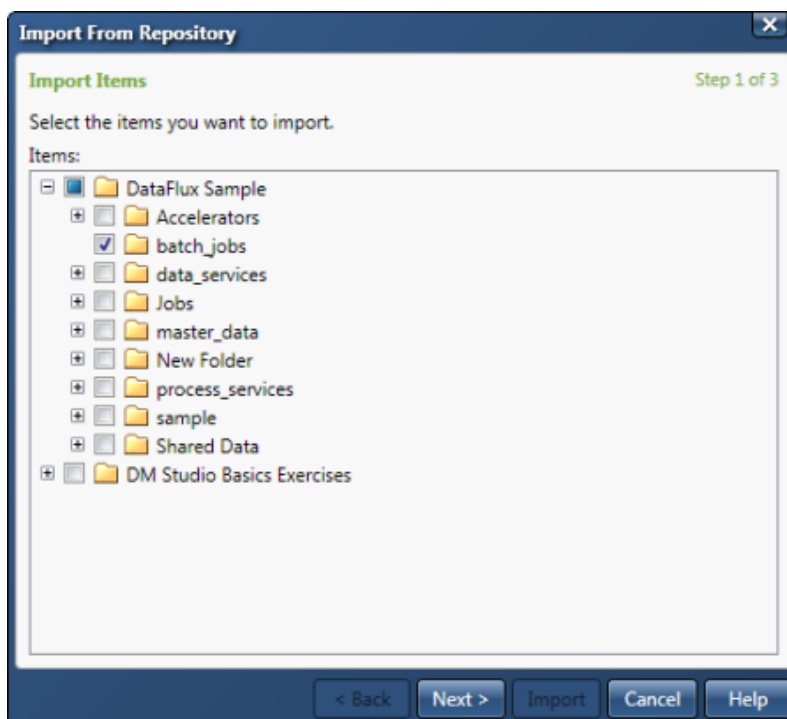
To deploy a batch data job to the Data Management Server, it is imported from the repository. This procedure assumes that the job has been exported to the repository in Data Management Studio.

1. Highlight the **batch jobs** folder and select **Import**.




*Import Batch Jobs*

2. Using the **Import From Repository** dialog, navigate to the job or jobs to be deployed and check the box next to the job name, or select the box next to a folder name to select all jobs in that folder.
3. Select **Next**.

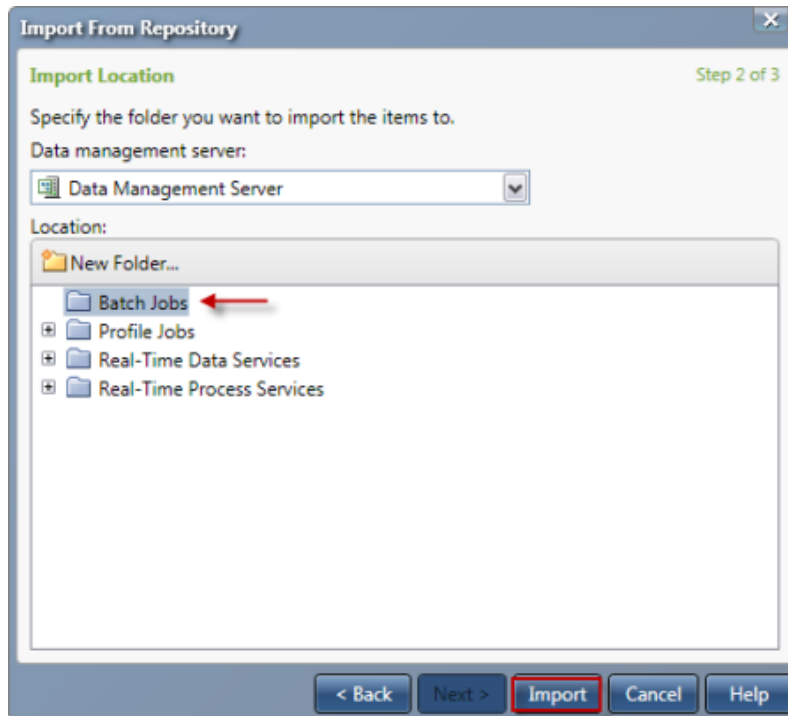


*Import from Repository Dialog*

 **Note:** It is recommended that you create the same folder structure on the Data Management Server that was created in Data Management Studio. If your jobs are in a sub-folder of batch jobs, create the same sub-folder when you import your jobs to the server. It is recommended that you build and test your batch jobs in the batch jobs folder (or in a sub-folder of it) because

mirroring these folders will help preserve any references where one Data Management Studio job references another.

4. Select the folder to import the items to and click **Import** to begin importing the selected jobs to the Data Management Server.



*Import from Repository: Select Import Folder*

5. Once the import has completed successfully, select **Close**.

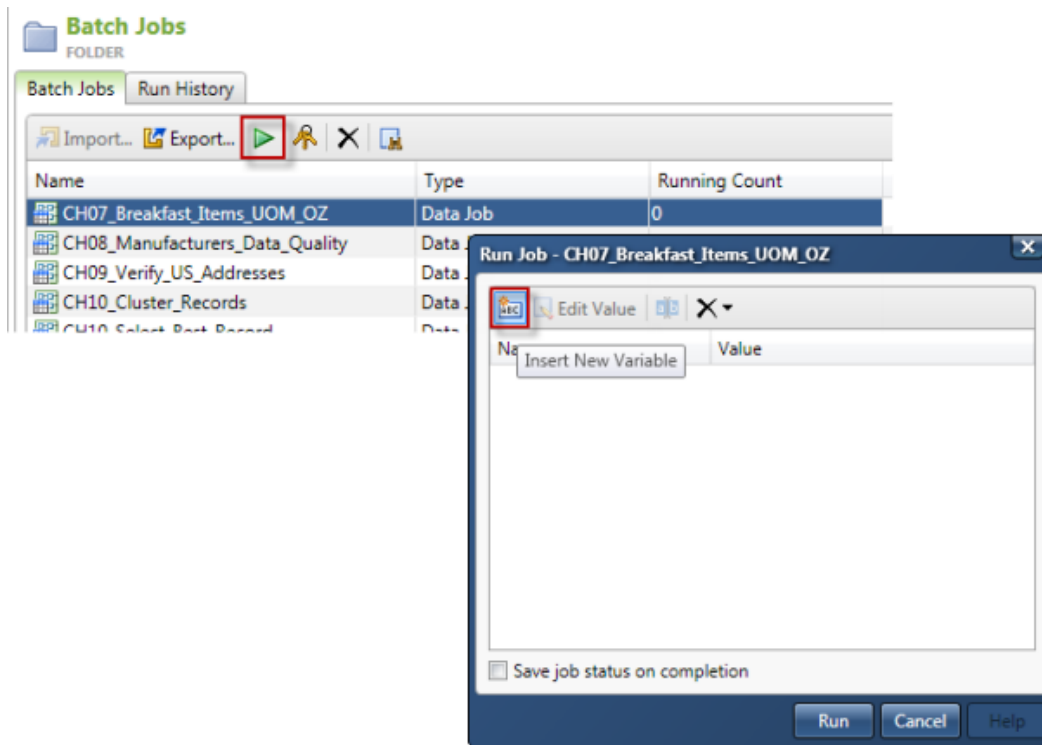
The jobs are now uploaded to the Batch Jobs folder on the Data Management Server.

## Running Batch Jobs

Before running any batch jobs, check to see if the jobs use variables. If you have macro variables that are read from a configuration file, inform your server administrator so the appropriate additions can be made to the macros configuration file on the Data Management Server. To run a batch job,

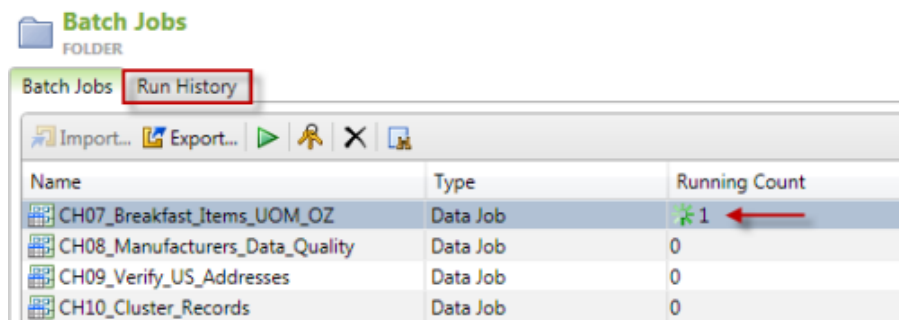
1. Select the Data Management Server that contains the batch jobs. If you are prompted, log on to the server by entering your user ID and password, and then click **Log On**.
2. Expand the **Data Management Server** jobs list and expand the **Batch Jobs** folder.
3. In the information pane under the **Batch Jobs** tab, select the job name and then click **Run**. The Run Job dialog opens where you can insert job variables.
4. In the **Run Job** dialog, click **New Variable** if the job is set up to use variables. Setting input variables is an optional step.





Run Batch Job: Insert New Variable

5. Select **Run**. Notice that the **Running Count** column is updated.



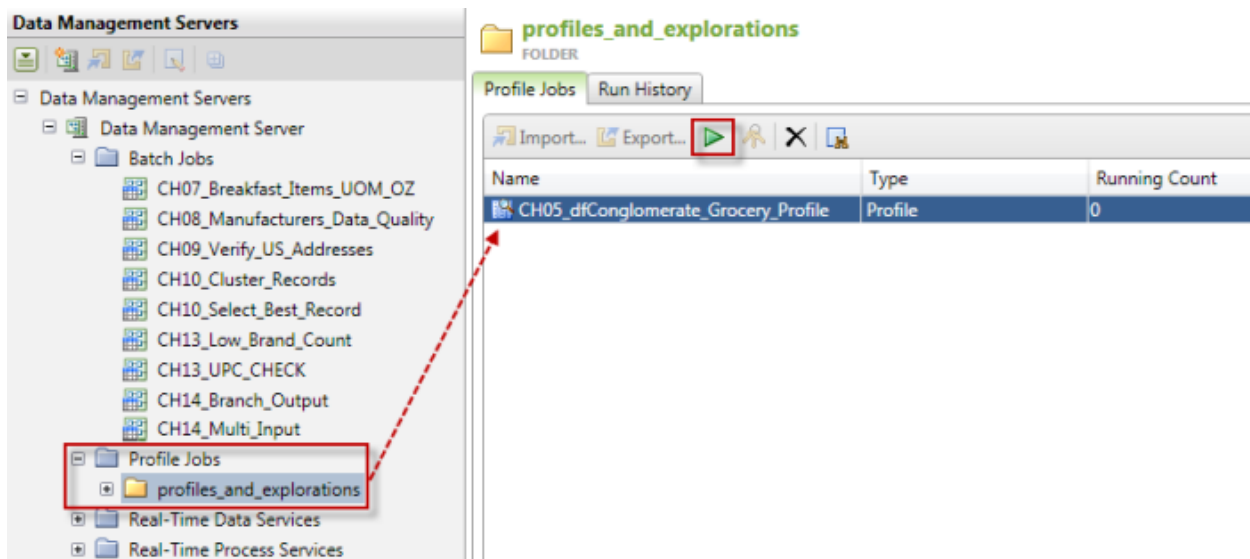
Batch Jobs Run History

6. Check the **Run History** tab for the job status and check the log when the job is finished running.

## Running Profile Jobs


To run a profile job, complete the following steps:

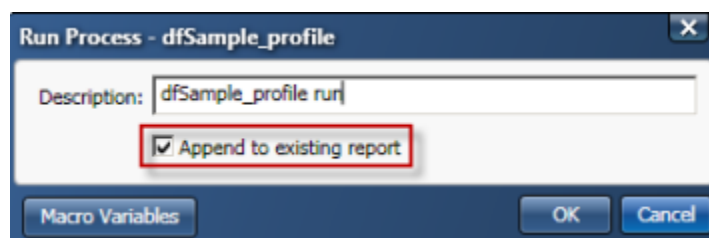
1. Select the name of the Data Management Server that contains the profile jobs you wish to run. If you are prompted, log on to the server by entering your user ID and password, and then click **Log On**.
2. Expand the **Profile Jobs** folder and select the folder containing the jobs you want to run. The jobs are listed under the **Profile** tab in the information pane to the right.
3. Select the job name, and then click **Run**.




Run Profile Jobs

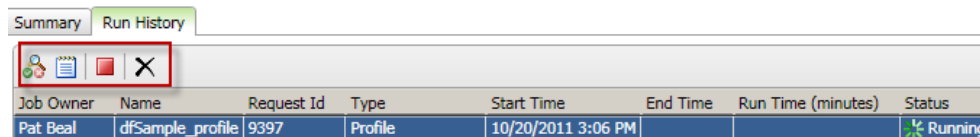
4. In the **Run Process** dialog, enter a description for the job and click **Macro Variables** to provide one or more variables for the job.

 **Note:** The first time you run a profile, a report is created. Use the **Append to existing report** option to continue writing to the existing report. To replace the existing report and start a new one, clear the **Append to existing report** option.



Run Process Dialog

5. In the **Profile Macro Variables** dialog, click **New Macro Variable**  and specify a value for the variable. Click **OK**. Setting input variables is an optional step and variables must be declared on the job.
6. In the **Run Process** dialog, click **OK**.
7. Select the **Run History** tab for the job status.



Run History Toolbar

8. Using the toolbar in **Run History** you can also view the job log, delete files or stop a process if a job is still running.

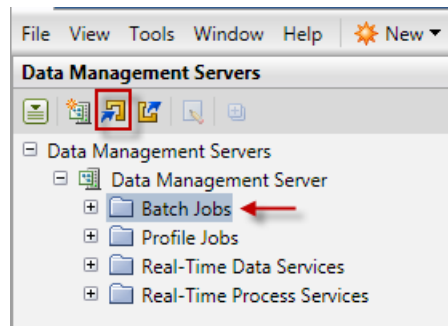
# Importing and Exporting Repository Items

Use the following procedures to import and export repository items to and from the Data Management Repository. You cannot import profiles, rules, and tasks to the Data Management Server.

## Importing Repository Items

To import one or more repository items, complete the following steps:

1. Click **Data Management Servers** and select the name of the server you want to import items into. If you are prompted, log on to the server by entering your user ID and password, and then click **Log On**.
2. Select the job or service category into which you want to import items and select **Import...** to open the **Import From Repository** wizard.



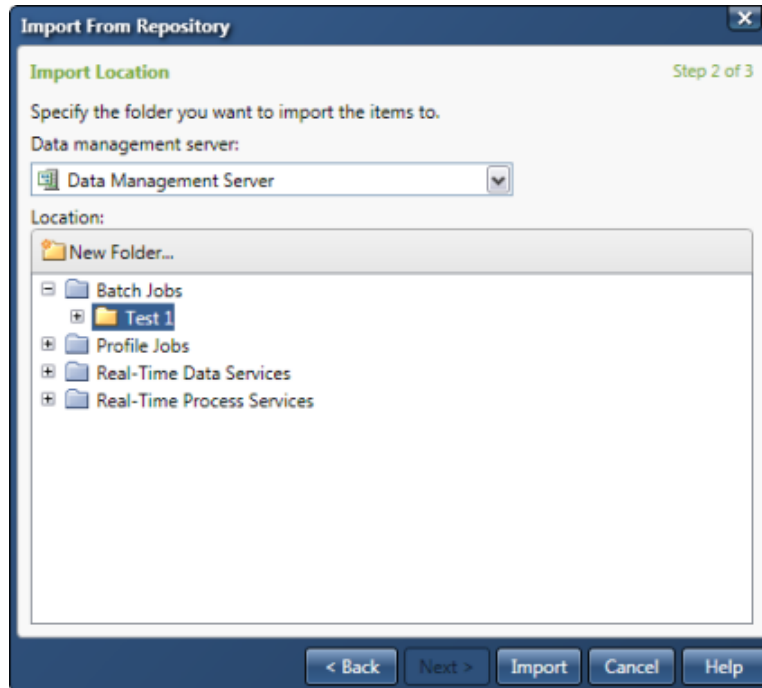
*Import Batch Jobs*

3. At the **Import Items** dialog, navigate through the items in the repository and select the items you want to import. Then, click **Next**.



*Import from Repository Wizard*

4. At the **Import Location** dialog, select a Data Management Server and a folder/location for the imported items.
5. If necessary create a new folder for the imported items. Click **New Folder...** to create folders that mimic the folder structure originally used for the items.
6. Click **Import**.



*Import Location Dialog*



**Note:** New folders must be created under an existing folder within Data Management Server, e.g. Batch Jobs or Real-Time Service. You cannot create a new folder directly beneath the Data Management Server instance.

7. When the import is finished, click **Close**.

## Exporting Repository Items

To export one or more repository items, complete the following steps:

1. Expand **Data Management Servers** and click the name of the server you want to export items from. If you are prompted, log on to the server by entering your user ID and password, and then click **Log On**.
2. Click the job or service folder from which you want to export items. In the information pane, click **Export**. The **Export To Folder** dialog appears.
3. Type a name in the **Name** field and specify the repository or folder where the content will be exported. Then, click **Open**.

If an item already exists with the same name, you will be asked whether you want to overwrite the existing item, rename the new item, or skip the item.

# Real-Time Data Services

You can test real-time data and process services by running the services in Data Management Server. To access the services, select the **Data Management Servers** riser bar from within Data Management Studio and use the following procedures.

- [Test Real-Time Data Services](#)
- [Test Real-Time Process Services](#)

Following is a brief overview of the various inputs and outputs associated with testing Real-Time Data Services.

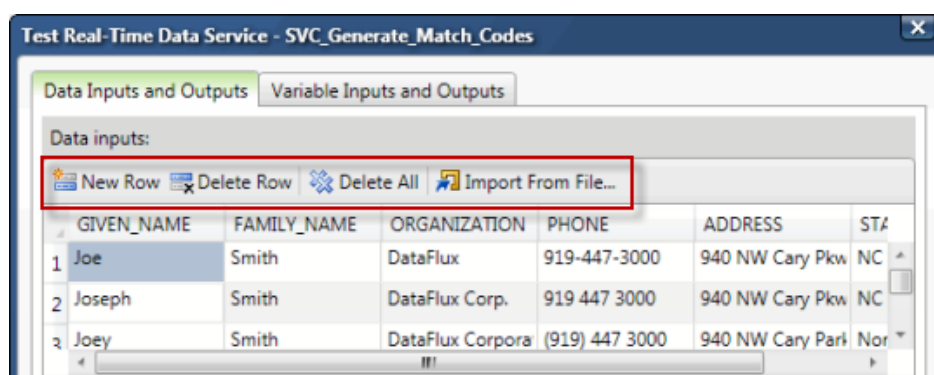
## Data Inputs and Outputs Tab

**New Row** — Allows you to add a new data row. The values are empty strings that will be passed to the service for processing.

**Delete Row** — Allows you to delete the rows containing the selected cells.

**Delete All** — Allows you to delete all rows.

**Import From File** — Imports data from a .csv file. If necessary, additional rows are added to match the number of imported rows. However, since columns are read-only on this tab, columns cannot be created during the import; any extra columns in the file will be ignored.



*Test Real-Time Data Service: Data Inputs and Outputs*

## Variable Inputs and Outputs Tab

**Insert New Variable** — Opens the **New Variable** window, where you can specify a variable name. While you can specify any variable name, only meaningful variables will be used during the run.

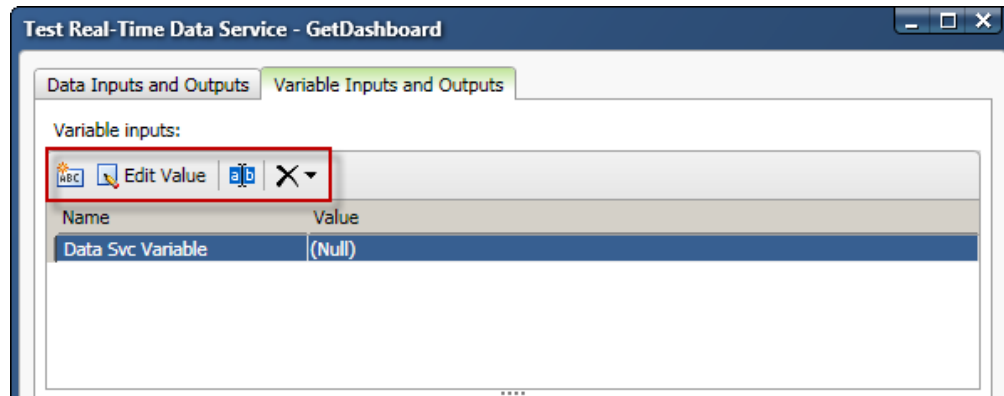
**Edit Value** — Allows you to edit the value of one or more selected variables.

**Rename Variable** - Allows you to rename the current variable.

**Delete drop-down menu:**

- **Clear value (null)** - Set the value for the selected variables to return a value of *null* instead of an empty string.


- **Clear all values (null)** - Set the value for all variables to return a value of *null* instead of an empty string.
- **Delete** - Allows you to delete one or more selected variables.



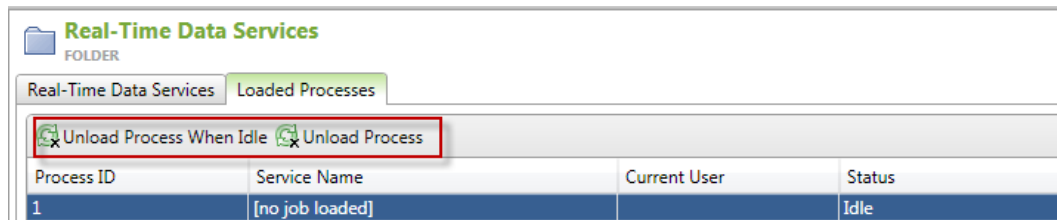
*Test Real-Time Data Service: Variable Inputs and Outputs*

## Testing Real-Time Data Services

To test a real-time data service, complete the following steps:

1. Click the name of the server for which you want to test real-time data services. If you are prompted, log on to the server by entering your user ID and password, and then click **Log On**.
2. Expand the **Real-Time Data Services** folder and click the folder containing the jobs you want to run.
3. In the information pane, on the **Real-Time Data Services** tab, select the data service name and select **Test** .
4. In the **Test Real-Time Data Service** dialog:
  - In the **Data Inputs and Outputs** tab, the **Data inputs** section is populated with information from the external data provider node. Additionally, you can perform the following tasks:
    - Click **New Row** to add new rows. Specify the appropriate input fields, depending on the service you are testing.
    - Select a cell in a row you want to remove and click **Delete Row**.
    - Click **Delete All** to delete all rows.
    - Click **Import From File** to navigate to a file which has values you want to import.
  - In the **Variable Inputs and Outputs** tab, in the **Variable inputs** section:
    - Click **New Variable** to specify a new variable name, and click **OK**.
    - Select a variable name and click **Edit Value** to specify or change the value for a variable.
    - Select **Rename Variable** to rename a selected variable.

- Select the **drop-down** menu at delete to:
  - **Clear value (null)** - Set the value for the selected variables to return a value of *null* instead of an empty string.
  - **Clear all values (null)** - Set the value for all variables to return a value of *null* instead of an empty string.
  - **Delete** - Allows you to delete one or more selected variables.
- 5. Click **Test**. If the test was successful, output data and variables fields will be populated. If the server is not able to test the job, an error is displayed.
- 6. Optional: To unload the process, select the **Loaded Processes** tab and choose one of the available options:
  - Unload Process When Idle
  - Unload Process
- 7. Click **Close**.



*Real-Time Data Services: Unload Process*



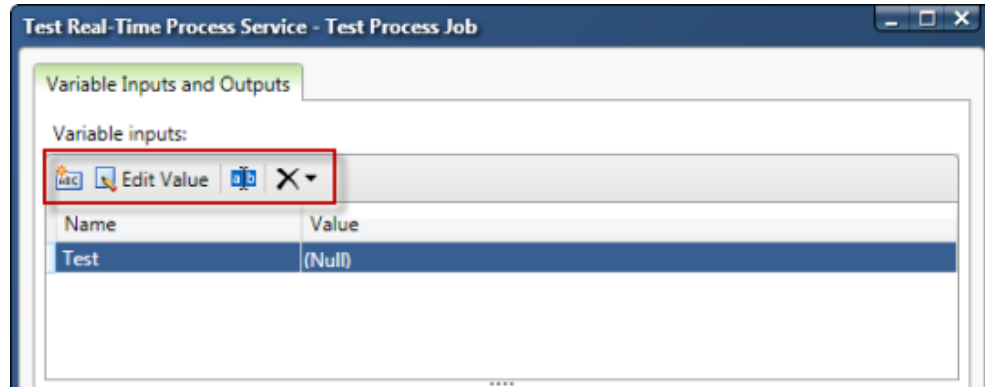
**Note:** You must be the owner of a job to unload any associated processes.

## Testing Real-Time Process Services

To test a real-time process service, complete the following steps:

1. Click the name of the server for which you want to test real-time process services. If you are prompted, log on to the server by entering your user ID and password, and then click **Log On**.
2. Expand the **Real-Time Process Services** folder and click the folder containing the jobs you want to run.
3. In the information pane, on the **Real-Time Process Services** tab, select the process service name select **Test**
4. In the **Test Real-Time Process Service** dialog, in the **Variable inputs** section:
  - Click **New Variable** to specify a new variable name, and click **OK**. Setting input variables is an optional step and variables must be declared on the process service job.
  - Select a variable name and click **Edit Value** to specify or change the value for a variable.
  - Select **Rename Variable** to rename a selected variable.

- Select the **drop-down** menu at delete to:
  - **Clear value (null)** - Set the value for the selected variables to return a value of *null* instead of an empty string.
  - **Clear all values (null)** - Set the value for all variables to return a value of *null* instead of an empty string.
  - **Delete** - Allows you to clear or delete one or more selected variables.



*Test Real-Time Process Service: Variable Inputs and Outputs*

5. Click **Test**. If the test was successful, output data and variables fields will be populated. If the server is not able to test the job, an error will be displayed.
6. Click **Close**.

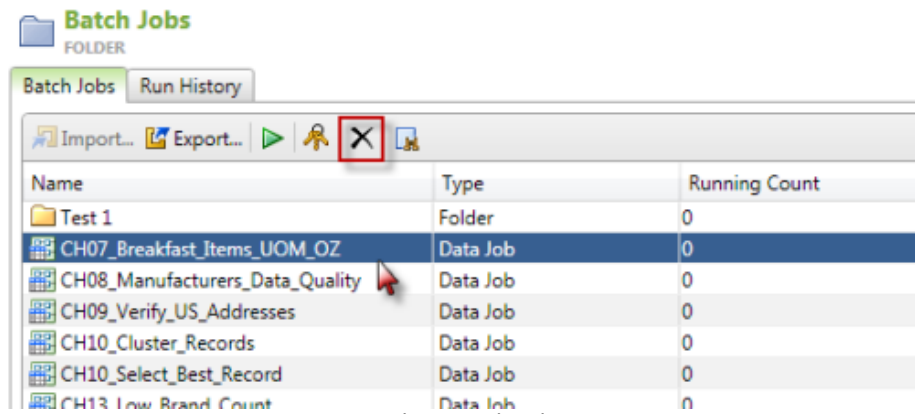
## Deleting Jobs and Services

You can remove jobs and services from the Data Management Server by selecting the delete button on the information pane toolbar. Doing so only removes jobs from your Data Management Server except for profiles, since they are deleted directly from the Data Management Repository for the server.


To delete a job or service, complete the following steps:

1. From the Data Management Studio user interface, click the **Data Management Servers** riser bar to access your Data Management Server.
2. Select the name of the server for which you want to delete a job or service. If you are prompted, log on to the server by entering your user ID and password, and then click **Log On**.
3. Expand the jobs or services folder, and then click the folder containing the job or service you want to delete.
4. In the information pane, on the jobs or services tab, select the object name, and then click **Delete**. The delete operation is final and cannot be canceled.





*Delete Batch Jobs*

 **Note:** Deleting a job does not delete the run history. You have to separately delete the run history if you want to clean-up old job activity.

# Troubleshooting

Following are common error messages and solutions.

## The repository is newer than this client

While running a profile job, if you get a message similar to, *The version of repository <ReposName> is newer than this client*, then someone at your site has a newer version of Data Management Studio than you do and has upgraded the repository. Contact your site administrator about upgrading your Data Management Studio software.

## ActiveX Control Required to View Help Files

In Microsoft Internet Explorer® 6.0 and later, ActiveX controls are sometimes blocked for download. Security for ActiveX content from CDs and local files can be changed under Internet Options. Contact your site administrator to change your Internet Explorer security to enable ActiveX, also known as active content:

1. In Internet Explorer, click **Tools > Internet Options**.
2. On the **Advanced** tab, under **Security**, select **Allow active content from CDs to run on My Computer**, and **Allow active content to run in files on My Computer**.

# Glossary

## A

---

### **API**

An application programming interface (API) is a set of routines, data structures, object classes and/or protocols provided by libraries and/or operating system services in order to support the building of applications.

## D

---

### **DAC**

A data access component (DAC) allows software to communicate with databases and manipulate data.

### **Data Management Repository**

see Repository

### **DPV**

Delivery Point Validation (DPV) is a USPS database that checks the validity of residential and commercial addresses.

### **DSN**

A data source name (DSN) contains connection information, such as user name and password, to connect through a database through an ODBC driver.

## L

---

### **LACS**

Locatable Address Conversion System (LACS) is used updated mailing addresses when a street is renamed or the address is updated for 911, usually by changing a rural route format to an urban/city format.

## O

---

### **ODBC**

Open Database Connectivity (ODBC) is an open standard application programming interface (API) for accessing databases.

## Q

---

### **QAS**

Quick Address Software (QAS) is used to verify and standardize US addresses at the point of entry. Verification is based on the latest USPS address data file.

### **QKB**

The Quality Knowledge Base (QKB) is a collection of files and configuration settings that contain all DataFlux data management algorithms. The QKB is directly editable using DataFlux Data Management Studio.

## R

---

### **RDI**

Residential Delivery Indicator (RDI) identifies addresses as residential or commercial.

### **Repository**

A collection of data and metadata for DataFlux objects. Can be public or private and consists of two parts: Data Storage and File Storage.

## S

---

### **SERP**

The Software Evaluation and Recognition Program (SERP) is a program the Canadian Post administers to certify address verification software.

### **SOA**

Service-Oriented Architecture (SOA) a suite of interoperable services that can be used within multiple, separate systems from several business domains

## U

---

### **USPS**

The United States Postal Service (USPS) provides postal services in the United States. The USPS offers address verification and standardization tools.