



Informatica® PowerExchange for MSMQ  
10.2

# User Guide for PowerCenter

© Copyright Informatica LLC 2009, 2019

This software and documentation are provided only under a separate license agreement containing restrictions on use and disclosure. No part of this document may be reproduced or transmitted in any form, by any means (electronic, photocopying, recording or otherwise) without prior consent of Informatica LLC.

Informatica, the Informatica logo, PowerCenter, and PowerExchange are trademarks or registered trademarks of Informatica LLC in the United States and many jurisdictions throughout the world. A current list of Informatica trademarks is available on the web at <https://www.informatica.com/trademarks.html>. Other company and product names may be trade names or trademarks of their respective owners.

U.S. GOVERNMENT RIGHTS Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation is subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License.

Portions of this software and/or documentation are subject to copyright held by third parties, including without limitation: Copyright DataDirect Technologies. All rights reserved. Copyright © Sun Microsystems. All rights reserved. Copyright © RSA Security Inc. All Rights Reserved. Copyright © Ordinal Technology Corp. All rights reserved. Copyright © Aandacht c.v. All rights reserved. Copyright Genivia, Inc. All rights reserved. Copyright Isomorphic Software. All rights reserved. Copyright © Meta Integration Technology, Inc. All rights reserved. Copyright © Intalio. All rights reserved. Copyright © Oracle. All rights reserved. Copyright © Adobe Systems Incorporated. All rights reserved. Copyright © DataArt, Inc. All rights reserved. Copyright © ComponentSource. All rights reserved. Copyright © Microsoft Corporation. All rights reserved. Copyright © Rogue Wave Software, Inc. All rights reserved. Copyright © Teradata Corporation. All rights reserved. Copyright © Yahoo! Inc. All rights reserved. Copyright © Glyph & Cog, LLC. All rights reserved. Copyright © Thinkmap, Inc. All rights reserved. Copyright © Clearpace Software Limited. All rights reserved. Copyright © Information Builders, Inc. All rights reserved. Copyright © OSS Nokalva, Inc. All rights reserved. Copyright Edifecs, Inc. All rights reserved. Copyright Cleo Communications, Inc. All rights reserved. Copyright © International Organization for Standardization 1986. All rights reserved. Copyright © ej-technologies GmbH. All rights reserved. Copyright © Jaspersoft Corporation. All rights reserved. Copyright © International Business Machines Corporation. All rights reserved. Copyright © yWorks GmbH. All rights reserved. Copyright © Lucent Technologies. All rights reserved. Copyright © University of Toronto. All rights reserved. Copyright © Daniel Veillard. All rights reserved. Copyright © Unicode, Inc. Copyright IBM Corp. All rights reserved. Copyright © MicroQuill Software Publishing, Inc. All rights reserved. Copyright © PassMark Software Pty Ltd. All rights reserved. Copyright © LogiXML, Inc. All rights reserved. Copyright © 2003-2010 Lorenzi Davide, All rights reserved. Copyright © Red Hat, Inc. All rights reserved. Copyright © The Board of Trustees of the Leland Stanford Junior University. All rights reserved. Copyright © EMC Corporation. All rights reserved. Copyright © Flexera Software. All rights reserved. Copyright © Jinfonet Software. All rights reserved. Copyright © Apple Inc. All rights reserved. Copyright © Telerik Inc. All rights reserved. Copyright © BEA Systems. All rights reserved. Copyright © PDFlib GmbH. All rights reserved. Copyright © Orientation in Objects GmbH. All rights reserved. Copyright © Tanuki Software, Ltd. All rights reserved. Copyright © Ricebridge. All rights reserved. Copyright © Sencha, Inc. All rights reserved. Copyright © Scalable Systems, Inc. All rights reserved. Copyright © jQWidgets. All rights reserved. Copyright © Tableau Software, Inc. All rights reserved. Copyright © MaxMind, Inc. All Rights Reserved. Copyright © TMate Software s.r.o. All rights reserved. Copyright © MapR Technologies Inc. All rights reserved. Copyright © Amazon Corporate LLC. All rights reserved. Copyright © Highsoft. All rights reserved. Copyright © Python Software Foundation. All rights reserved. Copyright © BeOpen.com. All rights reserved. Copyright © CNRI. All rights reserved.

This product includes software developed by the Apache Software Foundation (<http://www.apache.org/>), and/or other software which is licensed under various versions of the Apache License (the "License"). You may obtain a copy of these Licenses at <http://www.apache.org/licenses/>. Unless required by applicable law or agreed to in writing, software distributed under these Licenses is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the Licenses for the specific language governing permissions and limitations under the Licenses.

This product includes software which was developed by Mozilla (<http://www.mozilla.org/>), software copyright The JBoss Group, LLC, all rights reserved; software copyright © 1999-2006 by Bruno Lowagie and Paulo Soares and other software which is licensed under various versions of the GNU Lesser General Public License Agreement, which may be found at <http://www.gnu.org/licenses/lgpl.html>. The materials are provided free of charge by Informatica, "as-is", without warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

The product includes ACE(TM) and TAO(TM) software copyrighted by Douglas C. Schmidt and his research group at Washington University, University of California, Irvine, and Vanderbilt University, Copyright (©) 1993-2006, all rights reserved.

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (copyright The OpenSSL Project. All Rights Reserved) and redistribution of this software is subject to terms available at <http://www.openssl.org> and <http://www.openssl.org/source/license.html>.

This product includes Curl software which is Copyright 1996-2013, Daniel Stenberg, <[daniel@haxx.se](mailto:daniel@haxx.se)>. All Rights Reserved. Permissions and limitations regarding this software are subject to terms available at <http://curl.haxx.se/docs/copyright.html>. Permission to use, copy, modify, and distribute this software for any purpose with or without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies.

The product includes software copyright 2001-2005 (©) MetaStuff, Ltd. All Rights Reserved. Permissions and limitations regarding this software are subject to terms available at <http://www.dom4j.org/license.html>.

The product includes software copyright © 2004-2007, The Dojo Foundation. All Rights Reserved. Permissions and limitations regarding this software are subject to terms available at <http://dojotoolkit.org/license>.

This product includes ICU software which is copyright International Business Machines Corporation and others. All rights reserved. Permissions and limitations regarding this software are subject to terms available at <http://source.icu-project.org/repos/icu/icu/trunk/license.html>.

This product includes software copyright © 1996-2006 Per Bothner. All rights reserved. Your right to use such materials is set forth in the license which may be found at <http://www.gnu.org/software/kawa/Software-License.html>.

This product includes OSSP UUID software which is Copyright © 2002 Ralf S. Engelschall, Copyright © 2002 The OSSP Project Copyright © 2002 Cable & Wireless Deutschland. Permissions and limitations regarding this software are subject to terms available at <http://www.opensource.org/licenses/mit-license.php>.

This product includes software developed by Boost (<http://www.boost.org/>) or under the Boost software license. Permissions and limitations regarding this software are subject to terms available at [http://www.boost.org/LICENSE\\_1\\_0.txt](http://www.boost.org/LICENSE_1_0.txt).

This product includes software copyright © 1997-2007 University of Cambridge. Permissions and limitations regarding this software are subject to terms available at <http://www.pcre.org/license.txt>.

This product includes software copyright © 2007 The Eclipse Foundation. All Rights Reserved. Permissions and limitations regarding this software are subject to terms available at <http://www.eclipse.org/org/documents/epl-v10.php> and at <http://www.eclipse.org/org/documents/edl-v10.php>.

This product includes software licensed under the terms at <http://www.tcl.tk/software/tcltk/license.html>, <http://www.bosrup.com/web/overlib/?License>, <http://www.stlport.org/doc/license.html>, <http://asm.ow2.org/license.html>, <http://www.cryptix.org/LICENSE.TXT>, <http://hsqldb.org/web/hsqldbLicense.html>, <http://httpunit.sourceforge.net/doc/license.html>, <http://jung.sourceforge.net/license.txt>, [http://www.gzip.org/zlib/zlib\\_license.html](http://www.gzip.org/zlib/zlib_license.html), <http://www.openldap.org/software/release/license.html>, <http://www.libssh2.org>, <http://slf4j.org/license.html>, <http://www.sente.ch/software/OpenSourceLicense.html>, <http://fusesource.com/downloads/license-agreements/fuse-message-broker-v-5-3-license-agreement>, <http://antlr.org/license.html>, <http://aopalliance.sourceforge.net/>, <http://www.bouncycastle.org/licence.html>, <http://www.jgraph.com/jgraphdownload.html>, <http://www.jcraft.com/jsch/LICENSE.txt>, [http://jotm.objectweb.org/bsd\\_license.html](http://jotm.objectweb.org/bsd_license.html), <http://www.w3.org/>

Consortium/Legal/2002/copyright-software-20021231; <http://www.slf4j.org/license.html>; <http://nanoxml.sourceforge.net/orig/copyright.html>; <http://www.json.org/license.html>; <http://forge.ow2.org/projects/javaservice/>; <http://www.postgresql.org/about/license.html>; <http://www.sqlite.org/copyright.html>; <http://www.tcl.tk/software/tcltk/license.html>; <http://www.jaxen.org/faq.html>; <http://www.jdom.org/docs/faq.html>; <http://www.slf4j.org/license.html>; <http://www.iodbc.org/dataspace/iodbc/wiki/IODBC/License>; <http://www.keplerproject.org/md5/license.html>; <http://www.toedter.com/en/jcalendar/license.html>; <http://www.edankert.com/bounce/index.html>; <http://www.net-snmp.org/about/license.html>; <http://www.openmdx.org/#FAQ>; [http://www.php.net/license/3\\_01.txt](http://www.php.net/license/3_01.txt); <http://srp.stanford.edu/license.txt>; <http://www.schneider.com/blowfish.html>; <http://www.jmock.org/license.html>; <http://xsom.java.net>; <http://benalman.com/about/license/>; <https://github.com/CreateJS/EaselJS/blob/master/src/easeljs/display/Bitmap.js>; <http://www.h2database.com/html/license.html#summary>; <http://jsoncpp.sourceforge.net/LICENSE>; <http://jdbc.postgresql.org/license.html>; <http://protobuf.googlecode.com/svn/trunk/src/google/protobuf/descriptor.proto>; <https://github.com/rantav/hector/blob/master/LICENSE>; <http://web.mit.edu/Kerberos/krb5-current/doc/mitK5license.html>; <http://jibx.sourceforge.net/jibx-license.html>; <https://github.com/lyokato/libgeohash/blob/master/LICENSE>; <https://github.com/hjiang/jsonxx/blob/master/LICENSE>; <https://code.google.com/p/lz4/>; <https://github.com/jedisct1/libsodium/blob/master/LICENSE>; <http://one-jar.sourceforge.net/index.php?page=documents&file=license>; <https://github.com/EsotericSoftware/kryo/blob/master/license.txt>; <http://www.scala-lang.org/license.html>; <https://github.com/tinkerpop/blueprints/blob/master/LICENSE.txt>; <http://gee.cs.oswego.edu/dl/classes/EDU/oswego/cs/dl/util/concurrent/intro.html>; <https://aws.amazon.com/asl/>; <https://github.com/twbs/bootstrap/blob/master/LICENSE>; <https://sourceforge.net/p/xmlunit/code/HEAD/tree/trunk/LICENSE.txt>; <https://github.com/documentcloud/underscore-contrib/blob/master/LICENSE>, and <https://github.com/apache/hbase/blob/master/LICENSE.txt>.

This product includes software licensed under the Academic Free License (<http://www.opensource.org/licenses/afl-3.0.php>), the Common Development and Distribution License (<http://www.opensource.org/licenses/cddl1.php>), the Common Public License (<http://www.opensource.org/licenses/cpl1.0.php>), the Sun Binary Code License Agreement Supplemental License Terms, the BSD License (<http://www.opensource.org/licenses/bsd-license.php>), the new BSD License (<http://opensource.org/licenses/BSD-3-Clause>), the MIT License (<http://www.opensource.org/licenses/mit-license.php>), the Artistic License (<http://www.opensource.org/licenses/artistic-license-1.0>) and the Initial Developer's Public License Version 1.0 (<http://www.firebirdsql.org/en/initial-developer-s-public-license-version-1-0/>).

This product includes software copyright © 2003-2006 Joe Walnes, 2006-2007 XStream Committers. All rights reserved. Permissions and limitations regarding this software are subject to terms available at <http://xstream.codehaus.org/license.html>. This product includes software developed by the Indiana University Extreme! Lab. For further information please visit <http://www.extreme.indiana.edu/>.

This product includes software Copyright (c) 2013 Frank Balluffi and Markus Moeller. All rights reserved. Permissions and limitations regarding this software are subject to terms of the MIT license.

See patents at <https://www.informatica.com/legal/patents.html>.

DISCLAIMER: Informatica LLC provides this documentation "as is" without warranty of any kind, either express or implied, including, but not limited to, the implied warranties of noninfringement, merchantability, or use for a particular purpose. Informatica LLC does not warrant that this software or documentation is error free. The information provided in this software or documentation may include technical inaccuracies or typographical errors. The information in this software and documentation is subject to change at any time without notice.

## NOTICES

This Informatica product (the "Software") includes certain drivers (the "DataDirect Drivers") from DataDirect Technologies, an operating company of Progress Software Corporation ("DataDirect") which are subject to the following terms and conditions:

1. THE DATADIRECT DRIVERS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT.
2. IN NO EVENT WILL DATADIRECT OR ITS THIRD PARTY SUPPLIERS BE LIABLE TO THE END-USER CUSTOMER FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES ARISING OUT OF THE USE OF THE ODBC DRIVERS, WHETHER OR NOT INFORMED OF THE POSSIBILITIES OF DAMAGES IN ADVANCE. THESE LIMITATIONS APPLY TO ALL CAUSES OF ACTION, INCLUDING, WITHOUT LIMITATION, BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, STRICT LIABILITY, MISREPRESENTATION AND OTHER TORTS.

The information in this documentation is subject to change without notice. If you find any problems in this documentation, please report them to us in writing at Informatica LLC 2100 Seaport Blvd. Redwood City, CA 94063.

Informatica products are warranted according to the terms and conditions of the agreements under which they are provided. INFORMATICA PROVIDES THE INFORMATION IN THIS DOCUMENT "AS IS" WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT.

Publication Date: 2019-04-10

# Table of Contents

<b>Preface .....</b>	<b>5</b>
Informatica Resources. ....	5
Informatica Network. ....	5
Informatica Knowledge Base. ....	5
Informatica Documentation. ....	5
Informatica Product Availability Matrixes. ....	6
Informatica Velocity. ....	6
Informatica Marketplace. ....	6
Informatica Global Customer Support. ....	6
 <b>Chapter 1: Understanding PowerExchange for MSMQ.....</b>	 <b>7</b>
Understanding PowerExchange for MSMQ Overview. ....	7
MSMQ Delivery Options. ....	7
 <b>Chapter 2: Working with MSMQ Sources and Targets.....</b>	 <b>8</b>
Working with MSMQ Sources and Targets Overview. ....	8
Creating MSMQ Source or Target Definitions. ....	9
 <b>Chapter 3: Creating and Configuring MSMQ Workflows.....</b>	 <b>10</b>
Working with MSMQ Workflows. ....	10
Configuring Terminating Conditions. ....	10
Configuring Real-time Processing. ....	11
Removing Messages from the Source Queue. ....	11
Configuring Delivery Options. ....	11
Pipeline Partitioning. ....	12
Configuring MSMQ Session Properties. ....	12
Running MSMQ Workflows. ....	13
 <b>Index.....</b>	 <b>14</b>

# Preface

The *Informatica PowerExchange® for MSMQ User Guide for PowerCenter®* provides information to build mappings to extract data from MSMQ messages and load data to MSMQ messages. It is written for the database administrators and developers who are responsible for extracting data from MSMQ messages and loading data into MSMQ messages.

This book assumes you have knowledge of relational database concepts and database engines, PowerCenter, and the MSMQ system. You should also be familiar with the interface requirements for other supporting applications.

## Informatica Resources

### Informatica Network

Informatica Network hosts Informatica Global Customer Support, the Informatica Knowledge Base, and other product resources. To access Informatica Network, visit <https://network.informatica.com>.

As a member, you can:

- Access all of your Informatica resources in one place.
- Search the Knowledge Base for product resources, including documentation, FAQs, and best practices.
- View product availability information.
- Review your support cases.
- Find your local Informatica User Group Network and collaborate with your peers.

### Informatica Knowledge Base

Use the Informatica Knowledge Base to search Informatica Network for product resources such as documentation, how-to articles, best practices, and PAMs.

To access the Knowledge Base, visit <https://kb.informatica.com>. If you have questions, comments, or ideas about the Knowledge Base, contact the Informatica Knowledge Base team at [KB\\_Feedback@informatica.com](mailto:KB_Feedback@informatica.com).

### Informatica Documentation

To get the latest documentation for your product, browse the Informatica Knowledge Base at [https://kb.informatica.com/\\_layouts/ProductDocumentation/Page/ProductDocumentSearch.aspx](https://kb.informatica.com/_layouts/ProductDocumentation/Page/ProductDocumentSearch.aspx).

If you have questions, comments, or ideas about this documentation, contact the Informatica Documentation team through email at [infa\\_documentation@informatica.com](mailto:infa_documentation@informatica.com).

## Informatica Product Availability Matrixes

Product Availability Matrixes (PAMs) indicate the versions of operating systems, databases, and other types of data sources and targets that a product release supports. If you are an Informatica Network member, you can access PAMs at

<https://network.informatica.com/community/informatica-network/product-availability-matrices>.

## Informatica Velocity

Informatica Velocity is a collection of tips and best practices developed by Informatica Professional Services. Developed from the real-world experience of hundreds of data management projects, Informatica Velocity represents the collective knowledge of our consultants who have worked with organizations from around the world to plan, develop, deploy, and maintain successful data management solutions.

If you are an Informatica Network member, you can access Informatica Velocity resources at <http://velocity.informatica.com>.

If you have questions, comments, or ideas about Informatica Velocity, contact Informatica Professional Services at [ips@informatica.com](mailto:ips@informatica.com).

## Informatica Marketplace

The Informatica Marketplace is a forum where you can find solutions that augment, extend, or enhance your Informatica implementations. By leveraging any of the hundreds of solutions from Informatica developers and partners, you can improve your productivity and speed up time to implementation on your projects. You can access Informatica Marketplace at <https://marketplace.informatica.com>.

## Informatica Global Customer Support

You can contact a Global Support Center by telephone or through Online Support on Informatica Network.

To find your local Informatica Global Customer Support telephone number, visit the Informatica website at the following link:

<http://www.informatica.com/us/services-and-training/support-services/global-support-centers>.

If you are an Informatica Network member, you can use Online Support at <http://network.informatica.com>.

# CHAPTER 1

## Understanding PowerExchange for MSMQ

This chapter includes the following topic:

- [Understanding PowerExchange for MSMQ Overview, 7](#)

### Understanding PowerExchange for MSMQ Overview

MSMQ (Microsoft Message Queuing) is a Windows-based message queuing application that can contain data in any format that is understood by both the sender and the receiver. PowerExchange for MSMQ integrates with MSMQ to extract data from MSMQ sources and write data to MSMQ targets. With PowerExchange for MSMQ, you can define MSMQ sources and targets in the Designer. You can use MSMQ source and target definitions in a mapping to read messages from MSMQ sources and write messages to MSMQ intermediate queues. MSMQ then reads messages from the MSMQ intermediate queues and writes them to the targets.

When extracting data from MSMQ or writing data to MSMQ, the PowerCenter Integration Service connects to a Microsoft Messaging Queue. The message queue can be a public message queue or a private message queue. The message queue can also be transactional or non-transactional.

### MSMQ Delivery Options

MSMQ provides the following delivery options for sending messages:

- **Recoverable messaging.** MSMQ stores queue messages on disk during delivery. If any computer on which messages reside fails or shuts down during delivery, MSMQ can resend the messages after the Message Queuing service restarts. Recoverable messaging guarantees message delivery, but may decrease performance.
- **Express messaging.** MSMQ stores queue messages in memory during delivery until the target queue receives them. If a computer fails during delivery, MSMQ cannot recover any lost messages. However, if the network fails, MSMQ continues to store messages in memory until the network connection is restored. Express messaging may increase performance, but does not guarantee message delivery.

For non-transactional queues, you can configure MSMQ to use recoverable messaging or express messaging. For transactional queues, you must use recoverable messaging.

To write messages to an MSMQ target queue, you can select a delivery option in the session properties.

## CHAPTER 2

# Working with MSMQ Sources and Targets

This chapter includes the following topics:

- [Working with MSMQ Sources and Targets Overview, 8](#)
- [Creating MSMQ Source or Target Definitions, 9](#)

## Working with MSMQ Sources and Targets Overview

MSMQ source and target definitions represent metadata for MSMQ messages. When the PowerCenter Integration Service reads messages from MSMQ, it reads messages based on the message format of the source definition. When the PowerCenter Integration Service writes messages to an MSMQ intermediate queue, it writes messages based on the format of the target definition.

When you create MSMQ source and target definitions, the Designer displays a table with message fields and MSMQ datatypes. When the PowerCenter Integration Service reads data from MSMQ, it converts the data based on the datatypes in the Source Qualifier transformation associated with the source.

Every MSMQ source and target definition contains the following fields:

- **MSG\_BODY**. Contains the MSMQ message body.
- **LABEL**. Describes the message label.
- **CORRELATION\_ID**. Contains the correlation identifier of the message.

The following table lists the MSMQ datatypes that PowerExchange for MSMQ supports and the corresponding transformation datatype:

MSMQ Datatypes	Transformation Datatype	Description
VT_LPSTR	String	Variable length, null-terminated ASCII strings.
VT_LPWSTR	String	Variable length, null-terminated Unicode strings.
VT_BSTR	Binary	Variable length, Unicode strings that may or may not be null-terminated.
Binary	Binary	Strings and numeric data.



MSMQ Datatypes	Transformation Datatype	Description
UniString	String	Variable length, null-terminated Unicode strings.
Binary	Binary	Binary data.

If you specify the datatype for the MSG\_BODY field as VT\_LPSTR, VT\_LPWSTR, or VT\_BSTR in a source definition, the PowerCenter Integration Service processes only those messages that match the specified datatype. If you specify one of these datatypes and enable the Remove Message on Read option when you configure MSMQ session properties, the PowerCenter Integration Service removes all messages even if they have not been processed.

If you specify the datatype for the MSG\_BODY field in the source definition as Binary, the PowerCenter Integration Service processes all messages regardless of datatype.

The datatype for the LABEL field is UniString and cannot be edited. The datatype for the CORRELATION\_ID field is Binary and cannot be edited.

## Creating MSMQ Source or Target Definitions

You manually create MSMQ source and target definitions in the Designer. After you create an MSMQ definition, you can edit the definition to change the precision for the MSG\_BODY port.

To create a MSMQ source or target definition:

1. To create an MSMQ source definition, click Sources > Create in the Source Analyzer. To create an MSMQ target definition, click Targets > Create in the Target Designer.
2. Enter a name for the source or target definition.
3. If you are creating a source definition, enter a name in the Database Name field.
4. Select MSMQ as the database type.
5. Click Create.

The Select Message Body Datatype dialog box appears.

6. Select one of the following message body datatypes:
  - **VT\_LPSTR**. Variable length, null terminated ASCII string.
  - **VT\_LPWSTR**. Variable length, null terminated Unicode string.
  - **VT\_BSTR**. Variable length, Unicode strings that may or may not be null-terminated.
  - **BINARY**. Strings and numeric data.
7. Click OK.

An MSMQ source or target definition appears.

8. To add another source or target definition, enter a new source or target name. Click Create.
9. Click Done.

## CHAPTER 3

# Creating and Configuring MSMQ Workflows

This chapter includes the following topics:

- [Working with MSMQ Workflows, 10](#)
- [Configuring MSMQ Session Properties, 12](#)
- [Running MSMQ Workflows, 13](#)

## Working with MSMQ Workflows

When you configure an MSMQ workflow, you define the session and scheduler properties that determine how the PowerCenter Integration Service reads messages from an MSMQ source or writes messages to an MSMQ target.

When you configure an MSMQ session, you can set the following session properties:

- Terminating conditions
- Real-time processing
- Remove message on read
- Deliver messages in recoverable mode

You can also configure pipeline partitioning for the session.

## Configuring Terminating Conditions

Terminating conditions determine when the PowerCenter Integration Service stops reading from the source and ends the session. You can define the following terminating conditions:

- Idle Time
- Message Count

### Idle Time

Use idle time to indicate how many seconds the PowerCenter Integration Service waits when no messages arrive before it stops reading from the queue. For example, if you enter 30 for idle time, the PowerCenter Integration Service waits 30 seconds after reading from queue. If no new messages arrive in MSMQ within 30 seconds, the PowerCenter Integration Service stops reading from the queue.

## Message Count

Use message count to control the number of messages the PowerCenter Integration Service reads from MSMQ before stopping. For example, when you specify 100 for message count, the PowerCenter Integration Service reads 100 messages from MSMQ.

If you enter a message count value, and you configure the session to use pipeline partitioning, the session can run on a single node only. The PowerCenter Integration Service that runs the session cannot run on a grid or on primary and backup nodes.

## Configuring Real-time Processing

You can configure flush latency to process data in real time. A real-time session reads, processes, and writes data to targets continuously. Flush latency determines how often the PowerCenter Integration Service flushes data from the source.

## Removing Messages from the Source Queue

The Remove Message on Read option determines whether the PowerCenter Integration Service removes messages from the queue after reading. If the Remove Message on Read option is disabled, the PowerCenter Integration Service does not remove previously read messages from the queue. If there are multiple partitions in a pipeline, each partition may read duplicate messages.

## Configuring Delivery Options

When you want to write messages to an MSMQ target queue, you can use one of the following delivery options:

- **Recoverable Messaging.** MSMQ stores messages on disk until it writes them to an MSMQ target queue. MSMQ stores the messages on the disk of each machine through which MSMQ routes the messages.
- **Express Messaging.** MSMQ stores messages in memory until it writes them to an MSMQ target queue.

### Using Recoverable Messaging

You can configure a PowerCenter session to use recoverable messaging. The PowerCenter Integration Service extracts messages from a source and transforms the data according to the mapping logic. It then writes the messages to an MSMQ intermediate queue. MSMQ stores the messages on disk and writes them to the target queue. After MSMQ delivers messages to the target queue, it removes sent messages from disk at regular intervals.

If the PowerCenter session fails during delivery, MSMQ can recover all messages that the PowerCenter Integration Service sent to the intermediate queue but did not reach the target queue. However, MSMQ cannot recover messages that the PowerCenter Integration Service did not send to the intermediate queue.

If the target queue is transactional, you must use recoverable messaging. If you configure the PowerCenter session to use express messaging, MSMQ automatically delivers the messages using recoverable messaging.

### Using Express Messaging

You can configure a PowerCenter session to use express messaging. The PowerCenter Integration Service extracts messages from a source and transforms the data according to the mapping logic. It then writes the messages to an MSMQ intermediate queue. MSMQ stores the messages in memory until it delivers them to the target queue.

If the PowerCenter session fails during delivery, MSMQ cannot recover any messages that did not reach the target queue. If the target queue is non-transactional, you can use recoverable or express messaging.

## Pipeline Partitioning

You can increase the number of partitions in a pipeline to improve session performance. Increasing the number of partitions allows the PowerCenter Integration Service to create multiple connections to sources and targets and process partitions of sources and targets concurrently.

The following table describes the partition types for partition points in MSMQ mappings:

Partition Point	Partition Type
Application Source Qualifier for MSMQ sources	Pass-through
MSMQ target	Pass-through

## Configuring MSMQ Session Properties

Use the following procedure to configure MSMQ session properties.

To configure session properties:

1. In the Task Developer, double-click an MSMQ session to open the session properties.
2. From the Connections settings on the Mapping tab (Sources node), select an MSMQ queue connection for Application Source Qualifiers connected to MSMQ sources.
3. From the Connections settings on the Mapping tab (Targets node), select an MSMQ queue connection for each MSMQ target.
4. From the General Options on the Properties tab, select the commit type.
5. Optionally, edit the commit interval.
6. Select the Mappings tab.
7. From the Properties settings on the Mapping tab (Sources node), enter a value for Message Count of 1 or greater.

If you enter a value of -1, the session does not complete. You must abort the session.

8. Optionally, enter a value for Real-time Flush Latency.
9. Optionally, enter a value for Idle Time.
10. Optionally, select the Remove Message on Read option.
11. Optionally, select Deliver Messages in Recoverable Mode to use MSMQ recoverable messaging. Or, clear Deliver Messages in Recoverable Mode to use MSMQ express messaging.
12. Click OK.

## Running MSMQ Workflows

If you remove messages after the PowerCenter Integration Service reads them from the source, the MSMQ server deletes the messages from the queue after the PowerCenter Integration Service reads them.

If a mapping with an MSMQ target definition contains an Update Strategy transformation, the PowerCenter Integration Service only writes rows flagged as DD\_INSERT to the target. It discards all other rows.

# INDEX

## D

datatypes  
MSG\_BODY for MSMQ [8](#)  
PowerExchange for MSMQ [8](#)  
delivery options  
description for MSMQ [7](#), [11](#)  
MSMQ, recovery [12](#)

## E

express messaging  
description for MSMQ [7](#), [11](#)

## I

idle time  
description for MSMQ [10](#)

## M

message count  
description for MSMQ [11](#)  
MSG\_BODY field  
MSMQ datatype [8](#)  
MSMQ source definitions  
creating [9](#)  
overview [8](#)  
MSMQ target definitions  
creating [9](#)  
overview [8](#)

## N

non-transactional queues  
MSMQ, delivery options [7](#)

## P

pipeline partitioning  
description for MSMQ [12](#)

PowerExchange for MSMQ  
overview [7](#)

## Q

queues  
MSMQ source messages, removing [11](#)

## R

real-time sessions  
description for MSMQ [11](#)  
recoverable messaging  
description for MSMQ [7](#), [11](#)

## S

session properties  
MSMQ, configuring [12](#)  
source queues  
MSMQ messages, removing [11](#)

## T

terminating conditions  
description for MSMQ [10](#)  
MSMQ idle time [10](#)  
MSMQ message count [11](#)  
MSMQ real-time flush latency [11](#)  
transactional queues  
MSMQ, delivery options [7](#)

## W

workflows  
MSMQ, running [13](#)