Informatica PowerExchange (Version 9.1.0)

Release Guide
Informatica PowerExchange Release Guide

Version 9.1.0
March 2011

Copyright (c) 1998-2011 Informatica. All rights reserved.

This software and documentation contain proprietary information of Informatica Corporation and are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright law. Reverse engineering of the software is prohibited. 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 Corporation. This Software may be protected by U.S. and/or international Patents and other Patents Pending.

Use, duplication, or disclosure of the Software by the U.S. Government is subject to the restrictions set forth in the applicable software license agreement and as provided in DFARS 227.7202-1(a) and 227.7702-3(a) (1995), DFARS 252 227-7013(c)(1)(ii) (OCT 1988), FAR 12.212(a) (1995), FAR 52.227-19, or FAR 52.227-14 (ALT III), as applicable.

The information in this product or documentation is subject to change without notice. If you find any problems in this product or documentation, please report them to us in writing.

Informatica, Informatica Platform, Informatica Data Services, PowerCenter, PowerCenterRT, PowerCenter Connect, PowerCenter Data Analyzer, PowerExchange, PowerMart, Metadata Manager, Informatica Data Quality, Informatica Data Explorer, Informatica B2B Data Transformation, Informatica B2B Data Exchange, Informatica On Demand, Informatica Identity Resolution, Informatica Application Information Lifecycle Management, Informatica Complex Event Processing, Ultra Messaging and Informatica Master Data Management are trademarks or registered trademarks of Informatica Corporation in the United States and in jurisdictions throughout the world. All other company and product names may be trade names or trademarks of their respective owners.

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 2007 Isomorphic Software. All rights reserved. Copyright Meta Integration Technology, Inc. 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 Clearspace 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.

This product includes software developed by the Apache Software Foundation (http://www.apache.org/), and other software which is licensed under the Apache License, Version 2.0 (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.

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 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 (c) 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.

This product includes Curl software which is Copyright 1996-2007, Daniel Stenberg, <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.

This product includes software copyright 2001-2005 (c) 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 (c) 2004-2007, The Dojo Foundation. All Rights Reserved. Permissions and limitations regarding this software are subject to terms available at http://svn.dojo.org/trunk/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 (c) 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 (c) 2002 Ralf S. Engelschall, Copyright (c) 2002 The OSSP Project Copyright (c) 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.

This product includes software copyright (c) 1997-2007 University of Cambridge. Permissions and limitations regarding this software are subject to terms available at http://www.pore.org/license.txt.

This product includes software copyright (c) 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.


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/cdfl1.0.php) the Common Public License (http://www.opensource.org/licenses/cpl1.0.php) and the BSD License (http://www.opensource.org/licenses/bsd-license.php).

This product includes software copyright (c) 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 Software is protected by U.S. Patent Numbers 5,794,246; 6,014,670; 6,016,501; 6,029,178; 6,032,158; 6,035,307; 6,044,374; 6,092,086; 6,208,990; 6,339,775; 6,640,226; 6,789,096; 6,820,077; 6,823,373; 6,850,947; 6,895,471; 7,117,215; 7,162,643; 7,254,590; 7,281,001; 7,421,458; 7,496,588; 7,523,121; 7,584,422; 7,720,842; 7,721,270; and 7,774,791, international Patents and other Patents Pending.

DISCLAIMER: Informatica Corporation provides this documentation "as is" without warranty of any kind, either express or implied, including, but not limited to, the implied warranties of non-infringement, merchantability, or use for a particular purpose. Informatica Corporation 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.

Part Number: PWX-RLG-910-0001
# Table of Contents

**Preface** ........................................................................................................... ix

Informatica Resources. ......................................................................................... ix
  - Informatica Customer Portal. ....................................................................... ix
  - Informatica Documentation. ....................................................................... ix
  - Informatica Web Site. ................................................................................ x
  - Informatica How-To Library. ....................................................................... x
  - Informatica Knowledge Base. ..................................................................... x
  - Informatica Multimedia Knowledge Base. ............................................... x
  - Informatica Global Customer Support. ..................................................... x

**Chapter 1: Summary of PowerExchange New Features and Changes** ............... 1

  - About This Summary. .............................................................................. 1
  - PowerExchange 9.1.0 .............................................................................. 2
    - New Features in PowerExchange 9.1.0. ............................................ 2
    - Parameter and Option Changes in 9.1.0. .......................................... 2
    - Changes to Supported Operating Systems and Data Sources in 9.1.0. ... 3
    - Documentation Changes in PowerExchange 9.1.0. ............................. 4
  - PowerExchange 9.0.1 HotFix 1. ................................................................. 5
    - Changes to Supported Operating Systems in 9.0.1 HotFix 1. ............... 5
  - PowerExchange 9.0.1 .............................................................................. 6
    - New Features in PowerExchange 9.0.1 .............................................. 6
    - Parameter and Option Changes in PowerExchange 9.0.1. ................. 6
    - Command Changes in PowerExchange 9.0.1 ..................................... 7
    - Changes to Supported Operating Systems and Data Sources in 9.0.1. ... 8
  - PowerExchange 9.0 .................................................................................. 9
    - New Features in PowerExchange 9.0. ............................................... 9
    - Parameter and Option Changes in PowerExchange 9.0. ..................... 10
    - Changes to Supported Operating Systems and Data Sources in 9.0. ... 12
    - Documentation Changes in PowerExchange 9.0. .............................. 13
  - PowerExchange 8.6.1 HotFix 10. ............................................................... 13
    - New Features in PowerExchange 8.6.1 HotFix 10. ............................ 14
    - Parameter and Option Changes in PowerExchange 8.6.1 HotFix 10. ... 14
  - PowerExchange 8.6.1 HotFix 5. ................................................................. 14
    - Parameter and Option Changes in PowerExchange 8.6.1 HotFix 5. ... 15
    - Documentation Changes in PowerExchange 8.6.1 HotFix 5. .............. 15
  - PowerExchange 8.6.1 HotFix 3. ................................................................. 15
    - New Features in PowerExchange 8.6.1 HotFix 3. .............................. 16
  - PowerExchange 8.6.1 HotFix 1 ................................................................. 16
## Chapter 14: PowerExchange for DB2 for i5/OS

PowerExchange 9.1.0 - New Features and Changes for DB2 for i5/OS.

- New Features in 9.1.0.
- Parameter and Option Changes in 9.0.1.
- New Features in 9.0.
- PowerExchange 8.6.1 HotFix 10 - New Features and Changes for DB2 for i5/OS.
- New Features in 8.6.1 HotFix 10.
- New Features in 8.6.1 HotFix 5.
- Behavior Changes in 8.6.1 HotFix 5.
- Parameter and Option Changes in 8.6.1 HotFix 5.
- PowerExchange 8.6.1 - New Features and Changes for DB2 for i5/OS.
- New Features in 8.6.1.
- Parameter and Option Changes in 8.6.1.
- PowerExchange 8.6 - New Features and Changes for DB2 for i5/OS.
- New Features in 8.6.
- Behavior Changes in 8.6.
- Parameter and Option Changes in 8.6.

## Chapter 15: PowerExchange for DB2 for z/OS

PowerExchange 9.1.0 - New Features and Changes for DB2 for z/OS.

- New Features in 9.1.0.
- Parameter and Option Changes in 9.0.1.
- New Features in 9.0.
- PowerExchange 8.6.1 - New Features and Changes for DB2 for z/OS.
- New Features in 8.6.1.
- Behavior Changes in 8.6.1.
- PowerExchange 8.6 - New Features and Changes for DB2 for z/OS.
- New Features in 8.6.
- Behavior Changes in 8.6.

## Chapter 16: PowerExchange for CA IDMS

PowerExchange 9.1.0 - New Features and Changes for CA IDMS.

- New Features in 9.1.0.
- PowerExchange 9.0.1 - New Features and Changes for CA IDMS.
- New Features in 9.0.1.
- PowerExchange 8.6.1 - New Features and Changes for CA IDMS.
Preface

This guide summarizes cumulative changes for PowerExchange releases that are currently supported, beginning with version 8.6. Use this guide to get an overview of the changes in each release. The guide lists new features and enhancements, behavior changes, and new and changed commands and parameters. The guide also covers any removed functionality and deprecated versions of data sources or operating systems.

This guide applies to the following PowerExchange products:

- PowerExchange for Adabas®
- PowerExchange for CA Datacom®
- PowerExchange for CA IDMS™
- PowerExchange for DB2® for i5/OS®
- PowerExchange for DB2 for Linux®, UNIX®, and Windows®
- PowerExchange for DB2 for z/OS®
- PowerExchange for IMS™
- PowerExchange for Oracle®
- PowerExchange for SQL Server®
- PowerExchange for VSAM

Informatica Resources

Informatica Customer Portal

As an Informatica customer, you can access the Informatica Customer Portal site at http://mysupport.informatica.com. The site contains product information, user group information, newsletters, access to the Informatica customer support case management system (ATLAS), the Informatica How-To Library, the Informatica Knowledge Base, the Informatica Multimedia Knowledge Base, Informatica Product Documentation, and access to the Informatica user community.

Informatica Documentation

The Informatica Documentation team takes every effort to create accurate, usable documentation. If you have questions, comments, or ideas about this documentation, contact the Informatica Documentation team through email at infa_documentation@informatica.com. We will use your feedback to improve our documentation. Let us know if we can contact you regarding your comments.
The Documentation team updates documentation as needed. To get the latest documentation for your product, navigate to Product Documentation from http://mysupport.informatica.com.

Informatica Web Site

You can access the Informatica corporate web site at http://www.informatica.com. The site contains information about Informatica, its background, upcoming events, and sales offices. You will also find product and partner information. The services area of the site includes important information about technical support, training and education, and implementation services.

Informatica How-To Library

As an Informatica customer, you can access the Informatica How-To Library at http://mysupport.informatica.com. The How-To Library is a collection of resources to help you learn more about Informatica products and features. It includes articles and interactive demonstrations that provide solutions to common problems, compare features and behaviors, and guide you through performing specific real-world tasks.

Informatica Knowledge Base

As an Informatica customer, you can access the Informatica Knowledge Base at http://mysupport.informatica.com. Use the Knowledge Base to search for documented solutions to known technical issues about Informatica products. You can also find answers to frequently asked questions, technical white papers, and technical tips. If you have questions, comments, or ideas about the Knowledge Base, contact the Informatica Knowledge Base team through email at KB_Feedback@informatica.com.

Informatica Multimedia Knowledge Base

As an Informatica customer, you can access the Informatica Multimedia Knowledge Base at http://mysupport.informatica.com. The Multimedia Knowledge Base is a collection of instructional multimedia files that help you learn about common concepts and guide you through performing specific tasks. If you have questions, comments, or ideas about the Multimedia Knowledge Base, contact the Informatica Knowledge Base team through email at KB_Feedback@informatica.com.

Informatica Global Customer Support

You can contact a Customer Support Center by telephone or through the Online Support. Online Support requires a user name and password. You can request a user name and password at http://mysupport.informatica.com.

Use the following telephone numbers to contact Informatica Global Customer Support:

<table>
<thead>
<tr>
<th>North America / South America</th>
<th>Europe / Middle East / Africa</th>
<th>Asia / Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Toll Free</strong></td>
<td><strong>Toll Free</strong></td>
<td><strong>Toll Free</strong></td>
</tr>
<tr>
<td>Brazil: 0800 891 0202</td>
<td>France: 00800 4632 4357</td>
<td>Australia: 1 800 151 830</td>
</tr>
<tr>
<td>Mexico: 001 888 209 8853</td>
<td>Germany: 00800 4632 4357</td>
<td>New Zealand: 1 800 151 830</td>
</tr>
<tr>
<td>North America: +1 877 463 2435</td>
<td>Israel: 00800 4632 4357</td>
<td>Singapore: 001 800 4632 4357</td>
</tr>
<tr>
<td><strong>Standard Rate</strong></td>
<td>Italy: 800 915 985</td>
<td><strong>Standard Rate</strong></td>
</tr>
<tr>
<td>North America: +1 650 653 6332</td>
<td>Netherlands: 00800 4632 4357</td>
<td>India: +91 80 4112 5738</td>
</tr>
<tr>
<td></td>
<td>Portugal: 800 208 360</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spain: 900 813 186</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Switzerland: 00800 4632 4357 or 0800 463 200</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toll Free</th>
<th>Standard Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil: 0800 891 0202</td>
<td>North America: +1 650 653 6332</td>
</tr>
<tr>
<td>Mexico: 001 888 209 8853</td>
<td></td>
</tr>
<tr>
<td>North America: +1 877 463 2435</td>
<td></td>
</tr>
<tr>
<td>North America / South America</td>
<td>Europe / Middle East / Africa</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td></td>
<td>United Kingdom: 00800 4632 4357 or 0800 023 4632</td>
</tr>
<tr>
<td></td>
<td><strong>Standard Rate</strong></td>
</tr>
<tr>
<td></td>
<td>France: 0805 804632</td>
</tr>
<tr>
<td></td>
<td>Germany: 01805 702702</td>
</tr>
<tr>
<td></td>
<td>Netherlands: 030 6022 797</td>
</tr>
</tbody>
</table>
CHAPTER 1

Summary of PowerExchange New Features and Changes

This chapter includes the following topics:

- About This Summary, 1
- PowerExchange 9.1.0, 2
- PowerExchange 9.0.1 HotFix 1, 5
- PowerExchange 9.0.1, 6
- PowerExchange 9.0, 9
- PowerExchange 8.6.1 HotFix 10, 13
- PowerExchange 8.6.1 HotFix 5, 14
- PowerExchange 8.6.1 HotFix 3, 15
- PowerExchange 8.6.1 HotFix 1, 16
- PowerExchange 8.6.1, 17
- PowerExchange 8.6, 23

About This Summary

This chapter summarizes the new features and changes in PowerExchange 8.6.x and 9.x releases and hotfixes. For each release or hotfix, the following types of changes are described:

- New features
- New, changed, and deleted commands
- New, changed, and deleted parameters and options
- Changes to supported versions of operating systems and data sources
- Documentation changes

For more information about these changes and about behavior changes, see the chapters for specific components and data sources.
PowerExchange 9.1.0

This section lists the new features and changes that PowerExchange 9.1.0 introduces.

New Features in PowerExchange 9.1.0

The following table lists PowerExchange 9.1.0 new features by PowerExchange component or data source:

<table>
<thead>
<tr>
<th>Component or Data Source</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adabas data sources</td>
<td>“Adabas FDT Password Requirement” on page 91</td>
</tr>
<tr>
<td>CA IDMS log-based CDC data sources</td>
<td>“Change Capture from IDMS Records That Use Presspack Compression” on page 115</td>
</tr>
<tr>
<td>IMS log-based CDC data sources</td>
<td>“IMS Log-Based ECCR That Works with the DBRC API” on page 117</td>
</tr>
<tr>
<td>IMS synchronous CDC data sources</td>
<td>“IMS Synchronous CRG.LOAD Library Contains New BMC Software Components” on page 117</td>
</tr>
<tr>
<td>Installation and Migration</td>
<td>“Advanced Parameters in the MVS Installation Assistant” on page 27</td>
</tr>
<tr>
<td></td>
<td>“openssl.exe Installation on Windows 32-Bit Systems” on page 28</td>
</tr>
<tr>
<td>PowerExchange Client for PowerCenter</td>
<td>“Support for Extended-Precision Timestamps in DB2 for z/OS Version 10” on page 31</td>
</tr>
<tr>
<td>PowerExchange Logger for MVS</td>
<td>“Running the PowerExchange Logger on z/OS 1.12” on page 72</td>
</tr>
<tr>
<td>PowerExchange Navigator</td>
<td>“Adabas FDT Password Option for an Adabas CAPXRT Source in a Database Row Test” on page 75</td>
</tr>
<tr>
<td>PowerExchange Utilities</td>
<td>“PWXUSSL - PowerExchange SSL Reporting Utility” on page 87</td>
</tr>
</tbody>
</table>

Parameter and Option Changes in 9.1.0

PowerExchange 9.1.0 introduces some parameter and option changes for the DBMOVER configuration file, the Datacom table-based ECCR, and the DTLUCBRG utility.
DBMOVER Configuration File Statements

The following table identifies new, changed, or deprecated statements in the DBMOVER configuration file:

<table>
<thead>
<tr>
<th>Statement</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPBUFSIZE</td>
<td>Changed</td>
<td>Chapter 5, “PowerExchange Listener” on page 49</td>
</tr>
<tr>
<td>SSL_CIPHER_LIST</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>SSL_CONTEXT_METHOD</td>
<td>New</td>
<td></td>
</tr>
</tbody>
</table>

Datacom Table-Based ECCR Parameter

The following table identifies a new optional parameter that you can specify in the RUNLIB(ECCRDCMP) member for the Datacom table-based ECCR:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCAL_TIME</td>
<td>New</td>
<td>“Datacom Table-Based ECCR Parameter” on page 98</td>
</tr>
</tbody>
</table>

DTLUCBRG Utility Parameter

The following table identifies a new parameter that you can specify in the DTLUCBRG utility:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOTIFYCHANGES</td>
<td>New</td>
<td>“DTLUCBRG Parameter” on page 88</td>
</tr>
</tbody>
</table>

Changes to Supported Operating Systems and Data Sources in 9.1.0

PowerExchange 9.1.0 introduces the following changes to supported versions of operating systems and data sources.

**Note:** The term *data source* refers generically to the DBMSs, VSAM data sets, sequential files, and flat files from which PowerExchange reads data or to which PowerExchange writes data.

For more information about version and maintenance requirements for operating systems and data sources, see the *PowerExchange Planning Guide for Installation and Migration*. 
Operating Systems

The following table identifies changes to the operating system versions that PowerExchange supports:

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Versions</th>
<th>Binary and Machine Type</th>
<th>New or Changed</th>
</tr>
</thead>
<tbody>
<tr>
<td>i5/OS</td>
<td>7.1</td>
<td></td>
<td>New</td>
</tr>
<tr>
<td>Red Hat Linux</td>
<td>5.5</td>
<td>32-bit, x86</td>
<td>New</td>
</tr>
<tr>
<td></td>
<td></td>
<td>64-bit, Opteron and EM64T</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>64-bit, IBM System z</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.4, 5.3</td>
<td>64-bit, IBM System z</td>
<td>Changed¹</td>
</tr>
<tr>
<td></td>
<td>5.3</td>
<td>64-bit, Itanium</td>
<td>Changed²</td>
</tr>
<tr>
<td>SUSE Linux</td>
<td>10, 11</td>
<td>64-bit, IBM System z</td>
<td>Changed¹</td>
</tr>
<tr>
<td>Windows</td>
<td>2003</td>
<td>64-bit, Itanium</td>
<td>Changed²</td>
</tr>
<tr>
<td>z/OS</td>
<td>1.12</td>
<td></td>
<td>New³</td>
</tr>
</tbody>
</table>

1. Support added for the indicated binary and machine type.
2. Support dropped for the indicated binary and machine type.
3. Support for CDC on z/OS 1.12 requires IBM APAR OA343692.

Data Sources

The following table identifies data source versions for which PowerExchange adds support:

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Version</th>
<th>Operating System</th>
<th>Bulk</th>
<th>CDC</th>
<th>New, Changed, or Deprecated</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2 for i5/OS</td>
<td>7.1</td>
<td>i5/OS</td>
<td>X</td>
<td>X</td>
<td>New</td>
</tr>
<tr>
<td>DB2 for z/OS</td>
<td>10</td>
<td>z/OS</td>
<td>X</td>
<td></td>
<td>New</td>
</tr>
</tbody>
</table>

Documentation Changes in PowerExchange 9.1.0

This section describes changes and enhancements to the PowerExchange 9.1.0 documentation.

MVS Installation Assistant Online Help

The MVS Installation Assistant online help was enhanced for usability and to provide more comprehensive information.

On any page in the MVS Installation Assistant, press F1 to access context-sensitive help for the page.

Also, some pages in the MVS Installation Assistant now provide an AdvancedParms button, which lets you define some PowerExchange ECCR and Condense parameters and some DBMOVER statements during installation. To access field-level help for an advanced parameter, select the parameter in the AdvancedOptions dialog box and press F1.
PowerExchange Message Reference

The PowerExchange Message Reference is now delivered in three volumes. In the previous release, the message reference was delivered in two volumes.

The following table describes the message ID ranges that each message reference volume covers:

<table>
<thead>
<tr>
<th>Message Reference Volume</th>
<th>Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerExchange Message Reference Volume 1</td>
<td>PWX-00100 to PWX-09999</td>
</tr>
<tr>
<td>PowerExchange Message Reference Volume 2</td>
<td>- PWX-10000 to PWX-35999</td>
</tr>
<tr>
<td>- DTL_BMG003 to DTL_RPS105I</td>
<td></td>
</tr>
<tr>
<td>PowerExchange Message Reference Volume 3</td>
<td>- DTL0001 to DTL62569I</td>
</tr>
<tr>
<td>- Messages with the PWXEDM prefix</td>
<td></td>
</tr>
</tbody>
</table>

Each message reference also contains an appendix that describes the abend, return, and reason codes that appear in PowerExchange messages.

PowerExchange 9.0.1 HotFix 1

This section lists changes that PowerExchange 9.0.1 HotFix 1 introduces.

Changes to Supported Operating Systems in 9.0.1 HotFix 1

PowerExchange 9.0.1 HotFix 1 adds support for Windows Server 2003 on Itanium 64-bit machines.

The following table identifies the bulk data movement and CDC data sources for which PowerExchange supports Windows Server 2003 on Itanium 64-bit machines:

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Bulk Data Movement</th>
<th>CDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-ISAM</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Flat files</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Microsoft SQL Server, all supported versions</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle, all supported versions</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
# PowerExchange 9.0.1

This section lists the new features and changes that PowerExchange 9.0.1 introduces.

## New Features in PowerExchange 9.0.1

The following table lists PowerExchange 9.0.1 new features by PowerExchange component or data source:

<table>
<thead>
<tr>
<th>Component or Data Source</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring and Tuning</td>
<td>“Connection Pooling” on page 78</td>
</tr>
<tr>
<td></td>
<td>“Data Maps Caching” on page 79</td>
</tr>
<tr>
<td></td>
<td>“Writer Partitioning for Bulk Data Movement Sessions” on page 33</td>
</tr>
<tr>
<td>PowerExchange Client for PowerCenter</td>
<td>“Enhanced Asynchronous Network Communication and Timeout Processing” on page 32</td>
</tr>
<tr>
<td>PowerExchange for Oracle</td>
<td>“CDC Support for Oracle Materialized Views” on page 121</td>
</tr>
<tr>
<td></td>
<td>“CDC Support for Oracle Transparent Data Encryption” on page 122</td>
</tr>
<tr>
<td>PowerExchange Listener</td>
<td>“Using infacmd pwx Commands to Manage a PowerExchange Listener Service” on page 50</td>
</tr>
<tr>
<td></td>
<td>“Additional PowerExchange Substitution Variable for Netport Jobs” on page 50</td>
</tr>
<tr>
<td>PowerExchange Logger for Linux, UNIX, and Windows</td>
<td>“Using infacmd pwx Commands to Manage a PowerExchange Logger Service” on page 61</td>
</tr>
<tr>
<td>PowerExchange Navigator</td>
<td>“GetCurrentFileName Function” on page 76</td>
</tr>
<tr>
<td>PowerExchange Utilities</td>
<td>“PWXUDMX - PowerExchange Data Maps Update Time ECSA Memory Utility” on page 88</td>
</tr>
</tbody>
</table>

## Parameter and Option Changes in PowerExchange 9.0.1

PowerExchange 9.0.1 introduces some parameter and option changes for the DBMOVER configuration file and some data sources.
**DBMOVER Configuration File Statements**

The following table identifies new, changed, or deprecated statements in the DBMOVER configuration file:

<table>
<thead>
<tr>
<th>Statement</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS4J CAPI_CONNECTION</td>
<td>Changed</td>
<td>Chapter 14, “PowerExchange for DB2 for i5/OS” on page 105</td>
</tr>
<tr>
<td>CAPX CAPI_CONNECTION</td>
<td>Changed</td>
<td>Chapter 6, “PowerExchange Logger for Linux, UNIX, and Windows” on page 61</td>
</tr>
<tr>
<td>DM_SUBTASK</td>
<td>Changed</td>
<td>Chapter 9, “PowerExchange Monitoring and Tuning” on page 78</td>
</tr>
<tr>
<td>DMXCACHE_DELETEECSA</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>DMXCACHE_MAX_MEMORY_MB</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>DMXCACHE_MULTIPLEJOBS</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>ENABLE_AUTOCOMMIT</td>
<td>New</td>
<td>Chapter 3, “PowerExchange Client for PowerCenter” on page 31</td>
</tr>
<tr>
<td>MAXTASKS</td>
<td>Changed</td>
<td>Chapter 5, “PowerExchange Listener” on page 49</td>
</tr>
<tr>
<td>SHOW_THREAD_PERF</td>
<td>Changed</td>
<td>Chapter 9, “PowerExchange Monitoring and Tuning” on page 78</td>
</tr>
<tr>
<td>TCPIP_SHOW_POOLING</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>TIMEOUTS</td>
<td>Ignored in 9.0.1 and later</td>
<td>Chapter 3, “PowerExchange Client for PowerCenter” on page 31</td>
</tr>
<tr>
<td>TIMEZONE</td>
<td>New</td>
<td>Chapter 11, “PowerExchange for Adabas” on page 91</td>
</tr>
<tr>
<td>WRT_ERROR_HANDLING</td>
<td>New</td>
<td>Chapter 9, “PowerExchange Monitoring and Tuning” on page 78</td>
</tr>
</tbody>
</table>

**DB2 ECCR REPL2OPT Statement**

The following table identifies a new statement in the DB2 for z/OS ECCR REPL2OPT member:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMITINT</td>
<td>New</td>
<td>Chapter 15, “PowerExchange for DB2 for z/OS” on page 111</td>
</tr>
</tbody>
</table>

**Command Changes in PowerExchange 9.0.1**

PowerExchange 9.0.1 introduces changes to pwxcmd commands.
The following table identifies the `pwxcmd` commands that are deprecated for PowerExchange processes that are managed by a PowerExchange application service:

<table>
<thead>
<tr>
<th>Command</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>pwxcmd close</td>
<td>Deprecated</td>
<td>“Using infacmd pwx Commands to Manage a PowerExchange Listener Service” on page 50</td>
</tr>
<tr>
<td>pwxcmd closeforce</td>
<td>Deprecated</td>
<td></td>
</tr>
<tr>
<td>pwxcmd listtask</td>
<td>Deprecated</td>
<td></td>
</tr>
<tr>
<td>pwxcmd stoptask</td>
<td>Deprecated</td>
<td></td>
</tr>
<tr>
<td>pwxcmd condense</td>
<td>Deprecated</td>
<td>“Using infacmd pwx Commands to Manage a PowerExchange Logger Service” on page 61</td>
</tr>
<tr>
<td>pwxcmd displayall</td>
<td>Deprecated</td>
<td></td>
</tr>
<tr>
<td>pwxcmd displaycheckpoints</td>
<td>Deprecated</td>
<td></td>
</tr>
<tr>
<td>pwxcmd displaycpu</td>
<td>Deprecated</td>
<td></td>
</tr>
<tr>
<td>pwxcmd displayevents</td>
<td>Deprecated</td>
<td></td>
</tr>
<tr>
<td>pwxcmd displaymemory</td>
<td>Deprecated</td>
<td></td>
</tr>
<tr>
<td>pwxcmd displayrecords</td>
<td>Deprecated</td>
<td></td>
</tr>
<tr>
<td>pwxcmd displaystatus</td>
<td>Deprecated</td>
<td></td>
</tr>
<tr>
<td>pwxcmd fileswitch</td>
<td>Deprecated</td>
<td></td>
</tr>
<tr>
<td>pwxcmd shutdown</td>
<td>Deprecated</td>
<td></td>
</tr>
</tbody>
</table>

If you use a PowerExchange Listener Service or Logger Service, use the `infacmd pwx` program to issue these commands instead. For more information about the `infacmd pwx` program, see the `Informatica Command Reference`.

For a PowerExchange Listener or PowerExchange Logger for Linux, UNIX, and Windows process that is not managed by an application service, continue to use the `pwxcmd` program to issue these commands.

### Changes to Supported Operating Systems and Data Sources in 9.0.1

PowerExchange 9.0.1 introduces the following changes to supported versions of operating systems and data sources.

**Note:** The term *data source* refers generically to the DBMSs, VSAM data sets, sequential files, and flat files from which PowerExchange reads data or to which PowerExchange writes data.

For more information about version and maintenance requirements for operating systems and data sources, see the *PowerExchange Planning Guide for Installation and Migration*. 
Operating Systems

The following table identifies the operating system versions for which PowerExchange adds support:

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Version</th>
<th>New or Deprecated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>Windows 7, 32-bit and 63-bit</td>
<td>New - For the PowerExchange Navigator only</td>
</tr>
<tr>
<td>z/OS</td>
<td>1.11</td>
<td>New - For z/OS data sources</td>
</tr>
</tbody>
</table>

Note: The 32-bit PowerExchange Navigator can run on a Windows 7 32-bit or 64-bit machine.

Data Sources

The following table identifies data source versions for which PowerExchange adds support:

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Versions</th>
<th>Operating Systems</th>
<th>Bulk</th>
<th>CDC</th>
<th>New, Changed, or Deprecated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adabas</td>
<td>8.2.2</td>
<td>z/OS</td>
<td>X</td>
<td>X</td>
<td>New</td>
</tr>
<tr>
<td>DB2 for Linux, UNIX, and Windows</td>
<td>9.7</td>
<td>Linux, UNIX, and Windows</td>
<td>X</td>
<td>X</td>
<td>New</td>
</tr>
<tr>
<td>IDMS</td>
<td>17</td>
<td>z/OS</td>
<td>X</td>
<td>X</td>
<td>New</td>
</tr>
<tr>
<td>IMS</td>
<td>11</td>
<td>z/OS</td>
<td>X</td>
<td>X</td>
<td>New</td>
</tr>
<tr>
<td>Oracle</td>
<td>11g Release 2</td>
<td>Linux, UNIX, and Windows</td>
<td>X</td>
<td>X</td>
<td>New</td>
</tr>
<tr>
<td>Sybase</td>
<td>15.0.3</td>
<td>Windows</td>
<td>X</td>
<td></td>
<td>New</td>
</tr>
</tbody>
</table>

1. To capture changes from Adabas 8.2.2 PLOG data sets, verify that Adabas zap AU822016 is applied. Otherwise, a data corruption problem might occur in the first column that follows the DTL_ columns.

PowerExchange 9.0

This section lists the new features and changes that PowerExchange 9.0 introduces.

New Features in PowerExchange 9.0

The following table lists PowerExchange 9.0 new features by PowerExchange component or data source:

<table>
<thead>
<tr>
<th>Component or Data Source</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerExchange Installation</td>
<td>“pwxcmd Command Enhancements for i5/OS” on page 28</td>
</tr>
<tr>
<td>PowerExchange Client for PowerCenter (PWXPC)</td>
<td>“DB2 for z/OS Stored Procedure Transformations” on page 35</td>
</tr>
</tbody>
</table>
## Parameter and Option Changes in PowerExchange 9.0

PowerExchange 9.0 introduces parameter changes for the DBMOVER and PowerExchange Condense configuration files.

<table>
<thead>
<tr>
<th>Component or Data Source</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“DB2 for i5/OS Bulk Data Movement Relational Connection Attribute” on page 38</td>
</tr>
<tr>
<td></td>
<td>“Enhanced Asynchronous Network Communication” on page 35</td>
</tr>
<tr>
<td></td>
<td>“Enhanced Partitioning Support for Bulk Data Movement Sessions” on page 35</td>
</tr>
<tr>
<td></td>
<td>“Bulk Data Offload for PowerExchange Data Targets” on page 81</td>
</tr>
<tr>
<td></td>
<td>“Workflows That Access a PowerExchange Listener Service” on page 36</td>
</tr>
<tr>
<td>PowerExchange Condense</td>
<td>“pwxcmd Commands Issued to a PowerExchange Condense Process on i5/OS or z/OS” on page 45</td>
</tr>
<tr>
<td></td>
<td>“Security for pwxcmd Commands Issued to a PowerExchange Condense Process on i5/OS” on page 45</td>
</tr>
<tr>
<td></td>
<td>“Security for pwxcmd Commands Issued to a PowerExchange Condense Process on z/OS” on page 46</td>
</tr>
<tr>
<td>PowerExchange Listener</td>
<td>“PowerExchange Listener Service in the Informatica Administrator” on page 51</td>
</tr>
<tr>
<td></td>
<td>“pwxcmd Commands Issued to a PowerExchange Listener on i5/OS or z/OS” on page 51</td>
</tr>
<tr>
<td></td>
<td>“Security for pwxcmd Commands Issued to a PowerExchange Listener on i5/OS” on page 52</td>
</tr>
<tr>
<td></td>
<td>“Security for pwxcmd Commands Issued to a PowerExchange Listener on z/OS” on page 52</td>
</tr>
<tr>
<td></td>
<td>“PWXUCDCT Utility for Managing PowerExchange Logger Files” on page 63</td>
</tr>
<tr>
<td></td>
<td>“PowerExchange Logger Service in the Informatica Administrator” on page 63</td>
</tr>
<tr>
<td>PowerExchange for DB2 for i5/OS</td>
<td>“Multiple-Row Fetch Statements for Bulk Data Movement” on page 106</td>
</tr>
<tr>
<td>PowerExchange for DB2 for z/OS</td>
<td>“DB2 for z/OS Stored Procedure Transformations” on page 112</td>
</tr>
</tbody>
</table>
DBMOVER Configuration File Statements

The following table identifies new, changed, or deprecated statements in the DBMOVER configuration file:

<table>
<thead>
<tr>
<th>Statement</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISABLE_PARTITIONS</td>
<td>New</td>
<td>Chapter 3, “PowerExchange Client for PowerCenter” on page 31</td>
</tr>
<tr>
<td>NODE</td>
<td>Changed</td>
<td></td>
</tr>
<tr>
<td>TCPIP_ASYNC</td>
<td>Deprecated</td>
<td></td>
</tr>
<tr>
<td>TIMEOUTS</td>
<td>Deprecated</td>
<td></td>
</tr>
</tbody>
</table>

PowerExchange Condense Configuration File Parameters

The following table identifies a changed parameter in the PowerExchange Condense CAPTPARM configuration file or member:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONDENSENAME</td>
<td>Changed</td>
<td>“PowerExchange Condense Configuration File Parameter” on page 46</td>
</tr>
</tbody>
</table>

PowerExchange Logger for Linux, UNIX, and Windows Parameters

The following table identifies new and changed parameters in the PowerExchange Logger configuration file:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOGGER_DELETES_EXPIRED_CDCT_RECORDS</td>
<td>New</td>
<td>“pwxcdl.cfg Parameters” on page 64</td>
</tr>
<tr>
<td>MAX_RETENTION_EXPIRY_DAYS</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>NO_DATA_WAIT</td>
<td>Changed</td>
<td></td>
</tr>
<tr>
<td>PROMPT</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>VERBOSE</td>
<td>Changed</td>
<td></td>
</tr>
</tbody>
</table>
PowerCenter Connection Attributes

The following table identifies new, changed, or deprecated PowerCenter connection attributes:

<table>
<thead>
<tr>
<th>Attribute</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWX Override</td>
<td>New</td>
<td>Chapter 3, &quot;PowerExchange Client for PowerCenter&quot; on page 31</td>
</tr>
<tr>
<td>Offload Processing</td>
<td>Changed</td>
<td>Chapter 3, &quot;PowerExchange Client for PowerCenter&quot; on page 31</td>
</tr>
</tbody>
</table>

Changes to Supported Operating Systems and Data Sources in 9.0

PowerExchange 9.0.1 introduces the following changes to supported versions of operating systems and data sources.

**Note:** The term data source refers generically to the DBMSs, VSAM data sets, sequential files, and flat files from which PowerExchange reads data or to which PowerExchange writes data.

For more information about version and maintenance requirements for operating systems and data sources, see the PowerExchange Planning Guide for Installation and Migration.

Operating Systems

The following table identifies changes to the operating system versions that PowerExchange supports:

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Versions</th>
<th>Binary and Machine Type</th>
<th>New or Deprecated</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX</td>
<td>5.2</td>
<td>32-bit, Power</td>
<td>Deprecated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>64-bit, Power</td>
<td></td>
</tr>
<tr>
<td>i5/OS</td>
<td>5.2</td>
<td></td>
<td>Deprecated</td>
</tr>
<tr>
<td>Red Hat Linux</td>
<td>4</td>
<td>32-bit, x86</td>
<td>Deprecated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>64-bit, Opteron and EM64T</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>64-bit, Itanium</td>
<td></td>
</tr>
<tr>
<td>Solaris</td>
<td>8, 9</td>
<td>32-bit, SPARC</td>
<td>Deprecated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>64-bit, SPARC</td>
<td></td>
</tr>
<tr>
<td>SUSE Linux</td>
<td>9</td>
<td>32-bit, x86</td>
<td>Deprecated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>64-bit, Opteron and EM64T</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>64-bit, Itanium</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>64-bit, IBM System z</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>32-bit, x86</td>
<td>New</td>
</tr>
<tr>
<td></td>
<td></td>
<td>64-bit, Opteron and EM64T</td>
<td></td>
</tr>
<tr>
<td>Windows</td>
<td>2000</td>
<td>64-bit, x86</td>
<td>Deprecated</td>
</tr>
</tbody>
</table>
Data Sources

The following table identifies changes to the data source versions that PowerExchange supports:

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Versions</th>
<th>Operating Systems</th>
<th>Bulk</th>
<th>CDC</th>
<th>New, Changed, or Deprecated</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA Datacom</td>
<td>12</td>
<td>z/OS</td>
<td>X</td>
<td>X</td>
<td>New</td>
</tr>
<tr>
<td>DB2</td>
<td>5.2</td>
<td>i5/OS</td>
<td>X</td>
<td>X</td>
<td>Deprecated</td>
</tr>
</tbody>
</table>

Documentation Changes in PowerExchange 9.0

This section describes changes and enhancements to the PowerExchange documentation.

Organizational Changes

The PowerExchange documentation set has been restructured to enhance usability. The following books have changed:

- *PowerExchange Migration Guide*. This book has been replaced by the *PowerExchange Planning Guide for Installation and Migration*.
- *PowerExchange Installation Guide*. This book no longer includes operating system and data source requirements. This information is now in the *PowerExchange Planning Guide for Installation and Migration*.

PowerExchange Navigator Online Help

The PowerExchange Navigator online help was enhanced for usability. When you access context-sensitive help for the PowerExchange Navigator, an online help version of the *PowerExchange Navigator User Guide* is displayed. This online help provides more comprehensive information about the PowerExchange Navigator than the previous Help.

PowerExchange Data Source Wizard Online Help

The PowerExchange Data Source wizard online help was enhanced for usability. You access the PowerExchange Data Source wizard when you configure an ODBC data source.

When you access context-sensitive help for the PowerExchange Data Source wizard, an online help version of the *PowerExchange Reference Manual* is displayed. This online help provides more comprehensive information about the PowerExchange Data Source wizard than the previous Help.

PowerExchange 8.6.1 HotFix 10

This section lists the new features and changes that PowerExchange 8.6.1 HotFix 10 introduces.
New Features in PowerExchange 8.6.1 HotFix 10

The following table lists a PowerExchange 8.6.1 HotFix 10 new feature for DB2 for i5/OS data sources:

<table>
<thead>
<tr>
<th>Component or Data Source</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2 for i5/OS</td>
<td>“Extracting the Relative Record Number” on page 107</td>
</tr>
</tbody>
</table>

Parameter and Option Changes in PowerExchange 8.6.1 HotFix 10

PowerExchange 8.6.1 HotFix 10 introduces changed or new parameters for the DBMOVER configuration file, DTLURDMO utility, and DTLUCBRG utility.

DBMOVER Configuration File Statement

The following table identifies a changed statement in the DBMOVER configuration file:

<table>
<thead>
<tr>
<th>Statement</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRACING</td>
<td>Changed</td>
<td>Chapter 5, “PowerExchange Listener” on page 49</td>
</tr>
</tbody>
</table>

DTLUCBRG Utility Parameter

The following table identifies a changed parameter for the DTLUCBRG utility:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRGPREFIX</td>
<td>Changed</td>
<td>Chapter 10, “PowerExchange Utilities” on page 87</td>
</tr>
</tbody>
</table>

DTLURDMO Utility Parameters

The following table identifies new parameters for the DTLURDMO utility:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>TARGETEPWD</td>
<td>New</td>
<td>Chapter 10, “PowerExchange Utilities” on page 87</td>
</tr>
<tr>
<td>TARGETPWD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TARGETUSER</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PowerExchange 8.6.1 HotFix 5

This section lists the new features and changes that PowerExchange 8.6.1 HotFix 5 introduces.
Parameter and Option Changes in PowerExchange 8.6.1 HotFix 5

PowerExchange 8.6.1 HotFix 5 introduces parameter changes for the DBMOVER configuration file.

DBMOVER Configuration File Statements

The following table identifies new statements in the DBMOVER configuration file:

<table>
<thead>
<tr>
<th>Statement</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADAUSER</td>
<td>New</td>
<td>Chapter 11, “PowerExchange for Adabas” on page 91</td>
</tr>
<tr>
<td>ALWCLRPFM on the AS4J CAPI_CONNECTION statement</td>
<td>New</td>
<td>Chapter 14, “PowerExchange for DB2 for i5/OS” on page 105</td>
</tr>
<tr>
<td>RMTRDBDIRE</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>RMTSYSNAME</td>
<td>New</td>
<td></td>
</tr>
</tbody>
</table>

Documentation Changes in PowerExchange 8.6.1 HotFix 5

This section describes changes and enhancements to the PowerExchange documentation.

CDC Guides

The PowerExchange CDC Guide for i5/OS, PowerExchange CDC Guide for Linux, UNIX, and Windows, and PowerExchange CDC Guide for z/OS have been enhanced to include a chapter about managing change data extractions. Also, the “Introduction to Change Data Extraction” and “Extracting Change Data” chapters have been enhanced with additional information.

Migration Guide

The PowerExchange Migration Guide now includes a section about the PowerExchange environment. Use this information to plan your PowerExchange environment, back up PowerExchange data, or migrate to a new release. The section includes the locations of PowerExchange data files and configuration files. This guide now also includes operating system and data source requirements.

Utilities Guide

In the PowerExchange Utilities Guide, the chapters for the DTLUAPPL and DTLUCDEP utilities have been changed to describe the DD statements in the sample JCL for running the utilities on z/OS. Also the sample JCL has been updated.

PowerExchange 8.6.1 HotFix 3

This section lists the new features and changes that PowerExchange 8.6.1 HotFix 3 introduces.
New Features in PowerExchange 8.6.1 HotFix 3

The following table lists the PowerExchange 8.6.1 HotFix 3 new feature:

<table>
<thead>
<tr>
<th>Component or Data Source</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerExchange Listener</td>
<td>&quot;Additional PowerExchange Substitution Variables for Netport Jobs&quot; on page 55</td>
</tr>
</tbody>
</table>

PowerExchange 8.6.1 HotFix 1

This section lists the new features and changes that PowerExchange 8.6.1 HotFix 1 introduces.

New Features in PowerExchange 8.6.1 HotFix 1

The following table lists PowerExchange 8.6.1 HotFix 1 new features by PowerExchange component or data source:

<table>
<thead>
<tr>
<th>Component or Data Source</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&quot;Security for pwxcmd Commands Issued to a PowerExchange Listener Service&quot; on page 56</td>
</tr>
<tr>
<td>PowerExchange Logger for Linux, UNIX, and Windows</td>
<td>&quot;Security for pwxcmd Commands Issued to a PowerExchange Logger Process&quot; on page 67</td>
</tr>
<tr>
<td>PowerExchange for SQL Server</td>
<td>&quot;CDC Support for SQL Server 2008&quot; on page 125</td>
</tr>
</tbody>
</table>

Parameter and Option Changes in PowerExchange 8.6.1 HotFix 1

PowerExchange 8.6.1 HotFix 1 introduces parameter changes for the PowerExchange Logger for Linux, UNIX, and Windows.

PowerExchange Logger for Linux, UNIX, and Windows Parameters

The following table identifies the pwxccl.cfg parameters for which PowerExchange 8.6.1 HotFix 1 introduces changes:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPTURE_NODE</td>
<td>Changed</td>
<td>Chapter 6, &quot;PowerExchange Logger for Linux, UNIX, and Windows&quot; on page 61</td>
</tr>
<tr>
<td>CAPTURE_NODE_EPWD</td>
<td>Changed</td>
<td></td>
</tr>
<tr>
<td>CAPTURE_NODE_PWD</td>
<td>Changed</td>
<td></td>
</tr>
</tbody>
</table>
Changes to Supported Systems and Data Sources in 8.6.1 HotFix 1

PowerExchange 8.6.1 HotFix 1 introduces changes to supported versions of operating systems and data sources.

For more information about version and maintenance requirements for operating systems and data sources, see the PowerExchange Installation Guide.

Operating Systems

The following table identifies changes to the operating system versions that PowerExchange supports:

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Versions</th>
<th>Binary and Machine Type</th>
<th>New or Deprecated</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX</td>
<td>6.1</td>
<td>32-bit, Power</td>
<td>New</td>
</tr>
<tr>
<td></td>
<td></td>
<td>64-bit, Power</td>
<td></td>
</tr>
<tr>
<td>Windows</td>
<td>2008</td>
<td>64-bit, Itanium</td>
<td>New</td>
</tr>
</tbody>
</table>

Data Sources

The following table identifies changes to the data source versions that PowerExchange supports:

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Versions</th>
<th>Operating Systems</th>
<th>Bulk</th>
<th>CDC</th>
<th>New, Changed, or Deprecated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adabas</td>
<td>6.1</td>
<td>UNIX and Windows</td>
<td>X</td>
<td></td>
<td>New</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>2008</td>
<td>Windows</td>
<td>X</td>
<td></td>
<td>New</td>
</tr>
</tbody>
</table>

PowerExchange 8.6.1

This section lists the new features and changes that PowerExchange 8.6.1 introduces.
### New Features in PowerExchange 8.6.1

The following table lists PowerExchange 8.6.1 new features by PowerExchange component or data source:

<table>
<thead>
<tr>
<th>Component or Data Source</th>
<th>Feature</th>
</tr>
</thead>
</table>
| PowerExchange Client for PowerCenter | “Bulk Data Offload Processing” on page 38  
“Group Source Processing for IMS Unload Files” on page 38  
“Minimum UOW Size for Change Data” on page 39 |
| PowerExchange Listener | “pwxcmd Commands Issued to a PowerExchange Listener” on page 56 |
| PowerExchange Logger for Linux, UNIX, and Windows **Note:** The PowerExchange Logger replaces PowerExchange Condense on Linux, UNIX, and Windows. | “New Features in 8.6.1” on page 69  
“Introduction to the PowerExchange Logger for Linux, UNIX, and Windows” on page 69  
“pwxcmd Commands Issued to a PowerExchange Logger Process” on page 70 |
| PowerExchange Monitoring and Tuning | “Bulk Data Offload and Multithreaded Processing” on page 82  
“CDC Offload Processing” on page 82  
“Performance Details for CDC Sessions” on page 83 |
| PowerExchange Navigator | “Application Name Option for the STOPTASK Command” on page 77 |
| PowerExchange ODBC | “Application Name Option in PowerExchange ODBC Data Source Dialog Box” on page 132 |
| PowerExchange Utilities | “New DTLURDMO Optional Statements” on page 90 |
| PowerExchange for CA Datacom | “CDC Offload and Multithreaded Processing” on page 99  
“Datacom Table-Based CDC” on page 99 |
| PowerExchange for CA IDMS | “CDC Offload and Multithreaded Processing” on page 116 |
| PowerExchange for DB2 for i5/OS | “PowerExchange Event Message Queue” on page 109 |
| PowerExchange for DB2 for Linux, UNIX, and Windows | “CDC Support for IBM DB2 for Linux, UNIX, and Windows Versions 9.1 and 9.5” on page 102 |
| PowerExchange for DB2 for z/OS | “Bulk Data Offload Processing” on page 113  
“Table SQL Operation Statistics in the DB2 ECCR” on page 113 |
| PowerExchange for IMS | “CDC Offload and Multithreaded Processing” on page 118  
“Enhanced Security for IMS Data Sources” on page 118 |
### Parameter and Option Changes in PowerExchange 8.6.1

PowerExchange 8.6.1 introduces new parameters and options for the DBMOVER configuration file, DTLRURDMO utility, and PowerExchange Logger for Linux, UNIX, and Windows.

#### DBMOVER Configuration File Statements

The following table identifies new, changed, and deleted DBMOVER configuration file statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Operating System or Data Source</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS400EVENTMSGQ</td>
<td>i5/OS</td>
<td>New</td>
<td>Chapter 14, “PowerExchange for DB2 for i5/OS” on page 105</td>
</tr>
<tr>
<td>CMDNODE</td>
<td>Linux, UNIX, and Windows</td>
<td>New</td>
<td>Chapter 5, “PowerExchange Listener” on page 49</td>
</tr>
<tr>
<td>OFFLOADPROCESSING</td>
<td>z/OS</td>
<td>Deleted</td>
<td>Chapter 20, “PowerExchange for VSAM and Flat Files” on page 128</td>
</tr>
<tr>
<td>PWXSOMAXCONN</td>
<td>All</td>
<td>Changed</td>
<td>Chapter 5, “PowerExchange Listener” on page 49</td>
</tr>
<tr>
<td>SHOW_THREAD_PERF</td>
<td>All</td>
<td>New</td>
<td>Chapter 9, “PowerExchange Monitoring and Tuning” on page 78</td>
</tr>
<tr>
<td>SVCNODE</td>
<td>Linux, UNIX, and Windows</td>
<td>New</td>
<td>Chapter 5, “PowerExchange Listener” on page 49</td>
</tr>
<tr>
<td>TCPIP_ASYNC</td>
<td>HP-UX, Linux, Solaris, z/OS</td>
<td>New</td>
<td>Chapter 9, “PowerExchange Monitoring and Tuning” on page 78</td>
</tr>
</tbody>
</table>
DTLURDMO Utility Options

The following table identifies new optional statements for the DTLURDMO utility copy statements:

<table>
<thead>
<tr>
<th>Copy Statement</th>
<th>Optional Statements</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM_COPY</td>
<td>RENAME</td>
<td>New</td>
<td>Chapter 10, “PowerExchange Utilities” on page 87</td>
</tr>
<tr>
<td>REG_COPY</td>
<td>RENAME RELATED BULK</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>XM_COPY</td>
<td>RENAME</td>
<td>New</td>
<td></td>
</tr>
</tbody>
</table>

PowerExchange Logger for Linux, UNIX, and Windows Parameters

The following table identifies the new parameters that you can specify for the PowerExchange Logger for Linux, UNIX, and Windows in the pwxcl.cfg configuration file:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPTURE_NODE</td>
<td>New</td>
<td>Chapter 6, “PowerExchange Logger for Linux, UNIX, and Windows” on page 61</td>
</tr>
<tr>
<td>CAPTURE_NODE_EPWD</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>CAPTURE_NODE_PWD</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>CAPTURE_NODE_UID</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>CONDENSENAME</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>EPWD</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>VERBOSE</td>
<td>Changed</td>
<td></td>
</tr>
</tbody>
</table>

Note: In addition to these parameters, the PowerExchange Logger for Linux, UNIX, and Windows supports the same parameters as PowerExchange Condense. If you set the existing VERBOSE parameter to Y, PowerExchange now produces PowerExchange Logger performance statistics.

Changes to Supported Systems and Data Sources in 8.6.1

PowerExchange 8.6.1 introduces the following changes to supported versions of operating systems and data sources.

Note: The term data source refers generically to the DBMSs, VSAM data sets, sequential files, and flat files from which PowerExchange reads data or to which PowerExchange writes data.

For more information about version and maintenance requirements for operating systems and data sources, see the PowerExchange Installation Guide.
### Operating Systems

The following table identifies changes to the operating system versions that PowerExchange supports:

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Versions</th>
<th>Binary and Machine Type</th>
<th>New or Deprecated</th>
</tr>
</thead>
<tbody>
<tr>
<td>i5/OS and OS/400</td>
<td>4.5 to 5.1</td>
<td></td>
<td>Deprecated</td>
</tr>
<tr>
<td>OS/390</td>
<td>2.10</td>
<td></td>
<td>Deprecated</td>
</tr>
<tr>
<td>Windows</td>
<td>2008</td>
<td>32-bit, x86</td>
<td>New</td>
</tr>
<tr>
<td></td>
<td></td>
<td>64-bit, Opteron and EM64T</td>
<td>New</td>
</tr>
<tr>
<td>z/OS</td>
<td>1.1 to 1.5</td>
<td></td>
<td>Deprecated</td>
</tr>
<tr>
<td></td>
<td>1.10</td>
<td></td>
<td>New</td>
</tr>
</tbody>
</table>

### Data Sources

The following table identifies changes to data source versions that PowerExchange supports:

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Versions</th>
<th>Operating Systems</th>
<th>Bulk</th>
<th>CDC</th>
<th>New, Changed, or Deprecated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adabas</td>
<td>6.2 to 7.0</td>
<td>z/OS</td>
<td>X</td>
<td>X</td>
<td>Deprecated</td>
</tr>
<tr>
<td></td>
<td>3.1 to 3.3</td>
<td>UNIX and Windows</td>
<td>X</td>
<td></td>
<td>Deprecated</td>
</tr>
<tr>
<td>CA IDMS</td>
<td>14.1</td>
<td>z/OS</td>
<td>X</td>
<td>X</td>
<td>Deprecated</td>
</tr>
<tr>
<td>CA Datacom</td>
<td>10</td>
<td>z/OS</td>
<td>X</td>
<td>X</td>
<td>Deprecated</td>
</tr>
<tr>
<td>CICS Transaction Server for OS/390</td>
<td>1.2 and 1.3</td>
<td>z/OS</td>
<td>X</td>
<td></td>
<td>Deprecated</td>
</tr>
<tr>
<td>CICS Transaction Server for z/OS</td>
<td>2.1 and 2.2</td>
<td>z/OS</td>
<td>X</td>
<td></td>
<td>Deprecated</td>
</tr>
<tr>
<td>DB2 for Linux, UNIX, and Windows</td>
<td>9.5</td>
<td>Linux, UNIX, and Windows</td>
<td>X</td>
<td></td>
<td>New</td>
</tr>
<tr>
<td></td>
<td>9.1</td>
<td>Linux, UNIX, and Windows</td>
<td>X</td>
<td></td>
<td>New</td>
</tr>
<tr>
<td></td>
<td>8.2</td>
<td>Linux, UNIX, and Windows</td>
<td>X</td>
<td></td>
<td>Changed</td>
</tr>
<tr>
<td></td>
<td>8.1</td>
<td>Linux, UNIX, and Windows</td>
<td>X</td>
<td></td>
<td>Changed</td>
</tr>
<tr>
<td>DB2 for OS/390</td>
<td>5.1 and 6.1</td>
<td>z/OS</td>
<td>X</td>
<td>X</td>
<td>Deprecated</td>
</tr>
<tr>
<td>DB2 for OS/390 and z/OS</td>
<td>7.1</td>
<td>z/OS</td>
<td>X</td>
<td>X</td>
<td>Deprecated</td>
</tr>
</tbody>
</table>
Interoperability of PowerExchange 8.6.1 and 8.6.0

Although PowerExchange supports communication among PowerExchange installations of the same version and release levels, PowerExchange 8.6.1 cannot communicate with PowerExchange 8.6.0.

Documentation Changes in PowerExchange 8.6.1

This section describes changes to the PowerExchange documentation.

MVS Installation Assistant Online Help

The MVS Installation Assistant online help was enhanced for usability. When you access context-sensitive help for the PowerExchange MVS Installation Assistant wizard, an online help version of the PowerExchange Installation Guide is displayed. This online help provides more comprehensive information about the MVS Installation Assistant than the previous Help.

New, Revised, and Deprecated Titles

The PowerExchange documentation set has been restructured to reduce duplication and enhance usability. The following changes have been made:

- PowerExchange CDC Guide for Linux, UNIX, and Windows has been added. This book consolidates change data capture (CDC) information for Linux, UNIX, and Windows platforms, which was previously covered in the following adapter guides:
  - PowerExchange DB2 for Linux, UNIX, and Windows Adapter Guide
  - PowerExchange Oracle Adapter Guide
  - PowerExchange SQL Server Adapter Guide

  These separate adapter guides are no longer published.

- The title PowerExchange Change Data Capture Guide for z/OS was changed to PowerExchange CDC Guide for z/OS.

- The title PowerExchange Change Data Capture Guide for i5/OS was changed to PowerExchange CDC Guide for i5/OS.
Documentation Enhancements
The following documentation has been enhanced:

- PowerExchange CDC Guide for i5/OS. This book has been restructured and enhanced to improve usability.
- PowerExchange Utilities Guide. The DTLURDMO utility chapter has been rewritten and enhanced to improve usability.

PowerExchange 8.6
This section lists the new features and changes that PowerExchange 8.6 introduces by PowerExchange component and data source.

New Features in PowerExchange 8.6
The following table lists PowerExchange 8.6 new features by PowerExchange component or data source:

<table>
<thead>
<tr>
<th>Component or Data Source</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerExchange Client for PowerCenter (PWXPC)</td>
<td>“Case-sensitive Filters for Metadata Imports” on page 41</td>
</tr>
<tr>
<td></td>
<td>“Change Data Extraction from Condense Files ” on page 42</td>
</tr>
<tr>
<td></td>
<td>“Current Restart Token Generation” on page 42</td>
</tr>
<tr>
<td></td>
<td>“Offload Processing and Multithreaded Processing” on page 42</td>
</tr>
<tr>
<td></td>
<td>“Sub-packet Commit Processing” on page 42</td>
</tr>
<tr>
<td></td>
<td>“Variables for PWXPC Session Properties” on page 42</td>
</tr>
<tr>
<td>PowerExchange Condense</td>
<td>“Replacement by PowerExchange Logger for Linux, UNIX, and Windows ” on page 47</td>
</tr>
<tr>
<td></td>
<td>“Override of CAPI Connection for PowerExchange Condense” on page 47</td>
</tr>
<tr>
<td></td>
<td>“Override of Configuration and License Key Files” on page 47</td>
</tr>
<tr>
<td></td>
<td>“Partial Condense Processing” on page 48</td>
</tr>
<tr>
<td></td>
<td>“Terse Messages” on page 48</td>
</tr>
<tr>
<td>PowerExchange Logger</td>
<td>“Pushdown Optimization for Extracting Changes” on page 73</td>
</tr>
<tr>
<td>PowerExchange Navigator</td>
<td>“Generation of Current Restart Tokens” on page 77</td>
</tr>
<tr>
<td></td>
<td>“Microsoft Windows Vista Support” on page 77</td>
</tr>
<tr>
<td>PowerExchange performance enhancements</td>
<td>“Offload Processing” on page 85</td>
</tr>
<tr>
<td></td>
<td>“Multithreaded Processing” on page 86</td>
</tr>
</tbody>
</table>
Parameter and Option Changes in PowerExchange 8.6

PowerExchange 8.6 introduces changes to DBMOVER configuration file and Adabas ECCR parameters.

DBMOVER Configuration File Statements

The following table lists the changes to DBMOVER configuration file statements:

<table>
<thead>
<tr>
<th>Statement or Statement</th>
<th>Option</th>
<th>Operating System or Data Source</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADABAS_PREFIX</td>
<td></td>
<td>Adabas</td>
<td>New</td>
<td>Chapter 11, “PowerExchange for Adabas” on page 91</td>
</tr>
<tr>
<td>CAPI_CONNECTION</td>
<td>ALWPARTIAL</td>
<td>i5/OS</td>
<td>New</td>
<td>Chapter 14, “PowerExchange for DB2 for i5/OS” on page 105</td>
</tr>
</tbody>
</table>
### Adabas ECCR Parameters

The following table lists a new parameter for the Adabas ECCR:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>New, Changed, or Deprecated</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>IGNORENOCHANGEUPDATES</td>
<td>New</td>
<td>Chapter 11, “PowerExchange for Adabas” on page 91</td>
</tr>
</tbody>
</table>

### Documentation Changes in PowerExchange 8.6

This section lists the changes to the PowerExchange documentation.

#### New, Revised, and Deprecated Titles

The PowerExchange documentation set has been restructured to enhance usability. The following books have been added:


- *PowerExchange CDC Guide for z/OS*. Incorporates CDC information that was previously covered in the following adapter guides, which are no longer published separately:
  - PowerExchange Adabas Adapter Guide
  - PowerExchange Datacom Adapter Guide
  - PowerExchange IDMS Adapter Guide
  - PowerExchange IDMS Log-Based Adapter Guide
  - PowerExchange IMS Adapter Guide
  - PowerExchange VSAM Adapter Guide

- *PowerExchange Command Reference*. Consolidates PowerExchange commands that can be issued from the command line or MVS operator console for all PowerExchange platforms.
Organizational Changes

Parts of PowerExchange books have been rewritten and restructured to enhance usability. The following books have significant enhancements:

- **PowerExchange Bulk Data Movement Guide.** The following information has been moved into this book:
  - DB2 bulk load information from the **PowerExchange Reference Manual**.
  - The Asynchronous Write with Fault Tolerance chapter from the **PowerExchange Reference Manual**.

- **PowerExchange CDC Guide for z/OS.** The following information has been moved into this book:
  - Configuration information for the PowerExchange Logger, Agent, and ECCR from the **PowerExchange Reference Manual**.
  - Event table processing information from the **PowerExchange Reference Manual**.
  - The Fault Finding chapter from the **PowerExchange Reference Manual**.

- **PowerExchange Command Reference.** PowerExchange Logger, Agent, and ECCR commands have been moved from the **PowerExchange Reference Manual** into this book.

- **PowerExchange Installation Guide.** The MVS chapter has been rewritten to improve usability.

- **PowerExchange Navigator User Guide.** All capture registration and extraction map creation and maintenance tasks have moved from the MVS adapter guides into this book.

- **PowerExchange Utilities Guide.** Information was added for the following utilities that were not previously documented:
  - DTLINFO - Release Information Utility
  - EDMLUCTR - Log Scan and Print Utility
  - HOSTENT - TCP/IP Address Reporter Utility
    Also, information was added for the following utilities that were previously covered in separate adapter guides, which have been incorporated into the **PowerExchange CDC Guide for z/OS**:  
  - DTLCCADW - Adabas PCAT Utility
  - DTLCUIML - IMS Log Marker Utility
  - DTLUCSR2 - IDMS SR2 and SR3 Records Utility
  - DTLULCAT and DTLULOGC - IDMS Log Catalog Utilities
Chapter 2

PowerExchange Installation and Migration

This chapter includes the following topics:

- PowerExchange 9.1.0 - New Features and Changes for Installation and Migration, 27
- PowerExchange 9.0 - New Features and Changes for Installation and Migration, 28
- PowerExchange 8.6.1 - New Features and Changes for Installation and Migration, 29
- PowerExchange 8.6 - New Features and Changes for Installation and Migration, 30

PowerExchange 9.1.0 - New Features and Changes for Installation and Migration

This section describes the PowerExchange 9.1.0 new features and changes that are related to PowerExchange installation and migration.

New Features in 9.1.0

PowerExchange 9.1.0 introduces the following new features that are related to PowerExchange installation and migration:

Advanced Parameters in the MVS Installation Assistant

You can now edit some PowerExchange ECCR and Condense parameters and some DBMOVER statements during installation.

In previous releases, you could only edit advanced parameters in the JCL after it was transferred to the z/OS system. Now, you can edit these parameters on Windows through the MVS Installation Assistant. The MVS Installation Assistant pages for general parameters and for specific data sources now provide an AdvancedParms button.

Click AdvancedParms to display an AdvancedOptions page where you can view and enter values for some of the PowerExchange ECCR and Condense parameters and some of the DBMOVER statements. The installer uses your input to customize sample JCL and configuration members that it generates when installation completes.

Note: If you define advanced parameters, you cannot restore these parameters to default values by using the RestoreDefaults button.

Field-level help is available for each of the advanced parameters.
The following table lists the pages from which you can edit advanced parameters, and the parameters and statements that you can edit:

<table>
<thead>
<tr>
<th>Page</th>
<th>ECCR Parameters</th>
<th>Condense Parameters</th>
<th>DBMOVER Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Parameters</td>
<td></td>
<td></td>
<td>- CODEPAGE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- SECURITY</td>
</tr>
<tr>
<td>Adabas Parameters</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Datacom Parameters</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>DB2 Parameters</td>
<td></td>
<td></td>
<td>- DB2CODEPAGE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- MVSDB2AF</td>
</tr>
<tr>
<td>DB2 CDC Parameters</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>IDMS CDC Parameters</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>IMS CDC Parameters</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>VSAM Parameters</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**RELATED TOPICS:**
- “MVS Installation Assistant Online Help” on page 4

**openssl.exe Installation on Windows 32-Bit Systems**

The PowerExchange installation program installs the openssl.exe file on Windows 32-bit systems. You no longer need to install a separate version of OpenSSL on these systems to create certificates.

**PowerExchange 9.0 - New Features and Changes for Installation and Migration**

This section describes the PowerExchange 9.0 new features and changes that are related to the PowerExchange installation and migration.

**New Features in 9.0**

PowerExchange 9.0 introduces the following new features that are related to PowerExchange installation and migration:

**pwxcmd Command Enhancements for i5/OS**

You can now use the pwxcmd program to send commands to a PowerExchange Listener or PowerExchange Condense process on an i5/OS system.
On i5/OS, if you are migrating to PowerExchange 9.0 from a previous release, you must perform the following migration tasks to enable the PowerExchange Listener to run and to authorize users to issue pwxcmd commands:

- To enable the PowerExchange Listener to run, issue the following upgrade command:

  `CHGJOBD JOBD(datalib/DTLLIST) ALWMLTTHD(*YES)`

  The `datalib` variable is the user-specified name for the PowerExchange data library that was entered at installation.

  Also, verify that the QMLTTHDACN system value is set to a value that enables functions that might not be threadsafe to run. If the QMLTTHDACN system value is set to 3, or to the `Do not perform the function` value in the iSeries Navigator, PowerExchange will not start. Set the QMLTTHDACN system value to 1 or 2, or to the `Perform the function that is not threadsafe` value in the iSeries Navigator.

- To create security objects to authorize users to issue pwxcmd commands, issue the following upgrade command:

  `CALL PGM(dtllib/CRTDTLENV) PARM('datalib')`

  Where `dtllib` is the name of the PowerExchange software library that was entered at installation, and `datalib` is the user-specified name for the PowerExchange data library that was entered at installation.

  For more information about migration, see the PowerExchange Planning Guide for Installation and Migration.

  For more information about pwxcmd commands, see the PowerExchange Command Reference and PowerExchange Reference Manual.

---

**PowerExchange 8.6.1 - New Features and Changes for Installation and Migration**

This section describes the PowerExchange 8.6.1 changes that are related to the PowerExchange installation and migration.

**Behavior Changes in 8.6.1**

PowerExchange 8.6.1 introduces the following change for interoperability of PowerExchange versions:

**PowerExchange Version 8.6.1 and 8.6.0 Interoperability**

In PowerExchange, the version, release, and modification level is in the following format:

`PowerExchange version.release.modification`

PowerExchange allows communication among PowerExchange installations that have the same version and release levels but different modification levels. For example, the 8.5.0 PowerExchange Navigator and PowerExchange Listener can communicate with a 8.5.1 PowerExchange Listener. The exception to this rule is that PowerExchange 8.6.1 and PowerExchange 8.6.0 cannot communicate with each other.

**Windows Path Environment Variable**

During PowerExchange for Windows installation, if you select a new installation directory, the installer updates the Path environment variable to include the new path. If the PowerExchange installation directory is already present in the Path environment variable, the installer does not modify the Path environment variable.

Additionally, the installer checks the length of the Path environment variable. If the length is greater than 260 characters, a warning dialog box is displayed and the Path environment variable is not modified. In this situation,
use the procedure described in the *PowerExchange Installation Guide* to edit the Path environment variable to reduce its length. Then, add the PowerExchange installation directory.

Previously, you had to manually edit the Path environment variable to include the new installation directory.

**PowerExchange 8.6 - New Features and Changes for Installation and Migration**

This section describes the PowerExchange 8.6 changes that are related to the PowerExchange installation and migration.

**Behavior Changes in 8.6**

PowerExchange 8.6 introduces the following behavior change for PowerExchange installation and migration:

**Windows Path Environment Variable**

When you install PowerExchange on Windows, you must manually add the PowerExchange installation path to the Path environment variable. The default installation path is:

\`C:\Informatica\PowerExchange\`

Previously, the PowerExchange installer automatically added the PowerExchange installation path to the Path environment variable on Windows machines.

**License Key for CDC Options**

The algorithm that PowerExchange uses for validating license keys for the following change data capture (CDC) data sources has changed:

- Microsoft SQL Server
- DB2 for Linux, UNIX, and Windows

If you use CDC for these data sources, you must enter the new license keys provided by Informatica when you upgrade to 8.6.
CHAPTER 3

PowerExchange Client for PowerCenter

This chapter includes the following topics:

- PowerCenter 9.1.0 - New Features and Changes for the PowerExchange Client for PowerCenter, 31
- PowerCenter 9.0.1 - New Features and Changes for the PowerExchange Client for PowerCenter, 32
- PowerCenter 9.0 - New Features and Changes for the PowerExchange Client for PowerCenter, 35
- PowerCenter 8.6.1 - New Features and Changes for the PowerExchange Client for PowerCenter, 38
- PowerCenter 8.6 - New Features and Changes for the PowerExchange Client for PowerCenter, 41

PowerCenter 9.1.0 - New Features and Changes for the PowerExchange Client for PowerCenter

This section describes the PowerCenter 9.1.0 new features and changes that are related to PowerExchange Client for PowerCenter (PWXPC).

New Features in 9.1.0

PowerCenter 9.1.0 introduces the following new features for PWXPC:

Support for Extended-Precision Timestamps in DB2 for z/OS Version 10

PowerExchange provides support for extended-precision timestamps for DB2 for z/OS Version 10 in bulk data movement sessions.

As in previous releases, timestamps with a scale of 6 and precision of 26 map to date/time transformation datatypes. Timestamps with a different scale or precision map to string transformation datatypes.

For more information, see PowerExchange Interfaces for PowerCenter.
PowerCenter 9.0.1 - New Features and Changes for the PowerExchange Client for PowerCenter

This section describes the PowerCenter 9.0.1 new features and changes that are related to PowerExchange Client for PowerCenter (PWXPC).

New Features in 9.0.1

PowerCenter 9.0.1 introduces the following new features for PWXPC:

DB2 for i5/OS and DB2 for z/OS Stored Procedures as a Source

You can now execute DB2 for i5/OS and DB2 for z/OS database stored procedures as override SQL for a data source.

For more information, see PowerExchange Interfaces for PowerCenter.

Enhanced Asynchronous Network Communication and Timeout Processing

PowerExchange 9.0.1 uses asynchronous network communication for send and receive data operations between a PowerExchange client and a PowerExchange Listener. With asynchronous communication, PowerExchange uses separate threads for network processing and data processing, so that network processing overlaps with data processing.

To detect unsuccessful connection attempts or failed connections, PowerExchange provides the following types of timeouts:

- Connection timeouts. Connection timeouts are used to detect an unsuccessful connection attempt.
- Heartbeat timeouts. During periods of inactivity, the network threads on the PowerExchange client and PowerExchange Listener send and receive heartbeat data. If no data, including heartbeat data, is sent or received over an interval of 300 seconds, a heartbeat timeout occurs.
- Network operation timeouts. When a single network operation exceeds the specified number of seconds, a network operation timeout occurs.

When a timeout occurs, PowerExchange ends the connection or connection attempt and issues a timeout error message.

You cannot configure heartbeat timeouts. PowerExchange automatically enables heartbeat timeouts for PowerExchange network communication.

You can configure connection and network operation timeouts. Use any of the following methods to configure these timeouts:

- PowerCenter Integration Service. By default, PowerExchange uses a connection timeout value of 180 seconds, and network operation timeouts are not enabled.
  You can use the PWX Override connection attribute to override the defaults for connection and network operation timeouts.
- PowerCenter Client. By default, PowerExchange uses a value of 180 seconds for connection and network operation timeouts. You can enter a different value in the Import from PowerExchange and PowerExchange Preview Data dialog boxes.
- PowerExchange Navigator. By default, PowerExchange uses a value of 180 seconds for connection and network operation timeouts. You can enter a different value in the Network Operation Timeout field in the Preferences dialog box.
**Note:** With PowerExchange 9.0.1 and later, the TIMEOUTS statement in the DBMOVER configuration file has no effect.

For more information, see *PowerExchange Interfaces for PowerCenter* and the *PowerExchange Navigator Guide*.

**Writer Partitioning for Bulk Data Movement Sessions**

You can use pass-through partitioning at writer partition points for bulk data movement sessions that have VSAM or sequential file targets. Writer partitions process SQL inserts only.

Use writer partitions to improve session performance. Writer partitions process data for one or more targets concurrently. If you enable offload processing for the target instance, offload processing also runs in the writer partitions on the PowerCenter Integration Service machine. Offload processing can additionally enhance performance when resources on the target system are constrained.

You can specify some session properties and overrides at the partition level. The **PWX Partition Strategy** session-level property determines the number of connections to the target in relation to the partition-level session properties and overrides.

For more information, see the *PowerExchange Bulk Data Movement Guide* and *PowerExchange Interfaces for PowerCenter*.

**Parameter and Option Changes in 9.0.1**

PowerExchange 9.0.1 introduces the following changes to DBMOVER configuration statements:

**DBMOVER Configuration File Parameters**

The following parameters in the DBMOVER configuration file are new or changed:

**ENABLE_AUTOCOMMIT={N|Y}**

*New.* This statement controls whether PowerExchange commits data to the target each time the data buffer becomes full during a bulk data movement session.

*Caution:* Avoid using this statement if possible. Defining ENABLE_AUTOCOMMIT=Y alters the standard commit and rollback behavior for PowerCenter sessions. Instead, reduce the value of the **Commit Interval** sessions property or tune the database based on error messages.

**TIMEOUTS**

*Obsolete.* This statement is ignored in PowerExchange 9.0.1 and later.

**WRT_ERROR_HANDLING={N|Y}**

*New.* This statement indicates whether to use an alternative method of handling error messages returned from the PowerExchange Listener for bulk data movement sessions that use writer partitioning when the **Write Mode** connection attribute is set to **Confirm Write On**.

Enter Y only under the following conditions:

* Writer partitioning is enabled.
* The **Write Mode** connection attribute is set to **Confirm Write On**.
* The input data for the writer partitions contains many errors.

If you specify WRT_ERROR_HANDLING=Y and set the **Write Mode** connection to **Confirm Write Off**, this statement is ignored.
In PowerCenter, you can override the WRT_ERROR_HANDLING setting for a bulk data movement session that has writer partitions. Enter the WRT_ERROR_HANDLING setting in the PWX Override attribute on the PWX NRDB Batch application connection.

For more information, see the PowerExchange Reference Manual.

NRDB Batch Application Connection Attributes

You can configure the following new or changed attributes on PWX NRDB Batch application connections:

**PWX Override**

New. Specify the following override to use an alternative error-handling method for errors returned from the PowerExchange Listener for bulk data movement sessions that use writer partitioning when the Write Mode connection attribute is set to Confirm Write On:

```
WRT_ERROR_HANDLING=Y
```

The alternative method might be more efficient when the Write Mode connection attribute is set to Confirm Write On and input data for the writer partitions contains many errors. Do not specify this override unless these conditions exist.

If you specify WRT_ERROR_HANDLING=Y and set the Write Mode connection to Confirm Write Off, this statement is ignored.

You can also specify the WRT_ERROR_HANDLING statement in the dbmover.cfg file on the PowerCenter Integration Service machine.

For more information, see PowerExchange Interfaces for PowerCenter.

Session Properties

If you use writer partitioning in bulk data movement sessions that have VSAM or sequential file targets, specify the following session-level property:

**PWX Partition Strategy**

Changed. This session-level property now applies to writer partitions as well as reader partitions. If you specify this property for a target instance, it controls the number of connections to the target in relation to the partition-level session properties that are specified. Enter one of the following options:

- **Single Connection.** PowerExchange creates a single connection to the data target. Any overrides that you specify for the first partition are used for all partitions. If you specify overrides for other partitions that are different from those for the first partition, the session fails with an error message.

- **Overrides Driven.** If the specified overrides are the same for all partitions, PowerExchange creates a single connection to the data target. If the overrides are not identical for all partitions, PowerExchange creates multiple connections.

Also, you can optionally specify the following session-level and partition-level properties, based on the target type:

- At the session level, you can enter the following session properties for VSAM data sets:
  - Insert Only
  - Truncate Table Option

- For individual partitions, you can enter the following session properties, including overrides, for either VSAM or sequential file targets:
  - File Name Override
  - Insert SQL Override
PowerCenter 9.0 - New Features and Changes for the PowerExchange Client for PowerCenter

This section describes the PowerCenter 9.0 new features and changes that are related to PowerExchange Client for PowerCenter (PWXPC).

New Features in 9.0

PowerCenter 9.0 introduces the following new features for PWXPC:

DB2 for z/OS Stored Procedure Transformations

You can use Stored Procedure transformations for DB2 for z/OS stored procedures in a PowerCenter mapping. Use Stored Procedure transformations for read or write bulk data movement and change data capture (CDC) operations.

You must create and configure an ODBC data source before you import the DB2 for z/OS stored procedure.

After you configure the Stored Procedure transformation in a mapping, use the PowerCenter Integration Service to run the session.

For more information, see PowerExchange Interfaces for PowerCenter.

Enhanced Asynchronous Network Communication

PowerExchange uses asynchronous network communication on all operating systems for most send and receive operations between a PowerExchange client and a PowerExchange Listener. With asynchronous communication, PowerExchange uses separate threads for network processing and data processing, so that network processing overlaps with data processing.

To detect unsuccessful connection attempts or failed connections, PowerExchange provides several types of timeouts, including heartbeat timeouts. During periods of inactivity, the network threads on the PowerCenter client and PowerCenter Listener send and receive heartbeat data. If no data, including heartbeat data, is sent or received during the timeout interval, a heartbeat timeout is generated, and the connection is terminated.

For more information, see the PowerExchange Interfaces for PowerCenter guide.

Enhanced Partitioning Support for Bulk Data Movement Sessions

PowerExchange 9.0 provides the following partitioning enhancements for bulk data movement sessions:

- You can use pass-through partitioning without SQL overrides for bulk data movement sessions that include any of the following offloaded data sources: VSAM data sets, sequential data sets, and DB2 for z/OS unload data sets.

- For all other nonrelational bulk data sources, you can use pass-through partitioning with disjoint SQL overrides. If you do not provide overrides with these data sources, data is read into the first partition only.
Workflows That Access a PowerExchange Listener Service

On Linux, UNIX, and Windows systems, you can create a PowerExchange Listener Service as an application service in the Informatica domain. The PowerExchange Listener Service manages a PowerExchange Listener. When you run a workflow that uses a PowerExchange Listener that is under control of the Informatica domain, PWXPC connects to the Service Manager to communicate with the PowerExchange Listener. By using a PowerExchange Listener Service, you can define backup nodes that can run the PowerExchange Listener if the PowerExchange Listener on the primary node becomes unavailable.

For more information, see the PowerCenter Administrator Guide and the PowerExchange Interfaces for PowerCenter guide.

Parameters and Option Changes in 9.0

PowerCenter 9.0 and PowerExchange 9.0 introduce the following changes for PWXPC connections and DBMOVER statements:

PWXPC Connections

You can configure the following new attribute on all PWXPC relational and application connections:

PWX Override

New. Specifies PowerExchange connection override values, separated by semicolons, including the following overrides:

- `TCP/IP_TIMEOUT=activity_timeout;`
- `TCP/IP_TIMEOUT=connection_timeout`

For more information, see PowerExchange Interfaces for PowerCenter.

NRDB Bulk Data Movement Application Connections

You can use offload processing for z/OS sequential data sets and VSAM data sets when used as data targets as well as when used as data sources.

You can configure the following attribute on NRDB bulk data movement application connections:

Offload Processing

New for data targets. Specifies whether to use offload processing to move PowerExchange bulk data processing from the source or target system to the PowerCenter Integration Service machine.

To enable offload processing with data targets, select one of the following values:

- Filter Before
- Filter After

For more information, see PowerExchange Interfaces for PowerCenter.

Session Properties

If you use reader partitioning in bulk data movement sessions, you can specify the following session-level property:
PWX Partition Strategy

New. Controls the number of connections to the data source in relation to the partition-level session overrides that are specified. Enter one of the following options:

- **Single Connection.** PowerExchange creates a single connection to the data source. Any overrides specified for the first partition are used for all partitions. If you specify overrides for other partitions that are different from the overrides for the first partition, the session fails with an error message.

- ** Overrides Driven.** If the specified overrides are the same for all partitions, PowerExchange creates a single connection to the data source. If the overrides are not identical for all partitions, PowerExchange creates multiple connections.

For more information, see *PowerExchange Interfaces for PowerCenter* and *PowerExchange Bulk Data Movement Guide*.

DBMOVER Configuration File Parameters

The following DBMOVER statements are new, changed, deprecated, or ignored in PowerExchange 9.0:

**DISABLE_PARTITIONS**

*New.* PowerExchange 9.0 introduces the DISABLE_PARTITIONS statement for users who want to disable the enhanced partitioning support for bulk data movement sessions.

If you enter Y for this statement, PowerExchange reverts to pre-9.0 behavior for pass-through partitioning for offloaded DB2 unload, VSAM, and sequential data sets. If you specify the same or no SQL override for each partition, PowerExchange reads the source data multiple times instead of once. If the Worker Threads connection attribute is set to a value greater than 0, multiple worker threads are used for the session.

The DISABLE_PARTITIONS statement is provided to preserve backwards compatibility in special cases. In all other cases, Informatica recommends that you use the default. The default value is N, which enables enhanced partitioning.

**NODE**

*Changed.* The NODE statement now includes a SERVICE_NAME parameter that identifies the node and the PowerExchange Listener on the node as being under control of a PowerExchange Listener Service in the Informatica domain.

**TCPIP_ASYNC**

*Ignored.* PowerExchange 9.0 now uses asynchronous network communication for all send and receive data operations between a PowerExchange client and a PowerExchange Listener. PowerExchange ignores the TCPIP_ASYNC statement.

**TIMEOUTS**

*Deprecated.* The connection timeout interval, previously specified in the first parameter of the TIMEOUTS statement, is now 60 seconds, unless you specify a different value with the PWX Override connection attribute. The first parameter in the TIMEOUTS statement has no effect.

Send and receive timeout values, which you could previously specify in the second and third parameters of the TIMEOUTS statement, are replaced with an activity timeout value. An activity timeout occurs if no data, other than heartbeat data, is sent or received over the specified interval.

By default, activity timeouts are not enabled, and PowerExchange uses heartbeat processing to detect send and receive timeouts. Activity timeouts are provided in case you want to use them in addition to heartbeat timeouts. To maintain backwards compatibility, PowerExchange uses both the TIMEOUTS statement in the DBMOVER configuration file and the TCPIP_ACT_TIMEOUT value in the PWX Override connection attribute to determine the activity timeout interval.

For more information, see the *PowerExchange Reference Manual* and *PowerExchange Interfaces for PowerCenter*. 
DB2 for i5/OS Bulk Data Movement Relational Connection Attribute

You can configure the following attribute on PWX DB2/i5OS relational connections:

Array Size

*New for DB2 for i5/OS.* Specifies the DB2 fetch array size, in number of rows, for DB2 for i5/OS bulk data movement operations that use the DB2 access method. The array size pertains to the DB2 multiple-row FETCH statements that PowerExchange uses to read data from DB2 source tables.

Valid values are from 1 through 100000. Default is 25.

Informatica recommends that you enter a value no greater than 100 for DB2 for i5/OS relational connections.

PowerCenter 8.6.1 - New Features and Changes for the PowerExchange Client for PowerCenter

This section describes the PowerCenter 8.6.1 new features and changes that are related to PowerExchange Client for PowerCenter (PWXPC).

For more information, see the PowerExchange Bulk Data Movement Guide, PowerExchange Interfaces for PowerCenter, and the CDC guides for your systems.

New Features in 8.6.1

PowerCenter 8.6.1 introduces the following new features for PWXPC:

**Bulk Data Offload Processing**

By default, PowerExchange performs column-level processing on the system where the bulk data resides. You can use offload processing to distribute column-level processing for the following sources to the PowerCenter Integration Service machine that runs the bulk data movement session:

- DB2 for z/OS tables
- Sequential files
- VSAM data sets

For VSAM data sets and sequential files, you can also distribute filtering to the Integration Service machine, and use multithreaded processing to increase efficiency.

**Group Source Processing for IMS Unload Files**

When you import metadata for IMS in Designer, you can import the multi-record IMS data map as a single source definition. You can then use the source definition in a mapping to process unload files for the IMS database. To use this feature, select the *Multi-Record Datamaps* option and select *IMS* in the *Source Type* field in the Import from PowerExchange dialog box.

For bulk data movement sessions that use multi-record source definitions for IMS unload files, PowerExchange uses group source to process an unload file for the IMS database. Group source processing in PowerExchange reads the IMS unload file once for all segments in the IMS database.

**Restriction:** When you import IMS data maps as multi-record data maps, you can only use the source definitions to process IMS unload data sets. You cannot use the multi-record source definitions to read segments from an
IMS database. To perform bulk data movement operations on IMS databases, create mappings that have a source definition for each segment in the IMS database.

**Minimum UOW Size for Change Data**

If your change data has many small UOWs, you can use the *Minimum Rows Per commit* option to create larger UOWs of more uniform size. Use this connection attribute to specify the minimum number of change records that PowerExchange must pass to PWXPC before passing a commit record. Until the minimum rows limit is met, PowerExchange discards any commit records that it reads from the change stream and passes only change records to PWXPC. After the minimum rows limit is met, PowerExchange passes the next commit record to PWXPC and then resets the minimum rows counter.

**Parameters and Option Changes in 8.6.1**

PowerCenter 8.6.1 introduces the following new and changed options for PWXPC connections:

**DB2 Bulk Data Movement Relational Connections**

You can configure the following new options on PWX DB2zOS relational connections:

**Offload Processing**

*New.* Specifies whether to use bulk data offload processing to move PowerExchange processing for bulk data from the source system to the PowerCenter Integration Service machine.

Select one of the following values:

- No
- Yes
- Auto. PowerExchange determines whether to use offload processing.

Default is No.

**Array Size**

*New.* Specifies the DB2 fetch array size.

Valid values are from 1 through 100000. Default is 25.

**CDC Application Connections**

You can configure the following new and changed options on PWX DB2zOS, DB2i5OS, DB2LUW, MSSQL, NRDB, and Oracle CDC application connections:

**Real-Time Flush Latency in milli-seconds**

*Changed.* Specifies the frequency, in milliseconds, at which the PowerCenter Integration Service flushes data from the source to the targets.

The following value is new:

- `-1`. This value disables data flushes based on time.

**PWX Latency in seconds**

*New.* Specifies the maximum time, in seconds, that the PowerExchange on the source platform waits for more change data before it flushes data to PWXPC on the PowerCenter Integration Service platform.

Default is 2.
Maximum Rows Per commit

*Changed.* Specifies the maximum number of change records that PWXPC processes before it flushes the data buffer to commit the change data to the targets. If necessary, PWXPC continues to process change records across UOW boundaries until the maximum rows value is met. PWXPC does not wait for a UOW boundary to commit the change data.

Previously, this option was called Commit Threshold.

Minimum Rows Per commit

*New.* Specifies the minimum number of change records that PowerExchange reads from the change stream before it passes any commit records to PWXPC. Before reaching this minimum value, PowerExchange passes only the change records, without any commit records, to PWXPC.

Default is 0, which disables this option.

Offload Processing

*Changed.* Specifies whether to use CDC offload processing to move PowerExchange processing for the change data from the source system to the PowerCenter Integration Service machine.

You can select one of the following values:

- **No**
- **Yes**
- **Auto.** PowerExchange determines whether to use offload processing.

Default is No.

Previously, this option was a check box.

Map Location

*New.* If you use offload processing, specifies the location of the source extraction maps. This value must be the name of a location in a NODE statement in the PowerExchange dbmover.cfg configuration file on the PowerCenter Integration Service machine.

Map Location User

*New.* If you specify a Map Location value, specifies a valid user ID for that location.

Map Location Password

*New.* If you specify a Map Location User value, specifies a valid password for that user ID.

Retrieve PWX Log Entries

*Changed.* Specifies whether PWXPC writes PowerExchange messages related to a CDC session in the PowerCenter session log.

Default is to write PowerExchange messages in the session log.

Previously, this option was disabled.

NRDB Bulk Data Movement Application Connections

For VSAM and sequential sources, you can configure the following new options on PWX NRDB Batch application connections:

Offload Processing

*New.* Use bulk data offload processing to move PowerExchange processing for the bulk data from the source system to the PowerCenter Integration Service machine.
Select one of the following values:

- **No**
- **Auto.** PowerExchange determines whether to use offload processing.
- **Filter Before.** Offload the bulk data processing to the PowerCenter Integration Service machine, but continue to filter data on the source system.
- **Filter After.** Offload the bulk data processing to the PowerCenter Integration Service machine, including the filtering of the data.

Default is No.

**Worker Threads**

*New.* When you select bulk data offload processing, specifies the number of threads that PowerExchange uses on the PowerCenter Integration Service machine to process bulk data.

For optimal performance, the value should not exceed the number of installed or available processors on the PowerCenter Integration Service machine.

Default is 0.

**Array Size**

*New.* If Worker Threads is greater than zero, specifies the size, in numbers of records, of the storage array size for the threads.

Default is 25.

**Retrieve PWX Log Entries**

*Changed.* Specifies whether PWXPC writes PowerExchange messages related to a CDC session in the PowerCenter session log.

Default is to write PowerExchange messages in the session log.

Previously, this option was disabled.

---

**PowerCenter 8.6 - New Features and Changes for the PowerExchange Client for PowerCenter**

This section describes the PowerCenter 8.6 new features and changes that are related to PowerExchange Client for PowerCenter (PWXPC).

For more information, see *PowerExchange Interfaces for PowerCenter.*

**New Features in 8.6**

PowerCenter 8.6 introduces the following new features for PWXPC:

**Case-sensitive Filters for Metadata Imports**

When importing metadata into PowerCenter, you can select an option that requires PowerExchange to respect the case of any metadata filter values that you specify. This feature enables you to import metadata for tables with mixed-case names.
To use this feature:

1. In Designer, open the Import from PowerExchange dialog box.
2. In the Metadata Filter area, select Respect Case.

Change Data Extraction from Condense Files

You can define PWX CDC Change or PWX CDC Real Time application connections to extract change data from condense files for the following data sources:

- DB2 for Linux, UNIX, and Windows
- Microsoft SQL Server


Current Restart Token Generation

You can use special override control statements in the restart token file to generate current restart tokens when the CDC session runs.

To define special override control statements, use the CURRENT_RESTART parameter. The following example shows two override control statements:

```
RESTART1=CURRENT_RESTART
RESTART2=CURRENT_RESTART
```

Offload Processing and Multithreaded Processing

If a system that contains a data source cannot provide the throughput that is necessary for PowerExchange CDC processing, you can use offload processing to distribute this work to the PowerCenter Integration Service machine.

If you use offload processing, you can also use multithreaded processing to help improve the efficiency of the offloaded CDC processing.

Sub-packet Commit Processing

When you use PWX CDC Change application connections to extract change data from condense files, you can specify the Commit Threshold attribute in the application connection to request that PWXPC commit change records after the specified threshold value is met.

Variables for PWXPC Session Properties

You can use variables to override PWXPC session properties. PWXPC 8.5 added variable support for some but not all session properties. In 8.6, all PWXPC session properties that are strings now accept variables. You must prefix all variables for PWXPC session properties with $PWX.

Behavior Changes in 8.6

PowerCenter 8.6 introduces the following behavior changes for PWXPC:

APPL_ID Column in the State Table

The APPL_ID column in the PM_REC_STATE table contains the application name concatenated with the task instance ID to ensure that the data is unique. Previously, the data in the column contained only the application name that was specified in the PWX CDC application connection.
CDC Restart Token Validation

PWXPC validates that the merged restart tokens for a session include a restart token pair for each source in the session. PWXPC creates the merged restart tokens by combining the information in the restart token file with the information in the state table for the specified application name.

Previously, PWXPC did not validate that the number of CDC sources and the names of these sources in the session matched the merged restart token results.

DB2 z/OS Correlation ID Attribute

You can configure relational connections to extract and load data in bulk mode for DB2 for z/OS sources and targets. You can specify an optional Correlation Id connection attribute for the PWX DB2zOS relational connection. When you specify a Correlation Id value, PWXPC automatically prefixes this value with PWX. For example, if you specify connect, PWXPC creates a DB2 correlation ID of PWXconnect when it connects to DB2.

Performance for CDC Extractions

PWXPC now uses fewer threads to read units of work (UOWs) that are smaller than the buffer block size of the session. This change improves throughput.

Sub-packet Commit Processing

Sub-packet commit processing enables you to commit change records before reaching the end of the UOW. PowerExchange no longer uses the SUBCOMMIT_THRESHOLD parameter in the DBMOVER configuration file to perform sub-packet commits. Instead, PWXPC uses only the Commit Threshold value in the application connection to control sub-packet commit processing.

PWXPC issues commits when it first detects that any of the following values is met:

- Commit Threshold
- UOW Count
- Real-Time Flush Latency

If you specify a Commit Threshold value, PWXPC commits the change records after that threshold value is met. Otherwise, PWXPC commits change data only on UOW boundaries, or, in the case of extractions from full condense files, at the end of the condense file.

PWXPC ignores the SUBCOMMIT_THRESHOLD parameter in the DBMOVER configuration file.

Previously, PWXPC issued a sub-packet commit when either of the following values was met:

- UOW Count
- Real-Time Flush Latency

Sub-packet commits generated from the value specified for either the SUBCOMMIT_THRESHOLD parameter or the Commit Threshold value counted towards the UOW Count. As a result, sub-packet commits occurred only when the UOW Count was met.
Chapter 4

PowerExchange Condense

This chapter includes the following topics:

- PowerExchange 9.0.1 - New Features and Changes for PowerExchange Condense, 44
- PowerExchange 9.0 - New Features and Changes for PowerExchange Condense, 44
- PowerExchange 8.6.1 - New Features and Changes for PowerExchange Condense, 47
- PowerExchange 8.6 - New Features and Changes for PowerExchange Condense, 47

PowerExchange 9.0.1 - New Features and Changes for PowerExchange Condense

This section describes the PowerExchange 9.0.1 new features and changes that are related to PowerExchange Condense.

Behavior Changes in 9.0.1

PowerExchange 9.0.1 introduces the following behavior change for PowerExchange Condense:

PowerExchange Condense No Longer Supported on Linux, UNIX, and Windows

On Linux, UNIX, and Windows platforms only, PowerExchange Condense is no longer supported.

If you used PowerExchange Condense in PowerExchange 8.6.1 or earlier and upgrade to PowerExchange 9.0.1, you must migrate from PowerExchange Condense to the PowerExchange Logger for Linux, UNIX, and Windows. You also must switch from the PowerExchange Condense dtlca.cfg configuration file to the PowerExchange Logger pwxcl.cfg configuration file.

PowerExchange Condense continues to be supported on i5/OS and z/OS.

For more information, see the PowerExchange Planning Guide for Installation and Migration.

PowerExchange 9.0 - New Features and Changes for PowerExchange Condense

This section describes the PowerExchange 9.0 new features and changes that are related to PowerExchange Condense.
New Features in 9.0

PowerExchange 9.0 introduces the following new features for PowerExchange Condense:

pwxcmd Commands Issued to a PowerExchange Condense Process on i5/OS or z/OS

You can use the pwxcmd program to send commands to a PowerExchange Condense process on an i5/OS or z/OS system. Previously, you could use the pwxcmd program to send commands to a PowerExchange Listener or PowerExchange Logger for Linux, UNIX, and Windows process on a Linux, UNIX, or Windows system only.

With pwxcmd, you can issue the same PowerExchange Condense commands that you can issue from the command line. These commands are condense, displaystatus, fileswitch, shutcond, and shutdown. You can issue the pwxcmd commands from the command line or in scripts.

On z/OS, you can authorize users to issue pwxcmd commands to a PowerExchange Condense process. For more information, see "Security for pwxcmd Commands Issued to a PowerExchange Condense Process on z/OS" on page 46.

On i5/OS, if you are migrating to PowerExchange 9.0 from a previous release, you must perform the following migration tasks to enable the PowerExchange Listener to run and to authorize users to issue pwxcmd commands:

- To enable the PowerExchange Listener to run, issue the following upgrade command:
  
  `CHGJOB JOB(datalib/UTILLIST) ALWMLTHD('YES')`

  The `datalib` variable is the user-specified name for the PowerExchange data library that was entered at installation.

  Also, verify that the QMLTHDACN system value is set to a value that enables functions that might not be threadsafe to run. If the QMLTHDACN system value is set to 3, or to the Do not perform the function value in the iSeries Navigator, PowerExchange will not start. Set the QMLTHDACN system value to 1 or 2, or to the Perform the function that is not threadsafe value in the iSeries Navigator.

- To create security objects to authorize users to issue pwxcmd commands, see "Security for pwxcmd Commands Issued to a PowerExchange Condense Process on i5/OS" on page 45.

For more information about migration, see the PowerExchange Planning Guide for Installation and Migration.

For more information about pwxcmd commands, see the PowerExchange Command Reference and PowerExchange Reference Manual.

Security for pwxcmd Commands Issued to a PowerExchange Condense Process on i5/OS

You can authorize users to issue specific pwxcmd commands to a PowerExchange Condense process on i5/OS. To authorize users, specify 2 in the first parameter of the SECURITY statement on the machine that is the target of the command and create security objects on the target system. PowerExchange checks security objects in the PowerExchange data library to determine whether the user ID supplied on the pwxcmd program is authorized to run commands.

Create security objects, as follows:

- If you are performing a first-time installation, security objects are created automatically.

- If you are migrating to PowerExchange 9.0 from a previous release, issue the following upgrade command to create security objects:

  `CALL PGM(dtlilib/CRTDILENVA) PARM('datalib')`
  
  Where:
  - `dtllib` is the name of the PowerExchange software library that was entered at installation.
- `datalib` is the user-specified name for the PowerExchange data library that was entered at installation.

To authorize a user to issue a specific pwxcmd command, grant the user access to the security object for the command. For example, to authorize a user to issue a pwxcmd condense command to a PowerExchange Condense process on an i5/OS system, grant the user access to the `datalib/CCONDENSE` security object on that system.

For more information about security, see *PowerExchange Reference Manual*.

**Security for pwxcmd Commands Issued to a PowerExchange Condense Process on z/OS**

You can authorize users to issue specific pwxcmd commands to a PowerExchange Condense process on z/OS. To authorize users, specify 2 in the first parameter of the SECURITY statement on the system that is the target of the command and provide resource profiles on the target system. PowerExchange checks the resource profiles to determine whether the user ID supplied on the pwxcmd program is authorized to run commands. In the resource profiles, the RACF class is either the default FACILITY class or the value specified in the RACF_CLASS parameter in the DBMOVER configuration file.

To authorize a user to issue pwxcmd commands, grant the user READ access to the appropriate resource profiles. Otherwise, access is denied.

The resource profile that controls access to pwxcmd commands has the following form:

```
DTL.CMD.service_type.service_name.command_name
```

For more information about security, see *PowerExchange Reference Manual*.

**Parameter and Option Changes in PowerExchange 9.0**

PowerExchange 9.0 introduces parameter changes for the PowerExchange Condense configuration file or member.

**PowerExchange Condense Configuration File Parameter**

You can now include the following configuration statement in the CAPTPARM configuration file or member to configure a PowerExchange Condense process to receive pwxcmd commands. Previously, you could include this statement in the pwxccl.cfg configuration file to configure the PowerExchange Logger for Linux, UNIX, and Windows only.

**CONDENSENAME**

Optional. A name for the command-handling service for a PowerExchange Condense or PowerExchange Logger for Linux, UNIX, and Windows process to which pwxcmd commands will be issued.

Syntax is:

```
CONDENSENAME=service_name
```

This service name must match the service name that is specified in the associated SVCNODE statement in the DBMOVER configuration file. The SVCNODE statement specifies the TCP/IP port on which this service listens for pwxcmd commands.

Maximum length is 64 characters.

No default.
PowerExchange 8.6.1 - New Features and Changes for PowerExchange Condense

This section describes the PowerExchange 8.6.1 changes that are related to PowerExchange Condense.

Behavior Changes in 8.6.1

PowerExchange 8.6.1 introduces the following behavior change for PowerExchange Condense:

Replacement by PowerExchange Logger for Linux, UNIX, and Windows

On Linux, UNIX, and Windows platforms only, PowerExchange Condense is replaced by the new PowerExchange Logger for Linux, UNIX, and Windows.

Before upgrading to the next PowerExchange release, you must migrate to the PowerExchange Logger.

For more information, see the PowerExchange CDC Guide for Linux, UNIX, and Windows and PowerExchange Migration Guide.

PowerExchange 8.6 - New Features and Changes for PowerExchange Condense

This section describes the PowerExchange 8.6 new features and changes that are related to PowerExchange Condense.

For more information, see the following guides:

- PowerExchange CDC Guide for i5/OS
- PowerExchange CDC Guide for z/OS
- PowerExchange for DB2 for Linux, UNIX, and Windows Adapter Guide
- PowerExchange for Oracle Adapter Guide
- PowerExchange for SQL Server Adapter Guide

New Features in 8.6

PowerExchange 8.6 introduces the following new features for PowerExchange Condense:

Override of CAPI Connection for PowerExchange Condense

You can now use the CONN_OVR parameter in the PowerExchange Condense configuration file to override the CAPI_CONNECTION statement from the DBMOVER configuration file that PowerExchange Condense uses.

Override of Configuration and License Key Files

When you start PowerExchange Condense on Linux, UNIX, Windows, or i5/OS, you can include the optional CONFIG and LICENSE parameters to specify an override configuration file or license key file that you created and want to use instead of the default DBMOVER configuration file or license.key file.
Note: For Linux, UNIX, and Windows, these override files take precedence over any override configuration and license key files that you specify in the optional PWX_CONFIG and PWX_LICENSE environment variables.

Partial Condense Processing
You can specify partial condense processing in capture registrations for the following data sources:
- IBM DB2 for Linux, UNIX, and Windows
- Microsoft SQL Server

PowerExchange Condense can then capture changes to condense files for these capture registrations. You can extract changes from the condense files in either batch or continuous extraction mode.

Previously, partial condense processing was not available for these data sources.

Terse Messages
PowerExchange Condense produces audit messages that can, with some settings, create large logs. By reducing and merging these messages and printing them when circumstances change or size limits are reached, you can reduce log sizes.

You can have PowerExchange Condense produce terse messages rather than verbose messages for activities that you routinely perform, such as cleanup, checkpoints, condense cycles, and fileswitch processing. To produce terse messages, set the VERBOSE parameter to N in the PowerExchange Condense configuration file.

Previously, PowerExchange Condense produced only verbose messages.

Behavior Changes in 8.6
PowerExchange 8.6 introduces the following behavior changes for PowerExchange Condense:

DCB Defaults for Partial Condense Files on z/OS
On z/OS systems, the default values for two PowerExchange Condense parameters that are used for allocating partial condense files have changed. Now, the CONDF_PART_BLKSZ parameter defaults to 0, and the CONDF_PART_LRECL parameter defaults to the calculated block size minus 4.

Previously, the CONDF_PART_BLKSZ parameter defaulted to 32,760, and the CONDF_PART_LRECL parameter defaulted to 32,756.

For more information, see the PowerExchange CDC Guide for z/OS.

Maximum Sequence Number in Condense File Names
The sequence portion of a condense file name restarts after the sequence reaches 900.

Previously, the sequence portion restarted after the sequence reached 999.
PowerExchange Listener

This chapter includes the following topics:

- PowerExchange 9.1.0 - New Features and Changes for the PowerExchange Listener, 49
- PowerExchange 9.0.1 - New Features and Changes for the PowerExchange Listener, 50
- PowerExchange 9.0 - New Features and Changes for the PowerExchange Listener, 51
- PowerExchange 8.6.1 HotFix 10 - New Features and Changes for the PowerExchange Listener, 53
- PowerExchange 8.6.1 HotFix 5 - New Features and Changes for the PowerExchange Listener, 53
- PowerExchange 8.6.1 HotFix 3 - New Features and Changes for the PowerExchange Listener, 55
- PowerExchange 8.6.1 HotFix 1 - New Features and Changes for the PowerExchange Listener, 55
- PowerExchange 8.6.1 - New Features and Changes for the PowerExchange Listener, 56
- PowerExchange 8.6 - New Features and Changes for the PowerExchange Listener, 58

PowerExchange 9.1.0 - New Features and Changes for the PowerExchange Listener

This section describes the PowerExchange 9.1.0 new features and changes that are related to the PowerExchange Listener.

Parameter and Option Changes in 9.1.0

PowerExchange 9.1.0 introduces the following changes to DBMOVER configuration statements:

DBMOVER Configuration File Statements

The following statements in the DBMOVER configuration file are new or changed:

APPBUFSIZE

*Changed.* The maximum value of APPBUFSIZE was increased to 8388608.

SSL_CIPHER_LIST

*New.* This statement restricts the available ciphers that a client offers to a server during an SSL handshake to those specified in the cipher list.
SSL_CONTEXT_METHOD

New. This statement selects the SSL or TLS versions that the peer supports for PowerExchange SSL communication.

For more information, see the PowerExchange Reference Manual.

PowerExchange 9.0.1 - New Features and Changes for the PowerExchange Listener

This section describes the PowerExchange 9.0.1 new features and changes that are related to the PowerExchange Listener.

New Features in 9.0.1

PowerExchange 9.0.1 introduces the following new features for the PowerExchange Listener:

Using infacmd pwx Commands to Manage a PowerExchange Listener Service

With the infacmd pwx program, you can issue the CloseListener, CloseForceListener, ListTaskListener, and StopTaskListener commands from the command line to manage a PowerExchange Listener Service. Previously, you could issue infacmd pwx commands to create and update attributes for a PowerExchange Listener Service. Use of the pwxcmd close, closeforce, listtask, and stoptask commands to manage a PowerExchange Listener Service is deprecated but still supported. For more information about the infacmd pwx program, see the Informatica Command Reference.

To issue commands to a PowerExchange Listener that is not managed by a PowerExchange Listener Service, you must use the pwxcmd program. For information, see the PowerExchange Command Reference.

Additional PowerExchange Substitution Variable for Netport Jobs

An optional keyword parameter is added to the sample netport jobs CAPXJCL, GDGJCL, IMSJCL, and TAPEJCL in the RUNLIB library. The parameter allows these jobs to initialize quickly in environments where APF authorization is not allowed, such as environments that access IMS databases through DL/I. Include this parameter only if you use data maps caching.

To add the parameter, enter the following statement instream as the second line in the PARMS:

    DMX_ECSA=%DMX_ECSA

The %DMX_ECSA substitution variable is the hexadecimal address of the ECSA memory that holds the time of the latest update to the DATAMAPS data set.

If you do not specify this parameter, you must APF-authorize the STEPLIB library to enable the netport jobs to work with data maps caching.

If you do not use data maps caching, this parameter is ignored.

Parameter and Option Changes in 9.0.1

PowerExchange 9.0.1 changes the default for a parameter in the DBMOVER configuration file.
DBMOVER Configuration File Parameter

The default value for the MAXTASKS statement changed.

\[ \text{MAXTASKS=} \text{number_of_tasks} \]

The default value for the MAXTASKS statement was increased from 5 to 30. This statement specifies the maximum number of tasks that can run concurrently in a PowerExchange Listener.

If you use PowerExchange tuning features that result in multiple threads and PowerExchange Listener subtasks, such as pipeline partitioning or multithreaded processing, you might need to increase the MAXTASKS value if PowerExchange processing slows or hangs. You also might need to increase this value if you add PowerCenter workflows.

PowerExchange 9.0 - New Features and Changes for the PowerExchange Listener

This section describes the PowerExchange 9.0 new features and changes that are related to the PowerExchange Listener.

New Features in 9.0

PowerExchange 9.0 introduces the following new features for the PowerExchange Listener:

PowerExchange Listener Service in the Informatica Administrator

On Linux, UNIX, and Windows systems, you can create a PowerExchange Listener Service as an application service in the Informatica domain. The PowerExchange Listener Service manages a PowerExchange Listener.

The PowerExchange Listener must run on the same node as the PowerExchange Listener Service that manages it. You can run multiple PowerExchange Listener Services and PowerExchange Listeners on the same node.

You can use the Informatica Administrator or the `infacmd` command line program to administer the PowerExchange Listener Service.

For more information, see the PowerCenter Administrator Guide.

pwxcmd Commands Issued to a PowerExchange Listener on i5/OS or z/OS

You can use the pwxcmd program to send commands to a PowerExchange Listener on an i5/OS or z/OS system. Previously, you could use the pwxcmd program to send commands to a PowerExchange Listener on a Linux, UNIX, or Windows system only.

With pwxcmd, you can issue the same PowerExchange Listener commands that you can issue from the command line. These commands are close, closeforce, listtask, and stoptask. You can issue the pwxcmd commands from the command line or in scripts.

On z/OS, you can authorize users to issue pwxcmd commands. For more information, see “Security for pwxcmd Commands Issued to a PowerExchange Listener on z/OS” on page 52.
On i5/OS, if you are migrating to PowerExchange 9.0 from a previous release, you must perform the following migration tasks to enable the PowerExchange Listener to run and to authorize users to issue pwxcmd commands:

- To enable the PowerExchange Listener to run, issue the following upgrade command:

  CHGJOBD JOBNAME('datalib/DTLIST) ALWMLTTHD('YES)

  The datalib variable is the user-specified name for the PowerExchange data library that was entered at installation.

  Also, verify that the QMLTTHDACN system value is set to a value that enables functions that might not be threadsafe to run. If the QMLTTHDACN system value is set to 3, or to the Do not perform the function value in the iSeries Navigator, PowerExchange will not start. Set the QMLTTHDACN system value to 1 or 2, or to the Perform the function that is not threadsafe value in the iSeries Navigator.

- To create security objects to authorize users to issue pwxcmd commands, see "Security for pwxcmd Commands Issued to a PowerExchange Listener on i5/OS" on page 52.

For more information about migration, see the PowerExchange Planning Guide for Installation and Migration.

For more information about pwxcmd commands, see the PowerExchange Command Reference and PowerExchange Reference Manual.

Security for pwxcmd Commands Issued to a PowerExchange Listener on i5/OS

You can authorize users to issue specific pwxcmd commands to a PowerExchange Listener on i5/OS. To authorize users, specify 2 in the first parameter of the SECURITY statement on the machine that is the target of the command and create security objects on the target system. PowerExchange checks security objects in the PowerExchange data library to determine whether the user ID supplied on the pwxcmd program is authorized to run commands.

Create security objects, as follows:

- If you are performing a first-time installation, security objects are created automatically.
- If you are migrating to PowerExchange 9.0 from a previous release, issue the following upgrade command to create security objects:

  CALL PGM('dtlib/CRTDTLENV) PARM('datalib')

  Where:

  - dtlib is the name of the PowerExchange software library that was entered at installation.
  - datalib is the user-specified name for the PowerExchange data library that was entered at installation.

  To authorize a user to issue a specific pwxcmd command, grant the user access to the security object for the command. For example, to authorize a user to issue a pwxcmd close command to a PowerExchange Listener on an i5/OS system, grant the user access to the datalib/LCLOSE security object on that system.

  For more information about security, see PowerExchange Reference Manual.

Security for pwxcmd Commands Issued to a PowerExchange Listener on z/OS

You can authorize users to issue specific pwxcmd commands to a PowerExchange Listener on z/OS. To authorize users, specify 2 in the first parameter of the SECURITY statement on the system that is the target of the command and provide resource profiles on the target system. PowerExchange checks the resource profiles to determine whether the user ID supplied on the pwxcmd program is authorized to run commands. In the resource profiles, the RACF class is either the default FACILITY class or the value specified in the RACF_CLASS parameter in the DBMOVED configuration file.

To authorize a user to issue pwxcmd commands, grant the user READ access to the appropriate resource profiles. Otherwise, access is denied.
The resource profile that controls access to pwxcmd commands has the following form:

```
DTL.CMD.service_type.service_name.command_name
```

For more information about security, see *PowerExchange Reference Manual*.

---

**PowerExchange 8.6.1 HotFix 10 - New Features and Changes for the PowerExchange Listener**

This section describes the PowerExchange 8.6.1 HotFix 10 new features and changes that are related to the PowerExchange Listener.

**Parameter and Option Changes in 8.6.1 HotFix 10**

PowerExchange 8.6.1 HotFix 10 introduces new parameters for the DBMOVER configuration file.

**DBMOVER Configuration Parameter**

The APPEND parameter of the TRACING statement now behaves consistently across Linux, UNIX, Windows, i5/OS, and z/OS operating systems. Previously, on i5/OS and z/OS, PowerExchange always overwrote the least recently used log file.

```
TRACING=[PFX=prefix[,APPEND={Y|N}],...]
```

Optional. Controls how PowerExchange uses log files when it restarts.

- Enter Y to have PowerExchange append the new log records to the log file that was most recently used. If no log files exist, PowerExchange opens a new log file.
- Enter N to have PowerExchange overwrite the log file that was least recently used.

Default is Y.

**Note:** On z/OS, the APPEND=Y option is not supported for Generation Data Groups (GDGs). When the PowerExchange Listener starts, it always writes to a new GDG.

---

**PowerExchange 8.6.1 HotFix 5 - New Features and Changes for the PowerExchange Listener**

This section describes the PowerExchange 8.6.1 HotFix 5 new features and changes that are related to the PowerExchange Listener.

**Parameter and Option Changes in 8.6.1 HotFix 5**

PowerExchange 8.6.1 HotFix 5 introduces new parameters for the DBMOVER configuration file.

**DBMOVER Configuration File Parameters**

You can specify the following new parameters in the DBMOVER configuration file:
ADAUSER=JOBNAME

New for Adabas. Specify this parameter with the value JOBNAME if you run multiple Netport jobs for accessing Adabas data on z/OS and want to use the Netport job name of each as the unique user ID in Adabas.

When multiple jobs run under the same user ID, such as the default, the jobs fail with Adabas Response Code 48 Sub Code 8 and PowerExchange message PWX-00416. Use this parameter to prevent this problem.

If you do not specify a value, PowerExchange uses either the default value of DTL00011 or, if specified, the ADABAS_PREFIX value appended with 0011.

This statement pertains to Netport jobs only. If you access Adabas data through a PowerExchange Listener, this statement is ignored.

CAPI_CONNECTION=(...TYPE=(AS4J,ALWCLRPFM=N\|Y),...)

New for DB2 for i5/OS. Include the following optional parameter on the AS4J CAPI_CONNECTION statement to indicate how PowerExchange handles an i5/OS Clear Physical File Member (CLRPFM) command during CDC processing.

ALWCLRPFM=N\|Y

Controls whether DB2 for i5/OS CDC processing stops or continues when PowerExchange encounters a journal entry for changes that result from an i5/OS CLRPFM command issued against a registered DB2 table. PowerExchange cannot properly replicate CLRPFM changes to targets.

Enter one of the following values:
- N. PowerExchange stops CDC processing when it encounters a journal entry with CLRPFM changes.
- Y. PowerExchange ignores CLRPFM changes in a journal entry, continues CDC processing, and issues message PWX-06808. If you also specify an event message queue in the AS400EVENTMSGQ statement of the DBMOVER member, PowerExchange writes message DTL3002 to the specified message queue when it encounters a journal entry with CLRPFM changes.

Default is N.

Warning: If you specify Y, the data integrity of the CDC targets might become damaged. Specify this parameter only when instructed to do so by Informatica Global Customer Support.

RMTRDBDIRE=database_name

New for DB2 for i5/OS. Include this optional parameter only if you plan to use remote journal receivers for CDC in a remote journaling environment. This parameter specifies the name of the DB2 database on the local system that contains the DB2 source tables for CDC. This value must be defined to i5/OS with the “Work with Relational Database Directory Entries” function (WRKRDBDIRE).

This parameter is automatically populated when you run the CRTPWXENV command during installation. You can override this value if necessary.

Maximum length is 18 characters. Default is *LOCAL.

RMTSYSNAME=host_name

New for DB2 for i5/OS. Include this optional parameter only if you plan to use remote journal receivers for CDC in a remote journaling environment. This parameter specifies the name of the i5/OS host that contains the DB2 source tables for CDC and the local journals and journal receivers. Also called the local system. This value must be defined to i5/OS with the “Work with TCP/IP Host Table Entries” function.

This parameter is automatically populated when you run the CRTPWXENV command during installation. You can override this value if necessary.

Maximum length is 68 characters. Default is *NONE.
PowerExchange 8.6.1 HotFix 3 - New Features and Changes for the PowerExchange Listener

This section describes the PowerExchange 8.6.1 HotFix 3 new features and changes that are related to the PowerExchange Listener.

New Features in 8.6.1 HotFix 3

PowerExchange 8.6.1 HotFix 3 introduces the following new feature for the PowerExchange Listener:

Additional PowerExchange Substitution Variables for Netport Jobs

On MVS, you can specify the following new PowerExchange substitution variables in the JCL for Netport jobs:

<table>
<thead>
<tr>
<th>Substitution Variable Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>%DATE_YYMMD</td>
<td>Current Gregorian date</td>
</tr>
<tr>
<td>%DATE_YYYYDDD</td>
<td>Current Julian date</td>
</tr>
<tr>
<td>%TIME_HHMMSS</td>
<td>Current time, in 24-hour clock time format</td>
</tr>
</tbody>
</table>

PowerExchange provides sample JCL in the NETJCL member of the RUNLIB library, which demonstrates how you can use substitution variables to form unique data set names.

For more information, see the PowerExchange Reference Manual.

PowerExchange 8.6.1 HotFix 1 - New Features and Changes for the PowerExchange Listener

This section describes the PowerExchange 8.6.1 HotFix 1 new features and changes that are related to the PowerExchange Listener.

For more information, see the PowerExchange Reference Manual.

New Features in 8.6.1 HotFix 1

PowerExchange 8.6.1 HotFix 1 introduces the following new features for the PowerExchange Listener:

Security for the PowerExchange Listener on Linux, UNIX, and Windows

The selective sign-on facility, previously available on i5/OS and MVS, is now available on Linux, UNIX, and Windows. Use the selective sign-on facility to control which users can connect to the PowerExchange Listener and optionally, the IP addresses from which they can connect.
This feature is controlled by the SECURITY parameter in the dbmover.cfg configuration file and by the USER parameter in the signon.txt file.

Security for pwxcmd Commands Issued to a PowerExchange Listener Service

PowerExchange provides a security feature for pwxcmd commands on Linux, UNIX, and Windows. The security feature verifies the supplied operating system user ID and password and optionally verifies that the user has the authority to issue the specific pwxcmd command. This feature is controlled by the SECURITY parameter in the dbmover.cfg configuration file and by the AUTHGROUP and USER parameters in the signon.txt file.

PowerExchange 8.6.1 - New Features and Changes for the PowerExchange Listener

This section describes the PowerExchange 8.6.1 new features and changes that are related to the PowerExchange Listener.

New Features in 8.6.1

PowerExchange 8.6.1 introduces the following new features for the PowerExchange Listener:

pwxcmd Commands Issued to a PowerExchange Listener

On Linux, UNIX, and Windows, you can use the pwxcmd program to send commands to a PowerExchange Listener. With pwxcmd, you can perform some of the tasks that you can also perform through PowerExchange Listener commands, such as stopping a PowerExchange Listener.

Note: You cannot start a PowerExchange Listener with the pwxcmd program.

You can issue pwxcmd commands from the command line or in scripts.

For more information, see the PowerExchange Command Reference.

Parameter and Option Changes in 8.6.1

PowerExchange 8.6.1 introduces new parameters for the DBMOVER configuration file.

DBMOVER Configuration File Parameters

On Linux, UNIX, and Windows, you can specify the following new parameters in the DBMOVER configuration file:

CMDNODE=(service_name,service_type,host_name,port_to_connect_to)

New. Specifies a PowerExchange service to which you want to send pwxcmd commands. The options for the CMDNODE parameter are:

♦ service_name is the name of the PowerExchange service to which you want to send pwxcmd commands. This name can be any name you want. Use this service name when issuing pwxcmd commands to this service.

♦ service_type is one of the following PowerExchange service types:

♦ LISTENER. Indicates a PowerExchange Listener service.
♦ CONDENSE. Indicates a PowerExchange Logger for Linux, UNIX, and Windows service.

♦ *host_name* is the host name or IP address of the PowerExchange service to be contacted.

♦ *port_to_connect_to* is the port number on which the PowerExchange service listens. This port number must match the port number in the corresponding SVCNODE statement.

**OFFLOADPROCESSING=[Y|N|A|D]**

*Deleted.* To enable offload processing for VSAM and sequential file bulk data movement on MVS, use the Offload Processing attribute on the PWX NRDB Batch application connection.

For more information about migrating existing bulk data movement sessions that use offload processing, see the PowerExchange Migration Guide.

**PWXSOMAXCONN=num_connections**

*Changed.* Specifies the maximum number of TCP/IP connections for sockets that PowerExchange uses to listen for connections.

Default is the SOMAXCONN value for the operating system on the machine where PowerExchange runs.

Previously, the default was 10.

**SHOW_THREAD_PERF=num_records**

*New.* Number of records PowerExchange processes in a statistics reporting interval. After this interval, PowerExchange writes messages PWX-31524 through PWX-31259 to the PowerExchange log file. If you select the Retrieve PWX log entries attribute on a PWX CDC application connection, PWXPC writes the messages in the session log.

The messages include information that you can use to tune multithreaded processing.

Valid values are from 10000 through 50000000.

**SVCNODE=(service_name,port_to_listen_on)**

*New.* Specifies the port on which a PowerExchange service listens for pwxcmd commands. The options for this statement depend on the PowerExchange service to which you are sending pwxcmd commands.

To send pwxcmd commands to a PowerExchange Listener:

♦ *service_name* is the node name specified on the LISTENER statement that corresponds to the PowerExchange Listener service to which you want to send pwxcmd commands.

♦ *port_to_listen_on* is the port on which the PowerExchange Listener service listens for pwxcmd commands. This port must be different than the port specified in the corresponding LISTENER statement.

To send pwxcmd commands to a PowerExchange Logger for Linux, UNIX, or Windows service:

♦ *service_name* is the service name specified on the CONDENSENAME statement that corresponds to the PowerExchange Logger service to which you want to send pwxcmd commands.

♦ *port_to_listen_on* is the port on which the PowerExchange service listens for pwxcmd commands.

**TCPIP_ASYNC={Y|N}**

*New.* Defines whether PowerExchange uses asynchronous network I/O when reading change data. If you specify Y, PowerExchange writes change data to the network buffers and reads change data from the change stream asynchronously.

Set this parameter to Y in the DBMOVER configuration file on the source system to help improve throughput for CDC sessions.

Default is N.
PowerExchange 8.6 - New Features and Changes for the PowerExchange Listener

This section describes the PowerExchange 8.6 changes that are related to the PowerExchange Listener.

Behavior Changes in 8.6

PowerExchange 8.6 introduces the following behavior change for the PowerExchange Listener:

Name Change for PowerExchange Listener Started Task

The name of the PROCLIB member that contains the JCL for the PowerExchange Listener started task is now PWXLSTNR. Previously, the name of this member was PSTRTLST.

Tape Data Sets with Large Block Sizes

PowerExchange can read MVS tape data sets that have a block size greater than 32 KB. Previously, PowerExchange could read only tape data sets that had a block size of 32 KB or less.

Parameter and Option Changes in 8.6

PowerExchange 8.6 introduces new parameters for the DBMOVER configuration file. Additionally, support for several parameters has been removed.

DBMOVER Configuration File Parameters

You can specify the following new parameters in the DBMOVER configuration file:

ADABASCODEPAGE=(database_id,sb_codepage,mb_codepage)

New. Specifies the single-byte and multiple-byte code pages to use for an Adabas database. This parameter is optional. Usually, this parameter is set only for databases that have WIDECHAR fields that require a code page other than the default code page or the code page that is set in the CODEPAGE parameter.

The ADABASCODEPAGE statement includes the following positional parameters:

♦ database_id is the identifier for the Adabas database or file to which the code page or code pages apply. This value is required. You can enter 0 to indicate the Adabas default database.
♦ sb_codepage is the name of a single-byte code page.
♦ mb_codepage is the name of a multiple-byte code page.

If the database contains WIDECHAR fields, you should enter a multiple-byte code page.

You can enter up to 20 ADABASCODEPAGE statements in the DBMOVER configuration file.

You can override the code pages that are specified in this parameter when you define a data map. In the data map, you can specify a code page for a specific source file and a Wide-character code page that applies only
to WIDECAR fields in the file. Additionally, you can specify code pages for specific fields. A field-level code page overrides a data map code page, and a data map code page overrides any code page that is specified in this parameter or any other DBMOVER code page parameter.

**ADABAS_PREFIX=prefix**

New. For Adabas data sources, specifies a prefix that PowerExchange uses to construct an ET-ID for accessing Adabas files in the PowerExchange Listener. Each ET-ID is composed of this prefix followed by a four-digit task number.

Use this parameter if you run multiple PowerExchange Listeners that need to access the same Adabas database. You must specify a different prefix for each PowerExchange Listener so that PowerExchange can generate a unique ET-ID value for each one. If the ET-IDs are not unique, one or more of the PowerExchange Listeners might not be able to access the Adabas database. In this case, the PowerCenter session fails.

Maximum prefix length is four alphanumeric characters. Default is DTL0.

**CAPI_CONNECTION=( ...,TYPE=(AS4J,ALWPARTIAL={N|Y}, ...))**

New. For DB2 for i5/OS data sources, you can include the ALWPARTIAL option in the CAPI_CONNECTION statement to specify whether PowerExchange processes journal receivers in partial status.

**ALWPARTIAL={N|Y}**

- Specify N to have PowerExchange fail processing if it detects any journal receivers in partial status.
- Specify Y to have PowerExchange process journal receivers in partial status.

**Important:** If you specify Y, you might compromise the data integrity of the change data being extracted because required changes might be unavailable. Specify this parameter only when instructed to do so by Informatica Global Customer Support.

Default is N.

**CAPI_CONNECTION=( ...,TYPE=(ORCL,ONLINECAT={N|Y}, ...))**

New. For Oracle data sources, you can include the ONLINECAT option in the CAPI_CONNECTION statement to specify if Oracle LogMiner uses the online catalog or the copy of the catalog from the redo logs to format change data from LogMiner logs.

**ONLINECAT={N|Y}**

- Specify N to have PowerExchange invoke Oracle LogMiner with the option to use the catalog copy from the redo logs to format log data. PowerExchange tracks schema changes to ensure that data loss does not occur.
- Specify Y to have PowerExchange invoke Oracle LogMiner with the option to use the online catalog to format log data. PowerExchange CDC initializes faster. However, Oracle LogMiner does not track DDL changes and cannot format log records for any tables that have schema changes. If you make schema changes while Oracle LogMiner is reading log data, Oracle LogMiner passes unformatted log records to PowerExchange for the changes recorded after the schema change. If you do not specify the BYPASSUF=Y option on the ORCL CAPI_CONNECTION statement, the extraction request fails when Oracle passes the first unformatted record. Otherwise, PowerExchange skips the unformatted record and continues processing, which results in data loss.

**Restriction:** Do not use this option under the following conditions:

- You need to start an extraction from a point in the Oracle redo logs that contains data captured for a table under a previous schema.
- You specified the BYPASSUF=Y option in the ORCL CAPI_CONNECTION statement and need to make schema changes for tables registered for CDC while extracting change data.
Default is N.

CAPI\_CONNECTION=(...,TYPE=(platform,REPNODE=value,...))

**Deleted.** Support for the REPNODE option of the DBMOVER CAPI\_CONNECTION statement has been removed for all platforms. Previously, this option was available for all platforms except DB2 for Linux, UNIX, and Windows.

If you already have this option specified in an existing DBMOVER file, PowerExchange ignores it.

If this parameter exists in the DBMOVER file, remove it.

**SUBCOMMIT\_THRESHOLD**

**Deleted.** Support for the DBMOVER SUBCOMMIT\_THRESHOLD parameter has been removed for all platforms because sub-packet commit processing is now handled in PowerExchange Client for PowerCenter (PWXPC).

If you already have this parameter specified in an existing DBMOVER file, PowerExchange ignores it.

If this parameter exists in the DBMOVER file, remove it. You can use the Commit Threshold attribute in PWX CDC application connections instead.

**UNIT=unit**

**Changed.** The UNIT parameter now accepts a string up to eight characters in length. Previously, this parameter accepted only a six-character string.

For more information, see the PowerExchange Reference Manual.
Chapter 6

PowerExchange Logger for Linux, UNIX, and Windows

This chapter includes the following topics:
- PowerExchange 9.0.1 - New Features and Changes for the PowerExchange Logger, 61
- PowerExchange 9.0 - New Features and Changes for the PowerExchange Logger, 62
- PowerExchange 8.6.1 HotFix 1, 67
- PowerExchange 8.6.1, 69

PowerExchange 9.0.1 - New Features and Changes for the PowerExchange Logger

This section describes the PowerExchange 9.0.1 new features and changes that are related to the PowerExchange Logger for Linux, UNIX, and Windows.

New Features in 9.0.1

PowerExchange 9.0.1 introduces the following new features for the PowerExchange Logger.

Using infacmd pwx Commands to Manage a PowerExchange Logger Service

With the infacmd pwx program, you can issue the CondenseLogger, DisplayAllLogger, DisplayCheckpointsLogger, DisplayCPULogger, DisplayEventsLogger, DisplayMemoryLogger, DisplayRecordsLogger, DisplayStatusLogger, FileSwitchLogger, and ShutDownLogger commands from the command line to manage a PowerExchange Logger Service. Previously, you could issue infacmd pwx commands to create and update attributes for a PowerExchange Logger Service. For more information about the infacmd pwx program, see the Informatica Command Reference.

The pwxcmd condense, displayall, displaycheckpoints, displaycpu, displayevents, displaymemory, displayrecords, displaystatus, fileswitch, and shutdown commands are deprecated but still supported for a PowerExchange Logger Service.

However, for a PowerExchange Logger process that is not managed by a PowerExchange Logger Service, you must use the pwxcmd program. For more information about pwxcmd commands, see the PowerExchange Command Reference.
PowerExchange 9.0 - New Features and Changes for the PowerExchange Logger

This section describes the PowerExchange 9.0 new features and changes that are related to the PowerExchange Logger for Linux, UNIX, and Windows.

New Features in 9.0

PowerExchange 9.0 introduces the following new features for the PowerExchange Logger.

New pwxcmd and Command-Line Display Commands for the PowerExchange Logger

PowerExchange 9.0 provides new DISPLAY commands for the PowerExchange Logger for Linux, UNIX, and Windows. You can enter these commands from the command line or by using the pwxcmd program. The commands display messages that indicate the PowerExchange Logger processing status, CPU time, and memory usage. The following table describes each command:

<table>
<thead>
<tr>
<th>Command-Line Command</th>
<th>pwxcmd Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISPLAY ALL</td>
<td>displayall</td>
<td>Displays all messages that are produced by the other PowerExchange Logger DISPLAY commands, arranged by command.</td>
</tr>
<tr>
<td>DISPLAY CHECKPOINTS</td>
<td>displaycheckpoints</td>
<td>Displays the sequence number and timestamp of the last checkpoint file written.</td>
</tr>
<tr>
<td>DISPLAY CPU</td>
<td>displaycpu</td>
<td>Displays the CPU time spent, in microseconds, for PowerExchange Logger processing during the current logging cycle, by processing phase and with the total for the entire PowerExchange Logger process. For example, CPU time might be reported for the following processing phases:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Reading source data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Writing data to PowerExchange Logger log files</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Performing file switches</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Performing other processing, such as initialization and command processing</td>
</tr>
<tr>
<td>DISPLAY EVENTS</td>
<td>displayevents</td>
<td>Displays events that the PowerExchange Logger Controller, Command Handler, and Writer tasks are waiting on. Also, indicates if the Writer is processing data or is in a sleep state waiting for an event or timeout to occur. In earlier PowerExchange versions, the DISPLAY STATUS command displayed this information.</td>
</tr>
<tr>
<td>DISPLAY MEMORY</td>
<td>displaymemory</td>
<td>Displays memory use, in bytes, for each PowerExchange Logger task and subtask, with totals for the entire PowerExchange Logger process. Memory use is shown by category. Categories are:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Application. Memory requested by the PowerExchange Logger application for its own use.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Total. Total memory in use for the PowerExchange Logger application and for related header overhead. This value</td>
</tr>
</tbody>
</table>
### Command-Line Command

<table>
<thead>
<tr>
<th>Command-Line Command</th>
<th>pwxcmd Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flucrates as memory is dynamically allocated and freed during PowerExchange Logger processing.</td>
<td>fluctuates as memory is dynamically allocated and freed during PowerExchange Logger processing.</td>
<td>fluctuates as memory is dynamically allocated and freed during PowerExchange Logger processing.</td>
</tr>
<tr>
<td>Maximum. The largest “Total” amount of memory used up to the point in time when the command is run.</td>
<td>Maximum. The largest “Total” amount of memory used up to the point in time when the command is run.</td>
<td>Maximum. The largest “Total” amount of memory used up to the point in time when the command is run.</td>
</tr>
</tbody>
</table>

| DISPLAY RECORDS | displayrecords | Displays counts of change records that the PowerExchange Logger processed in the current processing cycle. If changes were not received in the current cycle, displays counts of change records for the current set of PowerExchange Logger log files. Record counts are shown by record type. Record types are Delete, Insert, Update, Commit, and Total. Some or all of the following information is reported, depending on whether the counts are for the current processing cycle or current log files: | Displays counts of change records that the PowerExchange Logger processed in the current processing cycle. If changes were not received in the current cycle, displays counts of change records for the current set of PowerExchange Logger log files. Record counts are shown by record type. Record types are Delete, Insert, Update, Commit, and Total. Some or all of the following information is reported, depending on whether the counts are for the current processing cycle or current log files: |
| Cycle. Counts of change records for the current PowerExchange Logger processing cycle. The PowerExchange Logger resets these counts to zero when the wait interval that is specified in the NO_DATA_WAIT2 parameter expires without any change data having been received from the source. | Cycle. Counts of change records for the current PowerExchange Logger processing cycle. The PowerExchange Logger resets these counts to zero when the wait interval that is specified in the NO_DATA_WAIT2 parameter expires without any change data having been received from the source. | Cycle. Counts of change records for the current PowerExchange Logger processing cycle. The PowerExchange Logger resets these counts to zero when the wait interval that is specified in the NO_DATA_WAIT2 parameter expires without any change data having been received from the source. |
| File number. Counts of change records for the current set of PowerExchange log files. The PowerExchange Logger resets these counts to zero when a file switch occurs. | File number. Counts of change records for the current set of PowerExchange log files. The PowerExchange Logger resets these counts to zero when a file switch occurs. | File number. Counts of change records for the current set of PowerExchange log files. The PowerExchange Logger resets these counts to zero when a file switch occurs. |
| Total. Total counts of change records that the PowerExchange Logger has received since it started. These counts are not reset to zero. | Total. Total counts of change records that the PowerExchange Logger has received since it started. These counts are not reset to zero. | Total. Total counts of change records that the PowerExchange Logger has received since it started. These counts are not reset to zero. |

If you run the PowerExchange Logger in background mode, you must use pwxcmd to issue these commands. For more information about pwxcmd commands, see the PowerExchange Command Reference and PowerExchange Reference Manual.

### PWXUCDCT Utility for Managing PowerExchange Logger Files

PowerExchange 9.0 provides a new utility, PWXUCDCT, for managing files and printing reports for the PowerExchange Logger for Linux, UNIX, and Windows. With this utility, you can perform the following tasks:

- Regenerate the CDCT file based on PowerExchange Logger log files if the CDCT file and its recent backups are damaged or deleted.
- Back up the CDCT file.
- Restore the CDCT file from a backup.
- Delete expired CDCT records and any PowerExchange Logger log files associated with those records.
- Delete PowerExchange Logger log files that are not referenced by any CDCT record.
- Print reports on the PowerExchange Logger pwxcl.cfg configuration file, checkpoint files, CDCT file, and log files.

For more information, see the PowerExchange Utilities Guide.

### PowerExchange Logger Service in the Informatica Administrator

The PowerExchange Logger must run on the same node as the PowerExchange Logger Service that manages it. You can run multiple PowerExchange Logger Services and PowerExchange Loggers on the same node.

You can use the Informatica Administrator or the infacmd command line program to administer the PowerExchange Logger Service.

For more information, see the PowerCenter Administrator Guide.

Parameter and Option Changes in 9.0

PowerExchange 9.0 introduces the following changes to the PowerExchange Logger for Linux, UNIX, and Windows parameters.

pwxccl.cfg Parameters

You can specify the following new or changed parameters for the PowerExchange Logger in the pwxccl.cfg configuration file. All of these parameters are optional.

**LOGGER_DELETES_EXPIRED_CDCT_RECORDS={Y|N}**

*New.* Controls how expired CDCT records, for which the retention period has elapsed, are deleted.

Options are:

- **Y.** The PowerExchange Logger maintains the CDCT retention array and deletes expired CDCT records during file switches. If you enter Y, you cannot issue the DELETE_EXPIRED_CDCT command from the PWXUCDCT utility to delete expired CDCT records.

- **N.** The PowerExchange Logger does not maintain the CDCT retention array and does not delete expired CDCT records. However, you can issue the DELETE_EXPIRED_CDCT command from the PWXUCDCT utility to delete expired CDCT records. To use the DELETE_EXPIRED_CDCT command, you must specify N.

Default is Y.

*Note:* This parameter does not affect PowerExchange Logger deletions of CDCT records rolled back because of a cold start or a warm start to a prior point in time.

**MAX_RETENTION_EXPIRY_DAYS=nnn**

*New.* Maximum number of days to hold retention array items in memory. Retention array items define when CDCT records expire and indicate the log file names and registration tags that are referenced by the CDCT records.

Enter a number from 1 through 999. Default is 999.

*Tip:* Usually, you do not need to set this parameter to avoid memory shortages. If you have a large volume of CDCT records, Informatica recommends that you set the LOGGER_DELETES_EXPIRED_CDCT_RECORDS parameter to N and schedule regular runs of the PWXUCDCT utility DELETE_EXPIRED_CDCT command to delete expired CDCT records. Use the MAX_RETENTION_EXPIRY_DAYS parameter only in situations with extreme memory limitations.

**NO_DATA_WAIT=nn**

*Changed.* You can now enter a value of 0 for this parameter. This parameter indicates the number of minutes that a PowerExchange Logger process that is running in continuous mode waits before starting the next processing cycle. A value of 0 causes no waiting to occur between processing cycles. With this setting, when source data is not available, the Consumer API (CAPI) sleeps.
PROMPT={Y|N}

New. When you run the PowerExchange Logger in foreground mode, controls whether the PowerExchange Logger displays a user confirmation prompt and waits for a response when you perform one of the following actions:

- Cold start the PowerExchange Logger.
- Warm start the PowerExchange Logger from a previous position in the change stream. This situation occurs only if checkpoint files that were more recent than the current ones were deleted and the CDCT file still contains records related to the deleted files.

Valid values are:

- Y. Displays the confirmation message PWX-33236 for a cold start or PWX-33242 for a warm start. You must respond to the message for startup processing to continue.
- N. Does not display the confirmation messages. PowerExchange attempts to start without first prompting for user confirmation.

Default is Y if you run the PowerExchange Logger in foreground mode. Default is N if you run the PowerExchange Logger in background mode or as a PowerExchange Logger Service in the Informatica domain.

Note: If you run the PowerExchange Logger in background mode or as a PowerExchange Logger Service in the Informatica domain, the default is N. In this case, if you enter PROMPT=Y in the pwxccl.cfg file, the PowerExchange Logger ignores this setting, issues error message PWX-33253, and continues processing.

VERBOSE={Y|N}

Changed. Messaging has been enhanced.

- If you enter N, the PowerExchange Logger logs a single terse message for each file switch and checkpoint.
- If you enter Y, the PowerExchange Logger logs multiple messages at various processing points, such as when starting or ending a cycle of reading source data or doing a file switch. Verbose messaging now often includes processing statistics such as records processed and elapsed time.

For more information, see the PowerExchange CDC Guide for Linux, UNIX, and Windows.

COLDSTART Parameter

New. You must specify the COLDSTART parameter to cold start the PowerExchange Logger, even if checkpoint files do not exist. To perform a cold start, explicitly enter COLDSTART=Y for the pwxccl process, as follows:

pwxccl coldstart=Y

Default is N, which indicates a warm start.

Behavior Changes in 9.0

PowerExchange 9.0 introduces the following behavior changes for the PowerExchange Logger for Linux, UNIX, and Windows.

Checkpoint File Changes

For more efficient checkpoint processing and smaller checkpoint files, PowerExchange 9.0 changes the format of the PowerExchange Logger for Linux, UNIX, and Windows checkpoint files from CISAM files with the extensions .dat and .idx to sequential files with the extension .ckp. The new checkpoint files have one primary record that stores the checkpoint timestamp and restart and sequence tokens.
Checkpoint files no longer contain DCT and ERT records that store information about PowerExchange Logger log files and related information. Consequently, you can no longer restore the CDCT file from checkpoint files. Instead, PowerExchange 9.0 provides a new utility, PWXUCDCT, which you can use to restore the CDCT file if necessary. Also, checkpoint files no longer store registration tags for sources of CDC interest. Instead, a list of registration tags is stored in cache files in the directory that is specified by the CHKPT_BASENAME parameter of the pwxccl.cfg file.

If you have PowerExchange Logger checkpoint files of the old format and then upgrade to PowerExchange 9.0 or later, PowerExchange begins creating checkpoint files of the new format at initialization and during file switches. Checkpoint files of the old format are gradually replaced.

**PowerExchange Logger Tasks and Subtasks**

The tasks and subtasks that comprise the PowerExchange Logger have changed as follows:

- The Controller task no longer starts subtasks in parallel. The Controller first starts the Command Handler subtask and then starts the Writer subtask. This start order is reflected in message output. The Controller also loads parameters from the pwxccl.cfg file and registrations from the CCT file.
- The Writer subtask replaces the Condense subtask and performs more of the PowerExchange Logger work. The Writer initializes the CAPI for the source database, reads change data from the change stream, and writes change data to PowerExchange Logger log files. The Writer also performs checkpoint processing, deletes expired CDCT records, and rolls back CDCT records if you perform a warm start to an earlier point in time.
- The Command Handler continues to process commands from various sources. If you specify PROMPT=Y in the pwxccl.cfg file, the Command Handler waits for the Writer subtask to initialize before accepting any command.
- The Dump subtask no longer exists.

**Change in DISPLAY STATUS Output**

The output from the command-line DISPLAY STATUS command and the pwxcmd displaystatus command has changed. These commands now report status information for the PowerExchange Logger Writer subtask. For example, a DISPLAY STATUS command might indicate that the Writer subtask is performing any of the following tasks:

- Initializing
- Reading or waiting for source data
- Writing source data to a PowerExchange Logger log file
- Starting a checkpoint
- Writing information to a checkpoint file
- Writing CDCT records during a file switch
- Completing deletion of expired CDCT records
- Shutting down

To display the information about the events that the PowerExchange Logger subtasks are waiting on, as previously reported by the DISPLAY STATUS command in earlier PowerExchange versions, use the new DISPLAY EVENTS command.

**Running the PowerExchange Logger in the Background**

You can more easily run a continuous PowerExchange Logger process in background mode because of the new PROMPT parameter that provides more control over user prompting and additional commands for displaying status information. If you run the PowerExchange Logger in background mode, enter PROMPT=N in the pwxccl.cfg file. Also, enter the CONDENSENAME statement in the pwxccl.cfg file and the CMDNODE statement in
PowerExchange 8.6.1 HotFix 1

This section describes the PowerExchange 8.6.1 HotFix 1 new features and changes that are related to the PowerExchange Logger for Linux, UNIX, and Windows.

**New Features in 8.6.1 HotFix 1**

This section describes the introduction of a security feature for pwxcmd commands in PowerExchange 8.6.1 HotFix 1.

**Security for pwxcmd Commands Issued to a PowerExchange Logger Process**

PowerExchange provides a security feature for pwxcmd commands on Linux, UNIX, and Windows. This feature is controlled by the SECURITY parameter in the DBMOVER configuration file and by the AUTHGROUP and USER parameters in the signon.txt file. The security feature verifies the supplied operating system user ID and password and optionally verifies that the user has the authority to issue the specific pwxcmd command.

*For more information, see the PowerExchange Reference Manual.*

**Parameter and Option Changes in 8.6.1 HotFix 1**

PowerExchange 8.6.1 HotFix 1 introduces the following changes to the PowerExchange Logger for Linux, UNIX, and Windows parameters.

**pwxccl.cfg Parameters**

The behavior of the following pwxccl.cfg parameters has changed:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPTURE_NODE=node_name</td>
<td>Optional. The node name that the PowerExchange Logger uses to retrieve both capture registrations and change data when you are using CDC offload processing with the PowerExchange Logger. Default is local. Do not specify this parameter if the capture registrations and change data are on the local machine where the PowerExchange Logger runs. You can also specify an optional user ID and password to control connection to the specified node by using the CAPTURE_NODE_UID parameter and the CAPTURE_NODE_EPWD or CAPTURE_NODE_PWD parameter.</td>
</tr>
<tr>
<td>CAPTURE_NODE_EPWD=encrypted_password</td>
<td>Optional. Specifies an encrypted password for the CAPTURE_NODE_UID user. This parameter now applies to local nodes as well as remote nodes. It controls access to both capture registrations and change data. Use it instead of the deprecated EPWD parameter. If you specify CAPTURE_NODE_EPWD, do not also specify CAPTURE_NODE_PWD.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CAPTURE_NODE_PWD=password</td>
<td>Optional. Specifies a password for the CAPTURE_NODE_UID user. This parameter now applies to local nodes as well as remote nodes. It controls access to both capture registrations and change data. Use it instead of the deprecated PWD parameter. If you specify CAPTURE_NODE_PWD, do not also specify CAPTURE_NODE_EPWD.</td>
</tr>
<tr>
<td>CAPTURE_NODE_UID=user_id</td>
<td>User ID that is used to control access to both capture registrations and change data on either the local machine or on the remote node that is specified in the CAPTURE_NODE parameter. Whether this parameter is required depends on the operating system of the local or remote node and the SECURITY setting in its DBMOVER configuration file. If the CAPTURE_NODE is an MVS or i5/OS system with a SECURITY setting of 1 or 2, you must specify a valid operating system user ID. If the SECURITY setting is 2, PowerExchange uses the specified user ID to control access to capture registrations and change data. However, if the SECURITY setting is 1, PowerExchange uses the user ID under which the PowerExchange Listener job runs. If the CAPTURE_NODE is an MVS or i5/OS system with a SECURITY setting of 0, do not specify this parameter. PowerExchange uses the user ID under which the PowerExchange Listener job runs to control access to capture registrations and change data. For a local or remote Linux, UNIX, or Windows system, specify a user ID that is valid for the data source type: - For a DB2 for Linux, UNIX, or Windows source, enter a valid operating system user ID that has DB2 DBADM or SYSADM authority. - For an Oracle source, enter a database user ID that permits access to Oracle redo logs and Oracle LogMiner. - For a SQL Server instance that uses SQL Server Authentication, enter a database user ID that permits access to the SQL Server distribution database. For a SQL Server instance that uses Windows Authentication, PowerExchange uses the user ID under which the PowerExchange Listener was started. In this case, do not specify this parameter unless you want to specify another user.</td>
</tr>
<tr>
<td>EPWD=encrypted_password</td>
<td>This parameter has been deprecated. Use CAPTURE_NODE_EPWD instead. If both CAPTURE_NODE_EPWD and EPWD are specified, CAPTURE_NODE_EPWD takes precedence.</td>
</tr>
<tr>
<td>PWD=password</td>
<td>This parameter has been deprecated. Use CAPTURE_NODE_PWD instead. If both CAPTURE_NODE_PWD and PWD are specified, CAPTURE_NODE_PWD takes precedence.</td>
</tr>
<tr>
<td>UID=user_id</td>
<td>This parameter has been deprecated. Use CAPTURE_NODE_UID instead. If both CAPTURE_NODE_UID and UID are specified, CAPTURE_NODE_UID takes precedence.</td>
</tr>
</tbody>
</table>

For more information, see the PowerExchange CDC Guide for Linux, UNIX, and Windows.
**PowerExchange 8.6.1**

This section describes the PowerExchange 8.6.1 feature called the PowerExchange Logger for Linux, UNIX, and Windows.

### Introduction to the PowerExchange Logger for Linux, UNIX, and Windows

PowerExchange 8.6.1 introduces the PowerExchange Logger for Linux, UNIX, and Windows as a replacement to PowerExchange Condense on Linux, UNIX, and Windows only. The PowerExchange Logger provides functionality that is equivalent to PowerExchange Condense on these platforms under a rebranded name.

Additionally, the PowerExchange Logger has the following behavior changes with respect to PowerExchange Condense:

- The name of the PowerExchange Logger executable is `pwxccl`, whereas the name of the PowerExchange Condense executable is `dtlcacon`. When you run `pwxccl`, you can specify the optional `config` and `license` parameters to specify an override `dbmover.cfg` file or license key file. If you do so, you must also specify the `cs` parameter to identify the PowerExchange Logger configuration file and place this parameter before the other optional parameters in the `pwxccl` command syntax. In PowerExchange 8.6.1, `dtlcacon` is an alias of `pwxccl`. If you attempt to use `dtlcacon` with the `dtlca.cfg` file, PowerExchange issues a warning message that suggests that you use `pwxccl`.

- The name of the PowerExchange Logger configuration file is `pwxccl.cfg`, whereas the name of the PowerExchange Condense configuration file is `dtlca.cfg`. PowerExchange provides an example `pwxccl.cfg` file. You can include the previous PowerExchange Condense parameters in `pwxccl.cfg` plus some additional new parameters. If you have an existing `dtlca.cfg` file for PowerExchange Condense, you can run the PowerExchange Logger with that file for the near future. However, before you upgrade to the next PowerExchange release, you must migrate to `pwxccl.cfg`.

- If you specify `VERBOSE=Y` in `pwxccl.cfg`, PowerExchange writes PowerExchange Logger performance statistics to the PowerExchange message log file when a file switch occurs.

- If you use group definitions, formerly called flexible condense, you can define a PowerExchange Logger group definitions file that includes SCHEMA override statements for Microsoft SQL Server, Oracle, and DB2 for Linux, UNIX, and Windows sources. Previously, PowerExchange Condense group definitions supported SCHEMA statements only for Oracle.

**Important:** If you currently use PowerExchange Condense on Linux, UNIX, and Windows, you should migrate to the PowerExchange Logger before your next upgrade. PowerExchange releases later than 8.6.1 will not support PowerExchange Condense on Linux, UNIX, and Windows.

For more information, see the [PowerExchange Command Reference](#), [PowerExchange CDC Guide for Linux, UNIX, and Windows](#), and [PowerExchange Migration Guide](#).

### New Features in 8.6.1

PowerExchange 8.6.1 introduces the following new features for the PowerExchange Logger for Linux, UNIX, and Windows, which were previously not available for PowerExchange Condense:

**CDC Offload Processing**

You can use change data capture (CDC) offload processing to have the PowerExchange Logger for Linux, UNIX, and Windows log change data on a machine different from the source machine. CDC sessions can then extract the change data from the PowerExchange Logger log files, rather than from the change stream on the original source machine.
**pwxcmd Commands Issued to a PowerExchange Logger Process**

You can use the `pwxcmd` program to send commands to a PowerExchange Logger for Linux, UNIX, and Windows process. With `pwxcmd`, you can perform some of the same tasks that you can perform through PowerExchange Logger commands, such as stopping a PowerExchange Logger process.

**Note:** You cannot start the PowerExchange Logger with the `pwxcmd` program.

You can issue `pwxcmd` commands from the command line or in scripts.

For more information, see the *PowerExchange Command Reference*.

**Parameter and Option Changes in 8.6.1**

PowerExchange 8.6.1 introduces the following new parameters for the PowerExchange Logger for Linux, UNIX, and Windows.

**pwxccl.cfg Parameters**

You can specify the following new optional parameters for the PowerExchange Logger in the `pwxccl.cfg` configuration file:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPTURE_NODE=node_name</td>
<td>Optional. If capture registrations and extraction maps reside on a system that is remote from where the PowerExchange Logger runs, specifies the node name of that system. If you specify this parameter, the PowerExchange Logger uses CDC offload processing to establish a network connection to the remote node and read change data. The PowerExchange Logger writes the change data to its local log files.</td>
</tr>
<tr>
<td>CAPTURE_NODE_EPWD=encrypted_password</td>
<td>Optional. Specifies the encrypted password for the CAPTURE_NODE_UID value. If you specify a user ID in CAPTURE_NODE_UID, specify the password for that user ID by using one of the following: CAPTURE_NODE_EPWD or CAPTURE_NODE_PWD. You can create an encrypted password by selecting File &gt; Encrypt Password in the PowerExchange Navigator.</td>
</tr>
<tr>
<td>CAPTURE_NODE_PWD=password</td>
<td>Optional. Specifies the password for the CAPTURE_NODE_UID value. If you specify a user ID in CAPTURE_NODE_UID, specify the password for that user ID by using one of the following: CAPTURE_NODE_EPWD or CAPTURE_NODE_PWD.</td>
</tr>
<tr>
<td>CAPTURE_NODE_UID=user_id</td>
<td>Optional. Specifies a user ID that can read change data from the source system. If the PowerExchange Listener on the source system is running on MVS or i5/OS and is configured with security, specify a valid operating system user ID. You do not need to specify this parameter if the PowerExchange Listener is running without security. If the PowerExchange Listener on the source system is running on Linux, UNIX, or Windows, specify a valid database user ID.</td>
</tr>
<tr>
<td>CONDENSENAME=(service_name)</td>
<td>A service name for a PowerExchange Logger process to which you want to issue <code>pwxcmd</code> commands.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>EPWD=encrypted_password</td>
<td>An encrypted password to use with the user ID that is specified in UID parameter. If you specify a user ID in UID, specify the password for that user ID by using one of the following parameters: EPWD or PWD. You can create an encrypted password by selecting File &gt; Encrypt Password in the PowerExchange Navigator.</td>
</tr>
</tbody>
</table>

Use the CAPTURE_NODE parameters if you want to extract change data from a remote system and store it in PowerExchange Logger log files.

**Note:** If you have an existing dtica.cfg file for PowerExchange Condense, you can specify the new CAPTURE_NODE and EPWD parameters in that file and run the PowerExchange Logger with dtica.cfg.

For more information, see the *PowerExchange CDC Guide for Linux, UNIX, and Windows*.
Chapter 7

PowerExchange Logger for MVS

This chapter includes the following topics:

- PowerExchange 9.1.0 - New Features and Changes for the PowerExchange Logger for MVS, 72
- PowerExchange 8.6 - New Features and Changes for the PowerExchange Logger for MVS, 72

PowerExchange 9.1.0 - New Features and Changes for the PowerExchange Logger for MVS

This section describes PowerExchange 9.1.0 new features that are related to PowerExchange Logger for MVS processing.

New Features in 9.1.0

PowerExchange 9.1.0 introduces the following new feature for the PowerExchange Logger:

Running the PowerExchange Logger on z/OS 1.12

You can run the PowerExchange Logger on a z/OS version 1.12 system.

On z/OS 1.12, PowerExchange Logger active log data sets cannot be larger than 4 GB.

Also, you must apply IBM APAR OA34369. Otherwise, the PowerExchange Logger might abend when it tries to use data-in-virtual (DIV) services to access its log data sets.

PowerExchange 8.6 - New Features and Changes for the PowerExchange Logger for MVS

This section describes PowerExchange 8.6 new features, behavior changes, and other changes that are related to PowerExchange Logger for MVS processing.

New Features in 8.6

PowerExchange 8.6 introduces the following new feature:
Pushdown Optimization for Extracting Changes

When extracting change data from the PowerExchange Logger on an MVS system, the PowerExchange Log Read API (LRAPI) automatically passes a source interest list to the PowerExchange Logger. The interest list contains the EDMNAMEs of the data sources involved in the extraction. The PowerExchange Logger uses the interest list to filter out the change data records for any sources that are not on the list. This filter can substantially reduce the amount of data that the PowerExchange Logger transfers to the LRAPI task in the PowerExchange Listener.

When the PowerExchange Logger receives a Resource Interest List command from a LRAPI log reader, it issues the following message:

```
PWXEDM1727911 Resource Interest List command from log reader agent xcf_member_name with nnnn name(s) successfully processed.
```

The LRAPI waits for the PowerExchange Logger to respond to the Resource Interest List command for 60 seconds by default. You can override this default time interval by adding the INTLST parameter to the EDMLRPRM external parameter file. In the INTLST statement, enter a time value in hundredths of a second. For example, the following INTLST statement specifies the default of 60 seconds:

```
INTLST=6000
```

After filtering data records, the PowerExchange Logger issues the following additional message to indicate the number of records that were filtered out:

```
PWXEDM172592I EDM Logger data transfer for xcf_member_name ended. nnnn records enqueued, nnnnn records filtered out
```

**Note:** The PowerExchange Logger does not filter out certain types of IMS data records, UOW records, and all PowerExchange Logger records.

Previously, the LRAPI received all of the change data records and then discarded those that were not of interest.

For more information, see the *PowerExchange CDC Guide for z/OS*.

Behavior Changes in 8.6

PowerExchange 8.6 introduces the following behavior change:

**Increasing the Size of In-Use Active Log Data Sets**

You can increase the size of all active log data sets of the PowerExchange Logger, including the active log pair that is currently in use. For instructions, see the procedure for changing the size of active log data sets in the *PowerExchange CDC Guide for z/OS*.

Previously, you had to perform a two-step process to increase the data set size across all active log pairs. First, you increased the size of the active log data sets that were not currently in use. You could not increase the size of the data sets in the active log pair that were identified as “in-use” by the PowerExchange Logger. After the PowerExchange Logger switched to a new active log pair, you could increase the size of the data sets in the active log pair that had been “in-use” just prior to the log switch.

For more information, see the *PowerExchange CDC Guide for z/OS*.

Other Changes in 8.6

PowerExchange 8.6 introduces the following sample JCL change:
LOGPRINT Sample Member

The following changes were made to the sample JCL for the EDMLUCTR utility in the LOGPRINT member of the SAMPLIB library:

- PARM='TRACEE' was removed from the EXEC statement. This parameter pertains to Post-Log Merge jobs only. It disables tracing for these jobs.
- Comments regarding the syntax and defaults for control statements and keywords were added to help you tailor the JCL.

For more information, see the comments in the LOGPRINT member.
PowerExchange Navigator

This chapter includes the following topics:
- PowerExchange 9.1.0 - New Features and Changes for the PowerExchange Navigator, 75
- PowerExchange 9.0.1 - New Features and Changes for the PowerExchange Navigator, 75
- PowerExchange 9.0 - New Features and Changes for the PowerExchange Navigator, 76
- PowerExchange 8.6.1 - New Features and Changes for the PowerExchange Navigator, 76
- PowerExchange 8.6 - New Features and Changes for the PowerExchange Navigator, 77

PowerExchange 9.1.0 - New Features and Changes for the PowerExchange Navigator

This section describes the PowerExchange 9.1.0 new features and changes that are related to the PowerExchange Navigator.

New Features in 9.1.0

PowerExchange 9.1.0 introduces the following new features for the PowerExchange Navigator:

Adabas FDT Password Option for an Adabas CAPXRT Source in a Database Row Test

When you run a database row test for an Adabas CAPXRT source in the PowerExchange Navigator, you can now enter the Adabas FDT password, which is required if the FDT is password protected in Adabas.

Enter the Adabas FDT password in the ADABAS File Password box in the CAPXRT Advanced Parameters dialog box.

PowerExchange 9.0.1 - New Features and Changes for the PowerExchange Navigator

This section describes the PowerExchange 9.0.1 new features and changes that are related to the PowerExchange Navigator.
New Features in 9.0.1

PowerExchange 9.0.1 introduces the following new features for the PowerExchange Navigator:

GetCurrentFileName Function

For a data map record defined for a nonrelational data source, the GetCurrentFileName function gets the name of the source data file. Use this function to determine the data file from which data for a record is read. For more information, see the PowerExchange Navigator User Guide.

Behavior Changes in 9.0.1

PowerExchange 9.0.1 introduces the following behavior changes in the PowerExchange Navigator:

CAPXRT Default DB Type in a Database Row Test for an Extraction Map

When you run a database row test of an extraction map, the default DB Type is CAPXRT. Previously, the default DB Type was CAPX.

PowerExchange 9.0 - New Features and Changes for the PowerExchange Navigator

This section describes the PowerExchange 9.0 new features and changes that are related to the PowerExchange Navigator.

Online Help Changes in PowerExchange 9.0

The PowerExchange Navigator online help was enhanced for usability. When you access context-sensitive help for the PowerExchange Navigator, an online help version of the PowerExchange Navigator User Guide is displayed. This online help provides more comprehensive information about the PowerExchange Navigator than the previous Help.

PowerExchange 8.6.1 - New Features and Changes for the PowerExchange Navigator

This section describes the PowerExchange 8.6.1 new features and changes that are related to the PowerExchange Navigator.

New Features in 8.6.1

PowerExchange 8.6.1 introduces the following new feature for the PowerExchange Navigator:
Application Name Option for the STOPTASK Command

You can now optionally include an application name in a STOPTASK command that you enter in the Database Row Test dialog box of the PowerExchange Navigator.

The application name is a name associated with the change data extraction. The LISTTASK command output includes this name.

Behavior Changes in 8.6.1

PowerExchange 8.6.1 introduces the following behavior change for the PowerExchange Navigator:

VSAM and Sequential Offload Processing

For bulk data movement sessions, use the Offload Processing attribute on the PWX NRDB Batch application connection to enable bulk data offload processing for VSAM data sets and sequential files.

Previously, bulk data offload processing for VSAM data sets and sequential files was enabled by the OFFLOADPROCESSING parameter in the DBMOVER configuration file and by the Offload Processing option in data maps.

The Offload Processing option in data maps has been removed.

For more information, see the PowerExchange Migration Guide.

PowerExchange 8.6 - New Features and Changes for the PowerExchange Navigator

This section describes the PowerExchange 8.6 new features and changes that are related to the PowerExchange Navigator.

New Features in 8.6

PowerExchange 8.6 introduces the following new features for the PowerExchange Navigator:

Generation of Current Restart Tokens

You can use the File > Database Row Test menu item to generate current restart tokens for all PowerExchange change data capture (CDC) sources. You can then cut and paste the generated restart tokens into a restart token file for a PowerCenter CDC session. You must also specify the following special SELECT statement:

```
SELECT CURRENT_RESTART [WHERE CONNAME=conn_name|CONTYPE=conn_type]
```

Microsoft Windows Vista Support

You can run the PowerExchange Navigator on the Microsoft Windows Vista operating system.
CHAPTER 9

PowerExchange Monitoring and Tuning

This chapter includes the following topics:

- PowerExchange 9.0.1 - New Features and Changes for Monitoring and Tuning, 78
- PowerExchange 9.0 - New Features and Changes for Monitoring and Tuning, 81
- PowerExchange 8.6.1 - New Features and Changes for Monitoring and Tuning, 82
- PowerExchange 8.6 - New Features and Changes for Monitoring and Tuning, 85

PowerExchange 9.0.1 - New Features and Changes for Monitoring and Tuning

This section describes the PowerExchange 9.0.1 new features and changes for PowerExchange monitoring and tuning.

New Features in 9.0.1

PowerExchange 9.0.1 introduces the following new monitoring and tuning features:

Connection Pooling

Connection pooling is a method of reusing cached connection information and eliminating overhead in opening network connections and creating new tasks.

When you enable connection pooling, PowerExchange maintains a pool of PowerExchange Listener connections. It does not keep files or databases open for the pooled connections.

The following clients support connection pooling:

- Data Integration Service. Define connection pooling properties for the Data Integration Service by using the Informatica Administrator. Before you enable connection pooling, verify that the value of the MASTASKS statement in the DBMOVER file on the PowerExchange Listener system is large enough to accommodate the maximum number of connections in the pool for the Listener task. For more information, see the Informatica Administrator Guide.

- PowerExchange Navigator. Configure connection pooling for the PowerExchange Navigator by defining connection pooling properties in the Preferences dialog box. For more information, see the PowerExchange Navigator User Guide.
PowerCenter Integration Service. The PowerCenter Integration Service uses connection pooling automatically in certain cases. You cannot configure connection pooling for the PowerCenter Integration Service.

DTLURDMO utility. On Linux, UNIX, and Windows, DTLURDMO automatically enables connection pooling with a connection pool size of 2 connections and a retention period of 30 seconds. You cannot change these values.

Informatica Developer tool. The Developer tool uses connection pooling automatically in certain cases. You cannot configure connection pooling for the Developer tool.

Data Maps Caching

You can configure PowerExchange to cache data maps defined for nonrelational z/OS data sources on the system where the data maps are used by a single PowerExchange Listener job or by multiple PowerExchange Listener, netport, and batch jobs.

When you enable data maps caching, PowerExchange retrieves data maps from job-level memory rather than by accessing the data maps file. By eliminating accesses to the data maps file, data maps caching improves performance.

When you enable data maps caching, you can decrease initialization time by 0.1 second in addition to performance improvements that you achieve through connection pooling. Data maps caching can be beneficial when many short transactions are completed for each second. If you run long-running bulk data movement sessions and initialization time is a small part of the overall processing time, you might not realize any performance benefits by enabling data maps caching.

To enable data maps caching, set the DMXCACHE_MAX_MEMORY_MB statement to a value greater than 0 in the DBMOVER configuration file. This value configures the maximum size for the data maps cache in megabytes.

You can configure PowerExchange to run data maps caching in single-job or multiple-jobs mode. If you use one PowerExchange Listener job and no netport jobs, configure PowerExchange to run data maps caching in single-job mode. If you use multiple PowerExchange Listener or netport jobs to access the same data maps file, run data maps caching in multiple-jobs mode. To configure the mode in which PowerExchange runs data maps caching, define the DMXCACHE_MULTIPLEJOBS statement and, optionally, the DMXCACHE_DELETEECSA statement in the DBMOVER configuration file.

For more information about enabling and configuring data maps caching, see the PowerExchange Bulk Data Movement Guide and the PowerExchange Reference Manual.

Writer Partitioning for Bulk Data Movement Sessions

You can use pass-through partitioning at writer partition points for bulk data movement sessions that have VSAM or sequential file targets. Writer partitions process SQL inserts only.

Use writer partitions to improve session performance. Writer partitions process data for one or more targets concurrently. If you enable offload processing for the target instance, offload processing also runs in the writer partitions on the PowerCenter Integration Service machine. Offload processing can additionally enhance performance when resources on the target system are constrained.

You can specify some session properties and overrides at the partition level. The PWX Partition Strategy session-level property determines the number of connections to the target in relation to the partition-level session properties and overrides.

For more information, see the PowerExchange Bulk Data Movement Guide and PowerExchange Interfaces for PowerCenter.

Parameter and Option Changes in 9.0.1

PowerExchange 9.0.1 introduces new and changed parameters for the DBMOVER configuration file.
You can specify the following new and changed statements in the DBMOVER configuration file.

**DM_SUBTASK={}**

*Changed.* The DM_SUBTASK statement now includes the R option.

To improve the read performance for data maps, the PowerExchange Listener starts a subtask that opens the DATAMAPS data set in read mode. No change in processing or performance occurs for insertion and deletion of data maps.

The R option is faster than the N option but slower than the Y option.

The behavior of the N and Y options are unchanged.

**DMXCACHE_DELETEECSA={}**

*New.* Specify Y to have PowerExchange free ECSA memory when PowerExchange runs data maps caching in multiple-jobs mode and no files with nonzero user counts exist in ECSA memory. Default is N.

*Note:* To run in multiple-jobs mode, set the DMXCACHE_MULTIPLEJOBS statement to Y.

**DMXCACHE_MAX_MEMORY_MB={}**

*New.* Specify the maximum size, in megabytes, that PowerExchange uses for the data maps cache. Valid values are from 0 through 4095. You must enter a value greater than 0 to enable data maps caching. If you accept the default value of 0, PowerExchange does not use data maps caching.

**DMXCACHE_MULTIPLEJOBS={}**

*New.* Specify Y to configure PowerExchange to run data maps caching in multiple-jobs mode. If you use multiple PowerExchange Listener or netport jobs to access the same data maps file, use this mode.

Specify N to configure PowerExchange to run data maps caching in single-job mode. If you use one PowerExchange Listener job and no netport jobs, use this mode.

Default is N.

**SHOW_THREAD_PERF**

*Changed.* This parameter now applies to writer partitioning of bulk data movement sessions as well as to reader partitioning and multithreaded processing. It specifies the number of records that PowerExchange must process in a statistics reporting interval before writing messages with statistics that you can use to assess performance. For reader and writer partitioning, these messages are PWX-31261 and PWX-31262.

**TCPIP_SHOW_POOLING**

*New.* This parameter specifies whether to issue message PWX-33805, which provides diagnostic information about connection pooling, to the PowerExchange log file.

**WRT_ERROR_HANDLING={}**

*New.* Indicates whether to use an alternative method of handling error messages returned from the PowerExchange Listener for bulk data movement sessions that use writer partitioning when the Write Mode connection attribute is set to Confirm Write On.

Options are:

- **N.** Use the normal method of handling error messages returned from the PowerExchange Listener on the target system.
Y. Use the alternative method of handling these error messages. Enter Y only under the following conditions:
- Writer partitioning is enabled.
- The **Write Mode** connection attribute is set to **Confirm Write On**.
- The input data for the writer partitions contains many errors.

Default is N.

In PowerCenter, you can override this WRT_ERROR_HANDLING setting for a bulk data movement session that has writer partitions. Enter the WRT_ERROR_HANDLING setting in the **PWX Override** attribute on the PWX NRDB Batch application connection. Use the same syntax as for this DBMOVER statement.

If you specify WRT_ERROR_HANDLING=Y and set the **Write Mode** connection to **Confirm Write Off**, this statement is ignored.

For more information about these statements, see the *PowerExchange Reference Manual*.

---

**PowerExchange 9.0 - New Features and Changes for Monitoring and Tuning**

This section describes the PowerExchange 9.0 new features and changes for PowerExchange monitoring and tuning.

**New Features in 9.0**

PowerExchange 9.0 introduces the following new features related to PowerExchange monitoring and tuning. For more information about these features, see the *PowerExchange Bulk Data Movement Guide*.

**Enhanced Partitioning Support for Bulk Data Movement Sessions**

PowerExchange 9.0 provides the following partitioning enhancements for bulk data movement sessions:
- You can use pass-through partitioning without SQL overrides for bulk data movement sessions that include any of the following offloaded data sources: VSAM data sets, sequential data sets, and DB2 for z/OS unload data sets.
- For all other nonrelational bulk data sources, you can use pass-through partitioning with disjoint SQL overrides. If you do not provide overrides with these data sources, data is read into the first partition only.

**Bulk Data Offload for PowerExchange Data Targets**

You can offload bulk data processing for the following data targets:
- Sequential z/OS data sets
- VSAM data sets

By default, PowerExchange performs column-level processing on the system where the bulk data resides. You can use bulk data offload processing to distribute column-level processing to the PowerCenter Integration Service that runs the bulk data movement session.

To select bulk data offload processing in PowerCenter, use PWX NRDB Batch application connections for VSAM data sets and sequential files.
PowerExchange 8.6.1 - New Features and Changes for Monitoring and Tuning

This section describes the PowerExchange 8.6.1 new features and changes for PowerExchange monitoring and tuning.

New Features in 8.6.1

PowerExchange 8.6.1 introduces the following new features related to PowerExchange monitoring and tuning:

Bulk Data Offload and Multithreaded Processing

You can use bulk data offload processing to distribute column-level processing to the PowerCenter Integration Service machine that runs the bulk data movement session.

By default, PowerExchange performs column-level processing on the system where the bulk data resides. Distributing processing to the PowerCenter Integration Service can reduce PowerExchange processing overhead on the system on which the bulk data resides.

You can use bulk data offload processing for the following data sources:

- DB2 for z/OS tables
- Sequential files
- VSAM data sets

To select bulk data offload processing in PowerCenter, use PWX DB2zOS relational connections for DB2 tables and use PWX NRDB Batch application connections for VSAM data sets and sequential files.

For VSAM and sequential bulk data movement sessions that use offload processing, you can also use the following options:

- Offload filtering. You can specify that PowerExchange filter bulk data on the source system before distributing column-level processing to the Integration Service machine. Alternatively, you can specify that PowerExchange move the bulk data to the Integration Service machine and then perform filtering and column-level processing.
- Multithreaded processing. When you select multithreaded processing, PowerExchange uses multiple threads to process the bulk data, which might improve processing efficiency.

For more information, see the PowerExchange Bulk Data Movement Guide, PowerExchange Interfaces for PowerCenter, and PowerExchange Migration Guide.

CDC Offload Processing

By default, PowerExchange performs the column-level processing on the system on which the changes are captured. For MVS, DB2 for i5/OS, and Oracle change data capture (CDC) sources, PowerExchange also runs the UOW Cleanser that reconstructs complete UOWs from the change data in the change stream on the source system.

You can use CDC offload processing to distribute column-level and UOW Cleanser processing for change data to the PowerCenter Integration Service machine that runs the extraction. Distributing processing to the Integration Service can reduce PowerExchange processing overhead on the system on which the change data resides. In addition to the data sources supported in PowerExchange 8.6, you can use CDC offload processing for the following data sources:

- Datacom
- IDMS
When you use CDC offload processing for real-time extractions, the change data remains on the source system but PowerExchange distributes column-level and UOW Cleanser processing to the PowerCenter Integration Service machine that runs the CDC session.

You can also use CDC offload processing to have the PowerExchange Logger for Linux, UNIX, and Windows log change data on a different machine. CDC sessions can then extract the change data from the PowerExchange Logger log files rather than from the change stream on the original source machine.

When you use CDC offload processing with the PowerExchange Logger for Linux, UNIX, and Windows, PowerExchange does the following processing:

- Reads change data from the source system where the data resides
- Distributes column-level and UOW Cleanser processing to the machine on which the PowerExchange Logger for Linux, UNIX, and Windows runs
- Stores the change data in PowerExchange Logger log files

Use continuous extraction mode to extract change data from PowerExchange Logger log files.


**Performance Details for CDC Sessions**

If you configure a CDC session to report performance details, you can monitor the progress of the session in the Workflow Monitor. Performance details include counters that you can use to assess the efficiency of a CDC session and change data extraction processing.

To enable the collection of performance details, select Collect performance data on the Properties tab of the CDC session. During the execution of the CDC session, PWXPC refreshes the statistical information every 30 seconds.

PWXPC does not store performance details in the repository. From Workflow Monitor, you can view the details only for the current CDC session. If you notice degradation of CDC session performance, you can view the final performance details to determine the point at which the session slows down.

For more information, see the PowerExchange CDC Guide for i5/OS, PowerExchange CDC Guide for Linux, UNIX, and Windows, and PowerExchange CDC Guide for z/OS.

**Behavior Changes in 8.6.1**

PowerExchange 8.6.1 introduces the following behavior changes for monitoring and tuning:

**CDC Offload Processing**

PowerExchange 8.6.1 introduces the following behavior changes to CDC sessions that use offload processing:

- You must configure source CAPI_CONNECTION statements in the dbmover.cfg file on the PowerCenter Integration Service machine. Otherwise, CDC sessions that request offload processing fail. Previously, when you selected CDC offload processing, PowerExchange did not require source CAPI_CONNECTION statements on the Integration Service machine.
- PowerExchange distributes the UOW Cleanser processing to the PowerCenter Integration Service machine. Previously, when you selected CDC offload processing, PowerExchange distributed only column-level processing to the PowerCenter Integration Service machine.

Monitoring PowerCenter Sessions in PowerExchange

The LISTTASK command output includes PowerCenter session name in the PwrCntrSess field, which has the following format:

\[ integration\_server\_name/\text{workflow}\_name/\text{session}\_name \]

Where:

- \( integration\_server\_name \) is the name of the PowerCenter Integration Service.
- \( workflow\_name \) is the name of the workflow that contains the CDC session.
- \( session\_name \) is the name of the CDC session.

PowerExchange also includes the PowerCenter session name in messages written to the PowerExchange log that are related to CDC sessions, such as the PWX-00408, PWX-04578, and PWX-04588 messages.

For more information, see the PowerExchange CDC Guide for i5/OS, PowerExchange CDC Guide for Linux, UNIX, and Windows, and PowerExchange CDC Guide for z/OS.

VSAM and Sequential Offload Processing

In bulk data movement sessions, use the Offload Processing attribute on the PWX NRDB Batch application connection to enable bulk data offload processing for VSAM data sets and sequential files.

Previously, bulk data offload processing was enabled by the OFFLOADPROCESSING parameter in the DBMOVER configuration file and by Offload Processing option in data maps.

For more information, see the PowerExchange Migration Guide.

Parameters and Option Changes in 8.6.1

PowerExchange 8.6.1 introduces new parameters for the DBMOVER configuration file. Also, one parameter is no longer supported.

DBMOVER Configuration File Statements in 8.6.1

You can specify the following new statements in the DBMOVER configuration file:

- **OFFLOADPROCESSING=\{Y|N|A|D\}\**
  
  *Deleted.* In bulk data movement sessions, use the Offload Processing attribute on the PWX NRDB Batch application connection to enable bulk data offload processing for VSAM and sequential data sets on MVS.

  For more information about migrating existing bulk data movement sessions that use offload processing, see the PowerExchange Migration Guide.

- **SHOW\_THREAD\_PERF=num\_records\**
  
  *New.* Number of change records PowerExchange processes in a statistics reporting interval. After which, PowerExchange writes messages PWX-31524 through PWX-31259 to the PowerExchange log file. If you select the Retrieve PWX log entries attribute on a PWX CDC application connection, PWXPC writes the messages in the session log.

  The messages include information that can be used to tune multithreaded processing.

  Valid values are from 10000 through 50000000.
TCP/IP_ASYNC={Y|N}

*New.* Defines whether PowerExchange uses asynchronous network I/O when reading change data. If you specify Y, PowerExchange writes change data to the network buffers and reads change data from the change stream asynchronously.

Set this parameter to Y in the DBMOVER configuration file on the source system to help improve throughput for CDC sessions.

Default is N.

**Restriction:** This parameter is not supported on AIX, i5/OS, or Windows.

For more information, see the *PowerExchange Reference Manual*.

---

**PowerExchange 8.6 - New Features and Changes for Monitoring and Tuning**

This section describes the PowerExchange 8.6 new features and changes that can affect PowerExchange performance.

**New Features in 8.6**

PowerExchange 8.6 introduces the following new features for improving the performance of PowerExchange CDC processing:

**Offload Processing**

If a system with a data source cannot provide the throughput that is necessary for PowerExchange CDC processing, you can use offload processing to distribute this work. Offload processing distributes CPU-intensive CDC processing to the Linux, UNIX, or Windows machine that runs the PowerCenter Integration Service that you use for change data extraction sessions. Offload processing can provide the following benefits:

- Help improve CDC performance when the source system is overburdened.
- Help reduce operating costs if you offload work from a z/OS system to a distributed client machine that has lower processing costs.

You can use offload processing for any of the following CDC data sources and platforms:

- Adabas on z/OS
- DB2 for Linux, UNIX, and Windows
- DB2 for z/OS
- Microsoft SQL Server on Windows
- Oracle on Linux, UNIX, or Windows
- VSAM on z/OS

To implement offload processing, select the **Offload Processing** attribute when you configure the PWX CDC Real Time application connection in the Workflow Manager. Offload processing is not available for ODBC connections.

Offload processing uses a single thread. If necessary, you can combine offload processing with multithreaded processing to enhance performance.

For more information, see *PowerExchange Interfaces for PowerCenter* and *PowerExchange CDC Guide for z/OS*. 
Multithreaded Processing

If you offload CDC processing to the PowerCenter Integration Service machine and that machine cannot keep up with the volume of change data that is being sent from the source, you can use multithreaded processing to help improve performance. Whereas offload processing is single-threaded, multithreaded processing uses multiple threads to provide parallel processing of the change stream. PowerExchange merges the change data that has been processed in parallel and passes it to the PWXPC CDC reader for extraction processing. However, if the processor on the PowerCenter Integration Service machine is fast enough to keep up with the change data from the source, multithreaded processing does not significantly improve performance.

To implement multithreaded processing, set the Worker Threads and Array Size attributes when you configure the PWX CDC Real Time application connection in the Workflow Manager. The Worker Threads attribute specifies the number of threads. Enter a value of 1 or greater. If 1 does not improve performance adequately, you can incrementally increase the value until you achieve the performance needed. For optimal performance, this value should not exceed the number of installed or available processors on the machine. The Array Size attribute specifies the storage array size, in number of records, for each thread.

**Note:** The Worker Threads and Array Size attributes are not available for bulk data movement or ODBC connections.

For more information, see *PowerExchange Interfaces for PowerCenter* and *PowerExchange CDC Guide for z/OS*.
CHAPTER 10

PowerExchange Utilities

This chapter includes the following topics:

- PowerExchange 9.1.0 - New Features and Changes for PowerExchange Utilities, 87
- PowerExchange 9.0.1 - New Features and Changes for PowerExchange Utilities, 88
- PowerExchange 9.0 - New Features and Changes for PowerExchange Utilities, 88
- PowerExchange 8.6.1 HotFix 10 - New Features and Changes for PowerExchange Utilities, 89
- PowerExchange 8.6.1 - New Features and Changes for PowerExchange Utilities, 90

PowerExchange 9.1.0 - New Features and Changes for PowerExchange Utilities

This section describes PowerExchange 9.1.0 new features and changes that are related to the PowerExchange utilities.

New Features in 9.1.0

PowerExchange 9.1.0 introduces the following new features for PowerExchange utilities.

PWXUSSL - PowerExchange SSL Reporting Utility

PowerExchange 9.1.0 provides the PWXUSSL utility for generating reports about SSL libraries and certificates on Linux, UNIX, and Windows. You can generate the following reports:

- Version report. Reports the version of OpenSSL that was used to build the cryptographic library.
- Ciphers report. Reports the cipher suites that are available in the OpenSSL cryptographic library.

For more information, see the PowerExchange Utilities Guide.

Parameter and Option Changes in 9.1.0

PowerExchange 9.1.0 introduces a new parameter for the DTLUCBRG utility.

For more information, see the PowerExchange Utilities Guide.
DTLUCBRG Parameter

You can specify the following new DTLUCBRG parameter:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOTIFYCHANGES</td>
<td>For DB2, Oracle, and Microsoft SQL Server data sources, causes PowerExchange CDC to fail and log an error message if any change to the schema for a table is encountered.</td>
</tr>
</tbody>
</table>

PowerExchange 9.0.1 - New Features and Changes for PowerExchange Utilities

This section describes PowerExchange 9.0.1 new features and changes that are related to the PowerExchange utilities.

New Features in 9.0.1

PowerExchange 9.0.1 introduces the following new features for PowerExchange utilities.

PWXUDMX - PowerExchange Data Maps Update Time ECSA Memory Utility

Use the PWXUDMX utility to allocate, display, and delete ECSA memory, which holds time stamps of the latest updates to data maps files, and to modify the use counts of a file. This processing is relevant if you configure data maps caching in multiple jobs mode by defining DMXCACHE_MULTIPLEJOBS=Y in the DBMOVER configuration file. With the PWXUDMX utility, you can complete the following tasks:

- Allocate less than the 4,096 bytes of ECSA memory that the system dynamically allocates.
- Delete ECSA memory.
- Display the contents of ECSA memory with file names and time stamps in legible format.
- Display the contents of ECSA memory in hexadecimal format.
- If a PowerExchange Listener or netport job does not shut down cleanly, decrement the use count of a file.
- Increment the use count of a file.

For more information, see the *PowerExchange Utilities Guide*.

PowerExchange 9.0 - New Features and Changes for PowerExchange Utilities

This section describes PowerExchange 9.0 new features and changes that are related to the PowerExchange utilities.

New Features in 9.0

PowerExchange 9.0 introduces the following new features for PowerExchange utilities.
PWXUCDCT Utility for Managing PowerExchange Logger Files

PowerExchange 9.0 provides a new utility, PWXUCDCT, for managing files and printing reports for the PowerExchange Logger for Linux, UNIX, and Windows. With this utility, you can perform the following tasks:

- Regenerate the CDCT file based on PowerExchange Logger log files if the CDCT file and its backup are damaged or deleted.
- Back up the CDCT file.
- Restore the CDCT file from a backup.
- Delete expired CDCT records and any PowerExchange Logger log files associated with those records.
- Delete PowerExchange Logger log files that are not referenced by any CDCT record.
- Print reports on the PowerExchange Logger pwxccl.cfg configuration file, checkpoint files, CDCT file, and log files.

For more information, see the PowerExchange Utilities Guide.

PowerExchange 8.6.1 HotFix 10 - New Features and Changes for PowerExchange Utilities

This section describes PowerExchange 8.6.1 HotFix 10 new features and changes that are related to the PowerExchange utilities.

Parameter and Option Changes in 8.6.1 HotFix 10

PowerExchange 8.6.1 HotFix 10 introduces new and changed parameters for the DTLURDMO and DTLUCBRG utilities.

For more information, see the PowerExchange Utilities Guide.

DTLUCBRG Parameter

The following DTLUCBRG parameter has changed:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRGPREFIX</td>
<td>This parameter is now required.</td>
</tr>
</tbody>
</table>
DTLURDMO Parameters

You can specify the following new DTLURDMO parameters:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TARGETEPWD</td>
<td>Specifies the encrypted password that is associated with the user ID in the TARGETUSER statement.</td>
</tr>
<tr>
<td>TARGETPWD</td>
<td>Specifies the password that is associated with the user ID in the TARGETUSER statement.</td>
</tr>
<tr>
<td>TARGETUSER</td>
<td>Specifies the user ID for access to data maps, extraction maps, and capture registrations on the target system.</td>
</tr>
</tbody>
</table>

PowerExchange 8.6.1 - New Features and Changes for PowerExchange Utilities

This section describes PowerExchange 8.6.1 new features and changes that are related to the PowerExchange utilities.

New Features in 8.6.1

PowerExchange 8.6.1 introduces the following new feature for PowerExchange utilities:

New DTLURDMO Optional Statements

The DTTURDMO utility now supports the following optional statements on the indicated DTLURDMO copy statements:

<table>
<thead>
<tr>
<th>Copy Statement</th>
<th>Optional Statements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM_COPY</td>
<td>RENAME</td>
<td>Specifies which elements of the data map name are renamed in the target system. The available parameters are MAP, SCHEMA, and TABLE.</td>
</tr>
<tr>
<td>REG_COPY</td>
<td>RENAME</td>
<td>Specifies which elements of the capture registration are renamed in the target system. The available parameters are BULKMAP, BULKSCHEMA, BULKTABLE, SCHEMA, and TABLE.</td>
</tr>
<tr>
<td></td>
<td>RELATED BULK</td>
<td>Specifies that the created extraction map is merged with a bulk data map that already exists in the target system. This statement is available for DB2 for Linux, UNIX, and Windows and DB2 for z/OS systems only.</td>
</tr>
<tr>
<td>XM_COPY</td>
<td>RENAME</td>
<td>Specifies which elements of the extraction map name are renamed in the target system. The available parameters are MAP, SCHEMA, and TABLE.</td>
</tr>
</tbody>
</table>
CHAPTER 11

PowerExchange for Adabas

This chapter includes the following topics:

- PowerExchange 9.1.0 - New Features and Changes for Adabas, 91
- PowerExchange 9.0.1 - New Features and Changes for Adabas, 92
- PowerExchange 8.6.1 HotFix 5 - New Features and Changes for Adabas, 93
- PowerExchange 8.6.1 - New Features and Changes for Adabas, 93
- PowerExchange 8.6 - New Features and Changes for Adabas, 94

PowerExchange 9.1.0 - New Features and Changes for Adabas

This section describes PowerExchange 9.1.0 changes that are related to Adabas sources or targets.

New Features in 9.1.0

PowerExchange 9.1.0 introduces the following new feature for Adabas CDC data sources:

Adabas FDT Password Requirement

If the Adabas Field Definition Table (FDT) for an Adabas CDC source file is password-protected in Adabas, you must enter the Adabas FDT password for a CAPXRT database row test and for PowerCenter CDC sessions. PowerExchange requires the FDT password to access Adabas data for these functions.

Specify the Adabas FDT password in the following ways:

- In the PowerExchange Navigator, enter the password in the new ADABAS File Password field in the CAPXRT Advanced Parameters dialog box. Enter the password when you perform a CAPXRT database row test of an extraction map for an Adabas source file with a password-protected FDT.
- In Workflow Manager, set the password in the Edit Tasks dialog box when you edit session properties. On the Mapping tab, select the Sources view, and then enter the password in the ADABAS Password attribute under Properties.

For more information, see the PowerExchange Navigator User Guide and PowerExchange Interfaces for PowerCenter.
## PowerExchange 9.0.1 - New Features and Changes for Adabas

This section describes PowerExchange 9.0.1 changes that are related to Adabas sources or targets.

### New Features in 9.0.1

PowerExchange 9.0.1 introduces the following new feature for Adabas data sources and targets:

**Adabas Version 8.2.2 Support**

PowerExchange 9.0.1 supports Adabas Version 8.2.2 data sources or targets for CDC and bulk data movement sessions.

If you intend to capture changes from Adabas 8.2.2 PLOG data sets, first verify that Adabas zap AU822016 is applied. Otherwise, the first four bytes of data in the first data column that follows the PowerExchange-generated DTL_ columns is corrupted.

### Behavior Changes in 9.0.1

PowerExchange 9.0.1 introduces the following behavior change for Adabas data sources and targets:

**Mixed-Case Adabas Field Name Support in Adabas Data Maps**

If you add a data map, the two-character Adabas field names now remain in the case in which you type them or import them from a field definition table (FDT).

Previously, the underlying Adabas field names were converted to uppercase characters. Consequently, all fields in existing Adabas data maps have uppercase Adabas names.

### Parameter and Option Changes in 9.0.1

PowerExchange 9.0.1 introduces a new Adabas-specific parameter in the DBMOVER configuration file.

**DBMOVER Configuration File Parameter 9.0.1**

You can specify the following new parameter in the DBMOVER configuration file:

**TIMEZONE**

*New.* Enables PowerExchange to read or write Adabas date-time values in the user's local time for bulk data movement sessions.

This statement applies only to Adabas 8.2.2 data sources or targets that include date-time fields for which the Adabas TZ option is specified in the field definitions.

Enter the local time zone from the tz database that you want PowerExchange to use, in the format the area/location. This value is case sensitive.

If you do not use the TIMEZONE statement, PowerExchange reads and writes Adabas date-time values in Coordinated Universal Time (UTC). UTC is the time in which Adabas stores date-time values when the TZ option is specified.

For CDC sessions, the TIMEZONE statement is ignored and PowerExchange always reads and writes Adabas date-time values in UTC.
**Important:** PowerExchange cannot convert UTC date-time values to the local time for CDC sessions. If you run a CDC session and a bulk data movement session for which you specified a local time zone against the same Adabas sources or targets, these sessions might have inconsistent date-time values.

For more information, see the *PowerExchange Reference Manual*.

---

**PowerExchange 8.6.1 HotFix 5 - New Features and Changes for Adabas**

This section describes PowerExchange 8.6.1 HotFix 5 changes that are related to Adabas data sources or targets.

### Parameter and Option Changes in 8.6.1 HotFix 5

PowerExchange 8.6.1 HotFix 5 introduces a new Adabas-specific parameter.

#### DBMOVER Configuration File Parameter

You can specify the following new parameter in the DBMOVER configuration member of the RUNLIB library:

**ADAUSER=JOBNAME**

*New.* Specify this parameter with the value JOBNAME if you run multiple Netport jobs for accessing Adabas data on z/OS and want to use the Netport job name of each as the unique user ID in Adabas.

When multiple jobs run under the same user ID, such as the default, the jobs fail with Adabas Response Code 48 Sub Code 8 and PowerExchange message PWX-00416. Use this parameter to prevent this problem.

If you do not specify a value, PowerExchange uses either the default value of DTL00011 or, if specified, the ADABAS_PREFIX value appended with 0011.

This statement pertains to Netport jobs only. If you access Adabas data through a PowerExchange Listener, this statement is ignored.

For more information, see the *PowerExchange Reference Manual*.

---

**PowerExchange 8.6.1 - New Features and Changes for Adabas**

This section describes PowerExchange 8.6.1 changes that are related to Adabas data sources or targets.

### Behavior Changes in 8.6.1

PowerExchange 8.6.1 introduces the following behavior changes for Adabas data sources and targets:

#### CDC Offload Processing

You must configure source CAPI_CONNECTION statements in the dbmover.cfg file on the PowerCenter Integration Service machine. Otherwise, CDC sessions that request offload processing fail. Previously, when you
selected CDC offload processing, PowerExchange did not require source CAPI_CONNECTION statements on the
PowerCenter Integration Service machine.

For more information, see the PowerExchange CDC Guide for z/OS and PowerExchange Planning Guide for
Installation and Migration.

**Support for Adabas MUPEX and LA Fields**

You can perform bulk data movement and change data capture (CDC) on Adabas files that have been formatted
by the MUPEX function. Previously, PowerExchange failed with Adabas Response Code 55 Sub Code 9 and
issued an error message when attempting to access MUPEX-formatted Adabas files.

Also, PowerExchange imports Long Alpha (LA) fields with a default length of 1,024 bytes. You can override this
default length from the PowerExchange Navigator by editing the data map. Open the Record view of an Adabas
file and then open the Field Properties dialog box for the LA field. In the **Length** field, you can enter an override
value of up to 16,381.

For more information, see the PowerExchange Bulk Data Movement Guide and the PowerExchange CDC Guide
for z/OS.

---

**PowerExchange 8.6 - New Features and Changes for Adabas**

This section describes PowerExchange 8.6 new features and changes that are related to Adabas data sources or
targets.

**New Features in 8.6**

PowerExchange 8.6 introduces the following new features for Adabas data sources and targets:

**Adabas Version 8.1 Support**

PowerExchange provides the following support for Adabas Version 8.1:

- You can perform CDC for Adabas 8.1 data sources on z/OS systems.
- You can perform bulk data movement operations for Adabas 8.1 data sources or targets on z/OS, UNIX, or
  Windows systems.

The following limitations apply to specific Adabas 8.1 features:

- If you use large object (LB) fields in Adabas files, you cannot perform CDC or bulk data movement processing
  for those files. An LB field is an alphanumeric field up to 2 GB in size, which can store documents, graphics,
  and other data conglomerates.
- If you use spanned records in Adabas files, you cannot perform CDC processing for those files. The ADASEL
  utility, which PowerExchange uses to read the PLOG records for CDC, does not process spanned records.
  Spanned records store a logical record as a primary record and one or more secondary records across multiple
data storage blocks.
- If you use the Adabas MUPEX function to format Adabas files, PowerExchange receives Adabas Response
  Code 55 Sub Code 9 and issues an SQL error message when attempting to access those files. The MUPEX
  function enables you to exceed the maximum limit of 191 for the number of multiple-value MU fields and PE
  group fields in a single record.
For more information, see the *PowerExchange Bulk Data Movement Guide* and the *PowerExchange CDC Guide for z/OS*.

**Adabas WIDECHAR Datatype Support**

PowerExchange supports Adabas fields with the WIDECHAR datatype for both CDC and bulk data movement. When you create data maps in the PowerExchange Navigator for Adabas databases that have WIDECHAR fields, you can specify a wide-character code page to use for these fields.

**Offload Processing and Multithreaded Processing**

If a system that contains a data source cannot provide the throughput that is necessary for PowerExchange CDC processing, you can use offload processing to distribute this work to the PowerCenter Integration Service machine. If you use offload processing, you can also use multithreaded processing to help improve the efficiency of the offloaded CDC processing.

**Behavior Changes in 8.6**

PowerExchange 8.6 introduces the following behavior changes that are related to CDC processing for Adabas data sources:

**Adabas ECCR Cold Start Processing**

During a cold start, the Adabas ECCR no longer attempts to read the restart information that is stored in an outstanding unit of work (UOW) in the PowerExchange Logger. Instead, the ECCR resolves its outstanding UOWs in the PowerExchange Logger and then begins reading change data from the oldest Adabas protection log (PLOG) file that is recorded in the PCAT file.

Previously, when you cold started the Adabas ECCR, the ECCR first read the restart information from the outstanding UOW in the PowerExchange Logger. If the PowerExchange Logger log that contained the restart record was not available, the cold start failed. To cold start the ECCR in this situation, you had to start it with another ECCR name.

For more information, see the *PowerExchange CDC Guide for z/OS*.

**Handling of Adabas Response Code 255**

If PowerExchange receives an Adabas response code of 255 when reading data from an Adabas database, PowerExchange disconnects from the database and the bulk data movement session terminates abnormally. A response code of 255 indicates an out of NAB space condition.

Also, PowerExchange reports the SQLCODE value of 1255 in the following message:

```
PWX-02011 SQL fetch error. SQLCODE=1255.
```

Previously, PowerExchange misinterpreted this Adabas response code as an end-of-file indicator. As a result, the bulk data movement session appeared to end normally, without warning that only some of the data was processed.

For more information about response code 255, see Adabas documentation.

**Tape Data Sets with Large Block Sizes**

The Adabas PCAT utility, DTLCCADW, can now read archived Adabas PLOG records from tape data sets that have a block size value greater than 32,760. PowerExchange can then use the PLOG transactional records for CDC.
Previously, DTLCCADW abended with system abend code 013 and reason code E1 when the block size value was greater than 32,760.

**Parameter and Option Changes in 8.6**

PowerExchange 8.6 introduces new Adabas-specific parameters for the Adabas ECCR and DBMOVER configuration file.

**Adabas ECCR Parameters**

You can specify the following new parameter in the ADAECRP1 member of the RUNLIB library:

**IGNORENOCHANGEUPDATES=(N|Y)**

*New.* Controls whether the Adabas ECCR ignores records for which update operations did not change the data. You can use this parameter to have the Adabas ECCR ignore the many unchanged records that are typically produced by the ADAORD utility for online reorder operations. When you reorder Adabas files, Adabas logs the before and after images of unchanged records to PLOG files. The ECCR captures the unchanged records from the PLOG files unless you instruct the ECCR to ignore these records.

Options are:

- **Y.** The Adabas ECCR checks the before image and after image of the source data to determine if the data changed and then passes only the changed records to the PowerExchange Logger. The ECCR ignores records for which data did not change. This setting can reduce the number of records that are sent to the PowerExchange Logger.

- **N.** The Adabas ECCR passes all records to the PowerExchange Logger, including the records with unchanged data.

Default is **N**.

For more information, see the *PowerExchange CDC Guide for z/OS*.

**DBMOVER Configuration File Parameters**

You can specify the following new parameters in the DBMOVER configuration member of the RUNLIB library:

**ADABASCODEPAGE=(database_id,sb_codepage,mb_codepage)**

*New.* Specifies the single-byte and multiple-byte code pages to use for an Adabas database. This parameter is optional. Usually, this parameter is set only for databases that have WIDECHAR fields that require a code page other than the default code page or the code page that is set in the CODEPAGE parameter.

The ADABASCODEPAGE statement includes following positional parameters:

- **database_id** is the identifier for the Adabas database or file to which the code page or code pages apply. This value is required. You can enter 0 to indicate the Adabas default database.

- **sb_codepage** is the name of a single-byte code page.

- **mb_codepage** is the name of a multiple-byte code page.

If the database contains WIDECHAR fields, you should enter a multiple-byte code page.

You can enter up to 20 ADABASCODEPAGE statements in the DBMOVER configuration file.

You can override the code pages that are specified in this parameter when you define a data map. In the data map, you can specify a code page for a specific source file and a Wide-character code page that applies only to WIDECHAR fields in the file. Additionally, you can specify code pages for specific fields. A field-level code
ADABAS_PREFIX=prefix

New. Specifies a prefix that PowerExchange uses to construct an ET-ID for accessing Adabas files in the PowerExchange Listener. Each ET-ID is composed of this prefix followed by a four-digit task number.

Use this parameter if you run multiple PowerExchange Listeners that need to access the same Adabas database. You must specify a different prefix for each PowerExchange Listener so that PowerExchange can generate a unique ET-ID value for each one. If the ET-IDs are not unique, one or more of the PowerExchange Listeners might not be able to access the Adabas database. In this case, the PowerCenter session fails.

Maximum prefix length is four alphanumeric characters. Default is DTL0.

For more information, see the PowerExchange Reference Manual.
PowerExchange 9.1.0 New Features and Changes for CA Datacom

This section describes PowerExchange 9.1.0 new features that are related to CA Datacom data sources or targets.

Parameter and Option Changes in 9.1.0

PowerExchange 9.1.0 introduces a new parameter for the Datacom table-based ECCR:

**Datacom Table-Based ECCR Parameter**

You can specify the following new parameter for the Datacom table-based ECCR in the ECCRDcmp member of the RUNLIB library:

LOCAL\_TIME\=(N|Y)

*Optional.* Controls whether the time stamps that the Datacom table-based ECCR uses to indicate when database changes occurred use the local time or Coordinated Universal Time (UTC) time.

**Note:** ECCR time stamps indicate when changes were made in the database. They do not indicate when the ECCR captured the changes.

Valid values:

- **N.** The ECCR time stamps use UTC time values based on the Datacom UTC time stamps in change records.
- **Y.** The ECCR time stamps use local time values based on the Datacom SQL time stamps in the change records.

Default is N.
PowerExchange 8.6.1 - New Features and Changes for CA Datacom

This section describes PowerExchange 8.6.1 new features that are related to CA Datacom data sources or targets.

New Features in 8.6.1

PowerExchange 8.6.1 introduces the following new features for Datacom data sources and targets:

**CDC Offload and Multithreaded Processing**

If a system that contains a data source cannot provide the throughput that is necessary for PowerExchange change data capture (CDC) processing, you can use offload processing to distribute this work to the PowerCenter Integration Service machine.

If you use offload processing, you can also use multithreaded processing to help improve the efficiency of the offloaded CDC processing.

**Datacom Table-Based CDC**

If you have Datacom Release 11.4 or later, you can use the new PowerExchange for Datacom table-based CDC feature to capture change data asynchronously from Datacom CDC tables. The table-based ECCR listens for changes to the CDC tables and writes the change data to the PowerExchange Logger for MVS.

Datacom synchronous CDC continues to be supported in PowerExchange 8.6.1.

For more information, see the *PowerExchange CDC Guide for z/OS*.

PowerExchange 8.6 - New Features and Changes for CA Datacom

This section describes PowerExchange 8.6 new features and changes that are related to CA Datacom data sources or targets.

New Features in 8.6

PowerExchange 8.6 introduces the following new feature for Datacom data sources:

**Datacom Table-Level Security**

You can define RACF resource profiles to prevent unauthorized READ access to Datacom tables that contain confidential data. This security strategy prevents unauthorized users from accessing confidential data in Datacom tables when they perform PowerExchange tasks.

When defining RACF resource profiles for Datacom tables, use the following syntax:

```
DTL.DBDREAD.DATCOM.database_id.short_table_name
```

PowerExchange matches the specified short table name against Datacom short table names and indirectly against Datacom long table names to determine the tables for which RACF is to restrict READ access. Do not define separate RACF resource profiles for long table names.
After you define the RACF resource profiles, PowerExchange issues an error message whenever an unauthorized user attempts a task that requires READ access to the data or metadata in a RACF-protected Datacom table. In addition to reading data, these tasks include creating a capture registration or data map and performing a row test on a data map or an extraction map.

For more information, see the *PowerExchange Reference Manual*. 
This chapter includes the following topics:

- PowerExchange 9.0.1 - New Features and Changes for DB2 for Linux, UNIX, and Windows, 101
- PowerExchange 8.6.1 HotFix 11 - New Features for DB2 for Linux, UNIX, and Windows, 102
- PowerExchange 8.6.1 - New Features and Changes for DB2 for Linux, UNIX, and Windows, 102
- PowerExchange 8.6 - New Features and Changes for DB2 for Linux, UNIX, and Windows, 103

PowerExchange 9.0.1 - New Features and Changes for DB2 for Linux, UNIX, and Windows

This section describes PowerExchange 9.0.1 new features and changes that are related to DB2 for Linux, UNIX, and Windows data sources or targets.

New Features in 9.0.1

PowerExchange 9.0.1 introduces the following new feature for DB2 for Linux, UNIX, and Windows data sources and targets:

IBM DB2 for Linux, UNIX, and Windows Version 9.7 Support

PowerExchange supports DB2 for Linux, UNIX, and Windows Version 9.7 for change data capture (CDC) and bulk data movement operations. No DB2 FixPaks are required. If you upgrade to DB2 9.7, you do not need to complete any special PowerExchange migration steps. You can continue to use your DB2 capture registrations.

For CDC, the following restriction applies:

- PowerExchange cannot capture change data from tables that use DB2 data row compression. Verify that the DB2 COMPRESS attribute for each registered table is set to NO.

For more information, see the PowerExchange CDC Guide for Linux, UNIX, and Windows.
PowerExchange 8.6.1 HotFix 11 - New Features for DB2 for Linux, UNIX, and Windows

This section describes PowerExchange 8.6.1 HotFix 11 new features and changes that are related to DB2 for Linux, UNIX, and Windows data sources or targets.

**New Features in 8.6.1 HotFix 11**

PowerExchange 8.6.1 HotFix 11 introduces the following new feature for DB2 for Linux, UNIX, and Windows data sources and targets:

**IBM DB2 for Linux, UNIX, and Windows Version 9.7 Support**

PowerExchange supports DB2 for Linux, UNIX, and Windows Version 9.7 for change data capture (CDC) and bulk data movement operations. No DB2 FixPaks are required. If you upgrade to DB2 9.7, you do not need to complete any special PowerExchange migration steps. You can continue to use your DB2 capture registrations.

For CDC, the following restriction applies:

- PowerExchange cannot capture change data from tables that use DB2 data row compression. Verify that the DB2 COMPRESS attribute for each registered table is set to NO.

For more information, see the *PowerExchange CDC Guide for Linux, UNIX, and Windows*.

---

**PowerExchange 8.6.1 - New Features and Changes for DB2 for Linux, UNIX, and Windows**

This section describes PowerExchange 8.6.1 new features and changes that are related to DB2 for Linux, UNIX, and Windows data sources or targets.

**New Features in 8.6.1**

PowerExchange 8.6.1 introduces the following new feature for DB2 for Linux, UNIX, and Windows data sources and targets:

**CDC Support for IBM DB2 for Linux, UNIX, and Windows Versions 9.1 and 9.5**

PowerExchange now supports change data capture (CDC) for DB2 for Linux, UNIX, and Windows Version 9.1 with FixPak 1 or later and for Version 9.5. PowerExchange continues to support DB2 Version 8. If you upgrade to DB2 9.1 or 9.5, no special migration steps are required to capture change data.

However, the following restrictions apply:

- PowerExchange does not capture change data from columns that have the following new datatypes:
  - DECFLOAT
  - XML

You can register tables that include DECFLOAT and XML columns. However, these columns are omitted from the capture registrations. Consequently, PowerExchange does not capture change data for DECFLOAT and XML columns but does capture change data for other selected columns in the table.
• PowerExchange does not allow you to create capture registrations for tables that contain columns with user-defined datatypes. Consequently, PowerExchange does not capture change data for these tables.

• Versions 9.1 and 9.5 introduced additional SQL operations on tables, including altering a column datatype. However, if you alter a column datatype to or from FOR BIT DATA, PowerExchange does not detect the datatype change. PowerExchange continues to use the datatype that is specified in the existing capture registration.

For more information, see the PowerExchange CDC Guide for Linux, UNIX, and Windows.

Behavior Changes in 8.6.1

PowerExchange 8.6.1 introduces the following behavior changes for DB2 for Linux, UNIX, and Windows data sources and targets:

CDC Offload Processing

You must configure source CAPI_CONNECTION statements in the dbmover.cfg file on the PowerCenter Integration Service machine. Otherwise, CDC sessions that request offload processing fail. Previously, when you selected CDC offload processing, PowerExchange did not require source CAPI_CONNECTION statements on the PowerCenter Integration Service machine.

For more information, see the PowerExchange CDC Guide for Linux, UNIX, and Windows and PowerExchange Migration Guide.

Required DB2 Version 8 FixPak Levels for CDC

For DB2 Versions 8.1 and 8.2, PowerExchange CDC now requires a higher FixPak level: FixPak 14 for DB2 8.1 and FixPak 7 for DB2 8.2.

For more information, see the PowerExchange Installation Guide.

PowerExchange 8.6 - New Features and Changes for DB2 for Linux, UNIX, and Windows

This section describes PowerExchange 8.6 new features and changes that are related to DB2 for Linux, UNIX, and Windows data sources or targets.

New Features in 8.6

PowerExchange 8.6 introduces the following new feature for DB2 for Linux, UNIX, and Windows data sources:

Offload Processing and Multithreaded Processing

If a system that contains a data source cannot provide the throughput that is necessary for PowerExchange CDC processing, you can use offload processing to distribute this work to the PowerCenter Integration Service machine.

If you use offload processing, you can also use multithreaded processing to help improve the efficiency of the offloaded CDC processing.
Behavior Changes in 8.6

PowerExchange 8.6 introduces the following behavior change for the PowerExchange installation:

License Key for CDC Options

The algorithm that PowerExchange uses for validating license keys for DB2 for Linux, UNIX, and Windows CDC has changed. You must enter the new license keys provided by Informatica when you upgrade to 8.6.
PowerExchange for DB2 for i5/OS

This chapter includes the following topics:
- PowerExchange 9.1.0 - New Features and Changes for DB2 for i5/OS, 105
- PowerExchange 9.0.1 - New Features and Changes for DB2 for i5/OS, 105
- PowerExchange 9.0 - New Features and Changes for DB2 for i5/OS, 106
- PowerExchange 8.6.1 HotFix 10 - New Features and Changes for DB2 for i5/OS, 106
- PowerExchange 8.6.1 HotFix 5 - New Features and Changes for DB2 for i5/OS, 107
- PowerExchange 8.6.1 - New Features and Changes for DB2 for i5/OS, 108
- PowerExchange 8.6 - New Features and Changes for DB2 for i5/OS, 109

PowerExchange 9.1.0 - New Features and Changes for DB2 for i5/OS

This section describes PowerExchange 9.1.0 new features and changes that are related to DB2 for i5/OS data sources or targets.

New Features in 9.1.0

PowerExchange 9.1.0 introduces the following new feature for DB2 for i5/OS data sources and targets:

DB2 for i5/OS Version 7.1 Support

PowerExchange adds support for DB2 for i5/OS Version 7.1 for CDC and bulk data movement sessions.

PowerExchange 9.0.1 - New Features and Changes for DB2 for i5/OS

This section describes PowerExchange 9.0.1 new features and changes that are related to DB2 for i5/OS data sources or targets.
Parameter and Option Changes in 9.0.1

PowerExchange 9.0.1 introduces a new option in the DB2 for i5/OS CAPI_CONNECTION statement in the DBMOVER configuration file.

DBMOVE Configuration File Parameter

You can specify a new option on the LIBASUSER parameter in the AS4J CAPI_CONNECTION statement in the DBMOVER member of the datalib/CFG file.

\[
\text{CAPI\_CONNECTION}=(\ldots, \text{TYPE}=(\text{AS4J,LIBASUSER=\{N|Y|M\}}, \ldots))
\]

New. Specify the new M option for the LIBASUSER parameter to populate the DTL__CAPXUSER column of each change record with the library name, file name, and data member name of the file where the change was made.

The functions of the N and Y options remain unchanged.

For more information, see the PowerExchange Reference Manual.

PowerExchange 9.0 - New Features and Changes for DB2 for i5/OS

This section describes PowerExchange 9.0 new features and changes that are related to DB2 for i5/OS data sources or targets.

New Features in 9.0

PowerExchange 9.0 introduces the following new feature for DB2 for i5/OS data sources and targets:

Multiple-Row Fetch Statements for Bulk Data Movement

For DB2 for i5/OS bulk data movement operations that use the DB2 access method, PowerExchange uses a DB2 multiple-row FETCH statement to retrieve multiple rows of data from a source table at a time. This feature can help improve performance by reducing the number of database accesses for reading source data. In PowerCenter, you can configure the number of rows to be retrieved by setting the Array Size attribute on a PWX DB2i5OS relational connection used by PWXPC. Default is 25 rows.

For more information, see PowerExchange Interfaces for PowerCenter and PowerExchange CDC Guide for i5/OS.

PowerExchange 8.6.1 HotFix 10 - New Features and Changes for DB2 for i5/OS

This section describes PowerExchange 8.6.1 HotFix 10 new features and changes that are related to DB2 for i5/OS data sources or targets.
New Features in 8.6.1 HotFix 10

PowerExchange 8.6.1 HotFix 10 introduces the following new feature for DB2 for i5/OS:

Extracting the Relative Record Number

PowerExchange now extracts the relative record number from DB2 on i5/OS records. The relative record number is shown in the generated DTL_CAPXRRN column, which PowerExchange adds to the extraction map.

For more information, see the PowerExchange CDC Guide for i5/OS.

PowerExchange 8.6.1 HotFix 5 - New Features and Changes for DB2 for i5/OS

This section describes PowerExchange 8.6.1 HotFix 5 new features and changes that are related to DB2 for i5/OS data sources or targets.

New Features in 8.6.1 HotFix 5

PowerExchange 8.6.1 HotFix 5 introduces the following new feature for DB2 for i5/OS data sources and targets:

Running PowerExchange on a Remote System in a Remote Journaling Environment

In a remote journaling environment, you can run PowerExchange on the remote system that contains the remote journal receivers from which you capture change data and not on the local system that contains the DB2 source tables. The remote PowerExchange Listener can access metadata for the DB2 source tables for registration and database row tests. Previously, PowerExchange required you to have copies of the DB2 source tables on the remote system.

For more information, see the PowerExchange CDC Guide for i5/OS.

Behavior Changes in 8.6.1 HotFix 5

PowerExchange 8.6 HotFix 5 introduces the following behavior change for DB2 for i5/OS data sources:

Processing of DB2 Tables with Multiple Logical Files

Previously, when determining the key of a DB2 for i5/OS table during registration processing, PowerExchange attempted to use a logical file that was defined with a unique key but also had select or omit criteria. If the registration was used for CDC, CDC processing failed. Now PowerExchange omits such logical files when determining key field information for capture registrations.

Parameter and Option Changes in 8.6.1 HotFix 5

PowerExchange 8.6.1 HotFix 5 introduces new parameters for the AS4J CAPI_CONNECTION statement in the DBMOVER configuration file.
DBMOVER Configuration File Parameters

You can specify the following new parameters in the DBMOVER member of the datalib/CFG file:

**CAPI_CONNECTION=(...TYPE=(AS4J,ALWCLRPFM={N|Y},...))**

*New.* Include the following optional parameter on the AS4J CAPI_CONNECTION statement to indicate how PowerExchange handles an i5/OS Clear Physical File Member (CLRPFM) command during CDC processing.

**ALWCLRPFM={N|Y}**

Controls whether DB2 for i5/OS CDC processing stops or continues when PowerExchange encounters a journal entry for changes that result from an i5/OS CLRPFM command issued against a registered DB2 table. PowerExchange cannot properly replicate CLRPFM changes to targets.

Enter one of the following values:

- **N.** PowerExchange stops CDC processing when it encounters a journal entry with CLRPFM changes.
- **Y.** PowerExchange ignores CLRPFM changes in a journal entry, continues CDC processing, and issues message PWX-06808. If you also specify an event message queue in the AS400EVENTMSGQ statement of the DBMOVER member, PowerExchange writes message DTL3002 to the specified message queue when it encounters a journal entry with CLRPFM changes.

Default is **N.**

**Warning:** If you specify **Y,** the data integrity of the CDC targets might become damaged. Specify this parameter only when instructed to do so by Informatica Global Customer Support.

**RMTRDBDIRE=database_name**

*New.* Include this optional parameter only if you plan to use remote journal receivers for CDC in a remote journaling environment. This parameter specifies the name of the DB2 database on the local system that contains the DB2 source tables for CDC. This value must be defined to i5/OS with the "Work with Relational Database Directory Entries" function (WRKRDBDIRE).

This parameter is automatically populated when you run the CRTPWXENV command during installation. You can override this value if necessary.

Maximum length is 18 characters. Default is *LOCAL.

**RMTSYSNAME=host_name**

*New.* Include this optional parameter only if you plan to use remote journal receivers for CDC in a remote journaling environment. This parameter specifies the name of the i5/OS host that contains the DB2 source tables for CDC and the local journals and journal receivers. Also called the local system. This value must be defined to i5/OS with the "Work with TCP/IP Host Table Entries" function.

This parameter is automatically populated when you run the CRTPWXENV command during installation. You can override this value if necessary.

Maximum length is 68 characters. Default is *NONE.

For more information, see the *PowerExchange Reference Manual.*

**PowerExchange 8.6.1 - New Features and Changes for DB2 for i5/OS**

This section describes PowerExchange 8.6.1 new feature and changes that are related to DB2 for i5/OS data sources or targets.
New Features in 8.6.1

PowerExchange 8.6.1 introduces the following new feature for DB2 for i5/OS data sources and targets:

**PowerExchange Event Message Queue**

If you use the PowerExchange journal exit, you can also configure PowerExchange to write a message to a message queue. After PowerExchange completes processing for a journal receiver and reads the first journal entry in the next journal receiver on the chain, PowerExchange writes the following informational message with message ID DTL3001 to the specified message queue:

```
Application extraction_name has finished processing entries from receiver journal_receiver_name in library library_name.
```

PowerExchange writes this message after the first journal entry in the next journal receiver on the chain is processed for each PowerExchange Condense job or the real-time extraction mode operation. As a result, you might see multiple messages on the event message queue for the same journal receiver.

For more information, see the *PowerExchange CDC Guide for i5/OS*.

Parameter and Option Changes in 8.6.1

PowerExchange 8.6.1 introduces a new DB2 for i5/OS-specific parameter for the DBMOVER configuration file.

**DBMOVER Configuration File Parameters**

You can specify the following new parameter in the DBMOVER member of the datalib/CFG file:

```
AS400EVENTMSGQ=library/msg_queue_name
```

New. If you specify AS4JRNEXIT=Y on the AS4J CAPI_CONNECTION statement, an event message queue to which PowerExchange writes message DTL3001 after processing a journal receiver. PowerExchange writes this message after it reads the first journal entry in the next journal receiver on the chain.

For more information, see the *PowerExchange Reference Manual* and *PowerExchange CDC Guide for i5/OS*.

PowerExchange 8.6 - New Features and Changes for DB2 for i5/OS

This section describes PowerExchange 8.6 new features and changes that are related to DB2 for i5/OS data sources or targets.

**New Features in 8.6**

PowerExchange 8.6 introduces the following new feature for DB2 for i5/OS data sources and targets:
Remote DB2 for i5/OS Journals

You can configure i5/OS to replicate DB2 journal entries from the local system to journals and journal receivers on a remote i5/OS system. PowerExchange can extract change data for the tables registered for capture from either local or remote journal receivers.

- If the journal is on the i5/OS system where PowerExchange is running, PowerExchange validates the association between the table registered for change data capture (CDC) and the journal.
- If the journal is on a remote i5/OS system, PowerExchange does not validate the association of tables registered for capture.

For more information, see the PowerExchange CDC Guide for i5/OS.

Behavior Changes in 8.6

PowerExchange 8.6 introduces the following behavior change for DB2 for i5/OS data sources:

Minimized Entry Specific Data (MINENTDTA) Parameter for Journals

PowerExchange cannot process journals that include minimized journal entries. Ensure that the journals for the tables registered for CDC do not include minimized journal entries. To do so, you can use the CRTJRN or CHGJRN command to set the MINENTDTA parameter to *NONE.

For more information, see the PowerExchange CDC Guide for i5/OS.

Parameter and Option Changes in 8.6

PowerExchange 8.6 introduces a new DB2 for i5/OS-specific parameter for the DBMOVER configuration file.

DBMOVER Configuration File Parameters

You can specify the following new parameter in the DBMOVER member of the datalib/CFG file:

```
CAPI_CONNECTION=( ...,TYPE=(AS4J,ALWPARTIAL={N|Y}, ...))
```

*New.* You can include the ALWPARTIAL option in the CAPI_CONNECTION statement to specify whether PowerExchange processes journal receivers in partial status.

```
ALWPARTIAL={N|Y}
```

Enter one of the following values:

- **N.** PowerExchange processing fails if it detects any journal receivers in partial status.
- **Y.** PowerExchange processes journal receivers in partial status.

**Important:** If you specify Y, you might compromise the data integrity of the change data being extracted because required changes might be unavailable. Specify this parameter only if instructed to do so by Informatica Global Customer Support.

Default is N.

For more information, see the PowerExchange Reference Manual.
PowerExchange 9.1.0 - New Features and Changes for DB2 for z/OS

This section describes PowerExchange 9.1.0 new features and changes that are related to DB2 for z/OS data sources or targets.

New Features in 9.1.0

PowerExchange 9.1.0 introduces the following new feature for DB2 for z/OS data sources and targets:

DB2 for z/OS Version 10 Support

PowerExchange adds support for DB2 for z/OS Version 10 for bulk data movement sessions.

PowerExchange 9.0.1 - New Features and Changes for DB2 for z/OS

This section describes PowerExchange 9.0.1 new features and changes that are related to DB2 for z/OS data sources or targets.
Parameter and Option Changes in 9.0.1

PowerExchange 9.0.1 introduces a new statement for the DB2 for z/OS ECCR REPL2OPT member.

DB2 ECCR REPL2OPT Statement

You can specify the following new COMMITINT parameter in the REPL2OPT member of the RUNLIB library

```
COMMITINT [MS=milliseconds]
```

Specifies a time interval, in milliseconds, after which the DB2 ECCR issues an SQL COMMIT to free resources that are held on its behalf because of IFI306 activity.

Valid values are from 0 through 999999. Default is 60000, or 60 seconds.

A value of 0 disables time-based SQL COMMITs. The DB2 ECCR issues SQL COMMITs only after the following types of events:

- ECCR startup
- Processing of a DB2 ECCR REFRESH command
- Processing of a UR that contains DDL

For more information, see the PowerExchange CDC Guide for z/OS.

PowerExchange 9.0 - New Features and Changes for DB2 for z/OS

This section describes PowerExchange 9.0 new features and changes that are related to DB2 for z/OS data sources or targets.

New Features in 9.0

PowerExchange 9.0 introduces the following new features for DB2 for z/OS data sources and targets:

DB2 for z/OS Stored Procedure Transformations

You can use DB2 for z/OS Stored Procedure transformations in a PowerCenter mapping that you use for read or write bulk data movement and change data capture (CDC) operations. You can also include a DB2 for z/OS stored procedure in an unconnected transformation outside of a session.

To import a stored procedure from a DB2 database or subsystem, you must use an ODBC data source that you create and configure before you perform the import.

After configuring a DB2 for z/OS Stored Procedure transformation in a PowerCenter mapping, you can use the PowerExchange Client for PowerCenter (PWXPC) to run the session that includes the transformation.

For more information, see PowerExchange Interfaces for PowerCenter.
PowerExchange 8.6.1 - New Features and Changes for DB2 for z/OS

This section describes PowerExchange 8.6.1 new features that are related to DB2 for z/OS data sources or targets.

New Features in 8.6.1

PowerExchange 8.6.1 introduces the following new features for DB2 for z/OS data sources and targets:

**Bulk Data Offload Processing**

By default, PowerExchange performs column-level processing on the system where the DB2 bulk data resides. You can use offload processing to distribute column-level processing for DB2 bulk data to the PowerCenter Integration Service machine that runs the bulk data movement session.

To select offload processing, use the **Offload Processing** attribute on PWX DB2zOS relational connections in PowerCenter.

For more information, see the *PowerExchange Bulk Data Movement Guide*.

**Table SQL Operation Statistics in the DB2 ECCR**

A new option, SQ, on the DISPLAY command for the DB2 ECCR displays insert, update, and delete statistics for all tables registered for change data capture (CDC). The DB2 ECCR accumulates the table SQL operation statistics for the time period in which the ECCR runs.

For more information, see the *PowerExchange CDC Guide for z/OS* and *PowerExchange Command Reference*.

Behavior Changes in 8.6.1

PowerExchange 8.6.1 introduces the following behavior change for DB2 for z/OS data sources:

**CDC Offload Processing**

You must configure source CAPI_CONNECTION statements in the dbmover.cfg file on the PowerCenter Integration Service machine. Otherwise, CDC sessions that request offload processing fail. Previously, when you selected CDC offload processing, PowerExchange did not require source CAPI_CONNECTION statements on the PowerCenter Integration Service machine.

For more information, see the *PowerExchange CDC Guide for z/OS* and *PowerExchange Migration Guide*.

PowerExchange 8.6 - New Features and Changes for DB2 for z/OS

This section describes PowerExchange 8.6 new features and changes that are related to DB2 for z/OS data sources or targets.
New Features in 8.6

PowerExchange 8.6 introduces the following new features for DB2 for z/OS data sources or targets:

IBM DB2 for z/OS Version 9.1 Support

PowerExchange provides the following support for DB2 for z/OS Version 9.1:

- You can perform CDC for DB2 for z/OS sources. PowerExchange supports all catalog-level modes of DB2 Version 9.1, including compatibility mode and new-function mode.
- You can perform bulk data movement for DB2 for z/OS Version 9.1 data sources or targets.

You must upgrade the DB2 Environmental Change Capture Routine (ECCR) capture directory tables to capture change data when running DB2 Version 8 new-function mode or DB2 Version 9.1.

The DB2 ECCR captures change data for all new DB2 Version 9.1 datatypes, with the following exceptions:

- DECIMAL
- XML

Also, the DB2 ECCR cannot capture changes that result from the IMMEDIATE option of the SQL TRUNCATE command. Do not use this option for tables that are registered for capture.


Offload Processing and Multithreaded Processing

If a system that contains a data source cannot provide the throughput that is necessary for PowerExchange CDC processing, you can use offload processing to distribute this work to the PowerCenter Integration Service machine.

If you use offload processing, you can also use multithreaded processing to help improve the efficiency of the offloaded CDC processing.

Behavior Changes in 8.6

PowerExchange 8.6 introduces the following behavior changes for DB2 for z/OS data sources:

DB2 ECCR Cold Start Processing

Enhancements to DB2 ECCR processing have substantially reduced CPU consumption and startup time during a cold start. This improved processing is most noticeable with DB2 subsystems that contain more than 10,000 DB2 tables and table spaces. The number of tables that are registered for capture does not affect cold start processing.

DB2 ECCR TCAPTABLEPART Capture Directory Table

The TCAPTABLEPART table now contains a row for every table space part that contains tables registered for capture. Previously, the DB2 ECCR did not use this capture directory table.

For more information, see the PowerExchange CDC Guide for z/OS.
**PowerExchange 9.1.0 - New Features and Changes for CA IDMS**

This section describes PowerExchange 9.1.0 new features and changes that are related to CA IDMS data sources or targets.

**New Features in 9.1.0**

PowerExchange 9.1.0 introduces the following new feature for CA IDMS data sources or targets:

**Change Capture from IDMS Records That Use Presspack Compression**

You can capture changes from IDMS records that use Presspack compression. To do so, you must modify the IDMS log-based ECCR JCL so that the ECCR can use Presspack decompression during change capture.

Modify the JCL in one of the following ways:

- If the ECCR does not run APF-authorized, specify the standard IDMS runtime libraries, including the data characteristic tables (DCTs) and a valid DMCL, in the STEPLIB concatenation of the ECCR JCL.
- If the ECCR runs APF-authorized, copy the IDMS runtime libraries and APF-authorize the copies. Then specify these copies in the STEPLIB concatenation. If you add or modify DCTs for records that are registered for change capture later, you must manually copy the tables to these duplicate libraries.

**Warning:** Do not APF-authorize the original IDMS libraries that you copied. If you do, some IDMS utilities might fail with a S0C4.

Also, unless you use the default DMCL named "IDMSDMCL," add a SYSIDMS DD input card and specify the name of the DMCL that you use in the input stream. For more information about the ECCR JCL, see the *PowerExchange CDC Guide for z/OS*.

If you upgrade to PowerExchange 9.1.0 from an earlier release or hotfix that does not support Presspack compression, you must also perform several migration steps to use this feature. For more information, see the *PowerExchange Planning Guide for Installation and Migration.*
PowerExchange 9.0.1 - New Features and Changes for CA IDMS

This section describes PowerExchange 9.0.1 new features and changes that are related to CA IDMS data sources or targets.

New Features in 9.0.1

PowerExchange 9.0.1 introduces the following new feature for CA IDMS data sources or targets:

CA IDMS Version 17 Support
PowerExchange 9.0.1 introduces IDMS Version 17 support for IDMS log-based CDC and bulk data movement sessions.

PowerExchange 8.6.1 - New Features and Changes for CA IDMS

This section describes PowerExchange 8.6.1 new features and changes that are related to CA IDMS data sources or targets.

New Features in 8.6.1

PowerExchange 8.6.1 introduced the following new feature for CA IDMS data sources and targets:

CDC Offload and Multithreaded Processing
If a system that contains a data source cannot provide the throughput that is necessary for PowerExchange change data capture (CDC) processing, you can use offload processing to distribute this work to the PowerCenter Integration Service machine.

If you use offload processing, you can also use multithreaded processing to help improve the efficiency of the offloaded CDC processing.

References: For more information, see Chapter 9, “PowerExchange Monitoring and Tuning” on page 78.
Chapter 17

PowerExchange for IMS

This chapter includes the following topics:

- PowerExchange 9.1.0 - New Features and Changes for IMS, 117
- PowerExchange 9.0.1 - New Features and Changes for IMS, 118
- PowerExchange 8.6.1 - New Features and Changes for IMS, 118
- PowerExchange 8.6 - New Features and Changes for IMS, 119

PowerExchange 9.1.0 - New Features and Changes for IMS

This section describes PowerExchange 9.1.0 new features that are related to IMS data sources.

New Features in 9.1.0

PowerExchange 9.1.0 introduces the following new features for IMS data sources:

**IMS Log-Based ECCR That Works with the DBRC API**

You can use a new IMS log-based ECCR program, DTLCCIMX, with IMS Version 10 and later. This ECCR program works with the DBRC API to get information about the IMS archive logs directly from the RECON data sets.

If you use the DTLCCIMX ECCR with IMS Version 10, you must apply IBM APAR PK50752.

PowerExchange continues to support the previous IMS log-based ECCR programs, each for a particular IMS version. If you use IMS 10 or later, you can migrate from these version-dependent ECCR programs to DTLCCIMX.

For more information about DTLCCIMX, see the PowerExchange CDC Guide for z/OS.

**IMS Synchronous CRG.LOAD Library Contains New BMC Software Components**

The PowerExchange CRG.LOAD library for IMS synchronous CDC contains a new version of the BMC Software CHANGE RECORDING FACILITY and DATABASE INTEGRITY PLUS components.

If you use the CRG software, after you upgrade to 9.1.0, you must run the CRGUMOD or CRGCLINK job in the hlq.SAMPLIB library again. Use the hlq.CRG.LOAD library as input. Otherwise, events such as abends might cause change capture to fail in the DLIODDCx module when the IMS synchronous ECCR tries to capture changes for a source segment.
You do not need to perform this action if you have a supported version of the BMC Software CHANGE RECORDING FACILITY or DATABASE INTEGRITY PLUS product. Use the BMC Software product instead of the CRG software. Make sure that the BMC Software product version matches or is later than the minimum supported version for your PowerExchange version.

For more information about the CRGUMOD and CRGCLINK jobs and the minimum supported versions for the BMC Software products, see the PowerExchange CDC Guide for z/OS.

PowerExchange 9.0.1 - New Features and Changes for IMS

This section describes PowerExchange 9.0.1 new features that are related to IMS data sources or targets.

New Features in 9.0.1

PowerExchange 9.0.1 introduces the following new feature for IMS data sources or targets:

IMS Version 11 Support

PowerExchange 9.0.1 introduces IMS Version 11 support for IMS log-based CDC, synchronous CDC, and bulk data movement sessions.

PowerExchange 8.6.1 - New Features and Changes for IMS

This section describes PowerExchange 8.6.1 new features that are related to IMS data sources or targets.

New Features in 8.6.1

PowerExchange 8.6.1 introduces the following new features for IMS data sources and targets:

CDC Offload and Multithreaded Processing

If a system that contains a data source cannot provide the throughput that is necessary for PowerExchange change data capture (CDC) processing, you can use offload processing to distribute this work to the PowerCenter Integration Service machine.

If you use offload processing, you can also use multithreaded processing to help improve the efficiency of the offloaded CDC processing.

Enhanced Security for IMS Data Sources

You can use PowerExchange security to control write access to IMS databases. You can create the following RACF resource profiles in the FACILITY class to control write access to IMS source databases:

- DTL.DBBWRITE.IMS controls write access to databases accessed through DL/1 Batch.
DTL.DBWRITE.IMS.

imsid
controls write access to databases accessed through ODBA. The imsid value is the IMS SSID value that you specify on the Data Maps Properties dialog box in the PowerExchange Navigator. For more information, see the PowerExchange Reference Manual.

Group Source Processing for IMS Unload Files

For bulk data movement sessions that use multi-record source definitions for IMS unload files, PowerExchange uses group source to process an unload file for the IMS database. Group source processing in PowerExchange reads the IMS unload file once for all segments in the IMS database.

For more information, see the PowerExchange Bulk Data Movement Guide, PowerExchange Interfaces for PowerCenter, and PowerExchange Navigator User Guide.

PowerExchange 8.6 - New Features and Changes for IMS

This section describes PowerExchange 8.6 new features and changes that are related to IMS data sources or targets.

New Features in 8.6

PowerExchange 8.6 introduces the following new features for IMS data sources or targets:

Enhanced Processing for IMS Unload Data Sets

PowerExchange provides the following enhanced support for bulk data movement operations that use IMS unload data sets:

- You can use DL/1 BATCH data maps to read IMS unload data sets.
- When you use either DL/1 BATCH or IMS ODBA data maps, PowerExchange can retrieve concatenated key (CCK) fields for IMS unload data sets.

For more information, see the PowerExchange Bulk Data Movement Guide.

IMS Version 10 Support

PowerExchange provides the following support for IMS Version 10:

- You can perform IMS synchronous and log-based change data capture (CDC) for IMS Version 10 data sources. For IMS synchronous CDC, PowerExchange supplies a new level of the CRG software that is usually used for this function. If you are upgrading from an earlier PowerExchange version and currently use the CRG software, install the new CRG software. If you use the BMC Software product libraries instead of the PowerExchange CRG software, you must use version 4.6.00 or later of CHANGE RECORDING FACILITY and DATABASE INTEGRITY PLUS.
- You can also perform bulk data movement operations for IMS Version 10 sources and targets.

For more information, see the PowerExchange Bulk Data Movement Guide and PowerExchange CDC Guide for z/OS.
Behavior Changes in 8.6

PowerExchange 8.6 introduces the following behavior change for IMS data sources:

IMS Synchronous ECCR Usage of CSA

When you use IMS Batch Terminal Simulator (BTS) jobs to change IMS databases registered for capture, the IMS synchronous Environmental Change Capture Routine (ECCR) obtains key 8 storage to communicate with the external subsystem. The ECCR obtains this storage in subpool 230 in the private area of the IMS region where the ECCR runs.

Previously, the IMS synchronous ECCR obtained key 8 storage in ECSA when any type of IMS job or transaction made changes to databases registered for capture. As a result, you could not specify the VSM ALLOWUSERKEYCSA(NO) parameter in the DIAGxx member of the z/OS PARMLIB library.

Architectural Level Set Requirement for the IMS Synchronous ECCR

To use the PowerExchange CRG software with the IMS synchronous ECCR, you must IPL your z/OS system in z/Architecture® mode. The PowerExchange CRG software is based on version 4.6.00 of the CHANGE RECORDING FACILITY and DATABASE INTEGRITY PLUS products from BMC Software. These BMC Software products also require that z/OS run in z/Architecture mode.

Previously, the PowerExchange CRG software ran on OS/390 and z/OS systems that were IPLed in either ESA or z/Architecture mode.

For more information, see the PowerExchange CDC Guide for z/OS.
Chapter 18

PowerExchange for Oracle

This chapter includes the following topics:

- PowerExchange 9.0.1 - New Features and Changes for Oracle, 121
- PowerExchange 8.6.1 - New Features and Changes for Oracle, 122
- PowerExchange 8.6 - New Features and Changes for Oracle, 123

PowerExchange 9.0.1 - New Features and Changes for Oracle

This section describes PowerExchange 9.0.1 changes that are related to Oracle data sources or targets.

New Features in 9.0.1

PowerCenter 9.0.1 introduces the following new features for Oracle:

**Oracle 11g Release 2 Support**

PowerExchange introduces support for Oracle 11g Release 2 for CDC and bulk data movement sessions.

For more information, see the PowerExchange CDC Guide for Linux, UNIX, and Windows and PowerExchange Bulk Data Movement Guide.

**CDC Support for Oracle Materialized Views**

If you use Oracle materialized views, PowerExchange can capture change data from the tables that underlie those views.

PowerExchange supports change capture for any type of materialized view. The view and its underlying table have a one-to-one correspondence and share the same name. If you issue the DDLDESCRIBE tables command from the Database Row Test dialog box in the PowerExchange Navigator, the results include a row for the materialized view and a row for the underlying table. The Type column indicates which row is for the materialized view and which row is for the table.

For more information, see the CDC Guide for Linux, UNIX, and Windows.
CDC Support for Oracle Transparent Data Encryption

If you use Oracle Transparent Data Encryption (TDE), PowerExchange can capture change data from objects with encrypted data. You do not need to complete any additional PowerExchange configuration task.

Before starting CDC for the source tables, verify that the encryption wallet has been opened.

For more information, see the CDC Guide for Linux, UNIX, and Windows.

PowerExchange 8.6.1 - New Features and Changes for Oracle

This section describes PowerExchange 8.6.1 changes that are related to Oracle data sources or targets.

Behavior Changes in 8.6.1

PowerExchange 8.6.1 introduces the following behavior changes for Oracle data sources:

**CDC Offload Processing**

You must configure source CAPI_CONNECTION statements in the dbmover.cfg file on the PowerCenter Integration Service machine. Otherwise, CDC sessions that request offload processing fail. Previously, when you selected CDC offload processing, PowerExchange did not require source CAPI_CONNECTION statements on the PowerCenter Integration Service machine.

For more information, see the PowerExchange CDC Guide for Linux, UNIX, and Windows and PowerExchange Migration Guide.

**Startup and Processing Progress Messages for Oracle CDC**

For change data extractions that use real-time extraction mode or the PowerExchange Logger for Linux, UNIX, and Windows, PowerExchange for Oracle CDC writes informational messages about startup and processing progress to the PowerExchange log file. These messages provide details about Oracle CDC processing, such as the PowerExchange configuration options, the Oracle archive logs that are selected, and the Oracle SCN that is being processed.

Previously, PowerExchange for Oracle CDC only wrote messages with this information to the PowerExchange log file if you used a level 2 DLL diagnostic trace.

Parameter and Option Changes in 8.6.1

PowerExchange 8.6.1 introduces the following new parameter:

**DBMOVER Configuration File Parameters**

You can specify the following parameters in the dbmover.cfg file:

```
CAPI_CONNECTION=( ..., TYPE=(ORCL,IGNUMSG={N|Y}, ...))
```

New. The following additional option can be specified in the Oracle CAPI_CONNECTION statement:
**IGNUFMSG=({N|Y})**

Indicates whether PowerExchange for Oracle CDC warns you when unformatted data is found for Oracle data sources. This option applies only if the BYPASSUF=Y is also specified in the CAPI_CONNECTION statement.

Valid values:
- Y. PowerExchange issues warnings when unformatted data is found and to continue processing.
- N. PowerExchange does not issue warnings when unformatted data is found.

Default is N.

TheIGNUFMSG option is ignored if BYPASSUF=N.

For more information, see the *PowerExchange Reference Manual*.

---

**PowerExchange 8.6 - New Features and Changes for Oracle**

This section describes PowerExchange 8.6 new features and changes that are related to Oracle data sources or targets.

### New Features in 8.6

PowerExchange 8.6 introduces the following new features for Oracle data sources and targets:

#### Additional Datatype Support

PowerExchange supports the following additional datatypes for both CDC and bulk data movement:
- BINARY_DOUBLE
- BINARY_FLOAT

To perform bulk data movement operations for tables that contain these datatypes, the system on which PowerExchange runs requires a minimum Oracle client level of 10.2.0.1.

For more information, see the *PowerExchange Oracle Adapter Guide*.

#### Oracle 11g Support

PowerExchange provides the following support for Oracle 11g:
- You can perform CDC for Oracle sources.
- You can perform bulk data movement for Oracle data sources and targets.

For more information, see the *PowerExchange Installation Guide*.

#### Offload Processing and Multithreaded Processing

If a system that contains a data source cannot provide the throughput that is necessary for PowerExchange CDC processing, you can use offload processing to distribute this work to the PowerCenter Integration Service machine.

If you use offload processing, you can also use multithreaded processing to help improve the efficiency of the offloaded CDC processing.
Parameter and Option Changes in 8.6

PowerExchange 8.6 introduces a new Oracle-specific parameter for the DBMOVER configuration file.

**DBMOVER Configuration File Parameters**

You can specify the following new parameter in the dbmover.cfg file:

```plaintext
CAPI_CONNECTION=( ..., TYPE=(ORCL, ONLINECAT={N|Y}, ...))
```

*New* The following additional option can be specified in the Oracle CAPI_CONNECTION statement:

```plaintext
ONLINECAT={N|Y}
```

Indicates if Oracle LogMiner uses the online catalog or the copy of the catalog from the redo logs to format change data from LogMiner logs. Options are:

* N. PowerExchange invokes Oracle LogMiner with the option to use the catalog copy from the redo logs to format log data. PowerExchange tracks schema changes to ensure that data loss does not occur.

* Y. PowerExchange invokes Oracle LogMiner with the option to use the online catalog to format log data. PowerExchange CDC initializes faster. However, Oracle LogMiner does not track DDL changes and cannot format log records for any tables that have schema changes. If you make schema changes while Oracle LogMiner is reading log data, Oracle LogMiner passes unformatted log records to PowerExchange for the changes recorded after the schema change. If you do not specify the BYPASSUF=Y option on the ORCL CAPI_CONNECTION statement, the extraction request fails when Oracle passes the first unformatted record. Otherwise, PowerExchange skips the unformatted record and continues processing, which results in data loss.

**Restrictions**: Do not use the ONLINECAT option under the following circumstances:

* You need to start an extraction from a point in the Oracle redo logs that contains data captured for a table under a previous schema.

* You specified the BYPASSUF=Y option in the ORCL CAPI_CONNECTION statement and need to make schema changes for tables registered for CDC while extracting change data.

Default is N.

For more information, see the PowerExchange Reference Manual.
CHAPTER 19

PowerExchange for SQL Server

This chapter includes the following topics:

- PowerExchange 8.6.1 HotFix 1 - New Features and Changes for SQL Server, 125
- PowerExchange 8.6.1 - New Features and Changes for SQL Server, 125
- PowerExchange 8.6 - New Features and Changes for SQL Server, 126

PowerExchange 8.6.1 HotFix 1 - New Features and Changes for SQL Server

This section describes PowerExchange 8.6.1 HotFix 1 new features that are related to Microsoft SQL Server data sources or targets.

New Features in 8.6.1 HotFix 1

PowerExchange 8.6.1 HotFix 1 introduces the following new feature for SQL Server CDC:

CDC Support for SQL Server 2008

PowerExchange introduces support for Microsoft SQL Server 2008 for CDC. PowerExchange CDC does not support the new datatypes introduced with Microsoft SQL Server 2008, such as date, time, datetime2, or datetimeoffset.

PowerExchange 8.6.1 - New Features and Changes for SQL Server

This section describes PowerExchange 8.6.1 new features that are related to Microsoft SQL Server data sources or targets.

New Features in 8.6.1

PowerExchange 8.6.1 introduces the following new features for SQL Server data sources and targets:
Bulk Data Movement Support for SQL Server 2008

PowerExchange introduces support for Microsoft SQL Server 2008 bulk data movement. No special migration steps are required if you used PowerExchange with a previous SQL Server version. Note that SQL Server 2008 CDC does not yet work.

For more information, see the PowerExchange Installation Guide.

Behavior Changes in 8.6.1

PowerExchange 8.6.1 introduces the following behavior change for SQL Server data sources:

CDC Offload Processing

You must configure source CAPI_CONNECTION statements in the dbmover.cfg file on the PowerCenter Integration Service machine. Otherwise, CDC sessions that request offload processing fail. Previously, when you selected CDC offload processing, PowerExchange did not require source CAPI_CONNECTION statements on the PowerCenter Integration Service machine.

For more information, see the PowerExchange CDC Guide for Linux, UNIX, and Windows and PowerExchange Migration Guide.

PowerExchange 8.6 - New Features and Changes for SQL Server

This section describes PowerExchange 8.6 new features and changes that are related to Microsoft SQL Server data sources or targets.

New Features in 8.6

PowerExchange 8.6 introduces the following new features for Microsoft SQL Server data sources and targets:

Offload Processing and Multithreaded Processing

If a system that contains a data source cannot provide the throughput that is necessary for PowerExchange CDC processing, you can use offload processing to distribute this work to the PowerCenter Integration Service machine.

If you use offload processing, you can also use multithreaded processing to help improve the efficiency of the offloaded CDC processing.

SQL Server uniqueidentifier Datatype Support

PowerExchange supports SQL Server columns with the uniqueidentifier datatype for both CDC and bulk data movement.

For more information, see the PowerExchange SQL Server Adapter Guide.

Behavior Changes in 8.6

PowerExchange 8.6 introduces the following behavior change for Microsoft SQL Server installation:
License Key for CDC Options

The algorithm that PowerExchange uses for validating license keys for Microsoft SQL Server CDC has changed. You must enter the new license keys provided by Informatica when you upgrade to 8.6.

For more information, see the PowerExchange Installation Guide.
CHAPTER 20

PowerExchange for VSAM and Flat Files

This chapter includes the following topics:

- PowerExchange 9.0.1 - New Features and Changes for VSAM and Flat Files, 128
- PowerExchange 8.6.1 - New Features and Changes for VSAM and Flat Files, 128
- PowerExchange 8.6 - New Features and Changes for VSAM and Flat Files, 130

PowerExchange 9.0.1 - New Features and Changes for VSAM and Flat Files

This section describes PowerExchange 9.0.1 new features and changes that are related to VSAM and sequential file data sources or targets.

New Features in 9.0.1

PowerExchange 9.0.1 introduces the following new feature for VSAM and sequential file data sources or targets:

Support for VSAM and Sequential Data Sets on z/OS 1.11

PowerExchange 9.0.1 supports change data capture (CDC) and bulk data movement for VSAM data sets and sequential data sets on z/OS version 1.11.

PowerExchange 8.6.1 - New Features and Changes for VSAM and Flat Files

This section describes PowerExchange 8.6 new features and changes that are related to VSAM and sequential data sources or targets.

New Features in 8.6.1

PowerExchange 8.6.1 introduces the following new features for VSAM and sequential file data sources:
Bulk Data Offload Processing
By default, PowerExchange performs column-level processing on the system where the bulk data resides. You can use offload processing to distribute column-level processing to the PowerCenter Integration Service machine that runs the bulk data movement session.
You can also distribute filtering to the Integration Service machine, and use multithreaded processing to increase efficiency.
For more information, see the PowerExchange Bulk Data Movement Guide.

Support for VSAM and Sequential Data Sets on z/OS 1.10
PowerExchange introduces bulk data movement and change data capture (CDC) support for VSAM data sets on z/OS version 1.10. PowerExchange also introduces bulk data movement support for sequential data sets on z/OS version 1.10.
For more information, see the PowerExchange Installation Guide.

Behavior Changes in 8.6.1
PowerExchange 8.6.1 introduces the following behavior changes for VSAM and sequential file data sources:

CDC Offload Processing
You must configure source CAPI_CONNECTION statements in the dbmover.cfg file on the PowerCenter Integration Service machine. Otherwise, CDC sessions that request offload processing fail. Previously, when you selected CDC offload processing, PowerExchange did not require source CAPI_CONNECTION statements on the PowerCenter Integration Service machine.
For more information, see the PowerExchange CDC Guide for z/OS and PowerExchange Migration Guide.

VSAM and Sequential File Offload Processing
In bulk data movement sessions, use the Offload Processing attribute on the PWX NRDB Batch application connection to enable bulk data offload processing for VSAM data sets and sequential files on MVS.
Previously, bulk data offload processing was enabled by the OFFLOADPROCESSING parameter in the DBMOVER configuration file and by the Offload Processing option in data maps.
For more information, see the PowerExchange Migration Guide and PowerExchange Bulk Data Movement Guide.

Parameter and Option Changes in 8.6.1
PowerExchange 8.6.1 introduces the following parameter changes that affect VSAM and sequential file data sources.

DBMOVER Configuration File Statements in 8.6.1
PowerExchange 8.6.1 depreciated the following the DBMOVER configuration file statement:

OFFLOADPROCESSING={Y|N|A|D}

Deleted. Instead of the OFFLOADPROCESSING statement, use the Offload Processing attribute on the PWX NRDB Batch application connection in a bulk data movement session to enable bulk data offload processing for VSAM data sets and sequential files on MVS.
If you previously used the OFFLOADPROCESSING statement, migrate to the new Offload Processing attribute on the PWX NRDB Batch application connection. For more information, see the PowerExchange Reference Manual and PowerExchange Migration Guide.

PowerExchange 8.6 - New Features and Changes for VSAM and Flat Files

This section describes PowerExchange 8.6 new features and changes that are related to VSAM data sources or targets.

New Features 8.6

PowerExchange 8.6 introduces the following new feature for VSAM data sources:

CDC Offload and Multithreaded Processing

If a system that contains a data source cannot provide the throughput that is necessary for PowerExchange CDC processing, you can use offload processing to distribute this work to the PowerCenter Integration Service machine. If you use offload processing, you can also use multithreaded processing to help improve the efficiency of the offloaded CDC processing.
Chapter 21

PowerExchange ODBC

This chapter includes the following topics:

- PowerExchange 9.0 - New Features and Changes for ODBC, 131
- PowerExchange 8.6.1 - New Features and Changes for ODBC, 131

PowerExchange 9.0 - New Features and Changes for ODBC

This section describes PowerExchange 9.0 new features and changes that are related to PowerExchange ODBC.

Tip: To integrate PowerCenter with PowerExchange, Informatica recommends that you use the PowerExchange Client for PowerCenter (PWXPC) instead of PowerExchange ODBC. PWXPC offers additional functionality.

For more information, see PowerExchange Interfaces for PowerCenter.

Online Help Changes in PowerExchange 9.0

The PowerExchange Data Source wizard online help was enhanced for usability. You access the PowerExchange Data Source wizard when you configure an ODBC data source. When you access context-sensitive help for the PowerExchange Data Source wizard, an online help version of the PowerExchange Reference Manual is displayed. This online help provides more comprehensive information about the PowerExchange Data Source wizard than the previous Help.

PowerExchange 8.6.1 - New Features and Changes for ODBC

This section describes PowerExchange 8.6.1 new features that are related to PowerExchange ODBC.

Tip: To integrate PowerCenter with PowerExchange, Informatica recommends that you use the PowerExchange Client for PowerCenter (PWXPC) instead of PowerExchange ODBC. PWXPC offers additional functionality.

For more information, see PowerExchange Interfaces for PowerCenter.
New Feature in 8.6.1

PowerExchange 8.6.1 introduces the following new feature for PowerExchange ODBC:

Application Name Option in PowerExchange ODBC Data Source Dialog Box

When you create a PowerExchange ODBC data source on Windows, you can specify an application name in the PowerExchange Data Source dialog box on the General tab. Install the PowerExchange Open Database Connectivity (ODBC) drivers if you plan to use ODBC to access PowerExchange from PowerCenter.

The application name is used as part of the audit trail for data extractions by the PowerExchange Listener.

For more information, see the PowerExchange Reference Manual.
INDEX

A

Adabas

Adabas version 8.1 support 94
Adabas version 8.2.2 support 92
ADABAS_PREFIX parameter in DBMOVER file 96
ADABASCODEPAGE parameter in DBMOVER file 96
ADAUSER parameter in DBMOVER file 53, 93
behavior changes 8.6.0 95
behavior changes 8.6.1 93
behavior changes 9.0.1 92
ECCR cold start processing 95
IGNORENOCHANGEUPDATES parameter for Adabas ECCR 96
LA field support 94
multithreaded processing 95
MUPEX-formatted file support 94
new features 8.6.0 94
new features 9.0.1 91, 92
offload processing 95
parameter and option changes 8.6.0 96
parameter and option changes 8.6.1 HotFix 5 93
parameter changes 8.6.1 HotFix 5 93
response code 255 handling 95
tape data sets with large block sizes 95
WIDECHAR datatype support 95

advanced parameters

MVS Installation Assistant 27
application connections

for extracting changes from condense files 42
new and changed CDC connection options 39
NRDB Batch connection options 40

capture directory tables, DB2 ECCR
TCATABLEPART table 114
upgrading for new DB2 versions 114
CAPXRT source

Adabas FDT password in database row test 75
change extraction pushdown optimization 73
checkpoint files 65
COMMITINT 112
condense files

allocation parameters for partial condense files 48
maximum sequence number in file names 48
configuration file

overriding for PowerExchange Condense 47

D
data maps caching

PowerExchange 9.0.1 79
data sources

version changes in PowerExchange 8.6.1 HotFix 1 17
versions added in PowerExchange 8.6.1 HotFix 1 17
versions added in PowerExchange 9.0 13
versions added in PowerExchange 9.0.1 9
versions added in PowerExchange 9.1.0 4
versions supported in PowerExchange 8.6.1 20
versions supported in PowerExchange 9.0 12
versions supported in PowerExchange 9.0.1 8
versions supported in PowerExchange 9.1.0 3
database row test

Adabas FDT password 75
Datacom

new features 8.6.0 99
new features 8.6.1 99
offload and multithreaded processing 99
parameter and option changes 9.1.0 98
table-based CDC 99
table-level security enhancement 99
Datacom table-based ECCR

LOCAL_TIME parameter 98
DB2 for i5/OS

ALWCLRPFM parameter on AS4J CAPI_CONNECTION 108
ALWPARTIAL parameter on AS4J CAPI_CONNECTION 110
Array Size option on PWXPC relational connections 38
AS400EVENTMSGQ statement 109
AS4J CAPI_CONNECTION, LIBASUSER parameter 106
behavior changes 8.6.0 110
event message queue 109
extracting the relative record number 107
MINTDINDEX parameter 110
multiple-row fetch for bulk data movement 106
new features 8.6.0 109
new features 8.6.1 109
new features 8.6.1 HotFix 10 107
new features 8.6.1 HotFix 5 107
new features 9.0.1 106
Index

E
ECSA memory
PWXUDMX utility 88
encryption
Oracle Transparent Data Encryption 122

G
GetCurrentFileName function
to get name of data file from which data is read 76
getting file name
for a record in a data map 76
group source processing
IMS unload files 38

I
IDMS
Presspack compression support for CDC 115
Version 17 support 116

new features 9.1.0 105
parameter and option changes 8.6.0 110
parameter and option changes 8.6.1 109
parameter and option changes 8.6.1 HotFix 5 107
parameter and option changes 9.0.1 106
remote journals 110
RMTRDBDIRE parameter 108
RMTSYSNAME parameter 108
running PowerExchange on system with remote journals 107
Version 7.1 support 105
DB2 for i5/OS stored procedures
as a source in PowerExchange Client for PowerCenter (PWXPC) 32
DB2 for Linux, UNIX, and Windows
behavior changes 8.6.0 104
FixPak levels required for CDC 103
license key validation for CDC 104
new features 8.6.0 103
new features 8.6.1 102, 103
new features 8.6.1 HotFix 11 102
new features 9.0.1 101
offload and multithreaded processing 103
version 9.1 and 9.5 support for CDC 102
version 9.7 support 101, 102
DB2 for z/OS
behavior changes 8.6.0 114
CDC limitation and SQL TRUNCATE IMMEDIATE option 114
Correlation Id attribute on PWX DB2zOS connection 43
DB2 ECCR capture directory table 114
DB2 ECCR cold start processing 114
DECFLOAT and XML datatype limitations 114
displaying statistics on SQL changes to tables 113
new features 8.6.1 113, 114
new features in 9.0.112
offload and multithreaded processing 114
offload processing for bulk data movement 113
parameter and option changes 9.0.1 112
REPL2OPT statement COMMITINT 112
SQ option on ECCR DISPLAY command 113
tcpaptablepart capture directory table 114
upgrading capture directory tables 114
Version 10 support 111
version 9.1 support 114
DB2 for z/OS stored procedures
as a source in PowerExchange Client for PowerCenter (PWXPC) 32
DBMOVER configuration file parameters
Adabas new parameters 93, 96
Adabas new parameters 8.6.1 HotFix 5 93
ADABAS_PREFIX parameter 58, 96
ADABASCODEPAGE parameter 58, 96
ADAUER parameter 53, 93
ALWCLRPFM parameter on AS4J CAPI_CONNECTION 53, 108
ALWPARTIAL parameter on AS4J CAPI_CONNECTION 58, 110
AS400EVENTMSGQ statement 109
AS4J CAPI_CONNECTION, LIBASUSER parameter 106
CMDNODE parameter 56
new and changed monitoring and performance parameters 84
new and changed parameters 8.6.1 56
new and changed parameters 8.6.1 HotFix 5 53
new and changed parameters 9.0.37
new and changed parameters 9.0.1 53
new and changed parameters 9.1.0 49
new monitoring and tuning parameter 79
OFFLOADPROCESSING parameter 56
ONLINECAT parameter on ORCL CAPI_CONNECTION 58
Oracle 124
ORCL CAPI_CONNECTION IGNUMFMSG option 122
ORCL CAPI_CONNECTION ONLINECAT option 124
REPNODE parameter on CAPI_CONNECTION 58
RMTRDBDIRE parameter 53, 108
RMTSYSNAME parameter 53, 108
SHOW THREAD PERF parameter 56
SUBCMMIT_THRESHOLD parameter 58
SVNCNODE parameter 56
TCP/IP_ASYNC parameter 56
TRACING parameter change 53
UNIT parameter 58
DBMOVER configuration file statements
DM_SUBTASK 80
DMXCACHE_DELETEECSA 80
DMXCACHE_MAX_MEMORY_MB 80
DMXCACHE_MULTIPLEJOBS 80
OFFLOADPROCESSING 129
OFFLOADPROCESSING parameter 84
SHOW THREAD PERF 80
SHOW THREAD PERF parameter 84
TCP/IP_ASYNC parameter 84
TCP/IP_SHOW_POOLING 80
WRT_ERROR_HANDLING 80
documentation changes
DTLURDMO documentation enhancement 23
Migration Guide changes in PowerExchange 8.6.1 HotFix 5 13, 15, 131
MVS Installation Assistant Help 13, 22
MVS Installation Assistant online help 4
MVS Installation Assistant online help changes in PowerExchange 9.1.0 4
new and changed titles in PowerExchange 8.6.0 25
new and changed titles in PowerExchange 8.6.1 22
online help changes in PowerExchange Navigator 9.0.76
organizational changes in PowerExchange 8.6.0 26
organizational changes in PowerExchange 9.0.0 13
PowerExchange 8.6.0 changes 25
PowerExchange 8.6.1 changes 22
PowerExchange Message Reference 5
DTCURBRS utility
CRGPREFX parameter change 89
NOTIFYCHANGES parameter change 88
DTPURDMO utility
documentation enhancement 23
new parameters in 8.6.1 HotFix 10 90
new statements 90

E
ECDSA memory
PWXUDMX utility 88
encryption
Oracle Transparent Data Encryption 122

G
GetCurrentFileName function
to get name of data file from which data is read 76
getting file name
for a record in a data map 76
group source processing
IMS unload files 38
IMS
batch terminal simulator (BTS) jobs 120
behavior changes 8.6.0 120
group source processing for IMS unload files 119
new features 8.6.0 119
new features 8.6.1 118
new features 9.1.0 117
offload and multithreaded processing for CDC 118
security for write access to IMS databases 118
synchronous ECCR requirement for CRG software 120
synchronous ECCR use of CSA 120
unload data set processing for bulk data movement 119
version 10 support added 119
version 11 support 118
z/Architecture mode requirement 120
IMS log-based ECCR
DTLCIMX ECCR program 117
IMS synchronous CDC
new BMC Software components in CRG.LOAD library 117
IMS unload files
group source processing 38
infacmd pwx commands
to manage PowerExchange Listener Service 50
to manage PowerExchange Logger Service 61
Informatica Administrator
PowerExchange Logger Service 63
installation
behavior changes 8.6.1 29, 30
license key validation for CDC 30
PowerExchange 8.6.0 changes 30
PowerExchange 8.6.1 changes 29
PowerExchange 9.0 documentation changes 28
PowerExchange 9.1.0 changes 27
Windows Path environment variable 29, 30
interoperability of PowerExchange versions
PowerExchange 8.6.1 and 8.6.0 22, 29

L
LA fields, Adabas 94
license key file
overriding for PowerExchange Condense 47
validation of license keys for CDC 30, 104
LOCAL_TIME parameter
Datacom table-based ECCR 98
LOGPRINT sample member
JCL changes 74

M
materialized views
CDC support 121
Microsoft SQL Server
behavior changes 8.6.0 126
license key requirement for CDC 127
new features 8.6.0 126
offload and multithreaded processing for CDC 126
Minimized Entry Specific Data (MINENTDTA) parameter 110
monitoring and tuning
bulk data offload and multithreaded processing 82
bulk data offloading processing 81
CDC offload processing 82
CDC session performance details 83
monitoring CDC sessions in PowerExchange 84
new features 8.6.1 82
new features 9.0 81
new features 9.0.1 78

VSAM and sequential file offloading processing 84
multiple-row fetch for DB2 for i5/OS sources 106
multithreaded processing
Adabas CDC processing 95
bulk data movement processing 82
CDC application connection attributes 86
Datacom CDC processing 99
DB2 for Linux, UNIX, and Windows CDC processing 103
DB2 for z/OS CDC processing 114
Oracle CDC processing 123
PWXPC CDC processing 42
SQL Server CDC processing 126
VSAM CDC processing 130
MUPEX function, Adabas 94
MVS Installation Assistant
online help 4
online Help 13, 22
PowerExchange 9.1.0 27
MVS Installation Assistant online help
changes in PowerExchange 9.1.0 4

N
Netport jobs
substitution variables 55
NRDB Batch application connections
Offload Processing attribute 36
PWX Override new value 34

O
ODBC
application name for ODBC data sources 132
new feature 8.6.1 132
offload processing
Adabas CDC processing 95
bulk data movement processing 38, 81, 82
Datacom CDC processing 99
DB2 for Linux, UNIX, and Windows CDC processing 103
DB2 for z/OS bulk data movement 113
DB2 for z/OS CDC processing 114
distributing CDC to the Integration Service machine 82, 85
distributing UOW Cleanser processing 83
enabling for VSAM data sets and sequential files 84
Oracle CDC processing 123
PowerExchange Logger for Linux, UNIX, and Windows offload processing 69
PowerExchange Logger for Linux, UNIX, and Windows processing 82
PWXPC CDC processing 42
removal of Offload Processing option in PowerExchange Navigator 77
requirement for source CAPI_CONNECTION statement 83
SQL Server CDC processing 126
VSAM bulk data movement 129
VSAM CDC processing 130
online help
MVS Installation Assistant 4
online Help
MVS Installation Assistant 13, 22
operating systems
version changes in PowerExchange 8.6.1 HotFix 1 17
versions added in PowerExchange 8.6.1 HotFix 1 17
versions added in PowerExchange 9.0 12
versions added in PowerExchange 9.0.1 9
versions added in PowerExchange 9.1.0 4
versions supported in PowerExchange 8.6.1 20
versions supported in PowerExchange 9.0 12

Index 135
versions supported in PowerExchange 9.0.1 8
versions supported in PowerExchange 9.1.0 3
Windows support in PowerExchange 9.0.1 HotFix 1 5
Oracle
  behavior change 8.6.1 122
  BINARY_DOUBLE and BINARY_FLOAT datatypes 123
  CDC support for Transparent Data Encryption (TDE) 122
  materialized views 121
  new features 8.6.0 123
  new features 9.0.1 121
  offload and multithreaded processing 123
  Oracle 11g Release 2 support 121
  Oracle version 11g support 123
  ORCL CAPI_CONNECTION IGNUFMSG option 122
  ORCL CAPI_CONNECTION ONLINECAT option 124
  parameter and option changes 8.6.0 124
  parameter and option changes 8.6.1 122
  progress messages for startup and CDC 122

P
  partitioning
    writer partitioning 33, 79
  Path environment variable, Windows 29, 30
  performance
    CDC session performance details 83
  pipeline partitioning
    writer partitioning 33, 79
  PowerCenter 8.6.0
    PWXPC new features and changes 41
  PowerCenter 8.6.1
    CDC application connection options 39
    DB2 bulk data connection options 38, 39
    NRDB Batch application connection options 40
    parameters and options for PWXPC connections 39
    PWXPC new features and changes 38
  PowerCenter 9.0
    PWXPC connection attribute changes 36
    PWXPC new features and changes 35
  PowerCenter 9.0.1
    PWXPC new features and changes 32
    PWXPC parameter changes 33
  PowerCenter 9.1.0
    PWXPC new features and changes 31
  PowerExchange 8.6.0
    Adabas new features and changes 94
    Datacom new features and changes 99
    DB2 for i5/OS new features 109
    DB2 for Linux, UNIX, and Windows new features and changes 103
    DB2 for z/OS new features and changes 113
    documentation changes 25
    IMS new features and changes 119
    installation changes 30
    new features summary 23
    Oracle new features and changes 123
    parameter changes summary 24
    PowerExchange Condense new features and changes 47
    PowerExchange Listener changes 58
    PowerExchange Logger for MVS new features and changes 72
    PowerExchange Navigator new features 77
    SQL Server new features and changes 126
    VSAM new features 130
  PowerExchange 8.6.1
    Adabas behavior changes 93
    Datacom new features and changes 99
    DB2 for i5/OS new features 108
    DB2 for Linux, UNIX, and Windows changes 102
    DB2 for z/OS new features and changes 113
    documentation changes 22
    IDMS new features 116
    IMS new features and changes 118
    installation changes 29
    interoperability with PowerExchange 8.6.0 22, 29
    monitoring and tuning new features 82
    new features summary 18
    ODBC new feature 131
    operating systems and data sources supported 20
    Oracle parameter and option changes 122
    parameter changes summary 19
    PowerExchange Condense behavior changes 47
    PowerExchange Listener new features and changes 56
    PowerExchange Logger for LUW new features and changes 67
    PowerExchange Navigator new features and changes 76
    PowerExchange utility new features and changes 90
    SQL Server new feature 125
    VSAM new features and changes 128
  PowerExchange 8.6.1 HotFix 1
    new features summary 16
    operating system and data source changes 17
    parameter changes summary 16
    PowerExchange Listener new features and changes 55
    PowerExchange Logger for LUW new features and changes 67
    SQL Server new feature 125
  PowerExchange 8.6.1 HotFix 10
    DB2 for i5/OS new features 106
    parameter changes summary 14
    PowerExchange utility new features and changes 89
  PowerExchange 8.6.1 HotFix 11
    DB2 for Linux, UNIX, and Windows changes 102
  PowerExchange 8.6.1 HotFix 3
    new features summary 16
    PowerExchange Listener new features and changes 55
  PowerExchange 8.6.1 HotFix 5
    Adabas parameter changes 93
    DB2 for i5/OS new features 107
    documentation changes 15
    parameter changes summary 10, 15, 46
    PowerExchange Listener new features and changes 53
  PowerExchange 9.0
    DB2 for i5/OS new features and changes 106
    documentation changes 13, 131
    installation documentation changes 28
    monitoring and tuning new features 81
    new features summary 9
    online help changes 76
    operating systems and data sources supported 12
    PowerExchange Condense behavior changes 44
    PowerExchange Logger for LUW new features and changes 62
    PowerExchange Navigator new features and changes 76
    PowerExchange utility new features and changes 88
  PowerExchange 9.0.1
    command changes summary 7
    DB2 for i5/OS new features and changes 105
    DB2 for Linux, UNIX, and Windows changes 101
    DB2 for z/OS changes 112
    monitoring and tuning new features 78
    new features summary 6
    operating systems and data sources supported 8
    Oracle CDC new features 121
    parameter changes summary 7
    PowerExchange Condense behavior changes 44
    PowerExchange Logger for LUW new features and changes 61
    PowerExchange Navigator new features and changes 75
    PowerExchange utility new features and changes 88

136 Index
PowerExchange 9.0.1 HotFix 1
Windows support 5
PowerExchange 9.1.0
Datacom new features and changes 98
DB2 for i5/OS changes 105
DB2 for z/OS changes 111
documentation changes 4
IMS new features and changes 117
installation changes 27
new features summary 2
operating systems and data sources supported 3
parameter changes summary 3
PowerExchange Listener parameter changes 49
PowerExchange Logger for MVS changes 72
PowerExchange Navigator new features and changes 75
PowerExchange utility new features and changes 87
PowerExchange 9.1.0 documentation changes
PowerExchange Message Reference 5
PowerExchange 9.1.0 new features
advanced parameters in the MVS Installation Assistant 27
PowerExchange Client for PowerCenter (PWXPC)
APPL_ID column in state table 42
behavior changes 8.6.0 42
bulk data offload processing 38
case-sensitive filters for importing table metadata 41
CDC application connections 39
CDC extraction from condense files 42
CDC restart token validation 43
CDC session performance details 83
connection attribute changes in 9.0 36
connection parameter and option changes 39
Correlation Id on PWX DB2zOS connection 43
current restart token generation 42
DB2 for i5/OS relational connection options 38
DB2 relational connection options 39
DB2 stored procedure transformations 35, 112
DBMOVER parameter changes in 9.0 33
extracting changes from condense files 42
group source processing for IMS unload files 38
new features and changes 8.6.0 41
new features and changes 8.6.1 38
new features and changes 9.0 35
new features and changes 9.0.1 32
new features and changes 9.1 31
offload and multithreaded processing for CDC 42
offload processing for bulk data movement 38
performance for CDC extractions 43
sub-packet commit processing 42, 43
variables for session properties 42
PowerExchange Condense
allocation parameters for partial condense files 48
behavior changes 8.6.0 48
behavior changes 8.6.1 47
behavior changes 9.0 44
behavior changes 9.0.1 44
CONFIG and LICENSE override parameters 47
CONN_OVR parameter to override CAPI_CONNECTION 47
maximum sequence number in condense file names 48
migration to PowerExchange Logger for LUW 44
new features and changes 8.6.0 47
new features in 8.6.7
new features in 9.0 45
overriding CAPI connection 47
overriding configuration and license key files 47
replacement on Linux, UNIX, and Windows 47
terse messages 48
PowerExchange Listener
application name in STOPTASK command in Navigator 77
behavior changes 8.6.0 58
CAPI_CONNECTION statement changes 58
DBMOVER configuration file parameter changes 56
DBMOVER parameter changes in 9.1.0 49
MVS tape data sets with large block sizes 58
new features and changes 8.6.1 56
new features and changes 8.6.1 HotFix 1 55
new features and changes 8.6.1 HotFix 3 55
parameter and option changes 8.6.0 58
parameter and option changes 8.6.1 56
parameter and option changes 8.6.1 HotFix 10 53
parameter and option changes 8.6.1 HotFix 5 53
pwxcmd command security 56
started task name change 58
TRACING parameter change 53
PowerExchange Listener Service
using infacmd pwx commands to manage 50
PowerExchange Logger for Linux, UNIX, and Windows
checkpoint file changes 65
COLDSTART parameter 65
display commands 62
display status command changes 66
introduced as new feature 69
new features 8.6.1 69
new features 8.6.1 HotFix 1 67
new features 9.0 62
new features 9.0.1 61
offload processing for CDC 69
parameter changes 8.6.1 70
parameter changes 8.6.1 HotFix 1 67
parameter changes 9.0 64
pwxcmd commands 28, 45, 51, 62, 70
PWXUCDCT utility 63
running in the background 66
task and subtask changes 66
PowerExchange Logger for MVS
behavior changes 8.6.0 73
filtering source interest list 73
increasing size of active log data sets 73
JCL changes in LOGPRINT member 74
new features and changes 8.6.0 72
new features and changes in 9.1.0 72
pushdown optimization for extracting changes 73
z/OS 1.12 APAR and log size requirements 72
PowerExchange Logger Service
using infacmd pwx commands to manage 61
PowerExchange Message Reference
PowerExchange 9.1.0 changes 5
PowerExchange Navigator
Adabas FDT password in database row test 75
behavior changes 8.6.1 77
generating current restart tokens 77
issuing STOPTASK command with application name 77
Microsoft Windows Vista support 77
new features 8.6.0 77
new features and changes 8.6.1 76
new features and changes 9.0 76
new features and changes 9.0.1 75
new features and changes 9.1.0 75
removal of Offload Processing option 77
PowerExchange utilities
DLTUCBRG parameter change 88, 89
DLTURDMO copy statements 90
DLTURDMO parameters in 8.6.1 HotFix 10 90
new features 9.0 88
new features 9.0.1 88
new features 9.1.0 87
new features in 8.6.1 90
parameter and option changes in 8.6.1 HotFix 10 89
parameter and option changes in 9.1.0 87
pwxccl configuration file
  CAPTURE_NODE parameter 67, 70
  CAPTURE_NODE_EPWD parameter 67, 70
  CAPTURE_NODE_PWD parameter 67, 70
  CAPTURE_NODE_UID parameter 67, 70
  CONDENSENAME parameter 70
  EPWD parameter 67, 70
  LOGGER_DELETED_EXPIRED_CDCT_RECORDS parameter 64
  MAXRetention_EXPIRY_DAYS parameter 64
  NO_DATA_WAIT parameter 64
  parameters 8.6.1 70
  parameters 8.6.1 HotFix 1 67
  parameters 9.0.6 67
  PROMPT parameter 64
  PWD parameter 67
  UID parameter 67
  VERBOSE parameter 64
pwxcmd commands
  displaystatus command change 66
  PowerExchange Listener command security 56
  PowerExchange Logger for Linux, UNIX, and Windows 62
  PowerExchange Logger for Linux, UNIX, and Windows commands 28, 45, 51, 70
PWXPC connections
  Offload Processing attribute on NRDB Batch connections 36
  PWX Override attribute values 36
  WRT_ERROR_HANDLING override 34
PWXUCDCT utility 63
PWXUDMX utility
  overview 88
R
reader partitioning
  PWX Partition Strategy session property 36
  session properties
    bulk data movement sessions with reader partitions 36
REPL2OPT statements 112
restart token file
  override statements for generating tokens 42
S
security
  PowerExchange Listener pwxcmd commands 56
  selective sign-on facility 55
  selective sign-on facility 55
sequential files
  offload processing for bulk data movement 129
  writer partitioning 33, 79
  z/OS version 1.10 support 129
  z/OS version 1.11 support 128
session properties
  bulk data movement with writer partitions 34
  PWX Partition Strategy property 34, 36
SQL Server
  behavior changes 8.6.0 126
  license key requirement for CDC 127
  new features 8.6.0 126
  new features 8.6.1 125
  new features 8.6.1 HotFix 1 125
  offload and multithreaded processing for CDC 126
  SQL Server 2008 support 125, 126
  uniquedatatype support 126
stored procedure transformations
  support for DB2 for z/OS stored procedures 35, 112
substitution variables
  Netport jobs 55
T
tape data sets
  MVS tape data sets with large block sizes 58
  TCPIP_ACT_TIMEOUT override 36
  TCPIP_CON_TIMEOUT override 36
transformations
  stored procedure 35, 112
U
utilities
  DTLUCBRG CRGPREFIX parameter change 89
  DTLUCBRG NOTIFYCHANGES parameter change 88
  DTLURDMO utility copy statements 90
  DTLURDMO utility parameters in 8.6.1 HotFix 10 90
  new features 9.0 88
  new features 9.0.1 88
  new features 9.1.0 87
  new features in 8.6.1 90
V
VSAM
  behavior changes 8.6.1 129
  new features 8.6.0 130
  new features 8.6.1 128
  offload and multithreaded processing 130
  offload processing for bulk data movement 129
  OFFLOADPROCESSING statement in DBMOVER 129
  parameter and option changes 8.6.1 129
  writer partitioning 33, 79
  z/OS version 1.10 support 129
  z/OS version 1.11 support 128
W
Windows 2008 support 21
  Windows Path environment variable 29, 30
  Windows Vista support 77
writer partitioning
  session properties 34