



Informatica® PowerExchange
10.4.0

Installation and Upgrade Guide

Informatica PowerExchange Installation and Upgrade Guide
10.4.0
December 2019

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Preface

Use the *Informatica® PowerExchange® Installation and Upgrade Guide* to learn how to install and upgrade the PowerExchange product and apply hotfixes. This guide also includes planning information for PowerExchange installation or upgrade operations.

Informatica Resources

Informatica provides you with a range of product resources through the Informatica Network and other online portals. Use the resources to get the most from your Informatica products and solutions and to learn from other Informatica users and subject matter experts.

Informatica Network

The Informatica Network is the gateway to many resources, including the Informatica Knowledge Base and Informatica Global Customer Support. To enter the Informatica Network, visit <https://network.informatica.com>.

As an Informatica Network member, you have the following options:

- Search the Knowledge Base for product resources.
- View product availability information.
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Use the Informatica Knowledge Base to find product resources such as how-to articles, best practices, video tutorials, and answers to frequently asked questions.

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Use the Informatica Documentation Portal to explore an extensive library of documentation for current and recent product releases. To explore the Documentation Portal, visit <https://docs.informatica.com>.

If you have questions, comments, or ideas about the product documentation, contact the Informatica Documentation team at infa_documentation@informatica.com.

Informatica Product Availability Matrices

Product Availability Matrices (PAMs) indicate the versions of the operating systems, databases, and types of data sources and targets that a product release supports. You can browse the Informatica PAMs at <https://network.informatica.com/community/informatica-network/product-availability-matrices>.

Informatica Velocity

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

You can find Informatica Velocity resources at <http://velocity.informatica.com>. If you have questions, comments, or ideas about Informatica Velocity, contact Informatica Professional Services at ips@informatica.com.

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Informatica Global Customer Support

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

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

<https://www.informatica.com/services-and-training/customer-success-services/contact-us.html>.

To find online support resources on the Informatica Network, visit <https://network.informatica.com> and select the eSupport option.

CHAPTER 1

PowerExchange Installation and Upgrade Overview

This chapter includes the following topics:

- [Installation and Upgrade Guide Scope, 12](#)
- [PowerExchange Overview, 13](#)
- [PowerExchange Components, 13](#)

Installation and Upgrade Guide Scope

This guide provides PowerExchange installation and upgrade instructions. It also covers prerequisites and planning information.

The guide provides step-by-step instructions for performing the following types of installation:

- **Full installation.** Installs all PowerExchange software. Perform a full installation to install PowerExchange for the first time or in a new location.
- **Upgrade installation.** Installs a new release of PowerExchange over an existing installation.
- **Hotfix installation.** Installs a hotfix for a PowerExchange release over an existing installation at the same release level.

Instructions are provided for the following types of operating systems:

- IBM i (formerly i5/OS)
- Linux and UNIX
- Windows
- z/OS

This guide also covers the following planning topics for consideration before performing an installation or upgrade:

- PowerExchange components. This topic applies to new PowerExchange users.
- Software requirements for each supported database and operating system. This topic applies to all PowerExchange users.
- License keys. This topic applies to all PowerExchange users.

- PowerExchange interoperability with PowerCenter® and with earlier releases of PowerExchange. This topic applies to all users who are installing PowerExchange for the first time or upgrading to a new release.
- PowerExchange environment. Describes the PowerExchange data files and directories, configuration parameters, environment variables, and other elements that comprise the PowerExchange environment on each operating system.
- Upgrade planning. Discusses strategies and steps for preserving PowerExchange data under different upgrade scenarios. This topic applies to all PowerExchange users, especially those who are upgrading to a new PowerExchange release. Users who are installing PowerExchange for the first time can also use this information to plan their environment so that future upgrades are as easy as possible.
- Upgrade considerations. Discusses considerations for upgrading to specific PowerExchange releases and coordination with PowerCenter upgrades. This topic applies to PowerExchange users who are upgrading to a new PowerExchange release.

Caution: Perform only one type of installation on a system at a time. If you install the software in both the software and patches folders, the installation does not work properly.

PowerExchange Overview

PowerExchange can help you synchronize a data source with a data target. PowerExchange performs the following basic functions:

- Bulk data movement. Use this function to materialize or entirely refresh a data target. This function can move large amounts of data between different platforms efficiently. However, frequent bulk data movement operations can be costly in terms of space, time, and staff resources.
- Change data capture (CDC). Use this function to capture changes to a data source and apply them to a target in near real time or asynchronously. PowerExchange CDC can capture insert, update, and delete changes that are made to a data source. PowerExchange CDC has minimal impact on the performance and availability of the source database, tables, and files.

PowerExchange provides two types of CDC:

- Synchronous CDC. Occurs in real time by integrating into the transaction performing the change.
- Asynchronous CDC. Captures the changes from database log files.

PowerExchange works with PowerCenter to enable you move bulk data and change data to a variety of data targets.

PowerExchange Components

PowerExchange uses some or most of following components, depending on your operating system and whether you are performing CDC, bulk data movement, or both.

PowerExchange Agent

On a z/OS system, the PowerExchange Agent verifies capture registration information, provides registration information to some types of ECCRs, and manages global queues and data flow among CDC components.

The PowerExchange Agent provides capture registrations to the following ECCRs:

- DB2 for z/OS
- IMS synchronous
- Batch VSAM
- CICS/VSAM

Other ECCRs read capture registration information directly from the CCT data set. For all of the ECCRs, the PowerExchange Agent verifies the capture registration information.

The PowerExchange Agent also manages global queues and data flow among various PowerExchange CDC components.

Use of the PowerExchange Agent is required for CDC on z/OS.

PowerExchange Condense

On an i5/OS or z/OS system, PowerExchange Condense stores change data in condense files and optionally condenses it. The condense files store only the successfully completed units of work (UOWs), in chronological order by end time. When an extraction session runs, change data is extracted from the condense files rather than from the change stream. You can run multiple Condense jobs at a time.

Use of PowerExchange Condense is optional on i5/OS and z/OS. On Linux, UNIX, or Windows, use the PowerExchange Logger.

PowerExchange Environmental Change Capture Routine (ECCR)

On a z/OS system, an ECCR captures change data from a data source and passes the captured changes to the PowerExchange Logger for recording. PowerExchange provides an ECCR for each type of data source on z/OS. Depending on the source type, the ECCR captures changes synchronously as they are made or asynchronously from database logs.

Use of an ECCR for the data source is required for CDC on z/OS.

PowerExchange Listener

The PowerExchange Listener coordinates activities across platforms, initiates requests, or processes requests from third-party applications.

More specifically, the PowerExchange Listener performs the following functions:

- Manages data maps for bulk data movement jobs and CDC for nonrelational sources and optionally for DB2 tables.
- Manages capture registrations and extractions maps for CDC data sources.
- Makes bulk data and change data available to the PowerExchange Navigator for database row tests.
- Makes bulk data and change data available to PowerCenter when you run a PowerCenter session.
- Interacts with other PowerExchange Listeners on other nodes to facilitate communication among the PowerExchange Navigator, PowerCenter Integration Service, data sources, and any system to which PowerExchange processing is offloaded.

If a data source or data target is remote from the system on which you are using PowerExchange, you must also run a PowerExchange Listener that has access to the data.

Use of the PowerExchange Listener is required for bulk data movement and CDC.

PowerExchange Logger for Linux, UNIX, and Windows

The PowerExchange Logger for Linux, UNIX, and Windows captures and stores change data in PowerExchange Logger log files. The log files store only the successfully committed UOWs, in chronological order by end time. When an extraction session runs, the change data is extracted from the PowerExchange Logger log files rather than from the database logs.

Use of the PowerExchange Logger is optional on Linux, UNIX, or Windows. On i5/OS or z/OS, use PowerExchange Condense.

PowerExchange Logger for z/OS

The PowerExchange Logger for z/OS receives captured change data from the ECCRs that are connected to it and stores the change data in log data sets. The change data is then available for real-time extractions or PowerExchange Condense jobs.

Use of the PowerExchange Logger is required for CDC on z/OS.

PowerExchange Navigator

The PowerExchange Navigator is the graphical user interface (GUI) from which you define and manage data maps, capture registrations, and extraction maps for the data sources from which you want to extract bulk data or capture change data.

PowerExchange uses these definitions to determine the data sources to process. Capture registrations and extraction maps pertain to CDC only. Data maps are required to perform bulk data movement operations and to provide metadata for capture registrations.

Installing PowerExchange Components

The PowerExchange components that you must install depend on whether you want to perform bulk data movement operations, CDC processing, or both.

The following table lists which components are required to perform bulk data movement or CDC and provides references to the relevant PowerExchange documentation for customizing the component:

Component	Bulk	CDC	Reference
PowerExchange Agent	-	X	<i>PowerExchange CDC Guide for z/OS</i>
PowerExchange Condense	-	X Optional	- <i>PowerExchange CDC Guide for i5/OS</i> - <i>PowerExchange CDC Guide for z/OS</i>
PowerExchange Environmental Change Capture Routine (ECCR), for each data source	-	X	<i>PowerExchange CDC Guide for z/OS</i>
PowerExchange Listener	X	X	- <i>PowerExchange Reference Manual</i> - <i>PowerExchange Bulk Data Movement Guide</i> - <i>PowerExchange CDC Guide for i5/OS</i> - <i>PowerExchange CDC Guide for Linux, UNIX, and Windows</i> - <i>PowerExchange CDC Guide for z/OS</i>

Component	Bulk	CDC	Reference
PowerExchange Logger for Linux, UNIX, and Windows	-	X Optional	<i>PowerExchange CDC Guide for Linux, UNIX, and Windows</i>
PowerExchange Logger for z/OS	-	X	<i>PowerExchange CDC Guide for z/OS</i>
PowerExchange Navigator	X	X	- <i>PowerExchange Navigator User Guide</i> - <i>PowerExchange Reference Manual</i>

CHAPTER 2

Installation Planning

This chapter includes the following topics:

- [Installation Planning Overview, 17](#)
- [Where to Install PowerExchange, 18](#)
- [Software Requirements for PowerExchange, 18](#)
- [PowerExchange 32-Bit and 64-Bit Executables on Windows, 29](#)
- [PowerExchange License Keys, 29](#)
- [PowerExchange Interoperability with PowerCenter, 30](#)
- [PowerExchange Interoperability with Informatica Services Products , 31](#)
- [PowerExchange Interoperability with Informatica Intelligent Cloud Services Data Integration Service, 32](#)
- [PowerExchange Interoperability with PowerExchange CDC Publisher, 32](#)
- [PowerExchange Interoperability with Informatica Data Archive, 33](#)
- [PowerExchange to PowerExchange Interoperability, 33](#)
- [Organization of the Downloaded PowerExchange Installation File, 34](#)

Installation Planning Overview

Before you install PowerExchange for the first time or upgrade to a new release, review the installation planning information to ensure that you can successfully install and use the product.

Perform the following planning tasks:

- Verify that your operating systems and data sources and targets meet the version and maintenance requirements that are specified for the PowerExchange release and functions that you want to use.
Note: The term *data source* refers generically to the relational databases and nonrelational sources from which PowerExchange reads data. The term *data targets* refers generically to the relational databases and nonrelational targets to which PowerExchange writes data.
- Obtain a license key.
- To use a PowerExchange installation with an earlier version of PowerExchange or PowerCenter, review the PowerExchange and PowerCenter interoperability information.
- Plan your PowerExchange environment to make current and future migrations as easy as possible.
- If you are upgrading from a previous PowerExchange release, review the upgrade planning and upgrade consideration information. See [Appendix A, “Upgrade Considerations” on page 170](#).

Where to Install PowerExchange

Install PowerExchange on each of the following systems:

- Each PowerExchange data source or target system
- Windows system on which you will run the PowerExchange Navigator
- PowerCenter Client or Informatica Developer client system
- PowerCenter Integration Service or Data Integration Service system

Software Requirements for PowerExchange

Review the topics for your operating systems to ensure that your operating systems and data sources are supported for the functions that you want to perform.

For more information about product requirements and supported platforms, see the Product Availability Matrix on Informatica Network:

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

Software Requirements for IBM i

PowerExchange supports the following 64-bit versions of the IBM i (i5/OS) operating system for bulk data movement and CDC:

- 7.4
- 7.3
- 7.2

The following table lists the data source or target versions that PowerExchange supports on IBM i for bulk data movement and CDC:

Data Source or Target	Version	Bulk	CDC
DB2 for IBM i	7.4 7.3 7.2	X	X (sources only)
Flat file	-	X	Not supported

DB2 for IBM i Version 7.2 Restrictions: The following restrictions apply to DB2 for IBM i version 7.2 only:

- If you use the DB2400C access method for a DB2 for IBM i 7.2 source and specify SECURITY=(2,x) in the DBMOVER file, bulk data movement operations that use ODBC and database row tests fail with an SQL error similar to the following one:

```
PWX-02302 CLI SQLState=42977. Native=-7022. User USER1 not the same as current user USER2.
```

This restriction is related to an IBM change to the DB2 interface that the DB2400C access method uses in IBM i 7.2.

- PowerExchange CDC does not honor Row and Column Access Control (RCAC) rules because of a DB2 limitation. When PowerExchange tries to process journal entries for tables that have RCAC rules applied, the columns or rows are not masked or filtered based on the rules. RCAC rules were introduced in DB2 for IBM i 7.2.

Software Requirements for Linux, UNIX, and Windows

Verify that your Linux, UNIX, or Windows system meets the operating system and data source requirements for the PowerExchange functions that you plan to perform. Additionally, apply the required maintenance to your operating system and data sources.

Supported AIX Versions and Data Sources and Targets

PowerExchange supports the following versions of the AIX operating system on 64-bit IBM Power systems for bulk data movement and CDC:

- 7.2
- 7.1 TL2 (minimum certified)

For CDC, you must install the bos.adt.debug package to get the libptools_ptr.a library. This library is required to create PowerExchange registration groups and capture registrations. Download the package from the IBM Web site.

The following table lists the data sources or targets that PowerExchange supports on AIX:

Data Source or Target	Data Source or Target Version	Bulk	CDC
DB2 for Linux, UNIX, and Windows	11.1 10.5	X	X (sources only)
Flat file	-	X	Not supported
Oracle	18c ¹ 12c R2 ¹	X	X (sources only)

1. PowerExchange bulk data movement and PowerExchange Express CDC for Oracle provide toleration support for Oracle 12c R2 (12.2) and 18c. *Toleration support* means that PowerExchange can capture data from Oracle sources but does not support any of the new features introduced in 12c R2 or 18c that the source database uses, including SCN values greater than 281474976710655. An exception is that Express CDC for Oracle can capture change data from a single pluggable database (PDB) in an Oracle multitenant container database (CDB).

Supported HP-UX Versions and Data Sources

PowerExchange supports the HP-UX Version 11.31 operating system on 64-bit Itanium machines for Oracle CDC source redo logs only.

The following table lists the supported Oracle source versions:

Data Source or Target	Data Source or Target Versions	Bulk	CDC
Oracle ¹	18c ² 12c R2 ²	Not supported	X (sources only)

1. The Oracle redo logs can reside on an HP-UX system, but the PowerExchange Listener and PowerExchange Logger for Linux, UNIX, and Windows must run on a remote machine with another supported operating system.

2. PowerExchange bulk data movement and PowerExchange Express CDC for Oracle provide toleration support for Oracle 12c R2 (12.2) and 18c. *Toleration support* means that PowerExchange can capture data from Oracle sources but does not support any of the new features introduced in 12c R2 or 18c that the source database uses, including SCN values greater than 281474976710655. An exception is that Express CDC for Oracle can capture change data from a single pluggable database (PDB) in an Oracle multitenant container database (CDB).

Supported Solaris Versions and Data Sources and Targets

PowerExchange supports the Oracle Solaris Version 11 operating system on 64-bit SPARC systems for Oracle CDC source redo logs only.

The following table lists the supported Oracle source versions:

Data Source or Target	Data Source or Target Versions	Bulk	CDC
Oracle ¹	18c ² 12c R2 ²	X	X (sources only)

1. The Oracle redo logs can reside on a Solaris system, but the PowerExchange Listener and PowerExchange Logger for Linux, UNIX, and Windows must run on a remote machine with another supported operating system.

2. PowerExchange bulk data movement and PowerExchange Express CDC for Oracle provide toleration support for Oracle 12c R2 (12.2) and 18c. *Toleration support* means that PowerExchange can capture data from Oracle sources but does not support any of the new features introduced in 12c R2 or 18c that the source database uses, including SCN values greater than 281474976710655. An exception is that Express CDC for Oracle can capture change data from a single pluggable database (PDB) in an Oracle multitenant container database (CDB).

Supported Red Hat Enterprise Linux Versions and Data Sources and Targets

On 64-bit Opteron and EM64T machines, PowerExchange supports the following 64-bit Red Hat Enterprise Linux versions for bulk data movement and CDC:

- Version 7.4
- Version 6.5

Note: Support is provided for both physical machines and virtual machines using Vmware ESXi v4.

The following table lists the supported data sources or targets on Red Hat Enterprise Linux:

Data Source or Target	Data Source or Target Versions	Bulk	CDC
DB2 for Linux, UNIX, and Windows	11.1 10.5	X	X (sources only)
Flat file	-	X	Not supported
MySQL Enterprise Edition ¹	8.0 5.7	Not supported	X (sources only)
Oracle	18c ² 12c R2 ²	X	X (sources only)
PostgreSQL ³	11.x 10.x	Not supported	X (sources only)

1. MySQL Community Edition is not supported.
2. PowerExchange bulk data movement and PowerExchange Express CDC for Oracle provide toleration support for Oracle 12c R2 (12.2) and 18c. *Toleration support* means that PowerExchange can capture data from Oracle sources but does not support any of the new features introduced in 12c R2 or 18c that the source database uses, including SCN values greater than 281474976710655. An exception is that Express CDC for Oracle can capture change data from a single pluggable database (PDB) in an Oracle multitenant container database (CDB).
3. PowerExchange does not support EnterpriseDB (EDB) PostgreSQL.

Supported SUSE Linux Versions and Data Sources and Targets

PowerExchange supports the following SUSE Linux Enterprise Server versions on 64-bit Opteron EM64T machines for bulk data movement and CDC:

- Version 12 SP2
- Version 11 SP4

Support is provided for both physical machines and virtual machines by using VMware ESXi v4.

Note: If you run the PowerExchange Logger for Linux, UNIX, and Windows on a SUSE Linux version 11 machine and print Logger monitoring statistics, monitoring message PWX-37105 incorrectly reports 0 KB as the total amount of memory that the Logger used. This problem does not occur if you run the Logger on a later SUSE Linux version.

The following table lists the supported data sources or targets on SUSE Linux:

Data Source or Target	Data Source or Target Versions	Bulk	CDC
DB2 for Linux, UNIX, and Windows	11.1 ¹ 10.5	X	X (sources only)
Flat file	-	X	Not supported

Data Source or Target	Data Source or Target Versions	Bulk	CDC
Oracle ¹	18c ² 12c R2 ²	X	X (sources only)
<p>1. DB2 LUW 11.1 support follows IBM support for this platform.</p> <p>2. PowerExchange bulk data movement and PowerExchange Express CDC for Oracle provide toleration support for Oracle 12c R2 (12.2) and 18c. <i>Toleration support</i> means that PowerExchange can capture data from Oracle sources but does not support any of the new features introduced in 12c R2 or 18c that the source database uses, including SCN values greater than 281474976710655. An exception is that Express CDC for Oracle can capture change data from a single pluggable database (PDB) in an Oracle multitenant container database (CDB).</p>			

Supported Windows Versions and Data Sources and Targets

PowerExchange supports the following Windows versions on 64-bit Opteron and EM64T Windows machines for bulk data movement and CDC:

- Windows 2019
- Windows 2016
- Windows Server 2012 R2

Support is provided for physical machines and for virtual machines by using VMware ESXi v4.

The following table lists the data sources or targets that are supported on Windows:

Data Source or Target	Data Source or Target Versions	Bulk	CDC
Flat File	-	X	Not supported
DB2 for Linux, UNIX, and Windows	11.1 10.5	X	X (sources only)
Microsoft SQL Server	2017 2016 2014 2012	X	X (sources only)
MySQL Enterprise Edition ¹	8.0 5.7	Not supported	X (sources only)
Oracle ²	18c ² 12c R2 ²	X	X (sources only)

Data Source or Target	Data Source or Target Versions	Bulk	CDC
PostgreSQL ³	11.x 10.x	Not supported	X (sources only)
<p>1. MySQL Community Edition is not supported.</p> <p>2. PowerExchange bulk data movement and PowerExchange Express CDC for Oracle provide toleration support for Oracle 12c R2 (12.2) and 18c. <i>Toleration support</i> means that PowerExchange can capture data from Oracle sources but does not support any of the new features introduced in 12c R2 or 18c that the source database uses, including SCN values greater than 281474976710655. An exception is that Express CDC for Oracle can capture change data from a single pluggable database (PDB) in an Oracle multitenant container database (CDB).</p> <p>3. PowerExchange does not support EnterpriseDB (EDB) PostgreSQL.</p>			

Supported Windows Versions for the PowerExchange Navigator

The following 64-bit Windows versions are supported on machines where the PowerExchange Navigator runs:

- Windows 2019
- Windows 2016
- Windows Server 2012 R2
- Windows 10

Software Requirements for z/OS

For bulk data movement operations or CDC processing on z/OS, review the list of supported z/OS versions and data sources. Additionally, apply the required maintenance to your operating system and data sources.

Supported z/OS Versions and Data Sources and Targets

PowerExchange supports the following versions of the z/OS operating system for bulk data movement and CDC:

- 2.3
- 2.2
- 2.1

The following table lists the data sources and targets on z/OS that are supported for bulk data movement and CDC:

Data Source or Target	Data Source or Target Versions	Bulk	CDC
Adabas ^{1, 3}	8.4.x 8.3.x	X	X (sources only)
CA Datacom ¹ (source only)	15.1 15	X (sources only)	X (sources only)
CA IDMS (source only)	19 18.5	X (sources only)	X (sources only)

Data Source or Target	Data Source or Target Versions	Bulk	CDC
DB2 for z/OS ¹	12 11	X	X (sources only)
IMS ¹	15 14 13	X	X (sources only)
Sequential files	Same as the z/OS versions	X	Not supported
VSAM	Same as the z/OS versions	X	X ³
CICS/VSAM - CICS Transaction Server (source only)	5.5 5.4 5.3 5.2 5.1 4.2	Use VSAM bulk data movement.	X (sources only)

1. See the maintenance requirements for these data sources.
2. To capture changes for spanned records in Adabas files, you must use Adabas 8.2.2 or later.
3. PowerExchange Batch VSAM CDC does not support VSAM files that are open in recording-level sharing mode (RLS).

Adabas Maintenance Requirements

For Adabas bulk data movement and CDC, verify that you have a supported version of the Predict product that is supported by your z/OS version, and the required maintenance for your Adabas version.

The following table lists the required minimum version of the Predict product:

Product	Version
Predict	8.3.1

The following table lists the required zap for supported Adabas versions:

Adabas Version	Zap Number
8.2.2	AU822016 ¹
8.1.3	A0813011
8.1.2	A0812024

1. If you intend to capture change data from Adabas 8.2.2 PLOG data sets, verify that Adabas zap AU822016 is applied. Otherwise, the first 4 bytes of data in the first data column that follows the PowerExchange-generated DTL__ columns is corrupted. If you use Adabas version 8.2.3 or later, you do not need to apply this zap because it is incorporated into these versions.

CA Datacom Maintenance Requirements

Depending on the Datacom release that you use, you might need to apply some Datacom fixes. To get the fixes, open an issue with CA Datacom support.

The following table lists the CA solutions and fixes that are required for Datacom table-based CDC:

Datacom Version	Fix Identifier	Fix Description
14	Solution 458 (PTF R079202)	LOG (LXX) INFORMATION INCORRECT WHEN LOG_RECORD_FORMAT=1 Important: Install this Datacom solution if you set the Datacom 14 LOG_RECORD_FORMAT option to 1.

DB2 for z/OS Maintenance Requirements

Depending on the DB2 for z/OS version that you use, you might need to apply IBM APARs to your DB2 for z/OS system for PowerExchange CDC to work properly.

The following table lists the APARs that are required or recommended for PowerExchange CDC:

APAR Number	APAR Title	DB2 Version
PI67145	AN IFI 306 READS REQUEST BECOMES DEADLOCKED READING A COMPRESSED LOG RECORD FROM AN ARCHIVE LOG TAPE Note: Occurs when the compression dictionary needed to expand that LOG record is on the same tape volume.	DB2 11
PM93957	LOG RECORD LRSN RETURNED BY IFCID306 CAN BE OUT OF SEQUENCE ON THE HOST MEMBER OF A DATA SHARING GROUP Note: Applies to DB2 data sharing environments.	DB2 11

Tip: Informatica recommends that you check the IBM APARs related to IFCID 0306 that are available for your DB2 version on the IBM Support web site to get any additional maintenance that is relevant to your CDC environment.

IMS Maintenance Requirements

If you perform IMS synchronous CDC with an IMS source, apply the fixes for the listed APARs to the IMS subsystem.

The following table identifies the APAR requirements by IMS version:

IMS Version	APAR Number	APAR Description
14	PI56632	AJ status code received when a DL/I SSA contains command code A and a non keyed field.
13	PI49955	AJ status code received when a DL/I SSA contains command code A and a non keyed field.
13	PI26816	Command Code A not resetting to the beginning of the database after a status GE is received on a prior call.

Supported Data Sources in an Amazon RDS Environment

PowerExchange Express CDC for Oracle can capture change data from sources in a cloud-based Amazon RDS for Oracle environment.

Only Amazon RDS for Oracle 12.2 is supported.

Supported PowerExchange Sources and Targets for Other Informatica Products

PowerExchange can provide data to the following Informatica products for processing:

Big Data Management

This product can access the following types of PowerExchange bulk data sources and targets:

- Adabas
- DB2 for i (i5/OS)
- DB2 for z/OS
- Flat file
- IMS

Data Quality

This product can access the following types of PowerExchange bulk data sources:

- Adabas
- DB2 for i
- DB2 for z/OS
- Flat file
- IMS

PowerCenter

This product can access the following types of PowerExchange sources and targets:

- Adabas
- Datacom
- DB2 for i
- DB2 for z/OS
- DB2 LUW
- Flat file (batch only)
- IDMS
- IMS
- Microsoft SQL Server
- MySQL (CDC only)
- Oracle
- PostgreSQL (CDC only)
- VSAM

Note: PowerCenter can access both sources and targets for bulk data and only sources for CDC.

Data Integration Hub

This product can access the following types of PowerExchange sources and targets:

- Adabas
- Datacom
- DB2 for i
- DB2 for z/OS
- DB2 LUW
- Flat file (batch only)
- IDMS
- IMS
- Microsoft SQL Server
- Oracle
- VSAM

Note: Data Integration Hub can access both sources and targets for bulk data and only sources for CDC.

PowerExchange CDC Publisher

This product can access the following types of PowerExchange CDC sources:

- Adabas
- Datacom
- DB2 for i
- DB2 for z/OS
- DB2 LUW
- IDMS
- IMS
- Microsoft SQL Server
- Oracle
- Batch VSAM and CICS/VSAM

Informatica Intelligent Cloud Services - PowerExchange CDC Connectors

The following Data Integration PowerExchange CDC connectors provide access to change data that PowerExchange captures:

- Oracle CDC V2 Connector
- Db2 for i CDC
- Db2 LUW CDC
- Db2 for z/OS CDC
- Microsoft SQL Server CDC
- MySQL CDC

Data Archive

This product can access the following types of PowerExchange bulk data sources:

- Adabas
- Datacom

- Flat file
- IDMS
- IMS
- VSAM

Note: Data Archive uses PowerExchange ODBC to access sources.

Data Masking - Data Centric Security

This security solution can access the following types of PowerExchange bulk data sources and targets:

- Adabas
- DB2 for i
- DB2 for z/OS
- Flat file
- IMS

Test Data Management

This product can access the following types of PowerExchange bulk data sources and targets:

- Adabas
- DB2 for i
- DB2 for z/OS
- Flat file
- IMS
- VSAM

Note: Test Data Management accesses sources and targets through PowerCenter.

The Data Generation solution can access the following types of PowerExchange bulk data targets:

- DB2 for i
- DB2 for z/OS

The Test Data Warehouse solution can access the following types of PowerExchange bulk data sources:

- DB2 for i
- DB2 for z/OS

PowerExchange 32-Bit and 64-Bit Executables on Windows

PowerExchange on Windows includes 32-bit and 64-bit executables. The PowerExchange installation program installs both sets of executables on 64-bit machines and installs only the 32-bit executables on 32-bit machines.

The following table shows which executables each PowerExchange component uses:

PowerExchange Component or Feature	32-bit Executables	64-bit Executables
PowerExchange Navigator	-	X
PowerExchange bulk data movement	-	X
PowerExchange change data capture (CDC)	-	X
PowerExchange utilities	X (Only for DTLREXE on a 32-bit machine)	X (All utilities including DTLREXE)
PowerExchange support for the PowerCenter Client	X	-
PowerExchange support for the Informatica Developer	-	X
PowerExchange support for the PowerCenter Integration Service and Data Integration Service	-	X
ODBC Administrator support, and PowerExchange ODBC driver	X (Supports PowerExchange ODBC connectivity for 32-bit applications)	X
z/OS Installation Assistant	-	X

Important: You must use the PowerExchange 32-bit executables on the system where the PowerCenter Client runs. The PowerCenter Client is a 32-bit application.

PowerExchange License Keys

To run PowerExchange components, you need a license key. The license key is a 64-character string comprised of hexadecimal characters.

The characters are separated by hyphens every four characters, such as:

1234-ABCD-1234-EF01-5678-A9B2-E1E2-E3E4-A5F1-A9B2-1234-E3D4-95F1

Note: Previously, PowerExchange used 44-character license keys. PowerExchange still accepts 44-character keys that have not expired.

The license key is not case-sensitive.

License keys are valid for specific time periods. PowerExchange uses license keys to control access to operating systems and data sources. Do not attempt to install the PowerExchange software until you have a valid license key for all required components.

How to Get the PowerExchange License Keys

If you download the installation files from the Informatica Electronic Software Download (ESD) site, the license key is delivered in an email message from Informatica.

Entering PowerExchange License Keys

Enter PowerExchange license keys at installation or when you get new license keys. Enter the keys in following situations:

- When you initially install PowerExchange, you must enter the license keys to complete the installation. The installation program creates license key files on the systems where the product is installed.
- If you get new license keys for an existing PowerExchange installation, update the license key files on your systems with the new keys.
- If you upgrade the PowerExchange software, update the license key files on your systems with the new keys when you install that new version.
- If you purchase additional product options for an existing PowerExchange installation, update the license key files on your systems with the new keys that are supplied for the added options.

If you do not have a license key or have problems with an existing license key, contact Informatica Global Customer Support.

If you have a Proof of Concept (POC) temporary license that has expired, you can purchase a full license. The expiration date for the temporary license is listed in the POC agreement. If you got the PowerExchange installation files from an FTP download, the expiration date is also listed in the email message.

PowerExchange Interoperability with PowerCenter

PowerCenter includes the PowerExchange Client for PowerCenter (PWXPC). To use PWXPC to connect to PowerExchange, you must verify that the PowerCenter and PowerExchange versions are compatible.

The following table describes the supported combinations of PowerExchange (PWX) and PowerCenter (PC) versions:

PWX ¹ Version	PWC 10.0	PWC 10.1	PWC 10.1.1	PWC 10.2.0	PWC 10.4.0
10.0	Yes	-	-	-	-
10.1	Yes	Yes	-	-	-
10.1.1	Yes	Yes	Yes	-	-
10.2.0	Yes	Yes	Yes	Yes	-
10.4.0	Yes	Yes	Yes	Yes	Yes

PowerExchange hotfixes are certified with the latest available PowerCenter hotfix.

Restrictions:

- If you run the PowerExchange Listener Service or PowerExchange Logger Service in the Informatica domain, the Informatica domain must be at the same version, release, and modification (*v.r.m*) level as PowerExchange.

To run different versions of the Informatica domain and PowerExchange, you must start the PowerExchange Listener or PowerExchange Logger for Linux, UNIX, and Windows by running the `dtllst` or `pwxccl` command-line program, respectively.

- If you are using PowerCenter 10.0 with PowerExchange 10.1, local mode is not supported for bulk data movement sessions. That is, do not specify **local** in the Location property in PWXPC connections for bulk data movement sessions. Instead, configure the PowerCenter Integration Server to connect to the PowerExchange Listener on the machine. To do so, define a NODE statement for the machine in the DBMOVER configuration file, and enter this node name in the Location property for the connection.

PowerExchange Interoperability with Informatica Services Products

To connect to PowerExchange from the Developer tool, verify that the PowerExchange and Informatica services versions are compatible. For example, PowerExchange 10.4 is compatible with Informatica services 10.4.

The following table describes the supported combinations of PowerExchange (PWX) and Informatica services (INFA) versions:

PWX ¹ Version	INFA 10.0	INFA 10.1	INFA 10.1.1	INFA 10.2.0	INFA 10.4.0
10.0	Yes	-	-	-	-
10.1	-	Yes	-	-	-
10.1.1	-	-	Yes	-	-
10.2.0	-	-	-	Yes	-
10.4.0	-	-	-	-	Yes

Hotfixes of PowerExchange are certified for use with the latest available Informatica services hotfix.

PowerExchange Interoperability with Informatica Intelligent Cloud Services Data Integration Service

To connect to PowerExchange from Informatica Intelligent Cloud Services Data Integration Service, verify that the Informatica Intelligent Cloud Services Data Integration Service versions are compatible. For example, PowerExchange 10.4 is compatible with Informatica Intelligent Cloud Services Data Integration Service.

The following table describes the supported combinations of PowerExchange (PWX) and Informatica Intelligent Cloud Services Data Integration Service versions:

PWX ¹ Version	IICS-DI R29	IICS-DI R30	IICS-DI R32	IICS-DI R33
10.2.0	Yes	Yes	Yes	Yes
10.4.0	-	-	-	-

PowerExchange hotfixes are certified with the latest available Informatica Intelligent Cloud Services Data Integration Service hotfix.

PowerExchange Interoperability with PowerExchange CDC Publisher

To connect to PowerExchange from the PowerExchange CDC Publisher, verify that the PowerExchange CDC Publisher versions are compatible. For example, PowerExchange 10.4 is compatible with PowerExchange CDC Publisher 1.2.

The following table describes the supported combinations of PowerExchange (PWX) and PowerExchange CDC Publisher versions:

PWX ¹ Version	PWX CDC Publisher 1.0	PWX CDC Publisher 1.1	PWX CDC Publisher 1.2
10.1	Yes	Yes	Yes
10.1.1	Yes	Yes	Yes
10.2.0	Yes	Yes	Yes
10.4.0	-	-	Yes

PowerExchange hotfixes are certified with the latest available PowerExchange CDC Publisher hotfix.

PowerExchange Interoperability with Informatica Data Archive

To connect to PowerExchange from Informatica Data Archive by using PowerExchange ODBC, you must verify that the Data Archive and PowerExchange versions are compatible.

The following table describes the supported combinations of PowerExchange (PWX) and Data Archive (DA) versions:

PWX ODBC Version	DA 6.4.x
10.0	Yes
10.1	Yes
10.1.1	Yes
10.2.0	Yes
10.4.0	Yes

PowerExchange hotfixes are certified for use with the latest available Data Archive hotfix.

Note: If you run the PowerExchange Listener Service in the Informatica domain, the Informatica domain must be at the same version, release, and modification (*v.r.m*) level as PowerExchange. If you run different versions of the Informatica domain and PowerExchange, you must start the PowerExchange Listener by running the `dtllst` command-line program.

PowerExchange to PowerExchange Interoperability

A PowerExchange installation can communicate with other PowerExchange installations that have the same version and release levels. The modification and hotfix levels can be different. However, PowerExchange installations that have different version or release levels cannot communicate.

The version, release, and modification levels are indicated in the following format:

`PowerExchange version.release.modification`

For example, a PowerExchange 10.1 Navigator and Listener can communicate with a PowerExchange 10.1.1 Listener. However, a PowerExchange 10.2.0 Navigator and Listener cannot communicate with a PowerExchange 10.1.1 Listener.

Organization of the Downloaded PowerExchange Installation File

The PowerExchange installation .zip file that you download from Informatica contains installation software organized by supported operating system.

Informatica provides a FTP link that you use to download the Informatica installation zip file from the Informatica Electronic Software Download site. Download the zip file to a directory on your local machine and then extract the installation software for your operating system.

For a full release, the downloaded installation file name has the following format: PExchange vr m.zip, where v , r , and m represent the PowerExchange version, release, and modification level. If the modification (m) level is 0, the modification value is omitted from the file name. When you extract the installation file, the installation software becomes available for each operating system in the following directories:

```
software
  i5os
  unix
    aix
    linux
  windows
  zos
```

Each operating-system directory contains an .exe or .tar file that you can use to access the installer.

For a hotfix release, the downloaded installation file name has the following format: PExchange vr mHF n .zip. This file contains two zip files, one for a full installation including the hotfix and one for only the PowerExchange changes since the last base release. When you extract one of these files, the installation software becomes available for each operating system. For example, the downloaded PExchange102HF2.zip file contains the following zip files:

- powerexchange_v1020_02_cd.zip. This file contains the full installation with the hotfix.
- powerexchange_V1020_hotfix2_cd.zip. This file contains only the changes since the last base release, which are included in the hotfix.

When you unzip either one of these files, the installation software is provided in a separate directory for each operating system, as for the full base release. For example:

```
i5os
unix
  aix
  linux
windows
zos
```

For more information about installation files, see the chapter for your operating system in this guide. For a hotfix release, see the hotfix release notes.

CHAPTER 3

Upgrade Planning

This chapter includes the following topics:

- [Upgrade Planning Overview, 35](#)
- [Strategies for Maintaining PowerExchange Data, 35](#)
- [Upgrade Scenarios, 36](#)
- [Migrating Data Maps, Capture Registrations, and Extraction Maps, 38](#)

Upgrade Planning Overview

When you upgrade PowerExchange, you must perform an upgrade installation on each of the following systems:

- Each PowerExchange data source or target system
- Windows system on which you will run the PowerExchange Navigator
- PowerCenter Client or Informatica Developer client system
- PowerCenter Integration Service or Data Integration Service system

To help you plan your upgrade, this chapter provides strategies for preserving existing PowerExchange data files. The chapter also describes several migration scenarios and lists the basic steps to follow for each scenario.

In addition to reviewing this chapter, see the upgrade considerations that are described in [Appendix A, "Upgrade Considerations" on page 170](#). For detailed descriptions of the PowerExchange environment for each operating system, see [Appendix B, "PowerExchange Environment" on page 186](#).

Strategies for Maintaining PowerExchange Data

PowerExchange lets you configure the locations of many of the PowerExchange data files and libraries. When you install and configure PowerExchange, Informatica recommends that you set up your environment to separate your data files and libraries from the PowerExchange software.

This approach to maintaining your PowerExchange data offers the following benefits:

- Upgrading to a new PowerExchange version is easier.
- Customized files do not get lost or overwritten during the upgrade.

- Backing up PowerExchange data is easier.

Consider the following approaches when you set up your PowerExchange environment:

- Create libraries for PowerExchange data that are separate from the PowerExchange software. Depending on the operating system and the data files, you might create the libraries yourself or specify their locations to the installation program.

For example, on Linux, UNIX, or Windows, you can store configuration files in the parent directory of the installation directory, or in a separate directory.

- Rename or copy configuration files and other files that you customize. For example, you can append the version number to the file name. In this way, you can easily identify the configuration files for a particular release. In addition, on some operating systems, this practice ensures that the installation program does not overwrite the configuration files.

After you set up your data, update the following items to point to the customized files:

- Configuration parameters
- Environment variables on Linux, UNIX, and Windows
- DD statements in JCL for PowerExchange jobs and started tasks on z/OS
- PowerExchange start commands in scripts or automation

The extent to which you can separate PowerExchange code and data, and the items that point to the data, varies by operating system.

Upgrade Scenarios

When you upgrade PowerExchange, depending on your requirements and environment, you can take one of the following approaches:

- Existing install and data location. Install a new release of PowerExchange in the same location as an existing installation on the same machine. PowerExchange uses the existing data files from their current location.

You can use this option on platforms other than i5/OS, if you run only one version of the product.

- New install location with existing data location. Install a new release of PowerExchange in a new location on the same machine as an existing installation. PowerExchange uses the existing data files from their current location.

You can use this option when you upgrade PowerExchange on Linux, UNIX, Windows, or z/OS, provided you are running only one version of the product. If you use this option on Windows, you must first remove the existing PowerExchange release.

- New install and data location. Install a new release of PowerExchange in a new location on the same machine as the existing release. The new installation uses data files from the new location.

You can use this option on any operating system. You must use this option if you are running multiple versions of PowerExchange or if you are upgrading PowerExchange on IBM i (i5/OS). If you use this option on Windows, you must first remove the existing PowerExchange release.

For each scenario, the following topics describe the basic flow for installing software, copying data files, and editing configuration parameters and other variables.

Existing Install and Data Location Scenario

In this scenario, you install the PowerExchange software into the same location as the previous installation, and you use the existing location for your PowerExchange data files.

After installation, verify that your configuration parameters and other variables point to the correct locations of the data.

Use the following process:

1. Back up PowerExchange data files and libraries for safekeeping.
2. Follow the instructions in this guide for upgrading to a new release. These instructions install the software into the same location as the previous installation.

If you are installing a new PowerExchange release on z/OS, select the **Upgrade by Using Existing Data Set Names** option in the z/OS Installation Assistant.

3. Verify that configuration parameters, environment variables, and DD statements point to the existing data environment. Because you are using the existing data location, these values should already be correct.

New Install Location with Existing Data Location Scenario

In this scenario, you install the PowerExchange software into a different location from the previous installation, but you use the same location for your PowerExchange data files.

After installation, verify that configuration parameters and other variables point to the correct locations of the data.

Use the following process:

1. Back up PowerExchange data files and libraries.
2. Follow the instructions in this guide for performing a full installation. Specify an installation location that is different from the location of the previous installation.

If you are installing a new PowerExchange release on z/OS, select Upgrade by Using New Data Set Names in the z/OS Installation Assistant. This approach results in a whole new set of data libraries being allocated.

On i5/OS, this approach results in the entire PowerExchange environment being re-created.

Verify that configuration parameters, environment variables, and DD statements point to the existing data environment.

New Install and Data Location Scenario

In this scenario, you install the PowerExchange software into a different location from the previous installation, and you create a new location for your PowerExchange data files.

Where possible, you then copy the PowerExchange data files from the previous release that you intend to use with the new release to the new data location. You also update configuration parameters and other variables to point to the new location of the data.

This approach does not work for all PowerExchange data. For example, you cannot use new data set names for the PowerExchange Logger for z/OS active and archive logs and then copy the existing data. For the PowerExchange Logger for z/OS, you must either keep the existing names or lose all existing captured data.

Use the following process:

1. Follow the instructions in this guide for performing a full installation, rather than an upgrade installation. Specify an installation directory that is different from the location of the old installation.
If you are installing a new PowerExchange release on z/OS, use the full installation option in the z/OS Installation Assistant. On z/OS, this option does not allow you to keep previously captured change data. If you need to keep previously captured change data on z/OS, you must follow the steps in [“New Install Location with Existing Data Location Scenario” on page 37](#).
2. Copy the PowerExchange data files and libraries from the previous installation to the new environment. However, you cannot use this approach for CDC on z/OS.
3. Set configuration parameters, environment variables, automation and scripts, and DD statements to point to the new data environment.

Migrating Data Maps, Capture Registrations, and Extraction Maps

After you upgrade to a new version of PowerExchange, migrate your data maps, extraction maps, and capture registrations as needed.

Informatica recommends that you use the DTLURDMO utility to copy these resources. Using DTLURDMO ensures that the resources are copied in a format that the upgraded version of PowerExchange requires. Also, DTLURDMO updates the header information in these resources that identifies their version.

You can also use the PWXUMAP utility to produce reports that list the data maps, extraction maps, and schemas to be migrated, so that you can verify the maps that are copied with DTLURDMO on both the source and target systems.

The procedures for migrating resources vary by operating system. The procedures also vary, depending on whether the source and target systems are at the same version level. A PowerExchange version, release, and modification level is represented as *v.r.m*, where *v* represents the version level.

Consider the following scenarios:

- Migrating resources after upgrading within the same version level. For example, upgrading from PowerExchange 10.1 to PowerExchange 10.2.

In this scenario, you can use DTLURDMO to copy the resources from the old PowerExchange Listener environment to the new environment. You do not need to first use operating system commands to copy the resources to the new location.

- Migrating resources after upgrading to a new version level. For example, upgrading from PowerExchange 9.6.1 to PowerExchange 10.0.0

DTLURDMO cannot copy resources across PowerExchange Listener environments at different version levels. The utility uses the SOURCE and TARGET statements to point to NODE statements of the two listeners. If the listeners are at different release levels, the system returns an error message indicating a version mismatch. Instead use DTLURDMO where the source is local and the target is the higher version PowerExchange Listener. To copy resources from one environment to a target environment at a higher version, use a copy utility to copy the resources to staging files on the target system, and then use DTLURDMO to upgrade the resources on the target system. DTLURDMO must always be run from the higher version environment.

Note: On z/OS you can submit JCL to accomplish both tasks in the same job.

Migrating Resources Across PowerExchange Systems at the Same Version Level

To migrate data maps, capture registrations, and extraction maps from one PowerExchange system to another PowerExchange system at the same version level, follow the procedures in the "DTLURDMO Utility" chapter of the *PowerExchange Utilities Guide*.

Migrating Data Maps to a New Version Level on IBM i

To migrate data maps after upgrading to a new PowerExchange version level on IBM i, use the following procedure:

1. Copy the data map files from the STDATAMAPS directory for the old version to the STDATAMAPS directory for the new version.
2. To upgrade the data maps in place, run DTLURDMO for the new version using dtlurdmo.ini input statements such as the following ones:

```
USER user_id;  
EPWD epwd;  
SOURCE LOCAL;  
TARGET LOCAL;  
DETAIL;  
REPLACE;  
DM_COPY;
```

Migrating Capture Registrations and Extraction Maps to a New Version Level on IBM i

To migrate capture registrations and extraction maps after upgrading to a new PowerExchange version level on IBM i, use the following procedure:

1. Copy the CCT file of the *datalib* library for the old version to the *datalib* library for the new version.
2. To upgrade the capture registrations and extraction maps in place, run DTLURDMO for the new version using the following dtlurdmo.ini input statements:

```
USER user_id;  
EPWD epwd;  
SOURCE LOCAL;  
TARGET LOCAL;  
DETAIL;  
REPLACE;  
REG_COPY;  
CREATEXMAPS;  
KEEPREGTAG;
```

Migrating Data Maps to a New Version Level on Linux, UNIX, and Windows

To migrate data maps after upgrading to a new PowerExchange version level on Linux, UNIX, or Windows, use the following procedure:

1. Copy the data map files from the directory defined in the DMX_DIR statement in the DBMOVER file for the old version to the directory defined in the DMX_DIR statement in the DBMOVER file for the new version.

2. To upgrade the data maps in place, run DTLURDMO on the target system using dtlurdmo.ini input statements such as the following ones:

```

USER user_id;
EPWD epwd;
SOURCE LOCAL;
TARGET LOCAL;
DETAIL;
REPLACE;
DM_COPY;

```

Migrating Capture Registrations and Extraction Maps to a New Version Level on Linux UNIX and Windows

To migrate capture registrations and extraction maps after upgrading to a new PowerExchange version level on Linux, UNIX, or Windows, use the following procedure:

1. Copy the CCT file from the directory defined in the CAPT_PATH statement in the DBMOVER file for the old version to the directory defined in the CAPT_PATH statement in the DBMOVER file for the new version.
2. To upgrade the capture registrations and extraction maps in place, run DTLURDMO for the new version using the following dtlurdmo.ini input statements:

```

USER user_id;
EPWD epwd;
SOURCE LOCAL;
TARGET LOCAL;
DETAIL;
REPLACE;
REG_COPY;
CREATEXMAPS;
KEEPREGTAG;

```

Migrating Data Maps to a New Version Level on z/OS

To migrate capture registrations and extraction maps to a new version level on z/OS, submit JCL statements to upgrade the data maps and copy them to the new location. Use JCL statements similar to the following ones:

```

//DTLURDMO JOB 'PWX INSTALL',MSGLEVEL=(1,1),MSGCLASS=X,
//          NOTIFY=&SYSUID,CLASS=A,REGION=0M
//LIBSRCH  JCLLIB ORDER=<HLQ>.V1020.RUNLIB
//*
//*
//*****
//* LIBSRCH IS REQUIRED AS SET STATEMENTS WILL BE INCLUDED DEPENDING
//* UPON THE SELECTIONS MADE FROM WITHIN THE INSTALL PROCESS
//*
//*****
//INCS1 INCLUDE MEMBER=GENBULK
//*
//RUN      EXEC PGM=DTLURDMO
//*
//STEPLIB DD DISP=SHR,DSN=&HLQ..LOADLIB
//         DD DISP=SHR,DSN=&SCERUN
//*
//DTLMSG  DD DSN=&HLQ..DTLMSG,DISP=SHR
//* IF USING MESSAGE OVERRIDE THEN CUSTOMIZE BELOW
//*DTLMMSG DD DISP=SHR,DSN=&RUNLIB (DTLMMSG)
//DTLCFG  DD DSN=&HLQ..RUNLIB (DBMOVER),DISP=SHR
//DTLKEY  DD DSN=&HLQ..RUNLIB (LICENSE),DISP=SHR
//DTLSGN  DD DSN=&HLQ..RUNLIB (SIGNON),DISP=SHR
//DTLLOG  DD SYSOUT=*
//DTLLOG01 DD SYSOUT=*

```



```

//DTLCAMAP DD DSN=&HLQVS..DTLCAMAP,DISP=SHR
//DATAMAP DD DSN=<HLQ>.V961.V1.DATAMAPS,DISP=SHR
//DTLAMCPR DD DSN=&HLQVS..CCT,DISP=SHR
//SYSOUT DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//CEEDUMP DD SYSOUT=*
/*
/* SAMPLE SYSIN
/*
//SYSIN DD *
USER <user id>;
PWD <pwd>;
SOURCE LOCAL;
TARGET NODE1;
REPLACE;
DETAIL;
DM COPY;
SELECT ;
/*

```

Migrating Capture Registrations and Extraction Maps to a New Version Level on z/OS

To migrate capture registrations and extraction maps to a new version level on z/OS, submit JCL statements to upgrade the capture registrations and extraction maps and copy them to the new location. Use JCL statements similar to the following ones:

```

//DTLURDMO JOB 'PWX INSTALL',MSGLEVEL=(1,1),MSGCLASS=X,
//          NOTIFY=&SYSUID,CLASS=A,REGION=0M
//LIBSRCH   JCLLIB ORDER=<HLQ>.V1020.RUNLIB
/*
/*
/******
/*
/* LIBSRCH IS REQUIRED AS SET STATEMENTS WILL BE INCLUDED DEPENDING
/* UPON THE SELECTIONS MADE FROM WITHIN THE INSTALL PROCESS
/*
/******
//INCS1 INCLUDE MEMBER=GENBULK
/*
//RUN       EXEC PGM=DTLURDMO
/*
//STEPLIB  DD DISP=SHR,DSN=&HLQ..LOADLIB
//          DD DISP=SHR,DSN=&SCERUN
/*
//DTLMSG   DD DSN=&HLQ..DTLMSG,DISP=SHR
/* IF USING MESSAGE OVERRIDE THEN CUSTOMIZE BELOW
/*DTLMGSO DD DISP=SHR,DSN=&RUNLIB(DTLMGSO)
//DTLCFG   DD DSN=&HLQ..RUNLIB(DBMOVER),DISP=SHR
//DTLKEY   DD DSN=&HLQ..RUNLIB(LICENSE),DISP=SHR
//DTLSGN   DD DSN=&HLQ..RUNLIB(SIGNON),DISP=SHR
//DTLLOG   DD SYSOUT=*
//DTLLOG01 DD SYSOUT=*
//DTLCAMAP DD DSN=&HLQVS..DTLCAMAP,DISP=SHR
//DATAMAP  DD DSN=&HLQVS..DATAMAPS,DISP=SHR
//DTLAMCPR DD DSN=OLDVERS.V1.CCT,DISP=SHR
//SYSOUT   DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//CEEDUMP  DD SYSOUT=*
/*
/* SAMPLE SYSIN
/*
//SYSIN    DD *
USER <user id>;
PWD <PWD>;
SOURCE LOCAL;
TARGET NODE1;
REPLACE;

```

```
DETAIL;  
REG_COPY;  
CREATEXMAPS LOC=TARGET;  
SELECT ;  
/*
```

CHAPTER 4

Installing and Upgrading PowerExchange on IBM i

This chapter includes the following topics:

- [IBM i Installation Overview, 43](#)
- [Performing a Full Installation on IBM i, 43](#)
- [Upgrading PowerExchange on IBM i, 53](#)
- [Installing a HotFix on IBM i, 55](#)
- [Uninstalling PowerExchange on IBM i, 58](#)

IBM i Installation Overview

When you install PowerExchange on the IBM i operating system (formerly i5/OS), you can perform a full installation, an upgrade, or a hotfix installation by running the PowerExchange IBM i Installer.

The IBM i Installer can perform the following tasks:

- Set variables and change PowerExchange parameters and data set names for the PowerExchange installation on the IBM i operating system in a single process.
- Add or update the PowerExchange License Key.
- Move the software library binary files to the software library on the IBM i system.
- Customize the DBMOVER configuration file on the IBM i system.

Note: An upgrade of PowerExchange on IBM i uses the same procedure as a full installation.

To manually install PowerExchange on IBM i, perform the tasks described in [Appendix C, “Manual Installation on IBM i” on page 196](#).

Performing a Full Installation on IBM i

Perform a full installation if you are installing PowerExchange for the first time or to a new location.

Before You Install PowerExchange on IBM i

Before installing PowerExchange, make sure that pre-installation requirements are met and that you have performed the specified prerequisite tasks.

General Pre-Installation Requirements

Perform the following tasks, using the information in [Chapter 2, “Installation Planning” on page 17](#):

- To use the IBM i Installer, install PowerExchange on a 64-bit Windows computer. The IBM i Installer runs only on 64-bit Windows systems.
- Ensure that the Java Standard Edition Runtime Environment (JRE) is installed on the system where you run the IBM i Installer.
- Verify that PowerExchange supports the versions and release levels of your operating system and data sources.
- Obtain a valid license key.
- Verify that the new PowerExchange release can operate with your PowerCenter installation.
- If you are upgrading from a previous release and plan to run multiple releases of PowerExchange, verify that the new PowerExchange release can operate with your existing PowerExchange installation.
- If you are upgrading from a previous release, perform any required pre-installation upgrade tasks. For more information, see [Chapter 3, “Upgrade Planning” on page 35](#).

User ID Requirements

Optionally, create a user ID for the owner or administrator of the PowerExchange installation. Make sure that the user ID has sufficient rights and privileges for accessing source and target data from different locations on the IBM i platform.

To install the product, you must log in with a user profile that has the required authorities. Use one of the following user profiles:

- The IBM-supplied user profile of QSECOFR
- A user profile defined with the USRCLS parameter set to *SECOFR and the SPCAUT parameter set to *USRCLS
- If the USRCLS parameter is not set to *SECOFR, a user profile with at least the following SPCAUT values: *SECADM, *ALLOBJ, and *JOBCTL

Disk Space Requirements

Verify that you have sufficient disk space. PowerExchange requires about 140 MB of disk space. You might need additional disk space depending on the number of files that will be sent and received and the number of databases.

IBM i System Value Requirements

PowerExchange requires that certain system values be set correctly on the IBM i system to avoid run-time failures or other unexpected errors that might occur when PowerExchange bulk data movement or CDC sessions run.

Set the following system values:

QCCSID - Coded Character Set Identifier

For PowerExchange to process metadata information correctly, the QCCSID system value must be set according to IBM guidelines.

Set QCCSID based on the language installed on the system. On a double-byte character set (DBCS) system, set QCCSID to a mixed CCSID. On a non-DBCS system, set QCCSID to a single-byte character set (SBCS) CCSID. For more information, see the IBM Knowledge Center website.

If you allow QCCSID to use the default value of 65535 instead of the correct value for the system, PowerExchange metadata requests fail with messages such as the following message when attempting to access DB2 tables:

```
SQL0332 - Character conversion between CCSID 1200 and CCSID 65535 not valid.
```

This error occurs on multibyte CCSID systems when columns are defined as GRAPHIC so that they can store multibyte values.

QSHRMEMCTL - Shared Memory Control

PowerExchange uses memory-mapping functions to pass information between running tasks. For these functions to work, set QSHRMEMCTL to 1.

Task Flow for a Full Installation on IBM i

Use the following checklist of tasks to perform a full installation of PowerExchange on IBM i:

Check	Task	Required or Optional
	"Step 1. Extract the IBM i Installer and Save File " on page 46	Required
	"Step 2. Run the IBM i Installer" on page 46	Required
	"Step 3. Enter the License Key" on page 49	Required
	"Step 4. Configure the DBMOVER Configuration File Options" on page 49	Optional
	"Step 5. Change Object Ownership (Optional)" on page 51	Optional
	"Step 6. Create a Relational Database Directory Entry (Optional)" on page 51	Optional
	"Step 7. Configure PowerExchange User Authority" on page 52	Required
	"Step 6. Test the Installation" on page 52	Recommended

Installing PowerExchange on IBM i

Complete the following steps to perform a full installation of PowerExchange on IBM i.

When you run the IBM i Installer, specify the library names and user name that you want to use for your installation in the following fields:

- **Condense Library:** The library that contains PowerExchange Condense files, if PowerExchange Condense is used.
- **Data Library:** The PowerExchange data library.
- **Software Library:** The PowerExchange software library.
- **User Name:** The user ID under which PowerExchange runs.

All libraries must reside in either the system auxiliary storage pool, ASP 1, or in an independent auxiliary storage pool (IASP) that is identified by a device name.

Tip: If you plan to run multiple PowerExchange releases, for example, for testing and production, install each release in a separate library. This practice prevents overwriting an existing release with the new release that you are installing, thereby allowing different releases to coexist.

Step 1. Extract the IBM i Installer and Save File

Extract the IBM i Installer and save file to a 64-bit Windows computer. The IBM i Installer can transfer the save file to the IBM i server and install the PowerExchange software there.

PowerExchange provides the following self-extracting zip file for the PowerExchange installation:

```
pwxvrm_i5os.exe
```

The `vrm` variable represents the PowerExchange version and release number.

When you extract the zip file, you specify a target location on the Windows machine that will be used to unzip the file.

After you extract the zip, the target location contains the following files:

- **IBM i save file.** The save file that contains the PowerExchange software, which is located in the `savefiles` directory in the target location. The file name has the following format:

```
pwxvrm.savf
```

- **IBM i Installer.** The `pwxins.exe` file that you use to run the IBM i Installer.

Step 2. Run the IBM i Installer

You can run the IBM i Installer to transfer the software to the IBM i system and configure PowerExchange for IBM i. The IBM i Installer runs on the Windows computer where PowerExchange has been installed.

Important: Make sure that the computer meets the following requirements:

- The computer uses a 64-bit Windows operating system. If you attempt to run the installer on a 32-bit system, the installation fails.
 - The display is set to a minimum resolution of 1280 x 960.
 - The Java Runtime Environment (JRE) version 8 or later is installed.
1. Use one of the following methods to launch the PowerExchange IBM i Installer:
 - In File Explorer, navigate to the PowerExchange installation directory and locate the `pwxins.exe` file. Double-click `pwxins.exe` to launch the installer.
 - In a Windows command window, navigate to the PowerExchange installation directory. Type `pwxins.exe` and press Enter to launch the installer.
 2. In the **Local File Name** field, enter the name of the IBM i save file you extracted.
 3. Under **IBM i Connection**, enter the following connection information:

Server

The name of the IBM i server on which PowerExchange will be installed.

User

The user ID for the owner or administrator of the PowerExchange installation. Make sure that the user ID has rights and privileges that allow access to source and target data from different

locations on the IBM i system. To install the product, you must log in with a user profile that has the required authorities. Use one of the following user profiles:

- The IBM-supplied user profile of QSECOFR
- A user profile defined with the USRCLS parameter set to *SECOFR and the SPCAUT parameter set to *USRCLS
- If the USRCLS parameter is not set to *SECOFR, a user profile with at least the following SPCAUT values: *SECADM, *ALLOBJ, and *JOBCTL

Password

The password associated with the user ID specified in the **User** field.

View password

Select this check box to see the password as you type it. Clear this check box to mask the password.

4. Under **IBM i Save File**, enter the following information for the save file to be created on the IBM i system:

Name

The name of the save file to be created on the IBM i system.

Library

The IBM i library where the save file will be created.

Replace existing

Select this check box if a save file already exists on the IBM i system and you want the installer to replace it.

5. Under **PowerExchange Environment**, enter the following information for configuring the PowerExchange environment on the IBM i system:

Object Library

The name of the PowerExchange software library on the IBM i system.

ASP Device

If you plan to run PowerExchange within an independent auxiliary storage pool (IASP), specify the auxiliary storage pool (ASP) group that will contain the PowerExchange libraries.

Note: All PowerExchange libraries must reside in either the system auxiliary storage pool, ASP 1, or in an IASP identified by a device name.

Note: The fields under **PowerExchange Environment** are not available until you enter the IBM i save file in **Local File Name**.

6. Select the **Create environment** check box to configure the data library, system objects, PowerExchange license key, and DBMOVER file.

The following fields become available:

Data Library

The name of of the PowerExchange data library that contains objects such as the configuration source file, data files for capture registrations and condense files, message log file, message queues, and PowerExchange job description.

Description

A brief description that PowerExchange uses when creating the data library, condense library, and extraction map library.

Create system objects

Select this check box if you want to create the environment with a predefined list of system objects to control the runtime environment for PowerExchange. The installer creates the following object types:

- **Class.** The class that defines the runtime attributes for PowerExchange jobs.
- **Output Queue.** The output queue that stores the spooled file output from PowerExchange jobs.
- **Subsystem Description.** A description of the subsystem associated with the job queue.
- **Job Queue.** The name of the job queue for the subsystem.
- **Job Description.** A description of the job used to define the system objects and libraries created for the PowerExchange environment.

If **Create system objects** is not selected, you must create a suitable runtime environment for PowerExchange before running the IBM i Installer.

Configure PWX license key

Select this check box to enter a PowerExchange license key for a new installation or to update an existing license key. This key will be transferred to the IBM i system. If you select this option and click **OK**, the **IBM i - Configure PWX License Key** dialog box appears.

Configure IBM i DBMOVER file

Select this check box to configure the DBMOVER configuration file on the IBM i system. If you select this option and click **OK**, the **Configure IBM i DBMOVER File** dialog box appears.

7. Select the **Configure CDC** check box to enter change data capture library names.

The following fields become available:

Condense Library

The name of of the library that contains the PowerExchange Condense files, including condense files, lock files, the CFGCOND(CAPTPARM) configuration member, and the CHECKPOINT, CMDHANDLER, COLLECTOR, CONDENSE, CONTROLLER, and DUMP message queues. PowerExchange deletes the files in this library during normal operation. Do not place other files in this library without first contacting Informatica Global Customer Support.

Extract Library

The name of of the PowerExchange capture library that contains the extraction map files.

Journal Exit Sequence

A unique four-digit number that is used to register the PowerExchange Delete Journal Receiver exit program for the exit point QIBM_QJO_DLT_JRNRCV. Specify a value that is not used on your system. To determine the numbers that are currently registered against the exit point, use the WRKREGINF command and then choose option 8. Default is 1000.

Exit Library

The name of of the PowerExchange Journal Exit Program library that is required if your environment is installed in to an IASP. The IBM i system requires that the Journal Exit Program provided by PowerExchange resides in a library that is not in the IASP.

8. If you select the **Configure remote database** check box, enter appropriate values to allow PowerExchange to connect to the remote system:

Configure remote database

Select this check box if you plan to access an Db2 for i database on a system that is remote from where the PowerExchange software is installed.

- **System Name.** The name of the remote IBM i system.
- **Database Name.** The name of of the remote Db2 for i database.
- **ASP Device.** If the PowerExchange environment needs to access tables and table metadata from a remote database in an Independent ASP, specify the name of the Independent ASP on the remote server. Otherwise, leave this field blank.
- **OS Level.** The version of the IBM i operating system on the remote system.

9. Click **OK** to run the installation process.

The next steps depend on the configuration options you selected:

- If you selected the **Configure PWX license key** check box, the **Configure PWX License Key** dialog box appears. For more information, see [“Step 3. Enter the License Key” on page 49.](#)
- If you selected the **Configure IBM i DBMOVER file** check box, the **Configure IBM i DBMOVER File** dialog box appears. For more information, see [“Step 4. Configure the DBMOVER Configuration File Options” on page 49.](#)
- If you did not select either option, the installation process begins, and progress bar tracks the installation progress. When the installation process completes, the IBM i installer issues a success message.

10. After the installation completes, click the Close button (X) at the top right corner of the IBM i Installer to close the window.

Tip: Use the **Reset** button at the bottom of the window to clear all of the information in the window.

Step 3. Enter the License Key

If you selected the **Configure PWX license key** check box, the **Configure PWX License Key** dialog box appears when you click **OK** in the IBM i Installer.

1. In the **PWX License Key** field, enter a 64-bit license key. For example:

1234-ABCD-1234-EF01-5678-A9B2-E1E2-E3E4-A5F1-A9B2-1234-E3D4-95F1

2. Click **OK** to save the license key.

If you selected the **Configure IBM i DBMOVER file** check box, the **Configure IBM i DBMOVER File** dialog box appears. Otherwise, the installation process begins, and the progress bar tracks the installation progress.

3. After the installation completes, click the Close button (X) to close the window.

Step 4. Configure the DBMOVER Configuration File Options

Optionally, you can set DBMOVER configuration file parameters for the IBM i server.

If you selected the **Configure IBM i DBMOVER file** check box, the **Configure DBMOVER File** dialog box appears when you click **OK** in the IBM i Installer.

1. In the dialog box, enter the following parameters for the PowerExchange Listener on the IBM i system:

Port Number

The TCP/IP port number on which the PowerExchange Listener listens for work requests. Valid values are 1 through 65535. Default is 2480.

Credentials Case

The case that PowerExchange uses for operating system user IDs and passwords. Valid values are:

- **A.** PowerExchange processes and passes user IDs and passwords to the operating system for authentication, as follows:
 1. PowerExchange converts the user ID to uppercase.
 2. PowerExchange checks whether the operating system is configured to handle mixed-case passwords. If so, PowerExchange passes the user ID in uppercase and the password in the case in which you entered it to the operating system for authentication. If not, PowerExchange converts the password to uppercase and passes the user ID and password to the operating system for authentication.
- **D.** PowerExchange converts user IDs and passwords to uppercase and then passes them to the operating system for authentication.
- **S.** PowerExchange converts the user ID to uppercase and leaves the password in the case in which you entered it. Then, PowerExchange passes the user ID and password to the operating system for authentication.

Default is **D**.

Security Level

Controls whether PowerExchange requires users to enter a valid operating system user ID and a password or passphrase. Also controls whether or not PowerExchange checks user-entered credentials to control access to file and database resources and to control the issuance of certain PowerExchange commands. Select one of the following options:

- **0.** PowerExchange does not require users to specify a valid operating system user ID and password and ignores any credentials that users supply. PowerExchange uses the userID under which the PowerExchange Listener or PowerExchange Condense task runs to control access to file resources. PowerExchange passes this user ID to the database system.
- **1.** PowerExchange requires users to specify a valid operating system user ID and a password or valid PowerExchange passphrase. PowerExchange checks these credentials when a PowerExchange task starts. Thereafter, PowerExchange controls access to file resources in the same manner as for option 0. For file access, PowerExchange uses the user ID under which the PowerExchange Listener or PowerExchange Condense task runs and passes this user ID to the database system.
- **2.** Provides the most specific level of security. PowerExchange requires users to specify a valid operating system user ID and a password or passphrase. PowerExchange checks these credentials when a PowerExchange task starts. PowerExchange Listener subtask processes run under the supplied user ID and password or passphrase. PowerExchange uses this user ID and password or passphrase to control access to PowerExchange files. PowerExchange also passes this user ID and password or passphrase to the database system for data access. PowerExchange uses security objects to control which users can run pwxcmd commands for a PowerExchange Listener or PowerExchange Condense process that are issued from a Linux, UNIX, or Windows system. The security objects also control which users can run PowerExchange Listener LISTTASK and STOPTASK commands that are issued from the SNDLSTCMD interface, the PowerExchange Navigator, or the DTLUTSK utility.

Default is **0**.

Selective Signon

Controls use of the PowerExchange selective sign-on file to authorize users to connect to the PowerExchange Listener. Select one of the following options:

- **N.** PowerExchange does not use the selective sign-on file.
- **Y.** PowerExchange uses the USER statement with the ALLOW and IP subparameters in the selective sign-on file to restrict users who can connect to the PowerExchange Listener.

Default is **N**.

Note: If you specify **Y** and also set the first parameter in the SECURITY statement to **1**, PowerExchange uses the TASKCNTRL parameter in the USER statements in the sign-on file to control access to PowerExchange Listener LISTTASK and STOPTASK commands that are issued from the PowerExchange Navigator.

Journal Name

Journal name for the journal that contains change data for registered source tables and from which PowerExchange extracts change data.

Journal Library

Library name for the journal that contains change data for registered source tables.

Instance

User-defined name for the source instance. This name must match the name that you specify in the **Collection Identifier** property of the registration group.

If you are running PowerExchange Condense, this name must also match the name specified in DBID parameter in the CAPTPARM member.

2. Click **OK** to run the installation process.

A progress bar tracks the installation progress. When the installation process completes, the IBM i Installer issues a success message.

3. After the installation completes, click the Close button (X) to close the window.

Step 5. Change Object Ownership (Optional)

You can change the ownership of the objects that were created from the shipped library and are owned by the user ID under which PowerExchange software and libraries were installed. Perform this step if you use a user ID for installation that is different from the one under which you want to run PowerExchange.

To change this user ID for the PowerExchange software library (*dtllib*) and data library (*datalib*), enter the following commands:

```
call pgm(dtllib/chgallobj) parm('dtllib' 'pwxusr')
call pgm(datalib/chgallobj) parm('datalib' 'pwxusr')
```

To change the user ID for the PowerExchange Condense library (*condlib*) and extraction map library (*cpplib*), which are used for PowerExchange CDC, enter the following commands:

```
call pgm(dtllib/chgallobj) parm('condlib' 'pwxusr')
call pgm(dtllib/chgallobj) parm('cpplib' 'pwxusr')
```

Step 6. Create a Relational Database Directory Entry (Optional)

Perform this step only if you want to use the DB2400C Db2 Call Level Interface (CLI) access method.

Use the following command to specify that the Relational Database Directory entry or entries with which you want to work:

```
WRKRDBDIRE
```

A Relational Database Directory entry can be a local database or a remote database on an IBM i system on which the PowerExchange Listener running. This command specifies all local and remote entries on the IBM i system, including *LOCAL.

If a Relational Database Directory entry does not exist, you must create one. The CLI access method requires a Relational Database Directory entry to obtain the name of the database to access.

Step 7. Configure PowerExchange User Authority

Configure security options for the PowerExchange Listener and user.

If you want to run the PowerExchange Listener interactively, ensure that the library list for the current job includes the PowerExchange software library (*dtllib*) and data library (*datalib*) before running the commands that are shown in this topic.

If you want the PowerExchange Listener to use the user ID and passwords supplied from the remote platform for security, change the first parameter in the SECURITY statement in the DBMOVER configuration file to a nonzero value.

Before running jobs, ensure that the PowerExchange user ID (*pwxusr*) has *EXECUTE authority for the following objects:

- QSYGETPH
- QSYRLSPH
- QWTSETP
- QCLRPGMI

To grant EXECUTE authority on these objects, run the following commands:

```
GRTOBJAUT OBJ(QSYGETPH) OBJTYPE(*PGM) AUT(*EXECUTE) USER(pwxusr)
GRTOBJAUT OBJ(QSYRLSPH) OBJTYPE(*PGM) AUT(*EXECUTE) USER(pwxusr)
GRTOBJAUT OBJ(QWTSETP) OBJTYPE(*PGM) AUT(*EXECUTE) USER(pwxusr)
GRTOBJAUT OBJ(QCLRPGMI) OBJTYPE(*PGM) AUT(*EXECUTE *READ) USER(pwxusr)
```

Also, to run the PowerExchange Listener, the user ID must have *READ authority for all of the user profiles. To grant *READ authority, run the following command:

```
GRTOBJAUT OBJ(remote_id) OBJTYPE(*USRPRF) AUT(*READ) USER(pwxusr)
```

Step 6. Test the Installation

To test the installation, use the PowerExchange DTLINFO utility, which is located in the PowerExchange software library that you specified in the IBM i Installer.

To run the DTLINFO utility, enter the following command:

```
CALL DTLINFO
```

The following information is displayed for the current PowerExchange installation:

- Version
- Release and release level
- Build date and time

For more information about DTLINFO, see the *PowerExchange Utilities Guide*.

After You Install PowerExchange on IBM i

After you install PowerExchange, perform the following post-installation tasks:

- If you are upgrading from a previous release, review the *PowerExchange Release Guide* for new features and changes.
- Optionally, copy PowerExchange data and configuration files from the previous release.
- Configure PowerExchange prior to performing bulk data movement or change data capture (CDC).

For more information about configuring PowerExchange, see the following documents:

- For bulk data movement configuration, see the *PowerExchange Bulk Data Movement Guide*.
- For CDC configuration, see the *PowerExchange CDC Guide for i5/OS*.
- For DBMOVER configuration file parameters, see the *PowerExchange Reference Manual*.

After you have configured PowerExchange and optionally copied PowerExchange data, you can start the PowerExchange Listener and, if required, PowerExchange Condense. For more information about starting and stopping PowerExchange tasks, see the *PowerExchange Command Reference*.

RELATED TOPICS:

- [“Copying Data and Configuration Files from a Previous Release on IBM i” on page 55](#)
- [“Migrating Data Maps, Capture Registrations, and Extraction Maps” on page 38](#)

Upgrading PowerExchange on IBM i

To upgrade an existing PowerExchange installation on IBM i, use the procedure for a full installation. For more information, see [“Performing a Full Installation on IBM i” on page 43](#). Also, review the following prerequisite tasks, upgrade considerations, and postrequisite tasks.

RELATED TOPICS:

- [“Installing a HotFix on IBM i” on page 55](#)

Before You Upgrade PowerExchange on IBM i

Before you upgrade PowerExchange on IBM i, perform the following prerequisite tasks:

1. Stop all PowerExchange tasks.
2. Back up the PowerExchange software library (*dtllib*). This library contains the PowerExchange programs, messages, and license key. If you specified the DMX_DIR statement in the DBMOVER member of the CFG file, back up the library to which it points.
3. If you use CDC, back up the following libraries:
 - Data library (*datalib*). PowerExchange created this library when you ran the IBM i Installer or CRTPWXENV command. This library contains the CFG file, the CCT file with the capture registrations, and the CDCT file with information about PowerExchange condense files.
 - Extraction library (*cpplib*). This library contains the extraction maps. The CPX_DIR statement in the DBMOVER member of the CFG file points to this library.

4. If you use PowerExchange Condense, back up the directories referenced by the following parameters in the CAPTPARM member of the CFG file:

- **CHKPT_BASENAME.** The library and base file name that PowerExchange Condense uses for generating checkpoint files.
- **COND_DIR.** The library that is specified in this parameter contains the condense files created by PowerExchange Condense.

Note: If you plan to cold start PowerExchange Condense, you do not need to back up the libraries specified in the CHKPT_BASENAME and COND_DIR parameters.

Upgrading PowerExchange on IBM i

PowerExchange does not provide an upgrade installation option for IBM i. You must perform a full installation. When you perform the full installation, you create a new PowerExchange environment that includes new copies of the following libraries:

- **STDATAMAPS.** The default PowerExchange library name for data maps. You can override the name for the data map library by using the DMX_DIR statement in the DBMOPER configuration file.
- **Software Library (*dtllib*).** The library that contains the PowerExchange software and resource files. You can use an existing library or create one when you run the IBM i Installer.
- **Data Library (*datalib*).** PowerExchange creates this library when you run the IBM i Installer. This library contains the CFG file, the CCT file with the capture registrations, and the CDCT file with information about PowerExchange condense files.
- **Extraction Library (*cpplib*).** The PowerExchange library for CDC extraction maps. PowerExchange creates this library when you run the IBM i Installer. You can override the name for the extraction library by defining the CPX_DIR statement in the DBMOPER member of the CFG file.
- **Condense Library (*condlib*).** The PowerExchange Condense library that contains the condense files. PowerExchange creates this library when you run the IBM i installer. You can override the name for the PowerExchange Condense library in the installer or by defining the COND_DIR parameter in the CAPTPARM member of the CFG file. PowerExchange Condense writes change data to condense files in this library.
- **Checkpoint files.** The checkpoint files for PowerExchange Condense. To specify the library and file-name prefix for these files, specify the CHKPT_BASENAME parameter in the CAPTPARM member of the CFG file.

RELATED TOPICS:

- [“Performing a Full Installation on IBM i” on page 43](#)

After You Upgrade PowerExchange on IBM i

After you upgrade PowerExchange, perform the following post-installation tasks:

- Review the *PowerExchange Release Guide* for new features and changes.
- Optionally, copy PowerExchange data and configuration files from the previous release.
- If necessary, configure PowerExchange prior to performing bulk data movement or change data capture (CDC).

RELATED TOPICS:

- [“Copying Data and Configuration Files from a Previous Release on IBM i” on page 55](#)
- [“Migrating Data Maps, Capture Registrations, and Extraction Maps” on page 38](#)

Copying Data and Configuration Files from a Previous Release on IBM i

After you complete the PowerExchange installation, you can copy or migrate the data maps, capture registrations, extraction maps, configuration files, and PowerExchange Condense checkpoint and condense files from the previous release to the libraries in the new PowerExchange environment. By copying this information, you maintain all existing bulk and CDC map definitions as well as condense files with change data.

For bulk data movement, copy the DBMOVER member of the *datalib*/CFG file from the previous release installation to the new installation.

For CDC, if you use PowerExchange Condense and plan to warm start it, copy the following libraries, files, and members from the previous release installation to the new installation:

- The DBMOVER member of the *datalib*/CFG file.
- All files that begin with FULL and PART in the *condlib* library, including the condense files that contain the change data.
- PowerExchange Condense checkpoint files, to which the CHKPT_BASENAME parameter in the CAPTPARM member of the CFG file refers.

If you plan to cold start PowerExchange Condense in the new environment, you only need to copy the DBMOVER member of the *datalib*/CFG file. You do not need to copy any additional files.

You can use the DTLURDMO utility to migrate data maps, capture registrations, and extraction maps. For more information, see [“Migrating Data Maps, Capture Registrations, and Extraction Maps” on page 38](#).

PowerExchange Configuration

If necessary, configure PowerExchange prior to performing bulk data movement or change data capture (CDC).

For configuration information, see the following documents:

- For bulk data movement configuration, see the *PowerExchange Bulk Data Movement Guide*.
- For CDC configuration, see the *PowerExchange CDC Guide for i5/OS*.
- For DBMOVER configuration file parameters, see the *PowerExchange Reference Manual*.

After you have configured PowerExchange, you can restart the PowerExchange Listener and, if required, PowerExchange Condense. For more information about starting and stopping PowerExchange tasks, see the *PowerExchange Command Reference*.

Installing a HotFix on IBM i

Install a hotfix in an existing PowerExchange environment on IBM i to get a bundle of fixes and enhancements. The hotfix version and the PowerExchange installed version must be the same.

When you install a hotfix, PowerExchange does not create new data libraries, such as those for data maps, capture registrations, and extraction maps. As a result, you do not need to migrate the contents of these data sets, which simplifies the installation process.

Because PowerExchange hotfixes are cumulative, you can install the latest available hotfix to get the changes in any previous hotfixes for the same PowerExchange version.

RELATED TOPICS:

- [“Upgrading PowerExchange on IBM i” on page 53](#)

Before You Install a HotFix on IBM i

Before you install the hotfix, perform following prerequisite tasks:

1. Stop all PowerExchange tasks.
2. Back up the PowerExchange software library, *dtllib*. This library contains the PowerExchange programs, messages, and license key. If you specify the DMX_DIR statement in the DBMOVER member of the CFG file, back up the library to which it points.
3. If you use CDC, back up the following libraries:
 - Data library (*datalib*). PowerExchange created this library when you ran the IBM i Installer or CRTPWXENV command. This library contains the CFG file, the CCT file with the capture registrations, and the CDCT file with information about PowerExchange condense files.
 - Extraction library (*cpplib*). This library contains the extraction maps. The CPX_DIR statement in the DBMOVER member of the CFG file points to this library.
4. If you use PowerExchange Condense, back up the directories referenced by the following parameters in the CAPTPARM member of the CFG file:
 - CHKPT_BASENAME. The library and base file name that PowerExchange Condense uses for generating checkpoint files.
 - COND_DIR. The library that is specified in this parameter contains the condense files created by PowerExchange Condense.

Note: If you plan to cold start PowerExchange Condense, you do not need to back up the libraries specified in the CHKPT_BASENAME and COND_DIR parameters.

Task Flow for Installing a HotFix on IBM i

Use the following checklist of tasks to install a PowerExchange hotfix on IBM i:

Check	Task	Required or Optional
	“Step 1. Extract the Save File on Windows” on page 57	Required
	“Step 2. Run the IBM i Installer” on page 57	Required
	“Step 3. Verify That the HotFix Is Installed” on page 58	Recommended
	“Step 4. Restart PowerExchange Tasks” on page 58	Required

Installing a HotFix on IBM i

Complete the following steps to install a PowerExchange hotfix on IBM i:

Step 1. Extract the Save File on Windows

PowerExchange provides a single self-extracting executable zip file that contains the save file for the hotfix. The zip file is located in the `patches/i5os` directory of the CD image. The zip file name has the following format:

```
pwxvrm_hotfixn_i5os.exe
```

The variable *vrm* is the version, release, and modification level, and the variable *n* is the hotfix number. For more information about the specific file name, see the *PowerExchange Release Notes* for the PowerExchange hotfix.

Unzip the self-extracting zip file into a temporary directory on your Windows computer.

Step 2. Run the IBM i Installer

You can use the IBM i Installer to transfer the PowerExchange software to the IBM i system and update PowerExchange configuration options.

1. Start the IBM i Installer in one of the following ways:
 - In File Explorer, navigate to the PowerExchange installation directory and locate the `pwxins.exe` file. Double-click `pwxins.exe` to launch the installer.
 - In a Windows command window, navigate to the installation directory for PowerExchange. Type `pwxins.exe` and press Enter to launch the installer.
2. In the **Local File Name** field, enter the name of the IBM i save file that you extracted to the Windows computer.

For more information, see [“Step 1. Extract the Save File on Windows” on page 57](#).

3. Optionally, in the **User Name** and **Password** fields, enter a user ID and password if you want to change ownership of the PowerExchange software library. Otherwise, use the same user ID and password that you entered for the full installation.
The user ID must comply with the requirements described in [“User ID Requirements” on page 44](#).
4. If you need to update the license key, select the **Configure PWX license key** check box.
5. If you need to update DBMOVER configuration options, select the **Configure IBM i DBMOVER file** check box.
6. If you configured the IBM i system to access DB2 for i metadata on a remote system for CDC, select the **Configure remote database** check box. Then complete the fields that allow PowerExchange to connect to the remote system.
7. Click **OK** to run the installation process.

The next steps depend on the configuration options you selected:

- If you selected the **Configure PWX license key** check box, the **Configure PWX License Key** dialog box appears. For more information, see [“Step 3. Enter the License Key” on page 49](#).
 - If you selected the **Configure IBM i DBMOVER file** check box, the **Configure IBM i DBMOVER File** dialog box appears. For more information, see [“Step 4. Configure the DBMOVER Configuration File Options” on page 49](#).
 - If you did not select either option, the installation process begins, and a progress bar tracks the installation progress. When the installation process completes, the IBM i installer issues a success message.
8. After the installation completes, click the Close button (X) at the top right corner of the IBM i Installer to close the window.

Tip: Use the **Reset** button at the bottom of the window to clear all of the information in the window.

Step 3. Verify That the HotFix Is Installed

Run the DTLINFO utility to confirm that the current PowerExchange version matches the hotfix level.

For more information about the DTLINFO utility, see the *PowerExchange Utilities Guide*.

Step 4. Restart PowerExchange Tasks

Restart the PowerExchange tasks that you stopped just prior to installing the hotfix.

These tasks include the PowerExchange Listener and PowerExchange Condense tasks.

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

Uninstalling PowerExchange on IBM i

Use this procedure to uninstall PowerExchange on IBM i. If you added remote capture registrations, perform the applicable steps on both the local and remote machines.

1. Stop all PowerExchange tasks.
2. Clear all spooled files from the PowerExchange output queue.
If you selected the **Create system objects** option in the IBM i Installer, the installer creates the output queue in the QGPL library. If you did not use the IBM i Installer to create system objects, the location of the output queue can be found in either the job description or the SMBJOB command.
3. Issue the ENDSBS command to end the PowerExchange subsystem. The name of the subsystem is the value that you specified for the PowerExchange data library in the IBM i Installer.
4. Delete all libraries that were created during the installation process, including the data maps library.
5. Delete any objects in the QGPL library that have the name that you specified for PowerExchange data library.
6. Delete any user profiles that were created during the installation process.

CHAPTER 5

Installing and Upgrading PowerExchange on Linux and UNIX

This chapter includes the following topics:

- [Linux and UNIX Installation Overview, 59](#)
- [Performing a Full Installation on Linux or UNIX, 59](#)
- [Performing an Upgrade Installation on Linux or UNIX, 68](#)
- [Installing a HotFix on Linux or UNIX, 70](#)

Linux and UNIX Installation Overview

This chapter provides instructions for the installing PowerExchange on Linux or UNIX, including instructions for a full installation, an upgrade, and a hotfix installation.

Note: The PowerExchange installation instructions apply to both Linux and UNIX unless otherwise noted.

Performing a Full Installation on Linux or UNIX

Perform a full installation if you are installing PowerExchange for the first time or to a new location.

Before You Install PowerExchange on Linux or UNIX

Before installing PowerExchange, make sure that pre-installation requirements are met and that you have performed the specified prerequisite tasks.

General Pre-Installation Requirements

Review the information in this guide to perform general pre-installation requirements.

Use the guide to complete the following tasks:

- Verify that PowerExchange supports the versions and release levels of your operating system and data sources.
- Obtain a valid license key.
- Verify that the new PowerExchange release can operate with your PowerCenter installation.
- If you are upgrading from a previous release and plan to run multiple releases of PowerExchange, verify that the new PowerExchange release can operate with your existing PowerExchange installation.
- If you are upgrading from a previous release, perform required upgrade tasks.

Create User ID and Grant Privileges

Create a Linux or UNIX user ID for the installation.

Complete the following steps to create the user ID:

1. Create a new user ID for the installation to become the owner or administrator of the software. In the installation instructions, this user ID is called pwxuser. Using the correct System Administration tool, create the pwxuser user ID.
2. Define a home disk.
3. Grant rights and privileges to pwxuser that are sufficient to access data from different locations on the Linux or UNIX platform.

Disk Space Requirements

Make sure that sufficient disk space is available for the installation.

The following disk space is required:

- The PowerExchange installation requires about 150 MB of disk space. Other disk space requirements depend on the files and database records being sent and received.
- The PowerExchange installation also requires 200 MB of disk space for temporary files. On UNIX, the installation script writes temporary files to the /tmp directory. To specify the location of these files, you can set the TMP or InstallAnywhere IATEMPDIR environment variable.

Java Requirements

Before you install PowerExchange on Linux or UNIX, verify that the Java Development Kit (JDK) is installed and set the INFA_JDK_HOME environment variable.

The following table shows the Java version that PowerExchange requires for each platform:

Platform	Java Major Version	Java Minor Version
AIX	1.8.0	ppc64
Linux	1.8.0_77	-
Solaris	1.7.0_45	-

In the login shell (for example, the .bashrc or .cshrc startup file), set the INFA_JDK_HOME environment variable to the directory that contains the Java Development Kit (JDK). Verify that the login shell can access this environment variable.

X Window Server

If you select the graphical user interface (GUI) option for PowerExchange installation, your system must have a graphics display server to display graphics. Without a graphics display server, an attempt to install PowerExchange by means of the installation GUI generates error messages.

On UNIX, the graphics display server is typically an X Window server. If an X Window server is not installed on the computer where you plan to install PowerExchange in graphical mode, you can use an X Window server that is installed on another computer. To do so, redirect the DISPLAY environment variable to the X Window server on the other computer.

To redirect the DISPLAY environment variable to a X Window server on another computer, use one of the following commands:

- C shell:

```
setenv DISPLAY=<TCP/IP node of XWindows server>:0
```

- Bourne/Korn shell:

```
export DISPLAY="<TCP/IP node of XWindows server>:0"
```

For example, if you have the X Window server installed on a computer that has a TCP/IP node of 10.1.50.23, use the following commands:

- C shell:

```
setenv DISPLAY 10.1.50.23:0
```

- Bourne/Korn shell:

```
export DISPLAY="10.1.50.23:0"
```

If you do not know the IP address of a computer where the X Window server is installed, ask your network administrator. For more information about redirecting the DISPLAY environment variable, see the documentation from the UNIX vendor.

If the X Window server does not support the font that the PowerExchange installation GUI uses, the button labels in the GUI might be displayed incorrectly.

AIX Prerequisite for CDC

On AIX, PowerExchange depends on the library libptools_ptr.a. In AIX 5.3 and earlier, that library was installed by default. In AIX 6.1 and later, that library is available only if you install the bos.adt.debug package. You can download the package from the IBM Web site.

Task Flow for a Full Installation

Use the following checklist of tasks to perform a full installation of PowerExchange on Linux or UNIX:

Check	Task	Required or Optional
	"Step 1. Transfer the TAR File to the Linux or UNIX System" on page 62	Required
	"Step 2. Extract Files from the TAR File" on page 63	Required
	"Step 3A. Run the PowerExchange Installation Script in Console Mode" on page 63.	Optional. Perform Step 3A or 3B.
	"Step 3B. Run the PowerExchange Installation Script in Graphical Mode" on page 63.	Optional. Perform Step 3A or 3B.

Check	Task	Required or Optional
	“Step 4. Set Up Path Environment Variables” on page 64	Required
	“Step 5. Set Locale for Oracle on Linux or UNIX” on page 64.	Optional for Oracle or DB2 for Linux, UNIX, or Windows data sources
	“Step 6. Perform Platform-Specific Tasks for Microsoft SQL Server” on page 65	Required if you plan to use Microsoft SQL Server as a data source and run the PowerExchange Listener on a Linux system
	“Step 7. Perform Platform-Specific Tasks for MySQL” on page 65	Required if you plan to use MySQL as a data source and run the PowerExchange Listener on a Linux system
	“Step 8. Test the Installation” on page 66	Recommended
	“Step 9. Delete Temporary Files and Directories” on page 67	Optional

Installing PowerExchange on Linux or UNIX

Complete the following steps to perform a full installation of PowerExchange on Linux or UNIX.

Step 1. Transfer the TAR File to the Linux or UNIX System

In this step, you transfer the TAR file from the CD image to the Linux or UNIX system.

PowerExchange provides a single TAR file that contains the software for each platform. The name of the TAR file varies by platform. The TAR file is located in one of the following directories of the CD image:

- The **software/unix/operating_system** directory of the CD image, for a full installation of a hotfix release.
- The **unix/operating_system** directory of the CD image, for a full installation of a main release.

The following table lists the subdirectories that contain the TAR file, the format of the TAR file name, and the binary type for each platform:

Subdirectory	File Name	Binary Type
aix	<code>pwxvrm_aix64.tar</code>	AIX 64-bit
linux	<code>pwxvrm_linux_em64t.tar</code> <code>pwxvrm_suse11_x64.tar</code>	RedHat Linux 64-bit, SUSE Linux Enterprise Server 12 64-bit SUSE Linux Enterprise Server 11 64-bit
solaris	<code>pwxvrm_solaris_sp64.tar</code>	Solaris 64-bit

The variable `vrm` is the version, release, and modification level. For more information about the exact file names, see the *PowerExchange Release Notes* for the PowerExchange hotfix.

Note: PowerExchange versions with integrated hotfix updates have a different format of file name than the base version of the software. For more information about the exact file names, see the *PowerExchange Release Notes* for the PowerExchange hotfix.

To transfer the TAR file to a UNIX or Linux system:

1. Log in as **pwxuser** and edit the `.profile`, as needed, to support the files and databases that will be accessed.
2. Create a temporary directory for this PowerExchange installation, for example:

```
mkdir pwx_install
```
3. Make this directory the current working directory:

```
cd pwx_install
```
4. Use FTP in BINARY mode to transfer the TAR file to the current working directory.

Step 2. Extract Files from the TAR File

Use the `tar` command to extract all of the files in the tar file to the directory that you created in Step 1.

The exact syntax might vary by type of Linux or UNIX platform. However, the following general syntax applies to most platforms:

```
tar -xvf file_name.tar
```

Step 3A. Run the PowerExchange Installation Script in Console Mode

You can install PowerExchange in console mode from a command prompt or in graphical mode. In this step, you install PowerExchange in console mode.

To install PowerExchange in console mode:

1. Locate the `install.sh` file.
2. At the command prompt, enter the following command:

```
sh install.sh
```
3. Follow the instructions in the installation wizard.

Step 3B. Run the PowerExchange Installation Script in Graphical Mode

In this step, you install PowerExchange in graphical mode.

You can install PowerExchange in console mode from a command prompt or in graphical mode using the PowerExchange installation graphical user interface (GUI). To install PowerExchange in graphical mode, an X Window server must be configured and running. For more information about the X Window System, see the X Window documentation.

To install PowerExchange in graphical mode:

1. Ensure that the X Window System is running.
2. Locate the `install.sh` file.
3. At the command prompt, enter the following command:

```
sh install.sh -i gui
```
4. Follow the instructions in the installation wizard.

RELATED TOPICS:

- [“X Window Server ” on page 61](#)

Step 4. Set Up Path Environment Variables

To successfully load PowerExchange executable files and shared libraries at run time, edit the path and library path environment variables on the Linux or UNIX system to point to the directories where the files and libraries are installed.

Also, set the PWX_HOME environment variable so that PowerExchange can locate various run-time components.

The following table lists the Linux and UNIX environment variables that you need to set:

Variable	Platform	Example
PWX_HOME	All	PWX_HOME=/usr/pwxuser/vvrm
PATH	All	PATH=/usr/pwxuser/vvrm
LIBPATH	AIX	LIBPATH=/usr/pwxuser/vvrm
LD_LIBRARY_PATH	Solaris	LD_LIBRARY_PATH=/usr/pwxuser/vvrm
LD_LIBRARY_PATH	Linux	LD_LIBRARY_PATH=/usr/pwxuser/vvrm

To verify that the environment variables are correct, log off and log in again.

Step 5. Set Locale for Oracle on Linux or UNIX

If you use PowerExchange with Oracle databases on a Linux or UNIX system, you might need to set some additional environment variables for the locale and code page.

Linux and UNIX operating systems usually have more than one code page installed and use one of them by default.

You can view the LANG, LC_CTYPE, or LC_ALL environment variable to get information about the language and locale that corresponds to the current code page. For example, you might issue the following LOCALE command in the C shell:

```
LOCALE
```

The command produces the following sample output:

```
LANG="C"  
LC_CTYPE="C"  
LC_NUMERIC="C"  
LC_TIME="C"  
LC_ALL="C"
```

In this example output, “C” implies “ASCII.”

If the LOCALE command output indicates that LANG and LC_ALL are not set, contact your UNIX administrator to determine the correct settings for these environment variables. Also, verify that these environment variables have been exported.

To change the language to English and require the system to use the Latin1 code page, issue the following command:

```
setenv LANG en_US.iso88591
```


In this case, the locale changes to Latin1 (ISO 8859-1), as shown in the following sample output:

```
LANG="en_US.iso88591"
LC_CTYPE="en_US.iso88591"
LC_NUMERIC="en_US.iso88591"
LC_TIME="en_US.iso88591"
LC_ALL="en_US.iso88591"
```

For more information about changing the locale or code page of your UNIX system, see the documentation for your UNIX system.

Step 6. Perform Platform-Specific Tasks for Microsoft SQL Server

If you plan to use Microsoft SQL Server as a data source and run the PowerExchange Listener on a Linux system, you must configure the DataDirect ODBC driver on Linux that PowerExchange supplies to connect to the SQL Server system.

1. Set the ODBCINI and ODBCINST environment variables to the DataDirect ODBC installation directory.

If the installation directory is `pxw_base_installation/ODBCversion`, use the following syntax to set the value:

```
$ ODBCINI=pxw_base_installation/ODBCversion/odbc.ini; export ODBCINI
$ ODBCINST=pxw_base_installation/ODBCversion/odbcinst.ini; export ODBCINST
```

2. Set the shared library environment variable. Use the following syntax:

```
$ LD_LIBRARY_PATH=${LD_LIBRARY_PATH}:pxw_base_installation/ODBCversion/lib;
export LD_LIBRARY_PATH
```

3. Edit the existing `odbcinst.ini` file.

Verify that the "Driver" path in the "[DataDirect 8.0 SQL Server Wire Protocol]" section is correct.

The entry should appear as follows:

```
Driver=pxw_base_installation/ODBCversion/lib/DWsqls28.so
```

Step 7. Perform Platform-Specific Tasks for MySQL

If you plan to use MySQL as a data source and run the PowerExchange Listener on a Linux system, you must perform several steps to configure the source system.

1. Verify that the MySQL `mysqlbinlog` utility is installed on the system where change capture processing will occur. This location can be local to or remote from the source database.

The following configurations meet this requirement:

- Run PowerExchange and the `mysqlbinlog` utility on the MySQL source database server.
- Run PowerExchange and the `mysqlbinlog` utility on a machine that is remote from the MySQL source database server. Either specify the `mysqlbinlog` path in the `Path` environment variable or specify the `mysqlbinlog` full path and file name in the `MYSQLBINLOG` parameter in the `MYSQL` `CAPL_CONNECTION` statement in the `dbmover` configuration file.

2. If PowerExchange capture will run on a Linux system, configure ODBC on that system so that PowerExchange will be able to use the ODBC driver to connect to the MySQL server. Perform the following steps:

- a. Set the ODBCINI and ODBCINST environment variables.

Use the following export statements:

```
export ODBCINI=$PWX_HOME/ODBC7.1/odbc.ini
export ODBCINST=$PWX_HOME/ODBC7.1/odbcinst.ini
```

- b. Set the shared LD_LIBRARY_PATH environment variable.

Use the following statements:

```
LD_LIBRARY_PATH=${LD_LIBRARY_PATH}:$PWX_HOME/ODBC7.1/lib;  
export LD_LIBRARY_PATH
```

- c. Update the ODBC driver information in the odbc.ini and odbcinst.ini files.

For example, add the following statement:

```
Driver=pwx_home/ODBC7.1/lib/DWmysql27.so
```

The *pwx_home* variable represents the local path to the DataDirect installation that PowerExchange uses.

3. Enable binary logging with the options that PowerExchange requires on the MySQL source database by using one of the following methods:

- If you start the MySQL database server from the command line, enter the following command:

```
mysqld --server-id[=server_id] --log-bin[=base_name] --binlog-format[=row]  
--binlog-row-image[=full]
```

- If you start the MySQL database server as a service on Windows or as a daemon on Linux, you can specify database configuration settings in an .ini or .cnf configuration file. The default file, my.ini, is located in the MySQL installation directory. To enable binary logging, add the following lines to your MySQL configuration file:

```
[mysqld]  
server-id=server_id  
log-bin=base_name  
binlog-format=row  
binlog-row-image=full
```

Notes:

- For MySQL 5.7.x, you must use a number greater than 0 for the *server-id* value.
- Informatica recommends that you include the optional log-bin parameter to specify the base name for the sequence of binary log files. To create the binary log file names, MySQL adds a numeric suffix to the base name, which is incremented each time a new binary log is created. If you do not specify a base name, MySQL uses the default base name of *host_name-bin*.
- PowerExchange requires row-based binary logging with the row image type of full. Verify that the binlog-format parameter is set to row and that the binlog-row-image parameter is set to full. These values are the default values.

4. Create a MySQL user that PowerExchange can use to connect to the MySQL database. Use the following SQL statement:

```
CREATE USER 'pwx_user'@'%' IDENTIFIED BY 'password';
```

5. Grant the following privileges that are required for CDC to the PowerExchange user:

```
GRANT SELECT ON database_name.* TO 'pwx_user'@'%';  
GRANT REPLICATION CLIENT ON *.* TO 'pwx_user'@'%';
```

If the user needs to access binary logs on a remote MySQL server, grant the following additional privilege:

```
GRANT REPLICATION SLAVE ON database_name.* TO 'pwx_user'@'%';
```

Step 8. Test the Installation

To test the installation, use the PowerExchange DTLINFO utility.

To run the DTLINFO utility, enter the following command:

```
dtlinfo
```

The following information is displayed for the current PowerExchange installation:

- Version
- Release and release level
- Build date and time

For more information about DTLINFO, see the *PowerExchange Utilities Guide*.

Step 9. Delete Temporary Files and Directories

After you complete the installation, you can delete the temporary directory that you created in Step 1 and its contents.

After You Install PowerExchange on Linux or UNIX

After you install PowerExchange, perform the following post-installation tasks:

- Review the *PowerExchange Release Guide* for new features and changes.
- Optionally, migrate PowerExchange data and configuration files from a previous release.
- If necessary, configure PowerExchange prior to performing bulk data movement or change data capture (CDC).

RELATED TOPICS:

- [“Copying PowerExchange Data from a Previous Release on Linux or UNIX” on page 67](#)
- [“Migrating Data Maps, Capture Registrations, and Extraction Maps” on page 38](#)

Copying PowerExchange Data from a Previous Release on Linux or UNIX

If you are upgrading to a new PowerExchange release on the machine and creating a new PowerExchange environment, you can copy PowerExchange data from the previous release to the new location.

Copy the following PowerExchange data:

- Copy the DBMOVER configuration file.
- If you use the PowerExchange Logger for Linux, UNIX, and Windows, copy the directory that is specified in the EXT_CAPT_MASK parameter of the pwxocl or dtlca configuration file. This directory contains the PowerExchange Logger log files. If you use a group definitions file, back up the directories that are specified in the *external_capture_mask* positional parameter of each GROUP statement.

Note: You do not need to back up these directories if you plan to cold start the PowerExchange Logger for Linux, UNIX, and Windows.

RELATED TOPICS:

- [“Migrating Data Maps, Capture Registrations, and Extraction Maps” on page 38](#)

PowerExchange Configuration

Configure PowerExchange prior to performing bulk data movement or change data capture (CDC).

For configuration information, see the following documents:

- For bulk data movement configuration, see the *PowerExchange Bulk Data Movement Guide*.
- For CDC configuration, see the *PowerExchange CDC Guide for Linux, UNIX, and Windows*.
- For dbmover.cfg configuration parameters, see the *PowerExchange Reference Manual*.

After you have configured PowerExchange, you can start the PowerExchange Listener and, if required, PowerExchange Logger for Linux, UNIX, and Windows. For more information about starting and stopping PowerExchange tasks, see the *PowerExchange Command Reference*.

PowerExchange Configuration Files for Localized Environments

The PowerExchange installation program installs sample configuration files for use in English and localized environments. The sample configuration files for localized environments include statements that specify the code page and messages file required for the environment.

PowerExchange provides the following sample configuration files:

File Name	Environment
dbmover.cfg	English
dbmover_bz.cfg	Brazilian Portuguese
dbmover_ja.cfg	Japanese
dbmover_ko.cfg	Korean
dbmover_sc.cfg	Simplified Chinese

Performing an Upgrade Installation on Linux or UNIX

This section describes how to perform an upgrade installation on Linux or UNIX. If you plan to install the new version of PowerExchange in the same directory as the previous version, follow the instructions in this topic.

RELATED TOPICS:

- [“Performing a Full Installation on Linux or UNIX” on page 59](#)
- [“Installing a HotFix on Linux or UNIX” on page 70](#)

Before You Upgrade PowerExchange on Linux or UNIX

Before you upgrade the PowerExchange software, complete the following tasks:

1. Stop all PowerExchange tasks.
2. Back up the current PowerExchange installation directory to provide fallback, if necessary.
3. If you specify the DMX_DIR parameter in the dbmover configuration file, back up the directory to which it points.
4. If you use CDC, back up the directories that you specified in the following dbmover.cfg parameters:
 - CAPT_PATH. Specifies the directory that contains the CCT files that hold the capture registrations as well as files for the PowerExchange Logger for Linux, UNIX, and Windows.
 - CAPT_XTRA. Specifies the directory that contains the extraction maps.
5. If you use the PowerExchange Logger for Linux, UNIX, and Windows, back up the directory that is specified in the EXT_CAPT_MASK parameter of the pwxcl or dtlca configuration file. This directory

contains the PowerExchange Logger log files. If you use a group definitions file, back up the directories that are specified in the *external_capture_mask* positional parameter of each GROUP statement.

Note: You do not need to back up these directories if you plan to cold start the PowerExchange Logger for Linux, UNIX, and Windows.

- Review the prerequisites.

RELATED TOPICS:

- [“Before You Install PowerExchange on Linux or UNIX” on page 59](#)

Task Flow for an Upgrade Installation on Linux or UNIX

These tasks for upgrading PowerExchange on Linux or UNIX are a subset of the tasks for a full installation.

Use the following checklist of tasks to upgrade PowerExchange on Linux or UNIX when using the same installation directory as the previous version:

Check	Task	Required or Optional
	“Step 1. Transfer the TAR File to the Linux or UNIX System” on page 62	Required
	“Step 2. Extract Files from the TAR File” on page 63	Required
	“Step 3A. Run the PowerExchange Installation Script in Console Mode” on page 63	Optional. Perform Step 3A or 3B.
	“Step 3B. Run the PowerExchange Installation Script in Graphical Mode” on page 63	Optional. Perform Step 3A or 3B.
	“Step 6. Perform Platform-Specific Tasks for Microsoft SQL Server” on page 65	Required if you plan to use Microsoft SQL Server as a data source and run the PowerExchange Listener on a Linux system
	“Step 7. Perform Platform-Specific Tasks for MySQL” on page 65	Required if you plan to use MySQL as a data source and run the PowerExchange Listener on a Linux system
	“Step 8. Test the Installation” on page 66	Recommended
	“Step 9. Delete Temporary Files and Directories” on page 67	Optional

After You Upgrade PowerExchange on Linux or UNIX

Review the *PowerExchange Release Guide* for new features and changes.

If necessary, configure PowerExchange prior to performing bulk data movement operations or CDC processing. For configuration information, see the following documents:

- For bulk data movement configuration, see the *PowerExchange Bulk Data Movement Guide*.
- For CDC configuration, see the *PowerExchange CDC Guide for Linux, UNIX, and Windows*.
- For dbmover.cfg configuration parameters, see the *PowerExchange Reference Manual*.

After you have configured PowerExchange, you can restart the PowerExchange Listener and, if required, PowerExchange Logger for Linux, UNIX, and Windows. For more information about starting and stopping PowerExchange tasks, see the *PowerExchange Command Reference*.

PowerExchange Configuration Files for Localized Environments

The PowerExchange installation program installs sample configuration files for use in English and localized environments. The sample configuration files for localized environments include statements that specify the code page and messages file required for the environment.

PowerExchange provides the following sample configuration files:

File Name	Environment
dbmover.cfg	English
dbmover_bz.cfg	Brazilian Portuguese
dbmover_ja.cfg	Japanese
dbmover_ko.cfg	Korean
dbmover_sc.cfg	Simplified Chinese

Installing a HotFix on Linux or UNIX

This section describes how to install a hotfix to an existing PowerExchange environment. The hotfix version and the existing PowerExchange version must be the same.

Hotfixes provide a subset of the PowerExchange software. You install on top of an existing PowerExchange environment. When you install a hotfix, PowerExchange does not create new data files, such as those containing data maps, capture registrations, and extraction maps. As a result, you do not need to migrate the contents of these files, which simplifies the hotfix installation process.

Because PowerExchange hotfixes are cumulative, you need to install only the latest available hotfix.

RELATED TOPICS:

- [“Performing an Upgrade Installation on Linux or UNIX” on page 68](#)

Before You Install a HotFix on Linux or UNIX

Before you install the hotfix, complete the following tasks:

1. Stop all PowerExchange tasks.
2. Back up the PowerExchange installation directory.
3. If you specify the DMX_DIR parameter in the dbmover configuration file, back up the directory to which it points.
4. If you use CDC, back up the directories that you specified in the following dbmover configuration file parameters:
 - CAPT_PATH. Specifies the directory that contains the CCT files for capture registrations and files for the PowerExchange Logger for Linux, UNIX, and Windows.
 - CAPT_XTRA. Specifies the directory that contains the extraction maps.

- If you use the PowerExchange Logger for Linux, UNIX, and Windows, back up the directory that is specified in the EXT_CAPT_MASK parameter of the pwxcl or dtlca configuration file. This directory contains the PowerExchange Logger log files. If you use a group definitions file, back up the directories that are specified in the *external_capture_mask* positional parameter of each GROUP statement.

Note: You do not need to back up these directories if they are the same as CAPT_PATH or if you plan to cold start the PowerExchange Logger for Linux, UNIX, and Windows.

Task Flow for Installing a HotFix on Linux or UNIX

Use the following checklist of tasks to install a PowerExchange hotfix on Linux or UNIX:

Check	Task	Required or Optional
	"Step 1. Transfer the TAR File to the Linux or UNIX System" on page 71	Required
	"Step 2. Untar the HotFix Installation File" on page 72	Required
	"Step 3. Verify the License and DBMOVER Configuration Files" on page 72	Required
	"Step 4. Run the slibclean Command on an AIX System" on page 72	Required on AIX
	"Step 5. Verify That the HotFix Is Installed" on page 72	Recommended
	"Step 6. Restart PowerExchange Tasks" on page 72	Required

Installing the HotFix on Linux or UNIX

Complete the following steps to install a PowerExchange hotfix on Linux or UNIX.

Step 1. Transfer the TAR File to the Linux or UNIX System

In this step, you transfer the TAR file from the CD image to the Linux or UNIX system.

Use FTP to transfer the hotfix installation TAR file in BINARY mode to the current PowerExchange installation directory on the Linux or UNIX system.

PowerExchange provides a single tar file that contains the software for each platform. The tar file is located in the **patches/unix** directory of the CD image. The name of the tar file varies by platform.

The following table lists the subdirectories that contain the tar file, the format of the tar file name, and the binary type for each platform:

Subdirectory	File Name	Binary Type
aix	pwxvrm_hotfixn_aix64.tar	AIX 64-bit
linux	pwxvrm_hotfixn_linux_em64t.tar pwxvrm_hotfixn_suse11_x64.tar	RedHat Linux 64-bit, SUSE Linux Enterprise Server 12 64-bit SUSE Linux Enterprise Server 11 64-bit
solaris	pwxvrm_hotfixn_solaris_sp64.tar	Solaris 64-bit

The variable *vrm* is the version, release, and modification level, and the variable *n* is the hotfix number. For more information about the exact file names, see the *PowerExchange Release Notes* for the PowerExchange hotfix.

Step 2. Untar the HotFix Installation File

Use the tar command to extract all of the files in the TAR file to the installation directory.

The exact syntax might vary by type of Linux or UNIX platform. However, the following general syntax applies to most platforms:

```
tar -xvf file_name.tar
```

Step 3. Verify the License and DBMOVER Configuration Files

If you store the license.key and dbmover.cfg files in the PowerExchange installation directory, verify that they are accurate and have not been affected by the hotfix installation. If necessary, copy these files from the backup.

Tip: To make upgrading to a new release simpler, store the license.key and dbmover.cfg files in a directory other than the PowerExchange installation directory. You can use environment variables or options on the start commands to point to locations of the license.key and dbmover.cfg files. For more information about environment variable and options for start commands for PowerExchange tasks, see [“PowerExchange Environment on Linux, UNIX, and Windows” on page 189](#).

Step 4. Run the slibclean Command on an AIX System

To ensure that the DTLINFO utility and the PowerExchange Listener report the correct hotfix number, run the slibclean command if you are installing on an AIX system. To run this command, you must have root or sudo authority.

Step 5. Verify That the HotFix Is Installed

Run the DTLINFO utility to verify that the current PowerExchange version matches the hotfix level.

For more information about the DTLINFO utility, see the *PowerExchange Utilities Guide*.

Step 6. Restart PowerExchange Tasks

Restart the PowerExchange tasks that you stopped just prior to installing the hotfix.

These tasks include the PowerExchange Listener task and the PowerExchange Logger for Linux, UNIX, and Windows.

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

PowerExchange Configuration Files for Localized Environments

PowerExchange provides sample configuration files for use in English and localized environments. The sample configuration files for localized environments include statements that specify the code page and messages file required for the environment.

If the sample configuration files for a hotfix have been updated since the previous release, the installation program installs sample files with "_sample" appended to the file name to prevent the files from overwriting previously installed files.

PowerExchange provides the following sample configuration files as needed for hotfixes:

File Name	Environment
dbmover.cfg_sample	English
dbmover_bz.cfg_sample	Brazilian Portuguese
dbmover_ja.cfg_sample	Japanese
dbmover_ko.cfg_sample	Korean
dbmover_sc.cfg_sample	Simplified Chinese

CHAPTER 6

Installing and Upgrading PowerExchange on Windows

This chapter includes the following topics:

- [Windows Installation Overview, 74](#)
- [Performing a Full Installation on Windows, 75](#)
- [Performing an Upgrade Installation on Windows, 80](#)
- [Installing a PowerExchange HotFix on Windows, 81](#)
- [Uninstalling PowerExchange on Windows, 84](#)

Windows Installation Overview

This chapter provides instructions for the installing PowerExchange on Windows, including instructions for a full installation, an upgrade, and a hotfix installation.

The PowerExchange installation program installs or upgrades PowerExchange on either a Windows 32-bit system or a Windows 64-bit system.

On Windows, PowerExchange includes 32-bit and 64-bit executables. The PowerExchange installation program installs both sets of executables on 64-bit machines and 32-bit executables on 32-bit machines. On 64-bit machines, the installation program gives you the option of installing the PowerExchange Navigator.

The following table shows, for selected PowerExchange components and features, if they use the 32-bit executables, 64-bit executables, or both:

PowerExchange Component or Feature	32-bit Executables	64-bit Executables
PowerExchange Navigator	-	X
PowerExchange bulk data movement	-	X
PowerExchange change data capture (CDC)	-	X
PowerExchange utilities	X (Only for DTLREXE on a 32-bit machine)	X (All utilities including DTLREXE)
PowerExchange support for the PowerCenter Client	X	-

PowerExchange Component or Feature	32-bit Executables	64-bit Executables
PowerExchange support for the Informatica Developer	-	X
PowerExchange support for the PowerCenter Integration Service and Data Integration Service	-	X
ODBC Administrator support, and PowerExchange ODBC driver	X (Supports PowerExchange ODBC connectivity for 32-bit applications)	X
z/OS Installation Assistant	-	X

Performing a Full Installation on Windows

Perform a full installation if you are installing PowerExchange for the first time or to a new location or if you are upgrading PowerExchange.

Before You Install PowerExchange on Windows

Before installing PowerExchange, make sure that pre-installation requirements are met and that you have performed the specified prerequisite tasks.

General Installation Requirements

Before you install PowerExchange, perform the following tasks:

- Verify that PowerExchange supports the versions and release levels of your operating system and data sources.
- Obtain a valid license key.
- Verify that the new PowerExchange release can operate with your PowerCenter installation.
- If you are upgrading from a previous release and plan to run different release levels of PowerExchange on different systems, verify that the new PowerExchange release can operate with existing PowerExchange installations. For more information, see [“PowerExchange to PowerExchange Interoperability” on page 33](#).
- If you are upgrading from a previous release, perform required migration tasks. For more information, see [“Before You Upgrade PowerExchange on Windows” on page 80](#).
- Optionally, if you are upgrading from a previous release, uninstall the previous release from the Windows system.

For more information about uninstalling PowerExchange on Windows, see [“Uninstalling PowerExchange on Windows” on page 84](#).

- Make a backup of the system PATH environment variable. The installation program prepends the PowerExchange path to the system PATH variable. If the maximum length of the PATH variable is exceeded, the variable may be truncated.

Disk Space Requirements

A PowerExchange installation on Windows requires 360 MB of disk space.

ODBC Considerations

Determine whether you need to install PowerExchange Open Database Connectivity (ODBC) drivers. You must install these drivers after you install PowerExchange if you plan to use ODBC to access PowerExchange from another Informatica product, such as PowerCenter or Data Archive.

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*.

The PowerExchange installation delivers 32-bit and 64-bit versions of the following thin ODBC drivers:

- **Informatica PowerExchange Unicode driver.** Use this driver to retrieve metadata that contains multibyte characters.
- **Informatica PowerExchange driver.** Use this driver to access data sources.

Install PowerExchange ODBC drivers on the following machines:

- If you use ODBC to import metadata into the PowerCenter Designer (a 32-bit application) or preview data in PowerCenter, install the 32-bit PowerExchange ODBC drivers on the PowerCenter Client machine.
- If you run workflows that use ODBC, install the 64-bit PowerExchange ODBC drivers on the PowerCenter Integration Service or Data Integration Service machine.

Considerations for PowerExchange Environment Variables

You can define PowerExchange environment variables to specify the location of PowerExchange message log, configuration, and license files. By moving these files from their default locations and using environment variables to point to the new locations, you can make upgrading easier and locating the files easier.

The following table lists the environment variables and the files to which they point:

Environment Variable	Points to
DETAIL_LOGPATH	PowerExchange message log file
PWX_CONFIG	PowerExchange DBMOVER configuration file
PWX_LICENSE	PowerExchange license key

The following table shows the default locations of the PowerExchange message log file, DBMOVER configuration file, and license key file in 32-bit and 64-bit PowerExchange environments:

PowerExchange File	Default Location in 32-bit PowerExchange	Default Location in 64-bit PowerExchange
Message log file	Current working directory	Current working directory
DBMOVER configuration file	bin32 subdirectory of the installation directory	Installation directory
License key file	bin32 subdirectory of the installation directory	Installation directory

In some cases you might run 32-bit and 64-bit Windows versions of PowerExchange on the same machine. For example, you might run the PowerCenter Developer and the PowerCenter Integration Server on the same machine. In this case, the Developer client invokes 32-bit PowerExchange executables to access metadata,

and the Integration Service invokes 64-bit PowerExchange executables to run workflows that connect to PowerExchange sources.

If you define PowerExchange environment variables to point to PowerExchange files, the environment variables apply to the files used by both 32-bit and 64-bit versions of PowerExchange. If you prefer to maintain separate DBMOVER or message log files for 32-bit and 64-bit versions of PowerExchange, you can keep the default locations and not define environment variables. You can also define the LOGPATH statement in the DBMOVER configuration file to specify a unique path and directory for PowerExchange message log files on a Windows system. If you also specify a value in the DETAIL_LOGPATH environment variable, the environment variable overrides the LOGPATH statement.

Task Flow for a Full Installation

Use the following checklist of tasks to perform a full installation of PowerExchange on Windows:

Check	Task	Required or Optional
	"Step 1. Log In as a User That Has the Required Authority" on page 77	Required
	"Step 2. Run the Installation Program" on page 77	Required
	"Step 3. Verify or Set the Path Environment Variable" on page 78	Required
	"Step 4. Install the PowerExchange ODBC Drivers (Optional)" on page 78	Required only if you need to use PowerExchange ODBC
	"Step 5. Test the Installation" on page 79	Recommended

Installing PowerExchange

Complete the following steps to perform a full installation of PowerExchange on Windows.

Step 1. Log In as a User That Has the Required Authority

To run the installation program, log in as the Administrator user or use a user ID that belongs to the Administrators group. If you do not have Administrator authority, the installation program does not install the PowerExchange Listener service.

Step 2. Run the Installation Program

Use the zip file that PowerExchange provides to install the PowerExchange software on Windows and add the PowerExchange Listener as a Windows service. The zip file is located in the `software/windows` directory of the CD image.

To install PowerExchange on a Windows 32-bit or 64-bit system:

1. Extract the contents of the zip file for your Windows platform to a temporary folder.

The zip file is named `pwxxvm_win_x64.zip`. The variable `vm` is the PowerExchange version, release, and modification level.

Note: PowerExchange versions with integrated hotfix updates have a different format of file name than the base version of the software. For more information about the exact file names, see the *PowerExchange Release Notes* for the PowerExchange hotfix.

When you extract the contents of the zip file, preserve its structure, so that the destination folder includes the following folders and files:

- properties folder
 - Server folder
 - source folder
 - install.bat file
2. Run install.bat.
The installation interface starts.
 3. If you are prompted to select a language, select a language and click **OK**.
 4. On the **Introduction** page, click **Next**.
 5. On the **Enter License Key** page, enter the license key and click **Next**.
If you do not know your license key, see [“PowerExchange License Keys” on page 29](#).
 6. On the **Installation Directory** page, accept the default installation directory, or click **Choose** to browse to an installation directory.
If you do not want to install the PowerExchange Navigator, clear the check box.
Then click **Next**.
 7. On the **Pre-Installation Summary** page, review the installation information. If the information is correct, click **Install**.
 8. On the **Post-Installation Summary** page, click **Done**.

Step 3. Verify or Set the Path Environment Variable

Verify or set the Path environment variable. The installation program updates the Path environment variable to include the PowerExchange installation directory. If the PowerExchange installation directory is not included, PowerExchange features, such as the PowerExchange Navigator help, might not work.

1. Click **Start > Control Panel > System > Advanced System Settings**.
2. Click **Environment Variables**.
3. To verify or change the Path environment variable, perform the following steps:
 - In the **System variables** box, select **Path** and click **Edit**.
 - In the **Variable value** box, verify that the Path environment variable contains the correct path to the PowerExchange installation directory. If it does not, add the PowerExchange installation directory to the semicolon-separated list of paths. If you accepted the default installation location, use the following default path:

```
C:\Informativa\PowerExchangev.r.m
```
4. Click **OK**.
5. Click **OK**.

Step 4. Install the PowerExchange ODBC Drivers (Optional)

If you plan to use ODBC to access PowerExchange from PowerCenter or another Informatica product that integrates with PowerExchange, install the PowerExchange Open Database Connectivity (ODBC) drivers.

1. To run the command prompt with administrator privileges, perform these actions:
 - Select **Start > All Programs > Accessories**.

- Right-click **Command Prompt** and select **Run as administrator**.
2. Navigate to one of the following directories:
 - To install 64-bit ODBC drivers, navigate to the base PowerExchange installation directory.
 - To install 32-bit ODBC drivers, navigate to the bin32 subdirectory of the PowerExchange installation directory.

For more information about the 32-bit and 64-bit ODBC drivers, see [“ODBC Considerations” on page 76](#).

3. At a command prompt, enter the following command:

```
dtlodbc add
```

This command installs both ODBC drivers and issues the following messages:

```
PWX-00607 DTLODBC VRM x.x.x Build Vxxx started.
PWX-02322 ODBC driver "Informatica PowerExchange" added.
PWX-02322 ODBC driver "Informatica PowerExchange Unicode" added.
```

4. Use the **Windows ODBC Data Source Administrator** to define PowerExchange ODBC data sources. For more information, see the *PowerExchange Reference Manual*.

Notes:

- If you run the dtlodbc program without administrator privileges, the program might appear to add or remove entries successfully without actually adding or removing them.
- As an alternative to running the command prompt with administrator privileges, you can configure Windows to always run the dtlodbc program with administrator privileges. Follow these steps:
 1. Navigate to the directory that contains the appropriate dtlodbc.exe file.
 2. Right-click **dtlodbc.exe** and select **Properties**.
 3. On the Compatibility tab, select **Run this program as an administrator**.

Step 5. Test the Installation

Use the DTLINFO utility to test the PowerExchange installation. To run the utility, enter the following command at the command prompt:

```
dtlinfo
```

This command displays the following information for the current installation of PowerExchange: version, release, modification level, and the build date and time. For more information about DTLINFO, see the *PowerExchange Utilities Guide*.

After You Install PowerExchange on Windows

After you install PowerExchange, perform the following post-installation tasks:

- Review the *PowerExchange Release Guide* for new features and changes.
- Optionally, migrate PowerExchange data and configuration files from a previous release.

For more information about migrating data maps, capture registrations, and extraction maps, see [“Migrating Data Maps, Capture Registrations, and Extraction Maps” on page 38](#).
- Configure PowerExchange prior to performing bulk data movement or CDC. For configuration information, see the following documents:
 - For bulk data movement configuration, see the *PowerExchange Bulk Data Movement Guide*.
 - For CDC configuration, see the *PowerExchange CDC Guide for z/OS*, *PowerExchange CDC Guide for i5/OS*, or *PowerExchange CDC Guide for Linux, UNIX, and Windows*.

- For dbmover.cfg configuration parameters, see the *PowerExchange Reference Manual*.

After you have configured PowerExchange, you can start the PowerExchange Listener service or PowerExchange Listener and, if required, the PowerExchange Logger for Linux, UNIX, and Windows. For more information about starting and stopping PowerExchange tasks, see the *PowerExchange Command Reference*.

PowerExchange Configuration Files for Localized Environments

The PowerExchange installation program installs sample configuration files for use in English and localized environments. The sample configuration files for localized environments include statements that specify the code page and messages file required for the environment.

PowerExchange provides the following sample configuration files:

File Name	Environment
dbmover.cfg	English
dbmover_bz.cfg	Brazilian Portuguese
dbmover_ja.cfg	Japanese
dbmover_ko.cfg	Korean
dbmover_sc.cfg	Simplified Chinese

Performing an Upgrade Installation on Windows

This section describes how to perform an upgrade installation on Windows. You cannot run multiple versions of PowerExchange on the same Windows machine. To upgrade to a new release, you must replace the existing release.

Before You Upgrade PowerExchange on Windows

Before you upgrade the PowerExchange software, complete the following tasks:

1. Stop all PowerExchange tasks.
2. Backup the current PowerExchange installation directory to provide fallback, if necessary.
3. If you specify the DMX_DIR parameter in the dbmover.cfg, backup the directory to which it points.
4. If you use CDC, backup the directories that you specified in the following dbmover.cfg parameters:
 - CAPT_PATH. Specifies the directory that contains the CCT files that hold the capture registrations as well as files for the PowerExchange Logger for Linux, UNIX, and Windows.
 - CAPT_XTRA. Specifies the directory that contains the extraction maps.
5. If you use the PowerExchange Logger for Linux, UNIX, and Windows, back up the directory that is specified in the EXT_CAPT_MASK parameter of the pwxcl.cfg or dtlca.cfg file. This directory contains the PowerExchange Logger log files. If you use a group definitions file, back up the directories that are specified in the *external_capture_mask* positional parameter of each GROUP statement.

Note: You do not need to back up these directories if you plan to cold start the PowerExchange Logger for Linux, UNIX, and Windows.

Upgrading PowerExchange on Windows

To upgrade to a new release of PowerExchange on Windows, perform a full installation.

RELATED TOPICS:

- [“Performing a Full Installation on Windows” on page 75](#)

After You Upgrade PowerExchange on Windows

Review the *PowerExchange Release Guide* for new features and changes.

If necessary, configure PowerExchange prior to performing bulk data movement or change data capture (CDC). For configuration information, see the following documents:

- For bulk data movement configuration, see the *PowerExchange Bulk Data Movement Guide*.
- For CDC configuration, see the *PowerExchange CDC Guide for Linux, UNIX, and Windows*.
- For dbmover.cfg configuration parameters, see the *PowerExchange Reference Manual*.

After you have configured PowerExchange, you can restart the PowerExchange Listener or PowerExchange Listener service and, if required, PowerExchange Logger for Linux, UNIX, and Windows. For more information about starting and stopping PowerExchange tasks, see the *PowerExchange Command Reference*.

PowerExchange Configuration Files for Localized Environments

The PowerExchange installation program installs sample configuration files for use in English and localized environments. The sample configuration files for localized environments include statements that specify the code page and messages file required for the environment.

PowerExchange provides the following sample configuration files:

File Name	Environment
dbmover.cfg	English
dbmover_bz.cfg	Brazilian Portuguese
dbmover_ja.cfg	Japanese
dbmover_ko.cfg	Korean
dbmover_sc.cfg	Simplified Chinese

Installing a PowerExchange HotFix on Windows

This section describes how to install a hotfix to an existing PowerExchange environment. The hotfix version and the existing PowerExchange version must be the same.

Hotfixes provide a subset of the PowerExchange software. You install on top of an existing PowerExchange environment. When you install a hotfix, PowerExchange does not create new data files, such as those containing data maps, capture registrations, and extraction maps. As a result, you do not need to migrate the contents of these files, which simplifies the hotfix installation process.

Because PowerExchange hotfixes are cumulative, you need to install only the latest available hotfix.

Before You Install a HotFix on Windows

Before applying the hotfix, complete the following tasks:

1. Stop all of the following PowerExchange tasks that are running:
 - PowerExchange Listener
 - PowerExchange Listener Service
 - PowerExchange Navigator
 - PowerExchange Logger for Linux, UNIX, and Windows
 - PowerCenter extractions that use PowerExchange on this computer
2. Back up the PowerExchange installation. By default, PowerExchange is installed in the following location:
`C:\Informativa\PowerExchangev.r.m`
3. If you specify the DMX_DIR parameter in the dbmover.cfg, back up the directory to which it points.
4. If you use CDC, back up the directories that you specified in the following dbmover.cfg parameters:
 - CAPT_PATH. Specifies the directory that contains the CCT files for capture registrations and files for the PowerExchange Logger for Linux, UNIX, and Windows.
 - CAPT_XTRA. Specifies the directory that contains the extraction maps.
5. If you use the PowerExchange Logger for Linux, UNIX, and Windows, back up the directory that is specified in the EXT_CAPT_MASK parameter of the pwxcl.cfg or dtlca.cfg file. This directory contains the PowerExchange Logger log files. If you use a group definitions file, back up the directories that are specified in the *external_capture_mask* positional parameter of each GROUP statement.
Note: You do not need to back up these directories if you plan to cold start the PowerExchange Logger for Linux, UNIX, and Windows.

Task Flow for Installing a HotFix on Windows

Use the following checklist of tasks to install a hotfix for PowerExchange on Windows:

Check	Task	Required or Optional
	"Step 1. Run the Installation Program" on page 82	Required
	"Step 2. Verify the License and DBMOVER Configuration Files" on page 83	Required
	"Step 3. Copy Localized PowerExchange Navigator Help Files" on page 83	Optional
	"Step 4. Verify That the HotFix Is Installed" on page 83	Recommended
	"Step 5. Restart PowerExchange Tasks" on page 83	Required

Installing the HotFix on Windows

Complete the following steps to install a PowerExchange hotfix on Windows.

Step 1. Run the Installation Program

PowerExchange provides a single self-extracting executable zip file that contains the hotfix for Windows. The zip file is located in the **patches/windows** directory of the CD image.

Unzip the self-extracting installation file into the PowerExchange installation directory. The installation file is named `pwvxrm_hotfixn_win_x64.exe`.

The variable `vrm` is the version, release, and modification level, and the variable `n` is the hotfix number. For more information about the exact file names, see the *PowerExchange Release Notes* for the PowerExchange hotfix.

Step 2. Verify the License and DBMOVER Configuration Files

If you store the `license.key` and `dbmover.cfg` files in the PowerExchange installation directory, verify that they are accurate and have not been affected by the hotfix installation. If necessary, copy these files from the backup.

Tip: To make migration to a new release simpler, store the `license.key` and `dbmover.cfg` files in a directory other than the PowerExchange installation directory. You can use environment variables or options on the start commands to point to locations of the `license.key` and `dbmover.cfg` files. For more information about environment variable and options for start commands for PowerExchange tasks, see [“PowerExchange Environment on Linux, UNIX, and Windows” on page 189](#).

Step 3. Copy Localized PowerExchange Navigator Help Files

If you installed the hotfix on the PowerExchange Navigator machine, localized PowerExchange help files reside in separate `helpdoc_<language>` folders, such as the `helpdoc_en` folder for English help and the `helpdoc_bz` folder for Brazilian Portuguese help. For the PowerExchange Navigator to display help in the correct language on your system, copy all of the help files to the generic `helpdoc` folder.

Step 4. Verify That the HotFix Is Installed

Run the DTLINFO utility, `dtlinfo.exe`, to verify that the current PowerExchange version matches the hotfix level.

For more information about the DTLINFO utility, see the *PowerExchange Utilities Guide*.

Step 5. Restart PowerExchange Tasks

Restart the PowerExchange tasks that you stopped just prior to installing the hotfix.

These tasks include the PowerExchange Listener, PowerCenter extraction workflows, and PowerExchange Logger for Linux, UNIX, and Windows.

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

PowerExchange Configuration Files for Localized Environments

PowerExchange provides sample configuration files for English and localized environments. The sample configuration files for localized environments include statements that specify the code page and messages file required for the environment.

If the sample configuration files for a hotfix have been updated since the previous release, the installation program installs sample files with `“_sample”` appended to the file name to prevent the files from overwriting previously installed files.

PowerExchange provides the following sample configuration files as needed for hotfixes:

File Name	Environment
dbmover.cfg_sample	English
dbmover_bz.cfg_sample	Brazilian Portuguese
dbmover_ja.cfg_sample	Japanese
dbmover_ko.cfg_sample	Korean
dbmover_sc.cfg_sample	Simplified Chinese

Uninstalling PowerExchange on Windows

Use this procedure to uninstall PowerExchange on Windows.

To uninstall a PowerExchange version earlier than 9.0.1, remove the program from the Windows **Control Panel**.

To uninstall PowerExchange 9.0.1 or later, perform the following actions:

1. Ensure that the PATH environment variable includes the path to the Java Runtime Environment (JRE).

For example, the JRE might be installed under the Informatica clients:

```
C:\Informatica\9.6.1\clients\java\jre\bin
```

2. From the Windows **Start** menu, expand the **Informatica PowerExchange v.r.m** folder and click **Uninstall PowerExchange v.r.m**.

For example, click **Informatica PowerExchange 10.1.1 > Uninstall PowerExchange 10.1.1**.

The uninstall program displays a message that prompts you to confirm the removal of all PowerExchange components. Click **Next** to continue.

Notes:

- If the program group is not in the **Start** menu, you can double-click the Uninstaller.exe executable file in the `px_installation_directory\Uninstaller_pwx` directory.
- If the uninstaller fails to initialize with a message that reports a Windows error 2 occurred while loading the Java VM, ensure that the PATH environment variable includes the current path to the JRE. Then, from the **Start** menu, right-click **Command Prompt** and select **Run as administrator**. Change (cd) to the directory that contains the PowerExchange Uninstaller.exe file. Then run Uninstaller.exe with the LAX_VM parameter pointing to the JRE installation. For example:

```
Uninstaller.exe LAX_VM "C:\Program Files\Java\jre1.8.0_77\bin\java.exe"
```

3. Click **Next**.

The uninstall program prompts you to stop all PowerExchange services before you proceed.

4. Perform one of the following actions:

- If no PowerExchange services are running, click **Continue** to proceed with the uninstallation.
- If any PowerExchange services are running, click **OK** to return to the previous window and stop the services.

5. At the prompt, select whether to uninstall the binary files only or completely remove PowerExchange from the system.

If you select to uninstall the binary files only, PowerExchange removes the following items:

- PowerExchange binaries
- Path to the PowerExchange binaries from the PATH environment variable
- PowerExchange Listener service

If you select to completely remove PowerExchange from the system, PowerExchange removes the preceding items and also removes registry entries that the PowerExchange Navigator created.

CHAPTER 7

Installing and Upgrading PowerExchange on z/OS

This chapter includes the following topics:

- [z/OS Installation Overview, 86](#)
- [Performing a Full Installation on z/OS, 87](#)
- [Performing an Upgrade on z/OS, 107](#)
- [Installing a HotFix on z/OS, 126](#)
- [z/OS Installation Assistant Reference, 133](#)

z/OS Installation Overview

When you install PowerExchange on z/OS, you can perform a full installation, an upgrade, or a hotfix installation by running the z/OS Installation Assistant.

The z/OS Installation Assistant can perform the following tasks:

- Set variables and change PowerExchange parameters and data set names for the z/OS installation in a single process.
- Move the software library binary files to the BINLIB library on the z/OS system.
- Move customized run-time library members to the RUNLIB library on the z/OS system.

After you run the z/OS Installation Assistant, you must submit a series of jobs that the z/OS Installation Assistant created on the z/OS system to complete the installation.

Important: The z/OS Installation Assistant only runs on 64-bit Windows systems. If you attempt to run the z/OS Installation Assistant on a 32-bit system, the installation will fail.

z/OS Security

PowerExchange requires access to z/OS databases and files that are typically protected by security products such as the IBM Resource Access Control Facility (RACF), CA ACF2, and CA Top Secret.

When you run the z/OS Installation Assistant, enter the user ID for the PowerExchange administrator. The PowerExchange administrator defines libraries, runs installation jobs, customizes data sources, and authorizes libraries.

After installation, you can set additional security options. For more information about PowerExchange security options and the SECURITY statement in the DBMOVER configuration member, see the *PowerExchange Reference Manual*.

Installation and Startup Errors

PowerExchange issues error messages that contain information about the causes of z/OS installation and startup errors.

The most common cause of a PowerExchange startup error is an incorrect IP address or port number in the NODE and LISTENER statements in the DBMOVER configuration member.

Performing a Full Installation on z/OS

Perform a full installation if you are installing PowerExchange on z/OS for the first time or to a different location or if you are updating an existing installation to add the CDC software. Use the z/OS Installation Assistant wizard.

The z/OS Installation Assistant uses your input to customize JCL and parameters in some files on the Windows system. From the z/OS Installation Assistant, you can transfer the files to the BINLIB and RUNLIB libraries on the z/OS system.

On the z/OS system, you must submit at least the SETUPBLK job. The SETUPBLK job performs the following tasks:

- Allocates an extended partitioned data set (PDSE) for the PowerExchange LOADLIB.
- Allocates the following PowerExchange partitioned data sets (PDSs) and data sets: DBRMLIB, DTLDATA, DTLDEMO, DTLEXP, DTLLOG, DTLMSG, PROCLIB, and SRCLIB.
- Uses TSO/E RECEIVE to expand the following distributed PDSE, PDSs, and data sets: DBRMLIB, DTLDATA, DTLMSG, LOADLIB, and SRCLIB.
- Optionally submits additional installation jobs. If you select the **Auto Submit** option on the **General Parameters** page, the SETUPBLK job submits these jobs based on the options that you select in the z/OS Installation Assistant. Otherwise, you must manually submit all of the jobs.
- Adds the JOB card in the JOBCARD member of the RUNLIB library to the additional installation jobs.

If you want to perform CDC, you must submit some additional jobs.

Before You Perform a Full Installation on z/OS

Before you perform a full installation on z/OS, you must complete the following tasks:

- Verify that PowerExchange supports the versions and release levels of your operating system and data sources.
- Verify that the z/OS Installation Assistant is installed on a 64-bit Windows system. The installation will fail if you attempt to run the z/OS Installation Assistant from a 32-bit system.
- Get a valid license key.
- If the Microsoft .NET Framework is not installed on your Windows machine, double-click dotnetfx35.exe in the PowerExchange installation directory to install it.

- Verify that the new PowerExchange release is compatible with your PowerCenter release on Linux, UNIX, or Windows.
- If you plan to run the new PowerExchange instance with other existing PowerExchange instances in your environment, verify that all of the PowerExchange instances have *version.release.modification* levels that are compatible.
- If you are upgrading from a previous release, verify that you have addressed all applicable upgrade issues.

Task Flow for a Full Installation on z/OS

To install PowerExchange on z/OS, install the PowerExchange base software. Also, install the PowerExchange Change Data Capture (CDC) software and the PowerExchange software for selected data sources if applicable.

Use the following checklist of tasks to complete a full installation of PowerExchange:

Check	Task	Required or Optional
	Phase I. Install the PowerExchange Base Software	Required
	“Step 1. Allocate the BINLIB and RUNLIB Libraries” on page 92	Required
	“Step 2. Extract the z/OS Installation Files to a Windows System” on page 93	Required
	“Step 3. Run the z/OS Installation Assistant for a Full Installation” on page 93	Required
	“Step 4. Edit the JOBCARD Member in the RUNLIB Library” on page 101	Required
	“Step 5. Review the XJOBS Member in the RUNLIB Library” on page 101	Required
	“Step 6. Submit PowerExchange Base Software Jobs” on page 101	Required
	“Step 7. Add the Library that Contains the CSNBSYD and CSNBSYE Programs to the System Link List (Optional)” on page 101	Optional. Perform this step if you want PowerExchange to use the z/OS Cryptographic Services ICSF to perform AES-128 encryption of user names and passwords.
	“Step 8. Add the Required Libraries to the APF List” on page 102	Required
	“Step 9. Add an OMVS Segment to the PowerExchange Listener User ID (RACF Users)” on page 102	Required if you use RACF
	Phase II. Install the PowerExchange CDC Software	Required if you use CDC
	“Step 10. Submit the CDC Jobs” on page 103	Required if you use CDC
	“Step 11. Submit the XIZZZ998 Job” on page 103	Required if you use CDC
	“Step 12. Copy the PowerExchange Agent Procedure to the PROCLIB Library ” on page 104	Required if you use CDC
	“Step 13. Add the PowerExchange Load Libraries to the APF List” on page 104	Required if you use CDC

Check	Task	Required or Optional
	“Step 14. Add an OMVS Segment to the PowerExchange Agent User ID (RACF Users)” on page 104	Required if you use CDC and RACF
	“Step 15. Start the PowerExchange Agent ” on page 104	Required if you use CDC
	“Step 16. Submit the SETUPCC2 Job” on page 105	Required if you use CDC
	Phase III. Install the PowerExchange Software for Specific Data Sources	Required for some data sources
	“Step 17. Install Software for DB2 for z/OS Data Sources” on page 105	Required for DB2 for z/OS data sources
	“Step 18. Install Software for IDMS Data Sources (Optional)” on page 105	Optional for IDMS data sources
	“Step 19. Install Software for IMS Synchronous CDC Data Sources” on page 106	Required for IMS synchronous CDC data sources if you use the PowerExchange CRG.LOAD library
	Phase IV. Delete Previously Copied RUNLIB Members	Optional
	“Step 20. Submit the XIZZZ999 Job (Optional)” on page 106	Optional

Space Requirements for PowerExchange Data Sets

On the z/OS system, you run installation jobs that allocate data sets, PDSs, and PDSEs that are used in bulk data movement and CDC. Some of these jobs are automatically submitted by other jobs, such as the SETUPBLK job.

Tip: To verify that sufficient space is available on the z/OS system for the PowerExchange data sets, contact your system administrator. The space requirements vary by type of hardware and direct access storage device (DASD).

PowerExchange Data Sets Allocated During Installation

The following table describes the data sets that the installation jobs allocate during installation of the PowerExchange base software on 3390 DASD:

DD Name	Description	Space Units (3390)	Space Quantity (pri,sec)	Directory Blocks	DCB Characteristics
DATAMAPS	VSAM data set that contains PowerExchange data maps.	TRK	(15,15)	-	VSAM
DBRMLIB	PDS that contains PowerExchange DB2 DBRMs for bulk and CDC.	TRK	(10,10)	10	RECFM FB LRECL 80 BLKSIZE 27920

DD Name	Description	Space Units (3390)	Space Quantity (pri,sec)	Directory Blocks	DCB Characteristics
DTLDATA	PDS that contains demo data for the demos in DTLDEMO.	CYL	(5,5)	10	RECFM FB LRECL 80 BLKSIZE 27920
DTLDEMO	PDS that contains demo JCL.	CYL	(5,5)	5	RECFM FB LRECL 80 BLKSIZE 27920
DTLEXPL	PDS that contains sample JCL for maintenance activities, fault resolution, and PowerExchange utilities. The AAYINDEX member describes each member in DTLEXPL.	TRK	(5,5)	10	RECFM FB LRECL 80 BLKSIZE 27920
DTLLOG	Sequential data set that can be used as the PowerExchange Listener message log. Alternative PowerExchange logging can also be used. For more information, see the <i>PowerExchange Reference Manual</i> .	CYL	(5,5)	0	RECFM VB LRECL 1024 BLKSIZE 23476
DTLMSG	Sequential data set that contains PowerExchange messages.	TRK	(5,15)	0	RECFM VB LRECL 1024 BLKSIZE 23476
LOADLIB	PDSE load library that contains PowerExchange load modules required for bulk access, as well as some of the CDC load modules.	CYL	(80,15)	100	RECFM U LRECL 0 BLKSIZE 23440
PROCLIB	PDS that contains the PowerExchange started task procedures.	TRK	(3,5)	5	RECFM FB LRECL 80 BLKSIZE 27920
SRCLIB	PDS that contains code samples and sample exits.	TRK	(15,15)	5	RECFM FB LRECL 80 BLKSIZE 27920

PowerExchange CDC Data Sets Allocated During Installation

The following table describes the additional data sets that the installation jobs allocate for CDC on 3390 DASD:

Data Set	Description	Space Units (3390)	Space Quantity (pri,sec)	Directory Blocks	DCB Characteristics
CCT	VSAM data set that contains capture registrations.	TRK	(15,15)	-	VSAM
CDCT	VSAM data set that contains PowerExchange Condense information.	TRK	(15,15)	-	VSAM
CDEP	VSAM data set that contains capture extraction history information.	TRK	(15,15)	-	VSAM
CRG.LOAD	Load library that contains load modules for IMS synchronous CDC.	CYL	(15,15)	90	RECFM U LRECL 0 BLKSIZE 23440
DBRM	Temporary load library that contains DB2 DBRM modules for DB2 CDC. Contents are copied to DBRMLIB during installation.	TRK	(20,15)	45	RECFM FB LRECL 80 BLKSIZE 27920
DTLCAMAP	VSAM data set that contains extraction maps.	TRK	(15,15)	-	VSAM
ERDS01	VSAM data set used by the PowerExchange Logger as an emergency restart data set.	TRK	(30,0)	-	VSAM
ERDS02	VSAM data set used by the PowerExchange Logger as an emergency restart data set.	TRK	(30,0)	-	VSAM
LOAD	Load library that contains load modules for PowerExchange CDC.	CYL	(75,15)	100	RECFM U LRECL 0 BLKSIZE 23746
PRILOG.DS01 PRILOG.DS02 PRILOG.DS03	VSAM data sets used by the PowerExchange Logger as primary active log data sets.	CYL	(15,0)	-	VSAM
SAMPLIB	PDS that contains sample JCL and parameters for PowerExchange CDC.	TRK	(50,15)	45	RECFM FB LRECL 80 BLKSIZE 27920
SECLOG.DS01 SECLOG.DS02 SECLOG.DS03	VSAM data sets used by the PowerExchange Logger as secondary active log data sets.	CYL	(15,0)	-	VSAM

Data Set	Description	Space Units (3390)	Space Quantity (pri,sec)	Directory Blocks	DCB Characteristics
SR2TOTAL	Sequential data set that contains IDMS CDC information.	CYL	(1,1)	0	RECFM VB LRECL 80 BLKSIZE 23476
SR2OUT	Sequential data set that contains IDMS CDC information.	CYL	(5,5)	0	RECFM VB LRECL 80 BLKSIZE 23476
USERLIB	Load library that contains control parameters for PowerExchange CDC.	TRK	(5,15)	45	RECFM U LRECL 0 BLKSIZE 23440

Phase I. Install the PowerExchange Base Software

In this phase of the full installation, you allocate the BINLIB and RUNLIB libraries on the z/OS system, extract the z/OS installation files into a temporary directory on the Windows system, and run the z/OS Installation Assistant from that directory. Then you run the customized installation jobs that the z/OS Installation Assistant transferred to the z/OS system to install the PowerExchange base software.

All PowerExchange users must complete the steps in this phase for a z/OS installation.

Step 1. Allocate the BINLIB and RUNLIB Libraries

On the z/OS system, you must allocate the BINLIB and RUNLIB libraries that will receive the files from the z/OS Installation Assistant.

Use the predefined library names of BINLIB and RUNLIB with a high-level qualifier of your choice, for example, PWX.SYSTEMA.PROD.RUNLIB. When you run the installation jobs on the z/OS system, the jobs will allocate members in these libraries.

- ▶ Allocate the BINLIB and RUNLIB libraries in one of the following ways:
 - Use the Interactive System Productivity Facility (ISPF) Option 3.2.
 - Use JCL such as the following sample JCL for allocating the RUNLIB library:

```
//ALLOC EXEC PGM=IEFBRL4
//DS1 DD DSNAME=&HLQ..RUNLIB,
// DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(20,10,50),RLSE),
// DCB=(BLKSIZE=nn,RECFM=FB,LRECL=80,DSORG=PS),
// VOL=SER=volume_serial_number
```

Tip: When allocating these libraries, record the high-level qualifiers (HLQ) that you use. You must enter this value as the HLQ value for the **User Modifiable Data Sets (Non-VSAM)** group on the **Data Set Group Details** page in the z/OS Installation Assistant.

The following table describes the parameters to use for allocating the BINLIB and RUNLIB libraries on a 3390 direct access storage device (DASD):

Library	Description	Space Units (3390)	Space Quantity (pri,sec)	Directory Blocks	DCB Characteristics
BINLIB	PDS that contains the software libraries in TSO/E transmitted format.	CYL	(160,10)	10	RECFM FB LRECL 80 BLKSIZE any valid value, often a multiple of the LRECL value
RUNLIB	PDS that contains the jobs to install PowerExchange, jobs to set up and run PowerExchange, and configuration data. The AAINDEX member describes each member in RUNLIB.	CYL	(10,1)	50	RECFM FB LRECL 80 BLKSIZE any valid value, often a multiple of the LRECL value

Step 2. Extract the z/OS Installation Files to a Windows System

PowerExchange for z/OS is shipped as a self-extracting executable. Extract the files to a temporary directory on your Windows system.

1. From a Windows command prompt, make a temporary directory to extract the installation files into. For example, run the following command to make a temporary directory named pwx_mvms:

```
mkdir pwx_mvms
```

2. Find and run the following product installation executable for z/OS:

```
pwxvrm_zos.exe
```

The *vrm* variable is the PowerExchange *version.release.modification* number. For example, pwx961_zos.exe is the name of the executable for the PowerExchange 9.6.1 for z/OS installation.

The WinZip Self-Extractor prompts you for a directory to unzip the files into.

3. In the **WinZip Self-Extractor** dialog box, click **Browse**.
4. In the **Browse for Folder** dialog box, browse to the temporary directory that you created, and then click **OK**.
5. In the **WinZip Self-Extractor** dialog box, click **Unzip**.
The WinZip Self-Extractor places several files in the root directory and creates the binary and runlib subdirectories, which also contain files. The WinZip Self-Extractor then displays a message box to indicate that the files were successfully unzipped.
6. In the message box, click **OK**.
7. In the **WinZip Self-Extractor** dialog box, click **Close**.

Step 3. Run the z/OS Installation Assistant for a Full Installation

To perform a full installation of PowerExchange, you must run the z/OS Installation Assistant wizard on a 64-bit Windows system.

If you do not have an existing INSTPARM file from a previous installation, the z/OS Installation Assistant initially creates an INSTPARM file that contains only the default values. The z/OS Installation Assistant

updates this InstParm file with your entries. As you progress through the z/OS Installation Assistant pages, you can save your entries to the InstParm file by clicking **Save** on any page.

The z/OS Installation Assistant also creates a corresponding INPARM nn file in an XRunlib directory on the Windows system, where nn is a two-digit number from 00 to 99. Each time you run the z/OS Installation Assistant, it creates another INPARM nn file with an nn value that is incremented by 1. After nn reaches 99, the z/OS Installation Assistant starts over at 00, creating INPARM00. When you complete the z/OS Installation Assistant, the INPARM nn file is transferred to the RUNLIB library on the z/OS system.

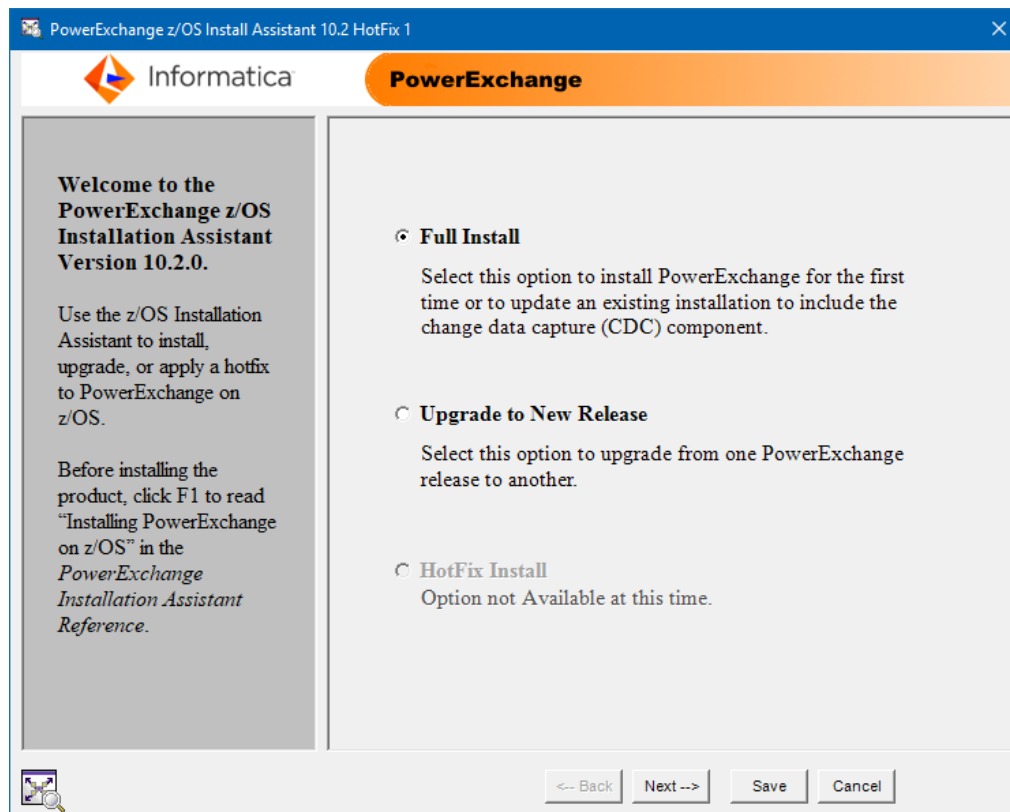
Tip: Retain the customized InstParm file so that you can use it to upgrade PowerExchange or apply hotfixes later.

On some z/OS Installation Assistant pages, you can click **Advanced Params** to define advanced parameters or click **Restore Defaults** to restore the default values. However, if you define advanced parameters, you cannot use the **Restore Defaults** button to restore the default values later.

Important: You must run the z/OS Installation Assistant on a 64-bit Windows system. If you attempt to run the wizard on a 32-bit system, the installation fails.

1. In the temporary directory to which you extracted the z/OS installation files (the "pwx_mvsv" directory in the preceding topic), right-click **MVS_Install.exe** and select **Run as administrator**.

The z/OS Installation Assistant starts:



2. Select **Full Install**, and click **Next**.
3. If you are performing a new installation and an InstParm file does not yet exist, a message indicates that the file will be created with default values. Click **OK** to create the InstParm file on the Windows system.
4. On the **Full Install** page, click **Next**.

The **Select Global Parameters** page appears:

PowerExchange z/OS Install Assistant 10.2 HotFix 1

Informatica PowerExchange

Full Install

- Global Parameters
- Data Set Group Details
- General Parameters
- Data Sources
 - CDC Common Parameters
 - Adabas
 - Datacom
 - DB2
 - DB2 CDC
 - IDMS
 - IDMS CDC
 - IMS
 - IMS CDC
 - MQ Series
 - VSAM
- Create Runlib JCL
- Transfer Files to Mainframe
- File Transfer Status

Select Global Parameters

Logon ID PowerExchange Agent / Logger Prefix

Default Values

HLQ

Storage Class Volume

Mgmt Class Unit

Data Class

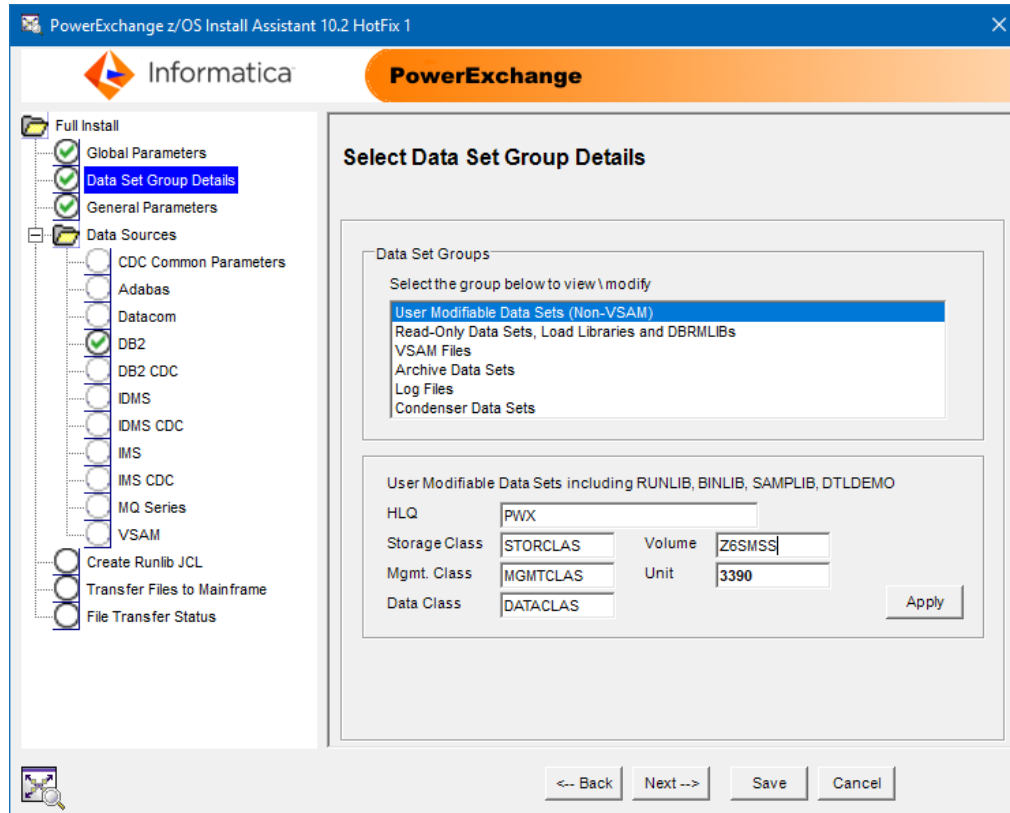
License Key

License Characters 44 (44 or 64 characters depending on which key used)

<-- Back Next --> Save Cancel

5. Enter the default data set high-level qualifier and default storage settings.
For more information, see ["Select Global Parameters Page \(Full Installation\)" on page 133](#).
Then, click **Next**.

The **Select Data Set Group Details** page appears and is populated with the information that you entered:



6. Enter the high-level qualifier (HLQ), volume, unit, and storage management subsystem (SMS) information for each data set group.

For more information, see [“Select Data Set Group Details Page” on page 135](#).

Then, click **Next**.

The **Select General Parameters** page appears:

PowerExchange z/OS Install Assistant 10.2 HotFix 1

Informatica PowerExchange

Full Install

- Global Parameters
- Data Set Group Details
- General Parameters
- Data Sources
 - CDC Common Parameters
 - Adabas
 - Datacom
 - DB2
 - DB2 CDC
 - IDMS
 - IDMS CDC
 - IMS
 - IMS CDC
 - MQ Series
 - VSAM
- Create Runlib JCL
- Transfer Files to Mainframe
- File Transfer Status

Select General Parameters

LE Run-time Library:

Delete Install Members Auto Submit On Light Install

TCP/IP Ports

Change Listener Port:

Use Tape / GDG Netport:

Use CDC Netport:

ICU

Select this option to generate ICU custom converters, which is required when extending PowerExchange character set support

USS directory where tar file programs are unpacked:

USS directory where ICU CNV files are placed (DTLCFG ICUDATADIR parameter):

JES3 Install

Advanced Parm's

Restore Defaults

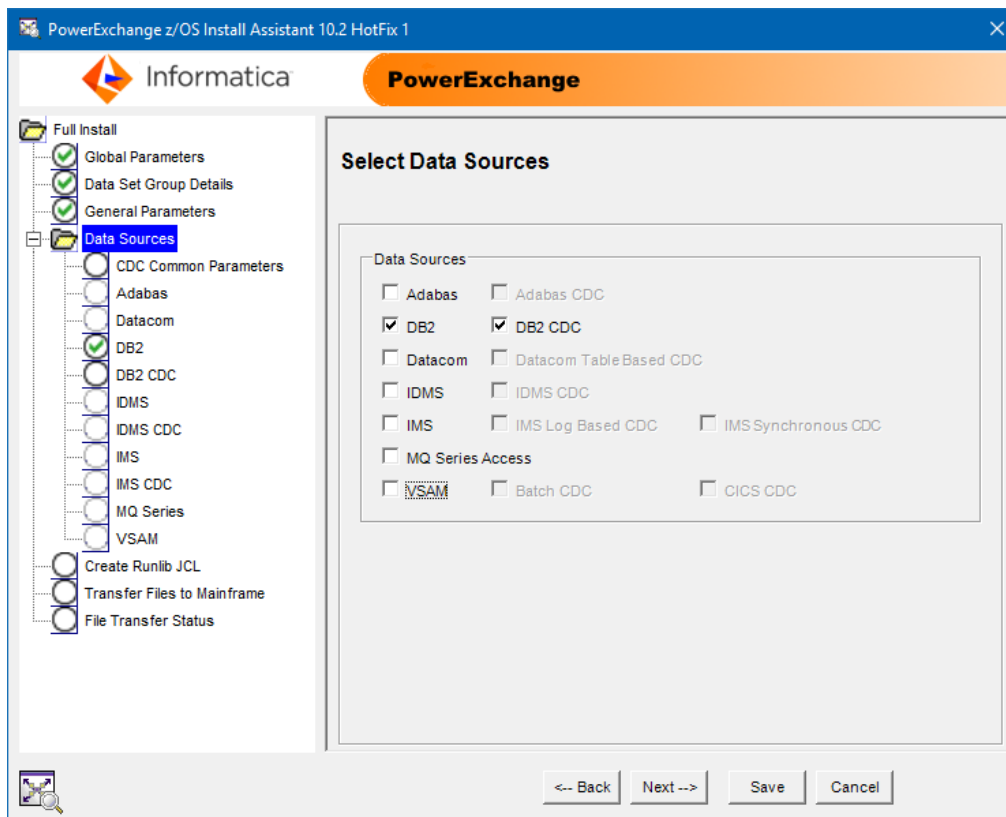
<-- Back Next --> Save Cancel

7. Enter the general parameters.

For more information, see ["General Parameters Page" on page 138](#).

Then, click **Next**.

The **Select Data Sources** page appears:



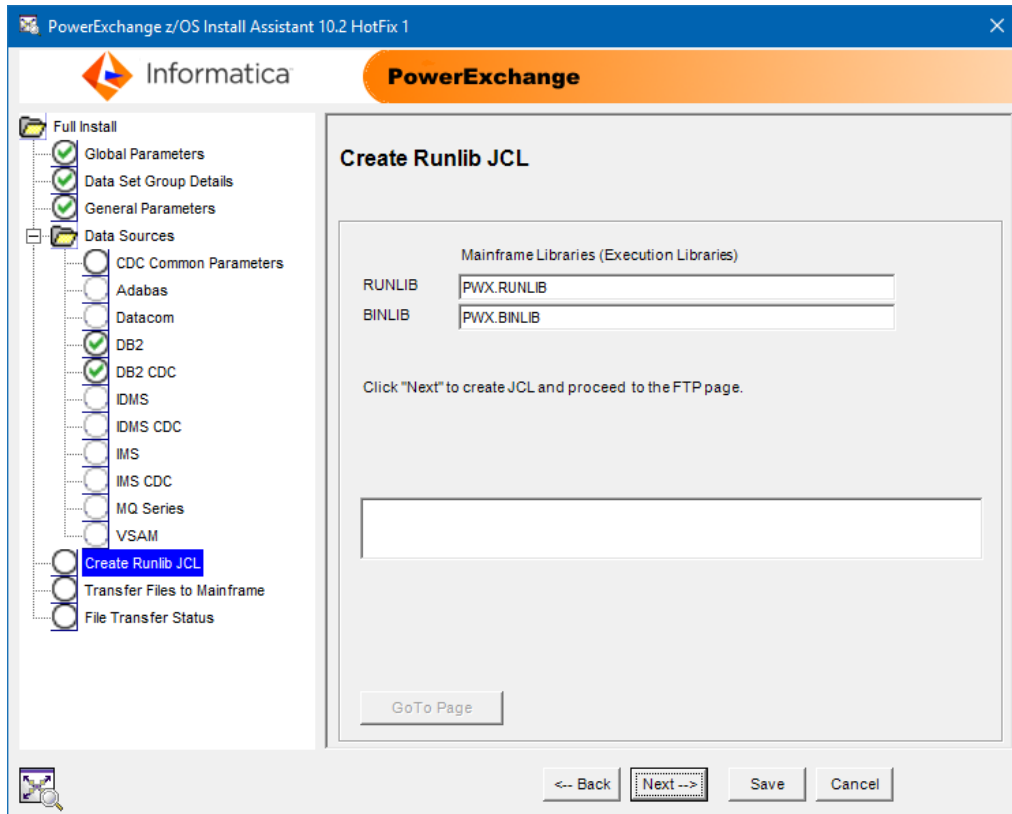
8. Select one or more data sources for bulk data movement and CDC operations.
 To select a CDC data source, first select the data source type for bulk data movement to the left.
 For more information, see ["Data Sources Page" on page 141](#).
 Then, click **Next**.
 If you selected a CDC data source, the **Select CDC Common Parameters** page appears.
9. Enter common parameters for CDC operations.
 For more information, see ["CDC Common Parameters Page" on page 142](#).
 Then, click **Next**.
10. Enter parameter settings for each data source that you selected on the **Data Sources** page.
 The following table lists the parameters page for each data source type:

Page	Reference
Adabas Parameters	" Adabas Parameters Page" on page 144
Datacom Parameters	" Datacom Parameters Page" on page 146
DB2 Parameters	" DB2 Parameters Page" on page 147
DB2 CDC Parameters	" DB2 CDC Parameters Page" on page 149

Page	Reference
IDMS Parameters	“ IDMS Parameters Page” on page 151
IDMS CDC Parameters	“ IDMS CDC Parameters Page” on page 152
IMS Parameters	“ IMS Parameters Page” on page 153
IMS CDC Parameters	“ IMS CDC Parameters Page” on page 154
MQ Series Parameters	“ MQ Series Parameters Page” on page 155
VSAM Parameters	“ VSAM Parameters Page” on page 156

If you selected multiple data source types, click **Next** to proceed to the next page.

When you click **Next** on the last parameters page, the **Create Runlib JCL** page appears:

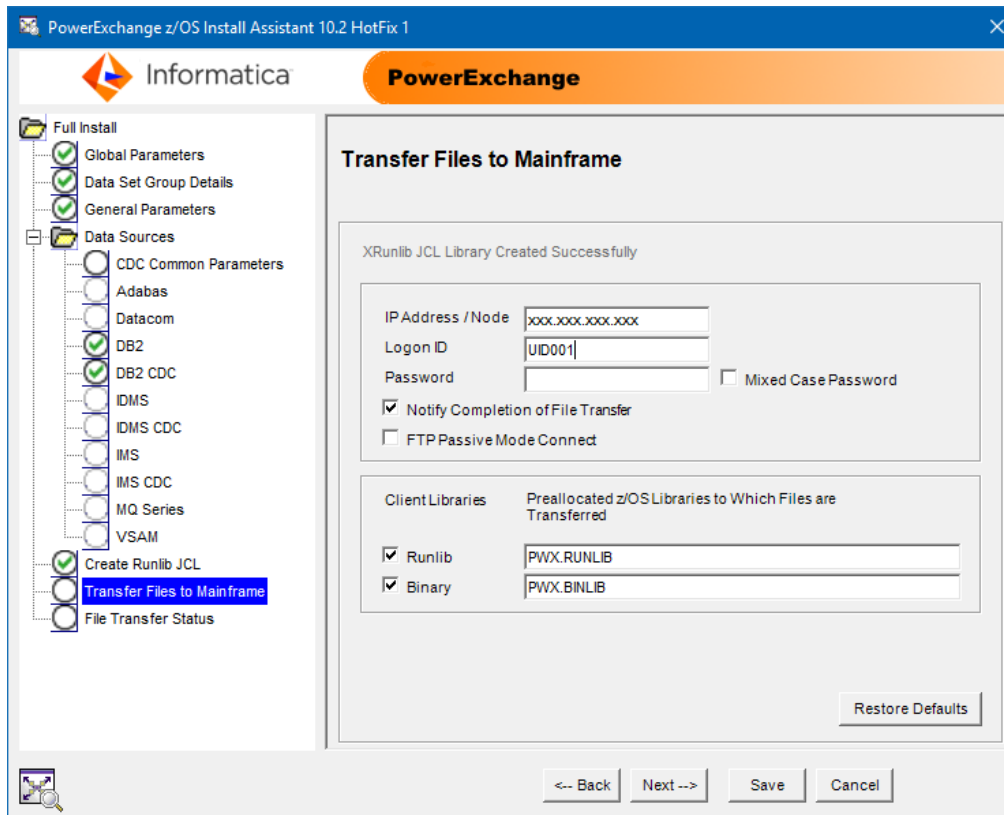


11. Enter information about the RUNLIB and BINLIB libraries.

For more information, see [“Create Runlib JCL Page” on page 156](#).

Then, click **Next**.

The **Transfer Files to Mainframe** page appears:



Also, the z/OS Installation Assistant creates the XRunlib folder. This folder contains the files from the runlib folder. The z/OS Installation Assistant customizes these files with the values that you entered.

12. On the **Transfer Files to Mainframe** page, enter information about the z/OS system to which to transfer files.

For more information, see [“Transfer Files to Mainframe Page” on page 157](#).

Then, click **Next**.

The **View File Transfer Status** page displays the status of the file transfer operation. For more information, see [“View File Transfer Status Page” on page 159](#).

13. After the file transfer completes, click **OK**.
14. Click **Finish**.

Note: The z/OS Installation Assistant saves your installation entries to the InstParm file in the root installation directory on Windows if you have not already done so. The z/OS Installation Assistant also creates a corresponding INPARM nn file in the XRunlib directory on Windows and uses FTP to transfer this file to the RUNLIB library on z/OS. The INPARM nn member in the RUNLIB that has the largest nn value is the most recent version of the member.

Step 4. Edit the JOBCARD Member in the RUNLIB Library

On the z/OS system, edit the JOBCARD member in the RUNLIB library according to your site standards. You might need to add parameters such as CLASS and MSGCLASS.

To see a list of the jobs in the RUNLIB library that will use the updated JOBCARD, view the XJOBSU member in the upgrade RUNLIB library.

1. In the RUNLIB library, edit the JOBCARD member.
2. If you selected the **Auto Submit On** option on the **General Parameters** page of the z/OS Installation Assistant, add the TYPRUN=HOLD statement to control how the jobs run.

With this parameter setting, when the jobs run, you must release each job manually.

Step 5. Review the XJOBS Member in the RUNLIB Library

The XJOBS member lists the installation jobs that you must submit from the RUNLIB, in the order that they must be submitted. It also includes some of the installation options that you set in the z/OS Installation Assistant.

- ▶ Review the XJOBS member in the RUNLIB library to determine which job to run next.

Step 6. Submit PowerExchange Base Software Jobs

You must submit the SETUPBLK job. If you did *not* select **Auto Submit On** and the option to install CDC software, also submit the SETUPVSM and XIZZZ998 jobs.

1. In the RUNLIB library, add the JOB card that is in the JOBCARD member of the RUNLIB to the SETUPBLK job.
2. Submit the SETUPBLK job.

The SETUPBLK job allocates sequential data sets, copies procedures to the PROCLIB library, and adds the JOB card that is in JOBCARD member of the RUNLIB to the other installation jobs.

If you selected the **Auto Submit On** option in the z/OS Installation Assistant, the SETUPBLK job also submits additional jobs based on the options that you selected.

3. If you did *not* select the **Auto Submit On** option and the option to install the CDC software, manually submit the following jobs:
 - SETUPVSM. This job allocates the DATAMAPS data set.
 - XIZZZ998. This job populates several data sets by using the corresponding members from RUNLIB.

Note: If you selected **Auto Submit On** and the option to install CDC software, you will submit the SETUPVSM and XIZZZ998 jobs later:

- Submit the SETUPVSM job after you submit the SETUPCC1 job. For more information, see [“Step 10. Submit the CDC Jobs” on page 103](#).
- Submit the XIZZZ998 job after you submit CDC jobs. For more information, see [“Step 11. Submit the XIZZZ998 Job” on page 103](#).

Step 7. Add the Library that Contains the CSNBSYD and CSNBSYE Programs to the System Link List (Optional)

If you want PowerExchange to use the z/OS Cryptographic Services Integrated Cryptographic Service Facility (ICSF) to perform AES-128 encryption of user names and passwords, verify that the ICSF is enabled. Also,

work with your z/OS system programmer to verify that the library that contains the CSNBSYD and CSNBSYE modules is included in the system link list.

By default, the CSNBSYD and CSNBSYE modules reside in CSF.SCSFMODE. If the library that contains the CSNBSYD and CSNBSYE modules is not in the system link list, work with your z/OS system programmer to add the library to the list.

PowerExchange uses ICSF, when it is enabled, to encrypt user names and passwords. Otherwise, PowerExchange uses AES-128 encryption and decryption routines that are compatible with those in the OpenSSL Toolkit. Because ICSF uses hardware assists, its encryption and decryption routines are much faster than the alternative routines.

Step 8. Add the Required Libraries to the APF List

Add the PowerExchange LOADLIB library and other required libraries to the authorized program facility (APF) list.

For more information about updating the APF list, consult with your z/OS systems programming team.

1. Add the LOADLIB library to the APF list.

After you APF-authorize the LOADLIB library, PowerExchange can complete the following tasks:

- Issue RACROUTE security calls to check permissions.
 - Wait for tape mounts when no tape drives are available.
 - Wait for data sets currently in use by other users.
 - Get IDMS schema and subschema information.
2. Verify that the library that contains the CSNBSYD and CSNBSYE modules is APF-authorized. If this library is included in the system link list, also verify that all of the libraries that are accessed through the system link list are APF-authorized.
 3. Review the STEPLIB DD statement in any PowerExchange JCL, especially the PowerExchange Listener JCL in the STARTLST and PWXLSTNR members of the RUNLIB library.

APF-authorize all libraries that are concatenated in the STEPLIB DD statement. Otherwise, failures occur.

Step 9. Add an OMVS Segment to the PowerExchange Listener User ID (RACF Users)

The PowerExchange Listener uses Transmission Control Protocol/Internet Protocol (TCP/IP) sockets for communication. If you use RACF, complete this step to configure the RACF user or profile under which the PowerExchange Listener runs.

Note: If you do not use RACF, consult the documentation for your security product.

- ▶ Define an OMVS segment for the RACF user ID under which the PowerExchange Listener runs.
Alternatively, set up a default OMVS segment by using the FACILITY class profile BPX.DEFAULT.USER.

Phase II. Install the PowerExchange CDC Software

If you purchased the CDC option and you selected CDC data sources in the z/OS Installation Assistant, install the PowerExchange CDC software in this phase of the installation.

Otherwise, proceed to [“Phase III. Install the PowerExchange Software for Specific Data Sources” on page 105.](#)

For any change capture environment on z/OS, the following components are required:

- A PowerExchange Listener. The z/OS Installation Assistant installs the PowerExchange Listener.
- A PowerExchange Agent. You must install and start the PowerExchange Agent.
- A PowerExchange Logger for z/OS. When you start the PowerExchange Agent, it runs the final setup job for the PowerExchange Logger.
- Environmental Change Capture Routines (ECCRs). You must install at least one ECCR.

Step 10. Submit the CDC Jobs

You must submit some CDC jobs in the RUNLIB library on the z/OS system.

1. Submit the following CDC jobs in the RUNLIB library:

SETUPCC1

Allocates and populates the common CDC component data sets.

SETUPVSM

Allocates the following VSAM data sets:

- CCT data set for capture registrations
- CDCT data set for PowerExchange Condense information
- CDEP data set for tracking CDC extraction information
- DATAMAPS data set for data maps
- DTLCAMAP data set for extraction maps
- PowerExchange Log Catalog (LOGSCAT) VSAM data set, which the PowerExchange IDMS log-based ECCR uses
- PowerExchange Logger active log and emergency restart data sets
- PowerExchange PLOG Catalog (PCAT) VSAM data set, which the Adabas ECCR uses

The SETUPVSM job creates VSAM data sets for capture processing by using the data set specifications in ["Space Requirements for PowerExchange Data Sets" on page 89](#). The data set sizes are adequate to build a test PowerExchange environment on a single z/OS logical partition (LPAR).

SETUPAGT

Assembles the EDMSDIR options module and writes it to the USERLIB library.

2. To create an efficient CDC implementation in a production environment, consider the number and size of the PowerExchange Logger active log and archive log data sets. Review data set sizes and parameters for the all CDC components after the installation is complete.

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

Step 11. Submit the XIZZZ998 Job

The XIZZZ998 job populates the DTLDATA, DTLDEMO, DTLEXP, and PROCLIB data sets with the appropriate members from RUNLIB.

- ▶ On the z/OS system, submit the XIZZZ998 job.

Step 12. Copy the PowerExchange Agent Procedure to the PROCLIB Library

The z/OS Installation Assistant customized the sample procedure, AGENTSTP, for the PowerExchange Agent based on your input.

The XIZZZ998 job copied this procedure to the PowerExchange installation PROCLIB library and renamed it based on the **Agent Started Task ID** field that you specified on the **CDC Common Parameters** page of the z/OS Installation Assistant.

- ▶ Copy the customized PowerExchange Agent procedure from the PowerExchange installation PROCLIB to the system PROCLIB library for started tasks.

Step 13. Add the PowerExchange Load Libraries to the APF List

For CDC, you must add PowerExchange load libraries to the APF list.

1. Add the following load libraries to the APF list:
 - *hlq*.LOAD
 - *hlq*.LOADLIB, if you have not already added it
 - *hlq*.CRG.LOAD, if you use IMS synchronous capture

The *hlq* variable is the value that you entered in the **Seq \ Install Library** field on the **Data Set Names** page of the z/OS Installation Assistant.

For information about updating the APF list, contact your z/OS systems programming team.

2. Review the STEPLIB DD statement in PowerExchange JCL, including the JCL for the PowerExchange Listener. Authorize all of the libraries that are concatenated in the STEPLIB DD statement. Otherwise, authorization is not in effect and failures might occur.

Step 14. Add an OMVS Segment to the PowerExchange Agent User ID (RACF Users)

The PowerExchange Agent uses TCP/IP sockets for communication with the PowerExchange Listener. If you use RACF, complete this step to configure the RACF user or profile under which the PowerExchange Listener runs.

Note: If you do not use RACF, consult the documentation for your security product.

- ▶ Define an OMVS segment for the RACF user ID under which the PowerExchange Agent runs.
Alternatively, you can set up a default OMVS segment by using the FACILITY class profile BPX.DEFAULT.USER.

Step 15. Start the PowerExchange Agent

To start the PowerExchange Agent, run the MVS START command.

- ▶ Run one of the following commands:

```
S agent_name  
START agent_name
```

The *agent_name* variable is the member name of the PowerExchange Agent procedure in the started task PROCLIB library.

The PowerExchange Agent started task name can be up to eight characters in length and can be different from the AgentID parameter defined in the AGENTCTL member of RUNLIB library.

Step 16. Submit the SETUPCC2 Job

The SETUPCC2 job creates the PowerExchange Logger EDMUPARM module and defines the active log data sets in the PowerExchange Logger emergency restart data sets. The job has been customized based on your entries in the z/OS Installation Assistant.

1. From the RUNLIB library on z/OS, add the JOB card that is in the JOBCARD member to the JCL in the SETUPCC2 member.

Note: You can change the job name.

2. Submit the SETUPCC2 job.

Phase III. Install the PowerExchange Software for Specific Data Sources

If you use Adabas, DB2 for z/OS, or IDMS data sources, install the PowerExchange software for these data sources.

Otherwise, proceed to [“After You Install PowerExchange on z/OS” on page 106](#).

Step 17. Install Software for DB2 for z/OS Data Sources

The SETUPDB2 job submits jobs that install PowerExchange for DB2.

1. In the RUNLIB library, add the JOB card that is in the JOBCARD member to the SETUPDB2 JCL.

Note: You can change the job name.

2. Submit the SETUPDB2 job.

This job submits the XIDDB210 job. The XIDDB210 job runs the DB2 bind for PowerExchange bulk data processing. You must have DB2 BINDADD authority to run this job.

If you selected the **DB2 CDC** option on the **Data Sources** page, the SETUPDB2 job also submits the XIDDB220 job.

The XIDDB220 job performs the following tasks:

- Creates the capture directory database, table spaces, tables, and indexes for PowerExchange CDC.
 - Submits the XIDDB225 job, which completes the DB2 binds for the DB2 ECCR. You must have SYSCTRL authority to run this job.
3. Authorize the appropriate users to access the DB2 plans. The following PowerExchange address spaces require access to the DB2 plans:
 - The PowerExchange Listener requires access to the plan that is specified in the XIDDB210 job.
 - The PowerExchange DB2 for z/OS ECCR requires access to the plan that is specified in the XIDDB225 job.

Step 18. Install Software for IDMS Data Sources (Optional)

If you selected IDMS as a data source, optionally submit the XIDIDM10 job. This job copies the system IDMS load libraries to the PowerExchange copies of these libraries, called *hlq.IDMS.LOADLIB* and *hlq.IDMS.DBA.LOADLIB*.

1. In the RUNLIB library, add the JOB card that is in the JOBCARD member to the SETUPIDM JCL.
2. Submit the XIDIDM10 job.

If you set the first parameter of the SECURITY statement in the DBMOVER configuration file to 1 or 2, the PowerExchange Listener must run APF-authorized. However, the IDMS load libraries are usually not APF-authorized. To handle this situation, use one of the following methods:

- Set the PC_AUTH statement to Y in the DBMOVER configuration member on the z/OS system. This setting causes PowerExchange to use a z/OS Program Call (PC) services routine to get the APF-authorization that the PowerExchange Listener requires. Use this method if you do not want to maintain and APF-authorize copies of the IDMS load libraries. This method is recommended when security is enabled.
- After you run the XIDIDM10 job to copy the IDMS load libraries, APF-authorize the copies. Then verify that these libraries are specified in the PowerExchange Listener STEPLIB DD statement.

For more information, see the *PowerExchange Bulk Data Movement Guide*.

RELATED TOPICS:

- [“IDMS CDC Parameters Page” on page 152](#)

Step 19. Install Software for IMS Synchronous CDC Data Sources

For IMS synchronous CDC data sources, the PowerExchange-provided CRG.LOAD library is installed if you selected the **IMS Synchronous CDC** option. You can use this software or one of the following BMC Software products, if available: CHANGE RECORDING FACILITY, DATABASE INTEGRITY PLUS, or Fast Path Online Restructure/EP. With any of these software choices, you must perform some configuration tasks.

- ▶ Complete the following tasks:
 - If you currently use IMS synchronous CDC and the PowerExchange-provided CRG.LOAD library, redo the IMS Database Recovery Control (DBRC) configuration for the IMS synchronous ECCR when you complete the full installation. For information about configuring DBRC, see the *PowerExchange CDC Guide for z/OS*.
 - If you are a new user of IMS synchronous CDC, complete the customization tasks described in the *PowerExchange CDC Guide for z/OS*.

Phase IV. Delete Previously Copied RUNLIB Members

Optionally, delete the RUNLIB members that the XIZZZ998 job previously copied to other libraries.

Step 20. Submit the XIZZZ999 Job (Optional)

- ▶ Optionally, submit the XIZZZ999 job to delete the RUNLIB members that were previously copied.

After You Install PowerExchange on z/OS

After you install PowerExchange on z/OS, you must configure PowerExchange.

For more information, see the following documents:

- For bulk data movement configuration, see the *PowerExchange Bulk Data Movement Guide*.
- For CDC configuration, see the *PowerExchange CDC Guide for z/OS*.
- For DBMOVER configuration file statements, see the *PowerExchange Reference Manual*.

After you configure PowerExchange, start the PowerExchange Listener and, if required, the PowerExchange Agent, PowerExchange Logger for z/OS, PowerExchange ECCRs, and PowerExchange Condense. For more information about starting and stopping PowerExchange tasks, see the *PowerExchange Command Reference*.

Performing an Upgrade on z/OS

To upgrade PowerExchange for z/OS, run the z/OS Installation Assistant.

The z/OS Installation Assistant upgrades the message, sample, and load libraries. The z/OS Installation Assistant does not create new operational data libraries, such as those containing data maps, capture registrations, extraction maps, and captured change data. As a result, you do not need to migrate the contents of these data sets to the newly allocated data sets, which simplifies the upgrade process.

When you upgrade, you have the option to use new data set names or existing data set names, as follows:

- To add new data sources to an existing PowerExchange environment and use new data set names for the message, sample, and load libraries, select the **Upgrade by Using New Data Set Names** option on the **Upgrade to a New Release** page.
- To use the same data set names as the existing installation for the message, sample, and load libraries, select the **Upgrade by Using Existing Data Set Names** option on the **Upgrade to a New Release** page.

When you run the z/OS Installation Assistant, it creates several jobs on the z/OS system. To complete the upgrade, submit these jobs.

Note: An upgrade does not create a complete PowerExchange environment. To run the new PowerExchange release concurrently with an existing PowerExchange release, you must complete a full installation.

For a PowerExchange CDC environment, Informatica recommends that you upgrade to prevent potential loss of captured change data.

RELATED TOPICS:

- [“Performing a Full Installation on z/OS” on page 87](#)

Before You Upgrade on z/OS

Before you upgrade on z/OS, complete the following tasks:

- Verify that PowerExchange supports the versions and release levels of the operating system and data sources.
- Verify that the license key is valid. If you have an existing InstParm file, it contains the license key. As part of the upgrade, you import the InstParm file. If you are adding new features, you might need a new license key.
- Verify that the new PowerExchange release is compatible with your PowerCenter installation.
- Verify that the z/OS Installation Assistant is installed on a 64-bit Windows system. The installation will fail if you attempt to run the z/OS Installation Assistant from a 32-bit system.

Task Flow for an Upgrade on z/OS

To upgrade PowerExchange on z/OS, upgrade the PowerExchange base software. Also, upgrade the PowerExchange CDC software and the PowerExchange software for certain data sources if applicable.

Use the following checklist of tasks to perform a PowerExchange upgrade:

Check	Task	Required or Optional
	Phase I. Upgrade the PowerExchange Base Software	Required
	“Step 1. Stop Access to PowerExchange” on page 109	Required
	“Step 2. Allocate the BINLIB and RUNLIB Libraries for an Upgrade” on page 110	Required
	“Step 3. Prepare the z/OS Components on Windows for an Upgrade” on page 111	Required
	“Step 4. Run the z/OS Installation Assistant to Upgrade” on page 111	Required
	“Step 5A. Upgrade by Using Existing Data Set Names (Optional)” on page 114	Optional. Perform Step 5A or 5B.
	“Step 5B. Upgrade by Using New Data Set Names (Optional)” on page 117	Optional. Perform Step 5A or 5B.
	“Step 6. Edit the JOBCARD Member in the RUNLIB Library” on page 119	Required
	“Step 7. Review the XJOBDSU Member in the RUNLIB Library” on page 119	Required
	“Step 8. Submit PowerExchange Base Software Jobs” on page 119	Required
	“Step 9. Add the PowerExchange Load Library to the APF List” on page 120	Required if you use new data set names
	Phase II. Upgrade the PowerExchange CDC Software	Required if you use CDC
	“Step 10. Submit CDC Jobs” on page 120	Required if you use CDC
	“Step 11. Add the PowerExchange Load Libraries to the APF List” on page 121	Required if you use CDC and new data set names
	Phase III. Upgrade the PowerExchange Software for Specific Data Sources	Required for some data sources
	“Step 12A. Run the SETUDB2U or SETDB2UE Job to Upgrade Software for DB2 Data Sources” on page 122	Required if you used DB2 for z/OS data sources before the upgrade
	“Step 12B. Run the SETUPDB2 Job to Upgrade Software for DB2 Data Sources” on page 123	Required if you add a DB2 for z/OS data source during the upgrade
	“Step 13. Upgrade Software for IDMS Data Sources (Optional)” on page 123	Optional for IDMS data sources

Check	Task	Required or Optional
	"Step 14. Upgrade Software for IMS Synchronous CDC Data Sources" on page 124	Required for IMS synchronous CDC sources if you use the PowerExchange CRG.LOAD library
	Phase IV. Complete Post-Upgrade Activities	Required
	"Step 15. Copy Started Task Procedures and Update RUNLIB Members" on page 124	Required if you use new data set names
	"Step 16. Resume Access to PowerExchange" on page 124	Required

Phase I. Upgrade the PowerExchange Base Software

In this phase of the upgrade, you allocate libraries on the z/OS system, extract the z/OS installation files to the Windows system, and use the z/OS Installation Assistant to upgrade the PowerExchange base software on the z/OS system.

After you run the z/OS Installation Assistant, you must complete additional tasks on the z/OS system.

All PowerExchange users must complete the steps in this phase.

Step 1. Stop Access to PowerExchange

Before you upgrade, you must stop some PowerExchange and PowerCenter tasks.

- If you use PowerExchange bulk data movement only, stop the following tasks:
 - All PowerCenter workflows that extract data from or write data to PowerExchange
 - All PowerExchange Listener address spaces
- If you use PowerExchange CDC, stop the following tasks:
 - All PowerCenter workflows that extract data from or write data to PowerExchange
 - All PowerExchange Listener address spaces
 - All ECCR address spaces
 - All PowerExchange Condense address spaces
 - All PowerExchange Logger for z/OS address spaces
 - All PowerExchange Agent address spaces

Note: To stop the DB2 for z/OS ECCR, use the ECCR QUIESCE command. This command stops the ECCR after it reaches a point in the DB2 log where no in-flight UOWs exist.

Use the following syntax to issue the QUIESCE command:

```
F job_name,QUIESCE
```

The *job_name* variable is the name of the ECCR job or the started task.

The resulting output includes the PWXEDM177268I and PWXEDM177012I messages, as shown in the following example:

```
PWXEDM177268I LAST READ DB2 LOG
LOCATION=rba_or_lrsn.data_sharing_member_id.sequence_number
PWXEDM177012I ECCR STATUS: LAST DB2 READ LOC
rba_or_lrsn.data_sharing_member_id.sequence_number
OLDEST OPEN UOW urid.data_sharing_member_id
```

You will need the values in these messages if you have to perform a special start of the ECCR. For more information, see [“Considerations for Starting the DB2 ECCR” on page 125](#).

Step 2. Allocate the BINLIB and RUNLIB Libraries for an Upgrade

On the z/OS system, you must allocate the BINLIB and RUNLIB libraries that will receive the files from z/OS Installation Assistant.

These libraries must have the same attributes as the libraries that you allocated for the first-time installation. However, their fully qualified library names can be different from those of the first-time installation libraries.

Informatica recommends that the libraries have the predefined PDS names of BINLIB and RUNLIB.

If you upgrade by using existing data set names, you must allocate *staging* BINLIB and RUNLIB libraries. Ensure that the HLQ that you specify for the staging BINLIB and RUNLIB libraries is different from the HLQ that you specified for the original installation. The z/OS Installation Assistant transfers files into the staging libraries. Also, the z/OS Installation Assistant provides jobs that you can use to copy the contents of the staging libraries to the existing libraries.

► On the z/OS system, allocate the BINLIB and RUNLIB libraries in one of the following ways:

- Use the ISPF Option 3.2.
- Use JCL such as the following sample JCL for allocating the RUNLIB library:

```
//ALLOC      EXEC PGM=IEFBRL4
//DS1 DD DSN=&HLQ..RUNLIB,
//          DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(20,10,50),RLSE),
//          DCB=(BLKSIZE=nn,RECFM=FB,LRECL=80,DSORG=PS),
//          VOL=SER=volume_serial_number
```

Record the HLQ that you use. You must enter this value as the HLQ value for the **Staging Data Sets** or **User Modifiable Data Sets (Non-VSAM)** group on the **Data Set Group Details** page in the z/OS Installation Assistant.

The following table describes the parameters to use for allocating the BINLIB and RUNLIB libraries on 3390 DASD:

Library	Description	Space Units (3390)	Space Quantity (pri,sec)	Directory Blocks	DCB Characteristics
BINLIB	PDS that contains the software libraries in TSO/E transmitted format.	CYLS	(160,10)	10	RECFM FB LRECL 80 BLKSIZE any valid value, often a multiple of the LRECL value
RUNLIB	PDS that contains the jobs to install, set up, and run PowerExchange. Also includes configuration data. The AAINDEX member describes each member in the RUNLIB library.	CYLS	(10,1)	50	RECFM FB LRECL 80 BLKSIZE any valid value, often a multiple of the LRECL value

Note: The PowerExchange upgrade process will allocate the following additional libraries:

- CRG.LOAD, DBRM, LOAD, and SAMPLIB libraries.

- All of the libraries described in [“Space Requirements for PowerExchange Data Sets” on page 89](#) except DATAMAPS, if you chose to upgrade by using new data set names.
- DBRMLIB, DTLEXPL, DTLMSG, LOADLIB, and SRCLIB libraries, if you chose to upgrade by using existing data set names.

Step 3. Prepare the z/OS Components on Windows for an Upgrade

PowerExchange for z/OS is shipped as a self-extracting executable. Extract the upgrade files into a temporary directory on your Windows system.

1. From a Windows command prompt, make a temporary directory to extract the upgrade files into. For example, you might run the following command to make a temporary directory named `pwx_mvsvvrm`:

```
mkdir pwx_mvsvvrm
```

The `vvrm` variable is the PowerExchange *version.release.modification* number.

2. Find and run the product upgrade executable.

The executable has a name such as:

```
pwxos26_vvrm.exe
```

The `vvrm` is the PowerExchange *version.release.modification* number. For example, `pwxos26_v961.exe` is the name of the executable for the PowerExchange version 9.6.1 installation on z/OS.

3. In the **WinZip Self-Extractor** dialog box, click **Browse**.
4. In the **Browse for Folder** dialog box, browse to the temporary directory that you created. Then, click **OK**.
5. In the **WinZip Self-Extractor** dialog box, click **Unzip**.

The WinZip Self-Extractor places several files in the root directory and creates the binary and runlib subdirectories, which also contain files. The WinZip Self-Extractor then displays a message box to indicate that the files were unzipped successfully.

6. In the message box, click **OK**.
7. In the **WinZip Self-Extractor** dialog box, click **Close**.

Step 4. Run the z/OS Installation Assistant to Upgrade

To perform a PowerExchange upgrade, you must run the z/OS Installation Assistant wizard on the Windows system.

Also, copy the existing `InstParm` file from the last full installation of the current PowerExchange version to your working directory on Windows. You can either manually copy the file before you start the z/OS Installation Assistant or you can import the file from a subsequent z/OS Installation Assistant page. As you progress through the z/OS Installation Assistant pages, you can save your entries to the `InstParm` file by clicking **Save** on any page.

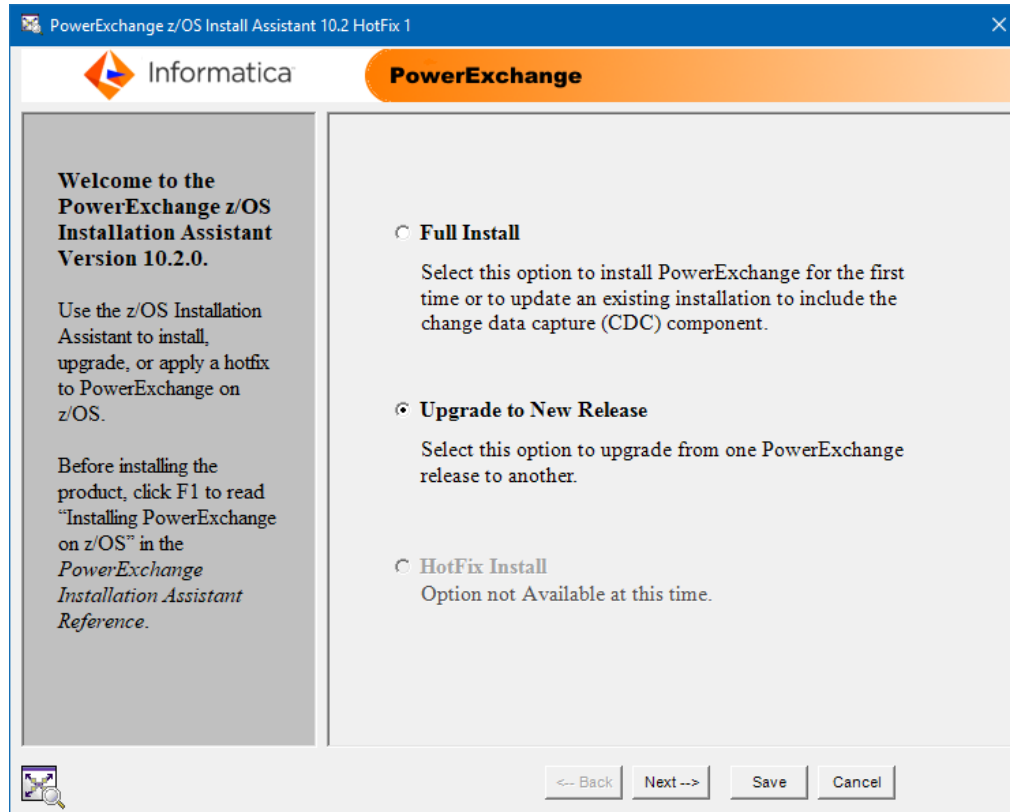
Tip: Retain the `InstParm` file on Windows so that you can use it to upgrade or apply hotfixes to PowerExchange later.

On some pages, you can click **Advanced Params** to define advanced parameters or click **Restore Defaults** to restore the default values. However, if you define advanced parameters, you cannot restore the default values later by using the **Restore Defaults** button.

Important: You must run the z/OS Installation Assistant on a 64-bit Windows system. If you attempt to run the wizard on a 32-bit system, the installation fails.

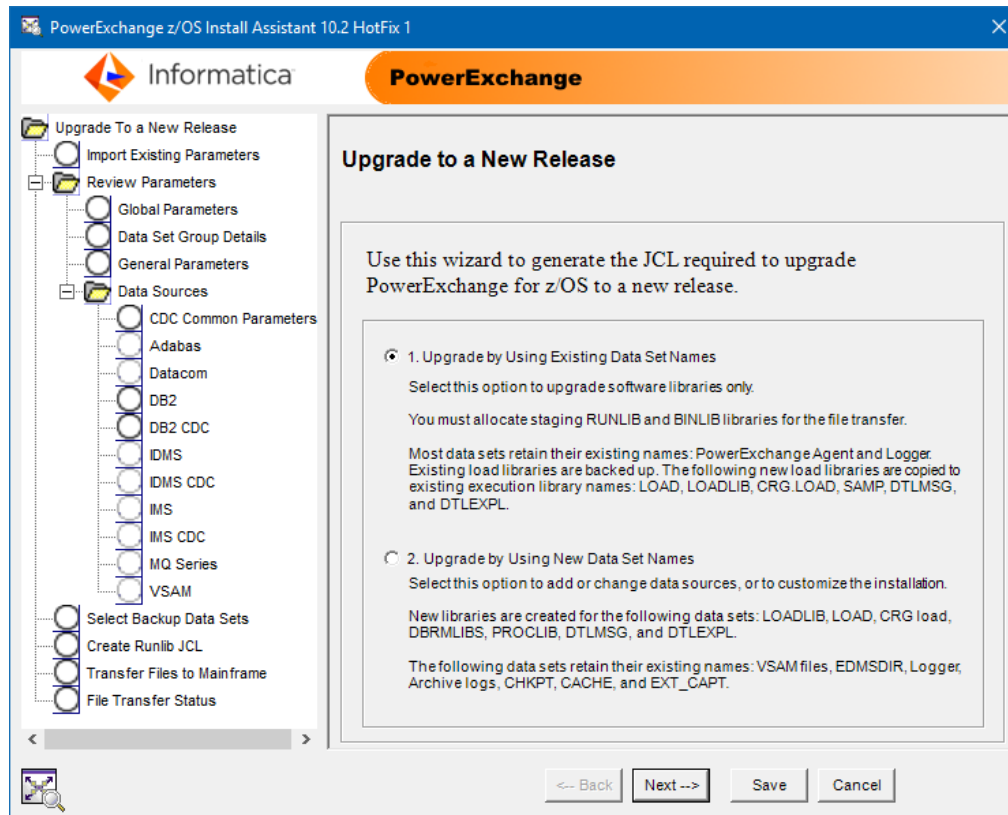
1. In the temporary directory to which you extracted the z/OS upgrade files (the "pwx_mvsv" directory in the preceding topic), right-click **MVS_Install.exe** and select **Run as administrator**.

The z/OS Installation Assistant starts:



2. Select **Upgrade to a New Release**, and click **Next**.

The **Upgrade to a New Release** page appears:

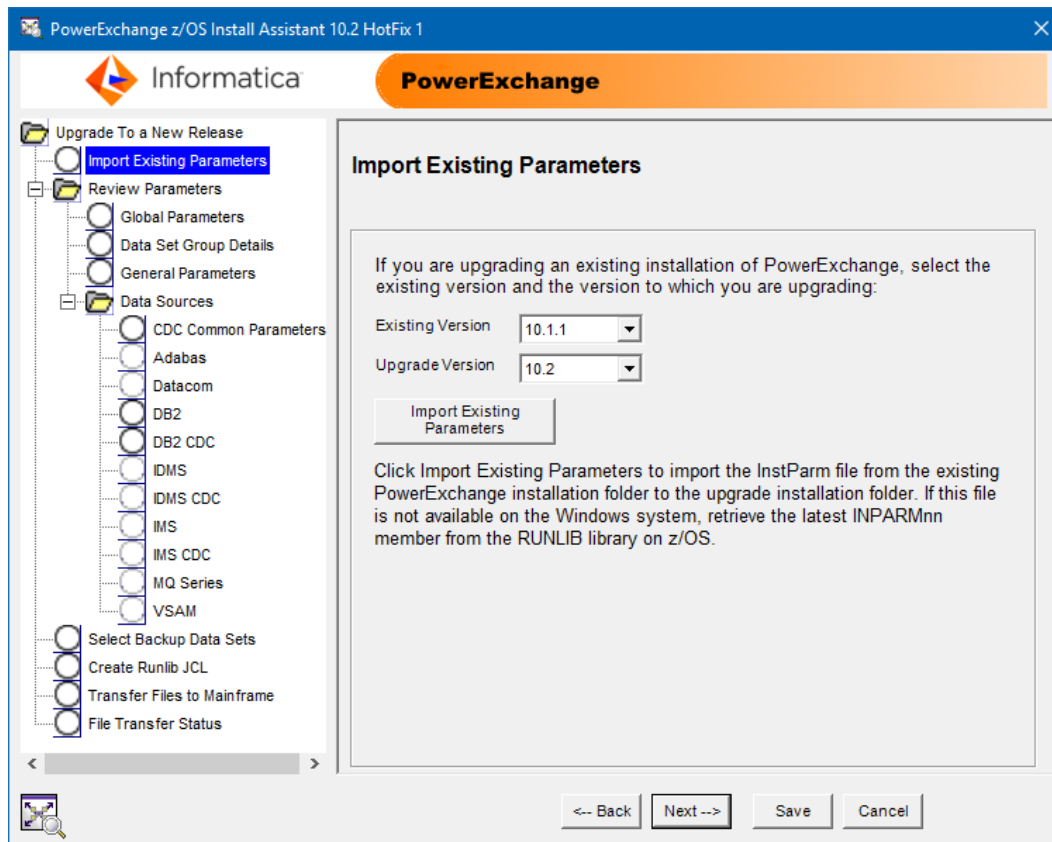


3. Select one of the following upgrade options:

- **Upgrade by Using Existing Data Set Names.** Use the same names as the existing installation for the message, sample, and load libraries.
- **Upgrade by Using New Data Set Names.** Use new data set names for the message, sample, and load libraries.

Then click **Next**.

The **Import Existing Parameters** page appears:



Depending on the upgrade option that you selected, proceed to one of the following steps:

- If you selected **Upgrade by Using Existing Data Set Names**, go to [“Step 5A. Upgrade by Using Existing Data Set Names \(Optional\)” on page 114](#),
- If you selected **Upgrade by Using New Data Set Names**, go to [“Step 5B. Upgrade by Using New Data Set Names \(Optional\)” on page 117](#).

Step 5A. Upgrade by Using Existing Data Set Names (Optional)

If you selected the **Upgrade by Using Existing Data Set Names** option to use the same names as the existing installation for the message, sample, and load libraries, complete this procedure.

Warning: After you select this upgrade option and progress through the z/OS Installation Assistant, you cannot switch to the alternative **Upgrade by Using New Data Set Names** option without first restoring the InstParm file to the new installation directory.

1. On the **Import Existing Parameters** page, if you did not manually copy the customized InstParm file from the existing PowerExchange installation to the upgrade installation directory, import the existing InstParm file.

Note: The z/OS Installation Assistant will update the installation parameters in the InstParm file based on your entries in the z/OS Installation Assistant.

For more information, see [“Import Existing Parameters Page” on page 160](#).

Then, click **Next**.

The **Review Parameters** page appears. For more information, see [“Review Parameters Page” on page 160](#).

2. Click **Next**.
The **Review Global Parameters** page appears.
3. Review the information on this page.
Optionally, change the **Logon ID** or **License Key**. You cannot change the other values on this page.
For more information, see [“Review Global Parameters Page \(Upgrade with Existing Data Set Names\)” on page 161](#).
Then, click **Next**.
The **Select Data Set Group Details** page appears.
4. Review the information for the staging and backup data sets. Provide data set group details as required.
For more information, see [“Select Data Set Group Details Page \(Upgrade with Existing Data Set Names\)” on page 163](#).
Then, click **Next**.
The **Review General Parameters** page appears.
5. Review the general parameters.
For more information, see [“General Parameters Page” on page 138](#).
Then, click **Next**.
The **Review Data Sources** page appears.
6. Review the data sources selected for bulk data movement and CDC operations.
For more information, see [“Data Sources Page” on page 141](#).
Then, click **Next**.
Note: For an upgrade that uses existing data set names, you cannot add or remove data sources. To add or remove data sources, you must perform a full installation.
If any CDC data source was selected, the **Review CDC Common Parameters** page appears.
7. Review the common parameters for CDC operations.
For more information, see [“CDC Common Parameters Page” on page 142](#).
Then, click **Next**.
8. Enter parameter settings for each data source that you selected on the **Data Sources** page.
The following table lists the parameters page for each data source type:

Page	Reference
Adabas Parameters	“Adabas Parameters Page” on page 144
Datacom Parameters	“Datacom Parameters Page” on page 146
DB2 Parameters	“DB2 Parameters Page” on page 147
DB2 CDC Parameters	“DB2 CDC Parameters Page” on page 149
IDMS Parameters	“IDMS Parameters Page” on page 151
IDMS CDC Parameters	“IDMS CDC Parameters Page” on page 152
IMS Parameters	“IMS Parameters Page” on page 153

Page	Reference
IMS CDC Parameters	“IMS CDC Parameters Page” on page 154
MQ Series Parameters	“MQ Series Parameters Page” on page 155
VSAM Parameters	“VSAM Parameters Page” on page 156

If you selected multiple source types, click **Next** to proceed to the next page.

Note: You cannot change data source information on these pages. To change data source information, you must upgrade by using new data set names or perform a full installation.

After you click **Next** on the last parameters page, the **Backup Data Sets** page appears.

9. Select the data sets that you want to back up.

For more information, see [“Backup Data Sets Page” on page 167](#).

Then, click **Next**.

The **Create Runlib JCL** page appears.

10. Enter information about the RUNLIB and BINLIB libraries.

For an upgrade that uses existing data set names, these libraries must be the BINLIB and RUNLIB libraries in the current PowerExchange environment.

For more information, see [“Create Runlib JCL Page” on page 156](#).

Then, click **Next**.

The **Transfer Files to Mainframe** page appears. Also, the z/OS Installation Assistant creates the XRunlib folder. The XRunlib folder contains the files from the runlib folder, which are customized with the values that you entered in the z/OS Installation Assistant.

11. On the **Transfer Files to Mainframe** page, enter information about the z/OS system to which to transfer files.

Note: For an upgrade using existing data set names, the RUNLIB and BINLIB libraries are temporary staging libraries. You entered the HLQ for these libraries in the **Staging Library HLQ** field on the **Data Set Names** page.

For more information, see [“Transfer Files to Mainframe Page” on page 157](#).

Then, click **Next**.

The **File Transfer Status** page displays the status of the file transfer operation. For more information, see [“View File Transfer Status Page” on page 159](#).

12. After the file transfer completes, click **OK**.

13. Click **Finish**.

The z/OS Installation Assistant saves your installation entries to the InstParm file in the root installation directory on Windows if you have not already done so. The z/OS Installation Assistant also creates a corresponding INPARMnn file in the XRunlib directory on Windows and uses FTP to transfer this file to the RUNLIB library on z/OS. The INPARMnn member in the RUNLIB that has the largest nn value is the most recent version of the member.

Proceed to [“Step 6. Edit the JOBCARD Member in the RUNLIB Library” on page 119](#).

Step 5B. Upgrade by Using New Data Set Names (Optional)

If you selected the **Upgrade by Using New Data Set Names** option to use new data set names for the message, sample, and load libraries, complete this procedure.

Warning: After you select this upgrade option and progress through the z/OS Installation Assistant, you cannot switch to the alternative **Upgrade by Using Existing Data Set Names** option without first restoring the InstParm file to the new installation directory.

1. On the **Import Existing Parameters** page, if you did not manually copy the customized InstParm file from the existing PowerExchange installation to the upgrade installation directory, import the existing InstParm file.

Note: The z/OS Installation Assistant will update the installation parameters in the InstParm file based on your entries in the z/OS Installation Assistant.

For more information, see [“Import Existing Parameters Page” on page 160](#).

Then, click **Next**.

The **Review Parameters** page appears. For more information, see [“Review Parameters Page” on page 160](#).

2. Click **Next**.

The **Review Global Parameters** page appears.

3. Enter the high-level qualifier (HLQ) for the new data set names and review the other information.

For more information, see [“Review Global Parameters Page \(Upgrade with New Data Set Names\)” on page 162](#).

Then, click **Next**.

The **Select Data Set Group Details** page appears.

4. Review the volume and unit values for data sets.

If necessary, you can change the volume and unit values for new data sets. For more information, see [“Select Data Set Group Details Page \(Upgrade with New Data Set Names\)” on page 165](#).

Then, click **Next**.

The **Review General Parameters** page appears.

5. Review the general parameters.

For more information, see [“General Parameters Page” on page 138](#).

Then, click **Next**.

The **Review Data Sources** page appears.

6. Review the data sources selected for bulk data movement and CDC operations. Optionally, add data source types.

For more information, see [“Data Sources Page” on page 141](#).

Then, click **Next**.

Note: For an upgrade that uses new data set names, you cannot remove data sources. To remove data sources, you must perform a full installation.

If any CDC data source was selected, the **CDC Common Parameters** page appears.

7. On the **Review CDC Common Parameters** page, review the common parameters for CDC operations.

For more information, see [“CDC Common Parameters Page” on page 142](#).

Then, click **Next**.

8. Enter parameter settings for each data source that you selected on the **Data Sources** page.

The following table lists the parameters page for each data source type:

Page	Reference
Adabas Parameters	“ Adabas Parameters Page” on page 144
Datacom Parameters	“ Datacom Parameters Page” on page 146
DB2 Parameters	“ DB2 Parameters Page” on page 147
DB2 CDC Parameters	“ DB2 CDC Parameters Page” on page 149
IDMS Parameters	“ IDMS Parameters Page” on page 151
IDMS CDC Parameters	“ IDMS CDC Parameters Page” on page 152
IMS Parameters	“ IMS Parameters Page” on page 153
IMS CDC Parameters	“ IMS CDC Parameters Page” on page 154
MQ Series Parameters	“ MQ Series Parameters Page” on page 155
VSAM Parameters	“ VSAM Parameters Page” on page 156

If you selected multiple source types, click **Next** to proceed to the next page.

After you click **Next** on the last parameters page, the **Backup Data Sets** page appears.

9. Select the data sets that you want to back up.

For more information, see [“Backup Data Sets Page” on page 167](#).

Then, click **Next**.

The **Create Runlib JCL** page appears.

10. Enter information about the RUNLIB and BINLIB libraries.

For more information, see [“Create Runlib JCL Page” on page 156](#).

Then, click **Next**.

The **Transfer Files to Mainframe** page appears. Also, the z/OS Installation Assistant creates the XRunlib folder. The XRunlib folder contains the files from the runlib folder, which are customized with the values that you entered in the z/OS Installation Assistant.

11. On the **Transfer Files to Mainframe** page, enter information about the z/OS system to which to transfer files.

Note: For an upgrade that uses new data set names, the RUNLIB and BINLIB libraries are new libraries. These libraries are also the libraries to which the z/OS Installation Assistant transfers the RUNLIB and BINLIB data sets. You entered the HLQ for these libraries on the **Data Set Group Details** page.

For more information, see [“Transfer Files to Mainframe Page” on page 157](#).

Then, click **Next**.

The **File Transfer Status** page displays the status of the file transfer operation. For more information, see [“View File Transfer Status Page” on page 159](#).

12. After the file transfer completes, click **OK**.

13. Click **Finish**.

Note: The z/OS Installation Assistant saves your installation entries to the InstParm file in the root installation directory on Windows if you have not already done so. The z/OS Installation Assistant also creates a corresponding INPARM nn file in the XRunlib directory on Windows and uses FTP to transfer this file to the RUNLIB library on z/OS. The INPARM nn member in the RUNLIB that has the largest nn value is the most recent version of the member.

Proceed to [“Step 6. Edit the JOBCARD Member in the RUNLIB Library” on page 119](#).

Step 6. Edit the JOBCARD Member in the RUNLIB Library

On the z/OS system, edit the JOBCARD member in the upgrade RUNLIB library according to your site standards. You might want to add parameters such as CLASS and MSGCLASS.

To see a list of the jobs in the RUNLIB library that will use the updated JOBCARD, view the XJOBSU member in the upgrade RUNLIB library.

1. In the upgrade RUNLIB library, edit the JOBCARD member.
2. If you selected the **Auto Submit On** option on the **General Parameters** page, add the TYPRUN=HOLD statement to control how the jobs run.

With this parameter setting, when the jobs run, you must release each job manually.

Step 7. Review the XJOBSU Member in the RUNLIB Library

The XJOBS member lists the installation jobs that you must submit from the RUNLIB, in the order that they must be submitted.

- ▶ Review the XJOBSU member in the RUNLIB library to determine which job to run next.

Step 8. Submit PowerExchange Base Software Jobs

To add the libraries that are required for bulk data movement, submit either the SETUBL1E or SETUBL1N job in the upgrade RUNLIB library. These jobs add libraries for bulk data movement and add the JOB card to other jobs.

The job that you use depends on the upgrade option that you selected:

- If you selected **Upgrade by Using Existing Data Set Names**, use SETUBL1E.
- If you selected **Upgrade by Using New Data Set Names**, use SETUBL1N,

Also, submit additional jobs as listed in the XJOBSU member.

1. If you are upgrading by using new data set names, submit the BKUPDSUN job.
This job makes backup copies of the data sets that you selected on the **Backup Data Sets** page.
2. Based on the upgrade option that you selected, add the JOB card in the JOBCARD member to the SETUBL1E or SETUBL1N job in the upgrade RUNLIB library.
3. Perform one of the following actions:
 - If you selected **Upgrade by Using Existing Data Set Names**, verify that the HLQ value in the GENBULK member in the existing RUNLIB library is the same as the HLQ value in the GENBULK member in the upgrade RUNLIB library.
 - If you selected **Upgrade by Using New Data Set Names**, verify that the HLQ value in the GENBULK member in the existing RUNLIB library differs from the HLQ value in the GENBULK member in the upgrade RUNLIB library.

4. Submit the SETUBL1E job or SETUBL1N job.
5. If you are upgrading by using existing data set names, submit the BKUPDSUE job.
This job backs up selected current installed data sets.
6. If you are upgrading by using existing data set names, submit the INSPWXUE job.
This job copies the newly created libraries to previously existing names.

If you chose to upgrade by using new data set names, proceed to [“Step 9. Add the PowerExchange Load Library to the APF List” on page 120.](#)

If you chose to upgrade by using existing data set names, proceed to [“Phase II. Upgrade the PowerExchange CDC Software” on page 120.](#)

RELATED TOPICS:

- [“Backup Data Sets Page” on page 167](#)

Step 9. Add the PowerExchange Load Library to the APF List

If you chose to upgrade by using new data set names and you previously APF-authorized the LOADLIB library, add the new LOADLIB library to the APF list.

For information about updating the APF list, consult with your z/OS systems programming team.

After you APF-authorize the LOADLIB library, PowerExchange can complete the following tasks:

- Issue RACROUTE security calls to check permissions.
- Wait for tape mounts when no tape drives are available.
- Wait for data sets currently in use by other users.
- Get IDMS schema and subschema information.

Phase II. Upgrade the PowerExchange CDC Software

If you purchased the CDC option and you selected CDC data sources in the z/OS Installation Assistant, you must upgrade the PowerExchange CDC software in this phase of the upgrade.

Otherwise, proceed to [“Phase III. Upgrade the PowerExchange Software for Specific Data Sources” on page 121.](#)

Step 10. Submit CDC Jobs

To allocate the data sets required for CDC operations, submit the CDC jobs in the upgrade RUNLIB library based on the upgrade option that you selected.

1. Submit the SETUCC1E or SETUCC1N job to allocate the required data sets.
 - If you selected the **Upgrade by Using Existing Data Set Names** option, submit SETUCC1E.
 - If you selected the **Upgrade by Using New Data Set Names** option, submit SETUCC1N.

- Submit the additional CDC jobs that are listed in the following table:

Upgrade Option	Jobs	Description
Upgrade by Using Existing Data Set Names	BKUPDSUE, followed by INSPWXUE Note: Do not submit INSPWXUE until BKUPDSUE finishes successfully.	The BKUPDSUE job makes backup copies of the data sets that you selected on the Backup Data Sets page. The INSPWXUE job populates existing software libraries with new members.
Upgrade by Using New Data Set Names	XIZZZ998, optionally followed by XIZZZ999	The XIZZZ998 job deletes temporary members from the RUNLIB library and builds JCL. The optional XIZZZ999 job deletes members from the RUNLIB library after the JCL is copied to the final destination libraries.

Step 11. Add the PowerExchange Load Libraries to the APF List

If you chose to upgrade by using new data set names, you must add the PowerExchange load libraries to the APF list.

Note: If you chose to upgrade by using existing data set names, proceed to [“Phase III. Upgrade the PowerExchange Software for Specific Data Sources” on page 121](#).

- Add the new versions of the following load libraries to the APF list:

- hlq*.LOAD
- hlq*.LOADLIB
- hlq*.CRG.LOAD, if you use IMS synchronous CDC

The *hlq* variable is the HLQ value that you entered for the **Read-only Data Sets. Load Libraries and DBRMLIBs** group on the **Data Set Group Details** page of the z//OS Installation Assistant.

For assistance with updating the APF list, consult your z/OS systems programming team.

- Authorize all libraries that are concatenated in the STEPLIB DD statement in the PowerExchange JCL, including the JCL for the PowerExchange Listener.

Otherwise, authorization is not in effect and failures might occur.

If you did not select Adabas CDC, DB2, IDMS, or IMS data sources, proceed to [“Step 15. Copy Started Task Procedures and Update RUNLIB Members” on page 124](#).

Phase III. Upgrade the PowerExchange Software for Specific Data Sources

If you use DB2 for z/OS, IDMS, or IMS data sources, you might need to upgrade the PowerExchange software for these data sources.

If you chose the option to upgrade by using new data set names and you added new data sources, you must upgrade the software for those data sources.

Otherwise, proceed to [“Phase IV. Post-Upgrade Activities” on page 124](#).

The XJOBSU member in the RUNLIB library describes the jobs that you run to upgrade the software for data sources.

If you selected the **Upgrade by Using Existing Data Set Names** option, complete the step in the following table for your environment type:

Environment	Step
Existing user of DB2 for z/OS bulk data movement and CDC	“Step 12A. Run the SETUDB2U or SETDB2UE Job to Upgrade Software for DB2 Data Sources” on page 122
Existing user of IMS synchronous CDC	“Step 14. Upgrade Software for IMS Synchronous CDC Data Sources” on page 124

If you selected the **Upgrade by Using New Data Set Names** option, complete the step in the following table for your environment type:

Environment	Step
Existing user of DB2 for z/OS bulk data movement and CDC	“Step 12A. Run the SETUDB2U or SETDB2UE Job to Upgrade Software for DB2 Data Sources” on page 122
New user of DB2 for z/OS bulk data movement and CDC	“Step 12B. Run the SETUPDB2 Job to Upgrade Software for DB2 Data Sources” on page 123
New user of IDMS bulk data movement or CDC	“Step 13. Upgrade Software for IDMS Data Sources (Optional)” on page 123
Existing user of IMS synchronous CDC	“Step 14. Upgrade Software for IMS Synchronous CDC Data Sources” on page 124

Step 12A. Run the SETUDB2U or SETDB2UE Job to Upgrade Software for DB2 Data Sources

If you used PowerExchange to process DB2 for z/OS data before the upgrade, run the SETUDB2U or SETDB2UE job in the RUNLIB library to upgrade the PowerExchange software for DB2 data sources

Which job you run depends on the upgrade option that you selected in the z/OS Installation Assistant:

- If you selected the **Upgrade by Using New Data Set Names** option, run SETUDB2U.
- If you selected the **Upgrade by Using Existing Data Set Names** option, run SETDB2UE.

Caution: Perform this procedure only if you used PowerExchange to process DB2 for z/OS data before the upgrade. If you added DB2 as a data source during the upgrade, perform [“Step 12B. Run the SETUPDB2 Job to Upgrade Software for DB2 Data Sources” on page 123](#) instead.

1. In the RUNLIB library, add the JOB card in the JOBCARD member to the SETUDB2U or SETDB2UE JCL.

Note: You can change the job name.

2. Submit the SETUDB2U or SETDB2UE job.

The SETUDB2U job submits the XIDDB210 job. The XIDDB210 job binds the DB2 plan and packages for PowerExchange DB2 bulk data movement. To run this job, you must have DB2 BINDADD authority.

If you selected the **DB2 CDC** option on the **Data Sources** page, the SETUDB2U job submits the XIDDB225 job. The XIDDB225 job binds the DB2 plan and packages for the DB2 ECCR. To run this job, you must have SYSCTRL authority.

The SETDB2UE job operates in a manner similar to SETUDB2U. However, SETDB2UE includes the JCL to run the DB2 binds.

3. If you changed the DB2 plan names during the upgrade, authorize the appropriate PowerExchange users to access the DB2 plans.

The following PowerExchange user address spaces require access to the DB2 plans:

- For bulk data movement, the PowerExchange Listener requires access to the plan that is specified in the XIDDB210 job.
- For CDC, the PowerExchange DB2 ECCR requires access to the plan that is specified in the XIDDB225 job.

Step 12B. Run the SETUPDB2 Job to Upgrade Software for DB2 Data Sources

If you added DB2 for z/OS as a data source during the upgrade, run the SETUPDB2 job to upgrade software for DB2 data sources.

Caution: Perform this procedure only if you added DB2 as a data source during the upgrade. If you used PowerExchange to process DB2 for z/OS data before the upgrade, perform [“Step 12A. Run the SETUDB2U or SETDB2UE Job to Upgrade Software for DB2 Data Sources” on page 122](#) instead.

1. In the RUNLIB library, add the JOB card in the JOBCARD member to the SETUPDB2 JCL.

Note: You can change the job name.

2. Submit the SETUPDB2 job.

This job submits the XIDDB210 job. The XIDDB210 job runs the DB2 bind for DB2 bulk data processing. You must have DB2 BINDADD authority to run this job.

If you selected the **DB2 CDC** option on the **Data Sources** page, SETUPDB2 also submits the XIDDB220 job. The XIDDB220 job completes the following tasks:

- Creates the capture directory database, table spaces, tables, and indexes for PowerExchange for DB2 CDC.
- Submits the XIDDB225 job, which runs the DB2 binds for the DB2 ECCR. You must have SYSCTRL authority to run this job.

3. Authorize the appropriate users to access the DB2 plans.

The following PowerExchange address spaces require access to the PowerExchange for DB2 plans:

- The PowerExchange Listener requires access to the plan that is specified in the XIDDB210 job.
- The PowerExchange DB2 ECCR requires access to the plan that is specified in the XIDDB225 job.

Step 13. Upgrade Software for IDMS Data Sources (Optional)

If you selected IDMS as a new data source during the upgrade, optionally submit the XIDIDM10 job. This job copies the system IDMS load libraries to the PowerExchange copies of these libraries, called *hlq.IDMS.LOADLIB* and *hlq.IDMS.DBA.LOADLIB*.

If you set the first parameter of the SECURITY statement in the DBMOVER configuration file to 1 or 2, the PowerExchange Listener must run APF-authorized. However, IDMS load libraries are usually not APF-authorized. To handle this situation, you can use one of the following methods:

- Run the XIDIDM10 job to copy the IDMS load libraries and APF-authorize the copies. Then verify that these libraries are specified in the PowerExchange Listener STEPLIB DD statement.
 - In the DBMOVER configuration member on the z/OS system, set the PC_AUTH statement to Y. This setting causes PowerExchange to use an z/OS Program Call (PC) services routine to get the APF-authorization that the PowerExchange Listener requires. Use this method if you do not want to maintain and APF-authorize copies of the IDMS load libraries. This method is recommended when security is enabled.
1. In the RUNLIB library, add the JOB card in the JOBCARD member to the XIDIDM10 JCL.

2. Submit the XIDIDM10 job.

For more information, see the *PowerExchange Bulk Data Movement Guide*.

Step 14. Upgrade Software for IMS Synchronous CDC Data Sources

If you currently use IMS synchronous CDC and the PowerExchange-provided CRG.LOAD library, you must redo the DBRC configuration for the IMS synchronous ECCR.

For information about how to configure DRBC for IMS synchronous CDC, see the *PowerExchange CDC Guide for z/OS*.

Phase IV. Post-Upgrade Activities

After you upgrade PowerExchange, copy started task procedures and update the RUNLIB members. Then, resume access to PowerExchange.

Step 15. Copy Started Task Procedures and Update RUNLIB Members

If you upgraded by using new data set names, you must copy new or changed procedures for started tasks from the PowerExchange upgrade PROCLIB library to a system started task PROCLIB library.

Additionally, because some DD statements in the procedure JCL in the upgrade PROCLIB library refer to upgrade RUNLIB members such as DBMOVE and CAPTDB2, complete the following steps:

1. Review the RUNLIB members in the earlier release to determine if they contain customizations.
2. To ensure that the upgrade RUNLIB members contain the customizations from the earlier release, perform one of the following actions:
 - Edit the upgrade RUNLIB members to incorporate any customization from the earlier release.
 - Replace the upgrade RUNLIB members with the customized members from the earlier release. To add new parameters and remove deprecated parameters from the RUNLIB members, review the *PowerExchange Release Guide*.

Step 16. Resume Access to PowerExchange

To resume access to PowerExchange, you must start the tasks for bulk data movement and CDC in the upgraded PowerExchange environment.

1. If you use PowerExchange bulk data movement, start the following tasks:
 - All PowerExchange Listener address spaces
 - All PowerCenter workflows that extract data from or write data to PowerExchange
2. If you use PowerExchange CDC, start the following tasks:
 - All PowerExchange Listener address spaces
 - All PowerExchange Agent address spaces
 - All PowerExchange Logger for z/OS address spaces
 - All ECCR address spaces
 - All PowerExchange Condense address spaces
 - All PowerCenter workflows that extract data from or write data to PowerExchange

Considerations for Starting the DB2 ECCR

Perform a warm start, cold start, or special start of the DB2 ECCR.

Use the following criteria to determine which start type to use:

- If you performed [“Step 12A. Run the SETUDB2U or SETDB2UE Job to Upgrade Software for DB2 Data Sources” on page 122](#), warm start the DB2 ECCR.
- If you performed [“Step 12B. Run the SETUPDB2 Job to Upgrade Software for DB2 Data Sources” on page 123](#), cold start the DB2 ECCR.
- In the following situations, perform a special start of the DB2 ECCR:
 - You upgraded from a release earlier than PowerExchange 8.6.1 HotFix 14, and you used PowerExchange to process DB2 for z/OS data before the upgrade.
 - You inadvertently deleted the DB2 ECCR capture directory tables (TCAP*), thereby preventing a warm start of the DB2 ECCR. Note that [“Step 12B. Run the SETUPDB2 Job to Upgrade Software for DB2 Data Sources” on page 123](#) deletes these tables if they exist.

To perform a special start of the DB2 ECCR, edit the REPLOPT data set to specify the STARTLOC parameter and the log location and RBA values from messages PWXEDM177268I and PWXEDM177021I, which you saved in [“Step 1. Stop Access to PowerExchange” on page 109](#). For example:

```
*START WARM
*START COLD
START STARTLOC=00000000047F56A7B2DB USEDIR,USESTAT
```

After you perform a special start of the ECCR, reset the control cards for a warm start:

```
START WARM
*START COLD
*START STARTLOC=00000000047F56A7B2DB USEDIR,USESTAT
```

For more information about performing a special start of the DB2 ECCR, see the *PowerExchange CDC Guide for z/OS*.

After You Upgrade on z/OS

After you upgrade on z/OS, review the latest PowerExchange documentation for information about new features and changes.

See the following documentation:

- For an overview of new features and changes, see the *PowerExchange Release Guide*.
- For information about post-upgrade tasks and considerations, see [Appendix A, “Upgrade Considerations” on page 170](#).
- For more information about migrating data maps, capture registrations, and extraction maps from a previous release, see [“Migrating Data Maps, Capture Registrations, and Extraction Maps” on page 38](#).
- If you selected the **Upgrade by Using New Data Set Names** option and you configured additional data sources, you must configure PowerExchange before you can use those data sources for bulk data movement or CDC.

To configure bulk data movement, see the *PowerExchange Bulk Data Movement Guide*.

To configure CDC, see the *PowerExchange CDC Guide for z/OS*.

For information about DBMOVER configuration statements, see the *PowerExchange Reference Manual*.

Installing a HotFix on z/OS

To apply a PowerExchange hotfix, run the z/OS Installation Assistant.

The hotfix must be for the existing PowerExchange version, such as 9.6.1 HotFix 3 for PowerExchange 9.6.1. Otherwise, complete an upgrade to get the software for the PowerExchange version with the latest hotfix.

Hotfixes provide a subset of the PowerExchange software that you install on top of an existing PowerExchange environment. When you install a hotfix, PowerExchange does not create new data libraries, such as those containing data maps, capture registrations, and extraction maps. As a result, you do not need to migrate the contents of these data sets, which simplifies the installation process.

When you apply a hotfix, you cannot add new data sources to an existing PowerExchange environment. To add new data sources, you must complete a full installation or an upgrade.

Because PowerExchange hotfixes are cumulative, install only the latest available hotfix.

RELATED TOPICS:

- [“Performing a Full Installation on z/OS” on page 87](#)

Before You Install a HotFix on z/OS

Before you apply a PowerExchange hotfix on z/OS, verify that the license key is valid. The InstParm file from your current release contains the license key. As part of the hotfix installation, you copy the InstParm file to the temporary directory that you create for the hotfix.

Also, verify that the z/OS Installation Assistant is installed on a 64-bit Windows system. The installation will fail if you attempt to run the z/OS Installation Assistant from a 32-bit system.

Task Flow for a HotFix Installation on z/OS

To apply a hotfix to PowerExchange on z/OS, install the PowerExchange hotfix and upgrade the PowerExchange software for specific data sources.

Use the following checklist of tasks to apply a hotfix to an existing PowerExchange installation:

Check	Task	Required or Optional
	Phase I. Install the PowerExchange HotFix	Required
	“Step 1. Stop Access to PowerExchange” on page 127	Required
	“Step 2. Allocate the BINLIB and RUNLIB Libraries for the HotFix” on page 128	Required
	“Step 3. Extract the z/OS Installation Files to a Windows System for a HotFix Installation” on page 129	Required
	“Step 4. Run the z/OS Installation Assistant to Apply a HotFix” on page 129	Required
	“Step 5. Run the PRESTLIB Job” on page 130	Required
	“Step 6. Back Up Existing Libraries (Optional)” on page 130	Optional
	“Step 7. Update the PowerExchange Libraries” on page 131	Required

Check	Task	Required or Optional
	Phase II. Upgrade the PowerExchange Software for Specific Data Sources	Required for some data sources
	"Step 8. Rebind the DB2 Plan and Packages for DB2 Data Sources" on page 131	Required for DB2 for z/OS data sources if the hotfix includes updated DBRM libraries
	"Step 9. Update the Software for IMS Data Sources" on page 132	Required if you use IMS synchronous CDC and the PowerExchange CRG.LOAD library
	Phase III. Complete Post-HotFix Installation Tasks	Required
	"Step 10. Resume Access to PowerExchange" on page 132	Required
	"Step 11. Test the Installation (Recommended)" on page 132	Recommended

Phase I. Install the HotFix on z/OS

In this phase of the hotfix installation, you allocate libraries on the z/OS system, extract the z/OS installation files to the Windows system, and use the z/OS Installation Assistant to install the hotfix on the z/OS system.

After you run the z/OS Installation Assistant, you must complete additional tasks on the z/OS system.

Step 1. Stop Access to PowerExchange

Before you apply the hotfix, you must stop some PowerExchange and PowerCenter tasks.

1. If you use PowerExchange bulk data movement only, stop the following tasks:
 - All PowerCenter workflows that extract data from or write data to PowerExchange
 - All PowerExchange Listener address spaces
2. If you use PowerExchange CDC, stop the following tasks:
 - All PowerCenter workflows that extract data from or write data to PowerExchange
 - All PowerExchange Listener address spaces
 - All ECCR address spaces
 - All PowerExchange Condense address spaces
 - All PowerExchange Logger for z/OS address spaces
 - All PowerExchange Agent address spaces

Note: If you do not plan to update the PowerExchange libraries right away, you can postpone this step until right before you back up and update the PowerExchange libraries in steps 6 and 7.

Step 2. Allocate the BINLIB and RUNLIB Libraries for the HotFix

On the z/OS system, you must allocate the BINLIB and RUNLIB libraries that will receive files from the PowerExchange hotfix.

These libraries must have the same attributes as the libraries that you allocated for the first-time installation or last upgrade. However, the fully qualified library names must be different from those of the previous libraries.

The libraries that you allocate must have the predefined PDS names of BINLIB and RUNLIB. Use a high-level qualifier (HLQ) that is different from the HLQ in the existing PowerExchange environment.

► On the z/OS system, allocate the BINLIB and RUNLIB libraries in one of the following ways:

- Use the ISPF Option 3.2.
- Use JCL such as the following sample JCL for allocating the RUNLIB library:

```
//ALLOC      EXEC PGM=IEFBRL4
//DS1 DD DSNAME=&HLQ..RUNLIB,
//          DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(20,10,50),RLSE),
//          DCB=(BLKSIZE=nn,RECFM=FB,LRECL=80,DSORG=PS),
//          VOL=SER=volume_serial_number
```

Record the HLQ that you use. You must enter this value as the HLQ value for the **HOTFIX Data Sets** group on the **Data Set Group Details** page in the z/OS Installation Assistant.

The following table describes the parameters to use for allocating the BINLIB and RUNLIB libraries on 3390 DASD:

Library	Description	Space Units (3390)	Space Quantity (pri,sec)	Directory Blocks	DCB Characteristics
BINLIB	PDS that contains the software libraries in TSO/E transmitted format.	CYLS	(160,10)	10	RECFM FB LRECL 80 BLKSIZE any valid value, often a multiple of the LRECL value
RUNLIB	PDS that contains the jobs to install PowerExchange, jobs to set up and run PowerExchange, and configuration data. The AAINDEX member describes each member in RUNLIB.	CYLS	(10,1)	50	RECFM FB LRECL 80 BLKSIZE any valid value, often a multiple of the LRECL value

Note: The hotfix installation might allocate the following additional libraries:

- DBRMLIB, DTLMSG, LOADLIB, and SRCLIB libraries
- CRG.LOAD, LOAD, and SAMPLIB libraries

Step 3. Extract the z/OS Installation Files to a Windows System for a HotFix Installation

PowerExchange for z/OS is shipped as a self-extracting executable. Extract the files to a temporary directory on your Windows system.

1. From a Windows command prompt, make a temporary directory to extract the hotfix installation files into. For example, you might run the following command to make a temporary directory named `pwx_mvsn_hotfix`:

```
mkdir pwx_mvsn_hotfix
```

2. Navigate to the self-extracting executable zip file that PowerExchange provides for the hotfix in the `patches/mvs` directory of the CD image. Then, double-click the zip file.

The zip file name has the following format:

```
pwxvrm_hotfixn_zos.exe
```

The `vrm` variable is the *version.release.modification* number and `n` is the hotfix number. For the specific file name, see the *PowerExchange Release Notes* for the PowerExchange hotfix.

The **WinZip Self-Extractor** dialog box appears.

3. In the **WinZip Self-Extractor** dialog box, click **Browse**.
4. In the **Browse for Folder** dialog box, browse to the temporary directory that you created. Then, click **OK**.
5. In the **WinZip Self-Extractor** dialog box, click **Unzip**.
The WinZip Self-Extractor places several files in the root directory and creates the `pbinary` and `prunlib` subdirectories, which also contain files. The WinZip Self-Extractor then displays a message box to indicate that the files were extracted successfully.
6. In the message box, click **OK**.
7. In the **WinZip Self-Extractor** dialog box, click **Close**.
8. Copy the `InstParm` file from the current product installation directory on Windows to the temporary directory that you created for the hotfix. The `InstParm` file contains your customized settings.

Step 4. Run the z/OS Installation Assistant to Apply a HotFix

When you apply a hotfix, the z/OS Installation Assistant transfers changed software library binary files to the hotfix `BINLIB` library and transfers new and changed `RUNLIB` members to the hotfix `RUNLIB` library.

In the z/OS Installation Assistant, click **Save** on any page to save your entries to the `InstParm` file.

Important: You must run the z/OS Installation Assistant on a 64-bit Windows system. If you attempt to run the wizard on a 32-bit system, the installation fails.

Note: Retain the `InstParm` file that the z/OS Installation Assistant creates on Windows so that you can use it to upgrade or apply hotfixes to PowerExchange later.

1. In the `pwx_mvsn_hotfix` directory, right-click **MVS_Install.exe** and select **Run as administrator**.

The z/OS Installation Assistant starts.

2. Select **HotFix Install** and click **Next**.

The **HotFix Install** page appears. For more information, see [“HotFix Install Page” on page 167](#).

3. Click **Next**.

The **Global Parameters** page appears.

4. Review the global parameters.

For more information, see [“Global Parameters Page \(HotFix\)” on page 168](#).

The **Data Set Group Details** page appears.

5. Enter the high-level qualifier (HLQ) for the hotfix.

For more information, see [“Data Set Group Details Page \(HotFix\)” on page 169](#).

The **Create Runlib JCL** page appears.

6. Enter information about the RUNLIB and BINLIB libraries for the hotfix. Verify that these data set names do not match the data set names in the current PowerExchange environment. For more information, see [“Create Runlib JCL Page” on page 156](#).

Then, click **Next**.

The **Transfer Files to Mainframe** page appears. Also, the z/OS Installation Assistant creates the PXRunlib folder. This folder contains the files from the prunlib folder, which are customized with the values that you entered in the z/OS Installation Assistant.

7. On the **Transfer Files to Mainframe** page, enter information about the z/OS system to which to transfer files.

For more information, see [“Transfer Files to Mainframe Page” on page 157](#).

Then, click **Next**.

The **View File Transfer Status** page displays the status of the file transfer operation.

8. After the file transfer completes, click **OK**.
9. Click **Finish**.

Note: The z/OS Installation Assistant saves your installation entries to the InstParm file in the root installation directory on Windows if you have not already done so. The z/OS Installation Assistant also creates a corresponding INPARM nn file in the XRunlib directory on Windows and uses FTP to transfer this file to the RUNLIB library on z/OS. The INPARM nn member in the RUNLIB that has the largest nn value is the most recent version of the member.

After running the z/OS Installation Assistant, you must manually submit at least the PRESTLIB job on the z/OS system.

Step 5. Run the PRESTLIB Job

On the z/OS system, submit the PRESTLIB job to install the hotfix from the hotfix RUNLIB library into the hotfix libraries.

1. Add a JOB card to the PRESTLIB member in the hotfix RUNLIB library.
2. Make any required changes to the PRESTLIB job. Review the space allocation parameters to determine if they are sufficient.
3. Submit the PRESTLIB job.

Step 6. Back Up Existing Libraries (Optional)

Optionally, back up existing libraries in the current PowerExchange environment.

► Back up the following libraries:

- CRG.LOAD
- DBRMLIB
- DTLMSG
- LOAD
- LOADLIB

- RUNLIB
- SAMPLIB
- SRCLIB

Step 7. Update the PowerExchange Libraries

To implement the hotfix changes, you must copy the contents of the hotfix libraries to the current PowerExchange environment libraries.

The hotfix libraries might contain only new or changed members or all members.

All hotfix libraries are partitioned data sets (PDSs) except for DTLMSG, which is a sequential data set.

You can also concatenate the libraries in the JCL for the PowerExchange Agent, PowerExchange Logger for z/OS, and ECCRs.

► Use any of the following methods to copy the PDSs and sequential data sets:

- To copy PDSs and sequential data sets, use ISPF Option 3.3.
- To copy PDSs, use the IBM IEBCOPY utility.
The following example JCL statements execute the IEBCOPY utility to copy one library to another library:

```
//COPY      EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//INDD1    DD DISP=SHR,DSN=hlq_hf.LOAD           HotFix LOAD
//OUTDD1   DD DISP=SHR,DSN=hlq.LOAD             Current Execution LOAD
//SYSIN    DD *
          COPY INDD=((INDD1,R)),OUTDD=OUTDD1
/*
```

In this example, the *hlq_hf* variable is the HLQ that you specified for the hotfix libraries and the *hlq* variable is the HLQ of the current PowerExchange environment.

- To copy sequential data sets, use the IBM IEBGENER utility.
The following example JCL statements execute the IEBGENER utility to copy one sequential data set to another library:

```
//IEBGENER EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DISP=OLD,DSN=hlq_hf.DTLMSG       HotFix DTLMSG
//SYSUT2   DD disp=OLD,DSN=hlq.DTLMSG         Current Execution DTLMSG
//SYSIN    DD DUMMY
/*
```

Phase II. Update the PowerExchange Software for Specific Data Sources

If you selected DB2 for z/OS or IMS synchronous CDC data sources, you must upgrade the PowerExchange software in this phase of the hotfix installation.

Otherwise, proceed to [“Phase III. Post-HotFix Installation Activities” on page 132.](#)

Step 8. Rebind the DB2 Plan and Packages for DB2 Data Sources

If the hotfix includes updated DBRM libraries, you must rebind some or all of the DB2 plan and packages for PowerExchange functions.

If the hotfix includes a DBRMXMIT file, use the XIDDB210 job to rebind the DB2 plan and packages for bulk data movement. If the hotfix includes a DBRM file and you selected the **DB2 CDC** option on the **Data Sources**

page of the z/OS Installation Assistant, use the XIDDB225 job to rebind the DB2 plan and packages for the DB2 ECCR. If the hotfix includes neither a DBRMXMIT file nor a DBRM file, do not rebind the DB2 plan and packages.

1. Edit the XIDDB210 job, XIDDB225 job, or both, as needed. Add a job card, and specify the hotfix version of the DBRM library or libraries in the DBRMLIB concatenation.
2. Submit the job or jobs.

To run the XIDDB210 job, you must have DB2 BINDADD authority. To run the XIDDB225 job, you must have SYSCTRL authority.

Step 9. Update the Software for IMS Data Sources

If you use IMS synchronous CDC and the PowerExchange-provided CRG.LOAD library, you must redo the DBRC configuration for the IMS synchronous ECCR.

For information about how to configure DRBC for IMS synchronous CDC, see the *PowerExchange CDC Guide for z/OS*.

Phase III. Post-HotFix Installation Activities

After you install a hotfix to PowerExchange, you must resume access to PowerExchange and test the hotfix installation.

Step 10. Resume Access to PowerExchange

To resume access to PowerExchange, start the PowerExchange and PowerCenter tasks for bulk data movement and CDC in the PowerExchange environment with the hotfix.

1. If you use PowerExchange bulk data movement only, start the following tasks:
 - All PowerExchange Listener address spaces
 - All PowerCenter workflows that extract data from or write data to PowerExchange
2. If you use PowerExchange CDC, start the following tasks:
 - All PowerExchange Listener address spaces
 - All PowerExchange Agent address spaces
 - All PowerExchange Logger for z/OS address spaces
 - All ECCR address spaces
 - All PowerExchange Condense address spaces
 - All PowerCenter workflows that extract data from or write data to PowerExchange

Step 11. Test the Installation (Recommended)

After you install PowerExchange on z/OS, test the installation.

- ▶ To verify that the PowerExchange version matches the level of the hotfix that was installed, run the DTLINFO job in the RUNLIB library.

z/OS Installation Assistant Reference

Use the z/OS Installation Assistant wizard to complete a full installation, an upgrade, or a hotfix installation of PowerExchange on z/OS. This reference describes each wizard page.

When you run the z/OS Installation Assistant, the wizard pages that are displayed and the fields that are available on these pages depend on the installation type, the source type, and whether you are using CDC.

Based on your entries, the z/OS Installation Assistant updates the InstParm file in the installation directory on the z/OS system and creates a corresponding INPARMnn file in an XRunlib directory on the Windows system. This reference identifies the variables in the INSTPARM file that correspond to the entry fields in the wizard, where applicable.

Note: To reduce the risk of errors, Informatica recommends changing installation settings in the z/OS Installation Assistant rather than editing the INSTPARM file directly. The z/OS Installation Assistant validates most entries and generates some INSTPARM variable values based on your entries.

Welcome to the PowerExchange z/OS Installation Assistant Page

Select the type of installation to perform. You can perform a full installation, an upgrade, or a hotfix installation.

Click one of the following options:

- **Full Install.** If PowerExchange is not currently installed, select this option to perform a full installation.
- **Upgrade to New Release.** If an earlier PowerExchange version is currently installed, select this option to perform an upgrade installation.
- **Hotfix Install.** If the current PowerExchange *version.release.modification* level is installed and you want to get the latest fixes for it, select this option to perform a hotfix installation.

This setting corresponds to the the <installtype> variable in the INSTPARM file. Valid variable values are 1 for a full install, 2 for an upgrade, or 3 for a hotfix install.

Click **Next** to continue.

Full Install Page

Perform a full installation in the following situations

- To install PowerExchange on z/OS for the first time or to a different location
- To update an existing installation to add the CDC software

Click **Next** to continue.

Select Global Parameters Page (Full Installation)

Based on the type of installation, enter and review global parameters.

Based on the default values that you enter in the **Default Values** area of this page, the z/OS Installation Assistant sets default values for each data set group on the **Data Set Group Details** page.

Logon ID

The z/OS user ID that enables connection to the z/OS system.

This setting corresponds to the <loginid> variable in the INSTPARM file.

PowerExchange Agent / Logger Prefix

Read-only for an upgrade or a hotfix installation. The base prefix for the PowerExchange Agent and PowerExchange Logger.

Enter an alphanumeric string from 1 to 3 characters in length. Default is PWX.

The z/OS Installation Assistant appends the following characters to this prefix:

- **A.** For the PowerExchange Agent.
- **L.** For the PowerExchange Logger.

This setting corresponds to the <zalpref> variable in the INSTPARM file.

HLQ

The default high-level qualifier (HLQ) for PowerExchange data sets.

You can use as many qualifier levels as required. For example, the following are valid HLQs:

- PWX.SYSTEMA.PROD
- SYS3.SYSA.PWX.TEST.A1

Default is PWX.

Maximum length is 26 characters, including periods.

This setting corresponds to the <dfhlhlq> variable in the INSTPARM file.

Storage Class

SMS only. The default SMS storage class for PowerExchange data sets.

If you specify an SMS storage class, you do not need to specify any volume or unit values.

Note: The SMS automatic class selection (ACS) routines in your installation might not allow specification of SMS classes or might override the values that you specify.

This setting corresponds to the <dfltsmssc> variable in the INSTPARM file.

Volume

The DASD volume serial number (VOLSER) on the z/OS system where you want to install PowerExchange libraries.

Default is VOLSER.

This setting corresponds to the <dfltvoll> variable in the INSTPARM file.

Mgmt Class

SMS only. The default SMS management classes for PowerExchange data sets.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

This setting corresponds to the <dfltsmsmc> variable in the INSTPARM file.

Unit

A generic or esoteric unit name on the z/OS system where you want to install PowerExchange.

Default is 3390.

This setting corresponds to the <dflunit> variable in the INSTPARM file.

Data Class

SMS only. The default SMS data classes for PowerExchange data sets.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

This setting corresponds to the <dfaltsmsdc> variable in the INSTPARM file.

License Key

The license key for the installation.

This setting corresponds to the <license> variable in the INSTPARM file.

Select Data Set Group Details Page

Enter or review information for data set groups.

Data Set Groups

Select a data set group for which to view or change properties. The properties that you select for the group override the default values in the **Select Global Parameters** window. Select one of the following groups:

- **User Modifiable Data Sets (Non-VSAM).** Includes RUNLIB, BINLIB, SAMPLIB, and DTLDEMO.
- **Read-Only Data Sets, Load Libraries and DBRMLIBs.** Includes LOAD, LOADLIB, DBRM, and DBRMLIB.
- **VSAM Files.** Includes VSAM files other than archive data sets.
- **Archive Data Sets.** Includes PowerExchange archive log data sets PRILOG.DS01, PRILOG.DS02, PRILOG.DS03, SECLOG.DS01, SECLOG.DS02, and SECLOG.DS03.
- **Log Files.** Includes the LOG and CDCLOG data sets.
- **Condense Data Sets.** Includes the PowerExchange Condense data sets.

HLQ

A high-level qualifier (HLQ) to use for the selected data set group.

The following table shows the default HLQs for each group:

Data Set Group	Default HLQ	Maximum Length
User Modifiable Data Sets (Non-VSAM)	PWX	26
Read-Only Data Sets, Load Libraries, and DBRMLIBs	PWX	26
VSAM Files	PWX.V1	23
Archive Data Sets	PWX.V2	17
Log Files	PWX	26

The maximum length values include periods.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **User Modifiable Data Sets (Non-VSAM)**, this setting corresponds to the <libname> variable.

- If you selected **Read-Only Data Sets, Load Libraries and DBRMLIBs**, this setting corresponds to the <libnameloadlib> variable.
- If you selected **VSAM Files**, this setting corresponds to the <libnamevsm> variable.
- If you selected **Archive Data Sets**, this setting corresponds to the <libnamearc> variable.
- If you selected **Log Files**, this setting corresponds to the <libnamelogfiles> variable.

For Condense data sets, this field is not displayed.

Storage Class

SMS only. The SMS storage class for the data set group.

If you specify an SMS storage class, you do not need to specify the volume or unit values.

Note: The SMS ACS routines at your installation might not allow you to specify SMS classes or might override the values that you specify.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **User Modifiable Data Sets (Non-VSAM)**, this setting corresponds to the <znonvssc> variable.
- If you selected **Read-Only Data Sets, Load Libraries and DBRMLIBs**, this setting corresponds to the <zloadstcl> variable.
- If you selected **VSAM Files**, this setting corresponds to the <zvsamstcl> variable.
- If you selected **Archive Data Sets**, this setting corresponds to the <zarchstcl> variable.
- If you selected **Log Files**, this setting corresponds to the <zlogfilesstcl> variable.

For Condense data sets, this field is not displayed.

Volume

The DASD volume serial number (VOLSER) on the z/OS system where you want to install the data sets.

For Condense data sets, this parameter maps to the CONDF_VOL parameter in the PowerExchange Condense configuration file.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **User Modifiable Data Sets (Non-VSAM)**, this setting corresponds to the <volid> variable.
- If you selected **Read-Only Data Sets, Load Libraries and DBRMLIBs**, this setting corresponds to the <volload> variable.
- If you selected **VSAM Files**, this setting corresponds to the <volidvsm> variable.
- If you selected **Log Files**, this setting corresponds to the <vollogfiles> variable.
- If you selected **Condense Data Sets**, this setting corresponds to the <condfvol> variable.

For archive data sets, this field is read only.

Mgmt. Class

SMS only. The SMS management class for the data set group.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **User Modifiable Data Sets (Non-VSAM)**, this setting corresponds to the <znonvsmc> variable.
- If you selected **Read-Only Data Sets, Load Libraries and DBRMLIBs**, this setting corresponds to the <zloadmgcl> variable.
- If you selected **VSAM Files**, this setting corresponds to the <zvsammgcl> variable.
- If you selected **Archive Data Sets**, this setting corresponds to the <zarchmgcl> variable.
- If you selected **Log Files**, this setting corresponds to the <zlogfilesmgcl> variable.

For Condense data sets, this field is not displayed.

Unit

A generic or esoteric unit name on the z/OS system where you want to install the data sets.

Default is 3390, where applicable.

For archive data sets, this parameter is a PowerExchange Logger EDMUPARM parameter that controls archive logging. Informatica recommends that you write the archive log data sets to DASD. For more information, see the *PowerExchange CDC Guide for z/OS*.

For Condense data sets, this parameter maps to the CONDF_UNIT parameter in the PowerExchange Condense configuration file.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you select **User Modifiable Data Sets (Non-VSAM)**, this setting corresponds to the <unit> variable.
- If you select **Read-Only Data Sets, Load Libraries and DBRMLIBs**, this setting corresponds to the <unitload> variable.
- If you selected **Archive Data Sets**, this setting corresponds to the <unitarc> variable.
- If you selected **Log Files**, this setting corresponds to the <unitlogfiles> variable.
- If you selected **Condense Data Sets**, this setting corresponds to the <condfunit> variable.

For VSAM files, this field is read only.

Data Class

SMS only. The SMS data class for the data set group.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

Maps to the CHKPT_VOLSERS parameter in the PowerExchange Condense configuration file.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **User Modifiable Data Sets (Non-VSAM)**, this setting corresponds to the <znonvsdc> variable.
- If you selected **Read-Only Data Sets, Load Libraries and DBRMLIBs**, this setting corresponds to the <zloaddtcl> variable.
- If you selected **VSAM Files**, this setting corresponds to the <zvsamdtcl> variable.
- If you selected **Archive Data Sets**, this setting corresponds to the <zarchdtcl> variable.

- If you selected **Log Files**, this setting corresponds to the <zlogfilestcl> variable.

For Condense data sets, this field is not displayed.

Checkpoint Volumes

If you selected the **Condense Data Sets** group, enter the volume serial numbers (VOLSERs) for the checkpoint data sets.

These settings correspond to the <chkptvol1>, <chkptvol2>, and <chkptvol3> variables in the INSTPARM file.

General Parameters Page

Enter or review general parameters.

LE Run-time Library

The data set name of the LE run-time library.

Default is SYS1.SCEERUN.

This field is read only for an upgrade or a hotfix install.

This setting corresponds to the <sceerunlib> variable in the INSTPARM file.

Delete Install Members

Select this check box to run the XIZZZ999 job. This job deletes members that were moved by the XIZZZ998 job from the RUNLIB library to other libraries.

To retain these members in the RUNLIB library, ensure that this check box is cleared. This check box is cleared by default.

This field is read only for an upgrade or a hotfix install.

This setting corresponds to the <delinst> variable in the INSTPARM file.

Auto Submit On

Select this check box to have PowerExchange installation jobs submitted automatically after you submit the initial job.

If you select this check box, also specify TYPRUN=HOLD in the JOB card that you set up in [“Step 4. Edit the JOBCARD Member in the RUNLIB Library” on page 101](#). All of the jobs should end with a return code less than 4.

If you want to manually submit the installation jobs, clear this check box. Informatica recommends that you manually submit the installation jobs so that you can verify that the jobs run in the correct order on the correct system.

By default, this check box is cleared.

Warning: If you are installing PowerExchange for DB2 or PowerExchange CDC, do not select this check box. During PowerExchange installation, you must run a job to bind DB2 plans. Without the appropriate DB2 authority, the BIND job fails. The installation of PowerExchange CDC components requires manual input between the run of various installation jobs.

Note: Selecting the **JES3 Install** check box causes the **Auto Submit On** check box to be cleared and become unavailable.

This field is read only for an upgrade or a hotfix install.

This setting corresponds to the <qikinst> variable in the INSTPARM file.

Light Install

Select this check box to install a subset of the PowerExchange libraries.

When this check box is selected, the following libraries are not installed or are installed only if you select certain options:

Library	Description	Notes
CRG.LOAD	Load library that contains load modules for IMS synchronous CDC	Installed only if you select IMS synchronous CDC
DATAXMIT	Demonstration data	Not installed
DBRM	Temporary load library that contains DB2 DBRM modules for DB2 CDC	Installed only if you select DB2 CDC
DBRMLIB	PDS that contains PowerExchange DB2 DBRMs for bulk and CDC	Installed only if you select DB2

By default, this check box is cleared.

Note: Selecting the **JES3 Install** check box causes the **Light Install** check box to be cleared and become unavailable.

This setting corresponds to the <liteinstall> variable in the INSTPARM file. Also sets values for the <exclcrgl>, <excldataxmit>, <excldb2>, <exclcrglx>, <excldataxmitx>, <excldb2x>, <adassor>, <adawork>, and <adadatasto> variables.

Change Listener Port

If you want the PowerExchange Listener to listen on a port other than the default port, select this check box and then enter a port number.

By default, this check box is cleared and the port number 2480 is used.

This field is read only for an upgrade or a hotfix install.

This port number corresponds to the <port> variable in the INSTPARM file.

Use Tape / GDG Netport

If you plan to use netport jobs to process tapes or generation data sets (GDGs), select this check box and then enter the port number on which these netport jobs will listen. Netport jobs are often used in conjunction with long-running tasks such as tape storage or IMS tasks.

By default, this check box is selected and the port number 32480 is used.

Note: To specify more than one netport job, manually edit the DBMOMVER configuration member of the RUNLIB library.

This field is read only for an upgrade or a hotfix install.

This port number corresponds to the <netport> variable in the INSTPARM file.

Use CDC Netport

If you plan to use netport jobs for CDC sources, select this check box and then enter the port number on which these CDC netport jobs will listen. Netport jobs are often used in conjunction with long-running tasks such as tape storage or IMS tasks.

By default, this check box is selected and the port number 22480 is used.

This field is read only for an upgrade or a hotfix install.

This port number corresponds to the <cdcport> variable in the INSTPARM file.

ICU

Select this check box to generate International Components for Unicode (ICU) custom converters.

By default, this check box is cleared and the ICU custom converters are not generated.

This field is read only for an upgrade or a hotfix install.

This setting corresponds to the <uss> variable in the INSTPARM file.

USS directory where tar file programs are unpacked

The USS directory to which the ICU installation tar files are copied and unpacked. You must select the **ICU** check box for this field to be available.

This field is read only for an upgrade or a hotfix install.

This setting corresponds to the <ussunpackdir> variable in the INSTPARM file.

USS directory where ICU CNV files are placed (DTLCFG ICUDATADIR parameter)

The USS directory where the ICU CNV files are placed. You must select the **ICU** check box for this field to be available.

If you specify this directory, also define the ICUDATADIR statement in the PowerExchange DBMOVER configuration file.

This field is read only for an upgrade or a hotfix install.

This setting corresponds to the <ussicudatadir> variable in the INSTPARM file.

JES3 Install

Select this check box to customize the JCL that installs PowerExchange in a JES3 environment. When this check box is selected, the **Auto Submit On** and **Light Install** options are unavailable.

By default, this check box is cleared.

This setting corresponds to the <jes3inst> variable in the INSTPARM file. A value of 0 corresponds to not selected, and a value of 1 corresponds to selected.

Advanced Params

Enables you to define advanced parameters.

To change an advanced parameter value, complete the following steps:

1. In the **Value** column, click the cell for the parameter.

Tip: To sort parameters, click a column header. For example, to sort by parameter name, click the **Parameter Name** header.

2. Enter the parameter value, and click **OK**.

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

Restore Defaults

Restores default values.

Data Sources Page

Select or review data sources to use for bulk data movement and CDC operations.

To select a CDC data source, first select the corresponding bulk data movement data source in the left column. The CDC data source then becomes available for you to select.

Your selections determine which pages subsequently appear in the z/OS Installation Assistant.

Note: These fields are read only for an upgrade using existing data set names and a hotfix install.

The following table describes the options on this page:

Option	Description
Adabas	Enables an Adabas file as a data source for bulk data movement. This setting corresponds to the <adaexec> variable in the INSTPARM file.
Adabas CDC	Enables an Adabas file as a data source for CDC. This setting corresponds to the <adacdc> variable in the INSTPARM file.
DB2	Enables DB2 for z/OS tables as a data source for bulk data movement. This setting corresponds to the <db2exec> variable in the INSTPARM file.
DB2 CDC	Enables DB2 for z/OS tables as a data source for CDC. This setting corresponds to the <cdcdb2> variable in the INSTPARM file.
Datacom	Enables CA Datacom tables as a data source for bulk data movement. This setting corresponds to the <dcomexec> variable in the INSTPARM file.
Datacom Table Based CDC	Enables CA Datacom tables as a data source for table-based CDC. This setting corresponds to the <dcomtblbasedcdc> variable in the INSTPARM file.
IDMS	Enables a CA IDMS database as a data source for bulk data movement. This setting corresponds to the <idmsexec> variable in the INSTPARM file.
IDMS CDC	Enables a CA IDMS database as a data source for log-based CDC. This setting corresponds to the <idmscdc> variable in the INSTPARM file.
IMS	Enables an IMS database as a data source for bulk data movement. This setting corresponds to the <imsexec> variable in the INSTPARM file.
IMS Log Based CDC	Enables an IMS database as a data source for log-based CDC. This setting corresponds to the <cdcims> variable in the INSTPARM file.
IMS Synchronous CDC	Enables an IMS database as a data source for synchronous CDC. This setting corresponds to the <cdcimssync> variable in the INSTPARM file.
VSAM	Enables a VSAM data set as a data source for bulk data movement. This setting corresponds to the <vsmexec> variable in the INSTPARM file.
Batch CDC	Enables a VSAM data set as a data source for batch CDC. This setting corresponds to the <vsambcdc> variable in the INSTPARM file.

Option	Description
CICS CDC	Enables a VSAM data set as a data source for CICS/VSAM CDC. This setting corresponds to the <vsamccdc> variable in the INSTPARM file.
MQ Series Access	Enables an MQ Series message queue as a data source for bulk data movement. This setting corresponds to the <mqexec> variable in the INSTPARM file.

CDC Common Parameters Page

Enter or review information about the common parameters to use for CDC operations.

Logger ID

The PowerExchange Logger ID value.

This value must comply with the following rules:

- Be from one to four characters in length
- Begin with a letter or the #, @, or \$ character
- Contain only alphanumeric characters and the #, @, and \$ characters

Default is PWXL.

The Logger ID value also maps to the LOGGER_NAME parameter in the PowerExchange Logger EDMUPARM options module and to the LOGGER parameter in the PowerExchange Agent EDMSDIR options module. For more information about these parameters, see the *PowerExchange CDC Guide for z/OS*.

This field is read only for an upgrade using new data set names.

This setting corresponds to the <zlogger> variable in the INSTPARM file.

LOGGER Started Task ID

The name for the PowerExchange Logger started task, which can be the same as or different from the **Logger ID** value.

Default is PWXL.

This field is read only for an upgrade using new data set names.

This setting corresponds to the <zllgname> variable in the INSTPARM file.

Agent Name

The PowerExchange Agent ID value.

This value must comply with the following rules:

- Be four characters in length
- Begin with an alphabetic character or the #, @, or \$ character
- Contain only alphanumeric characters and the #, @, and \$ characters
- Be different from any existing z/OS subsystem name

You can use the same Agent ID value for multiple PowerExchange Agents as long as each PowerExchange Agent runs on a separate z/OS system.

Default is PWXA.

The Agent Name value also maps to the AgentID option in the PowerExchange Agent AGENTCTL member and to the AGENTID parameter in the EDMSDIR options module. For more information about these parameters, see the *PowerExchange CDC Guide for z/OS* .

This field is read only for an upgrade using new data set names.

This setting corresponds to the <zagent> variable in the INSTPARM file.

Agent Started Task ID

The name for the PowerExchange Agent started task proc, which can be the same as or different from the **Agent Name** value.

Default is PWXA.

This field is read only for an upgrade using new data set names.

This setting corresponds to the <zagentstartid> variable in the INSTPARM file.

Logger Data Set Size (Cylinders)

The number of cylinders to allocate for the PowerExchange Logger primary log, the secondary log, and the primary space for the archive log data sets.

If the active log data set is larger than permitted by the DSPSERV CREATE function, the Log Format utility (EDMLUTLO) issues the PWXEDM172782E error message.

Maximum size is 2912 cylinders for a 3390 device, or 3495 cylinders for a 3380 device.

This field is read only for an upgrade using new data set names.

This setting corresponds to the <zlogdssz> variable in the INSTPARM file.

Change Capture Error

Specifies the action that PowerExchange takes when a DB2, IMS synchronous, batch VSAM, or CICS/VSAM ECCR cannot capture changes for a source.

Select one of the following options:

- **Continue.** Stops change capture but allows the job or transaction to continue. Changes to the source are not captured.
- **Abend.** Causes the job or transaction to end abnormally. Transactions cannot update the source.

This option also maps to the CCERR parameter in the EDMSDIR options module. For more information about the EDMSDIR options, see the *PowerExchange CDC Guide for z/OS*.

This field is read only for an upgrade using new data set names.

This setting corresponds to the <zccerr> variable in the INSTPARM file. Valid variable values are CONT and ABEND.

Use Post Log Merge

Enables the PowerExchange Logger Post-Log Merge environment.

For more information about configuring Post-Log Merge, see the *PowerExchange CDC Guide for z/OS*.

This field is read only for an upgrade with new data set names.

This setting corresponds to the <plm_logrgrp> variable in the INSTPARM file. Valid variable values are N and Y.

Suffix (1 to 9)

A unique suffix for a PowerExchange Logger member in a Post-Log Merge group.

The suffix is used as in the data set name for USERLIB and in the XCF members created by the PowerExchange Logger.

A valid value is a single numeric character from 1 to 9.

Default is 1.

This field is read only for an upgrade using new data set names.

This setting corresponds to the <plm_suffix> variable in the INSTPARM file.

TIME_CHKPT_FREQ (5-60)

Defines the frequency at which the PowerExchange Logger creates time-based checkpoint records in a Post-Log Merge environment. This value is the number of TIMER_INTERVAL periods.

A valid value is from 5 to 60.

Default is 30.

This field is read only for an upgrade using new data set names.

This setting corresponds to the <plm_time_chkpt_freq> variable in the INSTPARM file.

TIMER_INTERVAL (50-6000)

Defines the frequency at which the PowerExchange Logger completes internal management operations, such as freeing unused virtual storage or detecting inactive tasks that need to be reactivated. This value is specified in hundredths of seconds.

A valid value is from 50 (.5 seconds) to 6000 (1 minute).

Default is 100.

This field is read only for an upgrade using new data set names.

This setting corresponds to the <plm_timer_interval> variable in the INSTPARM file.

Adabas Parameters Page

Enter or review information about the Adabas file to use for bulk data movement and CDC operations.

Adabas

Enables an Adabas file as a data source for bulk data movement.

This setting corresponds to the <adaexec> variable in the INSTPARM file.

Adabas CDC

Enables an Adabas file as a data source for CDC.

This setting corresponds to the <adacdc> variable in the INSTPARM file.

Load Library

The name of the Adabas load library.

Default is ADABAS.LOADLIB.

This setting corresponds to the <adaload> variable in the INSTPARM file.

Database ID

The Adabas DBID.

Default is 1000.

This setting corresponds to the <adadb> variable in the INSTPARM file.

OUSP

Controls whether security is used for an Adabas data source. If you enable OUSP and PowerExchange security, PowerExchange creates a UNIX User Security Packet (USP) for Adabas users, which enables Adabas to verify user security access.

By default, this option is cleared.

This setting corresponds to the <adasecu> variable in the INSTPARM file.

Associator

Adabas CDC only. The associator data set that corresponds to the database ID.

Default is PWX.DB.ASSOR.

This setting corresponds to the <adassor> variable in the INSTPARM file.

Work

Adabas CDC only. The work data set that corresponds to the given database ID.

Default is PWX.DB.WORK.

This setting corresponds to the <adawork> variable in the INSTPARM file.

Data Storage

Adabas CDC only. The data storage data set that corresponds to the given database ID.

Default is PWX.DB.DATA.

This setting corresponds to the <adadatasto> variable in the INSTPARM file.

Unit

Adabas CDC only. The Adabas unit name for the specified database ID. PowerExchange uses this value in the ADARUN card.

Default is 3390.

This setting corresponds to the <unitada> variable in the INSTPARM file.

Advanced Params

Enables you to define advanced parameters.

To change an advanced parameter value, complete the following steps:

1. In the **Value** column, click the cell for the parameter.

Tip: To sort parameters, click a column header. For example, to sort by parameter name, click the **Parameter Name** header.

2. Enter the parameter value, and click **OK**.

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

Restore Defaults

Restores default values.

Datacom Parameters Page

Enter or review information about the Datacom tables to use for bulk data movement and CDC operations.

Datacom

Enables CA Datacom tables as a data source for bulk data movement.

This setting corresponds to the <dcomexec> variable in the INSTPARM file.

Table Based CDC

Enables CA Datacom tables as data sources for Database table-based CDC.

This setting corresponds to the <dcomtblbasedcdc> variable in the INSTPARM file.

Load Library

The data set name of the Datacom load library.

Default is DCOM.V10.TARGET.CAILIB.

This setting corresponds to the <dcomload> variable in the INSTPARM file.

Customized Load

The data set name of the Datacom customized load library.

Default is DCOM.V10.CUST1.CUSLIB.

This setting corresponds to the <dcomcust> variable in the INSTPARM file.

Service Pack Library

The data set name of the Datacom service pack library, if one exists.

Default is DCOM.V10.SP01LOAD.

This setting corresponds to the <dcomspl> variable in the INSTPARM file.

IPC Library

The data set name of the Inter-Product Components (IPC) library. This library is a collection of common routines, similar to the CA90s or TNG framework, which enable the product to be insulated from the environment to facilitate speed of development.

Default is CAI.IPC.CAILIB.

This setting corresponds to the <dcomipc> variable in the INSTPARM file.

CA90 / TNG Library

The data set name of the CA90s or the TNG library.

Default is CAI.CAILIB.

This setting corresponds to the <dcomcai> variable in the INSTPARM file.

CXX Directory

The data set name of the Datacom CXX communication library.

Default is DCOM.V10.CXX.

This setting corresponds to the <dcomcxx> variable in the INSTPARM file.

Datacom Table Based Cleanup

Enables Datacom table-based CDC clean up.

By default, this option is cleared.

This setting corresponds to the <dcomcleanup> variable in the INSTPARM file.

Datacom Cleanup Interval

If you selected **Datacom Table Based Cleanup**, the number of seconds that the cleanup subtask must wait before removing changes from the Datacom CDC tables.

Default is 300.

This setting corresponds to the <dcomcleanupinterval> variable in the INSTPARM file.

Datacom CDC Base

The ID of the database that contains the change data.

Default is 2009.

This setting corresponds to the <dcomcdcbase> variable in the INSTPARM file.

Datacom MUF Name

The name of the Datacom MUF from which PowerExchange table-based CDC captures change data.

Default is MUFNAME.

This setting corresponds to the <dcomdbid2> variable in the INSTPARM file.

Advanced Params

Enables you to define advanced parameters.

To change an advanced parameter value, complete the following steps:

1. In the **Value** column, click the cell for the parameter.

Tip: To sort parameters, click a column header. For example, to sort by parameter name, click the **Parameter Name** header.

2. Enter the parameter value, and click **OK**.

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

Restore Defaults

Restores default values.

DB2 Parameters Page

Enter or review parameters for DB2 for z/OS bulk data movement.

DB2

Select this option to use DB2 for z/OS tables as a data source for bulk data movement.

This setting corresponds to the <db2exec> variable in the INSTPARM file.

DB2 Subsystem ID

The DB2 subsystem ID (SSID) or data-sharing group name for the data source.

Default is DSN1.

This setting corresponds to the <ssid> or <ssid4> variable in the INSTPARM file. The <ssid4> value is padded with spaces.

Load Library

The data set name of the DB2 SDSNLOAD load library. This value is optional if the z/OS LNKLST concatenation includes the DB2 load library.

Default is DSN910.SDSNLOAD.

This setting corresponds to the <db2load> variable in the INSTPARM file.

DB2 Exit

The data set name of the DB2 SDSNEXIT load library.

If the z/OS LNKLST concatenation includes the DB2 exit library, this value is optional.

Default is DSN910.SDSNEXIT .

This setting corresponds to the <db2exit> variable in the INSTPARM file.

Bulk Plan Name

The name of DB2 plan for PowerExchange bulk data movement. This name can be no longer than eight characters.

Default is PWXBKVxn, where *x* is a letter and *n* is a number that together correspond to the PowerExchange version. For example, for PowerExchange 10.1, the default name is PWXBKVA1.

This setting corresponds to the <db2plan> variable in the INSTPARM file.

Bulk Plan Owner Name

The owner name that PowerExchange uses to bind the DB2 plan and packages for bulk data movement created during the installation process.

Default is the **Logon ID** value from the **Select Global Parameters** page.

This setting corresponds to the <zcreator> variable in the INSTPARM file.

Package Collection Suffix

A suffix that PowerExchange appends to DB2 package collection IDs in the BIND PACKAGE statements in the BIND control members. This suffix can be up to 62 characters in length. If you plan to run more than one PowerExchange version in your environment, you can use the suffix to differentiate the packages for the version that you are installing.

Note: If the InstParm file contains a value for this field from a previous installation and you are performing a full installation or upgrade installation, the default value is taken from the InstParm file. You can edit this value, if necessary. If you are performing a hotfix installation, the default value is also taken from the InstParm file. However, you can edit the value only if the hotfix includes the DBRMXMIT file, which requires a rebind of the DB2 plan and packages.

This setting corresponds to the <db2pkgsuffix> variable in the INSTPARM file.

In the **DSNTEP2** group box:

Name

The DSNTEP2 program name.

Default is DSNTEP2.

This setting corresponds to the <db2dsntep2name> variable in the INSTPARM file.

Plan

The DSNTEP2 plan name.

Default is DSNTEP91.

This setting corresponds to the <db2instplan> variable in the INSTPARM file.

DB2 RUNLIB

The data set name of the load library that contains the DSNTEP2 program. PowerExchange uses the DSNTEP2 program to run DB2 commands.

Default is DSN910.RUNLIB.LOAD.

This setting corresponds to the <db2runlib> variable in the INSTPARM file.

Advanced Params

Enables you to define advanced parameters.

To change an advanced parameter value, complete the following steps:

1. In the **Value** column, click the cell for the parameter.

Tip: To sort parameters, click a column header. For example, to sort by parameter name, click the **Parameter Name** header.

2. Enter the parameter value, and click **OK**.

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

Restore Defaults

Restores default values.

DB2 CDC Parameters Page

Enter or review parameters for DB2 for z/OS change data capture (CDC).

DB2 Change Data Capture

Select this option to enable CDC.

This setting corresponds to the <cdcdb2> variable in the INSTPARM file.

Plan

The DB2 ECCR plan name. This value can be up to eight characters in length.

Default is PWXCPV xn , where x is a letter and n is a number that together correspond to the PowerExchange version. For example, for PowerExchange 10.1, the default name is PWXCPVA1.

This setting corresponds to the <zccdb2plan> or <zccdb2plan8> variable in the INSTPARM file. The <zccdb2plan8> variable value is padded with 8 bytes.

Package Collection Name

The collection ID that is used for the DB2 ECCR packages. This value can be up to 70 characters in length.

Default is the plan name.

This setting corresponds to the <zcccollid> variable in the INSTPARM file.

Capture Database Name

The name of the DB2 database to contain the DB2 ECCR capture directory tables.

Default is PWXCCDDB.

This setting corresponds to the <zccdbname> variable in the INSTPARM file.

STOGROUP

The DB2 STOGROUP for the DB2 ECCR capture directory tables, table spaces, and indexes. You can choose an existing STOGROUP name. If you do not specify a STOGROUP, the DB2 defaults apply.

Default is SYSDEFLT.

This setting corresponds to the <zstogroup> variable in the INSTPARM file.

CDC Plan Owner Name

The owner name that PowerExchange uses to bind the DB2 plan and packages for the DB2 ECCR during installation.

Default is the **Logon ID** value from the **Select Global Parameters** page.

This setting corresponds to the <zdb2owner> variable in the INSTPARM file.

TCAP Table Owner Name

The owner name that PowerExchange uses to create the PowerExchange capture directory (TCAP) tables and indexes during installation. These objects are required for CDC.

Default is the **Logon ID** value from the **Select Global Parameters** page.

This setting corresponds to the <zdb2tcapowner> variable in the INSTPARM file.

TCAPWORK Buffer Pool Name

The name of the DB2 buffer pool to be used for the DB2 ECCR TCAPWORK table space.

This buffer pool must be at least 16 KB in size. Based on the buffer pool size, enter one of the following names for the buffer pool:

- For a 16-KB buffer pool, enter `BP16Kn`, where the *n* variable is a number from 0 to 9.
- For a 32-KB buffer pool, enter `BP32K` or `BP32Kn`, where the *n* variable is a number from 1 to 9.

Default is BP16K0.

This setting corresponds to the <zbufpool> variable in the INSTPARM file.

CA Name

The name of the DB2 ECCR, which identifies the DB2 ECCR to the PowerExchange Logger. Define this value in the CA NAME statement in the REPDB2CT member of the RUNLIB library.

Because the DB2 ECCR uses this name to request a global resource lock, this value must be unique within a sysplex.

Default is PWXDB201.

This setting corresponds to the <zdb2caname> variable in the INSTPARM file.

Advanced Params

Enables you to define advanced parameters.

To change an advanced parameter value, complete the following steps:

1. In the **Value** column, click the cell for the parameter.
Tip: To sort parameters, click a column header. For example, to sort by parameter name, click the **Parameter Name** header.
2. Enter the parameter value, and click **OK**.

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

Restore Defaults

Restores default values.

IDMS Parameters Page

Enter or review information about the CA IDMS tables to use for bulk data movement operations.

IDMS

Enables a CA IDMS database as a data source for bulk data movement.

This setting corresponds to the <idmsexec> variable in the INSTPARM file.

Primary Library

The data set name of the primary IDMS library.

Default is IDMS.LOADLIB.

This setting corresponds to the <idmsload> variable in the INSTPARM file.

DBA Library

The data set name of the IDMS DBA library.

Default is IDMS.DBA.LOADLIB.

This setting corresponds to the <idmsdba> variable in the INSTPARM file.

SYSCTL Library

The data set name of the IDMS SYSCTL library.

Default is IDMS.SYSCTL.

This setting corresponds to the <idmsctl> variable in the INSTPARM file.

Third Party Library

The data set name of the IDMS third-party library.

This setting corresponds to the <idms3pty> variable in the INSTPARM file.

DMCL Member

The data set name of the IDMS DMCL member.

Default is GLBLDMCL.

This setting corresponds to the <dtldmcl> variable in the INSTPARM file.

Mode

If you selected the **IDMS** option but not the **IDMS CDC** option on the **Data Sources** page, the following **Mode** options are available:

- **Central.** Uses centrally defined databases and the SYSCTL data set.
- **Local.** Uses the IDMS dictionary and database file entries that you specify in the IDMSDICT and IDMSFILE members of the PowerExchange RUNLIB library. This information overrides data in SYSCTL data set (CV mode).

Default is **Local**.

This setting corresponds to the <idmslcm> variable in the INSTPARM file. Valid variable values are Central (C) or Local (L).

Restore Defaults

Restores default values.

IDMS CDC Parameters Page

Enter or review information about the CA IDMS tables to use for CDC operations.

IDMS CDC

Enables a CA IDMS database as a data source for CDC.

This setting corresponds to the <idmscdc> variable in the INSTPARM file.

IDMS CV Name

The IDMS Central Version (CV) name.

This setting corresponds to the <idmscvname> variable in the INSTPARM file.

Log Location

Specifies the location where IDMS log files are stored.

Default is LOCAL.

This setting corresponds to the <zidmsloglocn> variable in the INSTPARM file.

This location is also specified in the NODE and LOGSID statements in the PowerExchange DBMOVER configuration file on the z/OS system. In the LOGSID statement, the location is specified in the second parameter, *listener_node*. For more information about these statements, see the *PowerExchange Reference Manual* and *PowerExchange CDC Guide for z/OS*.

LOGSID

The name of the IDMS LOGSID, which corresponds to the first parameter, *registration_logsid*, in the LOGSID statement in the DBMOVER configuration file. For more information about the LOGSID statement, see the *PowerExchange Reference Manual*.

Default is PWXLGSID.

This setting corresponds to the <zidmslogsid> variable in the INSTPARM file.

Media Type

The media type. The following options are available:

- **Disk.** The IDMS logs reside on disk.
- **Tape.** The IDMS logs reside on tape.

Default is **Disk**.

This setting corresponds to the <idlmediatype> variable in the INSTPARM file. Valid variable values are D (disk) and T (tape).

Advanced Parm

Enables you to define advanced parameters.

To change an advanced parameter value, complete the following steps:

1. In the **Value** column, click the cell for the parameter.

Tip: To sort parameters, click a column header. For example, to sort by parameter name, click the **Parameter Name** header.

2. Enter the parameter value, and click **OK**.

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

Restore Defaults

Restores default values.

RELATED TOPICS:

- [“Step 18. Install Software for IDMS Data Sources \(Optional\)” on page 105](#)

IMS Parameters Page

Enter or review information about the IMS database to use for bulk data movement operations.

IMS

Enables an IMS database as a data source for bulk data movement.

This setting corresponds to the <imsexec> variable in the INSTPARM file.

Access through ODBA

Enables access to IMS data through the Open Database Access (ODBA) method.

This setting corresponds to the <imsodba> variable in the INSTPARM file.

IMS Region

The IMS ID for the IMS region.

Default is IMS.

This setting corresponds to the <imsregn> variable in the INSTPARM file.

PSB Member

The data set name of the program specification block (PSB) member.

Default is PSB1.

This setting corresponds to the <zimspsbmr> variable in the INSTPARM file.

Procedure Library

The data set name of the IMS procedure library that contains the DLIBATCH PROC.

Default is IMS.PROCLIB.

This setting corresponds to the <zimsproc> variable in the INSTPARM file.

PSB Library

The data set name of the PSB library that is specified in the IMS NETPORT statement of the DBMOVER configuration file. The z/OS Installation Assistant uses this name to customize the IMS JCL members in the RUNLIB library.

Default is IMS.PSBLIB.

This setting corresponds to the <zimspsb> variable in the INSTPARM file.

RESLIB

The data set name of the IMS SDFSRESL library. The z/OS Installation Assistant uses this name to customize the IMS JCL members in the RUNLIB library.

Default is IMS.RESLIB.

This setting corresponds to the <zimsres> variable in the INSTPARM file.

DBD Library

The data set name of the database description (DBD) library. The z/OS Installation Assistant uses this name to customize the IMS JCL members in the RUNLIB library.

Default is IMS.DBDLIB.

This setting corresponds to the <zimsdbd> variable in the INSTPARM file.

IMS Netport

The port number of the port on which the IMS netport job listens.

Default is 12480.

This setting corresponds to the <imsport> variable in the INSTPARM file.

Restore Defaults

Restores default values.

IMS CDC Parameters Page

Enter or review information about the IMS database to use for CDC operations.

IMS Log-based CDC

Enables an IMS database as a data source for log-based CDC.

This setting corresponds to the <cdcims> variable in the INSTPARM file.

IMS Synchronous CDC

Enables an IMS database as a data source for synchronous CDC.

This setting corresponds to the <cdcimssync> variable in the INSTPARM file.

IMS Version

The version of the installed IMS system.

Valid values are 10 to 14.

Default is 14.

This setting corresponds to the <imsversion> variable in the INSTPARM file.

Data Set 1

The IMS Database Recovery Control (DBRC) RECON data set for IMS log-based CDC.

Default is PWX.V1.IMSDEMO.RECON1.

This setting corresponds to the <imsreconds1> variable in the INSTPARM file.

Data Set 2

The IMS DBRC RECON data set for IMS log-based CDC.

Default is PWX.V1.IMSDEMO.RECON2.

This setting corresponds to the <imsreconds2> variable in the INSTPARM file.

Data Set 3

The IMS DBRC RECON data set for IMS log-based CDC.

Default is PWX.V1.IMSDEMO.RECON3.

This setting corresponds to the <imsreconds3> variable in the INSTPARM file.

IMS Synchronous ECCR DFSESL Data Sets

IMS synchronous CDC only. The data sets that are concatenated to existing DFSESL DD statements in your IMS dependent region or IMS control region.

Enter up to five data set names.

Note: The z/OS Installation Assistant adds these data set names to the ESLLIB option of the EDMSDIR options module. This option specifies the data sets to be concatenated to existing DFSESL DD statements in your IMS dependent region or IMS control region. For more information about these data sets, see the *PowerExchange CDC Guide for z/OS*.

These settings correspond to the <zesllibparm1>, <zesllibparm2>, <zesllibparm3>, <zesllibparm4>, and <zesllibparm5> variables in the INSTPARM file.

Advanced Params

Enables you to define advanced parameters.

To change an advanced parameter value, complete the following steps:

1. In the **Value** column, click the cell for the parameter.

Tip: To sort parameters, click a column header. For example, to sort by parameter name, click the **Parameter Name** header.

2. Enter the parameter value, and click **OK**.

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

Restore Defaults

Restores default values.

MQ Series Parameters Page

Enter or review information about the MQ Series message queue to use for bulk data movement operations.

MQ Series Access

Enables an IBM Websphere MQ Series message queue as a data source for bulk data movement operations.

This setting corresponds to the <mqexec> variable in the INSTPARM file.

MQ Load Library 1

The data set name of the SCSQLOAD MQ load library that provides connectivity to Websphere MQ.

Default is CSQ.SCSQLOAD.

This setting corresponds to the <mqload1> variable in the INSTPARM file.

MQ Load Library 2

The data set name of the SCSQANLE MQ load library that provides connectivity to Websphere MQ.

Default is CSQ.SCSQANLE.

This setting corresponds to the <mqload2> variable in the INSTPARM file.

MQ Load Library 3

The data set name of the SCSQAUTH MQ load library that provides connectivity to Websphere MQ.

Default is CSQ.SCSQAUTH.

This setting corresponds to the <mqload3> variable in the INSTPARM file.

Restore Defaults

Restores default values.

VSAM Parameters Page

Enter or review options for VSAM bulk data movement and CDC operations.

VSAM

Enables a VSAM data set as a data source for bulk data movement.

This setting corresponds to the <vsmexec> variable in the INSTPARM file.

Batch Change Data Capture

Enables batch VSAM CDC.

This setting corresponds to the <vsambcdc> variable in the INSTPARM file.

CICS Change Data Capture

Enables CICS/VSAM CDC.

This setting corresponds to the <vsamccdc> variable in the INSTPARM file.

Advanced Parms

Enables you to define advanced parameters.

To change an advanced parameter value, complete the following steps:

1. In the **Value** column, click the cell for the parameter.

Tip: To sort parameters, click a column header. For example, to sort by parameter name, click the **Parameter Name** header.

2. Enter the parameter value, and click **OK**.

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

Create Runlib JCL Page

Enter information to create the RUNLIB JCL.

RUNLIB

The fully-qualified name of the RUNLIB library to which the z/OS Installation Assistant transfers the installation JCL, except for an upgrade that uses existing data set names. You must preallocate this library. When the z/OS Installation Assistant creates the installation JCL, it uses this RUNLIB name to customize the JCL.

For a first-time installation, the default value is PWX.RUNLIB.

For an upgrade that uses existing data set names, this library must be the RUNLIB library in the currently running PowerExchange environment and must be different from the staging RUNLIB data set name. When the z/OS Installation Assistant creates the JCL that is written to the staging RUNLIB library, the z/OS Installation Assistant uses this name to customize the JCL. The z/OS Installation Assistant does not update this library.

For an upgrade that uses new data set names, the default value is *hlq*.RUNLIB, where *hlq* is the value entered on the **Data Set Group Details** page.

For a hotfix installation, the default value is PWX.SP.RUNLIB. Verify that this data set name does not match the RUNLIB data set name that the current PowerExchange environment uses.

For a full install or an upgrade, this setting corresponds to the <runlib> variable in the INSTPARM file. For a hotfix install, this setting corresponds to the <patchrunlib> variable in the INSTPARM file.

BINLIB

The fully-qualified name of the BINLIB library to which the z/OS Installation Assistant transfers modules and load libraries, except for an upgrade using existing data set names. The z/OS Installation Assistant uses this name to customize the installation JCL. You must preallocate this library.

For a first-time installation, the default value is PWX.BINLIB. When the z/OS Installation Assistant creates the installation JCL, it uses this name to customize the JCL.

For an upgrade that uses existing data set names, this library must be the BINLIB library in the currently running PowerExchange environment and must be different from the staging BINLIB data set name. The z/OS Installation Assistant does not update this library.

For an upgrade that uses new data set names, the default value is *hlq*.BINLIB, where *hlq* is the value entered on the **Data Set Group Details** page.

For a hotfix installation, the default value is PWX.SP.BINLIB. Verify that this data set name does not match the BINLIB data set name that the current PowerExchange environment uses.

For a full install or an upgrade, this setting corresponds to the <binlib> variable in the INSTPARM file. For a hotfix install, this setting corresponds to the <patchbinlib> variable in the INSTPARM file.

The following Pages are incomplete or contain data validation errors...

This message box displays the names of any wizard pages that are incomplete or contain validation errors.

GoTo Page

When you select a page name in the validation errors message window, goes to the page where the validation error is located.

Restore Defaults

Restores default values.

Transfer Files to Mainframe Page

Enter information about the z/OS system to which you want to transfer files.

IP Address / Node

The IP address of the z/OS system on which to install PowerExchange.

This setting corresponds to the <ipaddress> variable in the INSTPARM file.

Mixed Case Password

Use a mixed-case password.

If the z/OS system where you are transferring files supports mixed-case passwords, select this check box. Then enter the password in the correct case.

If the z/OS system does not support mixed-case passwords, clear this check box. The password that you enter is automatically converted to uppercase.

This setting corresponds to the <allowmixed> variable in the INSTPARM file.

Logon ID

The user ID that is used to connect to the z/OS system.

This setting corresponds to the <logonid2> variable in the INSTPARM file.

Password

The password that is used to connect to the z/OS system.

This setting is not saved to the INSTPARM file.

Notify Completion of File Transfer

Display a pop-up notification window when the transfer completes.

Clear this option to suppress notification.

This setting is not saved to the INSTPARM file.

FTP Passive Mode Connect

Use FTP in passive mode to transfer files to the z/OS system.

For a full install or an upgrade, this setting corresponds to the <passive_mode> variable in the INSTPARM file. This field is not displayed for a hotfix install.

Runlib

Use FTP to transfer the contents of the XRunlib folder for a full or upgrade or the PXRrunlib folder for a hotfix installation to the specified RUNLIB library.

For an upgrade that uses existing data set names, verify that this data set name is different from the RUNLIB data set name that appears on the **Create Runlib JCL** page. This library is the temporary staging RUNLIB library. You entered the high-level qualifier (HLQ) for this library in the **Staging Data Set HLQ** box on the **Data Set Group Details** page.

For an upgrade that uses new data set names, this library is the new RUNLIB library where the z/OS Installation Assistant transfers the RUNLIB data sets. You entered the HLQ value for this library and other user-modifiable data sets on the **Data Set Group Details** page.

This setting corresponds to the following variables in the INSTPARM file:

- <ftprunlib> variable for a full install or hotfix install
- <upgradeftprunlib_e> variable for an upgrade using existing data set names
- <upgradeftprunlib_n> variable for an upgrade using new data set names

Binary

Uses FTP to transfer the contents of the binary folder for a full installation or an upgrade, or the pbinary folder for a hotfix installation, to the specified BINLIB library.

For an upgrade that uses existing data set names, verify that this data set name is different from the BINLIB data set name that appears on the **Create Runlib JCL** page. This library is the temporary staging BINLIB library. You entered the HLQ value for this library in the **Staging Library HLQ** box in the **Select Data Set Group Details** page.

For an upgrade that uses new data set names, this library is the new BINLIB library where the z/OS Installation Assistant transfers the BINLIB data sets. You entered the HLQ value for this library and other user-modifiable data sets on the **Data Set Group Details** page.

This setting corresponds to the following variables in the INSTPARM file:

- <ftpbinlib> variable for a full install or hotfix install
- <upgradeftpbinlib_e> variable for an upgrade using existing data set names
- <upgradeftpbinlib_n> variable for an upgrade using new data set names

Restore Defaults

Restores default values.

View File Transfer Status Page

Review status messages for the file transfer to the z/OS system.

The text box at the top shows the directory on Windows from which the files are being transferred and the fully qualified name of the partitioned data set (PDS) on z/OS to which the files are being transferred.

The middle list box shows status messages for the file transfer.

The box at the bottom shows a completion message that indicates whether the file transfer succeeded or failed and the number of files that were sent to the z/OS system.

Upgrade to a New Release Page

Select whether to upgrade by using existing or new data set names.

Upgrade by Using Existing Data Set Names

Uses the same names as the existing installation for the message, sample, and load libraries. If you select this option, you cannot add or change data sources.

When you select this option, the z/OS Installation Assistant completes the following tasks:

- Populates the staging RUNLIB and BINLIB libraries.
- Backs up existing execution, sample, and load libraries.
- Copies upgrade libraries to the existing library names.
- Maintains existing data set names for VSAM files, the USERLIB data set, PowerExchange Logger for z/OS logs, PowerExchange Condense data sets, and the PowerExchange Agent cache data set.

If you select this option, you do not have to change any existing JCL.

Upgrade by Using New Data Set Names

Uses new data set names for the message, sample, and load libraries. You can also add or change data sources.

When you select this option, the z/OS Installation Assistant completes the following tasks:

- Creates new load and sample libraries.
- Maintains existing data set names for VSAM files, the USERLIB, PowerExchange Logger for z/OS logs, PowerExchange Condense data sets, and the PowerExchange Agent cache data set.
- Provides new, customized versions of PowerExchange procedures in the new PROCLIB library.

If you select this option, you must edit existing JCL to specify the new library names.

This setting corresponds to the <xbackupuseexisting> variable in the INSTPARM file. Valid variable values are 0 (upgrade by using new data set names) or 1 for (upgrade by using existing data set names).

Import Existing Parameters Page

When you perform an upgrade, you can import parameters from the customized InstParm file in the current PowerExchange installation directory on Windows to the default InstParm file in the upgrade installation directory. By importing the parameters, you retain the customizations that you last entered. Do not import the existing InstParm parameters if you manually copied the InstParm file from the current installation directory to the new upgrade installation directory.

If the customized InstParm file is not available on Windows, retrieve the latest INPARM nn member from the RUNLIB library on the z/OS system by using FTP or another file transfer method. The latest INPARM nn member has the highest nn number in its name. Also, in INPARM nn members that were created in PowerExchange 10.1 and later, the first line of the contents provides the date and time at which the member was created.

Existing Version

The version of the current PowerExchange installation from which you are importing the InstParm file.

The upgrade jobs append this version to the end of the high-level qualifier for the backup data sets in the following format:

```
.Vversion
```

This setting corresponds to the <fromversion> variable in the INSTPARM file.

Upgrade Version

The PowerExchange version to which you are upgrading.

Import Existing Parameters

To import parameters from the existing InstParm file that includes your latest customizations to the new upgrade installation directory, complete the following steps:

1. Click **Import Existing Parameters**.
A dialog box appears.
2. Browse to the location of the customized InstParm file in the top-level installation directory of the current PowerExchange version.

Note: The customized InstParm file can have a name other than InstParm.

3. Click **OK**.

The z/OS Installation Assistant imports the parameters from the customized InstParm file and stores them in the new InstParm file in the upgrade installation directory.

Review Parameters Page

This page is informational only.

Click **Next** to continue.

Review Global Parameters Page (Upgrade with Existing Data Set Names)

Review or enter global parameters. Only the **Logon ID** and **License Key** parameters are editable.

Logon ID

The z/OS user ID that enables connection to the z/OS system.

This setting corresponds to the <loginid> variable in the INSTPARM file.

PowerExchange Agent / Logger Prefix

Read only. The base prefix for the PowerExchange Agent and PowerExchange Logger.

Default is PWX.

The z/OS Installation Assistant appends the following characters to this prefix:

- **A.** For the PowerExchange Agent.
- **L.** For the PowerExchange Logger.

HLQ

Read only. The high-level qualifier (HLQ) that you entered for the existing installation.

Storage Class

Read only. For SMS only, the default SMS storage class for PowerExchange data sets.

Note: The SMS automatic class selection (ACS) routines in your installation might not allow specification of SMS classes or might override the values that you specify.

Volume

Read only. The DASD volume serial number (VOLSER) on the z/OS system where you want to install PowerExchange libraries.

Default is VOLSER.

Mgmt. Class

Read only. For SMS only, the default SMS management classes for PowerExchange data sets.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

Unit

Read only. A generic or esoteric unit name on the z/OS system where you want to install PowerExchange.

Default is 3390.

Data Class

Read only. For SMS only, the default SMS data classes for PowerExchange data sets.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

License Key

The license key for the installation. If you have a new license key, enter it. Otherwise, accept the previous license key.

This setting corresponds to the <license> variable in the INSTPARM file.

Review Global Parameters Page (Upgrade with New Data Set Names)

Review or enter global parameters. Only the **Logon ID** and **License Key** parameters are editable.

Logon ID

The z/OS user ID that enables connection to the z/OS system.

This setting corresponds to the <loginid> variable in the INSTPARM file.

PowerExchange Agent / Logger Prefix

Read only. The base prefix for the PowerExchange Agent and PowerExchange Logger.

Default is PWX.

The z/OS Installation Assistant appends the following characters to this prefix:

- **A.** For the PowerExchange Agent.
- **L.** For the PowerExchange Logger.

HLQ

Read only. The high-level qualifier (HLQ) that you entered for the existing installation.

Storage Class

Read only. For SMS only, the default SMS storage class for PowerExchange data sets.

Note: The SMS automatic class selection (ACS) routines in your installation might not allow specification of SMS classes or might override the values that you specify.

Volume

Read only. The DASD volume serial number (VOLSER) on the z/OS system where you want to install PowerExchange libraries.

Default is VOLSER.

Mgmt. Class

Read only. For SMS only, the default SMS management classes for PowerExchange data sets.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

Unit

Read only. A generic or esoteric unit name on the z/OS system where you want to install PowerExchange.

Default is 3390.

Data Class

Read only. For SMS only, the default SMS data classes for PowerExchange data sets.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

License Key

The license key for the installation. If you have a new license key, enter it. Otherwise, accept the previous license key.

This setting corresponds to the <license> variable in the INSTPARM file.

Select Data Set Group Details Page (Upgrade with Existing Data Set Names)

Enter or review information for data set groups.

Data Set Groups

Select a data set group to view or change its properties. Select one of the following groups:

- **Staging Data Sets**
- **Backup Data Sets**
- **Existing Load Libraries**

HLQ

The high-level qualifier (HLQ) for the staging or backup data sets. Use as many qualifier levels as required.

Default value for the staging data sets is `.VversionSTG`, where the `version` variable is the version number of the new PowerExchange release.

For example, the HLQ for the staging data sets might be the following value:

```
PWX.V100STG
```

Default value for the backup data sets is `.Vbackup_version`, where the `backup_version` variable is the version number of the release that you are backing up.

For example, the HLQ for backup data sets might be the following value:

```
PWX.V961
```

Maximum length is 26 characters.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **Staging Data Sets**, this setting corresponds to the `<libnameupgrade>` variable.
- If you selected **Backup Data Sets**, this setting corresponds to the `<bkuphlq1>` variable.

For existing load libraries, this field is read only.

Storage Class

SMS only. The SMS storage class for the data set group.

If you specify an SMS storage class, you do not need to specify any volume or unit values.

Note: The SMS automatic class selection (ACS) routines in your installation might not allow specification of SMS classes or might override the values that you specify.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **Staging Data Sets**, this setting corresponds to the `<smsscupgrade>` variable.
- If you selected **Backup Data Sets**, this setting corresponds to the `<bkupsmssc>` variable.

For existing load libraries, this field is read only.

Volume

The DASD volume serial number (VOLSER) on the z/OS system where you want to install the data sets.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **Staging Data Sets**, this setting corresponds to the <volupgrade> variable.
- If you selected **Backup Data Sets**, this setting corresponds to the <bkupvol> and <bkupvolvsm> variables.

For existing load libraries, this field is read only.

Mgmt. Class

SMS only. The SMS management class for the data set group.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **Staging Data Sets**, this setting corresponds to the <smsmcupgrade> variable.
- If you selected **Backup Data Sets**, this setting corresponds to the <bkupsmsmc> variable.

For existing load libraries, this field is read only.

Unit

A generic or esoteric unit name on the z/OS system where you want to install the data sets.

Default is 3390, where applicable.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **Staging Data Sets**, this setting corresponds to the <unitupgrade> variable.
- If you selected **Backup Data Sets**, this setting corresponds to the <bkupunit> variable.

For existing load libraries, this field is read only.

Data Class

SMS only. The SMS data class for the data set group.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **Staging Data Sets**, this setting corresponds to the <smsdcupgrade> variable.
- If you selected **Backup Data Sets**, this setting corresponds to the <bkupsmsdc> variable.

For existing load libraries, this field is read only.

Select Data Set Group Details Page (Upgrade with New Data Set Names)

Enter or review information for data set groups.

Data Set Groups

Select a data set group to view or change its properties. Select one of the following groups:

- **User Modifiable Data Sets (Non-VSAM)**. Includes RUNLIB, BINLIB, SAMPLIB, and DTLDEMO.
- **Read-Only Data Sets, Load Libraries, and DBRMLIBs**. Includes LOAD, LOADLIB, DBRM, and DBRMLIB.
- **Backup Data Sets**.

HLQ

The high-level qualifier (HLQ) for the staging or backup data sets. Use as many qualifier levels as required.

Default for the first two groups is *hlq.NEW*, where *hlq* is the value for the high-level qualifier on the **Global Parameters** page .

Default for the backup data sets is *hlq.Vbackup_version*, where *hlq* is the value for the high-level qualifier on the **Global Parameters** page, and *backup_version* is the version number of the release that you are backing up.

Maximum length is 26 characters.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **User Modifiable Data Sets (Non-VSAM)**, this setting corresponds to the <libname> variable.
- If you selected **Read-Only Data Sets, Load Libraries and DBRMLIBs**, this setting corresponds to the <libnameloadlib> variable.
- If you selected **Backup Data Sets**, this setting corresponds to the <bkuphlq1> variable.

Storage Class

SMS only. The SMS storage class for the data set group.

If you specify an SMS storage class, you do not need to specify any volume or unit values.

Note: The SMS automatic class selection (ACS) routines in your installation might not allow specification of SMS classes or might override the values that you specify.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **User Modifiable Data Sets (Non-VSAM)**, this setting corresponds to the <znonvssc> variable.
- If you selected **Read-Only Data Sets, Load Libraries and DBRMLIBs**, this setting corresponds to the <zloadstcl> variable.
- If you selected **Backup Data Sets**, this setting corresponds to the <bkupsmssc> variable.

Volume

The DASD volume serial number (VOLSER) on the z/OS system where you want to install the data sets.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **User Modifiable Data Sets (Non-VSAM)**, this setting corresponds to the <volid> variable.
- If you selected **Read-Only Data Sets, Load Libraries and DBRMLIBs**, this setting corresponds to the <volload> variable.
- If you selected **Backup Data Sets**, this setting corresponds to the <bkupvol> variable.

Mgmt. Class

SMS only. The SMS management class for the data set group.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **User Modifiable Data Sets (Non-VSAM)**, this setting corresponds to the <znonvsmc> variable.
- If you selected **Read-Only Data Sets, Load Libraries and DBRMLIBs**, this setting corresponds to the <zloadmgcl> variable.
- If you selected **Backup Data Sets**, this setting corresponds to the <bkupsmc> variable.

Unit

A generic or esoteric unit name on the z/OS system where you want to install the data sets.

Default is 3390, where applicable.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you select **User Modifiable Data Sets (Non-VSAM)**, this setting corresponds to the <unit> variable.
- If you select **Read-Only Data Sets, Load Libraries and DBRMLIBs**, this setting corresponds to the <unitload> variable.
- If you select **Backup Data Sets**, this setting corresponds to the <bkupunit> variable.

Data Class

SMS only. The SMS data class for the data set group.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

Depending on the data set group that you selected, this setting corresponds to one of the following variables in the INSTPARM file:

- If you selected **User Modifiable Data Sets (Non-VSAM)**, this setting corresponds to the <znonvsdc> variable.
- If you selected **Read-Only Data Sets, Load Libraries and DBRMLIBs**, this setting corresponds to the <zloaddtcl> variable.
- If you select **Backup Data Sets**, this setting corresponds to the <bkupsmc> variable.

Backup Data Sets Page

Select which data sets to back up.

Select Datasets to Back Up

To back up all data sets, select the **All** check box. This check box corresponds to the xkups variable in the INSTPARM file.

To back up specific data sets, select the check box next to the name of each one.

These check boxes correspond to the following variables in the INSTPARM file:

Check Box	INSTPARM Variable
All	xbkupds
CCT	xbkcct
DTLCAMAP	xbkcmmap
DBRMLIB	xbkdbrm
LOADLIB	xbklplib
CDCT	xbkcdct
CRG LOAD	xbkcrg
DTLMSG	xbkmsg
SAMPLIB	xbksamp
CDEP	xbkcdep
DATAMAPS	xbkdmap
LOAD	xbkload
SRCLIB	xbksrc

Tip: Informatica recommends that you select the **All** option, which enables you to restore the PowerExchange environment to its pre-upgrade state if fallback is necessary after an upgrade.

RELATED TOPICS:

- [“Step 8. Submit PowerExchange Base Software Jobs” on page 119](#)

HotFix Install Page

This page is informational only.

Before you install the hotfix, you must allocate RUNLIB and BINLIB libraries on the z/OS system. When you install the hotfix, the z/OS Installation Assistant transfers files from the prunlib and pbinary directories on Windows to the libraries that you allocate on the z/OS system.

Click **Next** to continue.

Global Parameters Page (HotFix)

Review or enter global parameters. Only the **Logon ID** and **License Key** parameters are editable.

Logon ID

The z/OS user ID that enables connection to the z/OS system.

This setting corresponds to the <loginid> variable in the INSTPARM file.

PowerExchange Agent / Logger Prefix

Read only. The base prefix for the PowerExchange Agent and PowerExchange Logger for z/OS.

Default is PWX.

The z/OS Installation Assistant appends the following characters to this prefix:

- **A.** For the PowerExchange Agent.
- **L.** For the PowerExchange Logger.

HLQ

Read only. The high-level qualifier (HLQ) that you entered for the existing installation.

Storage Class

Read only. For SMS only, the default SMS storage class for PowerExchange data sets.

Note: The SMS automatic class selection (ACS) routines in your installation might not allow specification of SMS classes or might override the values that you specify.

Volume

Read only. The DASD volume serial number (VOLSER) on the z/OS system where you want to install PowerExchange libraries.

Default is VOLSER.

Mgmt. Class

Read only. For SMS only, the default SMS management classes for PowerExchange data sets.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

Unit

Read only. A generic or esoteric unit name on the z/OS system where you want to install PowerExchange.

Default is 3390.

Data Class

Read only. For SMS only, the default SMS data classes for PowerExchange data sets.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

License Key

The license key for the installation. If you have a new license key, enter it. Otherwise, accept the previous license key.

This setting corresponds to the <license> variable in the INSTPARM file.

Data Set Group Details Page (HotFix)

Enter or review information for data set groups.

HOTFIX Data Sets

Select this data set group to view or change properties for hotfix data sets.

HLQ

The high-level qualifier (HLQ) for the hotfix data sets. Use as many qualifier levels as required.

Default is PWXSP.

Maximum length is 26 characters.

This setting corresponds to the <patchlibname> variable in the INSTPARM file.

Storage Class

SMS only. The SMS storage class for the data set group.

If you specify an SMS storage class, you do not need to specify any volume or unit values.

Note: The SMS automatic class selection (ACS) routines in your installation might not allow specification of SMS classes or might override the values that you specify.

This setting corresponds to the <patchsmssc> variable in the INSTPARM file.

Volume

The DASD volume serial number (VOLSER) on the z/OS system where you want to install the data sets.

This setting corresponds to the <patchvol> variable in the INSTPARM file.

Mgmt. Class

SMS only. The SMS management class for the data set group.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

This setting corresponds to the <patchsmsmc> variable in the INSTPARM file.

Unit

A generic or esoteric unit name on the z/OS system where you want to install the data sets.

Default is 3390, where applicable.

This setting corresponds to the <patchunitl> variable in the INSTPARM file.

Data Class

SMS only. The SMS data class for the data set group.

Note: The SMS ACS routines in your installation might not allow you to specify SMS classes or might override the values that you specify.

This setting corresponds to the <patchsmsdc> variable in the INSTPARM file.

APPENDIX A

Upgrade Considerations

This appendix includes the following topics:

- [Upgrade Considerations Overview, 170](#)
- [Coordination of PowerExchange and PowerCenter Upgrades, 171](#)
- [Upgrade Considerations for PowerExchange 10.4, 173](#)
- [Upgrade Considerations for PowerExchange 10.2 HotFix 2, 174](#)
- [Upgrade Considerations for PowerExchange 10.2 HotFix 1, 174](#)
- [Upgrade Considerations for PowerExchange 10.2, 175](#)
- [Upgrade Considerations for PowerExchange 10.1, 176](#)
- [Upgrade Considerations for PowerExchange 10.0, 176](#)
- [Upgrade Considerations for PowerExchange 9.6.1, 179](#)
- [Upgrade Considerations for PowerExchange 9.6.0, 183](#)

Upgrade Considerations Overview

This chapter discusses specific upgrade considerations for PowerExchange and PowerCenter.

The following table lists the upgrade considerations and the users to whom they apply:

Topic	Applies to
"Coordination of PowerExchange and PowerCenter Upgrades" on page 171	PowerExchange users who are upgrading PowerExchange or PowerCenter
"Upgrade Considerations for PowerExchange 10.4" on page 173	PowerExchange users who are upgrading to 10.4 from an earlier release
"Upgrade Considerations for PowerExchange 10.2 HotFix 2" on page 174	PowerExchange users who are upgrading to 10.2 HotFix 2 from an earlier release
"Upgrade Considerations for PowerExchange 10.2 HotFix 1" on page 174	PowerExchange users who are upgrading to 10.2 HotFix 1 from an earlier release
"Upgrade Considerations for PowerExchange 10.2" on page 175	PowerExchange users who are upgrading to 10.2 from an earlier release

Topic	Applies to
“Upgrade Considerations for PowerExchange 10.1” on page 176	PowerExchange users who are upgrading to 10.1 from an earlier release
“Upgrade Considerations for PowerExchange 10.0” on page 176	PowerExchange users who are upgrading to 10.0 from an earlier release
“Upgrade Considerations for PowerExchange 9.6.1” on page 179	PowerExchange users who are upgrading to 9.6.1 from an earlier release
“Upgrade Considerations for PowerExchange 9.6.0” on page 183	PowerExchange users who are upgrading to 9.6.0 from an earlier release

If you are upgrading PowerExchange, review the first two topics in the table. Also review the topics about any releases that you skip during the upgrade process.

For example, if you upgrade from PowerExchange 10.1 to 10.4, skipping the 10.2 and 10.2 hotfix releases, review the following topics:

- [“Upgrade Considerations for PowerExchange 10.4” on page 173](#)
- [“Upgrade Considerations for PowerExchange 10.2 HotFix 2” on page 174](#)
- [“Upgrade Considerations for PowerExchange 10.2 HotFix 1” on page 174](#)
- [“Upgrade Considerations for PowerExchange 10.2” on page 175](#)

Coordination of PowerExchange and PowerCenter Upgrades

PWXPC is a component of PowerCenter that connects PowerCenter and PowerExchange. PWXPC uses interfaces from PowerExchange and PowerCenter to integrate the products. Because PowerCenter and PowerExchange are so closely integrated, you need to carefully plan upgrades of PowerExchange and PowerCenter.

Consider the following when planning a PowerExchange or PowerCenter upgrade:

- If you plan to upgrade only PowerExchange or only PowerCenter, review the PowerCenter and PowerExchange interoperability considerations.
- If you run CDC sessions, you might need to cold start the sessions after you upgrade PowerCenter. If so, you need to save the final restart tokens for the CDC sessions prior to the upgrade. You can then use the final restart tokens to start reading change data from the point of interruption.

Considerations for Restarting CDC Sessions

After upgrading from PowerCenter 8.6.1 HotFix 3 or later, you can warm start CDC sessions to restart the sessions from the point of interruption.

After upgrading from an earlier release to PowerCenter 8.6.1 HotFix 3 or later, you must cold start CDC. Before you cold start a session, you must establish the restart point for the session to ensure that it restarts from the point of interruption.

Saving Restart Tokens Before Upgrading PowerCenter

Use the following procedure to capture the restart point for CDC sessions before upgrading PowerCenter.

To save restart tokens before upgrading PowerCenter:

1. Shut down all CDC sessions cleanly.
2. Verify that the final restart token files for all CDC sessions are saved.
Depending on the PowerCenter release that you are migrating from, either PWXPC records the restart tokens or you recover them, as follows:
 - If you are migrating from a PowerCenter release earlier than 8.1.1 SP2, PWXPC writes the final restart tokens to the restart token file when the CDC session ends.
 - If you are migrating from PowerCenter 8.1.1 SP2 through SP5 without enhanced restart enabled, PWXPC writes the final restart tokens to the restart token file when the CDC session ends.
 - If you are migrating from PowerCenter 8.1.1 SP2 through SP5 with enhanced restart enabled, run recovery on all CDC sessions. PWXPC creates a backup restart token file with an appended timestamp that contains the restart tokens.
 - If you are migrating from PowerCenter 8.5 or later, run recovery on all CDC sessions. PWXPC updates the restart token file with the restart tokens.
3. As a precaution, back up any relational tables that are targets in the CDC sessions. Also, back up the PowerCenter recovery tables.
4. Upgrade PowerCenter.

Important: If you did not save the final restart token files before the PowerCenter upgrade, you must manually build the restart token file by using the session log. For sessions that run on PowerCenter 8.1.1 SP2 or later with enhanced restart enabled, use the restart tokens from the NRDBCDC_RDR_12075 or PWXPC_12075 message. You can use the restart tokens from the message in conjunction with a special override statement to get the restart tokens for all sources in a CDC session. For sessions that run on PowerCenter releases earlier than 8.1.1 SP2 or without enhanced restart, use the restart tokens in the restart token files. If you need assistance, contact Informatica Global Customer Support.

Establishing Restart Points for CDC Sessions after a PowerCenter Upgrade

Before you start CDC sessions after a PowerCenter upgrade, establish restart points.

Important: Prior to the PowerCenter upgrade, you should have saved the restart tokens. If you did not follow the procedure to save the restart tokens prior to upgrading PowerCenter, contact Informatica Global Customer Support for assistance.

To establish restart points for CDC sessions after a PowerCenter upgrade:

1. Verify that the restart token files for all CDC sessions contain restart tokens.
Depending on the PowerCenter release you are migrating from, PWXPC stored the restart tokens as follows:
 - If you are migrating from a PowerCenter release earlier than 8.1.1 SP2, PWXPC stored the final restart tokens in the restart token file for the session when the session ended.
 - If you are migrating from PowerCenter 8.1.1 SP2 through SP5 and did not enable enhanced restart, PWXPC stored the final restart tokens in the restart token file for the session when the session ended.
 - If you are migrating from PowerCenter 8.1.1 SP2 through SP5 and enabled enhanced restart, PWXPC stored the restart tokens in a backup restart token file with an appended timestamp when the session

recovery operation ended. Copy the backup restart token file for each CDC session to the restart token file for that session.

- If you are migrating from PowerCenter 8.5 or later, PWXPC stored the restart tokens in the restart token file when the session recovery operation ended.
2. Cold start the CDC session or workflow.
PWXPC uses the restart token file to restart the CDC session.

Upgrade Considerations for PowerExchange 10.4

If you are upgrading to PowerExchange 10.4 from an earlier release, review these upgrade considerations before starting the upgrade process.

Updated Components in the PowerExchange ECCR CRG.LOAD Library for IMS Synchronous CDC

PowerExchange 10.4.0 updates the PowerExchange CRG.LOAD library for IMS synchronous CDC to provide the latest available version of the BMC Software CHANGE RECORDING FACILITY, DATABASE INTEGRITY PLUS, or Fast Path Online Restructure/EP components.

You can use either the CRG software that PowerExchange delivers or one of these BMC Software products, which include the CRG code.

Important: If you have a supported version of one of the BMC Software products, Informatica recommends that you use the BMC Software product instead of the CRG software.

- If you use one of the BMC Software products, ensure that the product meets the minimum version that PowerExchange requires for IMS synchronous CDC, as described in the "IMS Synchronous Change Data Capture" chapter of the *PowerExchange CDC Guide for z/OS*.

Note: For IMS 15, PowerExchange 10.4.0 requires the following minimum versions of the BMC Software products:

- CHANGE RECORDING FACILITY: Version 5.1.00 Level 1907 with BMC fix BQQ4590
- DATABASE INTEGRITY PLUS: Version 5.1.00 Level 1907 with BMC fix BQQ4590
- Fast Path Online Restructure/EP: Version 4.1.00 Level 1907 with BMC fix BQQ4590

If you use an earlier product version, upgrade to the supported minimum version or later.

- If you use the CRG software, after you upgrade PowerExchange, run the CRGUMOD or CRGCLINK job in the *hlq.SAMPLIB* library again to install DBRC modifications. 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. After you run the CRGUMOD or CRGCLINK job, restart the IMS control region.

Upgrade Considerations for PowerExchange 10.2 HotFix 2

If you are upgrading to PowerExchange 10.2 HotFix 2 from an earlier release, review these upgrade considerations before starting the upgrade process.

New SAMPLIB Member for ECCR Programs That Support CICS/VSAM 5.5

PowerExchange 10.2 HotFix 2 adds the #CICSV72 member in SAMPLIB for defining the CICS/VSAM ECCR programs and transaction for the newly supported CICS Transaction Server 5.5 version.

Because the definition of the CICS/VSAM ECCR programs and transaction changed, you must restart the CICS region after upgrading to PowerExchange 10.2 HotFix 2.

Checksums Added to PowerExchange Logger CDCT File

Beginning in PowerExchange 10.2 HotFix 2, PowerExchange performs a checksum test of records in the CDCT file of the PowerExchange Logger for Linux, UNIX, and Windows to detect corrupted records and to avoid potential errors while reading information from the CDCT file.

The addition of checksums to the CDCT file makes the file incompatible with PowerExchange releases earlier than 10.2 HotFix 2. Before you apply 10.2 HotFix 2, back up your existing CDCT file. Then, if you need to fall back from 10.2 HotFix 2 to the earlier release, you can restore the CDCT file from the backup.

Upgrade Considerations for PowerExchange 10.2 HotFix 1

If you are upgrading to PowerExchange 10.2 HotFix 1 from an earlier release, review these upgrade considerations before starting the upgrade process.

Updated Components in the PowerExchange ECCR CRG.LOAD Library for IMS Synchronous CDC

The PowerExchange 10.2 HotFix 1 updates the PowerExchange CRG.LOAD library for IMS synchronous CDC to provide the latest available version of the BMC Software CHANGE RECORDING FACILITY and DATABASE INTEGRITY PLUS components.

If you use the CRG software, after you upgrade PowerExchange, run the CRGUMOD or CRGCLINK job in the *hlq.SAMPLIB* library again to install DBRC modifications. 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. After you run the CRGUMOD or CRGCLINK job, restart the IMS control region.

Important: If you have a supported version of the BMC Software CHANGE RECORDING FACILITY, DATABASE INTEGRITY PLUS, or Fast Path Online Restructure/EP product, use the BMC Software product instead of the CRG software. In this case, you do not need to run the CRGUMOD or CRGCLINK job. Ensure that the BMC Software product version matches or is later than the minimum BMC version that PowerExchange 10.2 HotFix 1 supports for your IMS version.

New SAMPLIB Member for ECCR Programs That Support CICS/VSAM 5.4

PowerExchange 10.2 HotFix 1 adds the SAMPLIB member #CICSV71 for defining the CICS/VSAM ECCR programs and transaction for the newly supported CICS Transaction Server 5.4.

Because the definition of the CICS/VSAM ECCR programs and transaction changed, you must restart the CICS region after upgrading to PowerExchange 10.2 HotFix 1.

Upgrade Considerations for PowerExchange 10.2

If you are upgrading to PowerExchange 10.2 from an earlier release, review these upgrade considerations before starting the upgrade process.

Consideration for Upgrading to PowerExchange on i5/OS

If you are upgrading an existing PowerExchange installation on i5/OS to the 10.2 version, after you upgrade the product and before you start the PowerExchange Listener, issue the following commands to rebuild the metadata objects that PowerExchange uses:

```
ADDLIB LIB(DTLLIB) POSITION(*FIRST)
CRTDTLENVF DTLLIB(DTLLIB) DATALIB(DATALIB)
```

Where:

- *DTLLIB* is the PowerExchange software library.
- *DATALIB* is the PowerExchange library that contains data files such as the CCT file, PowerExchange configuration parameters file, and the LISTENER and DTLOS_MSQG message queues.

If you need to access a remote DB2 for i5/OS database, you must specify additional parameters in the CRTDTLENVF command, as follows:

```
CRTDTLENVF DTLLIB(DTLLIB) DATALIB(DATALIB) RMTRDBDIRE(DATABASE_NAME)
RMTSYSNAME(HOST_NAME) RMTASPDEV(*) OSLEVEL(OS_LEVEL)
```

Updated Components in the PowerExchange ECCR CRG.LOAD Library for IMS Synchronous CDC

The PowerExchange 10.2 version includes patch P802235, which updates the PowerExchange CRG.LOAD library for IMS synchronous CDC to provide the latest available version of the BMC Software CHANGE RECORDING FACILITY and DATABASE INTEGRITY PLUS components.

If you use the CRG software, after you upgrade PowerExchange, run the CRGUMOD or CRGCLINK job in the *hlq*.SAMPLIB library again to install DBRC modifications. 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. After you run the CRGUMOD or CRGCLINK job, restart the IMS control region.

Important: If you have a supported version of the BMC Software CHANGE RECORDING FACILITY, DATABASE INTEGRITY PLUS, or Fast Path Online Restructure/EP product, use the BMC Software product instead of the CRG software. In this case, you do not need to run the CRGUMOD or CRGCLINK job. Ensure that the BMC Software product version matches or is later than the minimum BMC version that PowerExchange 10.2 supports for your IMS version.

Upgrade Considerations for PowerExchange 10.1

If you are upgrading to PowerExchange 10.1 from an earlier release, review these upgrade considerations before starting the upgrade process.

Updated Components in the PowerExchange 10.1 ECCR CRG.LOAD Library for IMS Synchronous CDC

PowerExchange 10.1 includes patch P717217, which updates the PowerExchange CRG.LOAD library for IMS synchronous CDC to provide the latest available version of the BMC Software CHANGE RECORDING FACILITY and DATABASE INTEGRITY PLUS components.

Note: PowerExchange 9.6.1 HotFix 4 also includes patch P717217.

If you use the CRG software, after you upgrade to 10.1 from PowerExchange 10.0 or PowerExchange 9.6.1 HotFix 3 or earlier, run the CRGUMOD or CRGCLINK job in the *hlq.SAMPLIB* library again to install DBRC modifications. 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. After you run the CRGUMOD or CRGCLINK job, restart the IMS control region.

Important: If you have a supported version of the BMC Software CHANGE RECORDING FACILITY, DATABASE INTEGRITY PLUS, or Fast Path Online Restructure/EP product, use the BMC Software product instead of the CRG software. In this case, you do not need to run the CRGUMOD or CRGCLINK job. Ensure that the BMC Software product version matches or is later than the minimum BMC version that PowerExchange 10.1 supports for your IMS version.

Upgrade Considerations for PowerExchange 10.0

If you are upgrading to PowerExchange 10.0 or a 10.0 hotfix from an earlier release, review these upgrade considerations before starting the upgrade process.

Considerations for Upgrading PowerExchange on Windows

PowerExchange 10.0 introduced changes in functionality on 32-bit and 64-bit Windows systems. As a result, the following upgrade considerations apply:

- PowerExchange bulk data movement and CDC operations are no longer supported on Windows 32-bit machines. Any existing data sources on these systems are no longer supported.
- If you upgrade from an earlier PowerExchange release on Windows and use PowerExchange ODBC drivers, you must reinstall the PowerExchange ODBC drivers and update PowerExchange ODBC data sources.

For more information about installing the PowerExchange ODBC drivers, see [“Step 4. Install the PowerExchange ODBC Drivers \(Optional\)” on page 78](#). For more information about updating PowerExchange ODBC data sources, see the *PowerExchange Reference Manual*.

- To use PowerCenter or Data Services with PowerExchange 10.0, you must upgrade to the 10.0 versions of these products. For more information, see [“PowerExchange Interoperability with PowerCenter” on page 30](#) and [“PowerExchange Interoperability with Informatica Services Products ” on page 31](#).

Preparing an i5/OS Environment to Accept pwxcmd displaystats Commands

PowerExchange 9.6.1 HotFix 2 added support for issuing the pwxcmd displaystats command to a PowerExchange Listener on i5/OS. If you are upgrading to PowerExchange 10.0 and have set SECURITY=(2,x) in the DMBOVER member of the CFG file, you must prepare the i5/OS environment for issuing pwxcmd displaystats commands if you have not done so already for an earlier PowerExchange release.

To prepare the environment, issue the following command on the i5/OS system where the PowerExchange Listener runs:

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

In this command, *dtllib* is the name of the PowerExchange software library that you specified at installation and *datalib* is the user-specified name for the PowerExchange data library that was entered at installation.

The command provides USE access on the files that are required to execute the pwxcmd displaystats command. If you do not prepare the i5/OS environment, the following error message is issued:

```
PWX-00252 Userid <user_id> does not have <*USE> access to <datalib/LDISPSTATS>, return code<355>.
```

Note: If you are installing PowerExchange for the first time instead of upgrading it, the CRTPWXENV command calls CRTDTLENVA to create the PowerExchange environment.

Updated Components in the PowerExchange 10.0 ECCR CRG.LOAD Library for IMS Synchronous CDC

If you upgrade to 10.0 from an earlier release that does not include EDP patch P699028, the PowerExchange CRG.LOAD library for IMS synchronous CDC does not contain the latest available version of the BMC Software CHANGE RECORDING FACILITY and DATABASE INTEGRITY PLUS components.

If you use the CRG software, after you upgrade to 10.0, run the CRGUMOD or CRGCLINK job in the *hlq.SAMPLIB* library again to install DBRC modifications. 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. After you run the CRGUMOD or CRGCLINK job, restart the IMS control region.

Important: If you have a supported version of the BMC Software CHANGE RECORDING FACILITY, DATABASE INTEGRITY PLUS, or Fast Path Online Restructure/EP product, use the BMC Software product instead of the CRG software. In this case, you do not need to run the CRGUMOD or CRGCLINK job. Ensure that the BMC Software product version matches or is later than the minimum BMC version that PowerExchange 10.0 supports for your IMS version.

Requirements for Upgrading the DB2 for z/OS ECCR to PowerExchange 10.0

PowerExchange 10.0 includes EDP patches P712919 and P713954, which affect DB2 for z/OS ECCR. If you perform DB2 for z/OS CDC and are upgrading from an earlier PowerExchange release that did not include the P712919 and P713954 patches, you must perform the following tasks to be able to restart the DB2 ECCR properly.

1. Before you install PowerExchange 10.0, issue the following DB2 for z/OS ECCR QUIESCE command to stop the ECCR:

```
MODIFY eccr_ task_name,QUIESCE
```

If you cannot QUIESCE the ECCR, wait until no DDL changes or DB2 utility QUIESCE operations are occurring on the DB2 subsystem and then use the MVS STOP (P) command to stop the ECCR.

Note: The ECCR treats DB2 utility QUIESCE operations as DDL changes.

2. Perform the upgrade installation.
3. In the XIDDB225 job in RUNLIB library, edit the JCL to add the PowerExchange 10.0 DBRM data set at the top of the DBRMLIB DD concatenation.
4. Run the XIDDB225 job to bind the DB2 plan and packages for the DB2 ECCR. To run the XIDDB225 job, you must have SYSCTRL authority.

Note: If you do not rebind the DB2 plan and packages with the 10.0 DBRM data set, the ECCR will abend at startup.

5. Restart the DB2 ECCR based on the following criteria:
 - If you did not specify an IFI306 OPT statement in the REPL2OPT member of the RUNLIB library, warm start the ECCR.
 - If you specified an IFI306 OPT statement in the REPL2OPT member and do not run the ECCR in a DB2 data-sharing environment, warm start the ECCR.
 - If you specified an IFI306 OPT statement in the REPL2OPT member, run the ECCR in a DB2 data-sharing environment, and stopped the ECCR with the MVS STOP command instead of the DB2 ECCR QUIESCE command, you must cold start or special start the ECCR.
To special start the ECCR from the point in time in the DB2 log where the ECCR stopped processing, include the USEDIR,USESTAT options in the START statement in the REPL2OPT member. If you want to special start the ECCR at some other point in time in the log and if DDL changes might have been logged between the point where the ECCR stopped processing and the point where the special start occurs, do not include the USEDIR,USESTAT options.

Important: If you previously encountered the problem that was fixed by CR 413954 (EDP patch P713954) and do not use the IFI306 OPT statement in the REPL2OPT member, you must delete the capture registration for the table that was identified in message PWXEDM177373W when the ECCR ended. Then warm start the ECCR and re-create the capture registration. If you use the IFI306 OPT statement, use the preceding restart criteria.

Removing an Obsolete Capture Directory Table for the DB2 for z/OS ECCR

Effective in PowerExchange 10.0, the DB2 for z/OS ECCR no longer uses the TCAPTABLEPART capture directory table.

If you upgrade to PowerExchange 10.0 from a previous release, you can delete the TCAPTABLEPART table and its index whenever you are certain that you do not need to fall back to the previous release.

Shutting Down the PowerExchange Agent Before Upgrading to PowerExchange 10.0 on z/OS

To address a PowerExchange Listener failure caused by the premature release of storage for a service address block (SRB) scheduled to the Listener job, you must drain and shut down the PowerExchange Agent before upgrading to PowerExchange 10.0 from an earlier PowerExchange release that did not include EDP patch P628599.

Perform the following steps:

1. Issue the PowerExchange Agent DRAIN command to ensure that all PowerExchange Agent tasks have completed processing before you shut down the Agent address space. Use the following syntax:

```
cmd_prefix DRAIN
```

The *cmd_prefix* variable is the command prefix that is specified in the AGENTCTL member of the RUNLIB library or the AGENTID parameter value in the AGENTCTL member.

2. Issue the PowerExchange Agent SHUTDOWN COMPLETELY command to shut down the Agent address space and delete the data space. Use the following syntax:

```
cmd_prefix SHUTDOWN COMPLETELY
```

3. Upgrade to PowerExchange 10.0.
4. To restart the PowerExchange Agent, issue the START command:

```
START agent_task_name
```

Upgrade Considerations for PowerExchange 9.6.1

If you are upgrading to PowerExchange 9.6.1 or later from any previous release, review these upgrade considerations before starting the upgrade process.

Updated Components in the PowerExchange 9.6.1 HotFix 4 ECCR CRG.LOAD Library for IMS Synchronous CDC

PowerExchange 9.6.1 HotFix 4 includes patch P717217, which updates the PowerExchange CRG.LOAD library for IMS synchronous CDC to provide the latest available version of the BMC Software CHANGE RECORDING FACILITY and DATABASE INTEGRITY PLUS components.

If you use the CRG software, after you upgrade to 9.6.1 HotFix 4, run the CRGUMOD or CRGCLINK job in the *h/q.SAMPLIB* library again to install DBRC modifications. 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. After you run the CRGUMOD or CRGCLINK job, restart the IMS control region.

Important: If you have a supported version of the BMC Software CHANGE RECORDING FACILITY, DATABASE INTEGRITY PLUS, or Fast Path Online Restructure/EP product, use the BMC Software product instead of the CRG software. In this case, you do not need to run the CRGUMOD or CRGCLINK job. Ensure that the BMC Software product version matches or is later than the minimum BMC version that PowerExchange 9.6.1 HotFix 4 supports for your IMS version.

Removing an Obsolete Capture Directory Table for the DB2 for z/OS ECCR

Effective in PowerExchange 9.6.1 HotFix 4, the DB2 for z/OS ECCR no longer uses the TCAPTABLEPART capture directory table.

If you upgrade to PowerExchange 9.6.1 HotFix from a previous release, you can delete the TCAPTABLEPART table and its index whenever you are certain that you do not need to fall back to the previous release.

Requirements for Upgrading the DB2 for z/OS ECCR to 9.6.1 HotFix 3

PowerExchange 9.6.1 HotFix 3 includes EDP patches P712919 and P713954, which affect DB2 for z/OS CDC. If you use DB2 for z/OS CDC and upgrade to PowerExchange 9.6.1 HotFix 3, you must perform several tasks to be able to restart the DB2 ECCR properly.

Perform the following tasks:

1. Before you install the hotfix, issue the following DB2 for z/OS ECCR QUIESCE command to stop the ECCR:

```
MODIFY eccr_ task_name,QUIESCE
```

If you cannot QUIESCE the ECCR, wait until no DDL changes or DB2 utility QUIESCE operations are occurring on the DB2 subsystem and then use the MVS STOP (P) command to stop the ECCR.

Note: The ECCR treats DB2 utility QUIESCE operations as DDL changes.

2. Perform the upgrade or hotfix installation.
3. In the XIDDB225 job in RUNLIB library, edit the JCL to add the PowerExchange 9.6.1 HotFix 3 DBRM data set at the top of the DBRMLIB DD concatenation.
4. Run the XIDDB225 job to bind the DB2 plan and packages for the DB2 ECCR. To run the XIDDB225 job, you must have SYSCTRL authority.

Note: If you do not rebind the DB2 plan and packages with the 9.6.1 HotFix 3 DBRM data set, the ECCR will abend at startup.

5. Restart the DB2 ECCR based on the following criteria:

- If you did not specify an IFI306 statement in the REPL2OPT member of the RUNLIB library, warm start the ECCR.
- If you specified an IFI306 statement in the REPL2OPT member and do not run the ECCR in a DB2 data-sharing environment, warm start the ECCR.
- If you specified an IFI306 statement in the REPL2OPT member, run the ECCR in a DB2 data-sharing environment, and stopped the ECCR with the MVS STOP command instead of the DB2 ECCR QUIESCE command, you must cold start or special start the ECCR.
To special start the ECCR from the point in time in the DB2 log where the ECCR stopped processing, include the USEDIR,USESTAT options in the START statement in the REPL2OPT member. If you want to special start the ECCR at some other point in time in the log and if DDL changes might have been logged between the point where the ECCR stopped processing and the point where the special start occurs, do not include the USEDIR,USESTAT options.

Important: If you previously encountered the problem that was fixed by CR 413954 (EDP patch P713954) and do not use the IFI306 statement in the REPL2OPT member, you must delete the capture registration for the table that was identified in message PWXEDM177373W when the ECCR ended. Then warm start the ECCR and re-create the capture registration. If you use the IFI306 statement, use the preceding restart criteria.

Updated Components in the PowerExchange 9.6.1 HotFix 2 ECCR CRG.LOAD Library for IMS Synchronous CDC

If you upgrade to 9.6.1 HotFix 2 from an earlier release that does not include patch P699028, the PowerExchange CRG.LOAD library for IMS synchronous CDC does not contain the latest available version of the BMC Software CHANGE RECORDING FACILITY and DATABASE INTEGRITY PLUS components.

If you use the CRG software, after you upgrade to 9.6.1 HotFix 2, run the CRGUMOD or CRGCLINK job in the *hlq*.SAMPLIB library again to install DBRC modifications. 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. After you run the CRGUMOD or CRGCLINK job, restart the IMS control region.

Important: If you have a supported version of the BMC Software CHANGE RECORDING FACILITY, DATABASE INTEGRITY PLUS, or Fast Path Online Restructure/EP product, use the BMC Software product instead of the CRG software. In this case, you do not need to run the CRGUMOD or CRGCLINK job. Ensure that the BMC Software product version matches or is later than the minimum BMC version that PowerExchange 9.6.1 HotFix 2 supports for your IMS version.

Change to the Format of PowerExchange Logger CDCT Backup Files

Effective in PowerExchange 9.6.1 HotFix 2, backup files for the PowerExchange Logger for Linux, UNIX, and Windows CDCT file have a new format. You cannot use backup files of the new format with PowerExchange versions earlier than PowerExchange 9.6.1 HotFix 2.

Before you upgrade to PowerExchange 9.6.1 HotFix 2 from an earlier release, you must shut down the PowerExchange Logger. Also, save the most recent CDCT backup file in case you need to fall back to the previous release. These backup files have names in the format of CDCT_*_TERM.bkp.

Additional Privileges Required for the PowerExchange Express CDC for Oracle User

If you upgrade to 9.6.1 HotFix 2 from a previous PowerExchange version or hotfix and use PowerExchange Express CDC for Oracle, you must grant some additional privileges to the Express CDC user to retrieve the information that is required for CDC processing.

Issue the following GRANT statements before you restart CDC processing:

```
GRANT SELECT ON "SYS"."DBA_USERS" TO "ORACAPTL";
GRANT SELECT ON "SYS"."DBA_TABLESPACES" TO "ORACAPTL";
```

In these statements, ORACAPTL is the name of the Express CDC user.

Preparing an i5/OS Environment to Accept pwxcmd displaystats Commands

PowerExchange 9.6.1 HotFix 2 adds support for issuing a pwxcmd displaystats command to a PowerExchange Listener on i5/OS. If you are upgrading to 9.6.1 HotFix 2 from an earlier release and set SECURITY=(2,x) in the DBMOVER member of the CFG file, you need to prepare the i5/OS environment to run pwxcmd displaystats commands.

To prepare the environment, issue the following command on the i5/OS system where the PowerExchange Listener runs:

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

In this command, *dtllib* is the name of the PowerExchange software library that you specified at installation and *datalib* is the user-specified name for the PowerExchange data library that was entered at installation.

The command provides USE access on the files that are required to execute the pwxcmd displaystats command. If you do not prepare the i5/OS environment, the following error message is issued:

```
PWX-00252 Userid <user_id> does not have <*USE> access to <DTLDEVMFDA/LDISPSTATS>,
return code<355>.
```

Note: If you are installing PowerExchange for the first time instead of upgrading it, the CRTPWENV command calls CRTDTLENVA to create the PowerExchange environment.

Shut Down the PowerExchange Agent Before Upgrading to PowerExchange 9.6.1 HotFix 1 on z/OS

To address a PowerExchange Logger for MVS failure, PowerExchange 9.6.1 HotFix 1 changes the size of the global circular queue DSN table in the PowerExchange Agent data space. Before you upgrade to 9.6.1 HotFix 1 from a prior PowerExchange release, you must drain and shut down the PowerExchange Agent.

Perform the following steps:

1. Issue the PowerExchange Agent DRAIN command to ensure that all PowerExchange Agent tasks have completed processing before you shut down the Agent address space. Use the following syntax:

```
cmd_prefix DRAIN
```

The *cmd_prefix* variable is the command prefix that is specified in the AGENTCTL member of the RUNLIB library or the AGENTID parameter value in the AGENTCTL member.

2. Issue the PowerExchange Agent SHUTDOWN COMPLETELY command to shut down the Agent address space and delete the data space. Use the following syntax:

```
cmd_prefix SHUTDOWN COMPLETELY
```

3. Install the hotfix.
4. To restart the PowerExchange Agent, issue the START command:

```
START agent_task_name
```

Expanded PowerExchange Agent Buffer Size for DB2 for z/OS ECCR Processing

PowerExchange 9.6.1 expanded the size of a PowerExchange Agent internal buffer to make DB2 for z/OS ECCR processing more efficient.

To use the expanded buffer size, you must perform the following steps when you upgrade to PowerExchange 9.6.1 from an earlier release:

1. After you upgrade PowerExchange, issue the PowerExchange Agent DRAIN command to ensure that all PowerExchange Agent tasks have completed processing before you shut down the Agent address space. Use the following syntax:

```
cmd_prefix DRAIN
```

The *cmd_prefix* variable is the command prefix that is specified in the AGENTCTL member of the RUNLIB library or the AGENTID parameter value in the AGENTCTL member.

2. Issue the PowerExchange Agent SHUTDOWN COMPLETELY command to shut down the Agent address space and delete the data space that contains the buffer. Use the following syntax:

```
cmd_prefix SHUTDOWN COMPLETELY
```

Updated Components in the PowerExchange 9.6.1 ECCR CRG.LOAD Library for IMS Synchronous CDC

If you upgrade to 9.6.1 from an earlier release that does not include patch P638444, the PowerExchange CRG.LOAD library for IMS synchronous CDC does not contain the latest available version of the BMC Software CHANGE RECORDING FACILITY and DATABASE INTEGRITY PLUS components.

If you use the CRG software, after you upgrade, run the CRGUMOD or CRGCLINK job in the *hlq*.SAMPLIB library again to install DBRC modifications. 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. After you run the CRGUMOD or CRGCLINK job, restart the IMS control region.

Important: 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. In this case, you do not need to run the CRGUMOD or CRGCLINK job. Ensure that the BMC Software product version matches or is later than the minimum BMC version that your PowerExchange version supports for the IMS version.

Upgrade Considerations for PowerExchange 9.6.0

If you are upgrading to PowerExchange 9.6.0 or later from any previous release, review these upgrade considerations before starting the upgrade process.

DB2 for z/OS CDC Configuration Tasks Related to Upgrading to PowerExchange 9.6.0 from an Earlier Version

If you use DB2 for z/OS CDC and upgrade to PowerExchange 9.6.0 from an earlier version that does not include patch P639029, you must rebind the DBRM package, X029167. If you upgrade from a version that does not include patch P523210, such as version 9.0.1 or version 8.6.1 HotFix 12 or earlier, you must also expand a column in the DB2 for z/OS ECCR TCAPWORK capture directory table to accommodate the longer LRSN values in DB2 9.1 data sharing environments.

Patch P523210 was incorporated in PowerExchange versions 8.6.1 HotFix 14 and 9.1.0 and might have been applied on earlier 8.6.1 or 9.x versions. To determine whether patch P523210 is installed and the steps that you need to perform, execute the following SQL query against the DB2 SYSIBM.SYSCOLUMNS catalog table:

```
SELECT LENGTH FROM SYSIBM.SYSCOLUMNS WHERE NAME='RBA' and TBCreator='TCAP_table_creator'
and TBNAME='TCAPWORK'
```

If this SQL query returns a length of 6, P523210 is not installed. In this case, complete all of the following steps.

If the SQL query returns a length of 8, P523210 is installed. However, you must rebind the DBRM package, X029167. Complete steps 4 through 7.

1. Use the QUIESCE command to stop the DB2 ECCR.
2. Modify the SQL statements in the EXPNDP3 member of the SAMPLIB library based on the comments in the member.

This member expands the TCAPWORK capture directory table to increase the size of the RBA column to properly support the longer LRSN values that can occur in DB2 9.1 data sharing environments.

3. Use SPUFI or another tool to execute the modified SQL statements in the EXPNDP3 member.
4. In the XIDDB225 job in the RUNLIB library, edit the JCL to add the PowerExchange 9.6.0 DBRM data set at the top of the DBRMLIB DD concatenation.
5. Verify that the BIND member that is specified in the SYSTSIN DD concatenation in the XIDB225 job contains the BIND statements for the X029167 package.

If the BIND member does not contain BIND statements for X029167, perform one of the following actions:

- If you selected the **Upgrade by Using Existing Data Set Names** option in the z/OS Installation Assistant, run the SETDB2UE job in the staging RUNLIB library to use the latest DB2BIND or DB2BINDB member that includes the bind statements for the package.

- Manually add the BIND statements for X029167 to the BIND member based on the sample statements in the P639029S member of the SAMPLIB library. Modify the PACKAGE, OWNER, and QUALIFIER values to match those that are specified for the other packages in the BIND member.
6. Run the XIDDB225 job to perform the binds.
 7. Restart the DB2 ECCR.

Change in Default Character Conversion in Single-Byte Static Code Pages

The default for the EXT_CP_SUPPT statement in the DBMOVER configuration file has changed. In PowerExchange releases earlier than 9.6.0, the EXT_CP_SUPPT default is N. In PowerExchange 9.6.0 and later, the default is Y.

This statement controls whether PowerExchange converts certain characters from their EBCDIC to their corresponding ASCII values. The statement affects EBCDIC characters X'41', X'FF', and characters with a value of less than X'40' in single-byte static code pages.

If you need to retain the previous default method of mapping for particular EBCDIC values (for example, if you need to map EBCDIC X'FF' to ASCII X'FF'), Informatica recommends that you create a customized ICU code page.

Connection Sharing for DB2 Lookups

PowerExchange 9.6.0 provides connection sharing for DB2 lookups. By default, all DB2 lookups in a workflow use the same connection, and the PowerExchange Listener performs them in a single task.

In PowerExchange releases earlier than 9.6.0, each DB2 lookup uses a separate connection. If you need to preserve this behavior in PowerExchange 9.6.0 or later, specify CONNSHARE=N in the PowerCenter PWX Override connection attribute.

Caution: If the DB2 connection is used as a target in a CDC workflow, do not change the default behavior. Otherwise, internal PowerCenter state tables that require connection sharing might not be updated correctly.

Note: DB2 lookups that share a connection do not use offload processing, partitioning, or threading.

PowerExchange Passphrases and Related Network Layer Changes

In PowerExchange 9.6.0 and later, you can enter a valid PowerExchange passphrase for access to z/OS and i5/OS instead of a password. You can enter a passphrase in fields, commands, and parameters throughout the PowerExchange interfaces, including the PowerExchange Navigator, PowerExchange utilities, PowerExchange Logger pwxcl.cfg configuration file, pwxcmd and infacmd commands, PowerCenter, Informatica Developer tool, and Informatica Administrator tool. Passphrases provide enhanced security because they are longer and contain a wide range of allowable character types.

In support of longer passphrases, the PowerExchange network layer changed. The network header for data transmissions was split to accommodate much longer security credentials. The connection information was moved from the regular network header to a new PowerExchange Listener header. The connection information is now sent only once instead of in each network message, which reduces network overhead.

Important: Because of these network layer changes, all PowerExchange instances in your environment must be at version 9.6.0 or later, regardless of whether you are using passphrases. Also, if you use passphrases in MVS jobs, you can allocate a long partitioned data set (PDS) for storing passphrases. Ensure that the PDS has a record length that is long enough to store both passphrases and even longer encrypted passphrases. For example, use a record length of 320.

For information about using passphrases in the PowerExchange interfaces, see the *PowerExchange Navigator User Guide*, *PowerExchange Interfaces for PowerCenter*, *PowerExchange Command Reference*, *PowerExchange Utilities Guide*, *Informatica Command Reference*, *Informatica Developer Tool Guide*, and *Informatica Administrator Guide*.

Updated Components in the IMS Synchronous ECCR CRG.LOAD Library

If you upgrade to 9.6.0 from an earlier release that does not include patch P647646, the PowerExchange CRG.LOAD library for IMS synchronous CDC does not contain the latest available version of the BMC Software CHANGE RECORDING FACILITY and DATABASE INTEGRITY PLUS components.

If you use the CRG software, after you upgrade to 9.6.0, run the CRGUMOD or CRGCLINK job in the *hlq.SAMPLIB* library again to install DBRC modifications. 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. After you run the CRGUMOD or CRGCLINK job, restart the IMS control region.

Important: 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. In this case, you do not need to run the CRGUMOD or CRGCLINK job. Ensure that the BMC Software product version matches or is later than the minimum BMC version that PowerExchange 9.6.0 supports for your IMS version. PowerExchange 9.6.0 does not support synchronous CDC with either the CRG software or BMC products for IMS 13.

Bind the DBRM Package for the DB2 for z/OS Plan

If you use DB2 for z/OS CDC and upgrade to PowerExchange 9.6.0 from an earlier version that does not include patch P639029, you must bind the DBRM package, X029167.

The XIDDB225 job, which runs as part of a normal upgrade process, uses the updated DB2BIND or DB2BINDB member that includes the bind statements for X029167. However, if you select the **Upgrade by Using Existing Data Set Names** option in the z/OS Installation Assistant, a previous DB2BIND member that does not include the bind statements for X029167 might be retained. In this case, run the SETDB2UE job in the staging RUNLIB library to use the latest DB2BIND member that includes the package bind statements.

Avoid PowerExchange Listener Hangs on z/OS

On z/OS, the PowerExchange Listener task might hang during shutdown processing. In this situation, all tasks that communicate with the Log Read API (LRAPI) end with abend code S13E/U0001.

To prevent this problem, before you upgrade to PowerExchange 9.6.0, shut down the PowerExchange change capture components, including the PowerExchange Agent, PowerExchange Logger for MVS, PowerExchange Condense, and the ECCRs. To shut down the PowerExchange Agent, you must use the DRAIN and SHUTDOWN COMPLETELY commands. Otherwise, various abends might occur when you restart the change capture components after the 9.6.0 upgrade.

APPENDIX B

PowerExchange Environment

This appendix includes the following topics:

- [PowerExchange Environment Overview, 186](#)
- [PowerExchange Environment on i5/OS, 186](#)
- [PowerExchange Environment on Linux, UNIX, and Windows, 189](#)
- [PowerExchange Environment on z/OS, 192](#)

PowerExchange Environment Overview

A PowerExchange environment includes the PowerExchange software and PowerExchange data files. PowerExchange data includes configuration data, PowerExchange data objects, and source data that PowerExchange processes.

Examples of PowerExchange data include the following:

- Configuration files
- License file
- Data maps
- Extraction maps
- Capture registrations
- PowerExchange Logger log files
- PowerExchange Condense condense files

The following sections provide detailed descriptions of the PowerExchange environment for each operating system. Use this information to:

- Plan a PowerExchange environment before performing a first-time installation
- Copy an existing PowerExchange environment when migrating to a new release
- Plan or implement a backup strategy

PowerExchange Environment on i5/OS

This section describes PowerExchange data libraries and data files on i5/OS and how to specify their location to PowerExchange. Use this information when planning which data files to copy, where to locate

them, and how to specify configuration parameters and PowerExchange start command options that point to them.

For more information about the PowerExchange environment on i5/OS, see the following guides:

- *PowerExchange Bulk Data Movement Guide*
- *PowerExchange CDC Guide for i5/OS*

PowerExchange Data Libraries and Data Files on i5/OS

Each time you install a new release of PowerExchange on i5/OS, you specify a new location for PowerExchange software and data. You specify the location of PowerExchange data libraries either before or during installation, depending on the library.

The following table shows how you create each library:

Library	Created by
<i>condlib</i>	CRTPWXENV installation command, as specified by the CONDLIB parameter
<i>cpxlib</i>	CRTPWXENV installation command, as specified by the CPXLIB parameter
<i>datalib</i>	CRTPWXENV installation command, as specified by the DATALIB parameter. The installation process installs the DBMOVER and CAPTPARM configuration files in this library.
<i>dtllib</i>	User, before installing PowerExchange. The installation process installs the license file, LICENSE(KEY), in this library.
STDATAMAPS	User, before installing PowerExchange. You can select the library name. STDATAMAPS is the default.

The following table summarizes the PowerExchange data files and members on i5/OS:

Library	File or Member	Description	Bulk	CDC
<i>condlib</i>	PARTIAL	Partial condense file. Separate members are produced for each file switch.	-	X
<i>condlib</i>	FULLnnnn	Full condense file	-	X
<i>condlib</i>	CHKPT	File that contains checkpoint members. Each member is named Vn, where n is a number from 0 to 9.	-	X
<i>condlib</i>	CDCT	Condense control table. Contains information about the condense files.	-	X
<i>condlib</i>	CDEP	Contains information about each extraction process that uses ODBC connections	-	X
<i>condlib</i>	CFGCOND (CAPTPARM)	Contains the parameters to be used with PowerExchange Condense.	-	X

Library	File or Member	Description	Bulk	CDC
<i>condlib</i>	PWXJRNLCCK (PWXJRNLCCK)	PowerExchange lock file for writing lock records for journals	-	X
<i>cpplib</i>	D3 <i>instance</i> where <i>instance</i> is the Collection ID specified when the registration group was created.	PowerExchange extraction maps	-	X
<i>datalib</i>	CFG	Library file that contains the DBMOVER and CAPTPARM configuration member	X	X
<i>datalib</i>	CFG(DBMOVER)	PowerExchange configuration member	X	X
<i>datalib</i>	CFG(CAPTPARM)	Sample configuration file for PowerExchange Condense	-	X
<i>datalib</i>	CCT	File that contains capture registrations	-	X
<i>dtllib</i>	LICENSE(KEY)	License key member	X	X
STDATAMAPS	<i>schema(mapname)</i> where: - <i>schema</i> is the schema name portion of the data map name. - <i>mapname</i> is the map name portion of the data map name.	PowerExchange data maps	X	-

Configuration Parameters That Point to PowerExchange Data on i5/OS

Use configuration parameters to specify the locations that you chose for PowerExchange data when you installed the product.

The following table lists the configuration files, parameters within the files, and the data to which they point:

Configuration File	Parameter	Points to
DBMOVER	CPX_DIR	Extraction maps
DBMOVER	DMX_DIR	Data maps
CAPTPARM	CHKPT_BASENAME	PowerExchange Condense checkpoint files
CAPTPARM	COND_DIR	PowerExchange Condense condense files

File Parameters in PowerExchange Start Commands on i5/OS

When you start the PowerExchange Listener or PowerExchange Condense, you can include parameters to specify the locations of the configuration and license files.

The following table shows the optional parameters you can include when you start PowerExchange Listener or PowerExchange Condense:

Program	Purpose	Parameter	Points to
DTLLST	PowerExchange Listener	CONFIG	DBMOVER member
DTLLST	PowerExchange Listener	LICENSE	License key
DTLCACON	PowerExchange Condense	CONFIG	DBMOVER member
DTLCACON	PowerExchange Condense	CS	CAPTPARM member
DTLCACON	PowerExchange Condense	LICENSE	License key

PowerExchange Environment on Linux, UNIX, and Windows

This section describes PowerExchange data directories and data files on Linux, UNIX, and Windows and how to specify their location to PowerExchange. Use this information when planning which data files to copy, where to locate them, and how to specify environment variables, start command options, and configuration parameters that point to them.

For more information about the PowerExchange environment on Linux, UNIX, and Windows, see the following guides:

- *PowerExchange Bulk Data Movement Guide*
- *PowerExchange CDC Guide for Linux, UNIX, and Windows*

PowerExchange Data Files and Directories on Linux, UNIX, and Windows

The following table lists the PowerExchange data directories and files on Linux, UNIX, and Windows:

Directory	Contents	Bulk	CDC
Directory specified by CAPT_PATH parameter	CCT file, which contains capture registrations.	-	X
Directory specified by CAPT_PATH parameter	CDEP file, which contains application names for PowerCenter extractions that use ODBC connections.	-	X
Directory specified by CAPT_PATH parameter	CDCT file, which contains information about PowerExchange Logger log files and restart points.	-	X

Directory	Contents	Bulk	CDC
Directory specified by CAPT_XTRA parameter	Extraction maps.	-	X
Directory specified by DMX_DIR	Data maps.	X	X
Directory specified by EXT_CAPT_MASK parameter	PowerExchange Logger log files.	-	X
installation_directory	PowerExchange software, which includes the license key and samples of the following files: <ul style="list-style-type: none"> - dbmover.cfg. The PowerExchange configuration file. - pwxcl.cfg. The PowerExchange Logger configuration file. - pwxclgrp.cfg. The configuration file for PowerExchange Logger group definitions. - examples directory (Windows only). Includes subdirectories for example data maps, extraction maps, capture registrations, personal metadata, and other PowerExchange data. - packages directory (Windows only). Includes a subdirectory that provides the Microsoft SQL Server Management Objects (SMO) framework, related packages, and Native Client. 	X	X

Note: You specify the installation directory when you install the product. You must create the other directories under names that you choose.

Configuration Parameters That Point to PowerExchange Files on Linux, UNIX, and Windows

After you install PowerExchange for the first time or migrate to a new release in a new PowerExchange environment, you must create directories for PowerExchange files. Then, in the appropriate configuration parameters, point to these directories.

The following table lists the dbmover and PowerExchange Logger configuration parameters that you set to point to the new file locations:

Configuration File	Parameter	Points to
dbmover.cfg	CAPT_PATH	Directory that contains the following control files: <ul style="list-style-type: none"> - CCT file that contains capture registrations - CDEP file that contains application names and information about extraction processes that have run - PowerExchange Logger CDCT file These files cannot reside in NAS or SAN storage.
dbmover.cfg	CAPT_XTRA	Extraction maps

Configuration File	Parameter	Points to
dbmover.cfg	DMX_DIR	File that contains data maps
pwxcl.cfg	EXT_CAPT_MASK	PowerExchange Logger log files

Environment Variables That Point to PowerExchange License, Configuration, and Message Log Files on Linux, UNIX, and Windows

The PowerExchange installation program installs configuration and license files in the installation directory. To make upgrading to a new PowerExchange version as easy as possible, you can move these files to a different location.

Also, PowerExchange creates message log files in the current working directory by default. You can create message log files in a directory that is separate from your current working directory so that you can find the message log files more easily.

You can use environment variables to point to the new locations of the DBMOVER, license key, and message log files.

The following table lists the environment variables and the files to which they point:

Environment Variable	Points to
DETAIL_LOGPATH	PowerExchange message log files
PWX_CONFIG	PowerExchange DBMOVER configuration file
PWX_LICENSE	PowerExchange license key

Note: You can also define the LOGPATH statement in the DBMOVER configuration file to specify a unique path and directory for PowerExchange message log files on a Linux, UNIX, or Windows system. If you also specify a value in the DETAIL_LOGPATH environment variable, the environment variable overrides the LOGPATH statement.

Start Command Parameters That Point to Data Files on Linux, UNIX, and Windows

When you start the PowerExchange Listener or PowerExchange Logger, on Linux, UNIX, or Windows, you can include parameters that point to configuration and license files that override the default files.

The following table shows the optional parameters you can include to start the PowerExchange Listener or the PowerExchange Logger:

Command	Purpose	Parameter	Points to
dtllst	Start PowerExchange Listener	config	DBMOVER configuration file
dtllst	Start PowerExchange Listener	license	License key

Command	Purpose	Parameter	Points to
pwxcl	Start PowerExchange Logger	config	DBMOVER configuration file
	Start PowerExchange Logger	cs	PowerExchange Logger configuration file
pwxcl	Start PowerExchange Logger	license	License key

PowerExchange Environment on z/OS

This section describes PowerExchange data sets on z/OS and how to specify their location to PowerExchange. Use this information when planning which data files to copy, where to locate them, and how to specify DD statements and configuration parameters that point to them.

For more information about the PowerExchange environment on z/OS, see the following guides:

- *PowerExchange Bulk Data Movement Guide*
- *PowerExchange CDC Guide for z/OS*

PowerExchange Data Sets on z/OS

You set up the PowerExchange data environment when you install the product. You specify the data set prefixes for sequential/PDS, VSAM, and archive data sets in the z/OS Installation Assistant. The z/OS Installation Assistant uses this information, along with other configuration information, to customize the JCL that you then run to create the libraries.

The following table summarizes the data sets that contain PowerExchange data on z/OS:

Data Set	Description	Created by	Bulk	CDC
AGENTREP	Sequential data set that specifies PowerExchange Agent parameters related to control of the capture registration subtask.	SETUPCC1 member of RUNLIB.	-	X
archive logs	PowerExchange Logger archive log data sets.	PowerExchange Logger, which uses the EDMUPARM created by the SETUPCC2 member in RUNLIB. This member specifies the ARCHIVE_OPTIONS values.	-	X
C1.CACHE C2.CACHE	Cache data sets for the PowerExchange Agent.	SETUPCC1 member of RUNLIB.	-	-
CCT	VSAM KSDS data set that contains capture registrations.	SETUPVSM member of RUNLIB.	-	X
CDCT	VSAM KSDS data set that contains PowerExchange Condense information.	SETUPVSM member of RUNLIB.	-	X

Data Set	Description	Created by	Bulk	CDC
CDEP	VSAM KSDS data set that contains capture extraction history information.	SETUPVSM member of RUNLIB.	-	X
checkpoint files	VSAM KSDS data sets that contain checkpoints for the Condense process.	Checkpoint files created as required by PowerExchange Condense. The data set prefix is specified by the CHKPT_BASENAME parameter in the CAPTPARM configuration file.	-	X
condense files	Files that contain the change data for the active registrations found by the condense job. PowerExchange Condense creates sequential data sets for capture registration that specify partial condense and VSAM KSDS data sets for those that specify full condense.	Condense files created as required by PowerExchange Condense. The data set prefix is specified by the EXT_CAPT_MASK parameter in the CAPTPARM configuration file.	-	X
DATAMAPS	VSAM KSDS data set that contains PowerExchange data maps.	XIBLK100 or SETUPVSM member of RUNLIB.	X	X
DTLCAMAP	VSAM KSDS data set that contains extraction maps.	SETUPVSM member of RUNLIB.	-	X
ERDS01 ERDS02	VSAM KSDS data sets called emergency restart data sets (ERDS) that the PowerExchange Logger uses to record the restart information and the data set names of the active and archive logs.	SETUPVSM member of RUNLIB.	-	X
LOGSCAT	PowerExchange Log Catalog for the IDMS log-based ECCR.	SETUPVSM member of RUNLIB.	-	-
PCAT	VSAM KSDS data set that is used by the Adabas ECCR.	SETUPVSM member of RUNLIB.	-	X
PRILOG.DS01 PRILOG.DS02 PRILOG.DS03	VSAM ESDS data sets used by the PowerExchange Logger as primary active log data sets.	SETUPVSM member of RUNLIB.	-	X
PROCLIB	PDS that contains the PowerExchange started task procedures.	SEUPBLK member of RUNLIB. Populated by the XIZZZ998 member of RUNLIB.	X	X

Data Set	Description	Created by	Bulk	CDC
RUNLIB	PDS that contains the jobs to install PowerExchange, jobs to set up and run PowerExchange, and the following configuration and license members: <ul style="list-style-type: none"> - AGENTCTL. Contains PowerExchange Agent configuration parameters. - CAPTxxx. Contains sample PowerExchange Condense CAPTPARM parameters for the data source. - DBMOVER. Contains PowerExchange configuration parameters. - LICENSE. License key member. 	Allocated by the user before installing the product. Populated by the z/OS Installation Assistant.	X	X
SECLOG.DS01 SECLOG.DS02 SECLOG.DS03	VSAM ESDS data sets used by the PowerExchange Logger as secondary active log data sets.	SETUPVSM member of RUNLIB. Dual active logging is specified in the EDMUPARM that is created by the SETUPCC2 member of RUNLIB.	-	X
SR2TOTAL	If IDMS log-based CDC is selected, a sequential data set that contains IDMS CDC information.	SETUPCC1 member of RUNLIB. Populated by the DTLUCSR2 utility.	-	X
SR2OUT	If IDMS log-based CDC is selected, a sequential data set that contains SR2/SR3 link information for IDMS databases registered for capture.	SETUPCC1 member of RUNLIB. Populated by the DTLUCSR2 utility.	-	X
USERLIB	Load library that contains control parameters for PowerExchange CDC, including the following members: <ul style="list-style-type: none"> - EDMSDIR. Contains configuration parameters for PowerExchange CDC. - EDMUPARM. Contains configuration parameters for the PowerExchange Logger. 	SETUPCC1 member of RUNLIB. Populated by the SETUPCC2 and XICDC600 members of RUNLIB.	-	X

DD Statements That Point to PowerExchange Data on z/OS

The JCL for PowerExchange components includes DD statements that point to PowerExchange data.

The following table lists the DD statements, the components for which the JCL includes the statement, and the data set or member to which the DD statement points:

DD Statement	PowerExchange Component	Points to
DTLACDC	PowerExchange Condense, PowerExchange Listener	CDCT data set
DTLACDE	PowerExchange Condense, PowerExchange Listener	CDEP data set
DTLADKSD	Adabas ECCR	PCAT data set

DD Statement	PowerExchange Component	Points to
DTLAMCPR	PowerExchange Condense, PowerExchange Listener	CCT data set
DTLCACFG	PowerExchange Condense, ECCRs	CAPTPARM parameters for PowerExchange Condense, configuration parameters for some ECCRs
DTLCAMAP	PowerExchange Condense, PowerExchange Listener	Data maps
DTLCFG	PowerExchange Agent, PowerExchange Condense, PowerExchange Listener, ECCRs	DBMOVER configuration member
DTLKEY	PowerExchange Agent, PowerExchange Condense, PowerExchange Listener, ECCRs	LICENSE member
EDMPARMS	PowerExchange Agent, PowerExchange Condense, ECCRs, PowerExchange Listener, PowerExchange Logger	USERLIB library, which contains the EDMSDIR module options
EDMSCTL	PowerExchange Agent	AGENTCTL parameters for EDMSCTL and IDMS log-based ECCR for LOGSCAT
ERDS01	PowerExchange Logger	Primary ERDS data set
ERDS02	PowerExchange Logger	Secondary ERDS data set
LOGSCAT	IDMS ECCR	PowerExchange Log Catalog for the IDMS ECCR

APPENDIX C

Manual Installation on IBM i

This appendix includes the following topics:

- [IBM i Manual Installation Overview, 196](#)
- [Performing a Full Installation on IBM i, 196](#)
- [Upgrading PowerExchange on IBM i, 205](#)
- [Installing a HotFix on IBM i, 207](#)

IBM i Manual Installation Overview

This appendix provides instructions for a manual installation of PowerExchange on IBM i, without using the PowerExchange IBM i Installer. The appendix includes instructions for a full installation, an upgrade, and a hotfix installation.

Performing a Full Installation on IBM i

Perform a full installation if you are installing PowerExchange for the first time or to a new location.

Before You Install PowerExchange on IBM i

Before installing PowerExchange, make sure that pre-installation requirements are met.

General Pre-installation Requirements

Review the information in this guide to perform the following tasks:

- Verify that PowerExchange supports the versions and release levels of your operating system and data sources.
- Obtain a valid license key.
- Verify that the new PowerExchange release can operate with your PowerCenter installation.
- If you are upgrading from a previous release and plan to run multiple releases of PowerExchange, verify that the new PowerExchange release can operate with your existing PowerExchange installation.
- If you are upgrading from a previous release, perform any required pre-installation upgrade tasks.

User ID Requirements

Optionally, create a user ID for the owner or administrator of the PowerExchange installation. Make sure that the user ID has sufficient rights and privileges for accessing source and target data from different locations on the IBM i platform.

To install the product, you must log in with a user profile that has the required authorities. Use one of the following user profiles:

- The IBM-supplied user profile of QSECOFR
- A user profile defined with the USRCLS parameter set to *SECOFR and the SPCAUT parameter set to *USRCLS
- If the USRCLS parameter is not set to *SECOFR, a user profile with at least the following SPCAUT values: *SECADM, *ALLOBJ, and *JOBCTL

Disk Space Requirements

Verify that you have sufficient disk space. PowerExchange requires about 140 MB of disk space. You might need additional disk space depending on the number of files that will be sent and received and the number of databases.

IBM i System Value Requirements

PowerExchange requires that certain system values be set correctly on the IBM i system to avoid run-time failures or other unexpected errors that might occur when PowerExchange bulk data movement or CDC sessions run.

Set the following system values:

QCCSID - Coded Character Set Identifier

For PowerExchange to process metadata information correctly, the QCCSID system value must be set according to IBM guidelines.

Set QCCSID based on the language installed on the system. On a double-byte character set (DBCS) system, set QCCSID to a mixed CCSID. On a non-DBCS system, set QCCSID to a single-byte character set (SBCS) CCSID. For more information, see the IBM Knowledge Center website.

If you allow QCCSID to use the default value of 65535 instead of the correct value for the system, PowerExchange metadata requests fail with messages such as the following message when attempting to access DB2 tables:

```
SQL0332 - Character conversion between CCSID 1200 and CCSID 65535 not valid.
```

This error occurs on multibyte CCSID systems when columns are defined as GRAPHIC so that they can store multibyte values.

QSHRMEMCTL - Shared Memory Control

PowerExchange uses memory-mapping functions to pass information between running tasks. For these functions to work, set QSHRMEMCTL to 1.

Task Flow for a Full Installation on IBM i

Use the following checklist of tasks to perform a full installation of PowerExchange on IBM i:

Check	Task	Required or Optional
	"Step 1. Set the IASP Group for PowerExchange Libraries" on page 198	Required for IASP use
	"Step 2. Create the PowerExchange Library" on page 199	Required
	"Step 3. Create a Save File for Restores" on page 199	Required
	"Step 4. Transfer the Binary Executable File" on page 199	Required
	"Step 5. Restore the Installation Library" on page 200	Required
	"Step 6. Edit the License Key File" on page 200	Required
	"Step 7. Create the PowerExchange Environment" on page 200	Required
	"Step 8. Change Object Ownership (Optional)" on page 203	Optional
	"Step 9. Create a Relational Database Directory Entry (Optional)" on page 204	Optional
	"Step 10. Configure PowerExchange User Authority" on page 204	Required
	"Step 11. Test the Installation" on page 204	Recommended

Installing PowerExchange on IBM i

Complete the following steps to perform a full installation of PowerExchange on IBM i.

The installation steps refer to the following variables:

- *condlib* is the library that contains PowerExchange Condense files such as condense files.
- *datalib* is the PowerExchange data library.
- *dtllib* is the PowerExchange software library.
- *pxusr* is the user ID under which PowerExchange runs.

Replace these variables with the library names and user that you want to use for your installation.

All libraries must reside in either the system auxiliary storage pool, ASP 1, or in an independent auxiliary storage pool (IASP) that is identified by a device name.

Tip: If you plan to run multiple PowerExchange releases, for example, for testing and production, install each release in a separate library. This practice allows different releases to coexist and prevents overwriting an existing release with the new release that you are installing.

Step 1. Set the IASP Group for PowerExchange Libraries

If you plan to run PowerExchange within an independent auxiliary storage pool (IASP), you must specify the auxiliary storage pool (ASP) group that will contain the PowerExchange libraries.

Note: All PowerExchange libraries must reside in either the system auxiliary storage pool, ASP 1, or in an independent auxiliary storage pool identified by a device name.

```
SETASPGRP ASPGRP(asp_device)
```

Step 2. Create the PowerExchange Library

In this step, you create the *dtllib* library for PowerExchange software.

To create the *dtllib* library, issue the following command:

```
CRTLIB LIB(dtllib) CRTAUT(*CHANGE)
```

Include CRTAUT(*CHANGE) if it is not the default.

If you plan to use flat or sequential files on the i5/OS system as data sources or targets, enter the following command to create a data maps library:

```
CRTLIB stdatamaps
```

Note: If you specify a different name for your data maps library, you must specify that name in the DMX_DIR parameter of the DBMOVER configuration file in the *datalib* library.

If you plan to run PowerExchange within an independent auxiliary storage pool (IASP), issue the following command instead:

```
CRTLIB LIB(dtllib) CRTAUT(*CHANGE) ASP(*ASPDEV) ASPDEV(asp_device)
```

Step 3. Create a Save File for Restores

In this step, you create a save file to store the PowerExchange-distributed save file.

To create the save file, issue the following command:

```
CRTSAVF FILE(library/save_file_name)
```

This file can be created in any library, such as QGPL/libres.

Note: In previous releases, PowerExchange distributed a separate save file that contained the necessary ICU objects for code page support. PowerExchange now includes these ICU objects in the same save file as the PowerExchange software. For more information about code page support in PowerExchange, see the *PowerExchange Reference Manual*.

Step 4. Transfer the Binary Executable File

In this step, you transfer the IBM i save file from the target directory on the Windows machine to the save file on IBM i that you created in the previous step.

PowerExchange provides the following self-extracting zip file for the PowerExchange for IBM i installation:

```
pwxvrm_i5os.exe
```

The *vrm* variable represents the PowerExchange version and release number.

When you extract the zip file, you must specify a target directory on the Windows machine that will be used to unzip the file. After you extract the zip file on Windows, the following object is created in the target directory:

```
pwxvrm_i5os
```

This object is an IBM i save file that contains the PowerExchange software.

Using binary mode in FTP, transfer the IBM i save file from the target directory on the Windows machine to the save file on IBM i that you created in the previous step.

Step 5. Restore the Installation Library

In this step, you restore the save file that you transferred to IBM i with FTP in the previous step.

After you transfer the binary save data, use the following command to display the save file that was updated by the FTP process:

```
DSPSAVF FILE(library/save_file_name)
```

Use the displayed **Library saved** value in the SAVLIB parameter of the following command to restore the save file that you transferred to IBM i in the previous step:

```
RSTLIB SAVLIB(DTLvrm) DEV(*SAVF) SAVF(library/save_file_name) RSTLIB(dtllib)  
MBROPT(*ALL) ALWOBJDIF(*ALL) FRCOBJCVN(*YES)
```

DTLvrm is the library that contains the save file. vrm is the version, release, and modification level of that library. The modification level can include a release type, such as GA for general availability or HF n for a hotfix. You must include the entire name in the SAVLIB parameter, including the release type.

You can install and run PowerExchange by using an IASP. To do so, you must specify the details for the IASP into which you will restore the objects by using the RSTASPDEV parameter. The following example shows the RSTLIB syntax with the RSTASPDEV parameter:

```
RSTLIB SAVLIB(DTLvrm) DEV(*SAVF) SAVF(library/save_file_name) RSTLIB(dtllib)  
MBROPT(*ALL) ALWOBJDIF(*ALL) FRCOBJCVN(*YES) RSTASPDEV(asp_device)
```

After the RSTLIB command completes, you can delete the save file by using the following command:

```
DLTF File(library/save_file)
```

Step 6. Edit the License Key File

Edit the license key file to add the key for the newly installed PowerExchange software. PowerExchange requires a license key to run.

Enter the license key in the dtllib/LICENSE(KEY) file. This file must be in the same library as the PowerExchange Listener program dtllst. In the file, update the single record member with your 64-byte license key, including a hyphen every 4 bytes. For example:

```
1234-ABCD-1234-EF01-5678-A9B2-E1E2-E3E4-A5F1-A9B2-1234-E3D4-95F1
```

Step 7. Create the PowerExchange Environment

In this step, you use the CRTPWXENV command to create a PowerExchange environment.

A PowerExchange environment includes the following libraries:

- *dtllib*. PowerExchange software library.
- *datilib*. Library that contains data files such as the CCT file for capture registrations, PowerExchange configuration parameters, and the LISTENER and DTLOS_MSQG message queues.
- *condlib*. Library that is used only for CDC with PowerExchange Condense. This library contains PowerExchange Condense condense files; lock files; the CFGCOND(CAPTPARM) configuration member; and the CHECKPOINT, CMDHANDLER, COLLECTOR, CONDENSE, CONTROLLER and DUMP message queues. PowerExchange deletes files in this library during normal operation. Do not place your own files in this library without first contacting Informatica Global Customer Support.
- *cpplib*. Library that contains extraction maps. This library is required only for CDC processing.

Ensure that the CRTPWXENV command runs under a user profile that has the required authority. For more information, see ["User ID Requirements" on page 44](#). If you plan to use remote journals for CDC, ensure that the user profile has the required authority on both the local and remote systems.

1. Issue the following command:

```
ADDLIB LIB(dtllib) POSITION(*FIRST)
```

2. Issue the CRTPWXENV command to create the PowerExchange environment. The parameters that you specify on the CRTPWXENV command depend on whether you use CDC processing or only the bulk data movement function and whether you restored *dtllib* to an IASP.

If you capture change data from journal receivers on the same system as the DB2 database, use the following command syntax:

```
CRTPWXENV DESC('user_description')
DATALIB(datalib) CONDLIB(condlib)
ASPDEV(*NONE) CRTSYSOBJ(*YES) CPXLIB(cpplib)
JRNEXTSEQ(nnnn) RMTOSLEVEL(*LOCAL)
```

If you capture change data from remote journal receivers, use the following command syntax:

```
CRTPWXENV DESC('user_description')
DATALIB(datalib) CONDLIB(condlib)
ASPDEV(*NONE) CRTSYSOBJ(*YES) CPXLIB(cpplib)
JRNEXTSEQ(nnnn) RMTASPDEV(*NONE)
RMRTRDBDIRE(database_name)
RMTSYSNAME(host_name) RMTOSLEVEL(os_level)
```

If you complete bulk data movement operations only, use the following command syntax:

```
CRTPWXENV DESC('user_description')
DATALIB(datalib) CONDLIB(*NONE)
ASPDEV(*NONE) CRTSYSOBJ(*YES)
```

If you restored *dtllib* into an IASP, specify the name of the ASP device in the ASPDEV parameter of the CRTPWXENV command. For example:

```
CRTPWXENV DESC('user_description')
DATALIB(datalib) CONDLIB(condlib)
ASPDEV(asp_device) CRTSYSOBJ(*YES)
CPXLIB(cpplib) JRNEXTSEQ(nnnn)
RMTOSLEVEL(*LOCAL) EXTPGMLIB(exitlib)
```

The following table describes the parameters of the CRTPWXENV command:

Parameter	Valid Values	Description
ASPDEV	1 to 10 characters	Name of the ASP device where <i>dtllib</i> resides. All PowerExchange libraries must reside on the same ASP device. Default is *NONE.
CONDLIB	1 to 10 characters	PowerExchange Condense library that contains objects such as a configuration source file, data files for checkpoints and condense files, message queues, and the PowerExchange Delete Journal Receiver exit program and its journal.
CPXLIB	1 to 10 characters	PowerExchange capture library that contains the extraction map files. Default is *NONE.
CRTSYSOBJ	See next table.	-
DATALIB	1 to 10 characters	PowerExchange data library that contains objects such as a configuration source file, data files for capture registrations and condense files, the message log file, message queues, and PowerExchange job description.

Parameter	Valid Values	Description
DESC	1 to 25 characters	A brief text description that PowerExchange uses when creating the <i>datalib</i> , <i>condlib</i> , and <i>cpplib</i> libraries.
EXTPGMLIB	1 to 10 characters	Specifies a PowerExchange Delete Journal exit program library. Default is *NONE. Use the default unless you also specified the ASPDEV parameter.
JRNEXTSEQ	1000 through 9999	A unique four-digit number that is used to register the PowerExchange Delete Journal Receiver exit program for the exit point QIBM_QJO_DLT_JRNRCV. Specify a value that is not used on your system. To determine the numbers that are currently registered against the exit point, use the WRKREGINF command and then choose option 8. Default is 1000.
RMTASPDEV	Maximum length of 10 characters	In a remote journaling environment, the name of an ASP device on which the CRTPWXENV command creates only dtllib and datalib libraries that contain a SQL package and SQL views for accessing source table metadata. This ASP device is remote from where you run the CRTPWXENV command and create the primary PowerExchange environment. Include this parameter only if you plan to use remote journal receivers for CDC and want to use an ASP on the local system to store the files that the remote PowerExchange Listener requires to access the table metadata. Default is *.
RMTOSLEVEL	*LOCAL V7R1M0 V7R2M0 V7R3M0	Specifies the IBM i version that runs on a remote machine. Include this parameter only if the metadata being retrieved is for tables that are stored in libraries on a remote machine. If the metadata is on the machine where this command is executed, the software determines the operating system release level. This parameter controls the views that the software builds over the system metadata tables.
RMTRDBDIRE	Maximum length of 18 characters	In a remote journaling environment, the name of DB2 database on the local system that contains the DB2 source tables for CDC. This value must have been defined to IBM i with the "Work with Relational Database Directory Entries" function (WRKRDBDIRE). Include this parameter only if you plan to use remote journal receivers for CDC. Default is *LOCAL.
RMTSYSNAME	Maximum length of 68 characters	In a remote journaling environment, the name of the IBM i host that contains the DB2 source tables for CDC and the local journals and journal receivers. Also called the local system. This value must have been defined to IBM i with the "Work with TCP/IP Host Table Entries" function. Include this parameter only if you plan to use remote journal receivers for CDC. Default is *NONE.

The following table describes the objects that the CRTSYSOBJ parameter creates so that PowerExchange can run in its own subsystem:

Object Type	Description	Object Name	Library
*CLS	Class that defines the run-time attributes of PowerExchange jobs.	DTLLIST	<i>datalib</i>
*OUTQ	Output queue that stores all spooled file outputs from PowerExchange jobs.	<i>datalib</i>	QGPL
*SBSD	Subsystem description that is used to run all the PowerExchange jobs for this environment.	<i>datalib</i>	QGPL
*JOBQ	Job queue that is associated with the subsystem description.	<i>datalib</i>	QGPL
*JOBDD	Job description that describes a job that uses all the system objects and libraries created for this environment.	DTLLIST	<i>datalib</i>

- If you want to move the objects that are created by default in the QGPL library to other libraries, use the appropriate commands.

You might not be able to move objects to an alternative library in an IASP. IBM i does not permit certain object types, such as output queues and job queues, to reside in libraries within an IASP.

The following example shows the commands that you can use to move objects to an alternative library *newlib*:

```
ENDSBS SBS(datalib)
MOVOBJ OBJ(save_file_library/datalib) OBJTYPE(*OUTQ) TOLIB(newlib)
MOVOBJ OBJ(save_file_library/datalib) OBJTYPE(*JOBQ) TOLIB(newlib)
MOVOBJ OBJ(save_file_library/datalib) OBJTYPE(*SBSD) TOLIB(newlib)
CHGJOBDD JOBDD(datalib/DTLLIST) JOBQ(newlib/datalib) OUTQ(newlib/datalib)
RMVJOBQ SBSD(newlib/datalib) JOBQ(save_file_library/datalib)
ADDJOBQ SBSD(newlib/datalib) JOBQ(newlib/datalib) MAXACT(*NOMAX)
SEQNBR(1) MAXPTY1(*NOMAX) MAXPTY2(*NOMAX)
MAXPTY3(*NOMAX) MAXPTY4(*NOMAX) MAXPTY5(*NOMAX) MAXPTY6(*NOMAX)
MAXPTY7(*NOMAX) MAXPTY8(*NOMAX) MAXPTY9(*NOMAX) STRSBS SBSD(newlib/datalib)
```

Note: If you specify CRTSYSOBJ(*NO) on the CRTPWXENV command, make sure the subsystem and job queue where you intend to run the PowerExchange Listener can support multiple concurrent jobs. If you are using CDC, the subsystem and job queue should support a minimum of six concurrent jobs.

Step 8. Change Object Ownership (Optional)

You can change the ownership of the objects that were created from the shipped library and are owned by the user ID under which PowerExchange software and libraries were installed. Perform this step if you use a user ID for installation that is different from the one under which you want to run PowerExchange.

To change this user ID for the *dtllib* and *datalib* libraries, enter the following commands:

```
call pgm(dtllib/chgallobj) parm('dtllib' 'pwxusr')
call pgm(dtllib/chgallobj) parm('datalib' 'pwxusr')
```

To change the user ID for the *condlib* and *cpplib* libraries, which are used for PowerExchange CDC, enter the following commands:

```
call pgm(dtllib/chgallobj) parm('condlib' 'pwxusr')
call pgm(dtllib/chgallobj) parm('cpplib' 'pwxusr')
```

Step 9. Create a Relational Database Directory Entry (Optional)

Perform this step only if you want to use the DB2400C DB2 Call Level Interface (CLI) access method.

Use the following command to specify that the Relational Database Directory entry or entries with which you want to work:

```
WRKRDBDIRE
```

A Relational Database Directory entry can be a local database or a remote database on an IBM i system on which the PowerExchange Listener running. This command specifies all local and remote entries on the IBM i system, including *LOCAL.

If a Relational Database Directory entry does not exist, you must create one. The CLI access method requires a Relational Database Directory entry to obtain the name of the database to access.

Step 10. Configure PowerExchange User Authority

Configure security options for the PowerExchange Listener and user.

If you want to run the PowerExchange Listener interactively, ensure that the library list for the current job includes the *dtllib* and *datilib* libraries before running the commands that are shown in this topic.

If you want the PowerExchange Listener to use the user ID and passwords supplied from the remote platform for security, change the first parameter in the SECURITY statement in the DBMOVER configuration file to a nonzero value.

Before running jobs, ensure the *pwxusr* user ID has *EXECUTE authority for the following objects:

- QSYGETPH
- QSYRLSPH
- QWTSETP
- QCLRPGMI

To grant EXECUTE authority on these objects, run the following commands:

```
GRTOBJAUT OBJ(QSYGETPH) OBJTYPE(*PGM) AUT(*EXECUTE) USER(pwxusr)
GRTOBJAUT OBJ(QSYRLSPH) OBJTYPE(*PGM) AUT(*EXECUTE) USER(pwxusr)
GRTOBJAUT OBJ(QWTSETP) OBJTYPE(*PGM) AUT(*EXECUTE) USER(pwxusr)
GRTOBJAUT OBJ(QCLRPGMI) OBJTYPE(*PGM) AUT(*EXECUTE *READ) USER(pwxusr)
```

Also, to run the PowerExchange Listener, the *pwxusr* user ID must have *READ authority for all of the user profiles. To grant *READ authority, run the following command:

```
GRTOBJAUT OBJ(remote_id) OBJTYPE(*USRPRF) AUT(*READ) USER(pwxusr)
```

Step 11. Test the Installation

To test the installation, use the PowerExchange DTLINFO utility, which is located in the PowerExchange software library that you specified in the IBM i Installer.

To run the DTLINFO utility, enter the following command:

```
CALL DTLINFO
```

The following information is displayed for the current PowerExchange installation:

- Version
- Release and release level
- Build date and time

For more information about DTLINFO, see the *PowerExchange Utilities Guide*.

After You Install PowerExchange on IBM i

After you install PowerExchange, perform the following post-installation tasks:

- If you are upgrading from a previous release, review the *PowerExchange Release Guide* for new features and changes.
- Optionally, copy PowerExchange data and configuration files from the previous release.
- Configure PowerExchange prior to performing bulk data movement or change data capture (CDC).

For more information about configuring PowerExchange, see the following documents:

- For bulk data movement configuration, see the *PowerExchange Bulk Data Movement Guide*.
- For CDC configuration, see the *PowerExchange CDC Guide for i5/OS*.
- For DBMOVER configuration file parameters, see the *PowerExchange Reference Manual*.

After you have configured PowerExchange and optionally copied PowerExchange data, you can start the PowerExchange Listener and, if required, PowerExchange Condense. For more information about starting and stopping PowerExchange tasks, see the *PowerExchange Command Reference*.

Upgrading PowerExchange on IBM i

To upgrade an existing PowerExchange installation on IBM i, use the procedure for a full installation. For more information, see [“Performing a Full Installation on IBM i” on page 196](#). Also, review the following prerequisite tasks, upgrade considerations, and postrequisite tasks.

Before You Upgrade PowerExchange on IBM i

Before you upgrade PowerExchange on IBM i, perform the following prerequisite tasks:

1. Stop all PowerExchange tasks.
2. Back up the PowerExchange installation library (*dtllib*). This library contains the PowerExchange programs, messages, and license key. If you specified the DMX_DIR statement in the DBMOVER member of the CFG file, back up the library to which it points.
3. If you use CDC, back up the following libraries:
 - Data library (*datalib*). PowerExchange created this library when you ran the CRTPWXENV command as a part of the installation process. This library contains the CFG file, the CCT file with the capture registrations, and the CDCT file with information about PowerExchange condense files.
 - Extraction library (*cpplib*). This library contains the extraction maps. The CPX_DIR statement in the DBMOVER member of the CFG file points to this library.
4. If you use PowerExchange Condense, back up the directories referenced by the following parameters in the CAPTPARM member of the CFG file:
 - CHKPT_BASENAME. The library and base file name that PowerExchange Condense uses for generating checkpoint files.
 - COND_DIR. The library that is specified in this parameter contains the condense files created by PowerExchange Condense.

Note: If you plan to cold start PowerExchange Condense, you do not need to back up the libraries specified in the CHKPT_BASENAME and COND_DIR parameters.

Upgrading PowerExchange on IBM i

PowerExchange does not provide an upgrade installation option for IBM i. You must perform a full installation. When you perform the full installation, you create a new PowerExchange environment that includes new copies of the following libraries:

- **STDATAMAPS.** The default PowerExchange library name for data maps. You can override the name for the data map library by using the `DMX_DIR` statement in the `DBMOVER` configuration file.
- **Software Library (*dtllib*).** The library that contains the PowerExchange software and resource files. You can use an existing library or create one when you run the IBM i Installer.
- **Data Library (*datalib*).** PowerExchange creates this library when you run the IBM i Installer. This library contains the `CFG` file, the `CCT` file with the capture registrations, and the `CDCT` file with information about PowerExchange condense files.
- **Extraction Library (*cpplib*).** The PowerExchange library for CDC extraction maps. PowerExchange creates this library when you run the IBM i Installer. You can override the name for the extraction library by defining the `CPX_DIR` statement in the `DBMOVER` member of the `CFG` file.
- **Condense Library (*condlib*).** The PowerExchange Condense library that contains the condense files. PowerExchange creates this library when you run the IBM i installer. You can override the name for the PowerExchange Condense library in the installer, or by defining the `COND_DIR` parameter in the `CAPTPARM` member of the `CFG` file. PowerExchange Condense writes change data to condense files in this library.
- **Checkpoint files.** The checkpoint files for PowerExchange Condense. To specify the library and file-name prefix for these files, specify the `CHKPT_BASENAME` parameter in the `CAPTPARM` member of the `CFG` file.

After You Upgrade PowerExchange on IBM i

After you upgrade PowerExchange, perform the following post-installation tasks:

- Review the *PowerExchange Release Guide* for new features and changes.
- Optionally, copy PowerExchange data and configuration files from the previous release.
- If necessary, configure PowerExchange prior to performing bulk data movement or change data capture (CDC).

Copying Data and Configuration Files from a Previous Release on IBM i

After you complete the PowerExchange installation, you can copy or migrate the data maps, capture registrations, extraction maps, configuration files, and PowerExchange Condense checkpoint and condense files from the previous release to the libraries in the new PowerExchange environment. By copying this information, you maintain all existing bulk and CDC map definitions as well as condense files with change data.

For bulk data movement, copy the `DBMOVER` member of the *datalib*/`CFG` file from the previous release installation to the new installation.

For CDC, if you use PowerExchange Condense and plan to warm start it, copy the following libraries, files, and members from the previous release installation to the new installation:

- The `DBMOVER` member of the *datalib*/`CFG` file.
- All files that begin with `FULL` and `PART` in the *condlib* library, including the condense files that contain the change data.
- PowerExchange Condense checkpoint files, to which the `CHKPT_BASENAME` parameter in the `CAPTPARM` member of the `CFG` file refers.

If you plan to cold start PowerExchange Condense in the new environment, you only need to copy the DBMOVER member of the *datalib*/CFG file. You do not need to copy any additional files.

You can use the DTLURDMO utility to migrate data maps, capture registrations, and extraction maps. For more information, see [“Migrating Data Maps, Capture Registrations, and Extraction Maps” on page 38](#).

PowerExchange Configuration

If necessary, configure PowerExchange prior to performing bulk data movement or change data capture (CDC).

For configuration information, see the following documents:

- For bulk data movement configuration, see the *PowerExchange Bulk Data Movement Guide*.
- For CDC configuration, see the *PowerExchange CDC Guide for i5/OS*.
- For DBMOVER configuration file parameters, see the *PowerExchange Reference Manual*.

After you have configured PowerExchange, you can restart the PowerExchange Listener and, if required, PowerExchange Condense. For more information about starting and stopping PowerExchange tasks, see the *PowerExchange Command Reference*.

Installing a HotFix on IBM i

Install a hotfix in an existing PowerExchange environment on IBM i to get a bundle of fixes and enhancements. The hotfix version and the PowerExchange installed version must be the same.

When you install a hotfix, PowerExchange does not create new data libraries, such as those for data maps, capture registrations, and extraction maps. As a result, you do not need to migrate the contents of these data sets, which simplifies the installation process.

Because PowerExchange hotfixes are cumulative, you can install the latest available hotfix to get the changes in any previous hotfixes for the same PowerExchange version.

Before You Install a HotFix on IBM i

Before you install the hotfix, perform following prerequisite tasks:

1. Stop all PowerExchange tasks.
2. Back up the PowerExchange software library (*dtllib*). This library contains the PowerExchange programs, messages, and license key. If you specified the DMX_DIR statement in the DBMOVER member of the CFG file, back up the library to which it points.
3. If you use CDC, back up the following libraries:
 - Data library (*datalib*). PowerExchange created this library when you ran the IBM i Installer or CRTPWXENV command. This library contains the CFG file, the CCT file with the capture registrations, and the CDCT file with information about PowerExchange condense files.
 - Extraction library (*cpplib*). This library contains the extraction maps. The CPX_DIR statement in the DBMOVER member of the CFG file points to this library.

4. If you use PowerExchange Condense, back up the directories referenced by the following parameters in the CAPTPARM member of the CFG file:

- **CHKPT_BASENAME.** The library and base file name that PowerExchange Condense uses for generating checkpoint files.
- **COND_DIR.** The library that is specified in this parameter contains the condense files created by PowerExchange Condense.

Note: If you plan to cold start PowerExchange Condense, you do not need to back up the libraries specified in the CHKPT_BASENAME and COND_DIR parameters.

Task Flow for Installing a HotFix on IBM i

Use the following checklist of tasks to install a PowerExchange hotfix on IBM i:

Check	Task	Required or Optional
	"Step 1. Extract the Save File on Windows" on page 208	Required
	"Step 2. Transfer the Save File to the IBM i System" on page 209	Required
	"Step 3. Restore the Save File" on page 209	Required
	"Step 4. Verify the License Key File" on page 209	Required
	"Step 5. Update the Signature of Installed Programs" on page 209	Required only if indicated by the Release Notes for the hotfix
	"Step 6. Update the DB2 Package for Remote Journals" on page 210	Required if you configured IBM i to access DB2 for IBM i metadata on a remote system for CDC
	"Step 7. Change Object Ownership (Optional)" on page 210	Optional
	"Step 8. Verify That the HotFix Is Installed" on page 210	Recommended
	"Step 9. Restart PowerExchange Tasks" on page 210	Required

Installing a HotFix on IBM i

Complete the following steps to install a PowerExchange hotfix on IBM i:

Step 1. Extract the Save File on Windows

PowerExchange provides a single self-extracting executable zip file that contains the save file for the hotfix. The zip file is located in the `patches/i5os` directory of the CD image. The zip file name has the following format:

```
pwxvrm_hotfixn_i5os.exe
```

The variable `vrm` is the version, release, and modification level, and the variable `n` is the hotfix number. For more information about the specific file name, see the *PowerExchange Release Notes* for the PowerExchange hotfix.

Unzip the self-extracting zip file into a temporary directory on your Windows computer.

Step 2. Transfer the Save File to the IBM i System

On the IBM i system, enter the following IBM i command to create a save file in which to store the hotfix installation file:

```
CRTSAVF library/save_file
```

Then, use FTP to transfer the hotfix installation file in BINARY mode to the save file on the IBM i system.

Step 3. Restore the Save File

Enter the following IBM i command to restore the save file to the PowerExchange installation library, *dtllib*:

```
RSTOBJ OBJ(*ALL) SAVLIB(DTLvrm) DEV(*SAVF) SAVF(library/save_file) RSTLIB(dtllib)  
MBROPT(*ALL) ALWOBJDIF(*ALL) FRCOBJCVN(*YES)
```

The following table describes the variables that you need to enter in some of the parameters in the RSTOBJ command:

Parameter	Description
<i>DTLvrm</i>	The name of the library saved. PowerExchange uses "DTL" followed by the PowerExchange version.release.modification number. Use the DSPSAVF command to display the name of the library.
<i>library/save_file</i>	The name of the library and save file to which you stored the hotfix installation file.
<i>dtllib</i>	The name of the PowerExchange installation library.

Step 4. Verify the License Key File

If you store the license key in the PowerExchange installation directory, verify that it is still correct and has not been affected by the hotfix installation. If necessary, copy the KEY member of the LICENSE file from the backup.

To make migration to a new release simpler, store the license key in a library other than the PowerExchange installation library. You can use options on the start commands to point to locations of the license key and DBMOVER files. For more information about options for start commands for PowerExchange tasks, see ["File Parameters in PowerExchange Start Commands on i5/OS" on page 189](#).

Step 5. Update the Signature of Installed Programs

The UPDPWXENV command updates the IBM i signatures of the PowerExchange programs so that these signatures match the signatures of the service programs. The *PowerExchange Release Notes* for the hotfix indicates if you need to run the command.

- To update the signatures of PowerExchange programs, issue the following command:

```
UPDPWXENV PWXLIB(dtllib) DATALIB(data-lib) SAVF(library/save_file)
```

The following table describes the variables that you need to enter in the parameters in the UPDPWXENV command:

Variable	Variable Description
<i>dtllib</i>	The name of the PowerExchange installation library.
<i>datalib</i>	The name of the PowerExchange dat library.
<i>library/save_file</i>	The name of the library and save file in which you stored the hotfix installation file.

Step 6. Update the DB2 Package for Remote Journals

If you configured the IBM i system to access DB2 for IBM i metadata on a remote system for CDC, update the DB2 package for the remote journals.

- To update the package, issue the CRTPWXPKG command from the IBM i console.

Use the following syntax:

```
CRTPWXPKG DTLLIB(dtllib) DATALIB(datalib) RMRTRBDIRE(database_name)
```

Step 7. Change Object Ownership (Optional)

If you previously changed the ownership of objects when you performed the full installation, you must run the same commands from Step 7 of the full installation again to change the ownership of the objects that the hotfix supplies.

To change user ID for the *dtllib* and *datalib* libraries, run the following commands:

```
call pgm(dtllib/chgallobj) parm('dtllib' 'pwxusr')
call pgm(dtllib/chgallobj) parm('datalib' 'pwxusr')
```

To change the user ID for the *condlib* and *cpplib* libraries, run the following commands:

```
call pgm(dtllib/chgallobj) parm('condlib' 'pwxusr')
call pgm(dtllib/chgallobj) parm('cpplib' 'pwxusr')
```

Step 8. Verify That the HotFix Is Installed

Run the DTLINFO utility to confirm that the current PowerExchange version matches the hotfix level.

For more information about the DTLINFO utility, see the *PowerExchange Utilities Guide*.

Step 9. Restart PowerExchange Tasks

Restart the PowerExchange tasks that you stopped just prior to installing the hotfix.

These tasks include the PowerExchange Listener and PowerExchange Condense tasks. For more information, see the *PowerExchange Command Reference*.

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