



Informatica® PowerExchange CDC Publisher
1.3

Release Guide

Informatica PowerExchange CDC Publisher Release Guide

1.3

October 2020

© Copyright Informatica LLC 2019, 2020

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

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

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

Portions of this software and/or documentation are subject to copyright held by third parties. Required third party notices are included with the product.

The information in this documentation is subject to change without notice. If you find any problems in this documentation, report them to us at infa_documentation@informatica.com.

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

Publication Date: 2020-10-09

Table of Contents

Preface	4
Informatica Resources.	4
Informatica Network.	4
Informatica Knowledge Base.	4
Informatica Documentation.	4
Informatica Product Availability Matrices.	5
Informatica Velocity.	5
Informatica Marketplace.	5
Informatica Global Customer Support.	5
 Chapter 1: Version 1.3.....	6
New Features and Enhancements.	6
Configuration Property Changes.	7
Changes to Software Requirements.	8
Operating Systems.	8
PowerExchange Versions.	8
Target Versions.	9
 Chapter 2: Version 1.2.....	10
New Features and Enhancements.	10
Configuration Property Changes.	11
Changes to Software Requirements.	11
PowerExchange Versions.	11
Target Versions.	11
 Chapter 3: Version 1.1.....	13
New Features and Enhancements.	13
Configuration Property Changes.	14
Behavior Changes.	15
Changes to Software Requirements.	15
Operating Systems.	15
Target Versions.	15
 Chapter 4: Version 1.0.....	16
Introducing PowerExchange CDC Publisher.	16
Software Requirements.	17
 Index.....	18

Preface

The *PowerExchange CDC Publisher Release Guide* describes the cumulative changes for Informatica® PowerExchange® CDC Publisher releases that are currently supported, beginning with version 1.0.

Review this guide to get an overview of the changes in each release. The guide lists new features and enhancements, behavior changes, and new and changed commands and parameters. The guide also covers any changes to supported operating systems, PowerExchange versions, and target versions.

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.
- Create and review your support cases.
- Find your local Informatica User Group Network and collaborate with your peers.

Informatica Knowledge Base

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

To search the Knowledge Base, visit <https://search.informatica.com>. If you have questions, comments, or ideas about the Knowledge Base, contact the Informatica Knowledge Base team at KB_Feedback@informatica.com.

Informatica Documentation

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>.

Informatica maintains documentation for many products on the Informatica Knowledge Base in addition to the Documentation Portal. If you cannot find documentation for your product or product version on the Documentation Portal, search the Knowledge Base at <https://search.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.

Informatica Marketplace

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

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 <http://network.informatica.com> and select the eSupport option.

CHAPTER 1

Version 1.3

This chapter includes the following topics:

- [New Features and Enhancements, 6](#)
- [Configuration Property Changes, 7](#)
- [Changes to Software Requirements, 8](#)

New Features and Enhancements

PowerExchange CDC Publisher 1.3 introduces the following features and enhancements:

Custom Pattern Formatter

If the Formatter does not meet your message format requirements, you can use the Custom Pattern Formatter, which is an extension of the Formatter to create user-defined patterns that customize the resulting Kafka messages. The Custom Pattern Formatter uses the definitions you create to format the message output. You can create patterns in any text-based form without restrictions, for example, in comma separated (CSV), JSON, or other text-based format. The custom patterns use tags that are similar to HTML tags. The custom patterns describe how the change data is presented in the message output. You can provide a custom pattern to describe the output for source tables, and you can also specify a default pattern for tables for which a specific pattern is not defined. Custom patterns support date, time, and timestamp conversions using masks, and data type overrides.

For more information, see Appendix C "Custom Pattern Formats" in the *PowerExchange CDC Publisher User Guide*.

Storing Checkpoints in Kafka

By default, PowerExchange CDC Publisher generates a checkpoint file after it sends the first change operation. As data streaming progresses, CDC Publisher saves information about the last change operation processed to the checkpoint file. If you set the connector property `Connector.checkpointsInTarget` to true in the `cdcPublisherKafka.cfg` file, CDC Publisher stores checkpoints in the Kafka headers instead of in the checkpoint file. To store checkpoints in Kafka headers, the Kafka version must be 0.11.0.2 or later.

For more information, see Chapter 3 "PowerExchange CDC Publisher Key Concepts" and Chapter 6 "Configuring PowerExchange CDC Publisher" in the *PowerExchange CDC Publisher User Guide*.

PwxCDCInfo Utility Enhancement

If you specify `STATS=INTERNAL` parameter in the `PwxCDCInfo` utility command, the utility reports the name of the PowerExchange Logger log file that the CDC Publisher is reading.

For more information, see Appendix A "Command Reference for the Command-Line Utilities" in the *PowerExchange CDC Publisher User Guide*.

PwxCDCAdmin Utility Enhancements

The PwxCDCAdmin utility has the following enhancements:

- To validate the content of custom patterns, you can add the optional CHECKCUSTOMPATTERNS parameter in the PwxCDCAdmin utility command.
- To override the file extension for reports that the utility generates, you can specify the SUFFIX option for the REPORT parameter in the PwxCDCAdmin command. The default suffix is .rpt unless it is overridden by the Common.ReportSuffix configuration parameter.

For more information, see Appendix A "Command Reference for the Command-Line Utilities" in the *PowerExchange CDC Publisher User Guide*.

PostgreSQL Data Source Support

PowerExchange CDC Publisher 1.3 can now capture change data from PostgreSQL sources on Windows or Linux.

For more information, see Chapter 1 "PowerExchange CDC Publisher Overview" in the *PowerExchange CDC Publisher User Guide*.

Avro Logical Date and Time Values in UTC

PowerExchange CDC Publisher now represents Avro logical date and time values in UTC by default. Previously, CDC Publisher converted Avro logical date and time values to long epoch values by using a UTC time zone. To revert to the previous behavior, set the Formatter.avroUseOriginalLogicalTimeConvertToUtc property to true.

For more information, see Chapter 6 "Configuring PowerExchange CDC Publisher" in the *PowerExchange CDC Publisher User Guide*.

Zero Scale Value Fields and Data Type Conversion

PowerExchange CDC Publisher converts numeric data types to decimal data types for fields that have a scale value of zero or null, by default. If you want to retain the original data type, as defined in PowerExchange, set the Formatter.avroCheckZeroScale property to true.

For more information, see Chapter 6 "Configuring PowerExchange CDC Publisher" in the *PowerExchange CDC Publisher User Guide*.

Configuration Property Changes

PowerExchange CDC Publisher 1.3 provides some new configuration properties.

The following table identifies the added properties:

Property	Configuration File	Added, Removed, or Changed
Formatter.avroCheckZeroScale	cdcPublisherAvro.cfg	Added
Formatter.avroExcludeDTLColumns	cdcPublisherAvro.cfg	Added
Formatter.avroIncludeInfBigIntSequence	cdcPublisherAvro.cfg	Added

Property	Configuration File	Added, Removed, or Changed
Formatter.avroUseOriginalLogicalTimeConvertToUtc	cdcPublisherAvro.cfg	Added
Formatter.customPatternFileList	cdcPublisherAvro.cfg	Added
Formatter.customPatternDataFile	cdcPublisherAvro.cfg	Added
Formatter.formatterAddTimestampUseSource	cdcPublisherAvro.cfg	Added
Common.ReportSuffix	cdcPublisherCommon.cfg	Added
Connector.checkpointMessageFrequency	cdcPublisherKafka.cfg	Added
Connector.checkpointPublisherId	cdcPublisherKafka.cfg	Added
Connector.checkpointTimeFrequency	cdcPublisherKafka.cfg	Added
Connector.checkpointsInTarget	cdcPublisherKafka.cfg	Added
Connector.kafkaConsumerPropertiesFile	cdcPublisherKafka.cfg	Added
Connector.restartCheckpointSource	cdcPublisherKafka.cfg	Added

For more information, see the chapter "Configuring PowerExchange CDC Publisher" in the *PowerExchange CDC Publisher User Guide*.

Changes to Software Requirements

PowerExchange CDC Publisher 1.3 introduces changes to supported target versions and PowerExchange versions.

Operating Systems

PowerExchange CDC Publisher 1.3 introduces the following changes to supported operating systems:

- Windows 2008 R2 is dropped.

PowerExchange Versions

CDC Publisher 1.3 supports PowerExchange 10.2, 10.4.0, and 10.4.1 and hotfixes on these versions. Support for PowerExchange 10.1.1 and 10.1 is dropped.

Target Versions

PowerExchange CDC Publisher 1.3 introduces the following changes to supported target versions:

Target Type	Version	Added or Dropped
Apache Kafka ¹	2.6 2.5 2.4 2.3 2.2	Added
<p>1. For Apache Kafka, you can download the version from any available binary download. The Scala version is immaterial.</p> <p>2. The MapR versions are supported with the Apache Kafka API.</p>		

Note: If you use Confluent Schema Registry in the Kafka target environment, Confluent versions 5.1 and 3.2.1 are supported.

CHAPTER 2

Version 1.2

This chapter includes the following topics:

- [New Features and Enhancements , 10](#)
- [Configuration Property Changes, 11](#)
- [Changes to Software Requirements, 11](#)

New Features and Enhancements

PowerExchange CDC Publisher 1.2 introduces the following features and enhancements:

Composite Message Key

PowerExchange CDC Publisher can now generate a composite message key for each source table based on rules that you define. The message key is included in the messages that CDC Publisher sends to the target messaging system. The target messaging system can use the message key to write messages with a specific key value to the same partition in the target topics. For more information, see the chapter "Configuring PowerExchange CDC Publisher" in the *PowerExchange CDC Publisher User Guide*.

Runtime Statistics at Shutdown

PowerExchange CDC Publisher can print runtime statistics to the message log at shutdown if you set the new `Connector.logConnectorStatsOnExit` property to true in the `cdcPublisherKafka.cfg` configuration file. The statistics are printed in message CDCPUB_15034 and are the same as the statistics produced by the `PWXCDCINFO STATS=TOPIC` command. For more information, see the chapter "Configuring PowerExchange CDC Publisher" in the *PowerExchange CDC Publisher User Guide*.

Support for Exactly-Once Delivery of Messages

To support exactly-once delivery of messages to the target, PowerExchange CDC Publisher now detects when the Kafka `enable.idempotence` property is set to true in the `producer.properties` file. When idempotence is enabled, the `retries` parameter in the Kafka Streams client configuration must be set to a value greater than 0. Previously, CDC Publisher reset the `retries` parameter to 0 when using *guaranteed delivery*. Now, CDC Publisher honors the existing `retries` parameter value greater than 0 when idempotence is enabled and *guaranteed delivery* is in use.

Support for Periods and Dashes in Kafka Topic Names

PowerExchange CDC Publisher now supports the use of period (.) and dash (-) characters in Kafka topic names if you set the new `Connector.kafkaTopicAllowSpecialCharacters` parameter to true. If you use the default value of false, CDC Publisher converts period and dash characters to an underscore (_) character.

Documentation Enhancement - New Release Guide

A new Release Guide publication has been created to track product changes across versions.

Configuration Property Changes

PowerExchange CDC Publisher 1.2 provides some new configurations properties.

The following table identifies the added properties:

Property	Configuration File	Added, Removed, or Changed
Connector.kafkaProducerPartitionID	cdcPublisherKafka.cfg	Added
Connector.kafkaTopicAllowSpecialCharacters	cdcPublisherKafka.cfg	Added
Connector.logConnectorStatsOnExit	cdcPublisherKafka.cfg	Added
Connector.sendMaintainOrder	cdcPublisherKafka.cfg	Added
Formatter.captureColumnValuesFile	cdcPublisherAvro.cfg	Added

For more information, see the chapter "Configuring PowerExchange CDC Publisher" in the *PowerExchange CDC Publisher User Guide*.

Changes to Software Requirements

PowerExchange CDC Publisher 1.2 introduces changes to supported target versions and PowerExchange versions. No changes to supported operating system versions occurred in this release.

PowerExchange Versions

PowerExchange Version 10.2 HotFix 1 EBF 07 is required for PowerExchange CDC Publisher Version 1.2 if your PowerExchange system includes MySQL version 5.7 as a data source.

Target Versions

PowerExchange CDC Publisher 1.2 introduces the following changes to supported target versions:

Target Type	Version	Added or Dropped
Apache Kafka ¹	2.1	Added
Apache Kafka	0.10.2.0 0.9.0.1	Dropped

Target Type	Version	Added or Dropped
MapR Streams ²	6.0 6.1	Added
MapR Streams	5.2.2	Dropped
<p>1. For Apache Kafka, you can download the version from any available binary download. The Scala version is immaterial.</p> <p>2. The MapR versions are supported with the Apache Kafka API.</p>		

Note: If you use Confluent Schema Registry in the Kafka target environment, versions 5.1 and 3.2.1 are supported.

CHAPTER 3

Version 1.1

This chapter includes the following topics:

- [New Features and Enhancements, 13](#)
- [Configuration Property Changes, 14](#)
- [Behavior Changes, 15](#)
- [Changes to Software Requirements, 15](#)

New Features and Enhancements

PowerExchange CDC Publisher 1.1 introduces the following features and enhancements:

Support for Confluent Schema Registry

PowerExchange CDC Publisher supports Apache Kafka environments that use Confluent Schema Registry. For more information, see the chapter "Target Messaging Systems" in the *PowerExchange CDC Publisher User Guide*.

Commit Messages

You can generate messages for transaction commit operations. You can then use the messages to detect transaction boundaries. To enable the generation of commit messages, set the new `Formatter.generateCommitDML` property to `LAST_TABLE` or `ALL_TABLES`. Optionally, you can also set the new `Connector.kafkaCommitDmlTopic` and `Connector.kafkaCommitDmlTopicFiltering` properties to control how these messages are sent to topics. For more information, see the chapter "Configuring PowerExchange CDC Publisher" in the *PowerExchange CDC Publisher User Guide*.

Timestamp for Change Record Processing

You can add a timestamp column to the generated Avro schema and formatted messages to indicate the time at which the CDC Publisher Formatter processed the change records. To do so, specify the new `Formatter.formatterAddTimestampColumn=true` property in the `cdcPublisherAvro.cfg` file. You can optionally also set the `Formatter.formatterAddedTimestampColumnFormat`, `Formatter.formatterAddedTimestampColumnTimezone`, and `Formatter.formatterAddedTimestampColumnName` properties to specify the timestamp format, time zone, and column name. For more information, see the chapter "Configuring PowerExchange CDC Publisher" in the *PowerExchange CDC Publisher User Guide*.

Table Name As a Message Key Value

You can use a source table name as the message key value in messages that PowerExchange CDC Publisher sends to a partitioned Kafka topic. To use the table name as the message key value, set the new `Connector.kafkaMessageKey` property to `USE_TABLE_NAME`.

Publish Messages to Topics in a MapR Stream

PowerExchange CDC Publisher can publish messages to topics in a MapR target messaging system that uses the Kafka API. The topics must be in a single MapR stream. For more information, see the chapter "Target Messaging Systems" in the *PowerExchange CDC Publisher User Guide*.

Configuration Property Changes

PowerExchange CDC Publisher 1.1 includes some added and changed configurations properties.

The following table identifies these properties:

Property	Configuration File	Added, Removed, or Changed
<code>Connector.queueType</code>	<code>cdcPublisherKafka.cfg</code>	Changed - New option for MapR Streams targets
<code>Connector.kafkaMaprStreamName</code>	<code>cdcPublisherKafka.cfg</code>	Added
<code>Connector.kafkaTopic</code>	<code>cdcPublisherKafka.cfg</code>	Changed - Topic names for MapR Streams targets include the stream name
<code>Connector.kafkaCommitDmlTopic</code>	<code>cdcPublisherKafka.cfg</code>	Added
<code>Connector.kafkaCommitDmlTopicFiltering</code>	<code>cdcPublisherKafka.cfg</code>	Added
<code>Connector.kafkaMessageKey</code>	<code>cdcPublisherKafka.cfg</code>	Added
<code>Extract.pwxOffloadOption</code>	<code>cdcPublisherPowerExchange.cfg</code>	Added
<code>Extract.pwxReadLatency</code>	<code>cdcPublisherPowerExchange.cfg</code>	Added
<code>Formatter.avroDisplaySchemaWithEscapedQuotes</code>	<code>cdcPublisherAvro.cfg</code>	Added
<code>Formatter.formatterAddTimestampColumn</code>	<code>cdcPublisherAvro.cfg</code>	Added
<code>Formatter.formatterAddedTimestampColumnFormat</code>	<code>cdcPublisherAvro.cfg</code>	Added
<code>Formatter.formatterAddedTimestampColumnName</code>	<code>cdcPublisherAvro.cfg</code>	Added
<code>Formatter.formatterAddedTimestampColumnTimezone</code>	<code>cdcPublisherAvro.cfg</code>	Added
<code>Formatter.generateCommitDML</code>	<code>cdcPublisherAvro.cfg</code>	Added

For more information see the chapter "Configuring PowerExchange CDC Publisher" in the *PowerExchange CDC Publisher User Guide*.

Behavior Changes

PowerExchange CDC Publisher 1.1 introduces the following behavior change:

Offload Processing

Previously, offload processing was enabled by default and you could not disable it. Now, offload processing is disabled by default and you can intentionally enable it by setting the new `Extract.pwxOffloadOption` property in the `cdcPublisherPowerExchange.cfg` file to `Y`.

Changes to Software Requirements

PowerExchange CDC Publisher 1.1 introduces changes to supported operating systems and target versions. No changes to supported PowerExchange versions occurred in this release.

Operating Systems

PowerExchange CDC Publisher 1.1 introduces the following changes to supported operating systems:

- RedHat Linux 7.4 is added.
- SUSE Linux 11 is dropped.

Target Versions

PowerExchange CDC Publisher 1.1 adds support for the following target versions:

Target Type	Version	Added or Deprecated
Apache Kafka ¹	1.1.0 0.11.0. <i>n</i>	Added
MapR Streams ²	6.0 5.2.2	Added
<p>1. For Apache Kafka, you can down the version from any available binary download. The Scala version is immaterial.</p> <p>2. The MapR Streams versions are supported with the Apache Kafka API.</p>		

CHAPTER 4

Version 1.0

This chapter includes the following topics:

- [Introducing PowerExchange CDC Publisher, 16](#)
- [Software Requirements, 17](#)

Introducing PowerExchange CDC Publisher

The PowerExchange CDC Publisher is a new Java-based tool that streams change data that has been captured from a PowerExchange data source to a target Apache Kafka messaging system. This tool is licensed as an option of the PowerExchange CDC product.

The following PowerExchange data sources are supported:

- On z/OS: Adabas, Datacom, DB2 for z/OS, IDMS, IMS, CICS/VSAM, and Batch VSAM
- On i5/OS: DB2 for i
- On Linux, UNIX, and Windows: DB2 for Linux, UNIX, and Windows, Microsoft SQL Server, and Oracle

The only supported target is currently Apache Kafka.

The PowerExchange CDC Publisher must run on a Red Hat Linux or Windows machine. Because the CDC Publisher retrieves change data from PowerExchange Logger for Linux, UNIX, and Windows log files, it requires that you use the PowerExchange Logger in your PowerExchange environment. You can run the CDC Publisher on the PowerExchange Logger or data source machine or on a machine that is remote from the PowerExchange Logger and data source. The CDC Publisher acts like a client of PowerExchange and target messaging system.

The PowerExchange CDC Publisher consists of the following command-line utilities:

- PwxCDCPublisher - The main utility for streaming PowerExchange change data to the target messaging system.
- PwxCDCAdmin - The utility for performing administrative functions, such as shutting down the PwxCDCPublisher process.
- PwxCDCInfo - The utility for reporting the color-coded status of the PwxCDCPublisher process and each of its main subprocesses. This utility can also report statistics and state information for each Kafka topic and for diagnostic attributes.

When you start the main PwxCdcPublisher utility from a command prompt, it performs the following processing:

1. Retrieves the PowerExchange extraction maps that define the data source objects.
2. If you configure filtering criteria, filters the extraction maps.

3. Starts an extraction process that reads change data from PowerExchange Logger log files for the source objects.
4. When the first change for an extraction map is received, generates an Avro schema.
5. Formats the change data into Kafka messages based on the Avro schema.
6. Connects to the Kafka target and sends the messages to the target. Consumer applications can then read the data from Kafka.

For detailed information about installing, configuring, and using the CDC Publisher, see the *PowerExchange CDC Publisher User Guide*.

Software Requirements

The Product Availability Matrix (PAM) identifies the versions of operating systems and target software that PowerExchange CDC Publisher 1.0 supports. If you are an Informatica Network member, you can access the PAM at <https://network.informatica.com/community/informatica-network/product-availability-matrices>.

INDEX

B

behavior changes

PowerExchange CDC Publisher 1.1 [15](#)

N

new features

PowerExchange CDC Publisher 1.1 [13](#)

PowerExchange CDC Publisher 1.2 [10](#)

PowerExchange CDC Publisher 1.3 [6](#)

P

PowerExchange CDC Publisher 1.1

behavior changes [15](#)

PowerExchange CDC Publisher 1.1 (*continued*)

new features [13](#)

software requirements [15](#)

PowerExchange CDC Publisher 1.2

new features [10](#)

software requirements [11](#)

PowerExchange CDC Publisher 1.3

new features [6](#)

software requirements [8](#)

S

software requirements

PowerExchange CDC Publisher 1.1 [15](#)

PowerExchange CDC Publisher 1.2 [11](#)

PowerExchange CDC Publisher 1.3 [8](#)