

PowerExchange CDC: Changing Sources or Targets for Extractions

Abstract

This article describes the proper procedure for changing data sources or targets for existing PowerExchange Change Data Capture (CDC) sessions that use PowerExchange Client for PowerCenter (PWXPC).

Supported Versions

- PowerExchange 10.0 or later

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Overview

This article describes how to change data sources or targets for PowerExchange Change Data Capture (CDC) sessions that use PowerExchange Client for PowerCenter (PWXPC).

Before you change sources or targets for a CDC session, you must stop any associated workflow. You can then update the session, mapping, and workflow, as needed. If you add data sources, you should also generate restart tokens for those sources and add them to the restart token file. You must preserve the restart tokens for the pre-existing data sources to prevent change data loss. When you are ready to resume extraction processing from the appropriate point with the latest configuration of sources and targets, you must cold start the session.

This procedure applies to all PowerExchange CDC platforms.

Changing Sources or Targets for a CDC Session

Use the following procedure to change sources or targets for an existing CDC session and then restart change data extraction from the appropriate point.

1. Stop the PowerCenter workflow that contains the session that you want to change. Use one of the following methods:
 - Stop the workflow from the Workflow Monitor.
 - Issue the `pmcmd stopworkflow` command.
 - Issue the PowerExchange Listener `STOPTASK` command.
 - Use the PowerExchange `DTLUTSK` utility.

2. After the workflow stops, right-click the CDC session and choose Recover Task or issue the `pmcmd starttask` command with the `-recovery` option.

When you recover tasks for a session, PWXPC writes the ending restart tokens for all sources in the session to the restart token file that is specified in the CDC application connection. These restart tokens will be used to resume CDC processing from the appropriate point when the CDC session is restarted.

3. In the Designer, edit or re-create the mapping to add or remove sources or targets.
4. In the Workflow Manager, change the session.

If you created a new mapping, you must create a new session. After validating the new session, update the workflow.

5. Verify that the CDC application connection points to the same restart token file that was updated in the recovery session.
6. If you added sources, update the restart token file to add restart tokens for those sources.
7. If you removed sources, update the restart token file to remove the restart tokens for those sources.
8. Cold start the CDC session
 PWXPC reads the restart token file to acquire restart tokens for all sources. PWXPC then passes these restart tokens to PowerExchange so that PowerExchange can resume change data extraction from the appropriate point in the change stream.

Example: Adding a Source to a CDC Session

This example adds the data source RRTB_SRC_004 to an existing PowerExchange CDC session. The session currently contains three other sources.

This example uses the PowerExchange DTLUAPPL utility to generate restart tokens for the new source. It also preserves the restart points for the existing sources.

1. From the Workflow Monitor, right-click the workflow that is associated with the extraction that you want to change and choose **Stop**.
2. In the Workflow Monitor, right-click the session and choose **Recover Task** to run a recovery session.

PWXPC writes the restart tokens to the restart token file and the following messages to the session log:

```
PWXPC_12060 [INFO] [CDCRestart]
=====
Session restart information:
=====
Extraction Map Name Restart Token 1 Restart Token 2 Source
dldsn7.rrtb0002_RRTB_SRC_002 000000AD220F00000000000000AD220F0000000000000000
C1E4E2D3404000000AD0D9C00000000 GMD storage
dldsn7.rrtb0001_RRTB_SRC_001 000000AD220F00000000000000AD220F0000000000000000
C1E4E2D3404000000AD0D9C00000000 GMD storage
dldsn7.rrtb0003_RRTB_SRC_003 000000AD220F00000000000000AD220F0000000000000000
C1E4E2D3404000000AD0D9C00000000 GMD storage
```

3. To add source RRTB_SRC_004, update the mapping and session.
4. Run the PowerExchange DTLUAPPL utility with the RSTTKN GENERATE parameter to generate a pair of restart tokens that indicate the current end of the change stream.

In this example, you can use the current end of the change stream to generate the restart tokens, without losing change data, because PowerExchange has not yet captured changes for the source.

Use the following DTLUAPPL control cards:

```
mod APPL dummy DSN9 rsttkn generate
  mod rsttkn rrtb004
end appl dummy
print appl dummy
```

The print command produces the following output:

```
Registration name=<rrtb004.1> tag=<DB2DSN7rrtb0041>
Sequence=<00000DBF240A00000000000000DBF240A00000000>
Restart=<C1E4E2D340400000DBF238200000000>
```

Use this output to create a pair of restart tokens for the new source. Use the Restart= value as is. To create a valid sequence token, add eight zeroes to the end of the Sequence= value

5. Add the RRTB_SRC_004 source and its restart token pair to the restart token file.

The restart token file should now contain entries for all four sources:

```
<!-- existing sources
dldsn7.rrtb0001_RRTB_SRC_001=000000AD220F00000000000000AD220F0000000000000000
dldsn7.rrtb0001_RRTB_SRC_001=C1E4E2D34040000000AD0D9C00000000
dldsn7.rrtb0002_RRTB_SRC_002=000000AD220F00000000000000AD220F0000000000000000
dldsn7.rrtb0002_RRTB_SRC_002=C1E4E2D34040000000AD0D9C00000000
dldsn7.rrtb0003_RRTB_SRC_003=000000AD220F00000000000000AD220F0000000000000000
dldsn7.rrtb0003_RRTB_SRC_003=C1E4E2D34040000000AD0D9C00000000
<!-- new source
dldsn7.rrtb0004_RRTB_SRC_004=00000DBF240A00000000000000DBF240A0000000000000000
dldsn7.rrtb0004_RRTB_SRC_004=C1E4E2D3404000000DBF238200000000
```

6. Cold start the session.

To resume extraction processing, PWXPC passes the restart tokens for all sources to PowerExchange. PowerExchange starts reading the change stream from the oldest restart point that PWXPC passed. PowerExchange does not send PWXPC any changes for a source until the restart point for that source has been reached.

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