iConvert for Perceptive Content

Product Guide

Version: 7.2.x

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Date: November 2018

Hyland™

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What is iConvert?

iConvert is a Windows only multi-threaded utility that converts an Perceptive Content database from one DBMS to another. It can also convert your SQL Server database from ANSI to Unicode. The iConvert utility creates your tables and copies the data, then adds indexes and constraints for you. After you install it, you can run iConvert and monitor its progress using log files, which you can configure to receive automatically by email.

You can install iConvert as a manual or automatic service. If you install iConvert as an automatic service, iConvert will start each time you start the machine it is installed on. We recommend that you contact Perceptive Software support before beginning a database conversion.

Prepare a target SQL Server database

To prepare a target database, complete the following steps.

Complete one of the following steps to prepare the target database for conversion.

- If you are converting to Oracle, you must create the database instance before running iConvert. Refer to the appropriate Perceptive Content Server installation guide for additional information.
- If you are converting to Microsoft SQL, you must create the database shell, users, and privileges before starting iConvert by running the iConvert_SQLServer-DBOnly.sql script, which is included in the installer.
- If you are converting to PostgreSQL, you must create the database shell, users, and privileges before starting iConvert by running the iConvert_PostgreSQL-DBOnly.sql script, which is included in the installer.

  Note You do not need to create the database tables or add indexes and constraints.
- If your ODBC connection is named Perceptive Content, stop all Perceptive Content services, then rename the existing ODBC connection to prevent it from being overwritten. The iConvert installer creates an ODBC connection for your target database with the default name of Perceptive Content.

Database Collation

If migrating to Unicode, you must select the appropriate Unicode collation during the database creation and before you start the iConvert process.

Database Recovery Model

Before starting the iConvert process, ensure that the destination database is using the Simple Recovery Model to ensure minimal logging and faster throughput. Once the iConvert process has finished, switch the Recovery Model to Full, perform a full database backup, and enable all of your standard database maintenance jobs.

Max Degree of Parallelism

For the duration of the iConvert process, consider setting the Max Degree of Parallelism (MAXDOP) to a value that is appropriate on the hosting server in order increase processing capacity and reduce the overall duration of the conversion. After the iConvert process has finished, you can switch the MAXDOP

back to 1 to disable parallelism. For best practices, refer to Microsoft documentation and knowledge base articles.

Temporary Database

Ensure that the TEMPDB database has a sufficient number of database files that are already sized appropriately to provide enough space for sorting in the tempdb during the iConvert process. For TEMPDB configuration best practices, refer to Microsoft documentation and knowledge base articles.

Install iConvert

Prior to installing iConvert, verify that the source database schema matches the version of iConvert that you are using. To install iConvert, complete the following steps.

Download the iConvert files

To obtain Perceptive product installation files, contact the Hyland Software Technical Support group. For a list of Technical Support phone numbers, go to hyland.com/pswtscontact.

Prepare Perceptive Content Server

1. Stop all Perceptive Content services.
2. Perform a complete backup of your Perceptive Content Server and database.
3. Verify that the existing database schema version matches the iConvert version.

Perform an attended installation of iConvert

1. Double-click the downloaded **iConvertSetup_[*version*].exe** file.
2. On the Welcome to the Perceptive Content Installation Wizard for Perceptive Content iConvert page, click Next.
3. On the **License Agreement** page, review the License Agreement terms, scroll to the end of the agreement, click the **I accept the terms in the license agreement** button, and then click **Next**.
4. On the **Database Configuration page**, select the destination database type to which you want to convert the existing database to.

   Note To convert to a Unicode database, you must use either a Windows-1252 or ISO8859-1 character set.
5. To configure iConvert to send email messages containing progress updates of the conversion, select **Check to configure email notification** and complete the following substeps and then click **Next**. Otherwise, click **Next** and continue to the next step.
   - In the **SMTP Server** field, specify the SMTP server you want iConvert to use to send email updates.
   - In the **SMTP Port** field, specify the port number of SMTP Server.
   - In the **Send to address** field, specify the email address to which you want iConvert to send email updates.

- In the **Send from address** field, specify the email address from which you want iConvert to send email updates.

6. On the Ready to Install the Program page, click Install.
7. When the **ODBC [Database Type – Oracle, PostgreSQL, or SQL] Wire Protocol Driver Setup** dialog box appears, create your destination database shell, users, and privileges as described in the Prepare a target SQL Server database section.
8. In the **ODBC [Database Type – Oracle, PostgreSQL, or SQL] Wire Protocol Driver Setup** dialog box, on the **General** tab, configure the DSN to access the database created in the previous step.
9. On the Installation Wizard Completed page, click Finish.

Configure iConvert

You need to update the src.dsn setting of your inserverConvert.ini file to point to the target database. To configure iConvert, complete the following steps.

1. Navigate to the **[*drive*:]\inserver\etc** directory.
2. Open the **inserverConvert.ini** file in a text editor and set the **src.dsn** to match the Data Source Name pointing to your existing Perceptive Content database.
3. Click **Save**.

Run iConvert

1. Stop all Perceptive Content services.
2. Make sure all sessions are closed by verifying the IN_SC_SESSION table is empty in the source database.
3. In a **Command Prompt** window, navigate to **inserver\bin64** and type **inserverConvert –start** to start iConvert.

   Note If you stop and restart iConvert, the conversion process begins where it left off. If you installed iConvert as a manual service, you must complete the previous step to re-start the process.

View conversion progress

To view your conversion progress, complete the following steps.

4. Navigate to the **[*drive:*]\inserver\log** directory and, in a browser, open the **convertresult.htm** file.
5. Each row represents the conversion process of an ODBC table. If the row is green, the conversion completed successfully. Yellow indicates the conversion is in progress. White or gray indicates the table has not yet started conversion. Red indicates the table did not convert successfully.

   Note Some rows may turn red temporarily during the conversion.

After the conversion

The iConvert conversion is complete when the service is stopped and the process is no longer running. After iConvert completes the conversion, you need to review the event log for failed tables, update the licenses, and remove the iConvert utility.

Review the event log

You can view the convertresult.htm file and review the status log from your conversion. This highlights ODBC tables that did not convert successfully. Address entries in the event log that are either highlighted in red or have an INVALID status. To review the event log, complete the following steps.

1. Navigate to the **[*drive:*]\inserver\log** directory.
2. In a browser, open the convertresult.htm file to view the status log. Review the log for FAILED or INVALID statuses and complete one of the following options.
   - If all statuses are SUCCESSFUL, proceed to run the **IN_EXTERN_MSG_SEQ.sql** script.
   - If there are INVALID statuses, proceed to address failed tables.

   Note This generally resolves any errors concerning indexes or constraints. Review the event log again after restarting.

Address an INVALID status row

An INVALID status row indicates that the import was successful, however there were errors adding indexes or constraints. To troubleshoot INVALID status rows, complete the following steps.

1. In a **Command Prompt** window, navigate to **inserver\bin64** and type **inserverConvert –start** to rerun iConvert.

   Note This generally resolves any errors concerning indexes or constraints.
2. Review the event log. If the INVALID rows still exist, complete the following substeps.
   1. In the source database, look for items that break the foreign key constraint.
   2. Fix any of these occurrences.

Address FAILED tables

A FAILED status indicates that the table did not import successfully. To troubleshoot FAILED tables, complete the following steps.

1. In a command prompt, navigate to the **inserver\bin64** directory, then type **inserverConvert –scrub-table <*table name*>**, which scrubs individual tables in the ODBC.

   Note This action truncates the records from the tables and sets their statuses to “not started”.
2. Run the **–scrub-table** command for all failing tables.
3. In a **Command Prompt** window, type **inserverConvert –start** to begin the rerun conversion of the failed tables.
4. Verify that the tables are no longer FAILED. For any remaining failing tables, rerun the command.

   Note You may need to run this command several times for each table.

Run the IN_EXTERN_MSG_SEQ.sql script

To complete the conversion of your SQL Server database, you must run the IN_EXTERN_MSG_SEQ.sql script. This script will copy the data in the inemuser.IN_EXTERN_MSG_SEQ table from the existing server (source_db) to the new server (dest_db). This process only applies to SQL Server databases. To prepare and execute the script, complete the following steps.

1. In **SQL Server Management Studio**, connect to the Unicode server using a login with system administrator privileges.
2. Open the **IN_EXTERN_MSG_SEQ.sql** script and complete the following substeps.
3. Ensure the variables in the Variable Declaration section of the script are set to the correct source, destination server, and database for your environment.
4. Replace the **INOW6_DESTINATION** variable name with the name of the destination Unicode database.
5. **Note** This name must match the declared **v_dest_db** variable.
6. Click **Execute**.

   Note This script creates a temporary linked server between the two instances of SQL Server in order to pull data between the source and destination databases.

Uninstall iConvert and verify database connection

Upon completing your database conversion, it is recommended that you uninstall iConvert and verify your Perceptive Content Server database connection. To perform these actions, complete the following steps.

1. Following your operating system's steps for removing programs, uninstall iConvert.
2. On each machine with a Perceptive Content service that connects directly to the database, ensure that the ODBC settings in the inow.ini are configured according to your new database.

Appendix: Configuration files

inserverConvert.ini

The following table provides definitions and sample data for the settings in the inserverConvert.ini configuration file. This table displays the INI settings under group headings in brackets, for example, [General]; in the order the groups appear in the INI file. Each setting offers two or more options, which are defined in the table below along with a description of each setting and its options. Use this table as a guide when customizing the file.

Section	Setting	Options	Description
General	num.workers	Any positive integer	Specifies the number of worker threads in the main pool. The default is 15.
	throttle.threshold	Any positive integer	Specifies the maximum number of inserts iConvert allows before committing the open transaction. The default is 1000.
	retry.attempts	Any positive integer	Specifies the number of times iConvert attempts the insert. The default is 3.
Logging	debug.level.file	0 through 6	Specifies the level iConvert uses to log errors for troubleshooting. 0 = Logging is off. 1 = The least verbose logging. 6 = The most verbose logging. The default is 0.
	socket.level.file	0, 1	Specifies whether to log communication between Perceptive Content Server and iConvert. 1 = iConvert logs communication. 0 = iConvert does not log communication. The default is 0.
	status.log.interval		Specifies how often, in seconds, iConvert refreshes the ConvertResult.html log file. The default is 10.

Section	Setting	Options	Description
ODBC	src.dbms	SQLServer, Oracle, PostgreSQL	Specifies the source DBMS the customer is converting from.
ODBC (continued)	src.dsn	Any valid database name	Specifies the source database name.
	src.userid	Any valid user ID	Specifies the user ID of the user that administers the source DBMS.
	src.password	A valid password for the specified user ID	Specifies the password for the source ODBC, where each character is advanced +1, so the password “imagenow” would be “jnbhfopx”.
	dest.dbms	SQLServer, SQLServerUnicode, Oracle, PostgreSQL	Specifies the destination DBMS to which the customer is converting.
	dest.dsn	Any valid database name	Specifies the destination database name.
	dest.userid	Any valid user ID	Specifies the user ID of the user that administers the destination DBMS.
	dest.password	A valid password for the specified user ID	Specifies the password for the destination ODBC, where each character is advanced +1, so the password “imagenow” would be “jnbhfopx”.
Email	smtp.server	Any valid IP address or server name of an SMTP server	Specifies the SMTP server iConvert uses to email convertresult.htm.
	smtp.port	Any existing port number	Specifies the port number of SMTP Server.
	email.to	Any email address	Specifies the email address to which iConvert sends emails containing the convertresult.htm log file.
	email.from	Any email address	Specifies the email address from which iConvert sends emails containing the convertresult.htm log file.

inow.ini

The following table provides definitions and sample data for the settings in the **[ODBC]** section of the inow.ini configuration file. Each setting offers two or more options, which are defined in the table below along with a description of each setting and its options. Use this table as a guide when customizing the file. To see all the settings in inow.ini, refer to the Perceptive Content Server Installation and Setup Guide for the appropriate environment and DBMS.

Setting	Options	Description
odbc.dbms	SQLServer, Oracle, PostgreSQL	Specifies the DBMS Perceptive Content uses.
odbc.dsn	Any valid database name	Specifies the name of your Perceptive Content database. The default is INOW6.
odbc.userid	Any valid username	Specifies the user ID for the ODBC connection. The default is inuser.
odbc.password	Any valid password	Specifies the password for the ODBC connection, where each character is advanced +1, so the password “imagenow” would be “jnbhfopx”. The default is jnbhfopx.
odbc.use_dddriver	TRUE FALSE	Specifies whether ODBC uses the DataDirect driver. The default is TRUE.
odbc.grid.max.fetch.count	Any positive integer	Specifies that maximum number of records retrieved by ODBC at one time. This setting applies to workflow, batch, related documents, document search, project search, ERM, and project viewer grids. The default is 2000.
auth.odbc.dbms	Oracle, SQLServer	Perceptive Content Server uses auth.* settings to connect to the authorization database when logon.method is set to SQL. This setting specifies the database management system Perceptive Content uses.
auth.odbc.dsn	Any valid database name	Specifies the name of your Perceptive Content database.
auth.odbc.userid	Any valid username	Specifies the user ID for the ODBC connection.
auth.odbc.password	Any valid password	Specifies the password for the ODBC connection, where each character is advanced +1, so the password “imagenow” would be “jnbhfopx”. The default is jnbhfopx.