

Healthcare Database Connector

Installation and Setup Guide

Version: 3.0.0

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Date: February 2017

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What is the Healthcare Database Connector?

The Healthcare Database Connector allows you to create, read, update, delete, and merge records stored in the Healthcare Database through web services. The combination of the Healthcare Database and Healthcare Database Connector allows you to easily store and retrieve healthcare data.

The Healthcare Database Connector provides two types of web service interfaces for interacting with the Healthcare Database.

- A REST interface that supports create, read, update, and delete operations.
- A SOAP interface that supports create, update, and delete operations.

Note For the best results, use the REST interface to interact with the Healthcare Database.

This guide describes how to install and configure the Healthcare Database Connector. It does not include information about the REST or SOAP interfaces. For more information, refer to the REST interface API documentation.

For more information about other required Perceptive Connect Runtime components, refer to the [Perceptive Connect Runtime Installation and Setup Guide](#).

Note The installation steps in this document assume you are installing the Healthcare Database Connector for the first time. To upgrade the database, refer to the [Upgrade Connector on Perceptive Connect Runtime](#) section.

Prerequisites

You must have access to a working installation of the following products on your network before you install and use this connector.

- Perceptive Integration Server, version 7.1.1 or higher
- Perceptive Connect Runtime, version 1.5.10 or higher
- Perceptive Content Connector, version 1.2.30 or higher
- Healthcare Database, version 1.2.x or higher

Install the Healthcare Database Connector

To download the connector and install it with the Perceptive Connect Runtime Web Console, complete the following tasks.

Download the files

To download the Healthcare Database Connector ZIP file, complete the following steps.

1. Go to www.lexmark.com and log in to the Customer Portal.
2. In the **Product Downloads** page, search for the Healthcare Database Connector file.
3. Download the file to your computer. Your computer must have access to the Perceptive Connect Runtime Web Console, located at **`http://<Perceptive Connect Runtime machine name>:<port>`**.

Install the Healthcare Database Connector

To install the Healthcare Database Connector, complete the following steps.

1. In a browser, navigate to the Perceptive Connect Runtime Web Console URL in the format **`http://<Perceptive Connect Runtime machine name or IP>:<port>`**.
2. In the browser dialog box, enter the Web Console user name and password.
3. On the **Perceptive Connect Runtime** page, click **Perceptive Connect Runtime**.
4. Under **Manage**, click **Install a Connector**.
5. Locate the connector ZIP file **Download the files** section, and drag the ZIP file into the box on the right hand part of the screen of the **Upload New Bundles** page.
6. In the **Pending** section, a new item appears with a label of **Installing: Healthcare Database Connector 3.0**.
7. After the connector is installed, a green **Accept** button and a red **Roll back** button display. Click the **Accept** button to complete the install.
8. After the installation is accepted, the **Healthcare Database Connector** item moves to the **Completed** section.

Configure the Healthcare Database Connector

To configure the Healthcare Database Connector settings, complete the following steps.

1. In a browser, navigate to the Perceptive Connect Runtime Web Console at **`http://<Perceptive Connect Runtime machine name or IP>:<port>/connect`**.
2. On the **Perceptive Connect Runtime** page, select **Perceptive Connect Runtime**.
3. Under **Manage**, select **Web Services**.
4. In the right pane, under **Web Services**, select one of the following options.
 - Select **/hdb** for front-end user applications
 - Select **/hdb/server** for machine-to-machine communications
5. Click **Edit Trust Validator**, choose a trust validator from the list and click **Save**.
6. In the left pane, under **Manage**, select **Configure**.
7. In the right pane, under **Configuration**, under **Healthcare Database Connector**, expand **Data Sources**.
8. Under **Data Sources**, in the **DataSource** name field, verify that **hdb** displays for the name.
9. Optional. Enter a description for the DataSource.
10. In the **DataSource** driver field, verify that **com.microsoft.sqlserver.jdbc.SQLServerDriver** displays for the driver.
11. In the **Connection** string field, verify that **jdbc:sqlserver://<Healthcare Database machine name or IP>:<port>;databaseName=HDB** shows for the string.
12. In the **User name** field, enter the user name used when installing the Healthcare Database.
13. In the **Password** field, enter the password for the user name in your Healthcare Database.

Note You can change the password later in Microsoft SQL Server Management Console.

14. The **Maximum** pool size field, by default, shows **8** for the pool size. Check with your Healthcare Database administrator before changing this value to make sure the optimal value is used.
15. In the **Component group** field, verify Healthcare Connector shows for the component group.
16. Click **Save**.

Configure the Healthcare Database Connector security

To configure the Healthcare Database Connector security, complete the following tasks.

Configure the Healthcare Database Connector REST API Trust Validator

The Trust Validator determines the type of authentication for the configured address.

Configure the ImageNowValidator

ImageNowValidator determines access by using Perceptive Integration Server to authenticate users by checking a session ID provided as a header in the REST web service call. To configure the Perceptive Integration Server connection in Perceptive Connect Runtime, complete the following steps.

1. In a browser, navigate to the Perceptive Connect Runtime Web Console at **http://<Perceptive Connect Runtime machine name or IP>:<port>/connect**.
2. On the **Perceptive Connect Runtime** page, click **Perceptive Connect Runtime**.
3. Under **Manage**, select **Configure**.
4. In the right pane, under **Configuration**, in the **Perceptive Content Connector** section, click **Connection Manager**, and select **Integration Server 7.1** from the **Connection Provider Target** list.
5. Enter the information for the Integration Server system user in the **User name** and **password** boxes and click **Save**.
6. In the **Integration Server URL** field, select **Integration Server 7.1 Connection** and enter the URL pointing to the instance of Integration Server that is used for authentication.
7. Click **Save**.

Configure the HealthcareApiTokenValidator

HealthcareApiTokenValidator determines access by checking a user-defined security token provided as a header in the REST web service call. To configure the security token in Perceptive Connect Runtime, complete the following steps.

1. In a browser, navigate to the Perceptive Connect Runtime Web Console at **http://<Perceptive Connect Runtime machine name or IP>:<port>/connect**.
2. On the **Perceptive Connect Runtime** page, click **Perceptive Connect Runtime**.
3. Under **Manage**, select **Configure**.
4. In the right pane, under **Healthcare Database**, select **Healthcare PI Validator**.
5. In the **Healthcare API Validator** dialog, enter the secure API token and click **Save**.

Configure the Healthcare Database Connector SOAP API authentication

Authentication is the process of determining the identity of a user. The SOAP API uses WS-Security with a password type of PasswordText to allow or reject requests. To configure the user allowed to access the SOAP API, complete the following steps.

Note The credentials for the configured user should not match those of an existing user. Instead, the credentials should be created and used only for the connector.

1. In a browser, navigate to the Perceptive Connect Runtime Web Console at **http://<Perceptive Connect Runtime machine name or IP>:<port>/connect**.
2. Under **Perceptive Connect**, select **View Configuration**.
3. In the **View Configuration** dialog box, under **Healthcare Database Connector**, select **Healthcare SOAP Endpoint**.
4. In the **User name** field, enter the user name.
5. In the **Password** field, enter the password.
6. Click **Save**.

Configure the Healthcare Database Connector security using Cross Origin Resource Sharing

CORS is a mechanism a web browser uses to determine which domains can make requests from a script, except from the domain where the script originated.

By default, CORS is enabled for Perceptive Connect Runtime, and is restricted to the local domain. To configure CORS on Perceptive Connect Runtime, complete the following steps:

1. Navigate to the location of the **Perceptive Connect Runtime** installation.
Example: C:\Perceptive Connect Runtime\
2. In a text editor, open the **config.properties** file located in the **/conf** directory.
3. Navigate to the **Cross Origin Resource Sharing** section and perform one of the following tasks.
 - To disable CORS support for Perceptive Connect Runtime, set the **connect.rs.cors.enabled** setting to **False**.

Note The default setting is True.

- To allow requests from any domain, set the **connect.rs.cors.allow.all.origins** setting to **True**.

Note The default setting is False.

- To allow certain domains to make requests, add the domain URLs to the **connect.rs.cors.allowed.origins** setting in a comma-separated string.

Note The port number must be included when defining a domain.

4. Save the file and exit.
5. Restart **Perceptive Connect Runtime**.

Configure inbound and outbound SSL connections

For information on configuring inbound and outbound SSL connections, refer to the Configuring SSL section found in the Perceptive Connect Runtime help.

Upgrade Connector on Perceptive Connect Runtime

You can upgrade the Healthcare Database Connector using Perceptive Connect Runtime. To upgrade from a previous version, complete the following steps.

1. Shut off or stop any services using the REST or SOAP APIs provided by the Healthcare Database Connector. For example, stop the Corepoint and the Capture and Indexing for Healthcare applications.
2. Upgrade the Connector by completing the steps in the [Install the Healthcare Database Connector](#) section.
3. To activate the HDB bundles, complete the following substeps.
 1. In a browser, navigate to the Perceptive Connect Runtime Web Console URL in the format `http://<Perceptive Connect Runtime matching name or IP>:<port>/connect`.
 2. Click **Perceptive Connect > View Bundles**.
 3. On the **View Bundles** page, verify all HDB bundles indicate **Active**. If a bundle is not active, click the **Start** button next to the bundle.
4. Turn on or resume any services using the APIs.

Appendix A: Install Healthcare Database Connector Swagger Tool

You can download a tool for exploring the Healthcare Database Connector's REST API. The tool is a separate download and install.

NOTE: The tool should only be installed and used in a testing environment. The Healthcare Database Connector Swagger Tool uses the database connection configured in Perceptive Connect Runtime for all of the CRUD operations and WILL make changes for all PUT and DELETE calls.

Download the files

To download the Healthcare Database Connector Swagger ZIP file, complete the following steps.

1. Go to www.lexmark.com and log in to the Customer Portal.
2. In the **Product Downloads** page, search for the Healthcare Database Connector Swagger file.
3. Download the file to a temporary directory on your computer. Your computer must have access to the **Perceptive Connect Runtime Web Console**, located at **`http://<Perceptive Connect Runtime machine name>:<port>`**.

Install the Healthcare Database Connector Swagger Tool

To install the Healthcare Database Connector Swagger Tool, complete the following steps.

1. In a browser, navigate to the Perceptive Connect Runtime Web Console URL in the format **`http://<Perceptive Connect Runtime machine name or IP>:<port>`**.
2. In the browser dialog box, enter the Web Console user name and password.
3. On the **Perceptive Connect Runtime** page, click **Perceptive Connect Runtime**.
4. Under **Manage**, click **Install a Connector**.
5. Locate the connector ZIP file **Download the files** section, and drag the ZIP file into the box on the right hand part of the screen of the **Upload New Bundles** page.
6. In the **Pending** section, a new item appears with a label of **Installing: Healthcare Database Connector 3.0**.
7. After the connector is installed, a green **Accept** button and a red **Roll back** button display. Click the **Accept** button to complete the install.
8. After the installation is accepted, the **Healthcare Database Connector** item moves to the **Completed** section.