Healthcare Database for SQL Server

Installation and Setup Guide

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Table of Contents

About the Healthcare Database

The Healthcare Database allows users to perform quick searches for patient, encounter, account, and order information.

Important The installation steps in this document assume you are installing the Healthcare Database for the first time or that you have no earlier versions running on your computer. To upgrade, refer to the Upgrade the Healthcare Database section.

The installation process

To install the Healthcare Database, complete the following tasks.

- Verify TCP/IP connectivity for the Healthcare Database

- Download the Healthcare Database files

- Set SQL Server database collation for non-Latin characters for a Unicode environment

- Create the Healthcare Database using Microsoft SQL Server

- Verify the HDB database user authentication

- On the Healthcare Database computer, check the Windows Event Viewer to make sure that the computer has no DNS, hardware, or critical Windows errors.

- Verify that your system meets the requirements in the Product Technical Specifications.

- Verify your product compatibility outside of the Healthcare Database, such as the compatibility between the service pack level of the operating system and your version of Microsoft SQL Server.

Prerequisites

- Microsoft SQL Server 2008 or later

  - Microsoft TCP/IP must be installed and configured.

Verify TCP/IP connectivity for the Healthcare Database

To verify TCP/IP connectivity for the Healthcare Database, complete the following step.

- In a **Command Prompt** window, type **ping *<server address>*** where *<server address>* is the IP address or the host name of the computer on which you will install the Healthcare Database. For example, type **ping 206.18.19.25 or ping notesrvr** , and then press Enter.

If you are connected, you will receive a reply.

```
C:\>ping 206.18.19.25

Pinging 206.18.19.25 with 32 bytes of data:

Reply from 206.18.19.25: bytes=32 time=111ms TTL=240
Reply from 206.18.19.25: bytes=32 time=100ms TTL=240
Reply from 206.18.19.25: bytes=32 time=100ms TTL=240
Reply from 206.18.19.25: bytes=32 time=100ms TTL=240

Ping statistics for 206.18.19.25:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 100ms, Maximum =  111ms, Average =  102ms

C:\>
```

Note If you receive the message "Bad IP address" in response to the ping request, the computers are not networked correctly. Check with your system administrator to verify the IP address or name of the computer that will host the Healthcare Database.

Install the Healthcare Database

Download the Healthcare Database files

1. Go to www.perceptivesoftware.com and log in to the **Customer Portal**.

2. In the **Product Downloads** page, search for the **Healthcare Database** file.

3. Download the file to a temporary directory on your computer.

Create the Healthcare Database using Microsoft SQL Server

To create the Healthcare Database using SQL Server, complete the following steps.

Prerequisite Verify the data directory for Microsoft SQL before creating the database. This is the directory where the database files appear when the following SQL file runs. The **HealthcareSS.sql** file is included in the downloaded Healthcare Database files.

1. Log in to the SQL Server computer with a user ID that has administrator rights, and start **SQL Server Management Studio**.

2. In the **Connect to Server** dialog box, enter the information in the **Server Type**, **Server Name**, and **Authentication** fields. Click **Connect**.

3. In the **Object Explorer**, select the **master** database.

4. On the **File** menu, click **Open** > **File** and complete the following substeps.

   1. In the **Open File** dialog box, browse to and select the **HealthcareSS.sql** file.

   2. Click **Open**.

   3. If necessary, click **Connect**.

5. In the **HealthcareSS.sql** file, update the drive in the four paths located on the **Create Database** and the **Alter Database** lines.

6. To execute the query batch file, on the **Query** menu, select **Execute**.

When the execution is complete, the completion message appears at the bottom of the **Query** window.

Note To configure named instances of SQL Server to allow remote TCP/IP connections on port 1433, refer to the appropriate Microsoft documentation.

Set SQL Server database collation for non-Latin characters for a Unicode environment

Collations provide support for supplemental characters and properties for non-Latin-based languages and data in SQL Server databases. If you plan to use a non-Latin-based character system with the database, you must update the collation property for your language.

To set the database collation, complete the following steps.

1. Open the **Healthcare Database creation script**.

2. To display a list of all of the supported collations on your system, execute the following SQL query in **SQL Server Management Studio**.

   ```
   SELECT * FROM fn_helpcollations()
   ```

3. At the beginning of the DDL script, locate the **COLLATE REPLACE_WITH_VALID_COLLATION_NAME** collation property.

4. Set the **COLLATE property** to a supported language from the list.

   For example, to set the collation to Simplified Chinese, change the property to

   COLLATE Chinese_Simplified_Stroke_Order_100_CI_AS.

   Note The Healthcare Database works with case-insensitive collations. Select a collation with the **CI** attribute.

Verify the HDB database user authentication

To verify the HDB database user authentication, complete the following steps.

1. In **SQL Server Management Studio**, in the **Object Explorer** pane, right-click your server > **Properties**.

2. In the **Server Properties** dialog box, under **Select a Page**, click **Security**. Under **Server Authentication**, complete one of the following substeps.

   - If **SQL Server and Windows Authentication** mode is selected, click **OK**.

   - If **Windows Authentication Mode** is selected, change it to **SQL Server and Windows**. Click **OK**, and then click **Yes** to restart the server.

   - To restart the server after changing the method, in the **Object Explorer** pane, right-click the server > **Restart**.

3. Click **OK** and then exit **SQL Server Management Studio**.

Upgrade the Healthcare Database

Download the Healthcare Database files

To download the Healthcare Database ZIP file, complete the following steps:

1. Go to www.perceptivesoftware.com and log in to the **Customer Portal**.

2. In the **Product Downloads** page, search for the **Healthcare Database** file.

3. Download the file to a temporary directory on your computer.

4. Unzip the downloaded file into the temporary directory used in the previous step.

Prepare to Upgrade

To complete an update of the Healthcare Database it is important to ensure that no services attempt to connect to the database while the upgrade is being performed. To prepare to update the Healthcare Database complete the following steps.

1. Download the Healthcare Database files.

2. Shut off or stop any services using the REST or SOAP APIs provided by the Healthcare Database Connector. For example, Corepoint and the Capture & Indexing for Healthcare application.

3. To stop the Healthcare Database Connector, 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 **Bundles** page, click the **Category** header to sort the list of bundles.

    4. Click the **Stop** button next to all of the bundles with the **Lexmark:HDB** category.

4. To identify the version of the Healthcare Database schema currently in use complete the following substeps.

    1. Log in to the SQL Server computer with a user ID that has administrator rights, and start SQL Server Management Studio.

    2. In the **Connect to Server** dialog box, enter the information in the **Server Type**, **Server Name**, and **Authentication** fields. Click **Connect**.

    3. In the **Object Explorer**, expand **Databases** and select the **HDB** database.

    4. Navigate to the **File** menu and select **File > New > Query with Current Connection**.

    5. In the blank text area, add the following SQL statement.

        ```
        SELECT TOP 1 [SCHEMA_VERSION] FROM [HDB].[hdbuser].[HDB_SCHEMA_VERSION]
        ```

    6. To execute the query, on the **Query** menu, click **Execute**.

    7. The version in the result window is the current schema version

Perform the Upgrade

You can upgrade the Healthcare Database in Microsoft SQL Server. To upgrade from a previous version, complete the following steps.

1. Log in to the SQL Server computer with a user ID that has administrator rights, and start SQL Server Management Studio.

2. In the **Connect to Server** dialog box, enter the information in the **Server Type**, **Server Name**, and **Authentication** fields; and click **Connect**.

3. In the **Object Explorer**, expand **Databases** and select the **HDB** database.

4. On the **File** menu, click **Open** > **File**.

5. In the **Open File** dialog box, navigate to and open the **HealthcareSS_Incremental_<current version>-<upgrade version>.sql** file that matches the current version of the Healthcare Database.

6. If necessary, click **Connect**.

7. To execute the query batch file, on the **Query** menu, click **Execute**.

8. When complete, a completion message appears at the bottom of the window.

Finalize the Upgrade

1. To start the Healthcare Database Connector, 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 **Bundles** page, click the **Category** header to sort the list of bundles.

   4. Click the **Start** button next to all of the bundles with the **Lexmark:HDB** category.

2. Turn on or resume any services using the APIs.