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Preface

This document describes the steps to upgrade your Omni-HealthData™ version 3.1.5 implementation to version 3.11 on Windows and Linux platforms.

How This Manual Is Organized

This manual includes the following chapters:

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<th>Chapter/Appendix</th>
<th>Contents</th>
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</thead>
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</tr>
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<td>2</td>
<td>Upgrading Omni-HealthData™ Version 3.1.5 to Version 3.11 on Linux</td>
</tr>
</tbody>
</table>

Describes how to upgrade your Omni-HealthData™ version 3.1.5 applications to version 3.11 on Windows platforms.

Describes how to upgrade your Omni-HealthData™ version 3.1.5 applications to version 3.11 on Linux platforms.

Documentation Conventions

The following table lists and describes the documentation conventions that are used in this manual.

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>THIS TYPEFACE</td>
<td>Denotes syntax that you must type exactly as shown.</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>this typeface</td>
<td></td>
</tr>
<tr>
<td>underscore</td>
<td>Indicates a default setting.</td>
</tr>
<tr>
<td>Key + Key</td>
<td>Indicates keys that you must press simultaneously.</td>
</tr>
<tr>
<td>{}</td>
<td>Indicates two or three choices. Type one of them, not the braces.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Convention</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>...</td>
<td>Indicates that you can enter a parameter multiple times. Type only the parameter, not the ellipsis (...).</td>
</tr>
<tr>
<td>.</td>
<td>Indicates that there are (or could be) intervening or additional commands.</td>
</tr>
</tbody>
</table>

**Related Publications**

Visit our Technical Documentation Library at [http://documentation.informationbuilders.com](http://documentation.informationbuilders.com). You can also contact the Publications Order Department at (800) 969-4636.

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Call Information Builders Customer Support Services (CSS) at (800) 736-6130 or (212) 736-6130. Customer Support Consultants are available Monday through Friday between 8:00 A.M. and 8:00 P.M. EST to address all your questions. Information Builders consultants can also give you general guidance regarding product capabilities. Be prepared to provide your six-digit site code (xxxx.xx) when you call.

To learn about the full range of available support services, ask your Information Builders representative about InfoResponse Online, or call (800) 969-INFO.
Help Us to Serve You Better

To help our consultants answer your questions effectively, be prepared to provide specifications and sample files and to answer questions about errors and problems.

The following table lists the environment information that our consultants require.

<table>
<thead>
<tr>
<th>Platform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
</tr>
<tr>
<td>OS Version</td>
</tr>
<tr>
<td>JVM Vendor</td>
</tr>
<tr>
<td>JVM Version</td>
</tr>
</tbody>
</table>

The following table lists additional questions to help us serve you better.

<table>
<thead>
<tr>
<th>Request/Question</th>
<th>Error/Problem Details or Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the problem arise through a service or event?</td>
<td></td>
</tr>
<tr>
<td>Provide usage scenarios or summarize the application that produces the problem.</td>
<td></td>
</tr>
<tr>
<td>When did the problem start?</td>
<td></td>
</tr>
<tr>
<td>Can you reproduce this problem consistently?</td>
<td></td>
</tr>
<tr>
<td>Describe the problem.</td>
<td></td>
</tr>
<tr>
<td>Describe the steps to reproduce the problem.</td>
<td></td>
</tr>
<tr>
<td>Specify the error messages.</td>
<td></td>
</tr>
<tr>
<td>Request/Question</td>
<td>Error/Problem Details or Information</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Any change in the application environment: software configuration, EIS/database</td>
<td></td>
</tr>
<tr>
<td>configuration, application, and so forth?</td>
<td></td>
</tr>
<tr>
<td>Under what circumstance does the problem not occur?</td>
<td></td>
</tr>
</tbody>
</table>

The following is a list of error and problem files that might be applicable.

- Input documents (XML instance, XML schema, non-XML documents)
- Transformation files
- Error screen shots
- Error output files
- Trace files
- Service Manager package to reproduce problem
- Custom functions and agents in use
- Diagnostic Zip
- Transaction log

For information on tracing, see the iWay Service Manager User’s Guide.

**User Feedback**

In an effort to produce effective documentation, the Technical Content Management staff welcomes your opinions regarding this document. Please use the Reader Comments form at the end of this document to communicate your feedback to us or to suggest changes that will support improvements to our documentation. You can also contact us through our website, [http://documentation.informationbuilders.com/connections.asp](http://documentation.informationbuilders.com/connections.asp).

Thank you, in advance, for your comments.
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Chapter 1

Upgrading Omni-HealthData™ Version 3.1.5 to Version 3.11 on Windows

This chapter describes how to upgrade your Omni-HealthData™ version 3.1.5 applications to version 3.11 on Windows platforms.

In this chapter:

- Completing Upgrade Prerequisites
- Upgrading Omni-HealthData™
- Completing Post-Upgrade Tasks

Completing Upgrade Prerequisites

This section describes the upgrade prerequisites, which consist of the following steps:

1. Backup your MData using the Omni-HealthData Governance Console (OHDGC).
   
   For more information, see How to Backup Your MData in Omni-HealthData Governance Console on page 14.

2. Stop all services and the Omni-HealthData Controller.
   
   For more information, see How to Stop All Services and the Controller on page 14.

3. Navigate to the Configuration section in the Omni Console.

4. Take note of all configuration parameters that have been edited in your local deployment, specifically the current memory settings, which will be required when installing Omni-HealthData™ version 3.11.

   Note: Edited (modified) configuration parameters are identified by the icon.

5. Stop OHDGC (Apache Tomcat and WSO2 Identity Server).
   
   For more information, see How to Stop Omni-HealthData Governance Console (Apache Tomcat and WSO2 Identity Server) on page 15.

6. Backup your Omni-HealthData™ databases.
   
   For more information, see How to Backup Omni-HealthData Databases on page 16.

7. Backup your omnigen home directory.
   
   For more information, see How to Backup the Omnigen Home Directory on page 16.
8. Verify the recommended port values.

**Note:** The recommended port values may have changed with Omni-HealthData™ version 3.11. Review the following recommended port value tables (Omni Server Port Usage and Omni-HealthData Governance Console Port Usage) before installing Omni-HealthData™ version 3.11.

### Default Port Numbers

<table>
<thead>
<tr>
<th>Component</th>
<th>Type</th>
<th>Version 3.1 Ports</th>
<th>Version 3.11 Ports</th>
<th>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omni-Gen Controller/Console</td>
<td>external</td>
<td>9500</td>
<td>9500</td>
<td>TLS 1.2</td>
</tr>
<tr>
<td>Omni-Gen Server</td>
<td>internal</td>
<td>9512</td>
<td>9514</td>
<td>TLS 1.2</td>
</tr>
<tr>
<td>Omni-Gen Server DQ High Speed TCP</td>
<td>internal</td>
<td>n/a</td>
<td>9532</td>
<td>none</td>
</tr>
<tr>
<td>Data Quality Cleanse</td>
<td>external</td>
<td>9502</td>
<td>9504</td>
<td>none</td>
</tr>
<tr>
<td>Data Quality Cleanse</td>
<td>internal</td>
<td>9503</td>
<td>9505</td>
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<tr>
<td>Data Quality Match</td>
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<td>Data Quality Match</td>
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<td>9507</td>
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<tr>
<td>Data Quality Merge</td>
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<td>9508</td>
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<td>Data Quality Merge</td>
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<td>Data Quality Remediation</td>
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<td>9510</td>
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<tr>
<td>Component</td>
<td>Type</td>
<td>Version 3.1 Ports</td>
<td>Version 3.11 Ports</td>
<td>Security</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-----------</td>
<td>-------------------</td>
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</tr>
<tr>
<td>Data Quality Remediation</td>
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<td>9024</td>
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<td>OGC Tomcat Console</td>
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<td>9090</td>
<td>9501</td>
<td>Tomcat Config</td>
</tr>
<tr>
<td>OGC Tomcat AJP</td>
<td>internal</td>
<td>9009</td>
<td>9525</td>
<td>Tomcat Config</td>
</tr>
<tr>
<td>OGC WS02</td>
<td>external</td>
<td>9443</td>
<td>9503</td>
<td>WS02 Config</td>
</tr>
<tr>
<td>OGC Redirect</td>
<td>internal</td>
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<td>9526</td>
<td>none</td>
</tr>
<tr>
<td>WS02 RMI Registry</td>
<td>internal</td>
<td>n/a</td>
<td>9534</td>
<td>WS02 Config</td>
</tr>
<tr>
<td>WS02 RMI Server</td>
<td>internal</td>
<td>n/a</td>
<td>9535</td>
<td>WS02 Config</td>
</tr>
<tr>
<td>WS02 LDAP Server</td>
<td>internal</td>
<td>n/a</td>
<td>9536</td>
<td>WS02 Config</td>
</tr>
<tr>
<td>WS02 KDC Server</td>
<td>internal</td>
<td>n/a</td>
<td>9537</td>
<td>WS02 Config</td>
</tr>
<tr>
<td>WS02 Thrift Entitlement Receiver</td>
<td>internal</td>
<td>n/a</td>
<td>9538</td>
<td>WS02 Config</td>
</tr>
</tbody>
</table>

9. For Postgres Only: verify pgcrypto installation.

As of version 3.11, Omni-HealthData™ requires the Postgres `pgcrypto` functions to be available. `pgcrypto` is included in most Postgres 8.4 and higher distributions, and is enabled for use by the following command:

```
CREATE EXTENSION pgcrypto;
```
To see if pgcrypto is available, issue the following command:

```sql
select * from pg_available_extensions
```

For earlier versions of Postgres, or its derivatives, the appropriate pgcrypto package must be installed. Where `CREATE EXTENSION` is not supported, the function definitions will need to be installed manually.

For example:

```sql
psql -d databasename -f $PGHOME/share/postgresql/contrib/pgcrypto.sql
```

**Procedure:** How to Backup Your MData in Omni-HealthData Governance Console

1. Log on to Omni-HealthData Governance Console (OHDGC) to download metadata using your browser.
   
   For example:
   
   ```
   http://omnihealthdata.ibi.com:9090/ogc
   ```

2. Log on using the preauthorized WSO2 Identity Server local (primary) credentials.
   
   For example:
   
   - Username: **primary/super_a**
   - Password: **supera123**

3. Click *Administration* in the top menu, then select *Download Metadata* from the navigation bar.

4. Save the MData.xml file in the location where you store your backups.

**Procedure:** How to Stop All Services and the Controller

1. Ensure that no work orders are currently running in the Omni Console.

2. Navigate to the *OmniServer* home directory.
   
   For example:
   
   ```
   C:\omni\product\omnihealthdata\omnigen\OmniServer
   ```

3. Open a command prompt window and type the following command to stop all services:
   ```
   omni stop-all
   ```
4. Upon successful notification that all services are stopped, enter the following command to stop the controller:

   omni stop-controller

**Procedure:** How to Stop Omni-HealthData Governance Console (Apache Tomcat and WSO2 Identity Server)

1. If Windows services are implemented:
   a. Open the Windows Services manager.
   b. Stop all services created by Omni-HealthData Governance Console (OHDGC).
      For example:
      
      iWay_ogc_*_<current_release>

2. If Windows Services are not implemented:
   a. Navigate to the OHDGC installation directory.
      For example:
      
      C:\omni\product\omnihealthdata\ohdgc
   b. Navigate to the location of the tomcat.bat file.
      For example:
      
      C:\omni\product\omnihealthdata\ohdgc\ogc\bin\ibi
   c. Open a command prompt, enter the following command, then press Enter to stop Apache Tomcat:
      
      tomcatstop.exe
   d. When Apache Tomcat has stopped, open the WSO2 Identity Server Management Console in a browser by entering the following URL:
      
      https://yourhost.yourdomain.com:9443
      
      For example:
      
      https://omnihealthdata.ibi.com:9443

   **Note:** You must use the appropriate protocol (HTTP or HTTPS) as specified in the server.runtime.http-protocol property of the og_configuration.properties file.

   e. Log on using the following credentials:
      
      □ Username: admin
Password: admin

f. Click Shutdown/Restart in the Manage section of the left navigation panel.
g. Click Graceful Shutdown to stop the WSO2 Identity Server.

Procedure: How to Backup the Omnigen Home Directory
1. Navigate to the omnihealthdata subdirectory where your base install is located.
   For example:
   
   C:\omni\product\omnihealthdata\

2. Rename the omnigen directory to:
   
   omnigen_<project_revision>

Procedure: How to Backup Omni-HealthData Databases
Upon successful shutdown of the WSO2 Identity Server, backup the corresponding omnihealthdata and omnirepo databases for the Omni-HealthData™ environment you want to upgrade.

Upgrading Omni-HealthData™

Important: Stop when you get to the Completing Post-Installation Tasks topic in the Omni-HealthData™ Installer User’s Guide, and continue with Completing Post-Upgrade Tasks on page 16.

Note: During the Omni-HealthData™ version 3.11 installation, specify your current databases and the memory settings you noted in Completing Upgrade Prerequisites on page 11.

Completing Post-Upgrade Tasks
This section describes how to complete post-upgrade tasks, such as deploying the new bundle for Omni-HealthData™ version 3.11.

Procedure: How to Deploy Your Bundle
1. Enter the following URL in your browser to access the Omni Console:
   
   https://yourhost.yourdomain.com:9500

   For example:
https://omnihealthdata.ibi.com:9500

**Note:** You cannot use *localhost* in the URL.

2. Log on using the following credentials:
   - **Username:** ibi
   - **Password:** ibi

3. Navigate to the Configuration section of the Omni Console.

4. Ensure that the local Configuration parameters you noted in *Completing Upgrade Prerequisites* on page 11 are set with the appropriate values from your prior implementation.

5. Deploy the new Data Model that is included with Omni-HealthData™ version 3.11 by selecting *Update Bundle* from the Deploy Bundle drop-down list, as shown in the following image.

![Deployment](image)

6. Browse to the location of the updated deployment bundle file (*omni-healthdata-bundle-3.11.*.zip), which is located in the following directory on Windows platforms:

   C:\data\omni\product\omnihealthdata\omnigen\OmniGenData\OmniHealthData\omni-healthdata-bundle-3.11.*.zip
7. Deploy your current (Omni-HealthData™ version 3.1.5) bundle into the updated (version 3.11) Omni Console, by selecting *Update Data Quality Plans* from the Deploy Bundle drop-down list, as shown in the following image.

![Deployment Image]

8. Browse to the location of your current (Omni-HealthData™ version 3.1.5) bundle, and select it for upload.

   This will deploy your existing Data Model and Data Quality (DQ) plans to your Omni-HealthData™ version 3.11 implementation.

9. Download and save the new deployment bundle by selecting the *Current Deployment* hyperlink for the latest Deployment listed in the *Deployment History* drop-down list.

*Procedure: How to Start Omni Services*


*Procedure: How to Upload Your Metadata in Omni-HealthData Governance Console*


Congratulations, you have successfully upgraded your Omni-HealthData™ implementation to version 3.11.
Upgrade Consideration for Existing Matching Repositories on Microsoft SQL Server

Omni-HealthData™ version 3.11 is packaged with iWay Data Quality Server (DQS) version 12. Earlier versions of Omni-HealthData (for example, version 3.1.5) included DQS version 10. In the underlying DQ database, the creation of tables differs between DQS version 10 and version 12 as follows:

- In DQS version 10, the data2 column on the repos_subject_data table is of type text.
- In DQS version 12, the data2 column on the repos_subject_data table is of type varchar(max).

As per current Microsoft SQL Server (MS SQL) specifications, the text type is obsolete and the varchar(max) type should be used instead.

If you are upgrading from an earlier version of Omni-HealthData (for example, version 3.1 or 3.1.5) and you are migrating an existing Matching repository that resides on MS SQL, you must execute the following SQL commands to modify the data2 columns on the repos_subject_data tables to use the varchar(max) type:

```sql
ALTER TABLE repos_facility_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_facilitylocation_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_member_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_organization_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_organizationalunit_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_patient_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_payer_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_practicefacility_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_provider_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_providerpractice_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_worker_data ALTER COLUMN data2 varchar(max);
```

If the data2 columns are not modified to use the varchar(max) type, then the following error is generated during the Match steps when processing data:

```
ERROR com.ibi.omni.managedservices.ManagedJavaService$IOThreadHandler:656
[FATAL]
[OnlineServicesComponent][01_match_patient.online][match_patient]
[match_patient_write.comp] [80] Internal error occurred during run of the plan:
java.sql.BatchUpdateException: Operand type clash: varbinary is incompatible with text[STEP Match patient/Match patient[Extended Unify]]
```
Chapter 2

Upgrading Omni-HealthData™ Version 3.1.5 to Version 3.11 on Linux

This chapter describes how to upgrade your Omni-HealthData™ version 3.1.5 applications to version 3.11 on Linux platforms.

In this chapter:

- Completing Upgrade Prerequisites
- Upgrading Omni-HealthData™
- Completing Post-Upgrade Tasks

Completing Upgrade Prerequisites

This section describes the upgrade prerequisites, which consist of the following steps:

1. Backup your MData using the Omni-HealthData Governance Console (OHDGC).
   For more information, see How to Backup Your MData in Omni-HealthData Governance Console on page 24.

2. Stop all services and the Omni-HealthData Controller.
   For more information, see How to Stop All Services and the Controller on page 24.

3. Navigate to the Configuration section in the Omni Console.

4. Take note of all configuration parameters that have been edited in your local deployment, specifically the current memory settings, which will be required when installing Omni-HealthData™ version 3.11.

   Note: Edited (modified) configuration parameters are identified by the icon.

5. Stop OHDGC (Apache Tomcat and WSO2 Identity Server).
   For more information, see How to Stop Omni-HealthData Governance Console (Apache Tomcat and WSO2 Identity Server) on page 25.

6. Backup your Omni-HealthData™ databases.
   For more information, see How to Backup the Omni-HealthData Databases on page 26.

7. Backup your omnigen home directory.
   For more information, see How to Backup the Omnigen Home Directory on page 25.
8. Verify the recommended port values.

**Note:** The recommended port values may have changed with Omni-HealthData™ version 3.11. Review the following recommended port value tables (*Omni Server Port Usage* and *Omni-HealthData Governance Console Port Usage*) before installing Omni-HealthData™ version 3.11.

### Default Port Numbers

<table>
<thead>
<tr>
<th>Component</th>
<th>Type</th>
<th>Version 3.1 Ports</th>
<th>Version 3.11 Ports</th>
<th>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omni-Gen Controller/Console</td>
<td>external</td>
<td>9500</td>
<td>9500</td>
<td>TLS 1.2</td>
</tr>
<tr>
<td>Omni-Gen Server</td>
<td>internal</td>
<td>9512</td>
<td>9514</td>
<td>TLS 1.2</td>
</tr>
<tr>
<td>Omni-Gen Server DQ High Speed TCP</td>
<td>internal</td>
<td>n/a</td>
<td>9532</td>
<td>none</td>
</tr>
<tr>
<td>Data Quality Cleanse</td>
<td>external</td>
<td>9502</td>
<td>9504</td>
<td>none</td>
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<tr>
<td>Data Quality Cleanse</td>
<td>internal</td>
<td>9503</td>
<td>9505</td>
<td>none</td>
</tr>
<tr>
<td>Data Quality Match</td>
<td>external</td>
<td>9504</td>
<td>9506</td>
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<td>Data Quality Match</td>
<td>internal</td>
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<tr>
<td>Data Quality Remediation</td>
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### Component Types

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<thead>
<tr>
<th>Component</th>
<th>Type</th>
<th>Version 3.1 Ports</th>
<th>Version 3.11 Ports</th>
<th>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Quality Remediation</td>
<td>internal</td>
<td>9509</td>
<td>9511</td>
<td>none</td>
</tr>
<tr>
<td>OGC Tomcat Shutdown</td>
<td>internal</td>
<td>9005</td>
<td>9024</td>
<td>none</td>
</tr>
<tr>
<td>OGC Tomcat Console</td>
<td>external</td>
<td>9090</td>
<td>9501</td>
<td>Tomcat Config</td>
</tr>
<tr>
<td>OGC Tomcat AJP</td>
<td>internal</td>
<td>9009</td>
<td>9525</td>
<td>Tomcat Config</td>
</tr>
<tr>
<td>OGC WS02</td>
<td>external</td>
<td>9443</td>
<td>9503</td>
<td>WS02 Config</td>
</tr>
<tr>
<td>OGC Redirect</td>
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<td>n/a</td>
<td>9526</td>
<td>none</td>
</tr>
<tr>
<td>WS02 RMI Registry</td>
<td>internal</td>
<td>n/a</td>
<td>9534</td>
<td>WS02 Config</td>
</tr>
<tr>
<td>WS02 RMI Server</td>
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<td>n/a</td>
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<td>WS02 Config</td>
</tr>
<tr>
<td>WS02 LDAP Server</td>
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<td>n/a</td>
<td>9536</td>
<td>WS02 Config</td>
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<tr>
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<td>9537</td>
<td>WS02 Config</td>
</tr>
<tr>
<td>WS02 Thrift Entitlement Receiver</td>
<td>internal</td>
<td>n/a</td>
<td>9538</td>
<td>WS02 Config</td>
</tr>
</tbody>
</table>

9. For Postgres Only: verify pgcrypto installation.

As of version 3.11, Omni-HealthData™ requires the Postgres `pgcrypto` functions to be available. Pgcrypto is included in most Postgres 8.4 and higher distributions, and is enabled for use by the following command:

```
CREATE EXTENSION pgcrypto;
```
To see if pgcrypto is available, issue the following command:

```sql
select * from pg_available_extensions
```

For earlier versions of Postgres, or its derivatives, the appropriate pgcrypto package must be installed. Where `CREATE EXTENSION` is not supported, the function definitions will need to be installed manually.

For example:

```bash
psql -d databasename -f $PGHOME/share/postgresql/contrib/pgcrypto.sql
```

**Procedure:** How to Backup Your MData in Omni-HealthData Governance Console

1. Log on to Omni-HealthData Governance Console (OHDGC) to download metadata using your browser.
   
   For example:
   
   ```
   http://omnihealthdata.ibi.com:9090/ogc
   ```

2. Log on using the preauthorized WSO2 Identity Server local (primary) credentials.
   
   For example:
   
   ```
   ![Username: primary/super_a](image)
   ![Password: supera123](image)
   ```

3. Click `Administration` in the top menu, then select `Download Metadata` from the navigation bar.

4. Save the MData.xml file in the location where you store your backups.

**Procedure:** How to Stop All Services and the Controller

1. Ensure that no work orders are currently running in the Omni Console.

2. Navigate to the `OmniServer` home directory.
   
   For example:
   
   ```
   /data/omni/product/omnihealthdata/omnigen/OmniServer
   ```

3. Open a terminal window and type the following command to stop all services:
   
   ```bash
   ./omni.sh stop-all
   ```
4. Upon successful notification that all services are stopped, enter the following command to stop the controller:

```
./omni.sh stop-controller
```

**Procedure:** How to Stop Omni-HealthData Governance Console (Apache Tomcat and WSO2 Identity Server)

1. Navigate to the OHDGC installation directory.
   
   For example:
   ```
   /data/omni/product/omnihealthdata/ohdgc
   ```

2. Navigate to the location of the `tomcatstop.sh` file.
   
   For example:
   ```
   /data/omni/product/omnihealthdata/ohdgc/ogc/bin/ibi/
   ```

3. Open a terminal window, enter the following command, then press Enter to stop Apache Tomcat:

   ```
   ./tomcatstop.sh
   ```

4. When Apache Tomcat has stopped, open the WSO2 Identity Server Management Console in your browser by entering the following URL:

   ```
   https://yourhost.yourdomain.com:9443
   ```

   For example:
   ```
   https://omnihealthdata.ibi.com:9443
   ```

   **Note:** You must use the appropriate protocol (HTTP or HTTPS) as specified in the `server.runtime.http-protocol` property of the `og_configuration.properties` file.

5. Log on using the following credentials:

   - Username: **admin**
   - Password: **admin**

6. Click **Shutdown/Rerestart** in the Manage section of the left navigation panel.

7. Click **Graceful Shutdown** to stop the WSO2 Identity Server.

**Procedure:** How to Backup the Omnigen Home Directory

1. Navigate to the `omnihealthdata` subdirectory where your base installation is located.
For example:

/data/omni/product/omnihealthdata

2. Rename the omnigen directory to:

omnigen_<project_revision>

Procedure: How to Backup the Omni-HealthData Databases

Upon successful shutdown of the WSO2 Identity Server, backup the corresponding omnirepo and omnihealthdata databases for the Omni-HealthData (OHD) environment you want to upgrade.

Upgrading Omni-HealthData™

See the Installing Omni-HealthData™ topic in Chapter 3, Installing Omni-HealthData™ Version 3.11 on Linux, in the Omni-HealthData™ Installer User’s Guide.

Important: Stop when you get to the Completing Post-Installation Tasks topic in the Omni-HealthData™ Installer User’s Guide, and continue with Completing Post-Upgrade Tasks on page 26.

Note: During the Omni-HealthData™ version 3.11 installation, specify your current databases and the memory settings you noted in Completing Upgrade Prerequisites on page 21.

Completing Post-Upgrade Tasks

This section describes how to complete post-upgrade tasks, such as deploying the new bundle for Omni-HealthData™ version 3.11.

Procedure: How to Deploy Your Bundle

1. Enter the following URL in your browser to access the Omni Console:

https://yourhost.yourdomain.com:9500

For example:

https://omnihealthdata.ibi.com:9500

Note: You cannot use localhost in the URL.

2. Log on using the following credentials:

   - Username: ibi
   - Password: ibi
3. Navigate to the Configuration section of the Omni Console.

4. Ensure that the local Configuration parameters you noted in Completing Upgrade Prerequisites on page 21 are set with the appropriate values from your prior implementation.

5. Deploy the new Data Model that is included with Omni-HealthData™ version 3.11 by selecting Update Bundle from the Deploy Bundle drop-down list, as shown in the following image.

6. Browse to the location of the updated deployment bundle file (omni-healthdata-bundle-3.11.*.zip), which is located in the following directory on Linux platforms:

/data/omni/product/omnihealthdata/omnigen/OmniGenData/OmniHealthData/omni-healthdata-bundle-3.11.*.zip
7. Deploy your current (Omni-HealthData™ version 3.1.5) bundle into the updated (version 3.11) Omni Console, by selecting Update Data Quality Plans from the Deploy Bundle drop-down list, as shown in the following image.

![Deployment Image]

8. Browse to the location of your current (Omni-HealthData™ version 3.1.5) bundle, and select it for upload.

   This will deploy your existing Data Model and Data Quality (DQ) plans to your Omni-HealthData™ version 3.11 implementation.

9. Download and save the new deployment bundle by selecting the Current Deployment hyperlink for the latest Deployment listed in the Deployment History drop-down list.

**Procedure:** How to Start Omni Services

See the How to Start Omni Services procedure in Chapter 3, Installing Omni-HealthData™ Version 3.11 on Linux, in the Omni-HealthData™ Installer User's Guide.

**Procedure:** How to Upload Your Metadata in Omni-HealthData Governance Console

See the How to Upload Your Metadata in Omni-HealthData Governance Console procedure in Chapter 3, Installing Omni-HealthData™ Version 3.11 on Linux, in the Omni-HealthData™ Installer User's Guide.

Congratulations, you have successfully upgraded your Omni-HealthData™ implementation to version 3.11.
Upgrade Consideration for Existing Matching Repositories on Microsoft SQL Server

Omni-HealthData™ version 3.11 is packaged with iWay Data Quality Server (DQS) version 12. Earlier versions of Omni-HealthData (for example, version 3.1.5) included DQS version 10. In the underlying DQ database, the creation of tables differs between DQS version 10 and version 12 as follows:

- In DQS version 10, the data2 column on the repos_subject_data table is of type text.
- In DQS version 12, the data2 column on the repos_subject_data table is of type varchar(max).

As per current Microsoft SQL Server (MS SQL) specifications, the text type is obsolete and the varchar(max) type should be used instead.

If you are upgrading from an earlier version of Omni-HealthData (for example, version 3.1 or 3.1.5) and you are migrating an existing Matching repository that resides on MS SQL, you must execute the following SQL commands to modify the data2 columns on the repos_subject_data tables to use the varchar(max) type:

```
ALTER TABLE repos_facility_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_facilitylocation_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_member_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_organization_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_organizationalunit_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_patient_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_payer_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_practicefacility_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_provider_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_providerpractice_data ALTER COLUMN data2 varchar(max);
ALTER TABLE repos_worker_data ALTER COLUMN data2 varchar(max);
```

If the data2 columns are not modified to use the varchar(max) type, then the following error is generated during the Match steps when processing data:

```
ERROR com.ibi.omni.managedservices.ManagedJavaService$IOThreadHandler:656
[FATAL]
[OnlineServicesComponent][01_match_patient.online][match_patient]
[match_patient_write.comp] [80] Internal error occurred during run of the
plan:

java.sql.BatchUpdateException: Operand type clash: varbinary is
incompatible with text[STEP Match patient/Match patient[Extended Unify]]
```
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iWay

Omni-HealthData™ Upgrade Guide

Version 3.11

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