Information Builders

iWay

Omni-Gen™ Master Data Management and Data Quality Editions Release Guide

Version 3.15

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Contents

1. Omni-Gen™ Master Data Management and Data Quality Editions Release Guide Version 3.2 and Higher 7

Introduction 7

Master Data Management Edition vs. Data Quality Edition. 8

Installation 8

Installation Considerations. 8

UTF-8 Character Support. 9

Operational Considerations. 9

Database Considerations. 10

Additional Considerations for Current Users. 11

Data Quality Updates. 13

Known Issues 13

Invoking the Swagger API for the Omni-Gen Server Authorize Call. 13

Deleting Project Bundles. 14

Project Bundle Compression Support. 14

Microsoft Internet Explorer Web Browser. 14

Omni-Gen Port Number Usage 15

Default Port Numbers Currently in Use. 15

Deprecated Port Numbers. 17

Key Features and Considerations 18

WSO2 Identity Server. 18

Omni Server Console Authorization. 19

Using WSO2 to Create New User IDs. 42

Authenticating Omni-Gen Console Users With Microsoft Active Directory/LDAP. 45

In the WSO2 System. 45

In the Active Directory/LDAP System. 48

Creating a User. 48

Creating a Group in Active Directory. 50

Adding a User to a Group. 52

Testing the Login to the Omni-Gen Console. 54

WSO2 Functions. 55

High Availability Web Services. 57

SAML for Omni Governance Console Authorization. 58
Omni Designer Repository Download. 59
Ramp Quality Gate. 60
Blocked Work Order Status. 61
Batch Split. 62
Elastic Removed. 63
Data Quality Workbench Disabled. 63
Data Lineage and Governance APIs (Metadata Management). 64
Deployment History Option. 64
Data Purge. 64
Expanded On-Ramp Processing Options. 64
Parallel Processing Option for Mastered Subjects. 65
System Error Codes. 66
Changing the Log Level for Omni-Gen Governance Console and Deployed Web Applications. 66
Omni-Gen Governance Console. 66
Deployed Web Applications. 67
Enhanced Access Security: Column-Based and Row-Based. 69
Base Port Support. 70
Server Runtime HTTPS Setting. 72
Instance and Master History. 72
Configuring History. 73
Deployment Task for Reset. 74
Domain Naming Considerations. 74
Importing a Project from a Release Bundle in Omni Designer. 74
Updating the Repository Connection. 75
Additional Bundle Deployment Options. 76
Support for Mastering Intra-Subject Relations. 76
Disabling Remediation Ticket Submission. 76
Match Post Processing. 77
Installation Verification Process. 78
Omni Console Operations Section. 79
Omni-Gen Consumption View 81

Omni-Gen Services 82
Omni Governance Console 82
New Features. 82
Known Issues. 84
OGC Sync of Model to Metadata and WS02 Roles. 84
SYNCH Process. 85
Mastered Subject (Domain) Name Length Limit. 85
Remediation Ticket Volume. 86
Resolved Cases 86
Customer Support 95

A. Glossary 97

Chapter 1

Omni-Gen™ Master Data Management and Data Quality Editions Release Guide Version 3.2 and Higher

This document provides release information for Omni-Gen™ Master Data Management (MDM) Edition and Data Quality (DQ) Edition version 3.2 and higher. It is intended for all levels of users, including data stewards, system integrators, application developers, and administrators.

In this chapter:

- Introduction
- Installation
- Known Issues
- Omni-Gen Port Number Usage
- Key Features and Considerations
- Omni-Gen Consumption View
- Omni-Gen Services
- Omni Governance Console
- Resolved Cases
- Customer Support

Introduction

This document provides release information for Omni-Gen™ Master Data Management (MDM) Edition and Data Quality (DQ) Edition version 3.2 and higher. This release is compatible with Omni-Gen artifacts generated in Omni-Gen version 3.2 and 3.1. Please be sure to review *Installation* on page 8 prior to proceeding with any upgrade. For further assistance, please contact iWay Customer Support.

Some of the functionality that is available in the MDM Edition, such as Omni Governance Console (OGC) 360 Viewer or other areas relevant only for Mastering functionality, do not apply to the DQ Edition.

Master Data Management Edition vs. Data Quality Edition

This section provides a high-level summary of the differences between Omni-Gen Master Data Management (MDM) Edition and Data Quality (DQ) Edition. It is meant to list only the differences in feature availability and not all of the available features.

Feature	Omni-Gen Version 3.2 and Higher MDM Edition	Omni-Gen Version 3.2 and Higher DQ Edition
Omni Designer - Merging Plans & Master Model Attributes	Yes	No
Omni Governance Console - 360 Viewer	Yes	No
Omni Governance Console - Remediation (Match/Merge tickets)	Yes	No

Installation

As of Omni-Gen version 3.2 and higher, a new wizard-based installer is provided, which simplifies the installation and configuration process. The user needs to download the installer applicable to their version and platform. The installation must be running with Administrative privileges to ensure that it has access to all required service configurations.

This install does not provide a pure upgrade functionality in terms of overlaying on top of the existing Omni-Gen 3.x release. The installation is meant to be a parallel process and then a migration of artifacts. It is important to note that if you install into the same directory, you may lose your configuration as configuration files will also be replaced in addition to the binaries. For more information, see the *Omni-Gen™ Installer User's Guide*.

Installation Considerations

- As of Omni-Gen version 3.2 and higher, a new wizard-based installer is provided with the product. There is no need to manually configure a properties file as in previous versions of Omni-Gen.
- As of Omni-Gen version 3.2 and higher, there is no separate installer for Omni Governance Console (OGC). OGC is now installed as part of the Omni-Gen product within the same installation wizard.

- During the installation process, it is important to provide a valid set of configuration properties so that the underlying system can be configured correctly. Although these settings can be updated using the Omni Console at a later time, additional steps might be required to relink any working components and re-initialize the back-end systems, such as databases, repositories, and so on.

UTF-8 Character Support

This section describes a configuration update you can make during the installation or after the installation (by modifying your database settings in the Omni Console) to enable the usage of UTF-8 characters in Omni-Gen version 3.2 and higher.

By default, the installation uses the following JDBC URL format when configuring SQL Server 2016:

```
jdbc:sqlserver://
hostname:port;databasename=db_name;sendStringParametersAsUnicode=false
```

To enable UTF-8 character support in your Omni-Gen environment, modify the JDBC URL to either of the following:

```
jdbc:sqlserver://
hostname:port;databasename=db_name;sendStringParametersAsUnicode=true
```

or

```
jdbc:sqlserver://
hostname:port;databasename=db_name;useUnicode=true;characterEncoding=UTF-8
```

Operational Considerations

This section provides a summary of operational considerations for users. For more information, see the *Omni-Gen™ Operation and Management Guide*.

- When doing large data loads (1M records and above), it is recommended to not have OGC up and running on the same machine due to resource constraints. You can either shut it down for the processing duration, or have it running on a separate instance.
- To access the Omni-Gen Console, please use `https://<host>.<domain>:<port>` instead of a *localhost* URL (for example, `https://mydesktop.ibi.com:9500`).
- All of the management of the relevant Omni-Gen Services is done from the Omni-Gen Console. There is no need to start any of the services from the command line. However, those options are still available. Please ensure that you have at least 32GB memory available if you plan to run all components at the same time.

- All commands must be executed with Administrative privileges.
- The copying of the model jar from the server to the OGC is done automatically by the deployment step.
- Omni-Gen Master Data and Data Quality Editions require JDK version 8. The user is advised to consult with their JDK provider for the latest build and licensing.
- Omni-Gen Master Data and Data Quality Editions have been certified with OpenJDK 8 build 232, as well as with Oracle JDK 8 build 231.
- Omni-Gen Log files for its components are located under the <*OmniGen_Home*>/*OmniGenData/log* directory. You can find sub-directories for components such as OGC, server, OmniDesignerRepository, and so on.
- Google Chrome is the recommended browser to be used with Omni-Gen version 3.2 and higher for all web-based user activity and interactions with the product.

Database Considerations

- **Microsoft SQL Server**

  To use Microsoft SQL Server as a repository database, you must use *sqljdbc42.jar* drivers.

- **Oracle**

  To use Oracle as a repository database, you must have select permission on *SYS.DBA.RECYCLEBIN*. Otherwise, the deployment of the bundle will not be successful.

- **Db2**

  To use Db2 as a repository database, the following tuning steps are required. This is due to the nature of Db2 and its requirement for higher memory consumption during the deployment phase. If the memory is not increased, you might encounter an *OutOfMemoryError* exception when resetting the environment or the deployment phase.

  For new installations:

  1. The Db2 JDBC URL should include a *traceLevel=0* option during the configuration.
  2. Prior to running *config* on the binary, set *cfg.server.commandline.max-memory=2048M* in the configuration file.
  3. After *config* completes, verify *server.commandline.max-memory=2048M* in the *OmniGenconfiguration.properties* file.

For existing installations:

1. The Db2 JDBC URL should include a *traceLevel=0* option during the configuration.
2. In the Omni Console, navigate to *Configuration*, *Runtime*, and click the *Command Line* tab. Set the *JVM Process Max Memory* parameter to 2048M.
3. Stop all processes and then restart.

Additional Considerations for Current Users

This section provides a short overview for the migration needed from prior 3.1.x versions to the version 3.2 and higher platform. For more information, see Appendix A in the *Omni-Gen™ Installer User's Guide*. Please contact iWay Customer Support for additional information and best practices.

- ❑ Install Omni-Gen version 3.2 or higher into a separate location, which is outside of Omni-Gen version 3.x from a prior release.
- ❑ During installation, you may reuse the connection information for external resources as outlined below:
  - ❑ You can reuse the Source Management connection.
  - ❑ You can reuse the database connection (ensure to select options to not recreate tables).
  - ❑ You can reuse ports that you have used previously. However, stop the existing 3.1.x version of Omni-Gen and OGC before upgrading. This will ensure that there are no port conflicts. If you changed the default port values or used custom port values in version 3.1.x, then carefully review and change the default port numbers that are being suggested by the 3.2 and higher version of the upgrade facility to prevent conflicts.
  - ❑ Ensure that file path directories point to proper artifacts.
- ❑ If you have an existing model, use Omni Designer version 3.2 and higher to check out your project from the repository.
  - ❑ The links to DQ plans will be lost and will need to be re-created.
  - ❑ In a future release, there will be an option available to fully export and then re-import the model with all of the associated artifacts, such as DQ plans. This will eliminate the need to re-establish DQ links and mappings of attributes.
- ❑ If you want to preserve existing data, use the Deployment Command Line facility (without the clean option to preserve the database) to redeploy the release bundle.

Note: If you navigate to the Omni Deployment Web Console, you will not see any bundle deployed due to the new directory structure. If you install or deploy the new bundle using a web console, it will recreate your database and all prior data will be lost.

- In OGC, you should reuse the MData file, which you have been using in Omni-Gen version 3.x. For more information, see Appendix A in the *Omni-Gen™ Installer User's Guide*.
- The EMF data store has moved to the OmniGenData location.

If you want to start with a clean environment, then ensure to complete the following:

- Delete prior used: `C:\Users\<<userid>>\id2*`
- Delete prior used: `C:\Users\<<userid>>\.emfstore`
- Drop the existing Omni-Gen databases used in prior installations and recreate them.

The following database changes need to be considered when comparing Omni-Gen version 3.0.x with version 3.1.2 and higher. These are generic database change examples and may or may not apply to the specific deployment.

Area	Omni-Gen Version 3.0.1	Omni-Gen Version 3.1.2 and Higher	Note	Action
Ramp	source_instance_id_name	*SUBJECT*_SIN	Every Ramp table.	
Source/ Instance/ Master	ORIGINATION CLEARANCE_CODE	ORIGINATION_CODE CLEARANCE_CODE_CODE	Every instance of code fields in the model.	Reprocess Ramp batch to sync data or move data manually to new columns.
Source/ Instance	PERSON_ID	PERSON_PERSON_ID	Every instance of link fields in the model.	Reprocess Ramp batch to sync data or move data manually to new columns.

Data Quality Updates

As of Omni-Gen version 3.2 and higher, if you have existing Omni-Gen 3.0.x Data Quality plans, they must be updated as follows to meet the new structural requirements:

- For Cleansing components, the `exp_meta_cleanse` attribute must be renamed to `tag_subject`.
- For Matching components, all tag attributes for each subject must be renamed from `exp_<your_subject>_meta_cleanse` to `tag_<your_subject>`.
- For Remediation components, all tag attributes must be renamed from `exp_<your_subject>_meta_cleanse` to `tag_<your_subject>`.

Known Issues

This section describes known issues in Omni-Gen version 3.2 and higher.

Invoking the Swagger API for the Omni-Gen Server Authorize Call

In Omni-Gen Version 3.15, when invoking the Swagger API for the Omni-Gen Server *Authorize* call, a 401 (Unauthorized) response is returned. This occurs even if you supply the appropriate credentials. This will be resolved in a future release.

As a workaround, follow the steps below to use the Omni-Gen Controller *Authorize* call and use the token from the response for the Omni-Gen Server Swagger API.

1. Go to Controller Swagger UI. For example:

   ```
   https://localhost:9500/swagger-ui.html
   ```

2. Click *POST* for the Authentication endpoint.
3. Click *Try it out*.
4. Set the authentication request value to the following:

   ```
   {"password": "ibi00", "username": "primary/ibi"}
   ```

5. Click *Execute*.

   You should see response code 200.

6. Copy the jwt token value.
7. Go to Server Swagger UI. For example:

   ```
   https://localhost:9514/server/swagger-ui.html
   ```

8. Click *Authorize* and then paste the jwt token value from step 6 into the text box.
9. Click *Authorize* and then click *Close*.

Now, you can run other endpoints besides authentication.

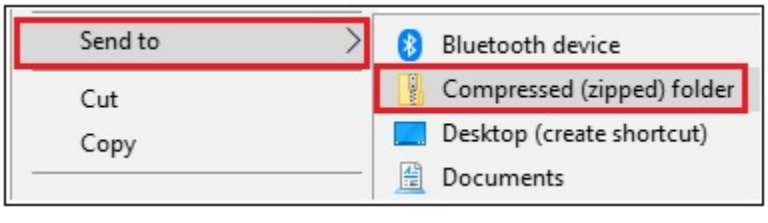
Deleting Project Bundles

When you delete a project bundle in the Deployment Console, any Data Quality (DQ) projects associated with this bundle in the SVN repository, including the source model in the EMF Store, are also deleted. You are prompted to confirm the deletion of all artifacts and can also cancel the delete operation if required. After deleting a project bundle from the Deployment Console, open Omni Designer, right-click the *<your_project> [trunk]* branch, and select *Update* from the context menu. This will synchronize the project status in Omni Designer with the repository service. After performing this update step, you will be able to generate a project bundle again successfully.

Project Bundle Compression Support

Use caution when manually updating or modifying any packaged components in a deployment bundle. If you must edit the contents of a deployment bundle for any reason, you must first unzip the bundle, make your required edits, and then recompress the bundle. If the WinZip utility is not used to recompress the bundle, then the bundle will not deploy properly. The standard compression utility provided on Windows is not supported by Omni-Gen. You must use the WinZip utility.

On Windows, do not use the *Send to*, *Compressed (zipped) folder* option from the context menu to recompress a bundle, as shown in the following image.



Microsoft Internet Explorer Web Browser

In some installations of Microsoft Internet Explorer (IE) version 11, actions on the Omni-Gen Console for starting or stopping services do not reflect the proper state. For example, after you start all services, the toggle icons shown for the states might remain unchanged. To resolve this issue:

1. In the browser, click *Certificate*, then *View Certificates*.

2. After you accept the certificate initially, the padlock icon will appear at the left side of the browser address bar.
3. Click the padlock icon and then click *Install Certificate*.
4. Choose *Install for Local Machine*.
5. Specify the location of the installation as *Trusted Root Certification Authorities*.
6. Restart your browser.

Omni-Gen Port Number Usage

This section provides a summary of port number usage in Omni-Gen.

Default Port Numbers Currently in Use

The following table lists the default port numbers currently used by Omni-Gen.

Component	Type	Ports 3.1.1 to 3.5 Release	Ports 3.6 and Higher Release	Security
Omni-Gen Controller/Console	external	9500	9500	TLS 1.2
Omni-Gen Server	internal	9512	9514	TLS 1.2
Omni-Gen Server DQ High Speed TCP	internal	n/a	9532	none
Data Quality Cleanse	external	9502	9504	none
Data Quality Cleanse	internal	9503	9505	none
Data Quality Match	external	9504	9506	none
Data Quality Match	internal	9505	9507	none
Data Quality Merge	external	9506	9508	none
Data Quality Merge	internal	9507	9509	none

Component	Type	Ports 3.1.1 to 3.5 Release	Ports 3.6 and Higher Release	Security
Data Quality Remediation	external	9508	9510	none
Data Quality Remediation	internal	9509	9511	none
Data Quality Workbench	external	n/a	9512	Tomcat Config
Data Quality Workbench	internal	n/a	9513	Tomcat Config
OGC Tomcat Shutdown	internal	9005	9024	none
OGC Tomcat Console	external	9090	9501	Tomcat Config
OGC Tomcat AJP	internal	9009	9525	Tomcat Config
OGC WS02	external	9443	9503	WS02 Config
OGC Redirect	internal	n/a	9526	none
OGC Logstash	internal	8500	9528	none
WS02 RMI Registry	internal	n/a	9534	WS02 Config
WS02 RMI Server	internal	n/a	9535	WS02 Config
WS02 LDAP Server	internal	n/a	9536	WS02 Config
WS02 KDC Server	internal	n/a	9537	WS02 Config
WS02 Thrift Entitlement Receiver	internal	n/a	9538	WS02 Config
Omni Designer Tomcat	internal	8885	9515	TLS 1.2

Component	Type	Ports 3.1.1 to 3.5 Release	Ports 3.6 and Higher Release	Security
Omni Designer Console	external	8888	9516	TLS 1.2
Omni Designer Redirect	internal	8843	9518	TLS 1.2
Omni Designer AJP	internal	8889	9517	Tomcat Config
Omni Designer Bridge	internal	9990	9519	Tomcat Config
Omni Designer EMF	internal	8080	9520	TLS 1.2
Deployment Console	external	8090	9521	none
Deployment Console	external	9554	9502	TLS 1.2
GIT/SVN	external	80/ (8800,8443)	80/ (8800,8443)	Repository Config

Deprecated Port Numbers

The following table lists the default port numbers that are no longer used as of Omni-Gen version 3.1.1 and higher.

Component	Property to Set	Type	Port
Omni-Gen Server	ogs.server.https.port	external	9553
Omni-Gen Server		internal	9514
Logstash		external	9518
Kibana		external	9520
ActiveMQ Console	cfg.activemq.webconsole.port	external	9522

Component	Property to Set	Type	Port
ActiveMQ Broker	cfg.activemq.broker.port	internal	9523
Zookeeper	cfg.zookeeper.client.port	internal	9524
Storm Console	cfg.storm.ui.port	external	9525
Storm Admins	cfg.storm.supervisor.worker.base.port cfg.storm.supervisor.worker.number	internal	9526/9527/ 9528/9529

Key Features and Considerations

This section describes the key features and considerations in Omni-Gen version 3.2 and higher.

WSO2 Identity Server

Omni-Gen makes use of WSO2, a third-party tool, for authentication and authorization to control access to the Omni-Gen Console and the Omni-Gen Server and API. It uses the WSO2 Identity Server (*https://wso2.com/identity-and-access-management/*), an open-source solution for Identity and Access Management.

As part of the Omni installation for Version 3.15, you may choose to have a new WSO2 installed alongside of Omni, or you may configure Omni to use a pre-existing WSO2 solution. Options for specifying this are in the Omni installer.

The default Omni-Gen installation creates two default user IDs in WSO2, primary/ibi for the Omni-Gen Console, and primary/omniapi for the Server and its API. The password for both of the default user IDs is ibi00 (two zeroes). The installation also creates eight roles in WSO2, four of which are assigned to these default user IDs. These eight roles can be assigned to any newly created IDs to control access to the Omni-Gen Server and Console.

The following three roles are available for the Console:

- Application/ROLE_OMNI_CONTROLLER_ADMIN
- Application/ROLE_OMNI_CONTROLLER_OPERATOR
- Application/ROLE_OMNI_CONTROLLER_READONLY

The following three roles are available for the Server:

- Application/ROLE_OMNI_SERVER_ADMIN

- Application/ROLE_OMNI_SERVER_OPERATOR
- Application/ROLE_OMNI_SERVER_READONLY

Note: The ROLE_OMNI_SERVER_OPERATOR and ROLE_OMNI_SERVER_READONLY roles are reserved for future use. The ROLE_OMNI_SERVER_ADMIN role, along with the ROLE_OMNI_CONTROLLER_ADMIN role, should be given to those who administer Omni-Gen.

The following two roles provide access to REST services used to call Omni services directly:

- Application/ROLE_OMNI_SERVER_API

  Provides access to the Omni-Gen Server REST services. For more information, see Chapters 1 - 4 in the *Omni-Gen API Services Reference Guide*.

- Application/ROLE_OMNI_CONTROLLER_API

  Provides access to the Omni-Gen Controller REST services. For more information, see Chapters 5 - 7 in the *Omni-Gen API Services Reference Guide*.

Note:

- Each of the roles has privileges assigned to them, by default. These privileges cannot be changed.
- The default user IDs are assigned the following roles:
  - The primary/ibi user ID is assigned the roles of Application/ ROLE_OMNI_CONTROLLER_ADMIN and Application/ROLE_OMNI_SERVER_ADMIN.
  - The primary/omniapi user ID is assigned the roles of Application/ ROLE_OMNI_SERVER_API and Application/ROLE_OMNI_CONTROLLER_API
- You can use WSO2 to create additional users and assign them non-admin roles, such as ReadOnly or Operator.

Omni Server Console Authorization

An Administrator can provide authorization to provide limited access to the Omni Server Console to protect it from unauthorized users.

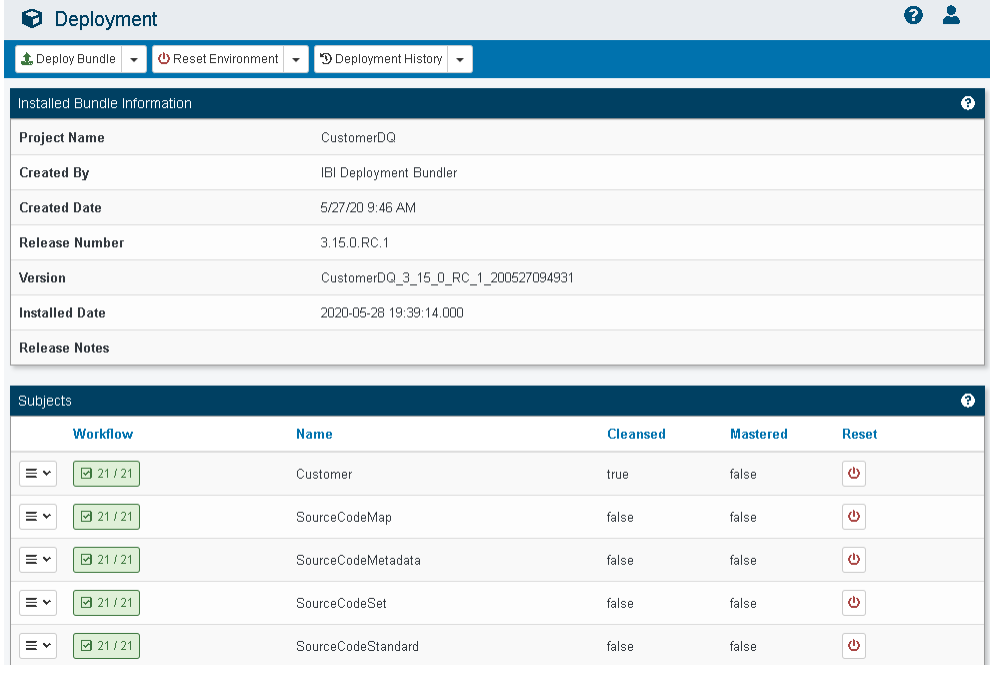
The following table outlines the privileges that are assigned to each role used by the Omni Server Console.

Role	Admin	Operator	ReadOnly
ROLE_OMNI_CAN_DEPLOY	X		
ROLE_OMNI_DEPLOYMENT_CHANGE_WORKFLOW	X		
ROLE_OMNI_DEPLOYMENT_RESET_SUBJECT	X		
ROLE_OMNI_DEPLOYMENT_REPROCESS_SUBJECT	X		
ROLE_OMNI_DEPLOYMENT_RUN_TESTS	X		
ROLE_OMNI_SERVICES_WRITE	X	X	
ROLE_OMNI_CONFIGURATION_WRITE	X		
ROLE_OMNI_WORKORDER_WRITE	X	X	
ROLE_OMNI_WORKORDER_DEBUG	X		
ROLE_OMNI_WORKORDER_DISPATCHER	X	X	
ROLE_OMNI_OPERATIONS_DOWNLOAD_DIAGNOSTICS	X	X	
ROLE_OMNI_ALLOW_TESTING	X		
ROLE_OMNI_CONFIG_DB_CONFIG_READ	X		
ROLE_OMNI_SERVICES_READ * Reserved for future use.	X	X	X
ROLE_OMNI_DEPLOYMENT_READ * Reserved for future use.	X	X	X
ROLE_OMNI_PROCESSING_READ * Reserved for future use.	X	X	X
ROLE_OMNI_CONFIGURATION_READ * Reserved for future use.	X	X	X
ROLE_OMNI_LOGS_AND_MESSAGES_READ * Reserved for future use.	X	X	X
ROLE_OMNI_SYSTEM_CODES_READ * Reserved for future use.	X	X	X

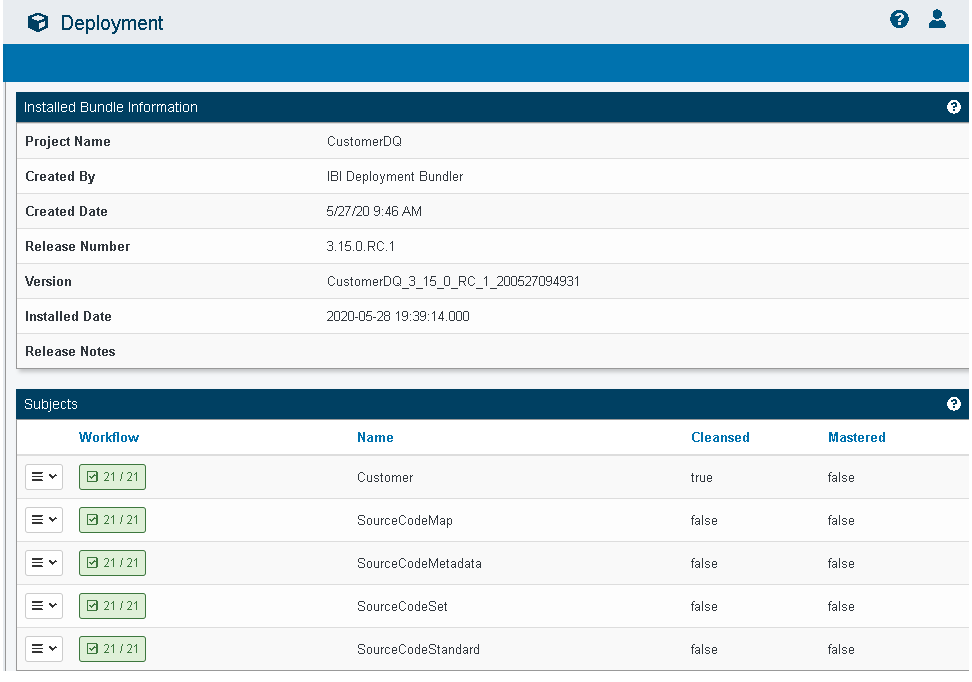
Role	Admin	Operator	ReadOnly
ROLE_OMNI_CONSOLES_READ * Reserved for future use.	X	X	X
ROLE_OMNI_OPERATIONS_READ * Reserved for future use.	X	X	X

ROLE_OMNI_CAN_DEPLOY

The following image shows the Console when the ROLE_OMNI_CAN_DEPLOY privilege is assigned.

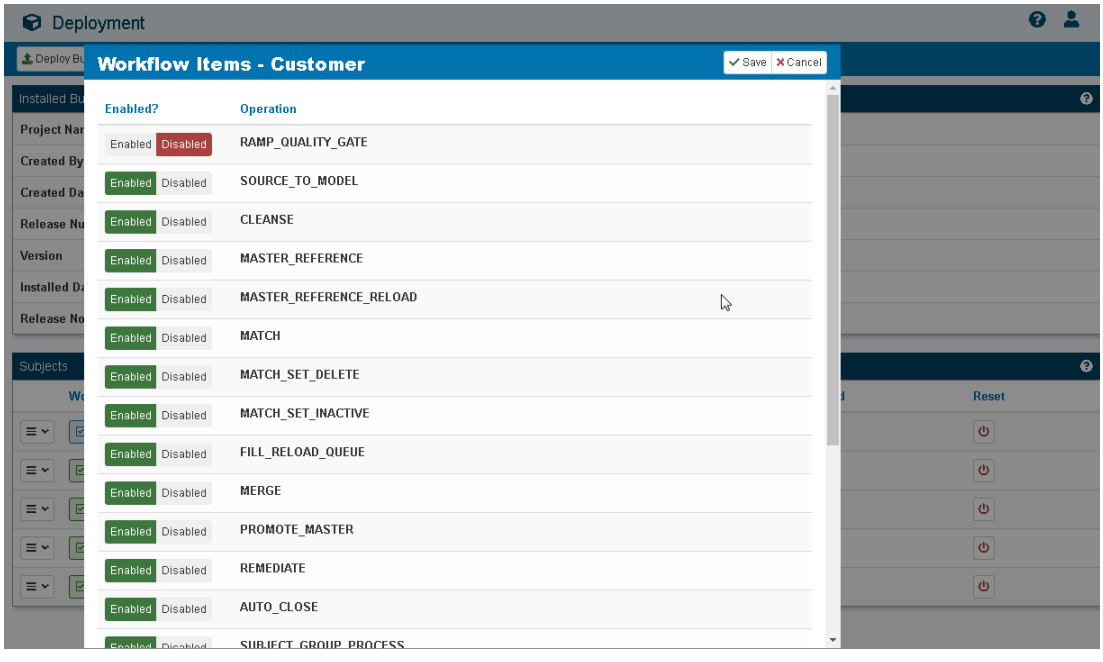


When the ROLE_OMNI_CAN_DEPLOY privilege is not assigned, the three global deploy buttons are removed, as shown in the following image.

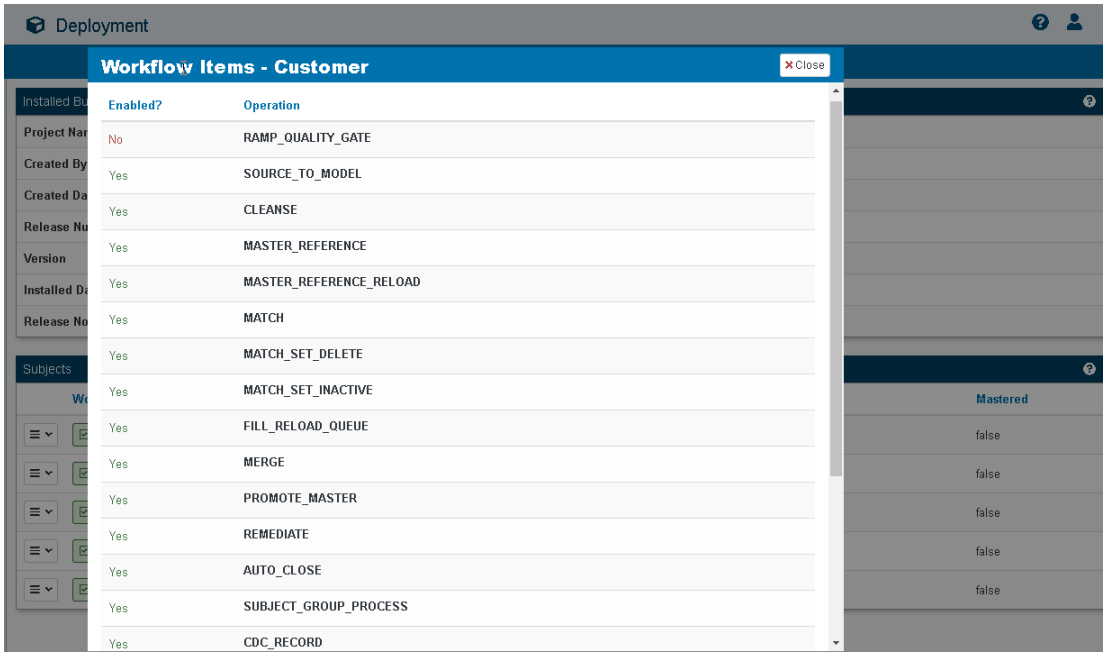


ROLE_OMNI_DEPLOYMENT_CHANGE_WORKFLOW

The following image shows the Console when the ROLE_OMNI_DEPLOYMENT_CHANGE_WORKFLOW privilege is assigned.

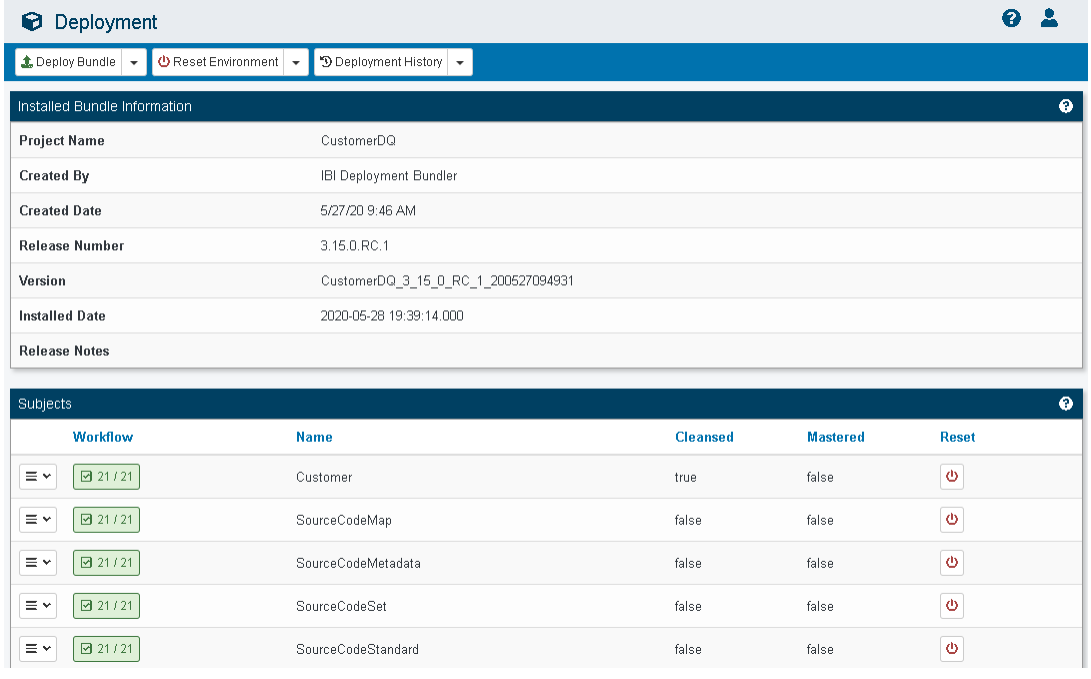


When the ROLE_OMNI_DEPLOYMENT_CHANGE_WORKFLOW privilege is not assigned, the Workflow Items show a read-only value for the Enabled? column in place of the Enabled and Disabled buttons, as shown in the following image.

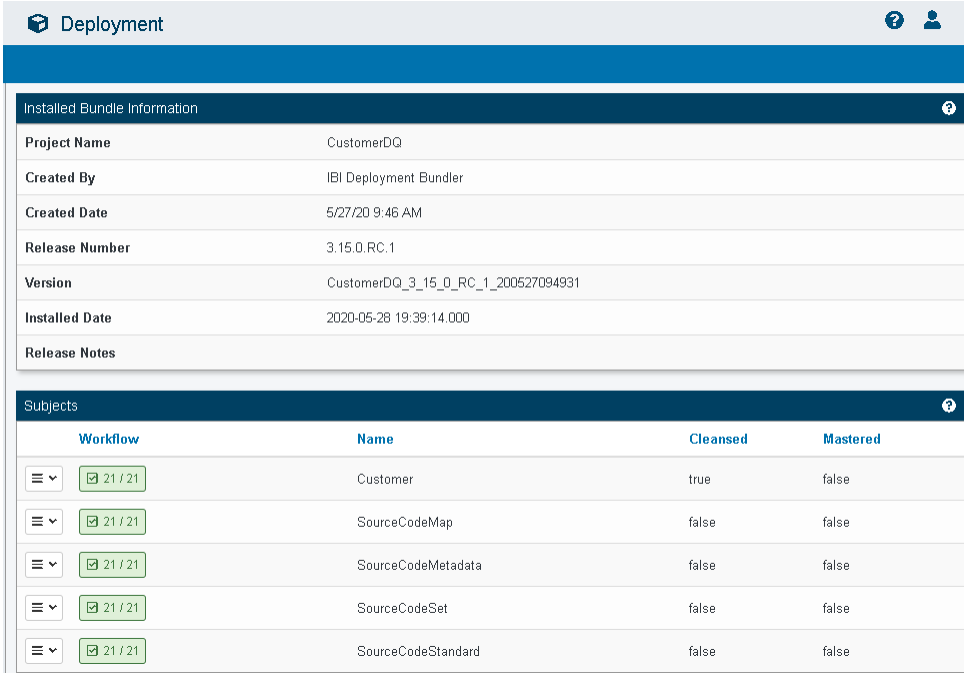


ROLE_OMNI_DEPLOYMENT_RESET_SUBJECT

The following image shows the Console when the ROLE_OMNI_DEPLOYMENT_RESET_SUBJECT privilege is assigned.

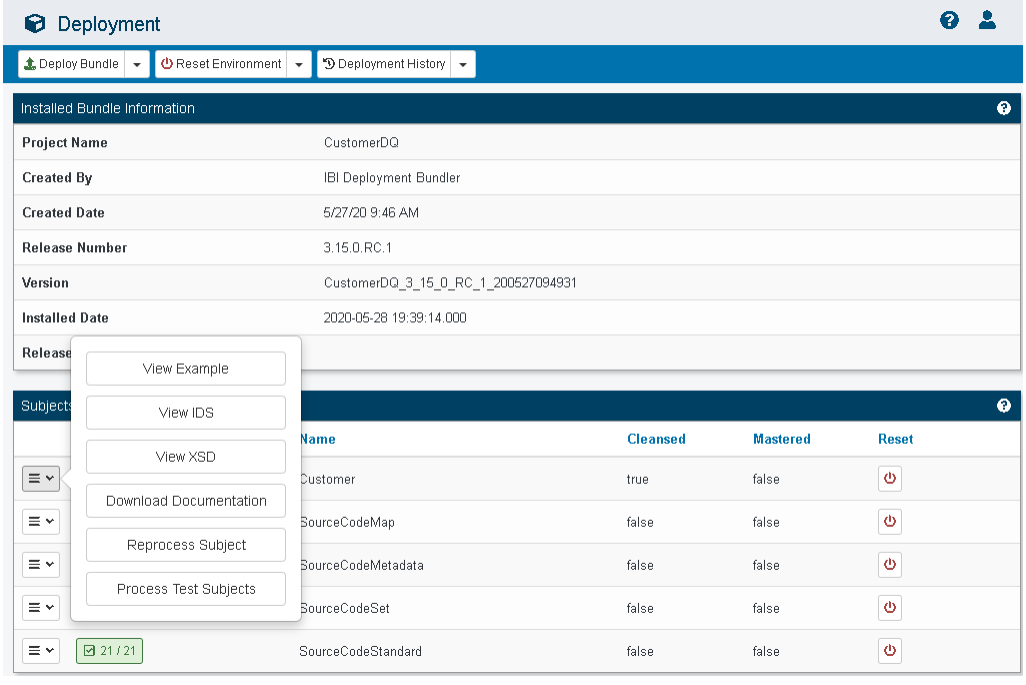


When the ROLE_OMNI_DEPLOYMENT_RESET_SUBJECT privilege is not assigned, the Subjects grid does not show the last column containing the Reset Subjects buttons, as shown in the following image.

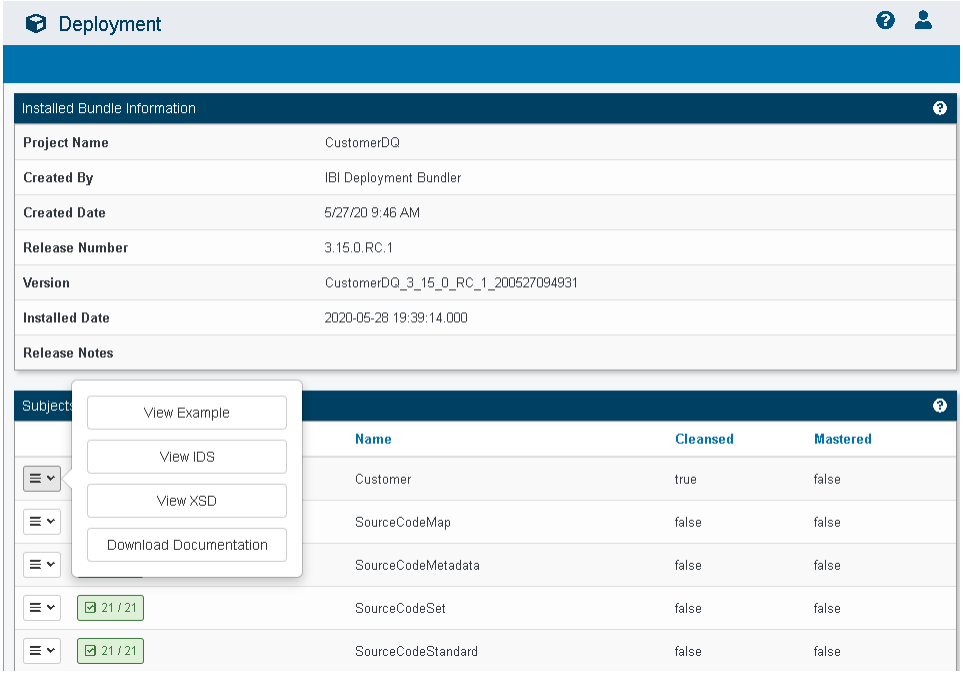


ROLE_OMNI_DEPLOYMENT_REPROCESS_SUBJECT

The following image shows the Console when the ROLE_OMNI_DEPLOYMENT_REPROCESS_SUBJECT privilege is assigned.

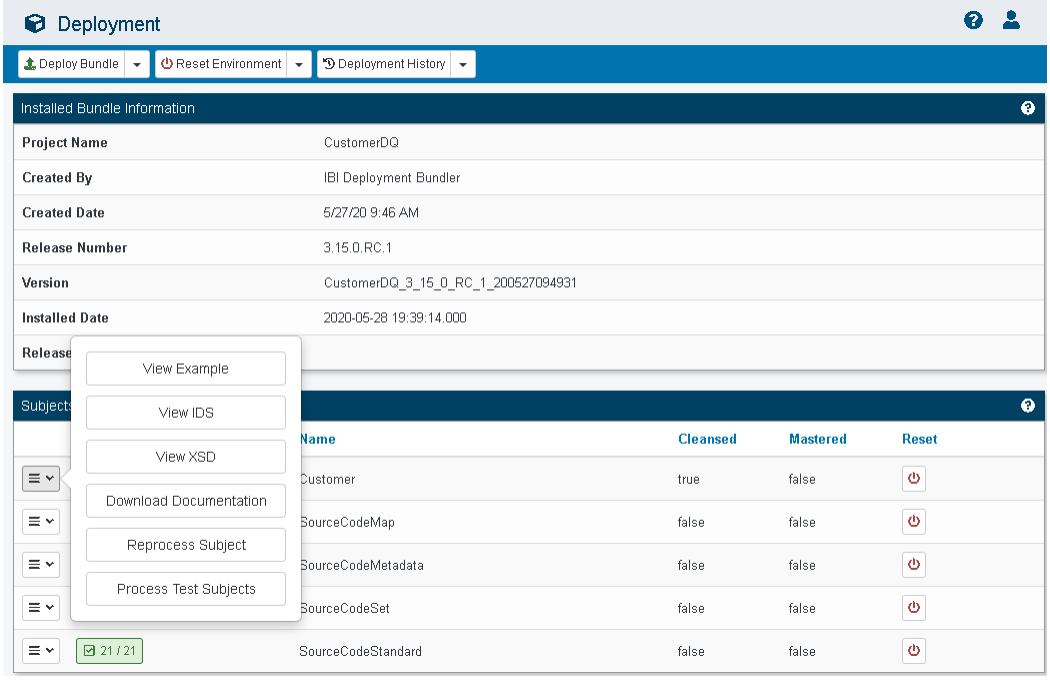


When the ROLE_OMNI_DEPLOYMENT_REPROCESS_SUBJECT privilege is not assigned, the Subject menu popup does not show the Reprocess Subject or Process Test Subjects buttons, as shown in the following image.

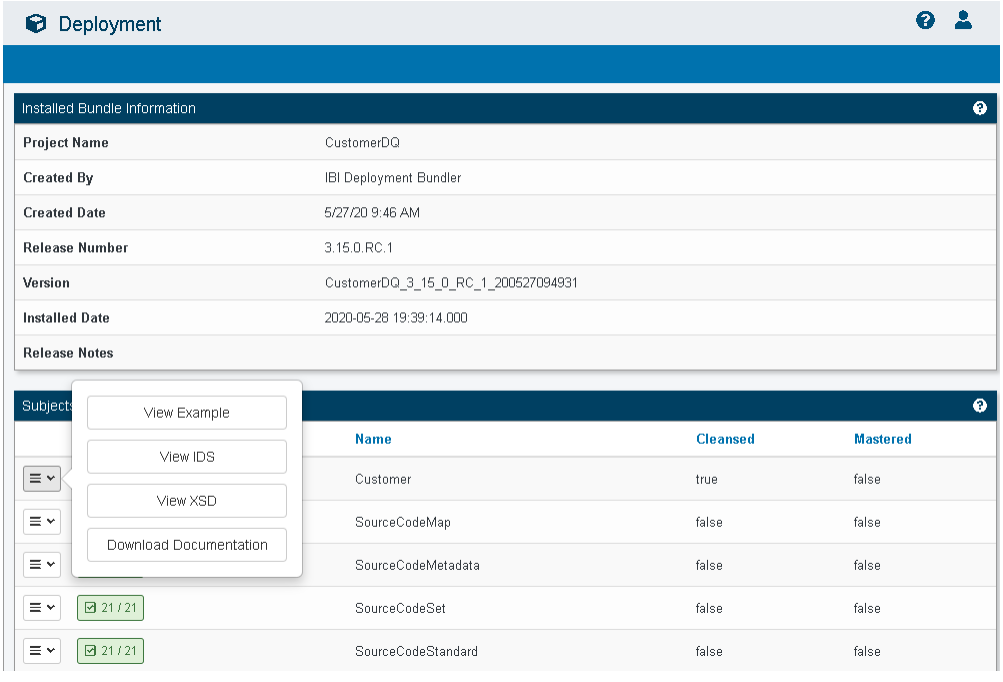


ROLE_OMNI_DEPLOYMENT_RUN_TESTS

The following image shows the Console when the ROLE_OMNI_DEPLOYMENT_RUN_TESTS privilege is assigned.

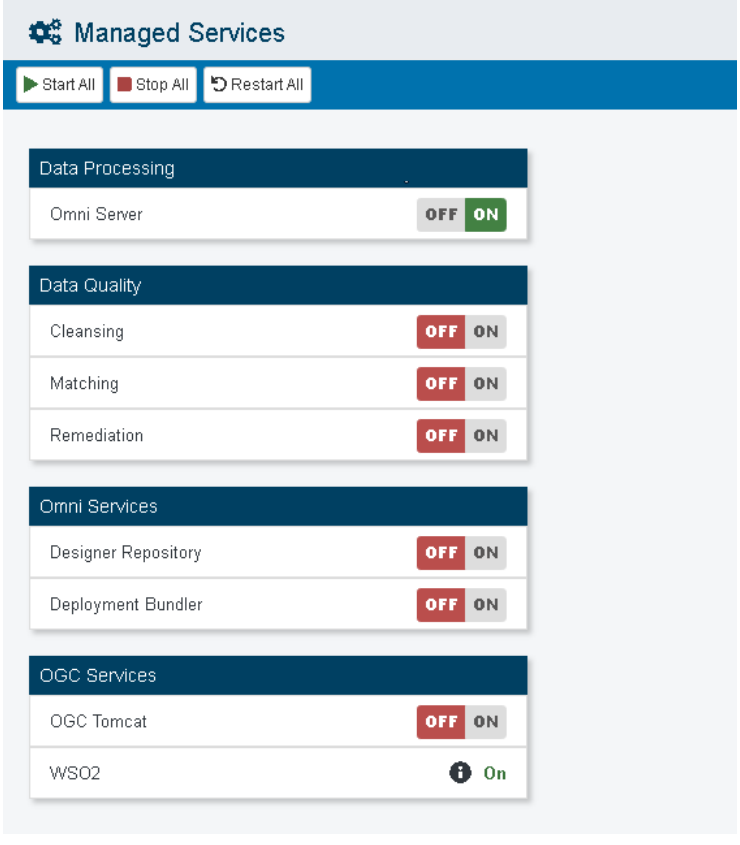


When the ROLE_OMNI_DEPLOYMENT_RUN_TESTS privilege is not assigned, the Subject menu popup does not show the Process Test Subjects and Reprocess Subject buttons, as shown in the following image.

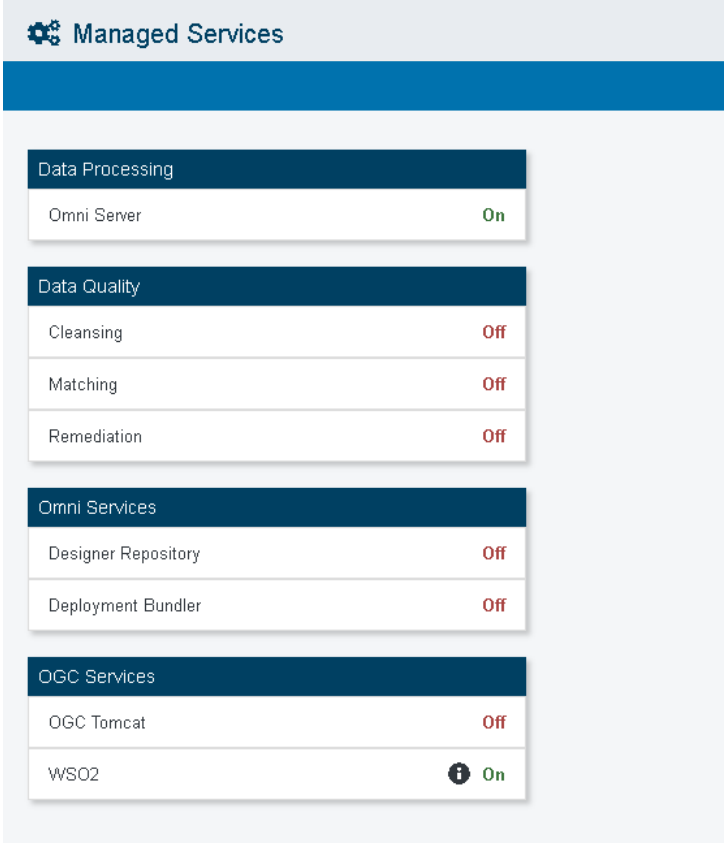


ROLE_OMNI_SERVICES_WRITE

The following image shows the Console when the ROLE_OMNI_SERVICES_WRITE privilege is assigned.

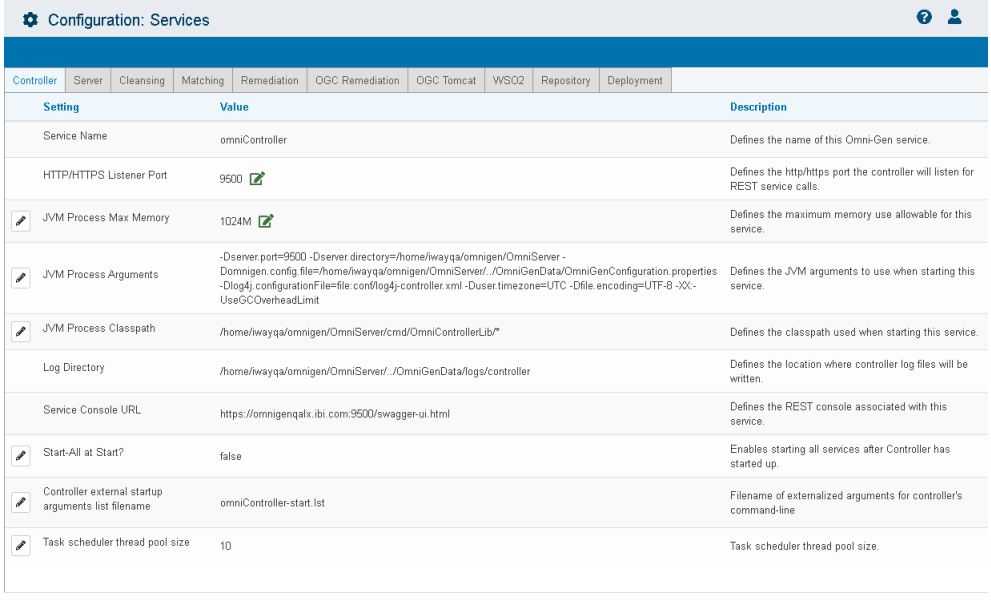


When the ROLE_OMNI_SERVICES_WRITE privilege is not assigned, the Start All and Restart All buttons are removed, as shown in the following image.

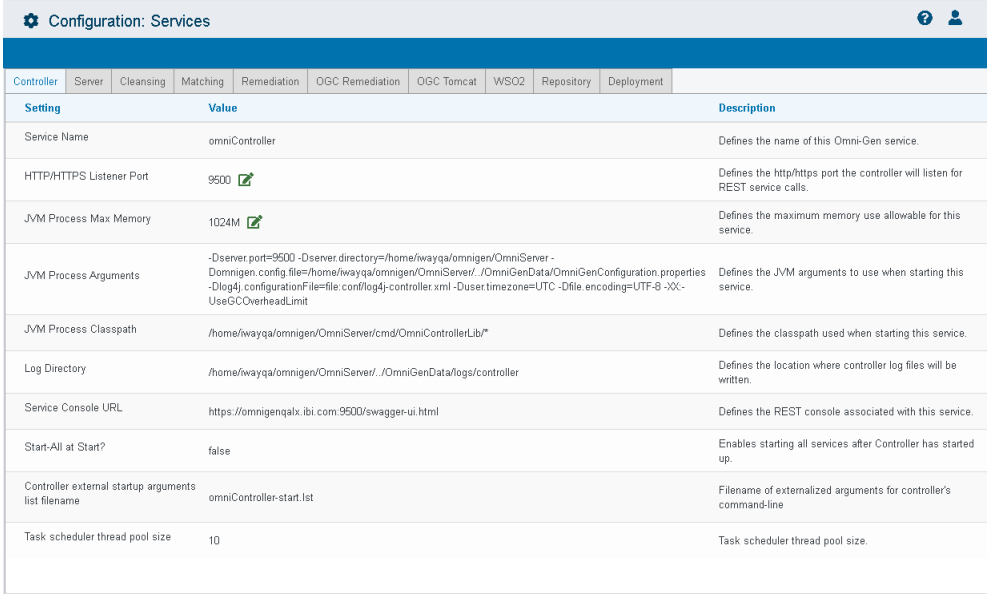


ROLE_OMNI_CONFIGURATION_WRITE

The following image shows the Console when the ROLE_OMNI_CONFIGURATION_WRITE privilege is assigned.

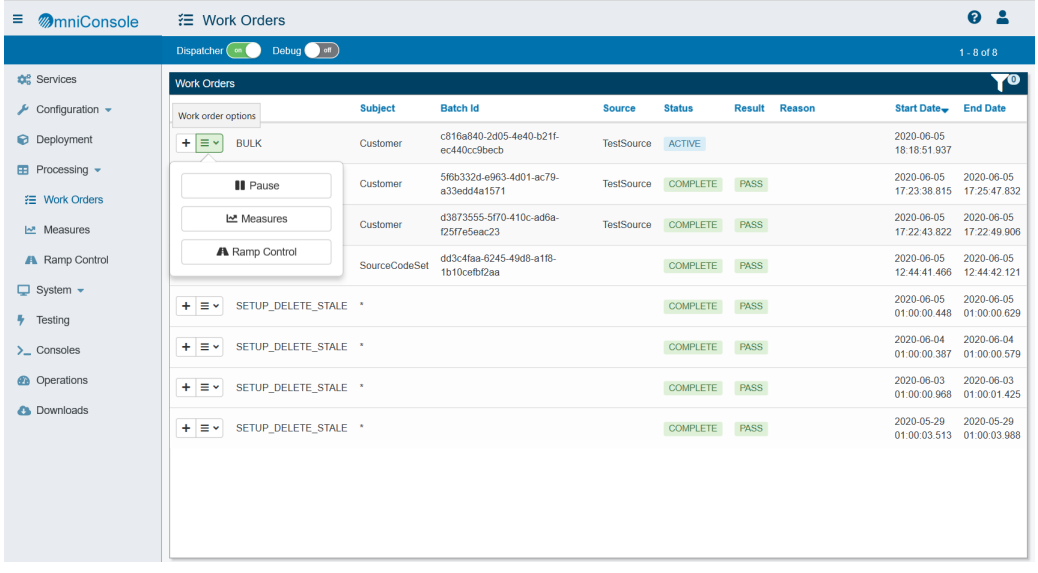


When the ROLE_OMNI_CONFIGURATION_WRITE privilege is not assigned, the configuration information will be read only. The Edit icon is removed for all properties, as shown in the following image.



ROLE_OMNI_WORKORDER_WRITE

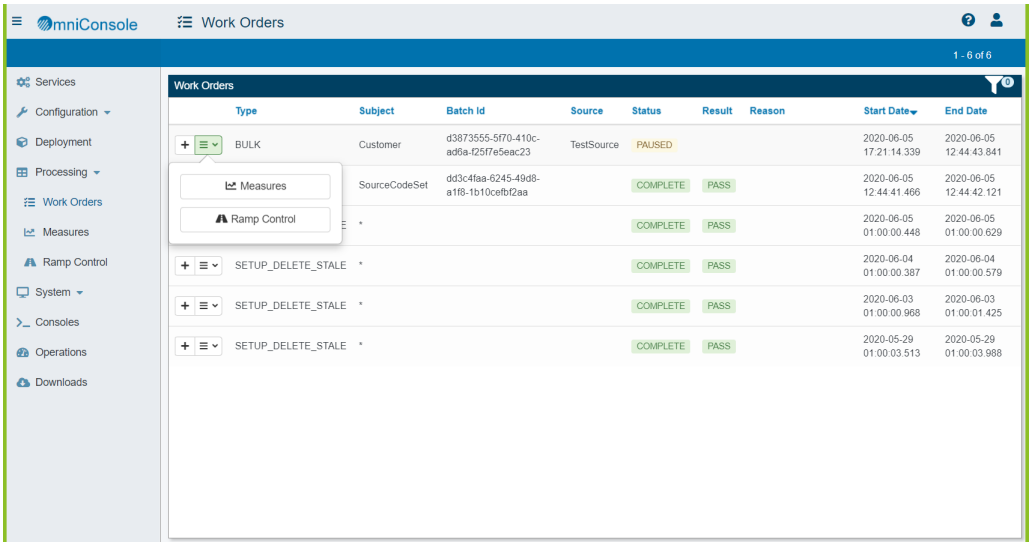
Using the ROLE_OMNI_WORKORDER_WRITE privilege, you can pause or resume something that has been paused. The following image shows the Console, with the Pause button, when the ROLE_OMNI_WORKORDER_WRITE privilege is assigned.



When the ROLE_OMNI_WORKORDER_WRITE privilege is not assigned:

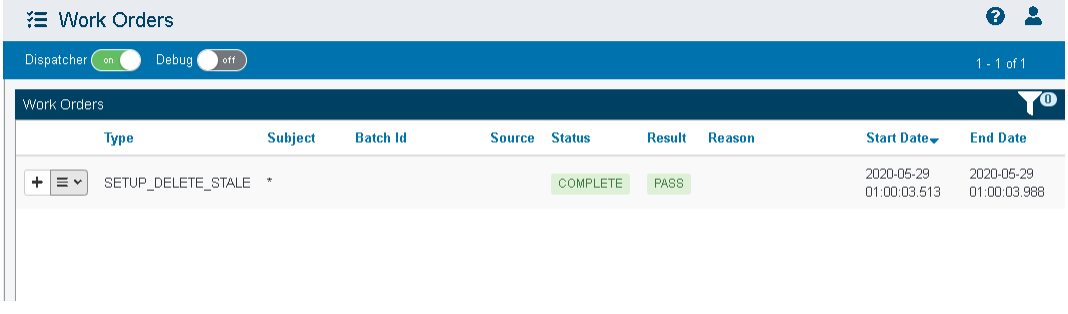
- ❑ If the Work Order status is *Active*, the Pause button is not available.
- ❑ If the Work Order status is *Paused*, the Resume and Ignore buttons are not available.
- ❑ If the Work Order status is *Failed*, the Restart and Ignore buttons are not available.

The following image shows an example of the Console, when the ROLE_OMNI_WORKORDER_WRITE privilege is not assigned

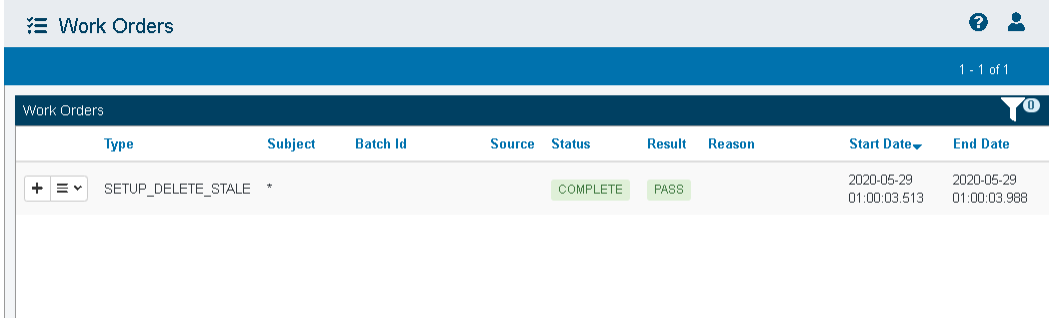


ROLE_OMNI_WORKORDER_DEBUG

The following image shows the Console when the ROLE_OMNI_WORKORDER_DEBUG privilege is assigned.

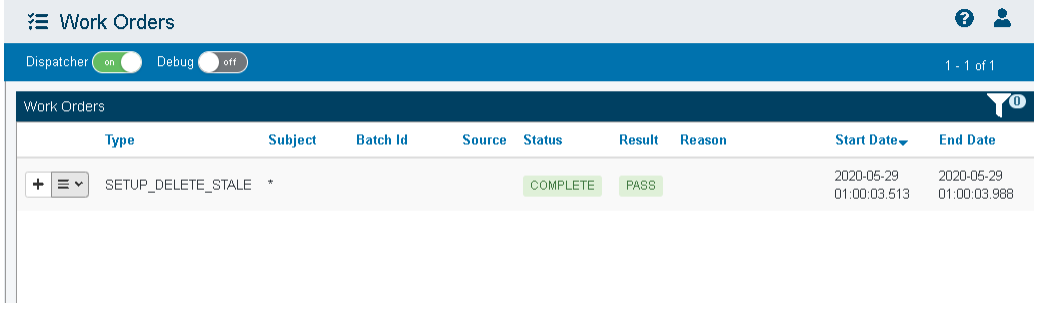


When the ROLE_OMNI_WORKORDER_DEBUG privilege is not assigned, the Debug toggle button is removed from the Work Orders screen, as shown in the following image.

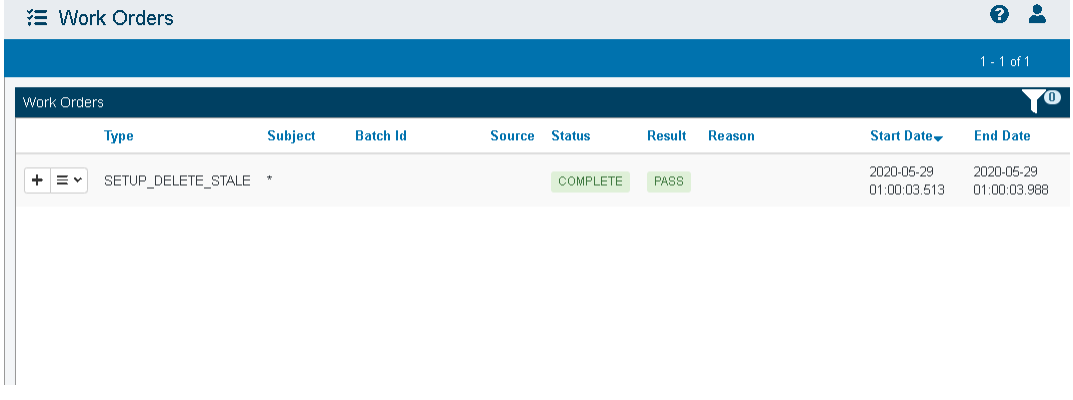


ROLE_OMNI_WORKORDER_DISPATCHER

The following image shows the Console when the ROLE_OMNI_WORKORDER_DISPATCHER privilege is assigned.

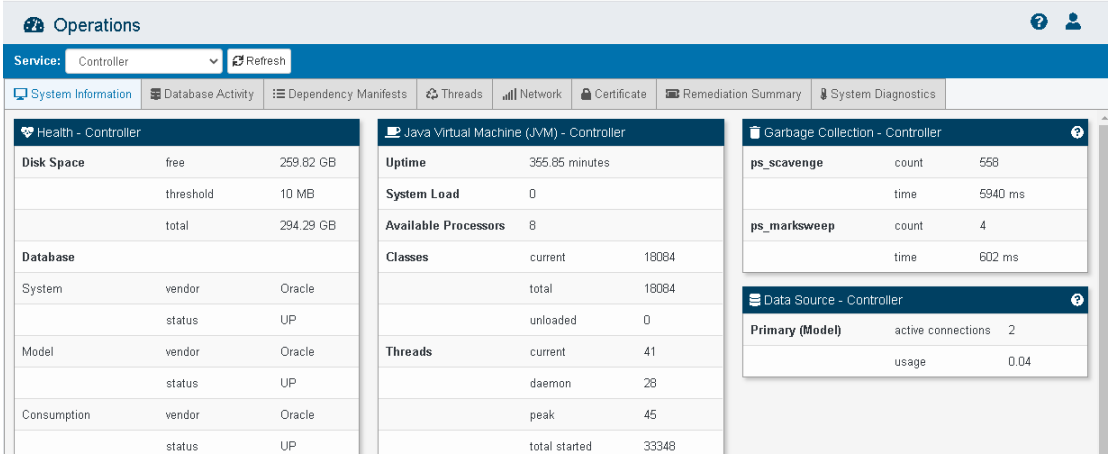


When the ROLE_OMNI_WORKORDER_DISPATCHER privilege is not assigned, the Dispatcher toggle button is removed from the Work Orders screen, as shown in the following image.

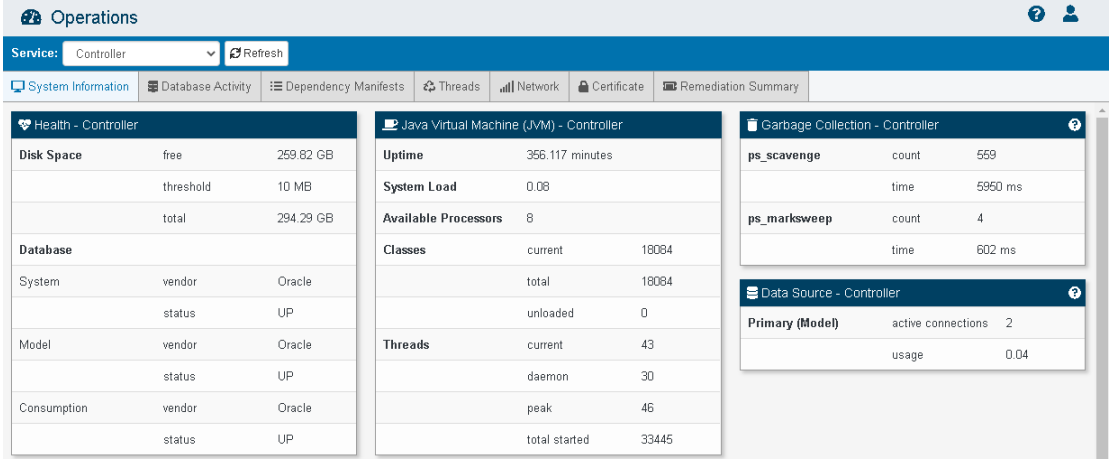


ROLE_OMNI_OPERATIONS_DOWNLOAD_DIAGNOSTICS

The following image shows the Console when the ROLE_OMNI_OPERATIONS_DOWNLOAD_DIAGNOSTICS privilege is assigned.

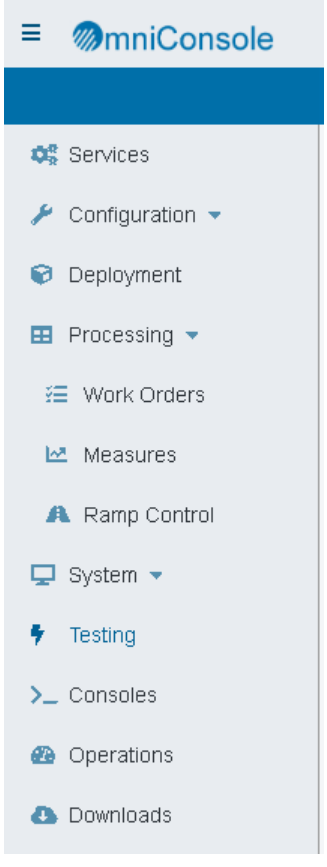


When the ROLE_OMNI_OPERATIONS_DOWNLOAD_DIAGNOSTICS privilege is not assigned, the Download Diagnostics tab is removed from the Operations page, as shown in the following image.

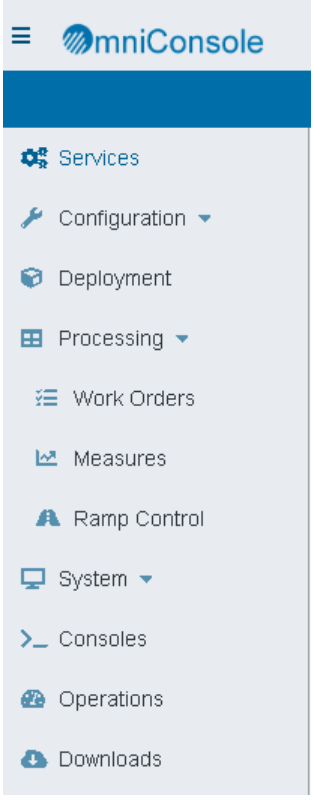


ROLE_OMNI_ALLOW_TESTING

The following image shows the Console when the ROLE_OMNI_ALLOW_TESTING privilege is assigned.

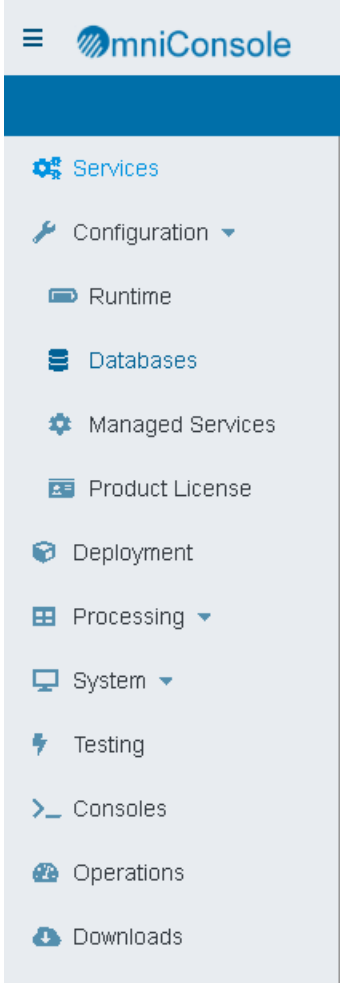


When the ROLE_OMNI_ALLOW_TESTING privilege is not assigned, the Testing link is removed from the left navigation menu, as shown in the following image.

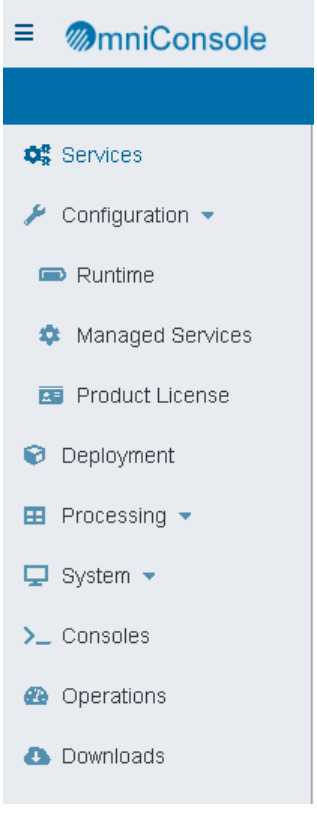


ROLE_OMNI_CONFIG_DB_CONFIG_READ

The following image shows the Console when the ROLE_OMNI_CONFIG_DB_CONFIG_READ privilege is assigned.



When the ROLE_OMNI_CONFIG_DB_CONFIG_READ privilege is not assigned, the Configuration Databases link is removed from the left navigation menu, as shown in the following image.

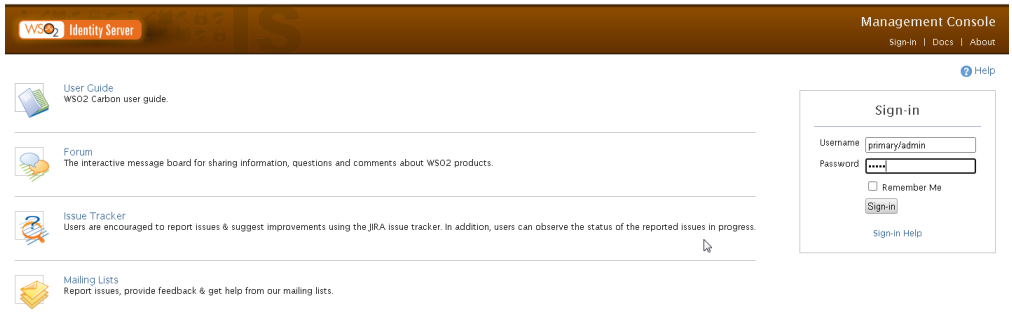


Using WSO2 to Create New User IDs

The following procedure describes how to use WSO2 to create new users and assign roles. You can create non-admin users, such as READONLY or OPERATOR, or additional users with administrative privileges.

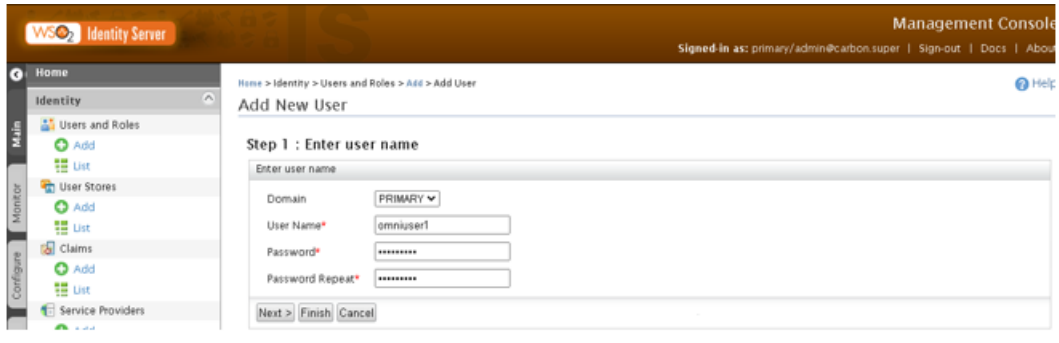
Note: You must be a WSO2 admin to create the users and assign roles.

1. Log in to the WSO2 Identity Server as an Administrator, as shown in the following image.



2. Under Users and Roles, click *Add*, then click *Add New User*.

   The Add New User pane opens, as shown in the following image.



3. Type the user name, password, password repeat, and then click *next*.

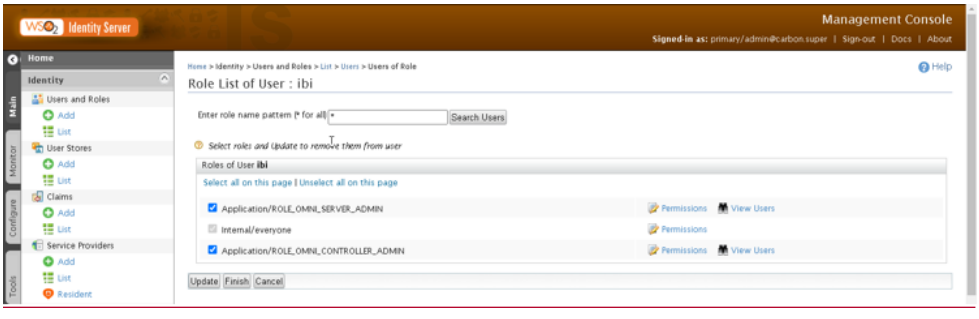
4. In Step 2, select the Omni role or roles for the user, as shown in the following image.

5. Click *Finish*.

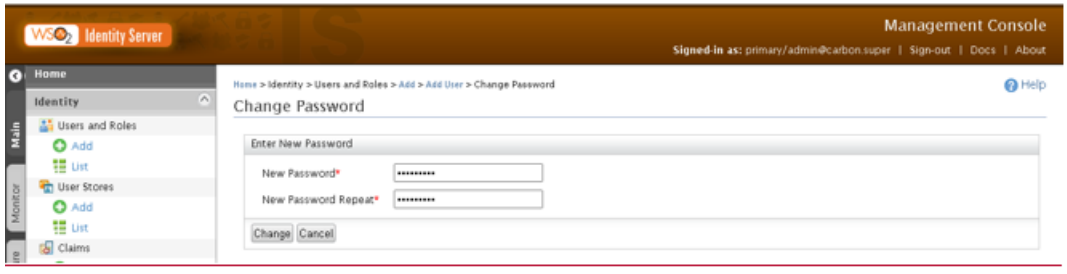
   Note: If you log in to the Console with this newly created omniuser1 ID with the READONLY role, you will see the services displayed, but because it is a read-only user, you will not be allowed to change anything.

6. To view the Users and their roles, under Users and Roles, click *List*, then *Users*, and then select *View Roles*.

   The following image shows the roles assigned to the default user primary/ibi.



7. To change the password for a user, under Users and Roles, click *List* and then select *Change my Password*. The Change Password pane is shown in the following image.



Authenticating Omni-Gen Console Users With Microsoft Active Directory/LDAP

As of Version 3.15, the Omni-Gen Console can use Active Directory/LDAP for authentication and authorization, by utilizing WSO2 user stores. The user store is created in WSO2 and configured with the user store manager class for LDAP.

The following topic details the procedure for configuring a WSO2 user store and configuring a WSO2-based LDAP connection allowing User ID authorizations to be obtained from Active Directory.

Note: You will need to consult with your Active Directory/LDAP administrator to obtain the information required to configure within WSO2.

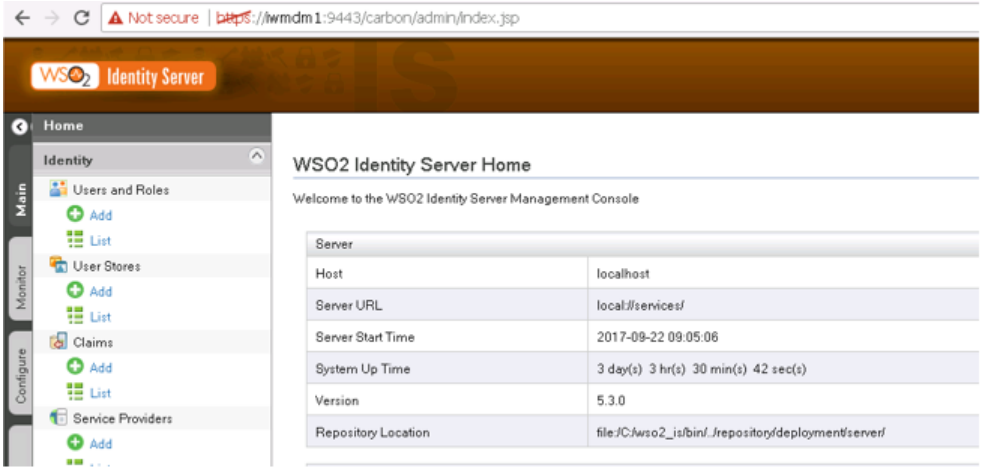
In the WS02 System

1. Connect to the WSO2_IS System Administration Console, for example:

   `https://your-wso2hostname:port`

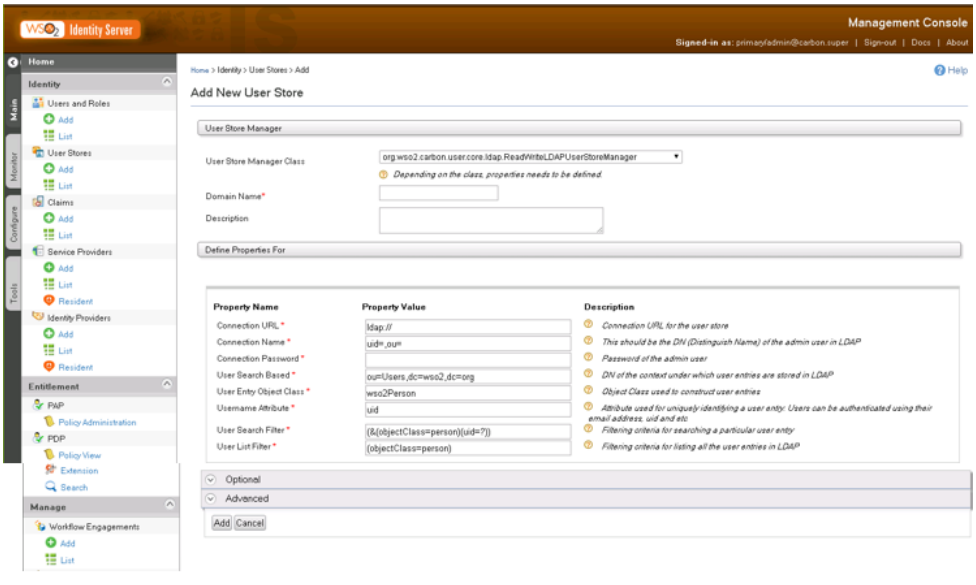
2. Log in with the WSO2_IS administrator user name and password.

The WSO2 Identity Server Home page opens, as shown in the following image.



3. Select the *Main* tab on the left side of the Home page.
4. Select *Identity*, then select *User Stores*, and then select *Add*.

   The Add New User Store pane opens, as shown in the following image.



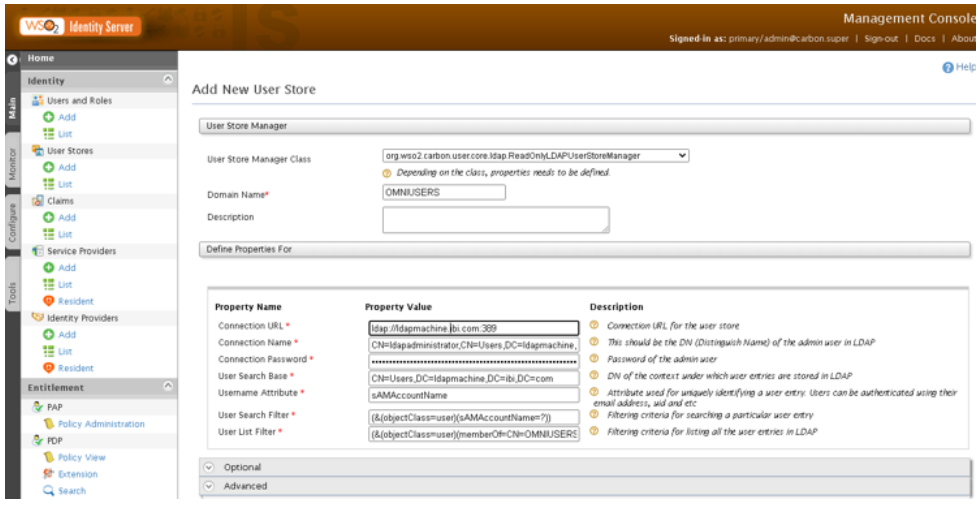
5. Complete the Add New User Store pane by filling in the Property Value text boxes.
   a. Change the User Store Manager Class drop-down to org.wso2.carbon.user.core.ldap.ReadOnlyLDAPUserStoreManager.

b. Type a Domain Name, for example, OMNIUSERS.

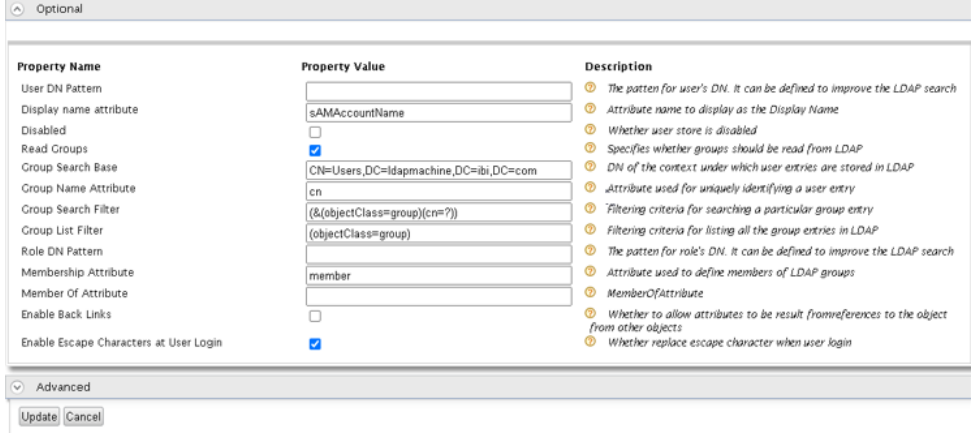
Note: This Domain Name will be used by all users logging in to the Omni-Gen Console. Users will connect as OMNIUSERS/_userid.

c. Type the appropriate information for your company's Active Directory system.

Note: All parameters on this pane are required. When completed, your pane will look similar to the following image.



6. Expand the *Optional* section, as shown in the following image.



The following parameters must be entered:

```
Display name attribute

Read Groups

Group Search Base

Group Name attribute

Membership Attribute
member

Enable Escape Characters at User Login
Selected
```

7. Click *Add*.
8. Confirm the *User Stores are being Updated*.

In the Active Directory/LDAP System

Once the user store is created in WSO2, log in to Active Directory. In Active Directory, you need to create groups for the roles used by Omni-Gen and assign Active Directory users to the appropriate groups.

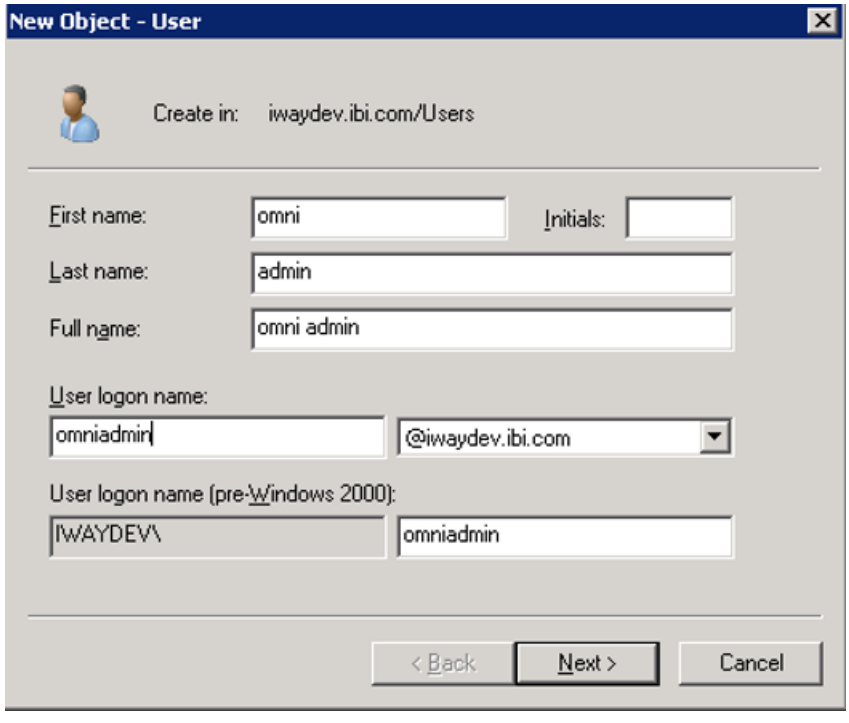
Note: You will need to consult with your Active Directory/LDAP administrator to obtain the information for this configuration.

Creating a User

1. In Active Directory, on the Active Directory Users and Computers left pane, right-click *Users*, then select *New*, and then select *Users*.

   The New Object - User dialog box opens.

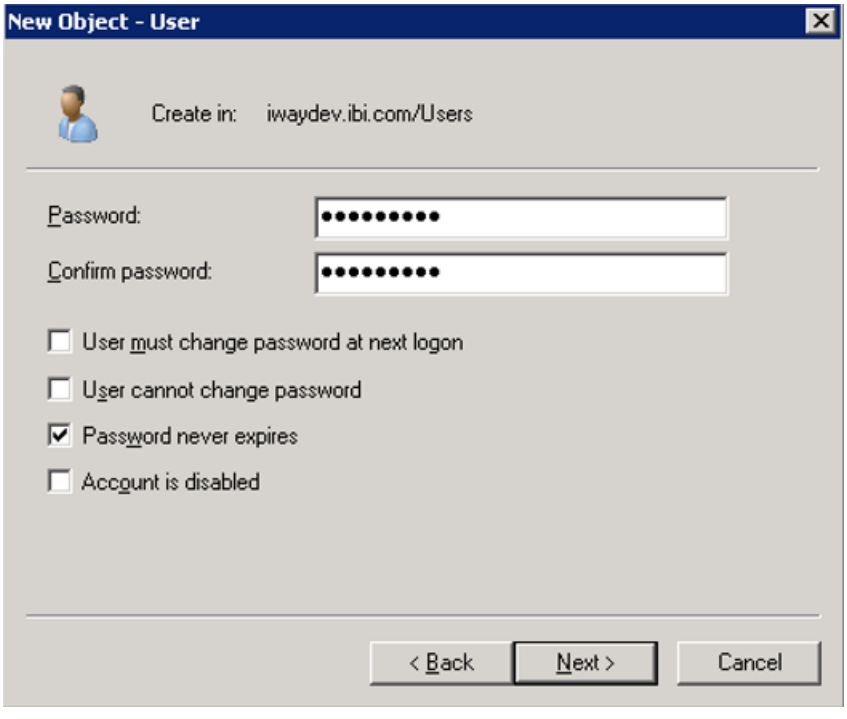
2. Type the first name, last name, full name, and user logon name, as shown in the following image.



3. Click *Next*.

   A second New Object - User dialog box opens, for you to set the password.

4. Type and confirm the password, as shown in the following image. Select or deselect *User must change password at next logon* and *Password never expires*, as is appropriate for your company.



5. Click *Next*.
6. Click *Finish*.

Creating a Group in Active Directory

A special group needs to be created for the Active Directory users to display in WSO2. Groups also need to be created for the Omni roles.

The following Group names should be created:

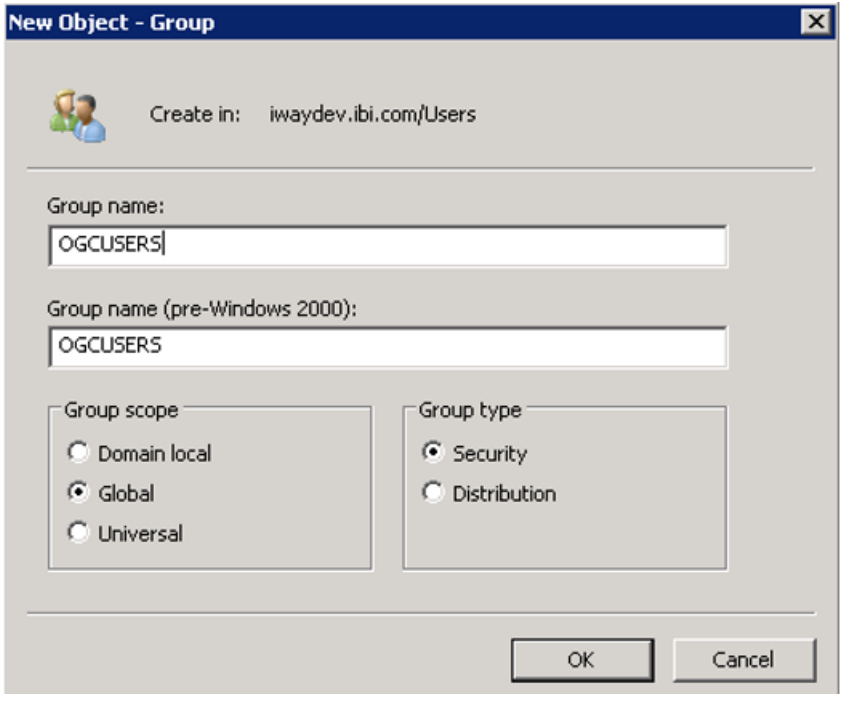
- OGCUSERS
- ROLE_OMNI_CONTROLLER_ADMIN
- ROLE_OMNI_CONTROLLER_READONLY
- ROLE_OMNI_SERVER_ADMIN

- ROLE_OMNI_SERVER_OPERATOR
- ROLE_OMNI_SERVER_READONLY
- ROLE_OMNI_SERVER_API
- ROLE_OMNI_CONTROLLER_API

1. In Active Directory, on the Active Directory Users and Computers left pane, right-click *Users*, then select *New*, and then select *Group*.

   The New Object - Group dialog box opens.

2. Type the group name, leave the Group scope option as *Global*, and leave the Group type option as *Security*, as shown in the following image.



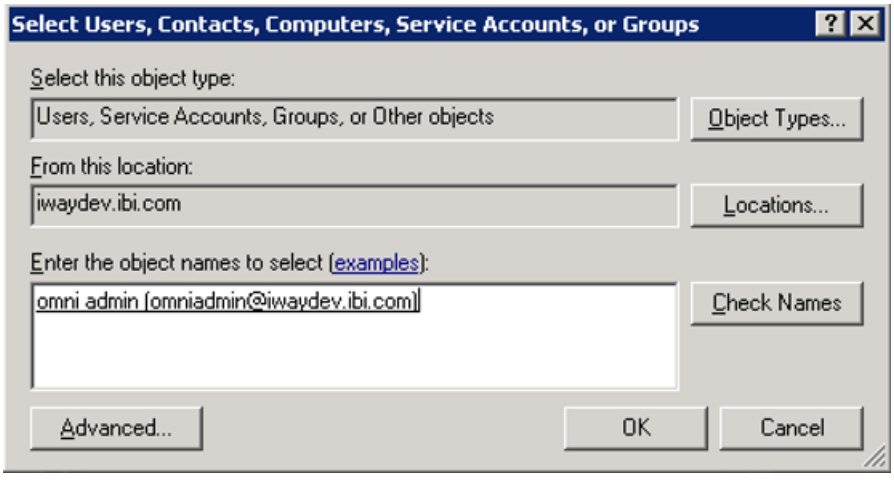
3. Click *OK*.
4. Repeat the process to create groups for the Omni roles.

   Once the groups are created, users must be assigned to the appropriate groups depending on the Omni-Gen privileges they require.

Note: All Omni-Gen users must be members of the OGCUSERS group and at least one other Omni group.

Adding a User to a Group

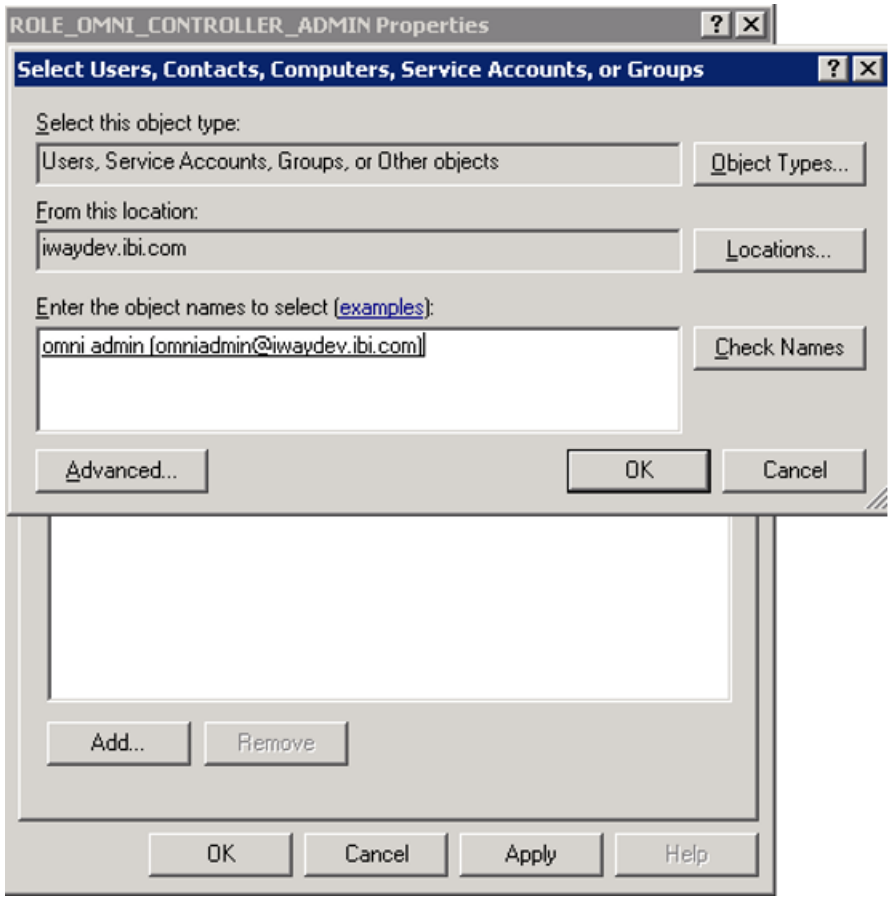
1. Right-click the group name, select *Properties*, and then select *Members*.
2. Click *Add*.
3. Type the first name or Login ID in the *Enter the object names to select* field box.
4. Click *Check Names*.



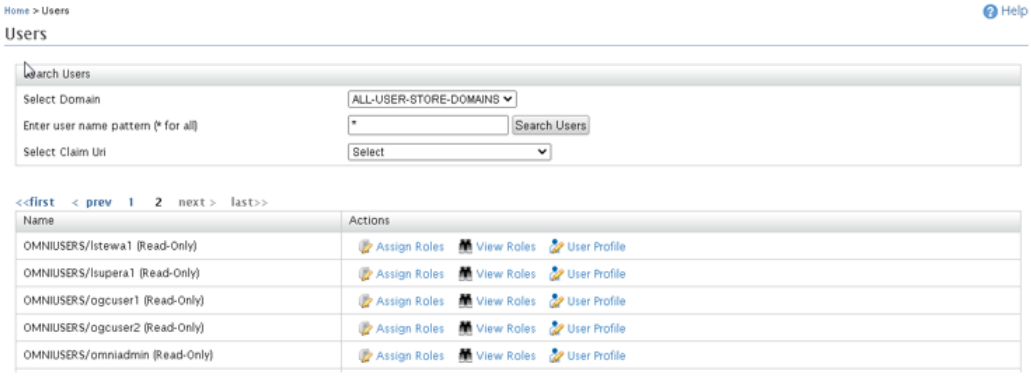
5. Click *OK*, then click *Apply*, and then click *OK* to exit the Group Properties dialog box.

   Repeat this process to add members to all the newly created Omni groups.

The following image shows that the omniadmin user is also added to the ROLE_OMNI_CONTROLLER_ADMIN group.

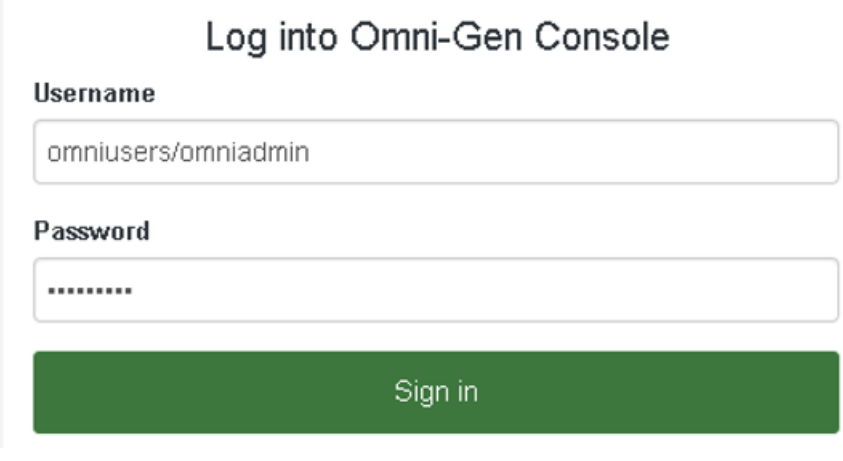


6. Return to WSO2 and you will see that the Active Directory user, omniadmin, appears in the list of users.



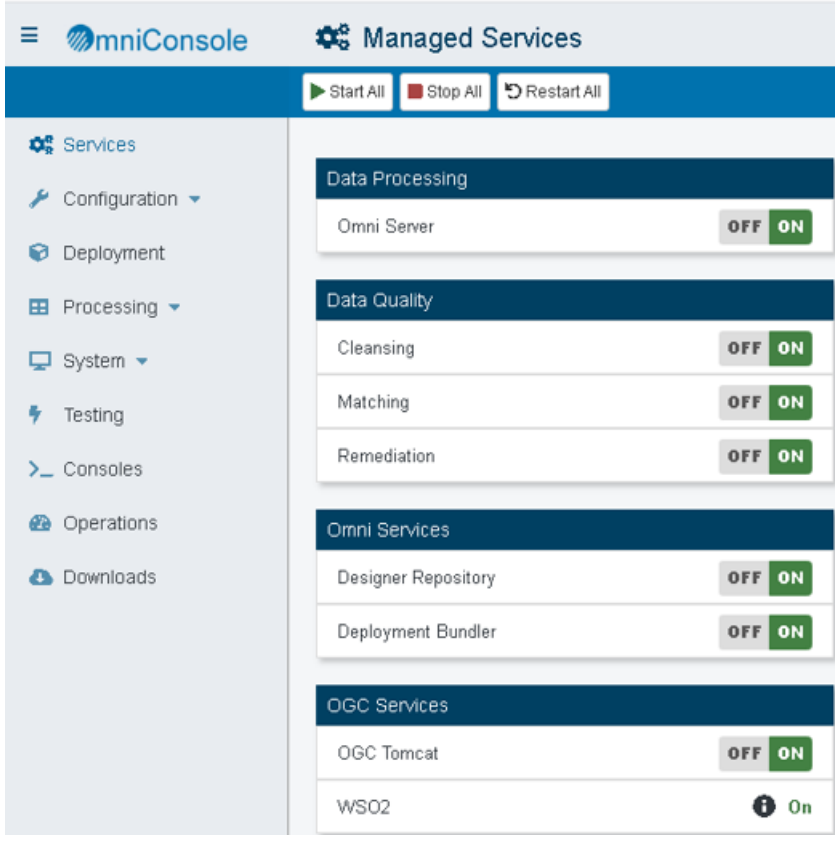
Testing the Login to the Omni-Gen Console

1. Verify that you can connect to the Omni-Gen Console with the newly created Active Directory user ID, as shown in the following image.



2. Click *Sign in*.

The Omni Console opens, as shown in the following image.



WSO2 Functions

Omni provides some utilities of WSO2 for frequently utilized functions. These utilities are accessed through the omni.sh (for Linux and UNIX) or omni.bat (for Windows) script, found in the omnigen/OmniServer directory of the Omni installation.

These utilities are not meant to replace the full capabilities of WSO2. Depending on your particular needs, you may still need to access the WSO2 console to properly provision WSO2 entities. For example, if you are creating your own set of users, this work would still be performed in WSO2.

These utilities are not meant to replace the full capabilities of WSO2. Depending on your particular needs, you may still need to access the WSO2 console to properly provision WSO2 entities. For example, if you are creating your own set of users, this work would still be performed in WSO2.

Command	Description
omni.sh wso2-config-list	Displays current settings for WSO2 host name, WSO2 port, WSO2 admin user name, and WSO2 admin password.
omni.sh wso2-config-host -Dconfig.value=<*newHost*>	Allows you to specify a different WSO2 host name for the machine on which WSO2 is running. For example: `-Dconfig.value=localhost`
omni.sh wso2-config-port -Dconfig.value=<*newPort*>	Allows you to specify a different WSO2 port where WSO2 is running. For example, `-Dconfig.value=9503`
omni.sh wso2-config-username -Dconfig.value=<*newUser*>	Allows you to specify a different WSO2 admin user name. This user is used to create and update users, roles, and policies in WSO2 for use by Omni components. For example: `-Dconfig.value=primary/admin`
omni.sh wso2-config-password -Dconfig.value=<*newPass*>	Allows you to specify a different WSO2 admin password. For example: `-Dconfig.value=mypassword`
omni.sh wso2-load-entities	Causes Omni to push the WSO2 entities (users, roles, and policies) that it uses to the configured WSO2. It presupposes that a WSO2 is running at the configured host name and port, and that the admin user name and password allow access to the WSO2. The command will fail if this configuration is incorrect. **Note:** If an entity already exists in WSO2, it is first deleted before being created. Any manual modification to an entity will be lost as a result of this command.

Note:

- On Windows platforms, change *omni.sh* to *omni.bat* in the above commands.
- Omni services, including the Omni Controller, should all be stopped before running any of these commands. Omni services will load the WSO2 values at service-startup time, and changing a WSO2 value after the fact may not be reflected in a running Omni service. Issue the following command prior to running the above commands:

  ```
  omni.sh stop-all
  ```

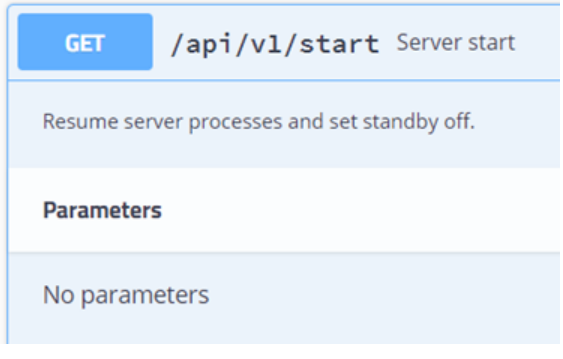
High Availability Web Services

As of Version 3.15, to support High Availability, an Omni Server can be configured to run as a backup to an active server. While waiting on standby, all activity, including work order processing and background processes, is suspended. In the event of a server failure, the backup server can be activated through a web service. A web service can also be used to stop all server activity. A system message will be written when a server is activated and when it is stopped.

The Enable/Disable Startup On Standby setting in the Omni Console, under the Configuration, Runtime tab, is used to determine if the server is in standby mode. You can enable or disable this feature through the configuration or at run time using the REST API Server Endpoint start and stop services, available in the Swagger UI Server service.

Note: The setting should be updated as part of the initial configuration of the backup server. After that the Endpoints control the state of the server.

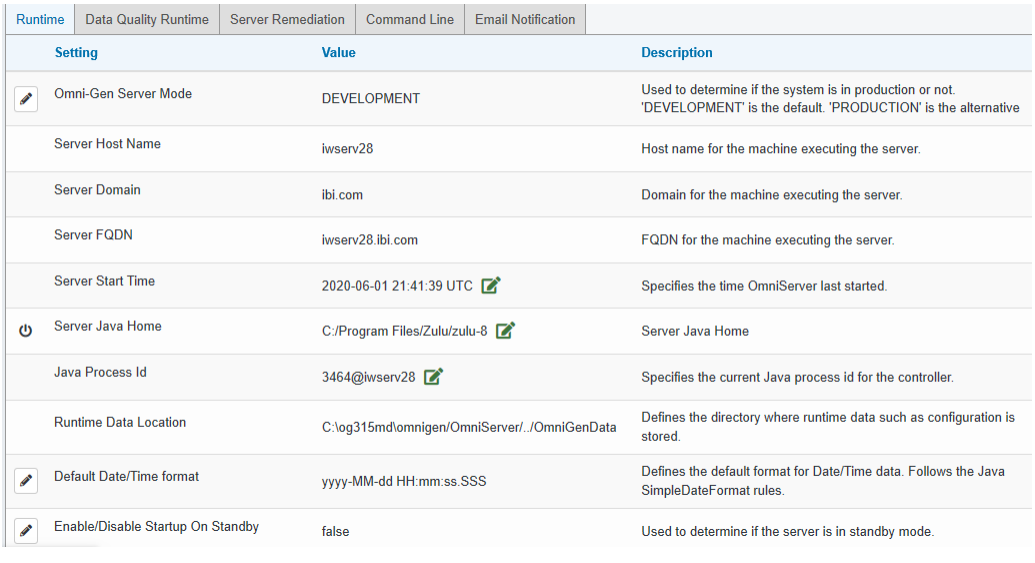
The Server start service and syntax is shown in the following image.



The Server stop service and syntax is shown in the following image.

When the Enable/Disable Startup On Standby setting is true, all server processes will be stopped until the REST API Server Endpoint start service is called to resume server processing. The default value is false.

The Runtime tab, with the Enable/Disable Startup On Standby setting is shown in the following image.



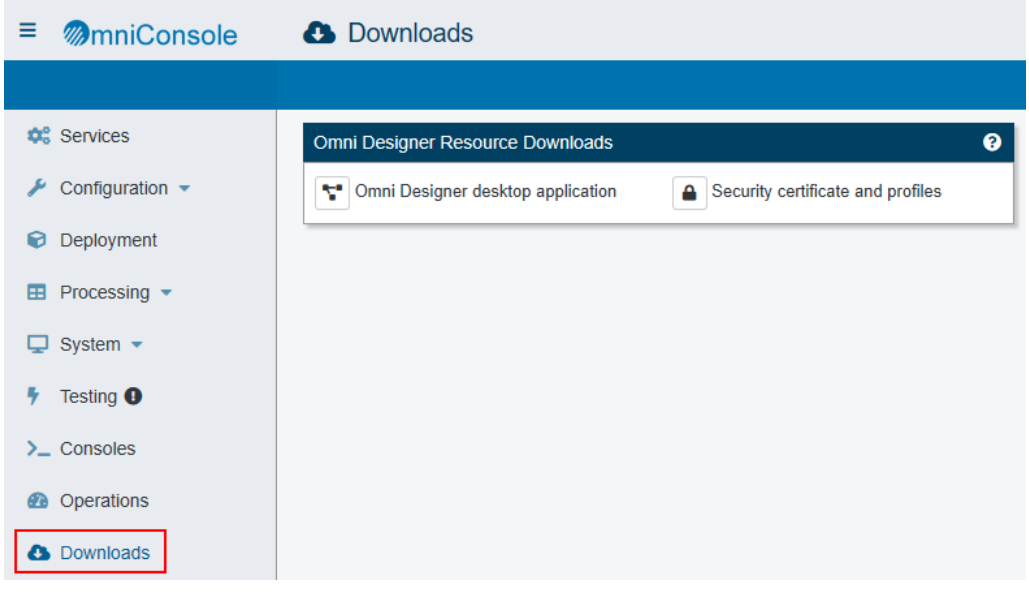
SAML for Omni Governance Console Authorization

As of Version 3.15, SHA256 encryption is supported when using a SAML connection for Omni Governance Console authorization.

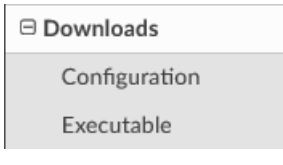
Omni Designer Repository Download

The Omni Console Downloads section, available as of Omni Version 3.14, enables you to download the Omni Designer, as well the necessary security certificates and profiles to connect to a remote Omni Designer Repository server. This enables Omni Designer in Cloud installations and access to remote Omni Designer repositories.

In the left pane of the Omni Console, click *Downloads*, as shown in the following image.



The Downloads page provides support for those users working with a remote instance of Omni-Gen who need the Omni Designer functionality in their local environment. It provides two different options, depending on the use case.



Configuration. The download configuration option is for users who already have Omni Designer installed on their local machine, but need to update their configuration. It contains all of the settings, profiles, and necessary security certificates for accessing a remote Omni Designer Repository.

Executable. The download executable option is for users who do not have Omni Designer installed. It contains all of the configurations mentioned for Configuration, in addition to the actual Omni Designer application. You specify the appropriate operating system (Windows or Linux/UNIX) after clicking the Downloads button.

For more information on downloading the zip file to update an existing version of Omni Designer or set up a new installation of Omni Designer, see the *Omni Console User's Guide*.

Ramp Quality Gate

As of Omni Version 3.14, the Ramp Quality Gate service creates a QUALITY_GATE work order which flags erroneous records in a ramp batch, so they are not included in Omni-Gen work order processing. A new column, rec_quality, on the _r tables captures the error and warning status detected by the Quality Gate.

The service has the following three parameters, all of which are required:

- batchId
- sourceName
- subject

The QUALITY_GATE work order does the following:

- Scans all ramp tables of a subject.
- Generates system warnings for columns that require trimming.
- Generates system errors for columns that contain embedded white spaces or a colon (:).
- Updates the rec_quality column on the ramp record. If the record generated system errors, rec_quality = 'E'. If the record generated system warnings, rec_quality = 'W'.

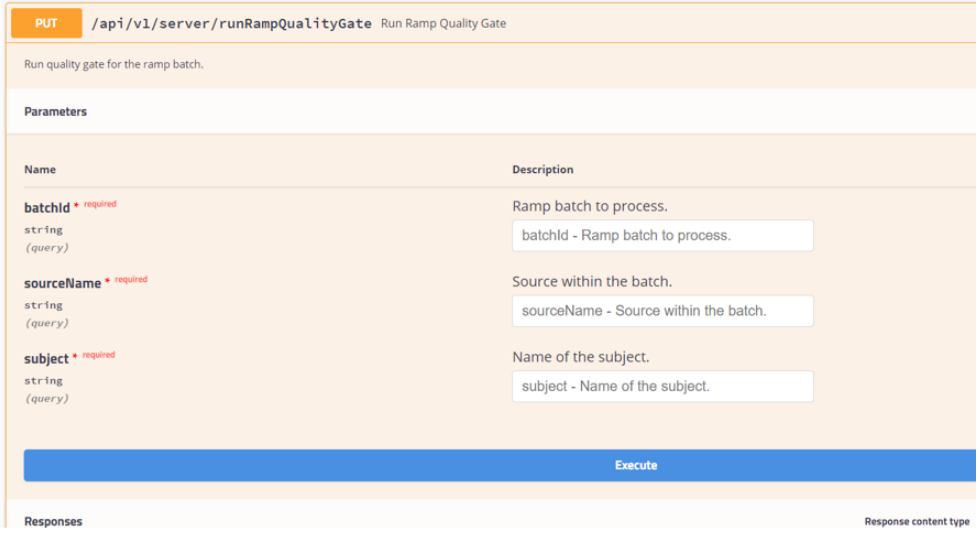
Note: The measures of this work order show three values:

- Number of the records scanned (Processed).
- Number of the records that did not generate a system error (Results).
- Number of the records that generated a system error (Errors).

When the work order completes, click the *System Messages* menu item on the work order to see the warnings and errors.

At this time, all flagged records should be fixed, and the rec_quality column should be set to NULL before the batch is submitted for processing. This applies even to those records marked with a warning, because NATIVE_SQL loads can only trim spaces.

The following image shows an example of the parameters for Ramp Quality Gate.



Blocked Work Order Status

As of Omni Version 3.14, the console provides information explaining why a work order that is ready to process is blocked from execution.

The possible blocked reasons are shown in the following table.

Reason	Description
SUBJECT_RUNNING	Another work order with the same subject is running.
SUBJECT_FAILED	Another work order with the same subject exists in FAILED state.
SUBJECT_PAUSED	Another work order with the same subject exists in PAUSED state.
SINGLETON_RUNNING	A work order defined as singleton is currently executing.
SINGLETON_WAITING	A work order defined as singleton is waiting for execution and appears before this work order in the queue.
MASTERING_PENDING	Work order cannot be executed until mastering is done on the subject.

The following image shows an example of a blocked work order with the SUBJECT_RUNNING explanation.

Source	Status	Result	Reason	Start Date
	BLOCKED		Another work order with the same subject exists in a FAILED state. TRANSATION ID = 450b9866-eac3-4648-95a4-50894761c3f5	
	BLOCKED		Another work order with the same subject exists in a FAILED state. TRANSATION ID = af6730ba-4be1-44e1-941b-96471f1d27d8	
TestSource	COMPLETE	FAIL	Exception during Cleansing processing : Not Found for URL http://mattc-OptiPlex-7020.ibi.com:9504/Customer/cleanse?process_id=450b9866-eac3-4648-95a4-50894761c3f5&server_address=mattc-OptiPlex-7020&server_port=9532	2020-01-14 02:53:17.786
TestSource	COMPLETE	IGNORE	Exception during Cleansing processing : Not Found for URL http://mattc-OptiPlex-7020.ibi.com:9504/Customer/cleanse?process_id=584e88ed-140c-487d-9d0d-e1742b1df695&server_address=mattc-OptiPlex-7020&server_port=9532	2020-01-14 02:50:37.389

Batch Split

As of Omni Version 3.14, the Batch Split feature allows for more optimized database resource usage and for the progress of the load to be visible to the user.

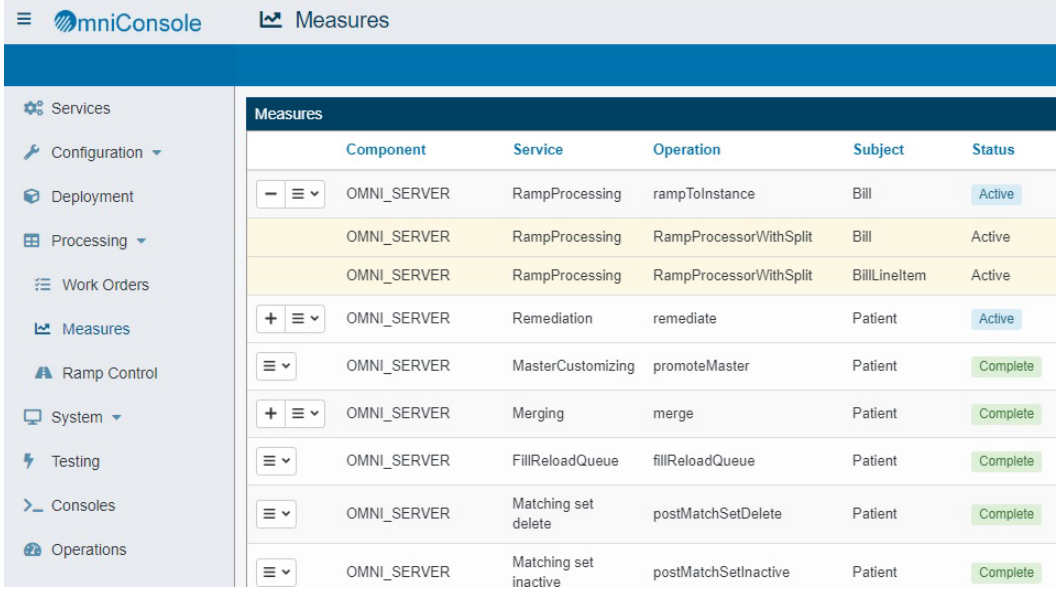
This is only applicable to loads of a transactional subject, where the Data Transfer Mode is NATIVE_SQL. In addition, the batch process must be bound to a single source

If the set of instances in a work order is too large, resource constraints can result in a batch processing failure. Using the Batch Split Size setting, multiple NATIVE_SQL operations are executed, each targeting a subset of the batch. The Measures are updated when each operation completes, showing how many records were processed and how many records were new or updated.

When Batch Split is off, all the records in the batch are processed by a single NATIVE_SQL operation and the measures are only updated when the operation is complete.

The default value of Batch Split Size is -1, which means not to process in chunks. If this value is greater than 0, the batch will be processed in Batch Split Size chunks. For example, if there are 10 million records in the table and the size is set to 1 million, approximately one million rows will be processed at a time.

The following image shows the measures updating while ramp to instance is processing. This only happens with Batch Split. Otherwise, measures are updated once they are completed.



Elastic Removed

As of Omni-Gen version 3.12, the Elastic components have been removed from the product. This change should not affect the migration of the existing implementations into Omni-Gen version 3.12.

Data Quality Workbench Disabled

As of Omni-Gen version 3.12, the Data Quality Workbench has been disabled in the Omni-Gen Master Data (MD) and Data Quality (DQ) Editions. The Data Quality Workbench is still available for personal use as part of the Omni-Gen Personal Edition.

Data Lineage and Governance APIs (Metadata Management)

Omni-Gen version 3.12 introduces a set of new APIs to facilitate Data Lineage and Governance. The APIs to manage the metadata and relevant services are available as part of the swagger interface for quick reference. The APIs are also fully documented in the *Omni-Gen™ API Service Reference Guide*. This is a phased-release and the introduction of the initial set of services which will be expanded in the future releases of Omni-Gen.

Deployment History Option

The Deployment History option enables you to see your prior Deployment History at a glance, with the following new features available for each Deployment.

- **Current Deployment.** Enables you to download the currently Deployed Data Model and Data Quality Plans as a Deployment Bundle, for ease of propagation to other environments.
- **Deployment Bundle.** Enables you to download the Bundle that was used to affect a specific *Update Bundle*, *Update Data Model*, or *Update Data Quality Plans* operation.

Data Purge

During the course of on-going incremental processing, instances, masters, and their children can be marked for *soft-delete* from the system. This feature enables you to schedule the automatic physical deletion of stale *soft-deleted* records from the system on a configurable interval.

For more details, see the *Omni-Gen™ Operation and Management User's Guide.*

Expanded On-Ramp Processing Options

In order to meet tighter processing windows for large volumes of data, several new processing options have been added that optimize the configuration of os_ramp_control:

- **batch_type = INSERT_ONLY.** Omni processing is optimized to skip internal Change Data Capture processes to facilitate large initial loads, assuming direct inserts.
- **data_transfer_mode = NATIVE_SQL.** A performance optimization that shifts internal processing to the Database Server for significantly large batches.

  Note: In version 3.12, the *Native SQL* processing option is only supported with Microsoft SQL Server and PostgreSQL.
- **change_detection = IGNORE.** Standard work order processing is performance-optimized to skip steps of the Work Order when the parent and child records of the instance have not been changed.

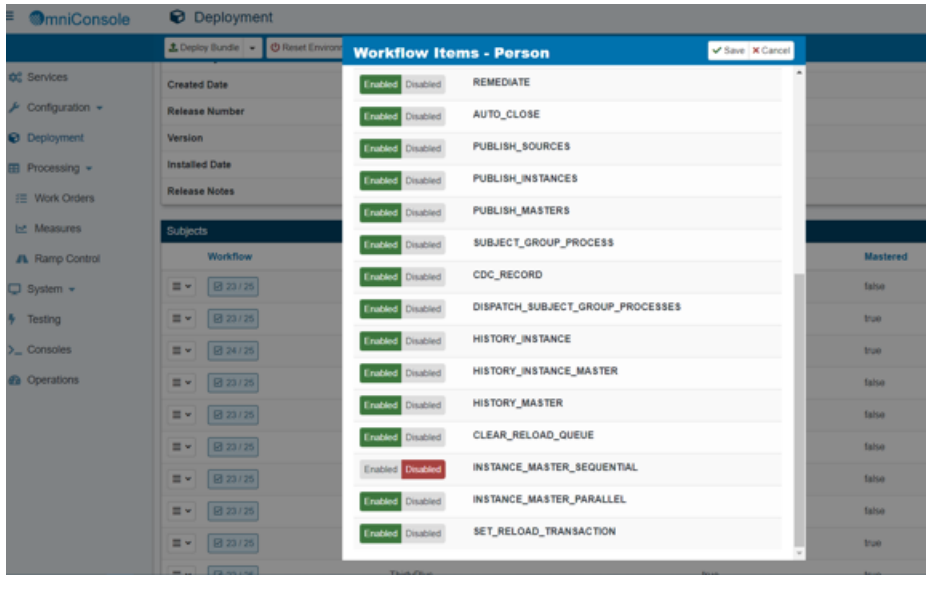
This option forces the Omni Server to bypass this optimization, and is generally used as a recovery step in the event that an error occurs during processing of a given batch.

It ensures that all instances in the ramp batch propagate to instance and quality operations, even if they have not changed.

Important: For key updates on using the new *os_ramp_control* options, while converting from the older, deprecated *os_ramp_control* options, and additional information on bulk processing improvements, see the *Omni-Gen™ Integration Services User's Guide*.

Parallel Processing Option for Mastered Subjects

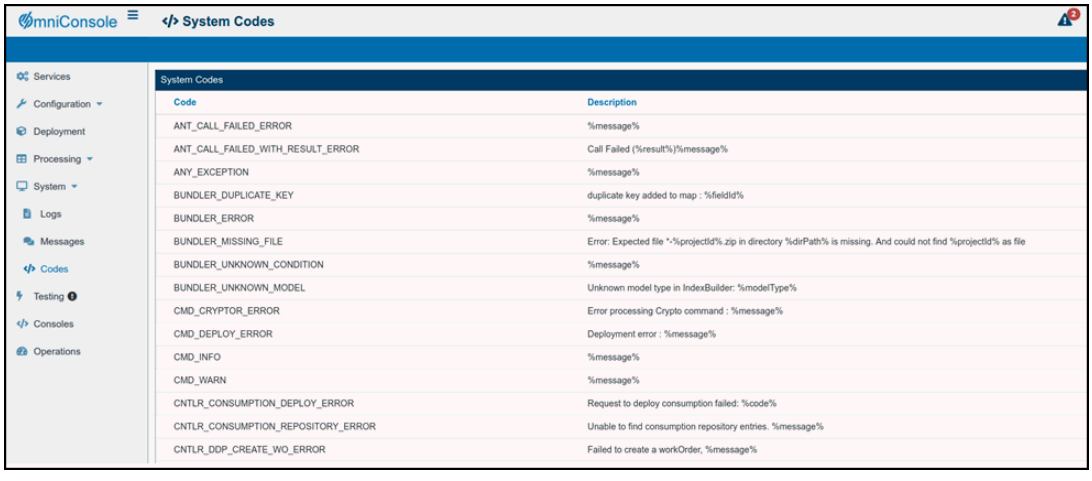
By decoupling Mastering processes from Ramp to Instance processing, and allowing you to make a minor configuration setting to execute groups of mastered instances in parallel, overall processing time can been further reduced. Instead of one call to the matching engine for each Work Order, you can now execute the Mastered Instances from multiple sources in parallel, and make a single call to the Matching engine when all are complete. This option is available in the Work Order step management for the subject, as shown in the following image.



For more information on setting up parallel processing options, see the *Omni-Gen™ Operation and Management User's Guide*.

System Error Codes

As of Omni-Gen version 3.8, the operations user has access to descriptive system-level error codes, which can be found in the Omni Console, as shown in the following image.



The error codes will continue to be updated and expanded in subsequent Omni-Gen releases, but this update available in Omni-Gen version 3.8 provides an initial, descriptive explanation of the error codes.

Changing the Log Level for Omni-Gen Governance Console and Deployed Web Applications

As of Omni-Gen version 3.8, you can change the log level that is used by the Omni-Gen Governance Console (OGC) and deployed web applications.

Omni-Gen Governance Console

To change the log level for Omni-Gen Governance Console (OGC):

1. Navigate to the following directory:

   `omnigen\OmniGovConsole\conf`

2. Edit the *logging.properties* file.
3. Replace *WARNING* with one of the following log level values:

   - ❏ SEVERE
   - ❏ WARNING
   - ❏ INFO

- ❑ CONFIG
- ❑ FINE
- ❑ FINER
- ❑ FINEST
- ❑ ALL

4. Save the *logging.properties* file.
5. Restart OGC.

Deployed Web Applications

Note that when the web applications described in this section (*ODataDomain*, *OmniDomain*, and *RemediationService*) are redeployed, the log level will revert to *WARN*, which is the default log level.

To change the log level for *ODataDomain*:

1. Navigate to the following directory:

   `omnigen\OmniGovConsole\webapps\ODataDomain\WEB-INF\classes`

2. Edit the *log4j2.xml* file.
3. Replace *WARN* with one of the following log level values:
   - ❑ OFF
   - ❑ FATAL
   - ❑ ERROR
   - ❑ WARN
   - ❑ INFO
   - ❑ DEBUG
   - ❑ TRACE
   - ❑ ALL
4. Save the *log4j2.xml* file.
5. Restart OGC.

To change the log level for *OmniDomain*:

1. Navigate to the following directory:

   `omnigen\OmniGovConsole\webapps\OmniDomain\WEB-INF\classes`

2. Edit the *log4j2.xml* file.
3. Replace *WARN* with one of the following log level values:

   - OFF
   - FATAL
   - ERROR
   - WARN
   - INFO
   - DEBUG
   - TRACE
   - ALL

4. Save the *log4j2.xml* file.
5. Restart OGC.

To change the log level for *RemediationService*:

1. Navigate to the following directory:

   `omnigen\OmniGovConsole\webapps\RemediationService\WEB-INF\classes`

2. Edit the *remediationServiceLog4j.properties* file.
3. Replace *WARN* with one of the following log level values:

   - OFF
   - FATAL
   - ERROR
   - WARN
   - INFO
   - DEBUG
   - TRACE

- ALL

4. Save the *remediationServiceLog4j.properties* file.
5. Restart OGC.

Enhanced Access Security: Column-Based and Row-Based

As of Omni-Gen version 3.6, enhanced security for the 360 Viewer and Remediation applications in the Omni Governance Console (OGC) is available in two forms (Column-based access security and Row-based access security).

- Column-based access security provides the ability to restrict access to any column in any table to any user.

  For example, all data stewards would see six columns of data in a 360 view of a subject, while finance managers would also see a seventh, restricted access data column, such as *Revenues Received*.

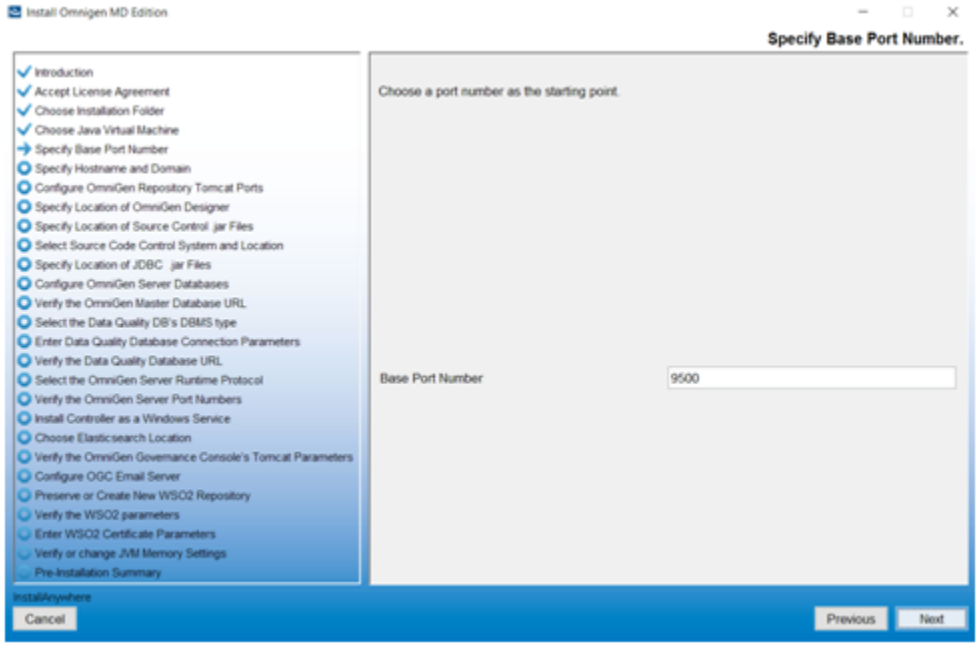
- Row (or column criteria)-based access security provides the ability to restrict the display of rows in any table where the value of the content in any column is a configurable value.

  For example, the rows of customer master records displayed for regional managers can be restricted to the rows where the *Region* column contains a value that is specific to the region of the manager.

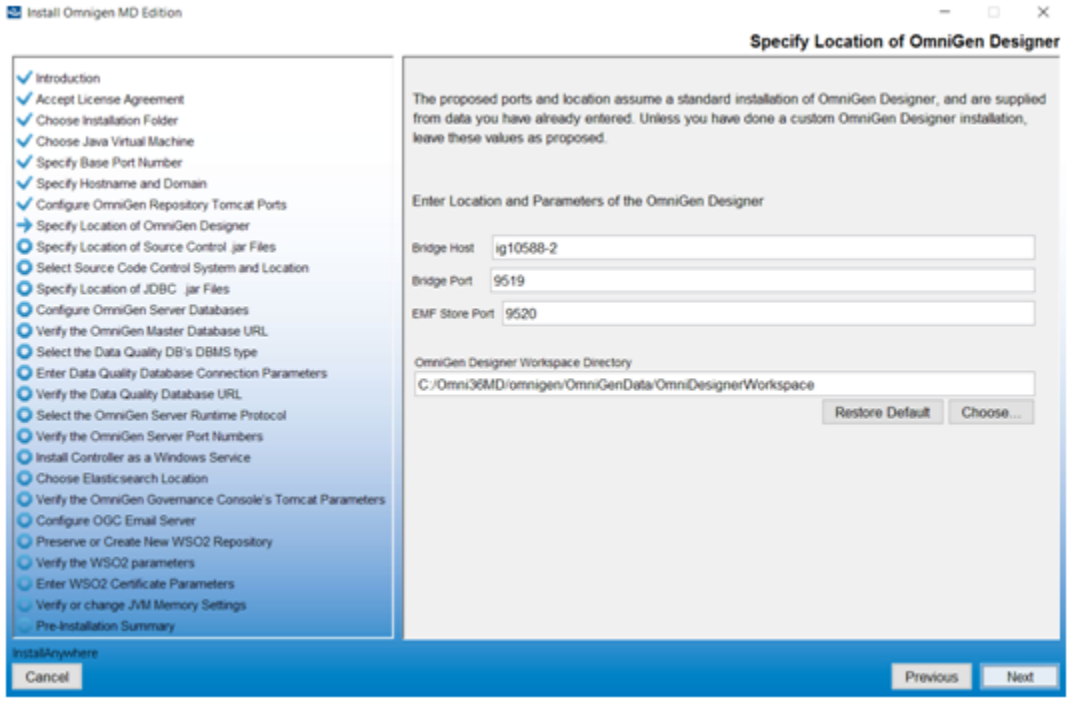
By default, Column-based access security and Row-based access security are disabled and can be enabled independently as required. For more information, see the *Omni Governance Console Administration User's Guide*.

Base Port Support

As of Omni-Gen version 3.6, the installer supports the configuration of a port range to be used by the Omni-Gen product. You can provide the initial port, which will be used as a starter to allocate the needed ports for the product services. You are prompted to provide a Base Port Number during installation, as shown in the following image.

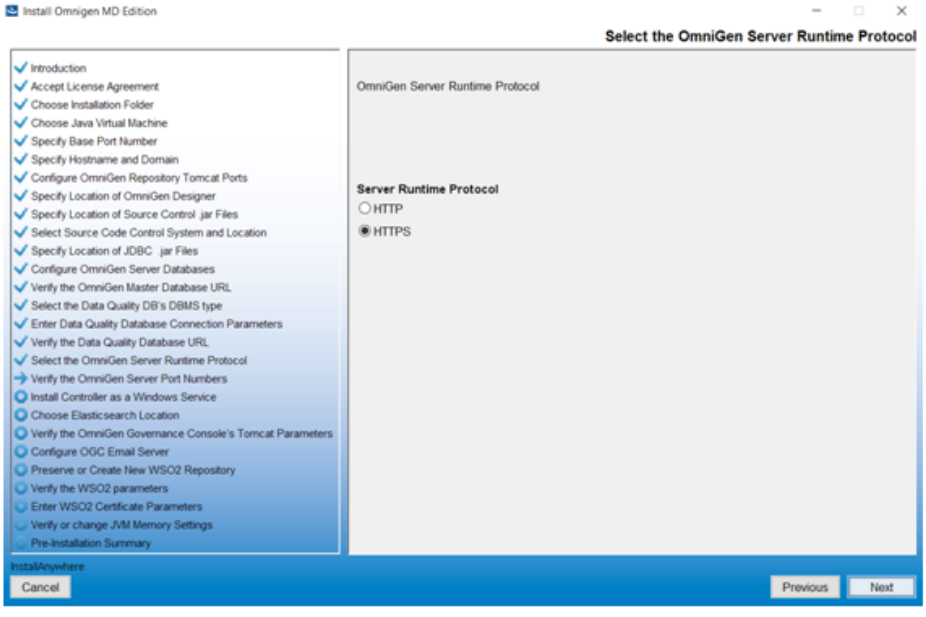


Throughout the installation, you have an option to change the default ports or accept the recommended values. Each applicable installation step provides you with an option to reconfigure the port assignment. However, it is recommended to keep the defaults to prevent any conflicts. The following image shows an example of a dialog box where you can change the default ports.



Server Runtime HTTPS Setting

As of Omni-Gen version 3.6, the installer enables you to select whether the Omni-Gen Server should use HTTP or HTTPS. You can update this setting at a later time using the Omni-Gen Server Console. The default is HTTPS, as shown in the following image.



Instance and Master History

As of Omni-Gen version 3.6, you have an option to track history of data changes for both Instance and Master records. The purpose of history data tables is to enable a safe place where all modifications of data can be tracked, if necessary. Currently, it is possible to track a history of instance records and/or master records. The naming convention for history tables is to include an '_h' suffix to an instance or master table name. For example, person → person_h; person_m → person_m_h.

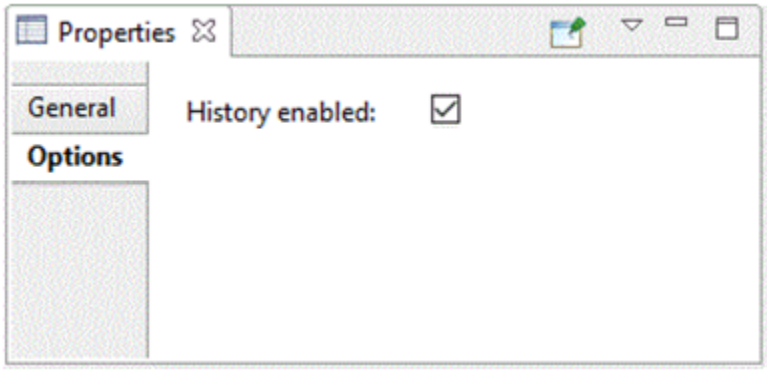
A history table replicates all tracked table column names, types, and order, but contains a few additional columns. Both instance and master history tables have a time stamp type column, 'hist_start_date'. In addition, instance history tables have a 'u_transaction_id' column.

The work of writing history records is captured in a separate data load step. Depending on data flow, one of the distinct work items: HISTORY_INSTANCE, HISTORY_MASTER, or HISTORY_INSTANCE_MASTER, could be created and executed. In the Omni Console measures, you can see how much time is spent on the operation and how many new history records are created.

Configuring History

There are two history creation enablers. The first is unconditional. Every subject, which is expected to have its history tracked, is required to have its IDS correspondent attribute set to true: captureHistory="true". Only then a correspondent history table itself will be created when the bundle is deployed. The second enabler can be set on and off globally in the Omni Server runtime settings. One setting activates or deactivates writing history for all instance subjects, another for all master subjects: "Enable/Disable Instance History" and "Enable/Disable Master History".

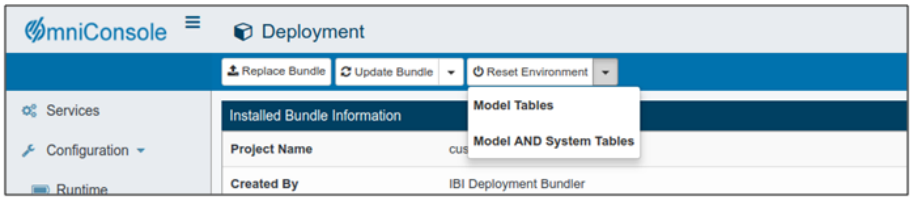
When creating a model in Omni Designer, subjects can be optionally set to capture history. If so, any deployment bundles generated for the model will have the appropriate IDS history flags set. The option is accessible when the subject properties are visible, as when the subject model is selected in the project view. In the options tab of the subject properties, select the *History Enabled* check box as shown in the following image.



After committing, project bundles and deployment bundles will be generated with history enabled for the selected subject.

Deployment Task for Reset

As of Omni-Gen version 3.6, you have an option on how to reset the Deployment environment. There are two options available where only Model related tables are removed, or where both Model and System tables are removed. For more information, see the *Omni-Gen™ Operation and Management Guide*.



Domain Naming Considerations

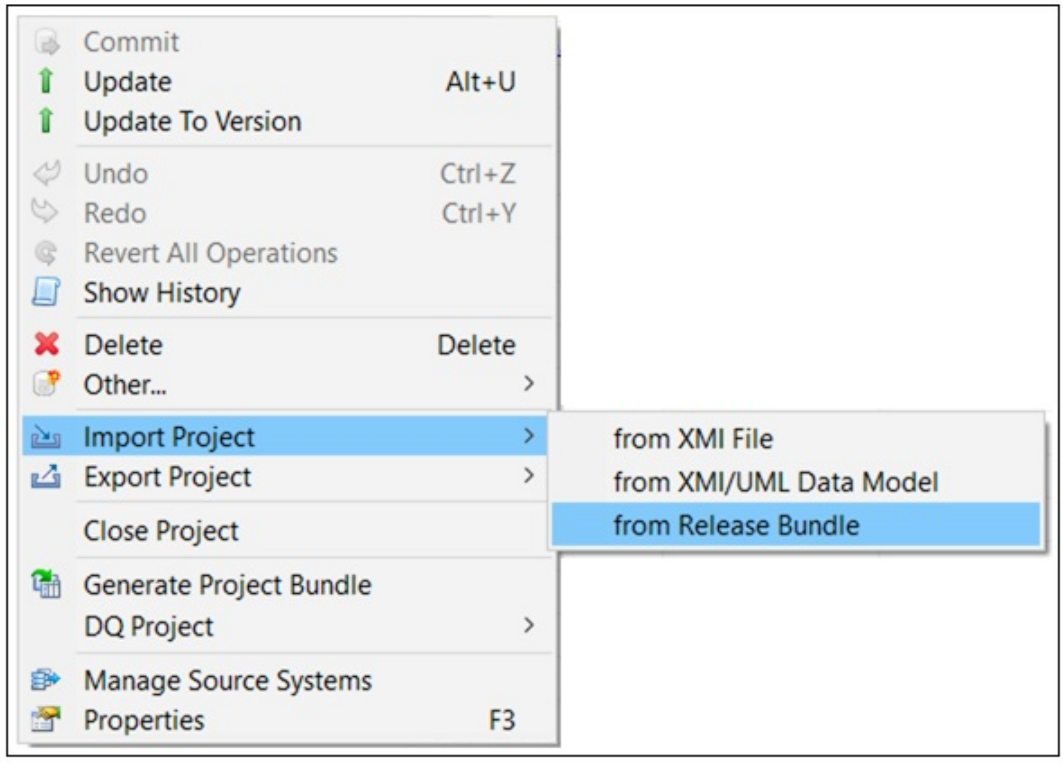
The domain name has certain limitations in the naming convention. The use of certain characters is not permitted and should be avoided in the domain name definition, as well as other field and attribute definitions. The information for model is being retrieved at runtime by an array of RESTful and other services, which do not allow and might incorrectly respond to requests for domains containing special characters. Below is the specification of allowed (white list) of characters used for domain specification.

Allowed are letters, numbers, and underscore (_). First character must be [a-z, A-Z], subsequent characters may be alphanumeric or underscore [a-z, A-Z, 0-9, _]

Importing a Project from a Release Bundle in Omni Designer

As of Omni-Gen version 3.4, you can now import a project into Omni Designer from a release bundle that was previously exported or generated.

Right-click anywhere in the Project Explorer tab, select *Import Project*, and then click *from Release Bundle* from the context menu, as shown in the following image.



You are prompted to select an existing repository into which the project will be imported.

In the Omni Designer Project dialog box, provide a project name and then click *Finish*.

The Export Project functionality in Omni Designer works the same as in previous releases.

Updating the Repository Connection

As of Omni-Gen version 3.2, you can modify the configuration of your repository using the Omni Console. However, be advised that you are still responsible for providing correct third-party driver .jar files for the repository connection, to be accessible from the following path:

`<OmniGenHome>\OmniDesignerRepository\lib`

Additional Bundle Deployment Options

In addition to the *Update Bundle* functionality in prior releases, the following options have been added:

- **Update Data Model.** Enables you to upgrade the model without affecting the already deployed Data Quality Plans, making it easier to implement data model changes.
- **Update Data Quality Plans.** Enables you to upgrade the Data Quality plans without affecting the already deployed Data Model, making it easier to deploy incremental customer-specific Data Quality plan changes. This pushes only Data Quality updates and bypasses the code generation and data base processing. This option assumes that the IDS directory in the deployment bundle will be empty for the Data Quality only update.

Support for Mastering Intra-Subject Relations

This feature was originally introduced in Omni-Gen version 3.1.2, but is also included in this set of release information, since it is considered a key feature.

The support for mastering intra-subject relations is also known as *households*. This feature allows for the creation of named relationships between master documents. Relationships are stored in the newly introduced internal table *os_subject_group_relation*, and are created by Data Quality plans present in the merging server. The online services for each subject group plan are defined as for cleansing, matching, etc., except that the location of the service is the name of the relationship process.

The list of available group relationship processes are defined in a text file whose location is given by the *Subject groups file* setting in the DQ runtime settings of the Omni Console. Each line in the file contains the process name, the originating ("from") subject, the destination ("related to") subject, and a comma separated list of all other involved subjects. For example:

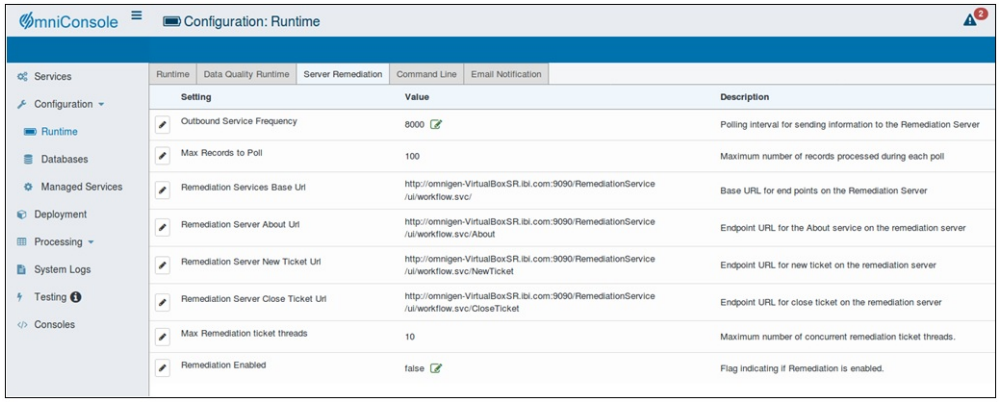
```
banking;Customer;Account;Organization,Employee
```

This feature with all related configuration is optional. If the relationships file exists, then appropriate subject group processes are automatically invoked as part of any master work order. Processing is otherwise unaffected by the addition of this feature.

Disabling Remediation Ticket Submission

As of Omni-Gen version 3.5, there is an available feature that disables the submission of tickets to the Remediation Service (Omni Governance Console). The system can continue to process records, and Remediation tickets can be generated, but they will not be submitted to the Remediation Service. When enabled, the tickets will be submitted to the Remediation Service.

This setting is in the Omni Console (expand *Configuration* in the left pane, select *Runtime*, and then click the *Server Remediation* tab), as shown in the following image.



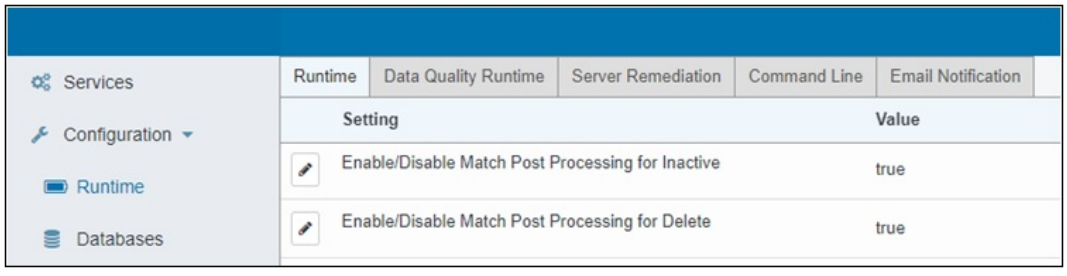
Match Post Processing

As of Omni-Gen version 3.5, there are various ways to optimize the system for performance depending on the application scenario and requirements. One way is to disable the Match Post Processing database operations. This step is executed after the Match step and checks the masters table to see if any should be inactive or marked as deleted. This is a resource-intensive operation, as it must scan the entire table.

As of Omni-Gen version 3.5, the following additional settings are made available where you can choose to enable or disable this Match Post Processing:

- When Enable/Disable Match Post Processing for Inactive is false, the work order does not include the MATCH_SET_INACTIVE step.
- When Enable/Disable Match Post Processing for Delete is false, the work order does not include the MATCH_SET_DELETE step.

These settings are available in the Omni Console under the Runtime section, as shown in the following image.



Installation Verification Process

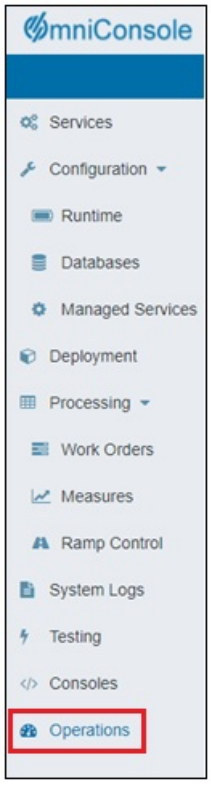
As of Omni-Gen version 3.5, when the application is started, the controller and the server test the connection with the host. If an invalid host name is provided during the installation, it is ignored. Once the controller and the server are up and running, use the following URLs to test the communication between these two components:

`https://<hostname>.<domain>:9500/api/vi/pingServer`

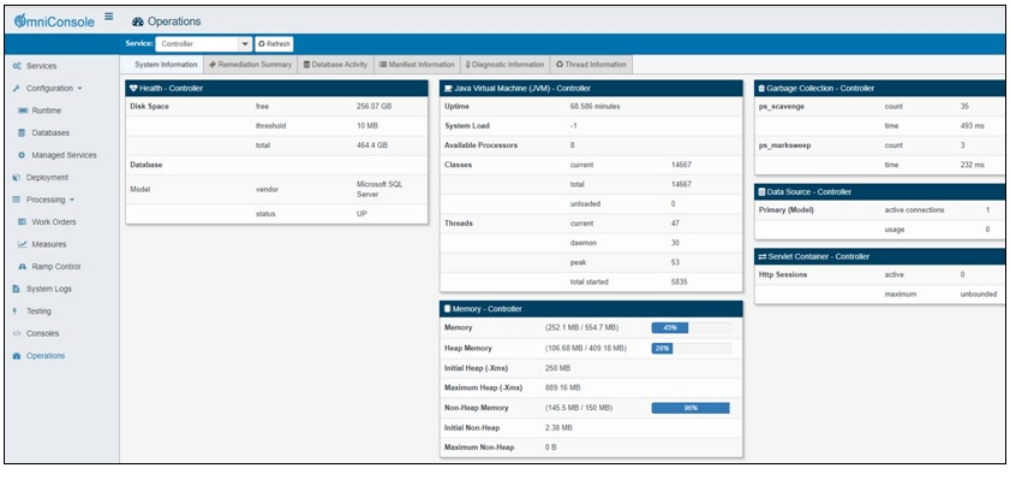
`https://<hostname>.<domain>:9512/server/api/vi/pingController`

Omni Console Operations Section

As of Omni-Gen version 3.5, a new Operations section is available in the Omni Console.



The Operations section provides a detailed view into system resource utilization, transaction processing, execution statistics, and other relevant data to optimize the Omni-Gen system and isolate any performance bottlenecks. This new area is separated into relevant sub-sections, based on the product area that is most resource intensive.

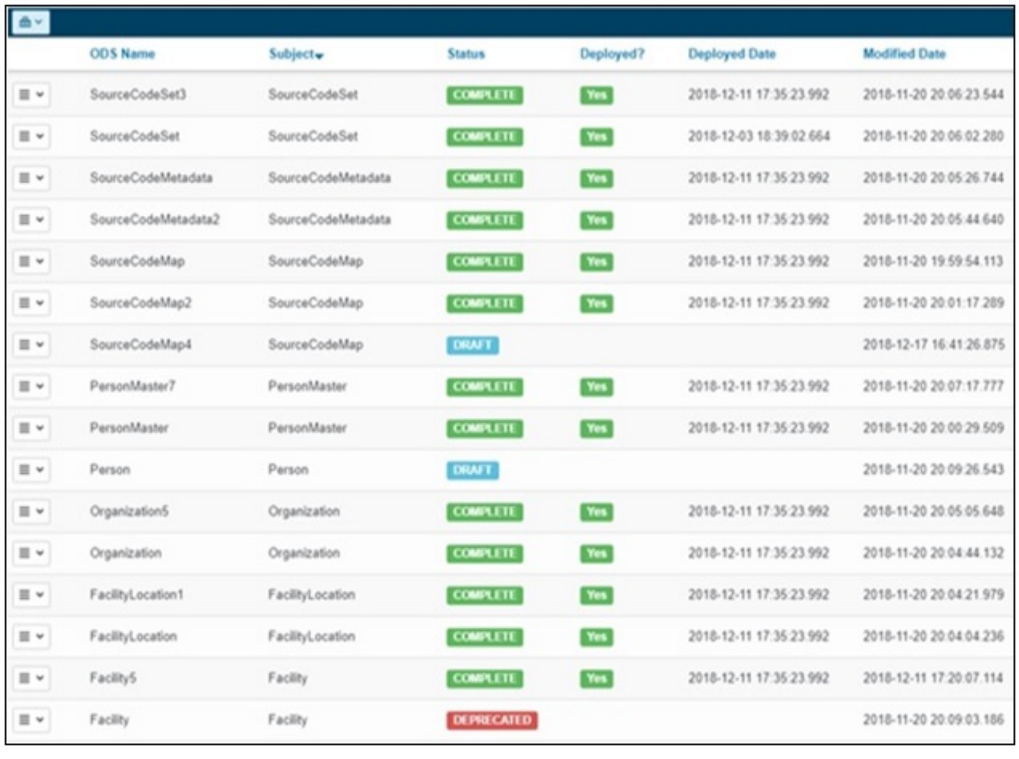


The Operations section is meant to be a supplement to other performance monitoring tools, such as Java monitoring, database monitoring, tuning facilities, and other related third-party tools. It is not meant to be a replacement, but rather a supplemental tool to help identify and isolate potential problems in the Omni-Gen system.

For more information on using this feature, see the *Omni Console User's Guide*.

Omni-Gen Consumption View

As of Omni-Gen version 3.8, Omni-Gen Consumption View is introduced, which is a customizable data model builder with dynamic views to empower business analytics and reporting. Omni-Gen Consumption View makes it easier to develop metrics and analytics from data collected in an Omni-Gen data repository.



ODS Name	Subject	Status	Deployed?	Deployed Date	Modified Date
SourceCodeSet3	SourceCodeSet	COMPLETE	Yes	2018-12-11 17:35:23.992	2018-11-20 20:06:23.544
SourceCodeSet	SourceCodeSet	COMPLETE	Yes	2018-12-03 18:39:02.664	2018-11-20 20:06:02.280
SourceCodeMetadata	SourceCodeMetadata	COMPLETE	Yes	2018-12-11 17:35:23.992	2018-11-20 20:05:26.744
SourceCodeMetadata2	SourceCodeMetadata	COMPLETE	Yes	2018-12-11 17:35:23.992	2018-11-20 20:05:44.640
SourceCodeMap	SourceCodeMap	COMPLETE	Yes	2018-12-11 17:35:23.992	2018-11-20 19:59:54.113
SourceCodeMap2	SourceCodeMap	COMPLETE	Yes	2018-12-11 17:35:23.992	2018-11-20 20:01:17.289
SourceCodeMap4	SourceCodeMap	DRAFT			2018-12-17 16:41:26.875
PersonMaster7	PersonMaster	COMPLETE	Yes	2018-12-11 17:35:23.992	2018-11-20 20:07:17.777
PersonMaster	PersonMaster	COMPLETE	Yes	2018-12-11 17:35:23.992	2018-11-20 20:00:29.509
Person	Person	DRAFT			2018-11-20 20:09:26.543
Organization5	Organization	COMPLETE	Yes	2018-12-11 17:35:23.992	2018-11-20 20:05:05.648
Organization	Organization	COMPLETE	Yes	2018-12-11 17:35:23.992	2018-11-20 20:04:44.132
FacilityLocation1	FacilityLocation	COMPLETE	Yes	2018-12-11 17:35:23.992	2018-11-20 20:04:21.979
FacilityLocation	FacilityLocation	COMPLETE	Yes	2018-12-11 17:35:23.992	2018-11-20 20:04:04.236
Facility5	Facility	COMPLETE	Yes	2018-12-11 17:35:23.992	2018-12-11 17:20:07.114
Facility	Facility	DEPRECATED			2018-11-20 20:09:03.186

Omni-Gen Consumption View allows high-level access users (for example, system administrators) to create custom and specific views or documents for low-level access users, enabling these users to trim massive data sets (reports) to smaller, more manageable data sets and leverages existing data to generate valuable actionable insights. For example, a report containing 500 columns of information can be scaled down to 20 columns of data that is specific to a user's requirements, which also reduces processing time. For more information, see the *Omni-Gen™ Consumption View User's Guide*.

Omni-Gen Services

Omni-Gen is designed with a microservices approach and enables many of its functions to be accessible through APIs. This enables other applications to seamlessly integrate with Omni-Gen provided services using the industry standard approach. For more information, see the *Omni-Gen™ API Services Reference Guide*.

Note the following 3.2 Swagger URLs:

To access the Omni Controller Swagger UI, the URL is:

`https://host.domain:9500/swagger-ui.html`

To access the Omni Server Swagger UI, the URL is:

`https://host.domain:9512/server/swagger-ui.html`

Omni Governance Console

Omni-Gen includes a portal named Omni Governance Console (OGC). OGC hosts several Omni-Gen web applications, including the 360 Viewer and Remediation portal.

New Features

This section describes new feature in Omni Governance Console (OGC) version 3.2 and higher.

❑ **Enhanced Grouping Functionality**

In Omni-Gen version 3.8.2, the Grouping feature is disabled by default. To enable Grouping in OGC:

1. Log on to the WSO2 Identity Server Management Console.
2. In the left pane, click the *Main* menu, expand the *Entitlement* section, and then click *Policy Administration*, which is located under the *PAP* node.
3. Locate the *component-access-menuitem-policy* row in the Available Entitlement Policies list, and then click *Edit* for this row.
4. Locate the *Grouping* section and uncomment the following rule:

   ```
   <Rule Effect="Permit"...
   ```

5. Click *Save Policy*.
6. For the *component-access-menuitem-policy* row in the Available Entitlement Policies list, click *Publish to My PDP*.
7. Select the *Update Policy* radio button, and then click *Publish*.
8. Confirm that you want to publish.

9. Log out of OGC and then log in.

   The Grouping feature is now available and displays as a tab in the OGC menu. For more information, see the *Omni-Gen Grouping User 's Guide*.

❑ **Email Notification of Remediation Ticket Assignment**

This feature allows an email notification to be sent to a user who has been assigned with a remediation ticket.

❑ **Improved Navigation to a Field Requiring Manual Cleansing for Remediation Purposes**

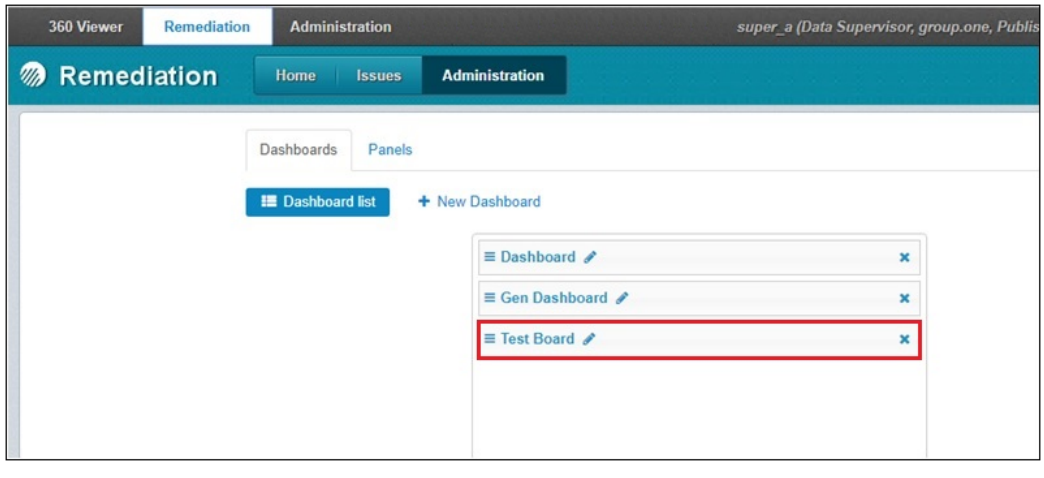
You can use the new *Expand All Activities* and *Hide All Activities* buttons to immediately locate any fields that require editing for Manual cleansing.

❑ **Email Notification of New Ticket Creation**

This feature allows an email notification to be sent to the assigned user when a new Manual Cleansing ticket is created. A second variant of this operation allows for all email notifications to be sent to a single user ID.

❑ **Remediation Dashboard Template**

To provide assistance when creating Remediation dashboards, a dashboard template called *Test Board* is now available, which is available under the Dashboards tab in the Administration section of the Remediation portal, as shown in the following image.



❑ **New Omni-Gen Installer**

Manually configuring a properties file for Omni-Gen and installing the OGC separately have been replaced by the new Omni-Gen installer, which prompts you for all configuration settings and then automatically installs (or upgrades) Omni-Gen Server and OGC.

- **Automatic User Role Configuration From Active Directory Through LDAP**

  Eliminates duplicate manual entry of OGC users and their privileges by extracting Group Membership data directly from Active Directory (AD) systems through LDAP protocol connections.

- **Expand All Command**

  Capability to expand nested Subjects in Remediation, Master Comparison exploration.

- **Create New Document**

  You have the ability (optional) to create a new document directly from the OGC Data Stewards session.

Known Issues

This section describes known issues in Omni Governance Console (OGC) version 3.2 and higher.

OGC Sync of Model to Metadata and WS02 Roles

The "sync of Model to Metadata and WS02 Roles" mistakenly creates a Metadata table for cases and instances, and automatically "Includes" them as Links displayed below the SubjectMaster table Full Info View. This causes the "cases" (and "instances") link to be displayed, and since the Table is not a valid subject or sub-collection, clicking it will cause a system error. This will be resolved in a future release.

As a workaround, you can follow the steps below.

1. At the completion of the SYNCH process, click *Apply Changes*.
2. From the OGC, click the *Administration* tab, and then select the *Tables* option.
3. From the Tables option, select your Master, then select the *EditTables* option, and then select the *Full Info View* option.
4. Move the cases and instances from Included to Excluded by clicking the *X* next to each.
5. Click *Update*.
6. Return to the Omni-Gen Console applications.

SYNCH Process

The normal behavior of the SYNCH process is to examine a newly deployed Omni-Gen model, create a list of Subjects in that model, and compare that list with the existing tables in the metadata for OGC (consisting of a runtime H2 database and its offline *MData.xml* file). Currently, in Omni-Gen™ Master Data Management (MDM) Edition and Data Quality (DQ) Editions, if the Subject exists in the model, but not in the metadata, then the SYNCH process creates a *subject* table and a *subject*Master table in the metadata. However, in the DQ Edition, there are not any *subject*Masters or *subject*Master tables. When later referenced, the presence of a *subject*Master table generates an error when any OGC application (for example, Remediation) is started.

Workaround (required for DQ Editions only):

1. After you run the SYNCH process, sign in to OGC.
2. Click the *Administration* tab.
3. Click *Tables*.
4. Examine the list of tables, and delete any *subject*Master tables.
5. Click *Update*, which is located at the bottom of the screen.
6. Click the corresponding tab of an OGC application (for example, the *Remediation* tab).

   Notice that no error is generated (specifically, Error 500) and the selected OGC application is operating as expected.

Mastered Subject (Domain) Name Length Limit

Omni-Gen Versions 3.2 to 3.5

The character limit of Mastered Subject (Domain) Names created in Omni Designer has nearly doubled. Please note that the limit has been set to 37 since the length of the *domain.Rolename* in *wso2_is* has been set to 50, but it must include the *domain.* prefix and the *Master* suffix.

Omni-Gen Versions 3.6 and Higher

The character limit of WSO2 Identity Server (WSO2 IS) role names created during Enhanced Security configuration has been doubled. Please note that the limit has been set to 100.

Remediation Ticket Volume

Omni-Gen processing enables the generation of remediation tickets as part of the data process for situations that cannot be addressed by implemented application logic and require input from a data steward. It is important to note that the remediation tickets will require a resource to review and manually resolve them in the Remediation portal. With that consideration, the application designer must keep in mind that there should be a balance of what the system handles and what cases should be generated for manual remediation.

For example, if the application designer is too strict on some merging strategies, it might generate thousands (if not tens of thousands) of tickets. It would be unreasonable to have such an implementation, since a data steward cannot be expected to manually resolve them. It is considered a best practice to balance the system to generate ticket volumes in the low 1000s at most so it is still manageable.

In future versions, Omni-Gen will provide bulk resolution processing, which will enable the data steward to isolate tickets with the same issue types that can be resolved in bulk. For example, if some tickets are generated based on missing information from a very old system, the data steward will be able to bulk resolve them and add an appropriate comment. However, the best practice of keeping ticket generation to manageable levels is still applicable.

Resolved Cases

This section provides a reference for the resolved Hottrack cases. The following table lists all cases resolved since Omni-Gen version 3.1.1. In addition, all of the cases listed in this table are also resolved in Omni-Gen version 3.2 and higher.

IRN Number	Fixed In	Summary
170728066	3.2.0	Size of deployment bundle impacting deployment to Omni-Gen Server.
171122036	3.2.0	OG Performance - No change suppression.
171001001	3.1.1.1, 3.1.3, 3.2.0	Full Load of Store Domain Failing (only 1550 records).
170608015	3.2.0	Deadlocks while importing data into Omni.
170418041	3.2.0	How to access Omni Console functionalities from external interfaces?

IRN Number	Fixed In	Summary
170919073	3.2.0	In Omni-Gen 3.x, there is a missing index for instance tables, transaction_id.
170803003	3.2.0	NFR: Add function to clear Omni-Gen Bundler Console.
170619020	3.2.0	Requires steps to completely destroy a session.
170508023	3.2.0	OGC oDataDomain cannot start until Elasticsearch is started.
171005025	3.1.1.1	enq: TX - row lock contention while doing reprocess subject PERSON.
170905041	3.1.3	Ramp table SID column length should be increased in the product.
170905010	3.1.2	Omni-Gen 3.1.1 – documentation enhancement for updated controller swagger URL and examples.
170713049	3.1.2	NFR for an API that processes BATCH LOADs into Omni-Gen.
170418033	3.1.2	How to display number of instances reflected in OGC on the main OGC screen.
170731021	3.1.2	Omni-Gen 3.0.1 Vulnerability scan.
170505023	3.1.1	If same "Subject" references another subject twice in the "Master Reference" table Omni Crashes.
170505050	3.1.1	vulnerability scan - SSL/TLS Server supports TLSv1.0.
170407050	3.1.1	Omnigen: Qualys vulnerability scan: various security risks.
170323081	3.1.1	How to change the OmniConsole Password.
170731035	3.1.1	OmniGen 3.1.1 ports, https and encryption.

IRN Number	Fixed In	Summary
170505049	3.1.1	Vulnerability scan - PHP "proc_open ( )" Environment Parameter Safe Mode Restriction-Bypass (php is not omni component).
170309090	3.1.1	Java 1.8 Support for Omni Governance Console.
170710045	3.1.1	OMNI-GEN PERFORMANCE SLOW ON API UPDATES / INSERTS.
170505023	3.1.1	SiteOne - Master reference primary key constraint.
170731049	3.1.1	PERF: MSP Load Stuck in RamptoSource for 16 hours.
170629070	3.1.1	unique constraint (SVC_OMNIGEN_30.PK_OS_MASTER_REFERENCE) violated.
170410012	3.1.1	Omni-Gen process failed when processing 10 million records.
170322073	3.1.1	Swagger processing REST API not exposing MODE and TIMEOUT.
170308044	3.1.1	POC: CRLF or TAB in the data causes failures in processing / cleansing.
170622027	3.1.1	Omni-Gen os_work_order_item index needed.
170426102	3.1.1	Testing OmniGen 3.1 build 189 - No remediation service created and blank merge created.
170419082	3.1.1	PERF - Omnigen 3.0 Ramp to Source Running Slow.
170203015	3.1.1	Remediation receives all records in the matching cluster regardless of the change on the record.
170505051	3.1.1	Vulnerability scan: EMF Store Birthday attacks against TLS ciphers with 64bit block size.

IRN Number	Fixed In	Summary
170505046	3.1.1	Vulnerability scan Deployment Bundle Tool, Multiple Cross-Site Scripting Vulnerabilities Detected.
170615023	3.1.1	Omni Server Console Documentation is not showing field descriptions.
170421003	3.1.1	GC overhead limit exceeded during bulk load.
171019031	3.4.0	NFR: Omni-Gen configuration, verification, and tracing for Server and Controller.
170914082	3.4.0	WB 3.2 hybrid - 1mil row failure in publish_master.
170807006	3.4.0	Omni-Gen database maintenance.
170725027	3.4.0	Change Data Capture (CDC) is not adding columns with null values to the OID.
170829064	3.4.0	Omni-Gen CDC - Providing namespace on changed OID.
171107024	3.4.0	Omni-Gen - Additional details for running two instances of Omni-Gen on the same server.
170424024	3.4.0	PERF - Omni-Gen 3.0 - No indication remediation tickets are being sent to OGC.
171207047	3.4.0	OmniGen installation failure not reported when creating remediation tables that already exist.
171207041	3.4.0	Omni-Gen installation failure is not reported when JAVA_HOME tools.jar is not found.
180103055	3.4.0	Installing Omni-Gen as a service fails to start when Java is installed under the Program Files directory.
171024048	3.4.0	NFR: Ordering of system logs and add timestamp.
171113137	3.4.0	Custom actions in SCXML to iSM.
170711001	3.4.0	Encrypt passwords in omnigendata.

IRN Number	Fixed In	Summary
171017064	3.4.0	NFR: Omni-Gen scheduling and automation of work orders.
170905013	3.4.0	Omni-Gen 3.1.1 - exposing errors on the console - logging enhancement/configuration.
180110064	3.4.0, 3.1.2.2	NFR: Send emails to a distribution list when workloads fail.
170919071	3.4.0	Omni-Gen removed REPOS_SUBJECT_WGID and REPOS_SUBJECT_WPK indexes - remove from OmniRepo.
180117023	3.4.0	Omni-Gen 3.2 - Case sensitive SqlServer DB / SQLServerException: Invalid column name 'IDCASE'.
180226004	3.5.0	OmniDQPlugin jar not installed in DQS development directory.
180207043	3.5.0	Dev environment Omni-Gen Server will not start.
180209015	3.5.0	NFR Omni-Gen: IVP for verifying the communication between controller and server.
180226024	3.5.0	Migration/Upgrade support.
170502034	3.5.0	Omni-Gen 3.1 - OGC install does not update the DATABASECHANGELOG table.
180212014	3.5.0	Omni-Gen Remediation Step: RemediationSender fails under work orders and tickets aren't created.
180307069	3.5.0, 3.2.1	Huge update query consuming resources for each transaction.
180321075	3.5.0, 3.1.4	NFR Omni-Gen: Make the work_order_scheduler threads configurable.
171017064	3.5.0, 3.4.0	NFR Omni-Gen: Scheduling and automation of work orders.

IRN Number	Fixed In	Summary
180316063	3.5.0	Change SQL used to inactivate masters without instances.
180314065	3.5.0, 3.2.1	CDC records still sending with Polling interval set to 600,000.
171214034	3.5.0	CRASH subject batch failed at rampToSource processing due to checkForMissingCodes failed.
180118033	3.5.0	CDC does not seem to be moving things to Boomi.
170831061	3.5.0	Deploy bundle error in Omni 3.1.1.
180104006	3.5.0	Omni-Gen Workbench: UI inconsistent right-click behavior.
180115049	3.5.0	Omni-Gen Workbench data is removed after a new subject is deployed.
180601016	3.6	WorkBench/DDP : Insufficient validation on reserved columnnames.
180510009	3.6, 3.1.4	Error moving data from Ramp to Source (String or binary data would be truncated).
180320029	3.6	NFR OmniGen - ability to verify database connections and reconnect from console.
171205073	3.6	Update to the master tables or reasoning why last_source_modified_date column is always null.
190202005	3.8, 3.5	CLONE: OutOfMemory on FILL_RELOAD_QUEUE in PostgreSQL.
181220040	3.8	Update bundle fails with the inability to unzip to artifacts.
180913038	3.8, 3.5	Omni-Gen version 3.5: Update transaction_id takes more than 16 hours for 40 million records.

IRN Number	Fixed In	Summary
181226030	3.8, 3.6.3	OGC caching entitlements instead of getting them from a fresh query.
181120071	3.8	OGC cannot configure HTTPS: The context.xml file is overwritten to default upon restart.
181015043	3.8, 3.2.2	Large number of remediation tickets causes out-of-memory issues in AutoClose phase.
181028003	3.8, 3.6.3	Accessing external databases from DQ Cleansing plan in Omni-Gen.
180621023	3.8	Omni-Gen upgrade from version 3.1.1 to 3.5: Deploy failure recovery.
180829043	3.8, 3.5	Not loading SOURCE_CODE_METADATA data into source and instance tables.
180820079	3.8	Error when creating deployment bundles.
180819007	3.8, 3.4.5	Omni-Gen: Non-trimmed SIDs cause mastering errors and failed work orders.
180920040	3.8	Omni-Gen version 3.5: Workbench rule fails with pop up menu to contact the administrator.
180718024	3.8, 3.6.3, 3.5	Omni-Gen version 3.5: Check for Source Code fails with java exceptions.
180206030	3.8	Omni-HealthData version 3.1.3: Structure of the DQ bundle to be used for updating the bundle.
180705101	3.8	Omni-Gen version 3.5: Turning off counts in OGC viewer until the master table is selected.
180612021	3.8	Increasing the column display width of fields to view full information on the screen.
180803012	3.8	Omni-Gen: Configuration for UTF-8 in SQL Server.

IRN Number	Fixed In	Summary
180412069	3.8	NFR Omni-Gen: Recognizing cleansing/mastering errors in a load and flagging.
180208028	3.8	In the Deployment Bundle Console, deleting a bundle deletes all DQ projects in the SVN and source models in the EMF Store.
171113137	3.8	Custom actions in SCXML to iSM.
170615112	3.8	List of Omni error messages and their meanings.
180223006	3.12	Display Model Fieldname short/long descriptions in the web (OGC, WB, DQM) consoles
190329091	3.12	OG Swagger API UI and documentation issues
190701096	3.12	Omni-Gen Server: out of memory during the fill reload queue processing step
190206153	3.12	Omni Governance Console slow
190410056	3.12	Vulnerability scan causes connection reset and Java out of memory
190807065	3.12	Column names ending in Code not processing properly through Omni-Gen
190805054	3.12	In our TEST and PROD Omni-Gen, the *Cleansing* status is unknown
190812098	3.12	Support for mssql-jdbc-7.2.1.jre8.jar
190927095	3.12	YL request to set the timezone on their prod Omni-Gen Server to be Eastern time from UTC
191021119	3.12	Cloud: Debugging Omni-Gen DQ services and generating a diagnostic zip
181030077	3.12	Email alerts for work orders
180819007	3.12	Non-trimmed SIDs cause mastering errors and failed work orders

IRN Number	Fixed In	Summary
190107107	3.12	Create a feature that removes inactive records
190205017	3.12	Greenplum bundle fails: ERROR: PRIMARY KEY and DISTRIBUTED RANDOMLY are incompatible
190307030	3.12	Security scan causes Java heap
181113055	3.12	Frequent connection getting closed failing the work orders
190312138	3.14	Omni Governance Console: Temporary DB outage requires OGC restart
191212068	3.14	Omni Governance Console: When DB connection is lost, there is no automatic reconnect
191220031	3.14	Omni-Gen Server: Provide information on why jobs are waiting
191231035	3.14	Omni Governance Console: administration formatting settings for views not working
200103076	3.14	Omni-Gen Server Console: After stopping a DQ service the ON button is no longer displayed and the service cannot be restarted
200521117	3.15	Omni-Gen not working with permanent DQ license
200407097	3.15	Security vulnerability with Java JMX server component
200331102	3.15	Application startup failed, could not acquire change log lock
200326058	3.15	Need assistance configuring OD/DQS to SVN Repository
200220062	3.15	SAML connection authorization issue: need SHA-256 encryption
200129039	3.15	OmniGen_omniController service terminated with the following service-error: Incorrect function

IRN Number	Fixed In	Summary
190403041	3.15	Adding multiple Omni Console users

Customer Support

Do you have questions about Omni-Gen™ Master Data Management and Data Quality Editions version 3.2 and higher?

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Glossary

This section is to definitively list and define the terms used in an Omni-Gen™ conversation and to facilitate better product understanding. The dictionary of terms will be updated with future releases. Note that this is not a full dictionary of terms and is meant to be just a high-level familiarization document. A detailed understanding of these and other terms require proper training and review of the provided user documentation.

DQS (Data Quality Server)	A product used by the Omni-Gen Server for cleansing, matching, and merging.
Attributes	The individual items that make up a subject. For example, the subject *Person* has the attributes of *last name* and *first name*.
Cleansing	Part of MDM subjects and their attributes that need to be verified for format, as well as accuracy. A common example is the handling of zip code for zip+4 treatments.
Consumers	Users of the Omni-Gen Model for purposes of remediation or post Master processing. 360 Viewer, Consumption Views, Health Views, WebFOCUS, and in the future publish-subscribe.
Consumption Views	Set of views derived from the Omni-Gen Model. It is generally denormalized.
Data Dictionary	A tool to help consumers of the Omni-Gen Model understand what they have modeled.
Data Steward	A user who works with the 360 Viewer and processes remediation tickets.

Deployment Bundle	An archive derived from the Project Bundle, which contains artifacts for Omni-Gen Server, Management Central Domain Service, Management Central Remediation Service, Cleansing, Matching, Merging, and other artifacts.
Golden Record	For more information, see Master Record.
Health Views	Similar to consumption views in that they are derived from the Omni-Gen Model. However, it is now only available with Omni Patient.
IDS (Interface Document Specification)	An XML document that is used to define a Subject. It also serves the purpose of defining how Omni Instance Documents (OIDs) are produced for processing. It is also known as Inbound Document Specification.
Instance Record	A record from a participating source application for a subject. It can be generated at data load time or can be the result of a change in the source system.
Omni™ Designer	An Eclipse-based tool to author the Omni-Gen model, as well as the cleansing, matching, and merging rules used by the Omni-Gen Server. It encourages team development and allows interaction with the Omni™ Designer Development Server to provide version control and release packaging.
Omni™ Designer Server	Server component providing Project Bundle lifecycle management, treating Project Bundles as SVN artifacts.

Omni Governance Console (OGC)	The Omni-Gen peer to OPMC. Instead of being prepackaged for a particular directory, it relies entirely upon the model authored by Omni™ Designer.
iSM (iWay Service Manager)	iSM is the platform on which Omni-Gen Server runs.
Kibana	Kibana is the Viewer in ELK. For more information, see ELK.
Log Stash	Log Stash is the log forwarding agent in ELK. For more in formation, see ELK.
Management Central Domain Service (OPMC/OGC Domain Service)	A sub-component of the OGC that decouples the 360 Viewer from the data models that support it.
Omni Governance Console Remediation Service (OPMC/OGC Remediation Service)	Provides remediation workflows and a supporting data model for the lifecycle of remediation tickets in the OGC.
Master Record	The merged result of Instance Records that have been cleansed and matched.
Matching	As part of MDM, matching is the act of identifying a set of instance records as contributors to one or more master records.
MDM (Master Data Management)	The process of cleansing, matching, and merging data sourced by multiple systems for the lifecycle of that data. Several transactional systems have different data for a worker. An MDM would produce a singular view of that worker.

Merging	Once instances have been identified as contributors to a master, the instance content for each is selectively brought into a master record. Note that not all instance attributes are required to be an attribute of the master record.
OID (Omni Instance Document)	Represents an instance record for a subject and conforms to an IDS. For more information, see IDS.
Omni-Gen	A software platform for the process of Master Data Management that allows you to maintain your own set of subjects to master.
Omni-Gen Model	The collection of subjects, attributes, source codes, and references that are mastered and used by a user.
Omni-Gen Server	The Omni-Gen server is the document processing engine that consumes IDS-compliant XML documents for participation in the mastering process. It builds and interacts directly with the Omni-Gen Model.
Omni-Patient	An instance of Omni-Gen with a Patient data model pre-engineered for use.
Omni-Payer	An instance of Omni-Gen with a Health Insurance Payer data model pre-engineered for use.
Omni Workbench	Is a rapid deploy version of Omni Patient for the purpose of supporting the data mapping work done at the client site. It relies upon *docker* to execute.

OPI (formerly Omni Patient Interface)	The database conduit for IDS documents to be submitted for processing.
OPMC (Omni Patient/ Payer Management Central)	The collection of subsystems that provide a data steward to get a complete view of the Omni-Gen Model as well as the ability to remediate matching issues beyond the scope of the matching tool. OPMC comes packaged with metadata to support Patient or Payer data stewardship.
Processing Rules	An upcoming feature allowing for the customization of processing in Omni-Gen.
Project Bundle	Is an archived XMI file that represents a project authored in Omni™ Designer and housed in Omni™ Designer Server.
Promotion	A feature that allows for a denormalized view of a subject in the Omni-Gen Model. Promoted data is presented as part of the root subject.
Reference	Binds subjects together in a parent-child relationship. For example, the subject *Facility* has a *Location*.
Reference Data	The set of static data that is used as type identifiers and source codes.
Relational Onramp	A set of tables, similar to the Omni-Gen Model, that are used to load data from source systems.

Release	Not to be confused with a software release from Information Builders, this is a release of a Project Bundle for use in Omni-Gen systems.
SCXML	A specification for workflow processing expressed in XML. This is a component of Processing Rules. For more information, see *http://www.w3.org/TR/scxml/*.
Service Lifecycle Manager	A web-based tool for working with Omni-Gen instances from development to production. It is the bridge between Omni™ Designer and the various subsystems.
Source	A producer of instance records for one or more subjects.
Source Instance ID	An identifier that is unique to all other records produced for the subject by a source.
Subject	A person, place, or thing that is part of the Omni-Gen Model. A subject must be uniquely identifiable by its Source, Source Instance ID, and Subject Type. Additionally, the Subject must be a root object in an IDS document.
WebFOCUS	Used in some customer engagements to visualize results of Omni-Gen work.
WS02	A third-party tool for providing authentication and authorization behaviors in Omni-Gen. It may act as a proxy to clients LDAP/Active Directory or house the data in its own RDBMS.

XMI	A specification for expressing models, like Database models in XML. For more information, see Project Bundle.

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