Administration Guide

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Administration Guide
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1
Welcome, System Administrators

As a system administrator for your InterSystems® Data Fabric Studio™ solution, your job is to take care of a small set of administrative tasks, outlined here.

Tip: A key first step is defining an initial set of users and data sources, so that data engineers can start creating data pipelines.

1.1 Data Source Management

A core purpose of Data Fabric Studio is to provide easy access to data sources. Managing these data sources consists of two tasks:

- Defining the credentials that the system will use to access the data sources
- Defining the data sources, which consists of providing the connection information for these sources

The data sources may be external APIs, databases accessed via JDBC, or files written directly to the file system used by your solution.

1.2 Security

Defining security consists mainly of the following tasks:

- Specifying the SSO configuration
- Defining the users
- Defining the user roles, which includes specifying access to application menus
- Defining the SSO rules, which connect users and user roles, so that each user has the privileges associated with those roles

1.3 Other Configuration

There are options for a handful of additional configuration items:

- Configuring the connection to AtScale (InterSystems IRIS® Adaptive Analytics)
- Customizing the application menus
- Customizing the system configuration settings, which control things such as how long various data is kept
- Defining email distribution lists

1.4 See Also

- About Your Solution: What Is Not Documented

2

Managing Data Source Credentials

A data source credential is a saved username and password that can be used to access a data source. In general, you need a data source credential for each database and each API (for example, Salesforce) that you access.

2.1 Defining a Credential

To create a credential:

1. Click the Management icon in the application menu.
2. In the **Data Loader** section, click **Credentials**.

   The page then displays a table of the existing credentials.
3. Click **New Credential** in the upper right, above the table of credentials.

   The system displays a popup dialog box.
4. Enter the following values into the dialog box:
   - **Name**—The unique name for this set of credentials. This is the name by which you will refer to the username/password combination.
   - **Username**—A username.
   - **Password** and **Confirm Password**—The password associated with this username.

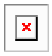
     This information is masked when you type it in, and is not displayed in any user interface.
5. Click **Submit**.

2.2 Editing a Credential

To edit a credential:

1. Click the Management icon in the application menu.
2. In the **Data Loader** section, click **Credentials**.

The page then displays a table of the existing credentials.

3. Click the Edit  icon in the applicable row.

   The system displays a popup dialog box.

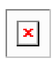
4. Make edits as follows:

   - To modify the username, type the new username into **Username**.
   - To enter a new password, click **Enter New Password** and then type the new password into **Password** and **Confirm Password**.

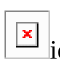
5. Click **Submit**.

2.3 Deleting a Credential

To edit a credential:

1. Click the Management  icon in the application menu.
2. In the **Data Loader** section, click **Credentials**.

   The page then displays a list of the existing credentials.

3. Click the Delete icon in the applicable row.

   The system displays a popup dialog box to confirm this action.

4. Click **Delete**.

2.4 See Also

- Defining Data Sources

3

Defining Data Sources

Before any user can load data from a data source, that data source must be defined within InterSystems® Data Fabric Studio™. The data source definition includes all the information needed to access the data source and retrieve information about the structure of available items in that data source.

3.1 Defining a Data Source

To create a data source:

1. Click the Management icon in the application menu.
2. In the **Data Loader** section, click **Data Sources**.

   The page then displays a list of the types of data sources.
3. Click one of the types.

   The right area then displays a table of the data sources of that type.
4. Click the **New** button in the upper right, above that list. (The name of the button depends on the type of data source you are looking at.)
5. In the right area, enter values as appropriate for that type.
6. Click **Submit**.

3.2 Editing a Data Source

To edit a data source:

1. Click the Management icon in the application menu.
2. In the **Data Loader** section, click **Data Sources**.

   The page then displays a list of the types of data sources.
3. Click one of the types.

   The right area then displays a table of the data sources of that type.

4. Click the Edit icon in the row for the data source that you want to edit.
5. In the right area, enter values as appropriate for that type.
6. Click **Submit**.

3.3 Testing a Data Source

To test a data source:

1. Click the Management icon in the application menu.
2. In the **Data Loader** section, click **Data Sources**.

   The page then displays a list of the types of data sources.
3. Click one of the types.

   The right area then displays a table of the data sources of that type.
4. Click the Test Connection icon in the row for the data source that you want to test.

   Or click the Edit icon in the row for the data source that you want to test and then click the **Test Connection** button on the right.

If the test is successful, the system displays the message **Connection Test Succeeded!** at the top of the page.

If the test is not successful, the system displays a popup message indicating the connection failed.

3.4 Deleting a Data Source

To delete a data source:

1. Click the Management icon in the application menu.
2. In the **Data Loader** section, click **Data Sources**.

   The page then displays a list of the types of data sources.
3. Click one of the types.

   The right area then displays a table of the data sources of that type.
4. Click the Delete icon in the row for the data source that you want to delete.

   The system displays a popup dialog box to confirm this action.
5. Click **Delete**.

When you delete a data source, the system automatically deletes any associated data schema definitions from the Data Catalog and (if applicable) removes its file interface path, including archived files.

3.5 See Also

- Data Source Details
- Managing Data Source Credentials

4 Data Source Details

This page provides details for each type of data source for InterSystems® Data Fabric Studio™.

4.1 ExcelSingleFileDir

An ExcelSingleFileDir source is a source that provides data via Microsoft Excel files, periodically written to a specific directory within the file system accessible by Data Fabric Studio. Apart from the format of the file, this data source is the same as FileDir.

4.2 FileDir

A FileDir source is a source that provides data via files, periodically written to a specific directory within the file system. The file should contain data separated by delimiters; a common example is a comma-separated value (CSV) file. Another common delimiter is the tab.

For a FileDir source, specify the following details:

Data Source Name

> *Required.* The unique name of this data source. This is the name that users see when they browse the Data Catalog.

Interface Path Location

> *Required.* The directory in which these files will be found, relative to the system base path. Because this is a relative path, it should not start with `/` or `\` (but any leading path separator is automatically removed).
>
> To avoid confusion, this directory should not be used by any other data source.

When you create a FileDir source, the system automatically creates the directory named by **Interface Path Location**, as well as the subdirectories Samples, Source, Work, and Archive. Using the File Manager explains the purpose of these directories.

4.3 JDBC

A JDBC data source provides access to a database via a JDBC connection.

For a JDBC data source, specify the following details:

Data Source Name

Required. The unique name of this data source. This is the name that users see when they browse the Data Catalog.

Credential

Required. The credential that defines the username and password to access the database. Select the applicable credential from the dropdown list.

JDBC URL

Required. Enter the JDBC connection string needed to access the database.

JDBC Database

Required. Select the database vendor and version.

Enable Foreign Tables

If you select this check box, it will be possible to project tables from the selected database as foreign tables within Data Fabric Studio. This is useful when it is not feasible or reasonable to load data directly into Data Fabric Studio. For example, a table may be extremely large and might not be queried frequently. A foreign table is read-only but can otherwise be accessed in the same way as local tables.

If you select this check box, also specify **JDBC Foreign Table Local Schema**, which is the default name of the schema to contain any foreign tables from this data source.

4.4 S3Delimited

An S3Delimited data source provides access to an S3 bucket that contains delimited files.

For an S3Delimited data source, specify the following details:

Data Source Name

Required. The unique name of this data source. This is the name that users see when they browse the Data Catalog.

Credential

Required. The credential that defines the username and password to access the given S3 bucket. Select the applicable credential from the dropdown list.

S3 Bucket Name

Required. The name of the S3 bucket to access.

AWS Session Token

The session token to use when accessing the S3 bucket.

Source Path

Location of the folder from which to load S3 files. You can optionally include %RUNDATE in the path for the ISO date to be injected at the time the files are loaded. The root folder is used if one is not provided.

Samples Path

Location of the folder from which to import S3 file schemas. You can optionally include %RUNDATE in the path for the ISO date to be injected at the time the files are listed. The root folder is used if one is not provided.

Archive Path

Location of the folder to archive previously loaded files in S3. You can optionally include %RUNDATE in the path for the ISO date to be injected at the time of the archiving. The root folder is used if one is not provided.

4.5 Salesforce

A Salesforce data source provides access to a Salesforce instance via the Salesforce API.

For a Salesforce data source, specify the following details:

Data Source Name

Required. The unique name of this data source. This is the name that users see when they browse the Data Catalog.

Credential

Required. The credential that defines the username and password to authenticate the Salesforce API. Select the applicable credential from the dropdown list.

Client ID Credentials

Required. Select the appropriate SDS Datasource (DS) Credentials record for the ClientId and Client Secret.

Authentication Server

Required. Specify the server used for authentication (which does not have to be the same server on which Salesforce is running).

Authentication URL

Required. Specify the end point in the Salesforce API to use in requesting access.

API end-point Server

Required. Specify the server on which the Salesforce API is running.

API URL

Required. Specify the end point in the Salesforce API to use in requesting resources.

Port

Specify the web server port to use, if that is not the standard port number.

4.6 See Also

- Defining Data Sources

5

SSO Configuration

To specify the SSO configuration that governs access to InterSystems® Data Fabric Studio™:

1. Click the Management icon in the application menu.
2. In the **Security** section, click **SSO Configuration**.
3. Select one of the following:
   - **OAuth 2.0**
   - **IRIS SSO**
4. For **OAuth 2.0**, specify details as appropriate for your OAuth2.0 provider.
5. Click **Save**.

   Or, to discard changes, click **Reset**.

6

Defining Users

This page describes how to define users. After defining users, be sure to specify SSO rules that specify the user roles to which the users belong (thus specifying which permissions the users have).

6.1 Defining a User

To create a user:

1. Click the Management icon in the application menu.
2. In the **Security** section, click **User Registry**.

   The page then displays a table of the existing users.
3. Click **New User** in the upper right, above the table of users.

   The system displays a popup dialog box.
4. Enter the following values into the dialog box:
   - **Username**—The unique name for this user.
   - **First Name**—The first name of the user.
   - **Last Name**—The last name of the user.
   - **Email**—The email address of the user.
   - **Job Title**—The job title of the user. Note that you can define an SSO rule that adds a user role based on the job title held by a user.
   - **Password** and **Confirm Password**—The password for this username.

     This information is masked when you type it in, and is not displayed in any user interface.
5. Optionally disable the user. To do so, clear the **Enabled** check box.

   Only enabled users can log in.
6. Click **Submit**.

6.2 Editing a User

To edit a user:

1. Click the Management icon in the application menu.
2. In the **Security** section, click **User Registry**.

   The page then displays a table of the existing users.
3. Click the Edit icon in the applicable row.

   The system displays a popup dialog box.
4. Optionally edit any of the following values:
   - **First Name**
   - **Last Name**
   - **Email**
   - **Job Title**
5. Optionally enter a new password. To do so, click **Change Password** and then type the new password into **Password** and **Confirm Password**.
6. Optionally disable or enable the user. To do so, clear or select the **Enabled** check box.
7. Click **Submit**.

6.3 Deleting a User

To delete a user:

1. Click the Management icon in the application menu.
2. In the **Security** section, click **User Registry**.

   The page then displays a table of the existing users.
3. Click the Delete icon in the applicable row.

   The system displays a popup dialog box to confirm this action.
4. Click **Delete**.

6.4 See Also

- Defining User Roles

- Defining SSO Rules

7

Defining User Roles

This page describes how to define user roles. After defining user roles (and users), be sure to specify SSO rules to specify the user roles to which the users belong (thus specifying which permissions the users have).

7.1 Defining a User Role

To create a user role:

1. Click the Management icon in the application menu.
2. In the **Security** section, click **User Roles**.

   The page then displays a list of the existing user roles.
3. Click **New User Role** in the upper right, above the table of user roles.

   The system displays a popup dialog box.
4. For **Role Name**, type a unique but descriptive name for this role.

   This name is shown when you define SSO rules.
5. Click **Submit**.

   The new role is then added to the table.
6. Click the Edit icon in the row for the new role.

   This displays the **Role Privileges** page, where you can define the role.

7.2 Filter Options in Role Privileges

When you view or edit role privileges, you can use filters in order to find particular items more easily. The filter options vary by item, but collectively are as follows:

- Search box—Type a string to display only items containing this text.
- **Schema** dropdown box—Select an SQL schema to show only items for that schema.

- **All**—Click this link to remove any filtering by role assignment.
- **Assigned**—Click this link to see only the items currently assigned to the role you are viewing. This option applies to application privileges and SQL capability privileges.
- **Unassigned**—Click this link to see only the items not currently assigned to the role you are viewing. This option applies to application privileges and SQL capability privileges.
- **With Privileges**—Click this link to see only the items for which the role currently has privileges. This option applies to SQL schemas, tables, procedures, and views.
- **Only Wildcards**—Click this link to see only schema wildcards. This option applies to SQL schemas.

7.3 Editing Role Privileges

To edit the privileges held by a user role:

1. Click the Management icon in the application menu.
2. In the **Security** section, click **Role Privileges**. Then select the role from the **Role** dropdown list.

   Or click **User Roles** and then click the Edit icon in the row for the role.
3. Then make edits as follows:
   - Click **Application Privileges** and then select the privileges this role needs to have within InterSystems TotalView™ For Asset Management. The page lists the privileges in groups with explanations of each.
   - Click **SQL Capability Privileges** and then select the SQL capabilities this role needs to have.
   - Click **SQL Schema Privileges** and then specify the privileges needed for specific SQL schemas (sets of tables) within InterSystems TotalView For Asset Management. (Note that you can also specify privileges via schema wildcards and you can specify privileges for specific tables.)

     If the row for a given schema is grayed out, look for a schema wildcard that controls access to the schema. You can create an override. To do so, click the OVERRIDE check box and then specify privileges as needed.
   - Click **SQL Procedure Privileges** and then select the SQL procedures that this role should be able to execute.
   - Click **SQL Table Privileges** and then specify the privileges needed for specific SQL tables.
   - Click **SQL View Privileges** and then specify the privileges needed for specific SQL views.

   This page provides filters you can use to find items more easily.
4. Click **Save**.

   The system displays a message summarizing the changes it will make.
5. Click **Apply** to confirm the changes.

7.4 Schema Wildcard Privileges

A *schema wildcard* enables you to give access to multiple schemas, including schemas that have not yet been created but that will follow a naming convention. To add privileges using a schema wildcard:

1. Click **Add Wildcard Schema**.
2. For **Schema Name**, specify a schema name that includes an asterisk, which will represent any character. For example: `Staging*`
3. Press **Submit**.

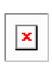
   This adds a row at the start of the schema privilege table.
4. In this new row, click the check box in the **ENABLED** column. This action enables you to specify privileges of different types for this schema wildcard.
5. In the same row, click the check box for each privilege you want to enable, for all schemas with names matching the given pattern. When you do so, the page also automatically selects the check box for each schema that matches the wildcard.

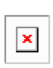
To disable a schema wildcard, clear the check box in the **ENABLED** column. When you do so, the page also automatically clears the check boxes for the schemas that matches the wildcard, showing these rows in a contrasting color so that you can find them easily.

To delete a schema wildcard, click **Delete** in the row for the schema wildcard. Then click **Delete** to confirm this action.

7.5 Renaming a User Role

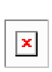
To rename a user role:

1. Click the Management  icon in the application menu.
2. In the **Security** section, click **User Roles**.

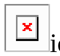
   The page then displays a table of the existing user roles.
3. Click the Rename  icon in the applicable row.
4. Type a new name into the dialog box.
5. Click **Submit**.

7.6 Deleting a User Role

To delete a user role:

1. Click the Management  icon in the application menu.
2. In the **Security** section, click **User Roles**.

The page then displays a table of the existing user roles.

3. Click the Delete icon in the applicable row.

   The system displays a popup dialog box to confirm this action.

4. Click **Delete**.

7.7 See Also

- Defining Users
- Defining SSO Rules

8

Defining SSO Rules

SSO rules connect users and user roles, so that each user has the privileges associated with those roles.

8.1 Rule Types

There are three types of SSO rules:

- A user rule directly assigns a specific user to one or more user roles.
- A job title rule adds user roles based on a specific job title. Any user who has the given job title is added to those user roles as well.
- A group rule adds user roles based on groups defined by an identity provider (such as Active Directory). Any user who belongs to the given group is added to those user roles as well.

8.2 Defining an SSO Rule

To create an SSO rule:

1. Click the Management icon in the application menu.
2. In the **Security** section, click **SSO Rules**.

   The page then displays a table of the existing SSO rules.
3. Click **New SSO Rule** in the upper right, above the table of SSO rules.

   The system displays a popup dialog box.
4. For **Rule Type**, select a rule type.
5. Specify the following details, which depend on rule type:
   - For a **Username** rule, specify **Username**. This must exactly match the name of the user to which it is intended to apply.
   - For a **Job Title** rule, specify **Job Title**. This must exactly match the job title to which it is intended to apply.

- For a **GroupID** rule, specify **Group**. This must exactly match the identity provider group to which it is intended to apply.

  Also specify **User Group Description**, which should be a name for this group within this application. This name is shown in **Rule Details** on the SSO Rules page.

6. In the **User Roles** section, select the user roles associated with this SSO rule.
7. Click **Submit**.

   The new SSO rule is then added to the table.

8.3 Editing an SSO Rule

To edit an SSO rule:

1. Click the Management icon in the application menu.
2. In the **Security** section, click **SSO Rules**.

   The page then displays a table of the existing SSO rules.
3. Click the Edit icon in the applicable row.

   The system displays a popup dialog box.
4. Edit any value, just as when you create an SSO rule.
5. Click **Submit**.

8.4 Deleting an SSO Rule

To delete an SSO rule:

1. Click the Management icon in the application menu.
2. In the **Security** section, click **SSO Rules**.

   The page then displays a table of the existing SSO rules.
3. Click the Delete icon in the applicable row.

   The system displays a popup dialog box to confirm this action.
4. Click **Delete**.

8.5 See Also

- Defining Users

- Defining User Roles

9

Configuring the Adaptive Analytics Connection

This page describes how to configure InterSystems® Data Fabric Studio™ so that it can call the API for AtScale (InterSystems IRIS® Adaptive Analytics). This enables data engineers to schedule the task of building cubes.

9.1 Configuring the Connection

To configure Data Fabric Studio so that it has a connection to AtScale:

1. Click the Analytics icon in the application menu.
2. Click **Configuration**.
3. Specify values as follows:
   - **Use Https**—Select this if you want to use an encrypted connection to the AtScale server.
   - **Server**—Specify the server on which AtScale is running.
   - **Port**—Specify the port to use for communication with AtScale.
   - **BatchAPIPort**—Specify the port to use for batch API calls to AtScale.
   - **Username**—Specify the AtScale username to use when calling the AtScale APIs. The best practice is to define and use a dedicated username for use only by API calls.
   - **Password** and **Confirm Password**—Specify the password for this user. This information is masked when you type it in, and is not displayed in any user interface.
4. Click **Test Connection** to ensure that the connection details are correct.
5. Click **Save**.

9.2 Editing the Connection

Later, if you need to change the password:

1. Click the Analytics icon in the application menu.
2. Click **Configuration**.
3. Click **Edit**.
4. Make changes as described above.

   If you need to change the password, select **Enter New Password**. Then specify the new password in **Password** and **Confirm Password**.
5. Click **Test Connection** to ensure that the connection details are correct.
6. Click **Save**.

10

Customizing the Application Menu

If you hold the appropriate permissions, you can customize the application menu for InterSystems® Data Fabric Studio™, including enabling or disabling items and modifying the order of menu items.

You can edit all system menu items but you cannot delete them.

10.1 Adding a Menu Item

To add a menu item:

1. Click the Management icon in the application menu.
2. In the **Security** section, click **App Menu**.
3. Click **New Menu Item**.
4. Specify details as follows:
   - **Enabled** controls whether this item is enabled (and visible). Clear this if you want the menu item to be hidden for now.
   - **Title** specifies the name of this menu item.
   - **Icon Type**, **Icon Name**, **Icon URL** specify the icon for this menu item.

     Icon Type controls how you specify the icon for this menu item. If you select **Preset**, choose an existing icon from **Icon Name**. If you select **From URL**, specify **Icon URL** as the URL of the icon.
   - **Link** specifies the URL to access when a user clicks this menu item.
   - **Group**
   - **Privilege Description** provides a brief description of the permissions required to use this menu item.
   - **Order** controls the position of this menu item. Select an integer.

   All these options are required.
5. Click **Submit**.

10.2 Editing a Menu Item

To edit a menu item:

1. Click the Management icon in the application menu.
2. In the **Security** section, click **App Menu**.
3. In the row for the menu item, click the Edit icon.
4. Modify details as when you add a menu item.
5. Click **Submit**.

10.3 Deleting a Menu Item

To delete a menu item (other than a system menu item):

1. Click the Management icon in the application menu.
2. In the **Security** section, click **App Menu**.
3. In the row for the menu item, click the Delete icon.
4. Click **Delete Menu Item** to confirm.

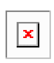
11

System Configuration Options

This page describes additional configuration options and how to modify them.

11.1 Modifying Settings

To modify settings:

1. Click the Management  icon in the application menu.
2. In the **Security** section, click **System Configuration**.

   The page then displays the current values for the settings.

   Below the **Settings** headings, there is a list of names, each of which corresponds to a group of related settings.
3. Optionally click a group name to quickly scroll to that group.
4. Make edits as needed. See the reference information later on this page.
5. Click **Save**.

   Or click **Revert** to cancel your edits.

11.2 Business Scheduler Settings

The **Business Scheduler** group includes one setting:

- **Enabled**—Specifies whether the Business Scheduler is enabled; this tool enables data engineers to run recipes, run snapshots, and build cubes.

11.3 Data Loader Settings

The **Data Loader** group includes the following settings:

- **Delta Schema Prefix**—Specifies the schema prefix to precede any tables used to track staging deltas.

- **File Import Minimum Rows**—Specifies the minimum number of rows required for a file to be loaded, excluded the header row if any.
- **Max Permissible Columns In Schema**—Specifies the maximum number of columns that a table can have when loaded.
- **Snapshot Data Retention In Days**—Specifies the number of days for which a snapshot will be kept until it is deleted. Use –1 to retain snapshots indefinitely.
- **Staging Data Retention In Days**—Specifies the number of days for which staging data will be kept until it is deleted. Use –1 to retain staging data indefinitely.
- **Staging Schema Prefix**—Specifies the schema prefix used for the names for all staging tables. Changing this has no effect on previously generated tables.

11.4 Recipes Settings

The **Recipes** group includes the following settings:

- **Dropped Records Report Path**—Specifies where to generate reports about dropped records.
- **Dropped Records Report Retention In Days**—Specifies the number of days for which a dropped records report will be kept until it is deleted. Use –1 to retain these reports indefinitely.
- **Max Dropped Records**—Specifies the maximum number of records to drop when using SQLQuickLoad before reverting the load.
- **Reconciliation Report Path**—Specifies where to generate reconciliation reports.
- **Reconciliation Report Retention In Days**—Specifies the number of days for which a reconciliation report will be kept until it is deleted. Use –1 to retain these reports indefinitely.
- **Reconciliation Report Row Count**—Specifies the number of rows to be sampled for every failed reconciliation rule when generating the reconciliation report.
- **Validation Report Path**—Specifies where to generate validation reports.
- **Validation Report Retention In Days**—Specifies the number of days for which a validation report will be kept until it is deleted. Use –1 to retain these reports indefinitely.
- **Role For Pending Index Build Tasks**—Specifies the workflow row to receive workflow tasks for pending index builds.

11.5 Snapshots Settings

The **Snapshots** group includes the following setting:

- **Snapshot Schema**—Specifies the prefix used for the first part of the name for all snapshot tables. Changing this has no effect on previously generated tables.

11.6 System Settings

The **System** group includes the following settings:

- **Connector Temp Files Base Path**—Specifies where data connectors will store files before loading them. Applies to only some connectors.
- **Logs Retention In Days**—Specifies the number of days for which entries in the Messages Log kept until they are deleted. Use –1 to retain Message Log entries indefinitely.
- **Polling Timeout In Minutes**—Specifies how long to wait for user action on a page before a refresh is required. This option applies only to pages that automatically poll the server, such as the Business Scheduler Dashboard.

12
Email Distribution Lists

When a task is scheduled, it can be configured to send email using email distribution lists defined within InterSystems® Data Fabric Studio™, as described on this page.

12.1 Creating an Email List

To create an email list:

1. Click the Management icon in the application menu.
2. In the **Email** section, click **Email Distribution Lists**.
3. Click **New List**.
4. Enter a unique list name and click **Submit**.
5. Click **Add Members**.
6. For each member of the list, specify the following:
   - **Email**—A complete email address
   - **Name**—A full name in any format (this is just for display purposes)

   Then click **Submit** to add this email address.

12.2 Editing an Email List

To edit an email list:

1. Click the Management icon in the application menu.
2. In the **Email** section, click **Email Distribution Lists**.
3. Click the list you want to edit.

Now you can make any of the following changes:

- Change the name of the list. To do this, click the Edit icon *in the upper right*, enter a new value for **List Name**, and then click **Submit**.
- Add new list members, in the same way as when you create an email list.
- Edit a list member. To do this, click the Edit icon next to the list member, edit the **Email** and **Name** values, and then click **Submit**
- Delete a list member. To do this, click the Delete icon next to the list member and then click **Delete** to confirm.

12.3 Deleting an Email List

To delete an email list:

1. Click the Management icon in the application menu.
2. In the **Email** section, click **Email Distribution Lists**.
3. Click the list you want to delete.
4. Click the Delete icon in the upper right and then click **Delete** to confirm.

12.4 See Also

- Email Templates
- Scheduling Tasks

13
Email Templates

When a task is scheduled, it can be configured to send email that uses a template defined within InterSystems® Data Fabric Studio™, as described on this page.

13.1 Defining an Email Template

To define an email template:

1. Click the Management icon in the application menu.
2. In the **Email** section, click **Email Templates**.
3. Click **New Template**.

   Now use the middle area of the page to define the template (as described next), and view the preview on the right side of the page.

4. For **Template Type**, select either **Business Scheduler Task Error** or **Business Scheduler Task Success**, depending on whether this template is meant for use in the case of errors or in the case of success, respectively.
5. For **Template Name**, specify a unique name for this template (within the given type—it is possible to have templates with the same name if they have different types). Users will see this template name when scheduling tasks.
6. For **Subject**, specify the subject line of the email message. The most useful format consists of a combination of text (included as is) and variables (which get replaced when the message is generated).

   For example, the default task error subject line is as follows:

   ```
   ERROR: {{ Subject }}
   ```

   The variable `{{ Subject }}` is automatically replaced with appropriate text based on the task.

   Similarly, the default task success subject line is as follows:

   ```
   SUCCESS: {{ Subject }}
   ```

   To edit the value in the **Subject** field, you can type directly and you can use the buttons listed under **Variables** to insert variables. To insert a variable, first move the cursor to the position where you want the variable to be, and then press the variable button.

7. For **Body**, specify the body of the email message. You can use the same techniques as in the **Subject** field, except that you have more space here for details.

8. Click **Save Template**.

13.2 Template Variables

This section provides reference information on the variables you can use within an email template. These are listed under **Variables**. To insert a variable, first move the cursor to the position where you want the variable to be, and then press the variable button. You can also type these.

{{Actions}}

Replaced with a comma-separated list of possible actions. This variable applies only to **Business Scheduler Task Error** templates.

{{Application}}

Replaced with `TotalView`.

{{Environment}}

Replaced with the name of the environment in which the task was running, for example `DEV`.

{{Message}}

For a successful task run, this variable is replaced with generated text of the following form, depending on the task and the name of the item:

```
The scheduled task, Recipe 'TUES', has been completed successfully
```

For an unsuccessful task run, this variable is replaced with a detailed error message, depending on the problem that occurred.

{{ResourceName}}

Replaced with the short name of the recipe.

{{ResourceType}}

Replaced with the name of the server on which the task was running.

{{SessionId}}

Replaced with the internal session ID (generally useful only for your application partner).

{{Subject}}

Replaced with a short summary, meant for use in an email subject line. For a successful task run, this variable is replaced with the following text:

```
Scheduled task completed
```

For an unsuccessful task run, this variable is replaced with the following text:

```
Unexpected error when running scheduled task
```

{{UTCTime}}

Replaced with the date and time when the task run finished (either successfully or not), in UTC time.

{{WorkflowRole}}

Replaced with name of the workflow role for which the message was generated. This role is specified when the task is scheduled.

13.3 Editing an Email Template

To edit an email template:

1. Click the Management icon in the application menu.
2. In the **Email** section, click **Email Templates**.
3. Click the template you want to edit.
4. Modify the details as needed.
5. Click **Save Template**.

13.4 Deleting an Email Template

To delete an email template (other than the default templates, which cannot be deleted):

1. Click the Management icon in the application menu.
2. In the **Email** section, click **Email Templates**.
3. Click the template you want to delete.
4. Click the Delete button and then click **Delete** to confirm.

13.5 See Also

- Email Distribution Lists
- Scheduling Tasks