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Introduction

Accessibility Features

Audience for This Document

DataFlux Reference Publications

Accessibility Features

DataFlux Web Studio (Web Studio) includes features that improve usability of the product for users with disabilities. These features are related to accessibility standards for electronic information technology that were adopted by the United States (U.S.) Government under Section 508 of the U.S. Rehabilitation Act of 1973, as amended.

If you have questions or concerns about the accessibility of DataFlux products, send an e-mail to techsupport@dataflux.com.

Audience for this Guide

This guide is intended for those who are responsible for installing and configuring DataFlux Web Studio Server and the DataFlux Web Studio client. The Web Studio client supports the following modules: Dashboard Viewer, Monitor Viewer, and Reference Data Manager.
DataFlux Reference Publications

This document might reference other DataFlux® publications including:

- DataFlux Web Studio User's Guide
- DataFlux Data Management Studio User's Guide
- DataFlux Data Management Studio Installation and Configuration Guide
- DataFlux Authentication Server Administrator's Guide
- DataFlux Authentication Server User's Guide
- DataFlux Data Management Server Administrator's Guide
- DataFlux Data Management Server User's Guide
- DataFlux Expression Language Reference Guide for Data Management Studio
- DataFlux Federation Server Administrator's Guide
- DataFlux Federation Server User's Guide
- DataFlux Migration Guide
- DataFlux Quality Knowledge Base Online Help
Introduction to Web Studio

Overview of Web Studio

DataFlux Data Management Studio can work with DataFlux Web Studio (Web Studio) and DataFlux Web Studio Server (Web Studio Server). The Web Studio Server runs the jobs that support all of the modules in the Web Studio client. The Web Studio client can include all of the following modules or a combination of them:

DataFlux Dashboard Viewer - Executives and other key decision-makers can use Dashboard Viewer to get a high-level summary of data stewardship efforts. Exceptions to monitored business rules are generated by data monitoring jobs that are created in Data Management Studio. The output of these jobs can be monitored in Web Studio, using Monitor Viewer and Dashboard Viewer.

DataFlux Monitor Viewer - Data stewards can use Monitor Viewer to get a detailed view of the exceptions to monitored business rules. They can drill deeper into the exceptions that are displayed in the Dashboard Viewer. Data stewards can also evaluate exceptions and assign related work to the appropriate technical personnel. Technical personnel will typically have access to Data Management Studio, and they can see and respond to the assignments made from Monitor Viewer in Web Studio.

Data flux Reference Data Manager- Reference Data Manager enables you to manage a central repository of reference information that can be used by technical, business, and IT users. Examples of reference information include a list of NASDAQ stock symbols with their associated company names, or a list of valid ZIP codes with their associated cities and states. The Reference Data Manager repository can be centrally managed and versioned; it can be based on business terms defined in Business Data Network; it can be exported to external systems; and it can be used to manage hierarchies in the DataFlux Quality Master Data Management Solution (qMDM) and other DataFlux software.

Note: In order to use the Web Studio modules that are described above, Web Studio and the separate modules must be licensed on the relevant server. For more information about licensing, contact your DataFlux representative.
Prerequisites for DataFlux Web Studio

DataFlux Web Studio Software

The following software is included with DataFlux Web Studio:

**DataFlux Web Studio Server 2.4.** This is a server that is configured to support the Web Studio client. The Web Studio Server runs the jobs that support all of the modules in the Web Studio client.

**DataFlux Web Studio 2.4.** This is the web client that enables users to interface with Dashboard Viewer, Monitor viewer, and Reference Data Manager.

Note that you must use the same versions of Web Studio and Web Studio Server.

System Requirements

You can review system requirements for SAS 9.3 products at the following location:


A search window for SAS 9.3 Install Center Documentation appears. Search for your product name. A results page will appear with links to the system requirements for your software.

Software Required by Web Studio

The following software is required by Web Studio. If you do not already have this software, you will need to install and configure this software as described in this guide.

**DataFlux Authentication Server 3.1.** You cannot log on to Web Studio unless you are registered on the Authentication Server. The Authentication Server administrator must create a number of users and groups to support the Web Studio modules. For more information, see [Defining Users and Groups on the Authentication Server](#).

**DataFlux Data Management Studio 2.4.** All Web Studio modules require a Data Management Platform repository. Only Data Management Studio can create the repository definition file (.RCF file) and create a new repository in the location that is specified in the definition file. Also, Dashboard Viewer and Monitor Viewer depend on components in Data Management Studio.

**Database Management System Software** (for repository storage). The Data Management Platform repository for Web Studio must use an ODBC DSN connection, and it must be in one of the following database formats:

- Oracle 11g R1, R2 (11.1, 11.2)
- Oracle 10g R1, R2 (10.1, 10.2)
- Microsoft SQL Server 2008 R1, R2
- Microsoft SQL Server 2005
- DB2 V9.1, V9.5, V9.7 for Linux, UNIX, Windows
**Java 1.6 or higher.** Must be specified in the PATH environment variable on the computer where the web server and the Web Studio client are running.

**Web browser** (for Web Studio users). Microsoft Internet Explorer versions 7 or 8, Mozilla Firefox, or Google Chrome.

**Adobe Flash 10.1** (for Web Studio users). If Adobe Flash is not already installed, you will be prompted to install it onto any web browser that attempts to run Web Studio.

**Web Studio Licensing**

Web Studio and the separate modules (Dashboard Viewer and Monitor Viewer) must be licensed on the relevant Web Studio Server. For more information about the products that you have licensed, review your SAS Software Order Email (SOE).
Working with Users and Groups

Web Studio Permissions

Planning Web Studio Users and Groups

Adding Web Studio Users and Groups

Web Studio Permissions

This table describes four types of permissions that can be enforced for Web Studio users and groups.

<table>
<thead>
<tr>
<th>Access</th>
<th>Permissions Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT administrative access</td>
<td>Controls access to Web Studio</td>
</tr>
</tbody>
</table>
| Edit access           | Monitor Viewer - Read <sup>1</sup>       
                      | Dashboard Viewer - Read <sup>1</sup>       
                      | Reference Data Manager – Edit and read                                            |
| Read-only access      | Monitor Viewer - Read                  
                      | Dashboard Viewer - Read                                                             
                      | Reference Data Manager – Read <sup>2</sup>                                        |
| No access             | No permissions within Web Studio                                                  |

<sup>1</sup> There is no concept of an edit function in Monitor Viewer or Dashboard Viewer. Users can only view data, drill into it, or modify their view of the data presented in the Viewers.

<sup>2</sup> By default, Reference Data Manager does not have a concept of a read-only user; all Web Studio users can edit information within Reference Data Manager if it is licensed for use. If you need to support read-only users, you must add them to the RDM_READONLY group in the Authentication Server.
Planning Web Studio Users and Groups

Overview of Web Studio Users and Groups

The Authentication Server is used to define Web Studio users and groups. Then the Web Studio interfaces in Data Management Studio are used to select these users and groups and grant them appropriate permissions for Web Studio modules. After these permissions have been granted, users can login to the Web Studio client and perform the tasks for which they have permission.

Before you install Web Studio, you might want to identify all of the Web Studio users and groups that you will need on the Authentication Server. Otherwise, you will get to a point in the installation of Web Studio software where you will have to stop and define a user or group before you can proceed.

Web Studio Users

In a production environment, Web Studio users would be people with logins on your network. The following generic user names represent different types of Web Studio users, such as itadmin and editrdm. None of these user names are required; they are simply examples. You will define users only for the Web Studio modules that you have licensed.

- **itadmin** - an administrator who controls who can login to the Web Studio client.
- **editrdm** - a user who can edit within Reference Data Manager.
- **readrdm** - a user with read-only access to Reference Data Manager.
- **datamonitor** - a user who can read the Dashboard Viewer and Monitor Viewer.

Web Studio Groups

The steps to add permissions to access and run the necessary jobs that drive the interface for Web Studio are not trivial. It is much easier to do this once for a group. Then, you can make any users or groups that need access to Web Studio a member of that group so that those permissions are inherited. In addition, if permissions ever need to be revoked, it is much easier to remove a user from a group in the Authentication Server than it is to revoke the permissions to Web Studio Server and the individual jobs.

All Web Studio modules require at least one group to be defined on the Authentication Server:

- **WSAdmin** - Members of the WSAdmin group control access to Web Studio. This group is required for all Web Studio modules, but the name does not have to be "WSAdmin." WSAdmin is the default name for this group unless you change it during the Web Studio Server installation process. You can also change the default name for this group by editing the dmserver/secure/grp_admin property in the dmserver.cfg file for Web Studio Server. This group must have at least one member in order to install and configure Web Studio software. The example user itadmin would be a member of this group.
In addition to the required group, the following group is recommended for all Web Studio modules:

- **DFWEB** - Members of the **DFWEB** group can login to Web Studio. This group is not required, but it is recommended for convenience. "DFWEB" is just an example group name. Any user who needs to log on to the Web Studio client could be made a member of this group. All of the example users that are described in [Web Studio Users](#) could be members of this group. However, there is no reason to add the example user itadmin to this group. Members of the WSAdmin group (such as itadmin) do not have to login to Web Studio themselves.

You will add additional groups for the Web Studio modules that you have licensed.

If you have licensed the Reference Data Manager module, the following groups are recommended:

- **Reference Data Users** - Members of the **Reference Data Users** group can add and update items within the Reference Data Manager module. This group is not required, but it is recommended for convenience. "Reference Data Users" is just an example group name. The example user editrdm could be a member of this group.

- **RDM_READONLY** - Members of **RDM_READONLY** have read-only access to the Reference Data Manager module. This group is not required, but it is recommended for convenience. The name of this group must be "RDM_READONLY." The example user readrdm could be a member of this group.

If you have licensed the Monitor Viewer and Dashboard Viewer, the following group is recommended:

- **Data Monitor Users** - Members of the **Data Monitor Users** group can view the Monitor Viewer and Dashboard Viewer. This group is not required, but it is recommended for convenience. "Data Monitor Users" is just an example group name. The example user datamonitor could be a member of this group.

### Example Permissions for Web Studio Groups

The following table describes one possible permission scheme for Web Studio groups. It is assumed that appropriate users or groups have been added to these groups on the Authentication Server. The **Access** and **Permission Types** columns list the types of permissions that can be enforced for Web Studio users and groups. The **Web Studio Groups** column lists the groups for Web Studio. Some of these groups are required, and some are recommended, as described in [Web Studio Groups](#). The example users in this column are described in [Web Studio Users](#).
<table>
<thead>
<tr>
<th>Access</th>
<th>Permissions Types</th>
<th>Web Studio Groups Defined on the Authentication Server</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IT administrative access</strong></td>
<td>Controls access to Web Studio</td>
<td>WSAdmin (member users could include example user itadmin)</td>
</tr>
<tr>
<td><strong>Edit access</strong></td>
<td>Monitor Viewer - Read</td>
<td>Reference Data Users (member users could include example user editrdm)</td>
</tr>
<tr>
<td></td>
<td>Dashboard Viewer - Read</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reference Data Manager - Edit and Read</td>
<td></td>
</tr>
<tr>
<td><strong>Read-only access</strong></td>
<td>Members of this group can log on to Web Studio. They also have the following permissions:</td>
<td>DFWEB (member groups could include Data Monitor Users)</td>
</tr>
<tr>
<td></td>
<td>Monitor Viewer - Read</td>
<td>Note that read-only Reference Data Users are enrolled in the separate RDM_READONLY group (example users could include example user readrdm)</td>
</tr>
<tr>
<td></td>
<td>Dashboard Viewer - Read</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reference Data Manager - Read</td>
<td></td>
</tr>
<tr>
<td><strong>No access</strong></td>
<td>No permissions within Web Studio</td>
<td>No Web Studio group</td>
</tr>
</tbody>
</table>

🔍 **Note:** If you want a user to have access to multiple modules, add that user to the group for each module.

**Next Task**

After you have identified all of the Web Studio users and groups that you will need, you can add them on the Authentication Server. See [Adding Web Studio Users and Groups](#).
Adding Web Studio Users and Groups

Overview of Authentication Server Users, Groups, and Domains

The Authentication Server is used to define Web Studio users and groups. Then the Web Studio interfaces in Data Management Studio are used to select these users and groups and grant them appropriate permissions for Web Studio modules. After these permissions have been granted, users can login to Web Studio and perform the tasks for which they have permission.

On the Authentication Server:

- A user is a person who has a login on your network or who has an internal account on a specific computer. In a production system, users typically have a network login.
- A group is a named set of users. Groups are a convenient way to grant permissions to sets of users.
- A domain is a label that is used to group similar user credentials, such as a group of users who need to log on to Web Studio, or a group of users who need to login to a database management system (DBMS). You might create a domain for the users who are logging on from a particular network, for example.

If an Authentication Server is installed on your site, and you have administrative privilege, you can use the Administration riser in Data Management Studio to add Authentication Server domains, users, and groups for Web Studio. This topic describes the basic steps for adding domains, users, and groups. Even if you are not responsible for this task, the topic will help you understand how the Authentication Server interacts with Web Studio and the Web Studio Server. For complete information about maintaining users and related information, see the DataFlux Authentication Server User's Guide and the DataFlux Authentication Server Administrator's Guide.

Prerequisites for Adding Authentication Server Users and Groups

Server administrators will use the Administration riser in Data Management Studio to add users, groups, and other information on the Authentication Server. Assume that a connection to an Authentication Server has already been added to the Administration riser, as described in "Connecting to Authentication Servers" in the DataFlux Data Management Studio User's Guide.

Identify a set of domains, users, and groups that must be registered on the Authentication Server in order to support Web Studio at your site. For example, you might want to define the entire set of Authentication Server users and groups that are described in Planning Web Studio Users and Groups. In order to support all of these users and groups, you could define the following domain, users, and groups:

- **Domain** - PUBDIS, a local domain for users on the test computer (pubdis) where a Web Studio test environment is installed. (For production systems, you could create an Authentication Server domain that corresponds to network domain that is used for production work.)
• **Users** - itadmn, editrdm, readrdm, and datamonitor. See [Planning Web Studio Users and Groups](#) for a description of these users. In the current example, all of these users have local accounts on the test computer, pubdis. For production systems, these would typically be network accounts. Passwords for users are not typically saved as part of the user definitions on the Authentication Server. These users will enter their passwords for the relevant domain as they normally would, when the Authentication Server prompts them to log on.

• **Groups** - WSadmin, DFWEB, Reference Data Users, RDM_READONLY, and Data Monitor Users. See [Planning Web Studio Users and Groups](#) for a description of these groups.

![Note:](#) Some Web Studio groups have specific names that must be used. For more information about these groups, see [Planning Web Studio Users and Groups](#).

**Open the Authentication Server as an Administrator**

1. Run Data Management Studio.
2. Click the **Administration** riser, and then expand the **Authentications Servers** folder.
3. Right-click an Authentication Server and select **Open**.
4. Enter any required credentials. After you login, the administrative dialogs for the Authentication Server will display, as shown in the next display.
Add Domains

Add domains on the Authentication Server as required to meet your goals. For the example that is described in the Prerequisites section, you would create the following domain:

- PUBDIS, a local domain on a test computer (pubdis) where a test environment for Web Studio is installed.

It is assumed that you have opened the Authentication Server as an administrator. Perform the following steps to add a domain.

1. Click the Domains riser.
2. Click the New Domain control in the All Domains panel on the right. The New Domain dialog displays. Typically, you will identify the information that is required by this dialog when you research the prerequisites.
3. Enter a name, a description, and other attributes, as shown in the next display.

![New Domain dialog](Image)

In the previous display, the Name specifies the domain name that could be combined with a login ID for authentication. The Description defines the purpose and scope of the domain. The User Name Format area specifies if and how the domain name is to be combined with a login ID for authentication. Given that the Down-level logon name option is selected in the previous display, the domain will be combined with the login ID for authentication (PUBDIS\editbdn). The case-sensitive option is unchecked for this domain.

4. Click OK when finished to save the domain.
5. Repeat for all required domains.
Add Users

Add users on the Authentication Server as required to meet your goals. For the example that is described in the Prerequisites section, you could start by creating the user editrdm.

It is assumed that you have opened the Authentication Server as an administrator. Perform the following steps to add a user.

1. Click the Users riser.

2. Click the New User control in the All Users panel on the right. The New User dialog displays. Typically, you will identify the information that is required by this dialog when you research the prerequisites.

3. Enter a name, a description, and other attributes, as shown in the next display.

   ![New User Dialog]

   In the previous display, the Name specifies an Authentication Server user for Web Studio. The Description identifies the user. The User ID specifies a login ID for this user in the selected domain. The Domain specifies an Authentication Server domain.

4. Click OK when finished to save the user.

5. Repeat for all required users. For the current example, the All Users panel would look like the next display.
Add Groups

Add the groups that are required to support Web Studio, as you plan to install it.

Note: Web Studio requires groups with specific names to be defined on the Authentication Server. For more information about these groups, see Planning Web Studio Users and Groups.

For the example that is described in the Prerequisites section, you could start by creating the group Reference Data Users. It is assumed that you have opened the Authentication Server as an administrator. Perform the following steps to add a group.

1. Click the Group riser.
2. Click the New Group control in the All Groups panel on the right. The New Group dialog displays. Typically, you will identify the information that is required by this dialog when you research the prerequisites.
3. Enter a name, a description, and other attributes, as shown in the next display.

In the previous display, the Name specifies an Authentication Server group for Web Studio. The Description identifies the user. The Owner specifies an Authentication Server user who is the contact for this group.
4. Click **OK** when finished to save the group.

5. Repeat for all required group. For the current example, the **All Groups** panel might look similar to the next display.

The display above includes some other groups, such as PUBLIC and USERS. For more information about these groups, see the documentation for the Authentication Server.

## Add Users to Groups

Based on your plan for the Web Studio installation, add users to the appropriate groups. You can also add a group as a member of another group. For the example plan that is described in the **Prerequisites** section, you would specify the following users and groups:

- **WSadmin** - itadmin, an administrative user who controls who can login to the Web Studio client.

- **Reference Data Users** - editrdm, a user who can edit within Reference Data Manager.

- **RDM_READONLY** - readrdm, a user who has read-only access to Reference Data Manager.

- **Data Monitor Users** - datamonitor, a user who can read the Dashboard Viewer and Monitor Viewer.

- **DFWEB** - Reference Data Users group; Data Monitor Users group; RDM_READONLY (if you support read-only access to Reference Data Manager).

It is assumed that you have opened the Authentication Server as an administrator. Perform the following steps to add users or groups to the appropriate group.

1. Click the **Groups** riser.

2. Expand the **Groups** folder on the left.

3. Under the **Groups** folder, select a group to which you will add a user or group.

4. Click the **Add Members** control in the **All Groups** panel on the right. The **Add Members** dialog displays. Typically, you will identify the information that is required by this dialog when you research the prerequisites.
5. Select one or more users or groups to be added as members of the current group. You can use Shift-Click or Control-Click to select multiple items, as shown in the next display.

![Groups display]

6. Click **Add** to add the selected users and groups as members of the current group.

7. Repeat for all groups.

**Next Task**

After you have added the required Web Studio users and groups on the Authentication Server, you can install Web Studio. See **Installing and Configuring Web Studio**.
Configuring Web Studio Server

- Installing Web Studio Server for Windows or UNIX
- Creating the Web Studio Server Repository
- Configuring Web Studio Server to Use the Repository
- Configuring Web Studio Server for Updates
- Starting the Web Studio Server Service
- Using Web Studio Server Logs
- Registering the Web Studio Server in Data Management Studio
- Setting Permissions for Users on the Web Studio Server

Installing Web Studio Server

DataFlux Web Studio Server is available through SAS delivery channels. See your SAS Software Order Email (SOE) for information about installing Web Studio Server. For more information, see [Directory Layout for Web Studio Server Installation](#).

The repository for a Web Studio Server must use an ODBC DSN connection to a database management system. Accordingly, your next task is to replace the server's default repository with a repository that uses an ODBC DSN connection.
Creating the Web Studio Server Repository

- **Overview**
- **Create DSNs for the Web Studio Server Repository**
- **Create the Web Studio Server Repository**
- **Next Task**

**Overview**

A repository is a collection of metadata about DataFlux objects and related resources. The repository for a Web Studio Server must use an ODBC DSN connection to a database management system. Accordingly, you must replace the server's default, file-based repository with a repository that uses an ODBC DSN connection.

In general, you will do the following:

- Review the database management systems that are supported for Web Studio repositories. See "Database Management System Software" in Prerequisites for DataFlux Web Studio.
- Identify the appropriate database and schema for your Web Studio Server repository.
- Use Data Management Studio to create a system DSN connection for the repository. Be sure to save credentials with the connection. Note also that the DSN used to connect to the Oracle DB should have Connection Pooling disabled.
- Use Data Management Studio to create a new repository in the database management system that is specified in the DSN. By doing this, you also create a repository definition file (RCF file). The RCF file specifies the DSN and other information for the repository.
- Copy the repository definition file from the Data Management Studio folder to the appropriate folder on the Web Studio Server.
- Start the Web Studio Server. It will now use the repository that is specified in the repository definition file.

**Create DSNs for the Web Studio Server Repository**

The repository for Web Studio must use an ODBC DSN connection, and it must be in one of the database formats cited in Prerequisites for DataFlux Web Studio. Use Data Management Studio to create a system DSN connection for the repository. Be sure to save credentials with the connection. For more information about these tasks, see the Data Riser Bar section in the "Maintaining Data Connections" chapter in the Data Management Studio User's Guide.

**Create the Web Studio Server Repository**

Begin by creating a DSN connection for the repository. The steps for creating the repository and copying the repository definition file to the appropriate folder on the Web Studio Server are as follows:
1. Start Data Management Studio.

2. Click the **Administration** riser bar.

3. Click the **Repository Definitions** folder.

4. In the **Repository Definitions** pane on the right, click the **New** button.

5. The **New Repository Definition** dialog appears. Enter the name of your repository in the **Name** field.

6. In the **Data storage** section of the dialog, specify a database connection (DSN connection) for your new repository. The DSN connection must have been created earlier. It should be a system DSN, and you should have saved credentials with the connection. For more information, see the "Data Connections" chapter in the DataFlux Data Management Studio User's Guide.

7. If you want multiple repositories defined in the same database, consider adding a unique prefix in the **Table prefix** field. A unique table prefix would enable you to identify the tables that are associated with a particular repository.

   💡 **Note:** If the DBMS for your repository is in Oracle format, then you must use an upper case prefix. In general, use only a-z, A-Z, 0-9, and the underscore as characters for a table prefix. A period is also acceptable if it is used as a separator between a schema name and the table prefix.

8. Skip the **File storage** location.

9. Uncheck the **Connect to repository at startup** check box and the **Private** check box.

10. Click on the **OK** button. A new repository definition file (.RCF file) will be created in a subfolder called `DataFlux\DataManagement\[instance]\repositories`. This folder is in the program files area, such as `C:\PROGRAM FILES\SASHome\Web Studio Server instance\etc\repositories` under Windows 7. A new repository will be created in the location that is specified in the **Data storage** field of the definition file.

11. To make sure everything is correct, connect to the repository. If everything is correct, the status should change to connected.

**Next Task**

After you have created a repository for the Web Studio Server, the next task is to configure the server to use this repository.
Configuring Web Studio Server to Use the Repository

Overview

After you have created a repository for the Web Studio Server, you must enable the server to access this repository. In general, you will copy two resource files from the Data Management Studio home folder to the Web Studio Server home folder. Then you will create a DSN on the Web Studio Server that has the same name and specifies the same database connection as the DSN that you created in Data Management Studio. After you do these tasks, the Web Studio Server can access the repository.

Copy the Repository Definition File and the Saved Credentials File

You must copy the repository definition file (.RCF file) and the saved credentials file for the repository DSN from the Data Management Studio home folder to the Web Studio Server home folder. A Web Studio Server stores .RCF files in the program files area:

SERVER_HOME\etc\repositories\Repository_Name.RCF

**Note:** A Web Studio Server should have only one repository definition file (.RCF file) in its repository folder. Accordingly, before copying the repository definition file from Data Management Studio to the server, you should rename any existing repository definition files on the server so that they do not have an .RCF extension.

Go to this folder on the Web Studio Server and rename any existing repository definition files so that they do not have an .RCF extension. Then perform the following steps.

1. Copy the repository configuration file (.RCF file) from Data Management Studio. The .RCF file is in the etc/repositories folder in the home directory.

2. Upload the repository configuration file to the Web Studio Server:
   SERVER_HOME\etc\repositories\Repository_Name.RCF

3. Copy the saved credential file from Data Management Studio. The saved credential file will be in the folder APPDATA\DataFlux\dac\savedconn and will have the same name as the DSN. The APPDATA directory in this path refers to the user settings area for the person who installed the application (in this case, Data Management Studio). For example, the path on a Windows 2008 Release 2 Server could be the following: "C:\Users\user_1\AppData\Roaming\DataFlux\dac\savedconn"

4. Upload the credential file to
   SERVER_HOME\etc\dsn

The next task is to enable the Web Studio Server to access the DSN that is specified in the .RCF file.
Create a DSN on the Web Studio Server

ODBC connections for jobs that run within Data Management Studio are created in Data Management Studio. However, ODBC connections for Web Studio Server must be created on the server. Until you do this, the Web Studio Server will not be able to access the DSN that is referenced in the repository definition file (.RCF file) that you copied from Data Management Studio.

You must create a DSN on the Web Studio Server that has the same name and specifies the same database connection as the DSN that you created in Data Management Studio. Then the Web Studio Server can access the DSN that is referenced in the repository definition file. Use the Windows ODBC Data Source Administrator for Windows servers or the dfdbconf tool for UNIX servers.

Windows ODBC Data Source Administrator

The Microsoft® ODBC Data Source Administrator manages database drivers and data sources. This application is located in the Windows Control Panel under Administrative Tools. Beginning in Windows 8, the icon is named ODBC Data Sources, and on 64-bit operating systems, there is a 32-bit and 64-bit version.

Perform these steps to create a DSN on the Web Studio Server under Windows:

1. On the Web Studio Server, select the Start menu, then type "odbc" in the search window and press the Enter key. The default ODBC Data Source Administrator will be displayed.
2. Select the System DSN tab and click Add...
3. Select the appropriate driver from the list and click Finish.
4. Enter your information in the Driver Setup dialog. The DSN must have the same name and specify the same database connection as the DSN that you created in Data Management Studio.
5. Click OK when finished.

UNIX ODBC Configuration Tool

The interactive ODBC Configuration Tool, dfdbconf, can be used to add an ODBC DSN. From the root directory of the Data Management Server installation, run:

```
./bin/dfdbconf
```

Select a driver from the list of available drivers and set the appropriate parameters for that driver. The DSN must have the same name and specify the same database connection as the DSN that you created in Data Management Studio. The new DSN is added to the ODBC INI file.

Next Task

After you have enabled the Web Studio Server to access the correct repository, the next task is to start the server.
Configuring Web Studio Server for Updates

When you update DataFlux Web Studio 2.4.1 to Web Studio 2.5 at the same time that you update DataFlux Data Management Studio 2.5 to Data Management Studio 2.6, you must add two options to the Web Studio Server app.cfg file. If you do not add these options, Web Studio Server will not start after the upgrades. The following options are required:

```
BASE/REPOS_VERSION_ACCEPT_LOW=8
BASE/REPOS_VERSION_ACCEPT_HIGH=8
```

Next Task

After you have configured Web Studio Server for any needed upgrades, you can start the Web Studio Server service.
Starting the Web Studio Server Service

Overview

Web Studio Server runs as a Microsoft Windows service called DataFlux Web Studio Server ([instance_name]). You can start and stop the service using the Microsoft Management Console (MMC) or through Administrative Tools in the Control Panel. In UNIX, Web Studio Server runs as a daemon administered from a command line using wssadmin (two s's) to start and stop the daemon.

Web Studio Server Service in Windows

Start and stop the service using the MMC or the Control Panel > Administrative Tools.

1. Click Start > Control Panel.
3. Expand the Services and Applications folder.
4. Click Services.
5. Click DataFlux Web Studio Server ([instance_name]), such as DataFlux Web Studio Server (websvr1).
6. Click either Start the service. To troubleshoot problems, see Using Web Studio Server Logs.

Note: You can also access the DataFlux Web Studio Server service using Start > All Programs > DataFlux.

Modifying the Windows Service Log On

When Web Studio Server is installed, the DataFlux Web Studio Server service is started using the local system account. This account can have some restrictions (such as accessing network drives). Therefore, it is suggested that you modify the service properties to have the service log on using a user account with the appropriate privileges, such as access to required network drives and files. For security reasons, you should assign administrative privileges only if necessary.

To modify the Web Studio Server log on:

1. Select Control Panel > Administrative Tools.
2. Double-click Services, and select the DataFlux Web Studio Server ([instance_name]) service.

Select the Log On tab, select This account, and enter Account and Password credentials for a user with administrative privileges. These passwords will be stored in the service.cfg file, which is in the etc folder in the Web Studio Server installation directory.
Web Studio Server Daemon in UNIX

Start and stop the daemon using the wssadmin application included in the installation. This application can be run using the command-line command: 

```
./bin/wssadmin your_command
```

from the installation root directory, where `your_command` should be one of the following:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
</table>
| start   | Enables you to start the Web Studio Server. For example: 
           `. /bin/wssadmin start` |
| stop    | Enables you to stop the Web Studio Server. For example: 
           `. /bin/wssadmin stop` |
| status  | Enables you to check whether the Web Studio Server is running. |
| help    | Enables you to display help information. |
| version | Enables you to display the version information. |

At this point, the Web Studio Server service or the UNIX daemon should be started. To troubleshoot problems, see [Using Web Studio Server Logs](#).

Next Tasks

After you have started the Web Studio Server, you can register the server in Data Management Studio.
Using Web Studio Server Logs

Web Studio Server logs can be used to troubleshoot problems.

In Windows, an example of the default path to the server logs is:
```
drive:\Program Files\DataFlux\WSServer\instance\var\server_logs\log subdirectory
```

In the UNIX and Linux operating environments, an example of the default path to the server logs is:
```
opt/DataFlux/WSServer/var/server_logs/log subdirectory
```

You should consider creating a shortcut to your web server log. This step can help you avoid the need to search for the log when a problem arises.

For more information about the messages in Web Studio Server logs, see "Data Services Logging" in the DataFlux Data Management Server Administration Guide.
Registering the Web Studio Server in Data Management Studio

Overview

The administrative interfaces for the Web Studio Server are in Data Management Studio. One of these interfaces is the Data Management Server riser. You will add a connection to the Web Studio Server on the Data Management Server riser. This connection will enable you to:

- set permissions for users on the Web Studio Server, such as the general permission to execute a data service
- grant appropriate users or groups access to the jobs for the Web Studio modules that you have licensed

Add the Web Studio Server to the Data Management Servers Riser

Perform the following steps:

1. In Data Management Studio, click the Data Management Servers riser. The Data Management Server panel displays.

2. In the server information pane on the right, click the New Data Management Server icon in the toobar. The Data Management Server dialog displays.

3. Specify a Name (display name), Server (server name or IP address), and Port for the Web Studio Server. The default port is 21038.

4. Click Test Connection to verify your connection. Enter the credentials for a user who is a member of the group that controls access to Web Studio. For example, given the users and groups described in Planning Web Studio Users and Groups, the group would be WSAdmin, and the user would be itadmin.

5. If the connection is successful, click OK to save your changes.

Next Tasks

After you have added a connection to the Web Studio Server to the Data Management Servers riser, you can set permissions for users on the Web Studio Server, such as the general permission to execute a data service.
Setting Permissions for Users on the Web Studio Server

Overview

Before Web Studio users can work in any Web Studio module, they must be granted these permissions on the Web Studio Server:

- Execute data service
- Execute process service
- Execute batch service

For example, in the next display, these permissions have been granted to a group, DFWEB.

For convenience, you will typically grant these permissions to a group rather than to individual users. All Web Studio users must be granted these permissions.
Prerequisites

A connection to the Web Studio Server must be available on the Data Management Servers riser. For more information, see Registering the Web Studio Server in Data Management Studio.

The person who performs this task must be a user who is a member of the group that controls access to Web Studio. For example, given the users and groups described in Planning Web Studio Users and Groups, the group would be WSAdmin, and the user would be itadmin.

The appropriate Web Studio users or groups must be defined on the Authentication Server. In this topic, permissions are granted to the group DFWEB. This group is described in Planning Web Studio Users and Groups.

Set Permissions for Users on the Web Studio Server

1. Run Data Management Studio.
2. Click the Data Management Servers riser.
3. Click the Web Studio Server. A log on dialog is displayed.
4. Enter the credentials for a user who is a member of the group that controls access to Web Studio. A connection to the server is made. Information about the current server displays on the right.
5. Click the Security tab in the right pane.
6. Click the Add button to select a user or group. A window displays a list of the users or groups that are defined on the Authentication Server.
7. You can click on a user or group to select one user or group. You can Shift-click, or Control-click to select multiple users or groups.
8. Click Add to add the selected users or groups to the Security tab.
9. Select one user or group in the Name column.
10. Review the permissions that display in the Permissions pane.
11. Right-click the execute date service permission and select Grant.
12. Repeat for execute process service and execute batch service. The Permissions pane should look similar to the display in the Overview section above.
13. Repeat for others users or groups, as needed.

The selected users now have the permissions that they need on the Web Studio Server.

Next Tasks

After Web Studio users have the permissions that they need on the Web Studio Server, you can now install the Web Studio client.
Configuring Web Studio

- Installing Web Studio
- Starting the Web Studio Service
- Configuring Reference Data Manager
- Running the Web Studio Configuration Wizard
- Configuring Monitor Viewer and Dashboard Viewer
- Verifying Your Web Studio Installation
- Updating Your Web Studio Configuration
Installing Web Studio

DataFlux Web Studio is available through SAS delivery channels. See your SAS Software Order Email (SOE) for information about installing Web Studio. For more information, see Directory Layout for Web Studio Installation.

After you have installed Web Studio, you can start the Web Studio service.
Starting the Web Studio Service

Overview

Web Studio runs as a Microsoft Windows service called DataFlux Web Studio ([instance_name]). You can start and stop the service using the Microsoft Management Console (MMC) or through Administrative Tools in the Control Panel. In UNIX, Web Studio runs as a daemon administered from a command line using wsadmin to start and stop the daemon.

Web Studio Service in Windows

Start and stop the service using the MMC or the Control Panel > Administrative Tools.

1. Click Start > Control Panel.
3. Expand the Services and Applications folder.
4. Click Services.
5. Click DataFlux Web Studio ([instance_name]), such as DataFlux Web Studio (webstd1).
6. Click either Stop the service or Restart the service.

Note: You can also access the DataFlux Web Studio service using Start > All Programs > DataFlux.

Modifying the Windows Service Log On

When Web Studio is installed, the DataFlux Web Studio service is started using the local system account. This account may have some restrictions (such as accessing network drives). Therefore, it is suggested that you modify the service properties to have the service log on using a user account with the appropriate privileges, such as access to required network drives and files. For security reasons, you should assign administrative privileges only if necessary.

To modify the Web Studio service log on:

1. Select Control Panel > Administrative Tools.
2. Double-click Services.
3. Select the DataFlux Web Studio ([instance_name]) service.

Select the Log On tab, select This account, and enter Account and Password credentials for a user with administrative privileges. These passwords will be stored in the service.cfg file, which is in the etc folder in the Web Studio installation directory.
Web Studio Daemon in UNIX

Start and stop the daemon using the wsadmin application included in the installation. This application can be run using the command-line command: 

```
./bin/wsadmin your_command
```

from the installation root directory, where `your_command` should be one of the following:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>start</td>
<td>Enables you to start the Web Studio service. For example: <code>./bin/wsadmin start</code></td>
</tr>
<tr>
<td>stop</td>
<td>Enables you to stop the Web Studio service. For example: <code>./bin/wsadmin stop</code></td>
</tr>
<tr>
<td>status</td>
<td>Enables you to check whether the Web Studio service is running.</td>
</tr>
<tr>
<td>help</td>
<td>Enables you to display help information.</td>
</tr>
<tr>
<td>version</td>
<td>Enables you to display the version information.</td>
</tr>
</tbody>
</table>

Next Task

After the Web Studio client service has been started, you can configure Web Studio modules, such as Dashboard.
Configuring Reference Data Manager

Overview
After you have installed Web Studio, you are ready to configure the Web Studio modules that you selected to install. This topic describes how to configure Reference Data Manager.

Grant Access to Reference Data Manager Jobs
When you use a feature in Reference Data Manager, a Reference Data Manager job is executed on the Web Studio Server. Accordingly, users must be given access to the jobs specific to Reference Data Manager. For example, given the users and groups that are described in Planning Web Studio Users and Groups, the Reference Data Users group could be given access to these jobs. If the RDM_READONLY group is implemented, it could also be given access to the jobs.

The jobs for Reference Data Manager are in the following folders on the Web Studio Server:

- **Batch Jobs > ReferenceData** folder
- **Real-Time Data Services > ReferenceData** folder

These folders are shown in the next display.

In order to give the appropriate group authorization to run these jobs, you will access the Web Studio Server from the Data Management Servers riser in Data Management Studio. Then you will expand the folders above, select the jobs in the folder, and grant privileges to the appropriate group.

The following steps assume that the Web Studio Server is available from the Data Management Servers riser in Data Management Studio.
1. Click the **Data Management Servers** riser in Data Management Studio.

2. In the server tree on the left, select the Web Studio Server.

3. Enter the credentials for a user who is a member of the group that controls access to Web Studio. For example, given the users and groups that are described in **Planning Web Studio Users and Groups**, the group would be **WSAdmin**, and the user would be **itadmin**.

4. Expand a folder where you expect to find Reference Data Manager jobs, based on the display above. For example, you could display the **Real-Time Data Services > ReferenceData** folder.

5. Click the folder that contains the relevant jobs, such as the **ReferenceData** folder. The jobs in that folder will display in the right pane, as shown in the next display.

6. Use Shift-Click to select all of the jobs in the right pane.

7. Right-click the selected jobs. Then, select **Permissions**. A Permissions dialog displays.

8. Click **Add** in the Permissions dialog. A list of users and groups that have been defined on the Authentication Server is displayed.

9. Select the appropriate users or groups for Reference Data Manager. For example, you could select the Reference Data Users group.

10. Click **Add** in the selection window. The selected users and groups will be granted permission to access the selected jobs, as shown in the next display.
11. To apply the permissions, click **OK** in the **Permissions** window. The group is added to the **Permissions** tab for the selected jobs.

12. (optional) To verify that you have applied the correct permissions for a job, click the job in the server tree on the left. The permissions for that job will display on the right.

13. Repeat for all Reference Data Manager jobs.

**Next Task**

You have now completed the Reference Data Manager configuration tasks. Otherwise, see [Running the Web Studio Configuration Wizard](#). When you run the configuration wizard, you will be given the opportunity to start the configuration of Monitor Viewer and Dashboard Viewer, if you have licensed those modules.
Running the Web Studio Configuration Wizard

Overview

When you installed the Web Studio client, you also installed Jetty, an open source web server. You are now ready to connect to that web server and configure the Web Studio client. Before you begin, make the following preparations:

- Verify that the DataFlux Web Studio service (open source web server) is running. The service name has the pattern: DataFlux Web Studio (instance_name).
- Identify the hostname and port number for the Authentication Server.
- Identify the hostname and port number for the Web Studio Server.
- If you have licensed Monitor Viewer and Dashboard Viewer, identify the hostname and port number for the Data Management Server where data monitoring jobs will run.
- Identify the administrative user name and password that were specified during the installation of the Web Studio client. The default credentials are: user=admin, password=wsAdmin1.

The URL for the Web Studio client has the following pattern:

- Pattern: http://web_server_hostname:port_number/webstudio/
- Example: http://pubdis.com:21079/webstudio/

The first time that you use the URL above, a set of Web Studio configuration pages becomes available. After configuration, this URL will display the Web Studio client. To update the configuration after installation, see Updating Your Web Studio Configuration.

Run the Web Studio Configuration Wizard

1. Open the following URL in a web browser:
   http://web_server_hostname:port_number/webstudio/

   The first time this URL is accessed, it will take you to the Web Studio Configuration page shown in the next display.
2. Log in with the administrative user name and password that were specified during the installation of the Web Studio client. The default credentials are: user=admin, password=wsAdmin1. The Initial Setup window displays.


4. Use the check boxes to select the display order of the modules in Web Studio. You will be able to use only those modules that you have licensed.

5. Specify the hostname and port of the Web Studio Server for Reference Data Manager, if you have that module licensed and installed.

6. Click **Save** to save your changes. A window displays your current settings. Use the **Edit** buttons to make any necessary changes.

7. If you have licensed Monitor Viewer and Dashboard Viewer, click the **Add Server** button, then specify the hostname and port number for the Data Management Server where data monitoring jobs will run.

8. When finished, click the **Logoff** button at top right to save your changes and log off. The standard login window for Web Studio displays.

**Next Task**

If you have licensed Dashboard Viewer and Monitor Viewer, you have some additional configuration to do. See [Configuring Monitor Viewer and Dashboard Viewer](#). Otherwise, see [Verifying Your Web Studio Installation](#).
Configuring Monitor Viewer and Dashboard Viewer

Overview

Exceptions to monitored business rules are generated by data monitoring jobs that are created in Data Management Studio and are then deployed to a Data Management Server. The output of these jobs can be monitored in Web Studio, using Monitor Viewer and Dashboard Viewer. Dashboard Viewer and Monitor Viewer can monitor any DataFlux Data Management Server version 2.3 or later on which data monitoring jobs are running.

Verify that the Data Management Server is a Secure Server

The Data Management Server that is monitored by Monitor Viewer and Dashboard Viewer must be a secure server. That is, access to this server must be controlled by an Authentication Server. See the documentation for the Data Management Server for a full explanation of this task.

In general, you must do the following to secure a Data Management Server:

1. Access the dmserver.cfg file in dmserver_home/etc.
2. Update the following options in this file with values appropriate for your site:
   ```
   dmserver/secure = yes
   dmserver/secure/grp_admin = dfadmin_grp
   base/auth_server_loc = iom://pubdis.com:21030
   ```
3. Restart the Data Management Server.
4. Define the dmserver/secure/grp_admin on the Authentication Server.
5. Add one user to this group. Make note of these credentials.

Copy the Jobs for Dashboard Viewer and Monitor Viewer

When Data Management Server is installed, the jobs that support Dashboard Viewer and Monitor Viewer are installed in backup folders. In order to use the Dashboard and Monitor Viewers, you must copy the jobs that support these viewers from their back up folders to folders where Web Studio expects them.

- Copy FROM dmserver_home\share\web\data_services TO dmserver_home\var\data_services
- Copy FROM dmserver_home\share\web \process_services TO dmserver_home\var\process_services

A script is provided to move these jobs to the correct location. Under Windows, click the shortcut dmserver_home\Update Web Studio Jobs. Under UNIX, run dmserver_home/bin/update_jobs. Note that the only supported configuration, for performance reasons, is to deploy data monitoring jobs to a secured Data Management Server. Then, you need to register that server so that it shows up in the Monitor Viewer and Dashboard viewer.
Grant Access to the Jobs for Dashboard Viewer and Monitor Viewer

When you use a feature in the Dashboard Viewer and Monitor Viewer, a job is executed on the Web Studio Server. Accordingly, users must be given access to the jobs that support the Dashboard Viewer and Monitor Viewer. For example, given the users and groups that are described in Planning Web Studio Users and Groups, the Data Monitor Users group could be given access to these jobs.

The jobs for Reference Data Manager are in the following folders on the Data Management Server data monitoring jobs are running:

- **Real-Time Data Services > Monitor** folder
- **Real-Time Process Services > Monitor** folder

These folders are shown in the next display.

In order to give the appropriate group authorization to run these jobs, you will access the Data Management Server from the Data Management Servers riser in Data Management Studio. You must log on to the Data Management Server as a member of the administrative group that is described in Verify that the Data Management Server is a Secure Server. Then you will be able to expand the folders above, select the jobs in the folder, and grant privileges to the appropriate group.

The following steps assume that the Data Management Server is available from the Data Management Servers riser in Data Management Studio.

1. Click the Data Management Servers riser in Data Management Studio.
2. In the server tree on the left, select the Data Management Server.
3. Enter the credentials for a user who is a member of the administrative group that is described in Verify that the Data Management Server is a Secure Server.
4. Expand a folder where you expect to find jobs for Monitor Viewer and Dashboard Viewer, based on the display above. For example, you could display the Real-Time Data Services > Monitor folder.
5. Click the folder that contains the relevant jobs, such as the Monitor folder. The jobs in that folder will display in the right pane.

6. Use Shift-Click to select all of the jobs in the right pane.

7. Right-click the selected jobs, and then select Permissions. A Permissions dialog displays.

8. Click Add in the Permissions dialog. A list of users and groups that have been defined on the Authentication Server is displayed.

9. Select the appropriate users or groups for Monitor Viewer and Dashboard Viewer. For example, you could select the Data Monitor Users group.

10. Click Add in the selection window. The selected users and groups will be granted permission to access the selected jobs, as shown in the next display.

11. To apply the permissions, click OK in the Permissions window. The group is added to the Permissions tab for the selected jobs.

12. (optional) To verify that you have applied the correct permissions for a job, click the job in the server tree on the left. The permissions for that job will display on the right.

13. Repeat for all jobs for Monitor Viewer and Dashboard Viewer.

**Next Task**

You have now completed the configuration for Monitor Viewer and Dashboard Viewer. See **Verifying Your Web Studio Installation**.
Verifying Your Web Studio Installation

Overview

To verify your Web Studio installation, you could log on to Web Studio as one of the users who are authorized for a module. The URL for the Web Studio client has the following pattern:

- Pattern: http://web_server_hostname:port_number/webstudio/
- Example: http://pubdis.com:21079/webstudio/

You could then see if you use the features in the module. To display task documentation for all modules, log on to Web Studio. Then select Help from the control at upper right. If you run into problems, see Using Web Studio Server Logs.

⚠️ Note: If you log on to Web Studio and you see a Transport error (403 error), then you might not have permission to access one or more modules. Check the Web Studio Server Logs for details.

Verifying Reference Data Manager

Log on to Web Studio as user who is authorized to add and update domains within Reference Data Manager. If you have appropriate permissions, you should see the New (domain) button in the toolbar.

Verifying Dashboard Viewer and Monitor Viewer

Log in to Web Studio as user who is authorized to monitor the output of data monitoring jobs on a Data Management Server. After you log in to Web Studio, you will be prompted to log in to the Data Management Server that you are monitoring. You will need appropriate credentials for that server. If you have appropriate permissions, you should see the monitored server at upper left of the Dashboard tab. You will not see any statistics until Web Studio gets output from the monitored server.
Updating Your Web Studio Configuration

Updating the Web Studio Options

After the initial configuration of Web Studio, you might want to make updates such as the following:

- update server locations
- change the order of the module tabs in the main Web Studio window
- change which module has focus when you first log on to Web Studio
- update the list of Data Management Servers to be monitored by Dashboard Viewer and Monitor Viewer

In order to make changes like this, use this URL to display the Web Studio configuration wizard:

- Pattern: http://web_server_hostname:port_number/webstudio/web/config
- Example: http://pubdis.com:21079/webstudio/web/config

For more information about the options in the configuration wizard, see Running the Web Studio Configuration Wizard.

Updating JVM Settings for the Jetty Web Server

When you installed the Web Studio client, you also installed Jetty, an open source web server. You might need to update Java Virtual Machine (JVM) settings for Jetty, such as the following:

- -Xms (initial heap size)
- -Xmx (max heap size)
- -XX MaxPermSize
- -Xss (stack size)

To update JVM settings for the Jetty Web Server, perform the following steps:

1. Open the webstudio.cfg file in the installation root for Web Studio.
2. Use the java_args option to specify JVM settings. Example: java_args = -Xms512m -Xmx1024m
3. Run the Refresh Service Options script in the installation root for Web Studio. The JVM settings that are specified in the webstudio.cfg file will be applied to Jetty.
## Directory Layout for Web Studio Server Installation

### Windows

The following table lists the directories that are created during the Web Studio Server installation for Windows:

<table>
<thead>
<tr>
<th>Directory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>drive:\Program Files\SASHome\Web Studio Server instance</td>
<td>Specifies the top-level installation directory.</td>
</tr>
<tr>
<td>\bin</td>
<td>Contains the executable files for this platform.</td>
</tr>
<tr>
<td>\data</td>
<td>Contains files that include data information that is specific to this installation.</td>
</tr>
<tr>
<td>\data\install</td>
<td>Contains a collection of files pertinent to installation such as templates and scripts.</td>
</tr>
<tr>
<td>\doc</td>
<td>Contains the documentation that is installed with the server.</td>
</tr>
<tr>
<td>\etc</td>
<td>Contains the configuration and license files.</td>
</tr>
<tr>
<td>\etc</td>
<td>Contains the library files for this platform.</td>
</tr>
<tr>
<td>\etc\dftkdsn</td>
<td>Contains the non-ODBC data connection configurations.</td>
</tr>
<tr>
<td>\etc\dsn</td>
<td>Contains the saved credential files for each data source name (DSN).</td>
</tr>
<tr>
<td>\etc\license</td>
<td>By default, the location where the license files reside. The path to the license file is located in the etc\app.cfg file.</td>
</tr>
<tr>
<td>\etc\macros</td>
<td>Contains the .cfg files, which specify the macro key and value pairs. All files in this directory are loaded in alphabetical order.</td>
</tr>
<tr>
<td>\etc\repositories</td>
<td>Contains the sample repository configuration file, server.rcf. The repository configuration file defines the location of the repository file that is used by the server. It also contains the ProfileExec.djf process job that is used to run the jobs on the server. If this job is missing, you will not be able to run profile jobs.</td>
</tr>
<tr>
<td>\etc\security</td>
<td>Contains files that specify server commands and permissions for specific users and groups.</td>
</tr>
<tr>
<td>\share</td>
<td>Contains message files that are needed by the software. If the files are removed, the software will fail to run. The directory also contains a sample copy of the WSDL file, which is used by the</td>
</tr>
</tbody>
</table>
**Directory Layout for Web Studio Installation**

**Windows**

The following table lists the directories that are created during the Web Studio installation for Windows:

<table>
<thead>
<tr>
<th>Directory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>drive:\Program Files\SASHome\Web Studio instance</td>
<td>Specifies the top-level installation directory.</td>
</tr>
<tr>
<td>\bin</td>
<td>Contains the executable files for this platform.</td>
</tr>
<tr>
<td>\data</td>
<td>Contains files that include data information that is specific to this installation.</td>
</tr>
<tr>
<td>\data\install</td>
<td>Contains a collection of files pertinent to installation such as templates and scripts.</td>
</tr>
<tr>
<td>\etc</td>
<td>Contains the configuration and license files.</td>
</tr>
<tr>
<td>\lib</td>
<td>Contains the library files for this platform.</td>
</tr>
<tr>
<td>\var</td>
<td>Contains the log files from the running of Web Studio Server as well as job-specific logs.</td>
</tr>
<tr>
<td>\var\databases</td>
<td></td>
</tr>
<tr>
<td>\var\logs</td>
<td></td>
</tr>
</tbody>
</table>

**UNIX**

The default installation home directory UNIX is: SASHome/Web Studio Server instance. The directory structure under the installation home directory is the same as it is under Windows.
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