



Relativity for Windows Workstations 2.3

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Contents

Introduction	4
Relativity Products	5
Relativity Components	6
Relativity Designer	6
Relativity DBA	6
Relativity Database Management System	6
What's New	8
Resolved Issues	10
Installation	13
System requirements	13
Hardware requirements	13
Operating systems supported	13
Software requirements	13
Downloading the product	14
Restrictions and requirements	14
Installing Relativity for Windows Workstations	14
What to install	14
Data Manager installation	14
Database Administrator installation	15
Installation verification	15
Data Manager verification	15
Locating the ODBC Administrator	16
Post-installation considerations	17
Location of data files	17
Uninstalling	18
Licensing information	19
To start Micro Focus License Administration	19
Installing licenses	19
If you have a license file	19
If you have an authorization code	20
Updates and SupportLine	21
Further Information and Product Support	21
Information We Need	21
Creating Debug Files	22
Copyright and Disclaimer	23

Introduction



Note: These release notes contain information that might not appear in the Help. Read them in their entirety before you install the product. This document may also contain a number of links to external Web sites. Micro Focus cannot be responsible for the contents of the Web site or for the contents of any site to which it might link. Web sites by their nature can change very rapidly and although we try to keep our links up-to-date, we cannot guarantee that they will always work as expected.

The Relativity product set enables the construction of a true relational database using existing COBOL application data. Relativity provides a full-featured, Windows Open Services Architecture (WOSA), Open Database Connectivity (ODBC)-compliant relational database engine. Thus, Relativity allows SQL-based client access to COBOL application data without moving, converting, replicating, or re-engineering COBOL data files.

With Relativity providing SQL-based access to COBOL data files, any ODBC-enabled database development application or tool can be chosen to build applications for ad hoc reporting, decision support, and specialized data processing functions. Relativity enables any working application to benefit from database technology without rewriting or migrating that application.

Relativity Products

The components detailed in the *Relativity Components* section are available within the following products:

Designer Suite

The Relativity Designer Suite is a Windows-only development tool which enables you to create Relativity databases. The Suite consists of the following components - the Designer, the Database Administrator, and the Data Manager.

You can import COBOL file record definitions into the database, and then create tables based on those record definitions.

Use the Database Administrator to maintain such things as the table connections, date constants, and character sets used in a Relativity database.

Relativity for Windows Workstations

Relativity for Windows Workstations is Windows-only run-time product and is a single-tier solution required when your ODBC application and COBOL data files reside on the same machine, and the ODBC application is a 32-bit program. Relativity for Windows Workstations requires a Relativity database that was developed using the Designer Suite.

Relativity for Windows Workstations contains the following components - Database Administrator and the Data Manager.

Use the Database Administrator to maintain such things as the table connections, date constants, and character sets used in a Relativity database.

Data Server

The Relativity Data Server is a run-time product which contains the Data Server for a specific platform (Windows or UNIX), and also a platform-specific Data Client.

It is a client/server solution required when your ODBC application is required to access COBOL data files that reside on another machine, or when your ODBC application is a 64-bit program. The Relativity Data Server requires a Relativity database that was developed using the Relativity Designer Suite.

This product also contains a Java Client, which is part of the client/server solution required by JDBC (Java Database Connectivity) applications.

Relativity Components

The Relativity product set consists of three main software components:

Relativity Designer

The Relativity Designer is an interactive, Windows-based tool that enables the COBOL application developer to define and maintain a relational database system of tables using COBOL data.

The Relativity Designer creates the Relativity catalog by performing the following functions:

- Automatically extracts the definitions of data files from the COBOL programs into the Relativity catalog.
- Collects information regarding the data from the application developer.
- Allows the developer to define relational tables from existing COBOL data items within records of existing COBOL files.

If an owner group has been assigned to the catalog, only users who are members of that owner group may open the data source associated with the catalog using the Relativity Designer. Assignment of an owner thus protects the sensitive data in the catalog exposed by the Relativity Designer from access by users who are not owners. A password-protected log on procedure validates user identities whenever a Relativity data source is opened, as explained in *Providing Data Security*.

Relativity DBA

The Relativity DBA (Database Administrator) is an interactive, Windows-based tool that enables the system administrator at the end-user location to maintain and manage the Relativity database and the security of the Relativity database.

The Relativity DBA provides the following functions:

- Defining and authorizing users of the database.
- Restricting the view of the data for individual groups of users.
- Maintaining the linkages between tables and physical COBOL data files.
- Defining date constants.
- Merging security and connection information into a new catalog (an optional function controlled by the catalog developer).
- Producing reports on security and connections.

The Relativity DBA can be used only by users who have the **Use Administrator** privilege set for the catalog, or by the catalog owner (who has all privileges set by default). The owner may grant this privilege to one or more administrative groups - see *Defining Group Privileges*.

Relativity Database Management System

The Relativity Database Management System (DBMS) connects Windows client-based tool products to COBOL data files. It processes SQL requests from the ODBC-enabled application (or tool) and performs the necessary actions to respond to the request with data obtained from the COBOL data files.

The Relativity DBMS comes in two variants: single-tier and a client/server. The single-tier product is named the Relativity Data Manager. The client/server product is named the Relativity Data Client and Relativity Data Server.

Relativity Data Manager

The Relativity Data Manager is a single-tier version of the Relativity DBMS. By single-tier, we mean that the product is installed on a single machine. In this configuration, the COBOL data files are installed on the same machine as the ODBC-enabled application and the Relativity Data Manager.

Relativity Data Client and Relativity Data Server

The Relativity Data Client and Relativity Data Server are a client/server version of the Relativity DBMS. In this configuration, the COBOL data files are typically not on the same machine as the ODBC-enabled application. In this case, the Relativity Data Client is installed on the same machine as the ODBC-enabled application, and the Relativity Data Server is installed on the same machine as the COBOL data files. The Data Server needs to be installed only once and on only the server machine, that is, the machine with the COBOL data files. The Data Client needs to be installed on each client machine that needs access to the data on the server machine. The Data Client sends the SQL requests from the ODBC-enabled application to the Data Server, which then processes the requests and returns only the resulting rows to the Data Client, which in turn returns them to the ODBC-enabled application.

What's New

This section details the new features added in each release of the Relativity products:

New features in Relativity 2.3

The following features are new to this release of Relativity:

- [New Designer user interface](#)
- [64-bit Data Server on SUSE](#)
- [SQL_C_SBIGINT and SQL_C_UBIGINT support](#)
- [Foreign key support](#)
- [New documentation: Relativity Data Server Utilities on UNIX](#)

New Designer user interface

[Back to the list](#)

The Relativity Designer has been redesigned with modern user interfaces. The original Designer has been renamed to the Classic Designer and will also be installed in this release, and you can continue to use it; however, we encourage you to transition to the new interface, as the Classic Designer is expected to be removed in a subsequent release.

64-bit Data Server support for SUSE

[Back to the list](#)

The Relativity Data Server for SUSE has been updated to run as a 64-bit process on SUSE 12. The RUNACTIVE script will determine if a 32-bit or 64-bit COBOL (either Visual COBOL or Server Express) is in use and launch the appropriate Data Server.

SQL_C_SBIGINT and SQL_C_UBIGINT support

[Back to the list](#)

The ODBC 3 Relativity Data Manager and Data Client (but not the Relativity Data Manager for ADO, nor the Relativity Data Client for ADO) now support 64-bit C integers SQL_C_SBIGINT and SQL_C_UBIGINT.



Note: This does not include support for 64-bit (BIGINT) columns; however, DECIMAL(20,0) columns will contain a SQL_C_SBIGINT.

Foreign key support

[Back to the list](#)

Relativity has been enhanced to support the ODBC API call `SQLForeignKeys`. The new Designer has the ability to designate a connection between columns in two different tables, creating foreign keys. These are columns that you usually use in joins. Adding this information allows SQL tools to optimize queries that they generate, and to present the foreign key association graphically.



Note: It is up to the SQL tool to make use of this information; Relativity does not directly use it, nor validate it. It is up to the database designer to make valid associations.

New documentation: Relativity Data Server Utilities on UNIX

[Back to the list](#)

New documentation is now available for the RelServerAdmin, RelClientAdmin, RelClientTest, and RelDriverAdmin utilities on UNIX. This document, entitled Relativity Data Server Utilities for UNIX, is

available from the SupportLine Product Documentation page: www.microfocus.com/documentation/relativity/

New features in Relativity 2.2

There are no new features included in this release of Relativity.

New features in Relativity 2.1 HotFix 1

There are no new features included in this HotFix.

New features in Relativity 2.1

The following features are new to this release of Relativity:

- [Net Express and Server Express support](#)
- [COBOL syntax files](#)
- [ODBC driver for ADO](#)

Support for Net Express and Server Express

You can now install and Relativity with either Micro Focus Net Express or Server Express.

See *Software Requirements* in these Release Notes for information about which versions of Net Express and Server Express are supported.

COBOL syntax files

The **COBOL FD Importer** within Relativity Designer invokes the COBOL compiler to generate information about a COBOL program's File Definition and saves it to COBOL syntax file. The wizard then reads the information from that file and imports it into the Relativity catalog.

The COBOL syntax files have a different extension based on which Micro Focus product you have installed Relativity for:

- .CST, if you use Relativity with either Visual COBOL or Enterprise Developer
- .RST, if you use Relativity with either Net Express or Server Express

A new ODBC driver

This release provides a new Relativity ODBC driver which is optimized for ADO support.

When you use Relativity with an ADO application, it is strongly recommended to use the ADO version of Relativity. To do this:

1. Open the ODBC Administrator and click **Add**.

This displays a list of all ODBC drivers installed on your machine.

2. Select a driver that is appropriate for your environment:

- Micro Focus Relativity Data Manager for ADO (32-bit)
- Micro Focus Relativity Data Client for ADO (32-bit)
- Micro Focus Relativity Data Client for ADO (64-bit)

Resolved Issues

Resolved issues in Relativity 2.3

The numbers that follow each issue are the Support Incident Numbers followed by the Reported Problem Incident (RPI) number (in parentheses).

- [Installation](#)
- [Designer](#)
- [Data Manager](#)
- [Data Client](#)

Installation

[Back to the list](#)

- Data Server installation now correctly configures COBOL Server 2013. (610408)
- Data Client now uninstalls cleanly. (641421)
- Relativity now uninstalls cleanly when multiple components exists. (641462)
- DBA and Designer installations now create the correct registry keys. (641737)

Designer

[Back to the list](#)

- ODBC Control Panel now displaying correctly on the Tools menu. (629654)
- The 64-bit ODBC Administrator menu option now available on 64-bit systems. (629655)
- If required, you are now prompted to elevate the privileges in order to run Server Administrator from the Tools menu. (629656)
- A shortcut to the Relativity Designer Samples directory is now included, to make them easier to locate. (629710)
- The Designer no longer hangs when attempting to access the DBMS help file from the Help menu. (629733)
- If required, you are now prompted to elevate the privileges in order to run the 64-bit ODBC Administrator from the Tools menu. (630446)
- Related links in the help topic 'Augmenting the COBOL File Definition in the FD Form' have been fixed. (631007)
- Condition item matching now working correctly. (635635)
- COBOL syntax file now generated correctly during import. (641412)
- The Help file for the classic DBA product now displays correctly. (641424)
- The import process when using a remote CST file now works correctly. (641428)
- The Help file for the DBMS product now displays correctly. (641468)
- Signed numeric edited data items are now handled correctly during import. (1106585)
- Use MAXCOLSUPPORT to override the 256(254 user defined) column limit in the Relativity Database. It's a registry value on Windows, and an ODBC.ini value on UNIX. (1114252)
- Error message relating to Working Storage item updated to be more helpful. (1114406)
- The CST import process now correctly translates numeric value strings into the appropriate catalog data types. (1114501)
- DateTime formats used in a loaded catalog are dynamically turned on so that they are not hidden from the user. (1118541)
- Field offsets now shown in the correct order. (1118543)

Data Manager

[Back to the list](#)

- Excel 2013 64-bit no longer crashes when trying to connect to a Relativity data source. (631186)
- Data Client no longer crashes when opened under the Designer whilst running/debugging under Visual Studio. (641531)

Data Client

[Back to the list](#)

- A heavily-loaded Relativity Data Server no longer crashes intermittently on Linux. (1114873)

Resolved issues in Relativity 2.2

The numbers that follow each issue are the Support Incident Numbers followed by the Reported Problem Incident (RPI) number (in parentheses).

- [Designer](#)
- [Data Manager](#)
- [Data Client](#)

Designer

[Back to the list](#)

- A problem with launching the Relativity Server Administrator from the Designer and DBA Tools menu has been corrected. A problem with locating the Server Administrator help file has also been corrected. (1105713)

Data Manager

[Back to the list](#)

- Relativity now works properly with Microsoft Word when used as a source for a Microsoft Word mailing list. (628929)

Data Client

[Back to the list](#)

- The 64-bit Relativity Server Administrator no longer crashes on Windows 10 when it attempts to create a catalog. (629199)

Resolved issues in Relativity 2.1 HotFix 1

The numbers that follow each issue are the Support Incident Numbers followed by the Reported Problem Incident (RPI) number (in parentheses).

- [Data Manager](#)
- [Designer](#)

Data Manager

[Back to the list](#)

- An INSERT into a table defined on a sequential file no longer fails with COBOL error 48,1 when using the Relativity for ADO driver.

2873824 (1106557)

Designer

[Back to the list](#)

- A problem in the Relativity Designer that caused an error to be reported when importing tables from another catalog is fixed. The error occurred if an imported FD had multiple unnamed FILLER items. The first item was correctly merged, but errors were reported on subsequent FILLER items in the same FD.

2874985 (1106659)

Resolved issues in Relativity 2.1

The numbers that follow each issue are the Support Incident Numbers followed by the Reported Problem Incident (RPI) number (in parentheses).

- [Data Manager](#)
- [Data Server](#)

Data Manager

[Back to the list](#)

- An issue where data files with edited data items, such as PIC -9(6).9(2), would return 0 in columns associated with such data items, if the data item contained EBCDIC characters has been fixed.

2862434 (1105012)

- An INSERT into a table defined on a sequential file no longer fails with COBOL error 48,1.

2849810 (1103083)

Data Server

[Back to the list](#)

- The Data Server no longer writes "Assert" messages to the server.log file.

Other resolved issues:

- 2862434 (1105011)
- 2859204 (1104837)

Installation

System requirements

Hardware requirements

The requirements for this Relativity product are in addition to the requirements of the Micro Focus product you have installed - either Visual COBOL, Enterprise Developer, Net Express or Server Express. See the in-product documentation for details of the respective product's requirements.

The disk space requirements are, approximately:

Platform	Relativity for Windows Workstations	License Administration tool
x86 Windows platforms	100MB	25MB
x64 Windows platforms	100MB	25MB
UNIX	100MB	100MB

Operating systems supported

For a list of up-to-date operating systems supported, check the *Product Availability* section on the Micro Focus SupportLine Web site: <http://supportline.microfocus.com/prodavail.aspx>.

This product operates on the following platforms:

- Windows 7 to Server 2012 R2, and everything in between.

Software requirements

This Relativity product requires one of the following Micro Focus COBOL development or deployment products.

- Visual COBOL or Enterprise Developer (including Development Hub and UNIX Components variants), version 5 or later.
- Enterprise Test Server, version 5 or later.
- Net Express 5.1 Update 18.
- COBOL Server or Enterprise Server, version 5 or later.
- Micro Focus Server 5.1 Update 18.

Other requirements

This product requires the latest version of the Micro Focus licensing software.

If you have one of the products listed above installed locally, you do not need to install the licensing software separately, as the product setup file also installs a new license server on the same machine.

Downloading the product

Use the download links in your Electronic Product Delivery email to download the required Relativity products.

For more information, follow the same links for the installation instructions and the End User License Agreement.

Restrictions and requirements

Before starting the installation on Windows, you should consider the following:

- If, when you install a Relativity product, the machine does not have the correct version of the Microsoft Visual C++ Redistributable Run-time already installed, it is installed as part of the Visual COBOL, Enterprise Developer, or Net Express install. This installation adds a number of .dll files, without digital signatures, into the `winsxs` directory.
- Your account must have administrative permissions to install this product. If your account does not have these permissions and cannot obtain them, you will be asked to provide the credentials of an administrator during the installation.

Installing Relativity for Windows Workstations

 **Note:** Before installing, see *Restrictions and Requirements*.

This version of the product is a full install.

What to install

You need to install the following files, in the following order:

- The Data Manager install file - `DataManagerx86.msi`. See *Data Manager installation*.
- The Database Administrator install file - `DBAx86.msi`. See *Database Administrator installation*.

 **Note:** This install is optional. Only install the Database Administrator if you require ongoing maintenance of Relativity databases.

Data Manager installation

 **Note:** The Data Manager is only available on Windows.

The Data Manager is one of the core pieces of the Relativity product. Either the Data Manager or a Data Server/Data Client must be installed in order to use the other Relativity products. The Data Manager is required in situations where the data files are located on the same Windows machine as the ODBC application, and the ODBC application is a 32-bit program. If either of these conditions is false, you will require the Data Server product instead.

The Data Manager requires an installation of other Micro Focus products in order to access data files. If the Data Manager is to be used with the Relativity Designer Suite in order to develop Relativity catalogs, Visual COBOL, Enterprise Developer, Net Express or Server Express must be installed on the same machine as the Data Manager. If the Data Manager is not to be used to develop catalogs, in other words it is being installed in a production environment, you only require an installation of COBOL Server, Enterprise Server or Micro Focus Server.

To install the Relativity Data Manager:

1. Run `DataManagerx86.msi` and follow the wizard instructions to install the prerequisite software and the product.
2. Following installation of the Data Manager, install a license using the Micro Focus License Administration; see *Installing licenses* in these Release Notes for more information.



Note: You must also license the Micro Focus product you have installed Relativity for (either Visual COBOL, Enterprise Developer, Net Express, Server Express, Enterprise Server, COBOL Server, or Micro Focus Server) with its own license.

3. Following installation of a license, use the 32-bit ODBC Administrator to create a data source. The ODBC application will use the data source name to establish a connection to the Relativity Data Manager and a Relativity catalog, which contains information about a Relativity database. See *Data Manager Verification* for more information.

Database Administrator installation



Note: The Database Administrator is only available on Windows.

The Database Administrator (DBA) is a program intended to maintain a Relativity database after development. It does not require Visual COBOL or Enterprise Developer to be installed on the same machine.

The DBA is a 32-bit ODBC application used to maintain such things as the table connections, date constants, and character sets used in a Relativity database. It will require a 32-bit Data Manager or 32-bit Data Client data source to a Relativity database in order to maintain it.

To install the Relativity DBA:

1. Run `DBAx86.msi` and follow the wizard instructions to install the prerequisite software and the product.
2. Following the installation of the DBA, create a 32-bit data source, using either the Data Manager or 32-bit Data Client, in order to access and maintain the database; see *Data Manager verification* for more information.
3. See the Relativity DBA Help for details on how to maintain a Relativity database.

Installation verification

By verifying the installation of each product in Relativity for Windows Workstations, you also undertake the initial setup.

The following instructions assume that you have run all required product installations for Relativity for Windows Workstations. It is useful to have an ODBC-enabled application, such as Microsoft Access, also installed to fully verify the installation.

Data Manager verification

After Data Manager is installed, you need to create a data source name to establish a connection to the Data Manager and the Relativity catalog.

1. Open the 32-bit ODBC Administrator (see *Locating the ODBC Administrator*).

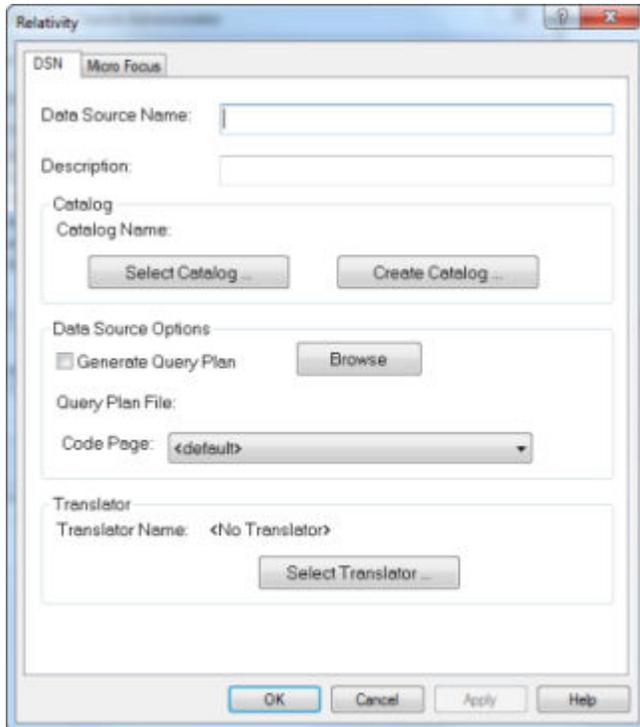
The **ODBC Data Source Administrator** window appears.

2. Click **Add**.

The **Create New Data Source** window appears.

3. Scroll down through the list of installed ODBC drivers and select **Micro Focus Relativity Data Manager (32-bit)**, and then click **Finish**.

The **Relativity** window appears.



4. In the **Data Source Name** field, enter **Verify**.

5. Click **Select Catalog**.

The **Select Catalog for Data Source** window appears.

6. Navigate to %PUBLIC%\Documents\Micro Focus\Relativity Data Manager\Samples\MF\Verify.

7. Select `verify.rcg`, and then click **Open**.

The **Relativity** window appears.

8. Click **OK** twice to close the **Relativity** and **ODBC Data Source Administrator** windows.

At this point, the Relativity driver has been loaded, it has opened a Relativity catalog, and a Relativity database has been created. This has thoroughly exercised the installation; however, as an extra step, start a 32-bit ODBC application, open the Verify datasource, and then execute the following SQL query:

```
SELECT * FROM BACKORDER
```

The result should show the BACKORDER table that started life as a COBOL data file.

Locating the ODBC Administrator

The Windows ODBC Administrator is an important utility due to its role of creating data sources. You must open the correct version of the ODBC Administrator appropriate to the bitism of data source that you require.

Windows 7

On a 32-bit Windows machine:

1. From the **Start** menu, open the **Control Panel**.
2. Do one of the following:
 - If the Control Panel is displaying in **Category** view, select **System and Security**, and then **Administrative Tools**.

- If the Control Panel is displaying in **Icons** view, select **Administrative Tools**.

3. Double-click **Data Sources (ODBC)**.

The **ODBC Data Source Administrator** screen appears.

On a 64-bit Windows machine:

Creating a 32-bit data source for the Relativity Data Manager or the Relativity 32-bit Data Client requires a 32-bit ODBC administrator on 64-bit Windows. Unfortunately, that is not the default ODBC administrator on a 64-bit Windows 7 machine. To start the required ODBC Administrator, follow one of the procedures below:

- To open the 32-bit ODBC Administrator:

1. From the **Start** menu, in the **Search programs and files** box, type `odbc`.
2. In the results box, double-click **ODBC Data Source Administrator (32-bit)**.

The **ODBC Data Source Administrator** screen appears.



Tip: To speed up access to this utility, right-click **ODBC Data Source Administrator (32-bit)** and select **Pin to Taskbar** or **Pin to Start Menu**.

- To open the 64-bit ODBC Administrator:

1. From the **Start** menu, open the **Control Panel**.
2. Do one of the following:
 - If the Control Panel is displaying in **Category** view, select **System** and **Security**, and then **Administrative Tools**.
 - If the Control Panel is displaying in **Icons** view, select **Administrative Tools**.
3. Double-click **Data Sources (ODBC)**.

The **ODBC Data Source Administrator** screen appears.

Windows 10 and later

You start the desired ODBC Administrator from the **Start** menu - locate the **Administrative Tools** group (from the **Start** menu, you can start to type the group name and the option should appear), and then select **ODBC Data Sources (32-bit)** or **ODBC Data Sources (64-bit)**, depending on the type of data source to maintain.

Post-installation considerations

The steps you must perform after installation depend upon the location of the data files.

Location of data files

- If the data files exist on a Windows machine, and the 32-bit ODBC application is installed on the same machine, you only need to create a data source using the Windows ODBC administrator.
- If the data files exist on a Windows machine, and the 64-bit ODBC application is installed on the same machine, you must create a server data source using the Data Server for Windows, and then create a client data source using the 64-bit Data Client that references the server data source. (There is not a 64-bit Data Manager.)
- If the data files exist on a Windows machine that is separate from the ODBC application, you must create a server data source on the Windows machine containing the data files, install the Data Client on each client machines containing the ODBC application, and then create a client data source on each that references the server data source.
- If the data files exist on a UNIX machine, you must create a server data source on the UNIX machine containing the data files, install the Data Client on each machine containing the ODBC application, and

then create a client data source on each that references the server data source. (There is not a single-tier Data Manager for UNIX.)

Uninstalling

Windows - all components

To uninstall one or more Relativity products from Windows:

1. Log in with the same user ID you used when you installed the product.
2. From the **Start** menu, open the **Control Panel**.
3. Do one of the following:
 - If the Control Panel is displaying in **Category** view, click **Uninstall a program** under **Programs**.
 - If the Control Panel is displaying in **Icons** view, double-click **Programs and Features**.
4. Select one of the following products and click **Remove** or **Uninstall**:
 - Micro Focus Relativity Data Manager
 - Micro Focus Relativity DBA
5. Click **Yes** to confirm.
6. If required, repeat from step 4 to uninstall further products.

This process only removes files that the installation software installed. If the product directory has not been removed, delete any unwanted files and sub-directories within it using Windows Explorer. The following folders might not be removed:

- The *Micro Focus product name* folder in the Start menu - you can delete this manually.
- %systemdrive%\Users\Public\Documents\Micro Focus - this includes the binaries and the log files of the samples you have built.
- %ProgramData%\Micro Focus - this includes some data files used by the Micro Focus licensing tool.
- %Program Files%\Micro Focus - you can delete this manually.

Some registry entries are also not removed by the uninstallation process and you need to manually delete them.

To uninstall a product from the command line, you need the installation file, and you need to execute the following command:

```
msiexec /x install-file.msi
```

Licensing information

To use Relativity, you need to purchase and install a license for it. To buy a license, contact your sales representative or Micro Focus SupportLine.

In addition, the Micro Focus product you have installed Relativity for (either Visual COBOL, Enterprise Developer, Net Express, Server Express, Enterprise Server, COBOL Server, or Micro Focus Server) must also be licensed with its own license.



Note:

- If you have purchased a license for a previous release of Relativity, that license will also enable you to use this release.
- Your entitlement for using this product is governed by the Micro Focus End User License Agreement and by your product order. If you are unsure of what your license entitlement is or if you wish to purchase additional licenses, contact your sales representative or Micro Focus SupportLine.

Relativity uses the Micro Focus License Administration software for installing and managing your Micro Focus licenses. See the instructions in the following sections about how to install the Relativity license.

To start Micro Focus License Administration

Windows 8.1

- From the Windows **Start** screen, click the **License Administration** tile

Windows 10 and Later

- From your Windows desktop, click **Start > Micro Focus License Manager > License Administration**

Installing licenses

You need either a license file (with a `.mflic` extension) or an authorisation code which consists of a string of 16 alphanumeric characters.

If you have a license file

1. Start Micro Focus License Administration.
2. Click the **Install** tab.
3. Do one of the following:
 - Click **Browse** next to the **License file** field and select the license file (which has an extension of `.mflic`).
 - Drag and drop the license file from Windows Explorer to the **License file** field.
 - Open the license file in a text editor, such as Notepad, then copy and paste the contents of the file into the box below the **License file** field.
4. Click **Install Licenses**.

If you have an authorization code

Authorizing your product when you have an Internet connection



Note:

- It is not possible to install licenses remotely. You must be logged into the machine on which you are installing the licenses.

The following procedure describes how to authorize your product using a local or network license server. The license server is set up automatically when you first install the product.

1. Start Micro Focus License Administration.
2. Click the **Install** tab.
3. Type the authorization code in the **Enter authorization code** field.
4. Click **Authorize**.

If you change the name of the machine running your license server after it has granted licenses, the licenses stop working.

Authorizing your product when you don't have an Internet connection

This method of authorization is required if the machine you want to license does not have an Internet connection or if normal (automatic) authorization fails.

1. Start Micro Focus License Administration.
2. Click **Manual Authorization** on the Install page.
3. Make a note of the contents of the **Machine ID** field. You will need this later.
4. Do one of the following:
 - If your machine has an Internet connection, click the SupportLine Web link in the Manual Authorization Information window.
 - If your machine does not have an Internet connection, make a note of the Web address and type it into a Web browser on a machine that has an Internet connection.

The Micro Focus SupportLine Manual product authorization Web page is displayed.

5. Type the authorization code in the **Authorization Code** field. The authorization code is a 16-character alphanumeric string supplied when you purchased your product.
6. Type the Machine ID in the **Machine ID** field.
7. Type your email address in the **Email Address** field.
8. Click **Generate**.
9. Copy the generated license string (or copy it from the email) and paste it into the box under the **License file** field on the Install page.
10. Click **Install Licenses**.

Updates and SupportLine

Our Web site gives up-to-date details of contact numbers and addresses.

Further Information and Product Support

Additional technical information or advice is available from several sources.

The product support pages contain a considerable amount of additional information, such as:

- The *Product Updates* section of the Micro Focus SupportLine Web site, where you can download fixes and documentation updates. Go to <https://supportline.microfocus.com/websync/productupdatesearch.aspx>
- The *Examples and Utilities* section of the Micro Focus SupportLine Web site, including demos and additional product documentation. Go to <https://supportline.microfocus.com/examplesandutilities/index.aspx>.
- The *Support Resources* section of the Micro Focus SupportLine Web site, that includes troubleshooting guides and information about how to raise an incident. Go to <https://supportline.microfocus.com/supportresources.aspx>

To connect, enter <https://www.microfocus.com> in your browser to go to the Micro Focus home page, then click **Support & Services > Support > Support Resources > All Support Resources by Product**. In the **Browse by Product** field, click the product you require, and then click **Log into SupportLine**.



Note: Some information may be available only to customers who have maintenance agreements.

If you obtained this product directly from Micro Focus, contact us as described on the Micro Focus Web site, <https://www.microfocus.com/support-and-services/contact-support/>. If you obtained the product from another source, such as an authorized distributor, contact them for help first. If they are unable to help, contact us.

Also, visit:

- The Micro Focus Community Web site, where you can browse the Knowledge Base, read articles and blogs, find demonstration programs and examples, and discuss this product with other users and Micro Focus specialists.
- The Micro Focus YouTube channel for videos related to your product.

Information We Need

However you contact us, please try to include the information below, if you have it. The more information you can give, the better Micro Focus SupportLine can help you. But if you don't know all the answers, or you think some are irrelevant to your problem, please give whatever information you have.

- The name and version number of all products that you think might be causing a problem.
- Your computer make and model.
- Your operating system version number and details of any networking software you are using.
- The amount of memory in your computer.
- The relevant page reference or section in the documentation.
- Your serial number . To find out these numbers, look in the subject line and body of your Electronic Product Delivery Notice email that you received from Micro Focus.

Creating Debug Files

If you encounter an error when compiling a program that requires you to contact Micro Focus SupportLine, your support representative might request that you provide additional debug files (as well as source and data files) to help us determine the cause of the problem. If so, they will advise you how to create them.

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