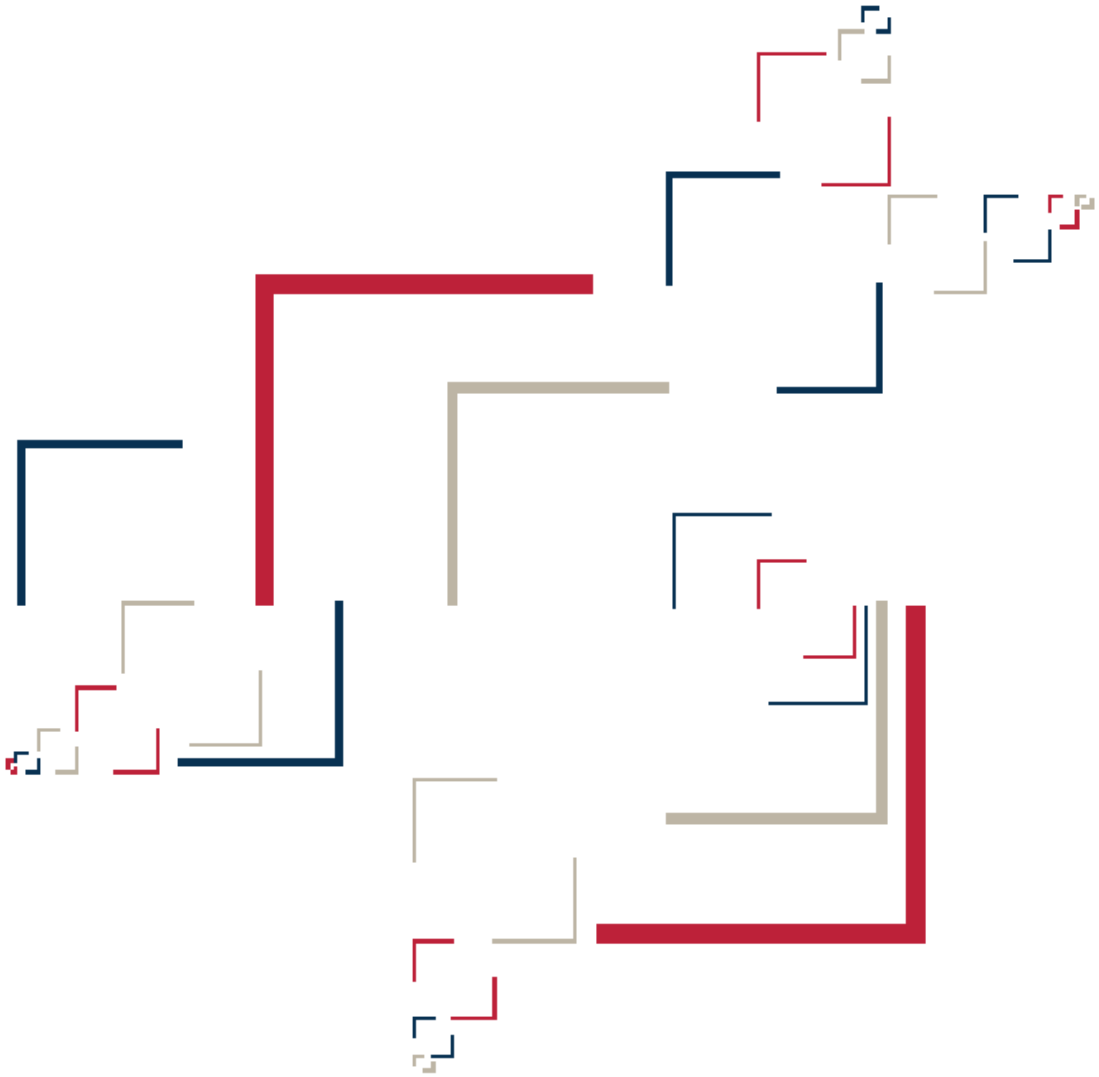

Micro Focus®

Modernization Workbench™

Installing MW Desktop Edition

MICRO FOCUS®

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1 Overview

This manual describes how to install and configure Modernization Workbench (MW) Desktop Edition, a suite of software products for analyzing, mining, and re-architecting legacy applications:

- Application Analyzer is the base Modernization Workbench product, used to analyze and document legacy systems at both the application and program levels.
- Business Rule Manager mines business logic from program code and encapsulates the logic in *business rules*.
- Application Architect offers a variety of advanced algorithms for "slicing" logic from program source: all the code needed for a computation, for example, or to “specialize” a program based on the value of a variable.

All three products are installed with Modernization Workbench. Each product is separately licensed.

MW Desktop Edition is deployed in a single-user environment with access to a database of application repositories. Each repository defines the objects in an MW workspace and how they interact. MW repositories can be stored in:

- An Oracle database packaged with MW Desktop Edition, one repository per schema. The schema names and ODBC data source name (DSN) are predefined.
- Microsoft SQL Server databases defined by the customer, one repository per database.

Installation Tasks

The table below describes the tasks involved in installing MW Desktop Edition and the order in which the tasks must be performed.

Task	Order	Notes
Install Oracle database supplied with MW Desktop Edition	1	Optional. (Embedded Oracle repository only.)
Install MW Desktop Edition	2	
Install Java add-on	3	Optional.

2 Hardware and Software Requirements

The following tables describe the hardware, disk space, operating system, and software requirements for MW installations.

MW Desktop Edition Hardware Requirements

The table below lists the hardware requirements for MW Desktop Edition. Hardware requirements may vary depending on the size of the application you are analyzing.

Type	Requirement	Notes
Processor	2.6 GHz Dual Core or 2x 3.0+ GHz Processors	Dual processing capability with multiple cores in a processor or with separate physical processors. ***NOTE:*** *MW Desktop Edition may not be installed on a machine with more than two physical processors (occupying one socket each).*
Physical Memory	3GB RAM	

Type	Requirement	Notes
Virtual Memory	1GB to 3GB	
Hard Drive Storage	Variable	For databases, approximately 60X the size in bytes of the application source code modeled in MW (for example, 100MB source = 6GB). For MW software, minimum 200MB. For Java add-on, minimum 115MB.
Hard Drive Requirements	2 or more physical hard drive partitions, fast drives recommended	Enables segmenting data I/O operations for performance-tuning optimizations.

MW Desktop Edition Software Requirements

The table below lists the software requirements for MW Desktop Edition.

Type	Notes
Operating System	Microsoft Windows XP Professional, Service Pack 3 or higher, 32-bit and 64-bit Microsoft Windows Server 2003, 32-bit and 64-bit Microsoft Windows Vista, 32-bit Microsoft Windows Server 2008, 32-bit Microsoft Windows 7, 32-bit
Internet Explorer 6.0 or higher (optional)	Required to view HTML report outputs.
Microsoft Office (optional)	Required by MW tools with reporting capabilities to save to Microsoft Office file formats.
Microsoft Visio (optional)	Required to generate output as Microsoft Visio .VSD files.
JRE 1.5.0 or higher (optional)	Required for Java add-on. Can be installed after the add-on is installed.

3 Installing and Uninstalling Modernization Workbench

Before running an installation program described in this section, make sure you have administrative permissions for the machine on which you are performing the installation. If you do not have administrative permissions, the installation program will not let you continue.

NOTE: *If you are using the Oracle database supplied with MW Desktop Edition, make sure that Oracle is not already installed on your machine. Failure to completely uninstall a previous version of Oracle will cause errors in MW operations.*

Installing the Oracle Database

The Oracle database packaged with Modernization Workbench stores up to seven MW repositories, one repository per predefined schema. The embedded version of Oracle supplied with the database limits the number of users and does not provide database administration tools. The repository should only be installed with the assistance of Micro Focus on-site personnel.

NOTE: *Make sure that Oracle is not already installed. Failure to completely uninstall a previous version of Oracle will cause errors in MW operations.*

TASK

1. In the repository installation folder, double-click the setup_32.cmd file. A command window opens.
2. Enter the drive for binary files in the **Select drive for binaries** field, or accept the default. Press Enter.
3. Enter the drive for data files in the **Select drive for data** field, or accept the default. Press Enter.
4. Enter the System Global Area (SGA) size in megabytes in the **SGA size field**, or accept the default. The SGA size must be at least 128 megabytes. Press Enter. The repository server installation begins transferring files to your machine.

   NOTE: *If you receive a Windows Security Alert during the installation asking if you want to keep blocking the program, click* ***Unblock****.*

Installing MW on the Desktop

Follow the instructions in this section to install MW Desktop Edition. The Micro Focus License Manager is packaged with the installation.

TASK

1. In the installation folder for the product, double-click the setup.exe program.
   - If the prerequisite software is installed on your machine, the Welcome screen opens.
   - If the prerequisite software is not installed on your machine, the Modernization Workbench Setup screen prompts you to install the missing software. Click **Install**. When the software been installed, the Welcome screen opens.
2. Click **Next**. The License Agreement screen opens. Read the License Agreement carefully. Click **I accept the terms in the license agreement** to accept its terms, then click **Next**.
3. The Customer Information screen opens. Enter your user name and organization in the **User Name** and **Organization** fields, respectively. Click **Next**.

4. The Destination Folder screen opens. Choose an installation folder. To accept the prefilled value, click **Next**. To specify a different folder, click **Change** and follow the substeps below.
   a Navigate the folder structure to find a suitable location. If the destination folder does not exist, the installation creates it.
   b Click **OK** to exit the Change Current Destination Folder screen and return to the Destination Folder screen.
   c Click **Next** in the Destination Folder screen.
5. The Ready to Install the Program screen opens. Click **Install** to begin transferring files to your machine. A progress meter indicates the progress of the transfer.

   *NOTE: To make changes to the settings, click **Back** repeatedly until you find the information you are looking for, make the required changes, then click **Next** until you return to the Ready to Install the Program screen.*
6. When the transfer is complete, the Setup Complete screen opens. Click **Finish**.

Installing the Java Add-On

To install the Java add-on, double-click Java.Addon.exe in the installation folder for the product.

Uninstalling Modernization Workbench

Follow the instructions below to uninstall a Modernization Workbench product. Make sure to close any open MW programs before running the uninstall program.

TASK

1. Choose **Start > Settings > Control Panel**.
2. In the Control Panel window, double-click the **Add/Remove Programs** icon.

3. In the Add/Remove Programs window, select the product you want to uninstall, then click **Remove**. You are prompted to confirm that you want to uninstall the product. Click **Yes**.
4. When the uninstall process completes, it prompts you to restart your computer. Click **Yes** to restart immediately, click **No** if you plan to restart later.

4 Post-Installation Administrative Tasks

Before you can work in MW, you must complete the basic administrative tasks described in this section. You are prompted to perform the first of these tasks, configuring the workbench, when you complete the installation.

Configuring Modernization Workbench

Use the Configuration Manager in the Modernization Workbench Administration tool to configure workbench options and displays for the programming languages, dialects, character sets, and products in use at your site.

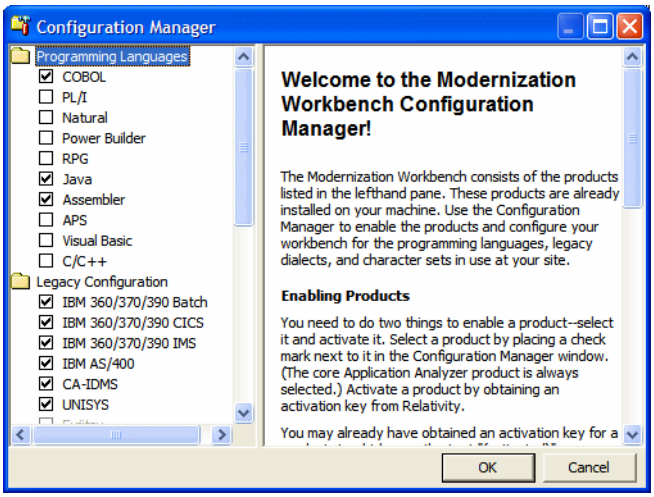
If you configure your workbench for Cobol, for example, you will see only the workbench options and displays appropriate for Cobol modernization. If it turns out that you need to configure your workbench for PL/I as well, you can always come back to the Configuration Manager and select PL/I in addition to Cobol.

TASK

1. Open the Configuration Manager window.
   - If you are installing MW, the Configuration Manager window opens after you finish the installation.
   - If you have previously installed MW and want to reconfigure it, choose **Start > Programs > Micro Focus > Modernization Workbench**

Administration. The Modernization Workbench Administration window opens. In the **Administer** menu, choose **Configure Workbench**. The Configuration Manager window opens.

*NOTE: If the workbench is open, you are prompted to exit. Click **OK**, then close the workbench.*



2. Select each programming language, dialect, and character set in use at your site. Select each workbench product you want to use at your site. The core Application Analyzer product is always selected. Select **Additional Tools** to enable tools not used in typical workbench configurations. When you are satisfied with your choices, click **OK**.

   NOTE: If you modify your workbench configuration, make sure to upgrade workspaces created under the previous configuration.

Licensing

All three Modernization Workbench products (Application Analyzer, Business Rule Manager, and Application Architect) are installed with the workbench. Each product is separately licensed. Follow the instructions in the topics linked below to manage your licenses for MW products.

Application Analyzer Licensing

Application Analyzer users are issued 30-day trial licenses at installation, so that they can work in Modernization Workbench out-of-the-box. A Sentinel RMS license server is installed with the product.

Depending on the licensing model in use at your site, you can manage your license:

- Locally, using the installed Sentinel RMS license server.
- Remotely, using a Sentinel RMS license server that has been configured to manage licenses centrally.

  NOTE: *The remote license server uses the same software as the local license server that is installed with Modernization Workbench.*

Each time you start Modernization Workbench during the trial period, the Micro Focus Licensing System Administration tool notifies you how much of the trial period remains and prompts you to enter a code authorizing a full license:

- If you use a local license server, enter the 16-character license authorization code for Application Analyzer in the **Authorization** field of the Trial License window, then click **Authorize**.
- If you use a remote license server, click **Advanced** on the Trial License window, then click **Change** in the **License server** field. Enter the IP address or server name of the license server, then click **Save**.

NOTE: *You can start the Licensing System Administration tool at any time by choosing* ***Start > Programs > Micro Focus License Manager > License Management System****.*

Your License System Administrator can tell you which licensing model your site uses and provide you with the name of the remote license server if needed. For complete information, including how to configure a remote license server, refer to the help provided with the Licensing System Administration tool.

NOTE: *Application Analyzer licenses provide support for a subset of the parsers available in Modernization Workbench. If you need support for additional parsers, contact support services.*

Business Rule Manager and Application Architect Licensing

Trial licenses are not provided for Business Rule Manager and Application Architect. Before you can work in these products, you must enter the 16-character license authorization code for the product. Each product is separately licensed.

Choose **Start > Programs > Micro Focus License Manager > License Management System**. In the Licensing System Administration tool, click the Authorize tab, then enter the authorization code in the **Enter authorization code** field and click **Authorize**.

Oracle Database Setup

The Oracle database packaged with Modernization Workbench supports up to seven workspace repositories, one repository per schema. The schema names and ODBC data source name (DSN) are predefined.

When you create an MW workspace, you provide three key pieces of information:

- The ODBC data source name (DSN). The data source name for all workspaces that use the Oracle database is RMW_Repository.
- A unique database schema name. Choose from seven predefined schema names:
  - RMWUSER1 through RMWUSER5, which together share a 30GB tablespace. Use these schemas for smaller workspaces that together contain no more than 75,000 source files.
  - RMWUSERM, which is assigned a 24GB tablespace. Use this schema for a workspace that contains between 25,000 and 50,000 source files.
  - RMWUSERL, which is assigned a 30GB tablespace. Use this schema for a workspace that contains between 50,000 and 75,000 source files.

  NOTE: *Tablespace usage may vary based on file complexity, type, programming language, and other characteristics. Tablespace limits are extensible, so check with Micro Focus support services before concluding that an application is too large for an available schema.*

- A unique database user name, which must be the same as the database schema name. The password for the user name is identical to the user name. So the user name and password for the schema RMWUSER1 should both be RMWUSER1.

Each user who connects to the workspace must provide all three pieces of information. For complete instructions on creating and connecting to workspaces, see *Getting Started* in the workbench documentation set.

SQL Server Database Setup

If you use Microsoft SQL Server, you must set up an SQL Server database for each workspace repository you plan to create.

NOTE: *The following instructions assume you are using Microsoft SQL Server Management Studio Express to create an SQL Server database, and Windows Authentication to connect to the server. Check the SQL Server documentation for details on SQL Server authentication.*

TASK

1. Choose **Start > Programs > Microsoft SQL Server 2005 > Configuration Tools > SQL Server Management Studio Express**.
2. In the Connect to Server screen, modify the default values if necessary, then click **Connect**.The Microsoft SQL Server Management Studio Express window opens.

   NOTE: *The server name must be of the form <machine>\<SQL server>.*
3. In the Object Explorer pane, click Databases and choose **New Database...** in the right-click menu. The New Database dialog opens.
4. Select the General page. In the **Database name** field, enter the name of the database for the repository. Modify the logical name and initial sizes of the database and log files if needed, then click **OK**. The new database is displayed in the Object Explorer pane.

   NOTE: *Check the SQL Server Management Studio Express documentation for details on other database settings.*

Upgrading Workspaces

When you modify your workbench configuration, you must *upgrade* every workspace created with the previous configuration.

TASK

1. Choose **Start > Programs > Micro Focus > Modernization Workbench Administration**. The Modernization Workbench Administration window opens.
2. In the Administration window, choose **Administer > Upgrade Workspace**. The Upgrade workspace dialog opens, where you can choose the workspace to upgrade.

5 Troubleshooting the Installation

Follow the instructions in this section to troubleshoot a Modernization Workbench installation.

Uninstalling Oracle

Failure to completely uninstall a previous version of Oracle will cause errors in MW repository operations. Follow the instructions in this section to uninstall a previous version of Oracle.

NOTE: *Uninstalling Oracle should only be undertaken by on-site support services personnel and only with the explicit permission of the client.*

TASK

1. Make a backup of the tnsnames.ora and sqlnet.ora files in the *ORACLE_HOME*\NETWORK\ADMIN folder.
2. Choose **Start > Programs > Oracle Installation Products > Universal Installer**. In the Universal Installer dialog, click **Deinstall Products**, then follow the prompts.

3. Choose **Start > Settings > Control Panel > Add/Remove Programs**. In the Add or Remove Programs window, verify that Oracle has been removed. If Oracle still appears in the list, remove it.

4. Choose **Start > Run**. Type `regedit` in the **Open** combo box and click **OK**. Delete the folders HKEY_CURRENT_USER\SOFTWARE\ORACLE and HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE from the registry.

   ADDITIONAL INFORMATION: Under HKEY_LOCAL_MACHINE\SOFTWARE\ODBC\ODBCINST.INI, there may be keys OraDb*version*_home1, Oracle in OraDb*version*_home2, or other Oracle keys. Delete the registry entries with those keys.

   Under HKEY_LOCAL_MACHINE\SOFTWARE\ODBC\ODBCINST.INI\ODBC Drivers, look for keys Oracle in OraDb*version*_home1 or Oracle in OraDb*version*_home2. Delete the registry entries with those keys. Do not delete the entry with the key Microsoft ODBC for Oracle.

5. Choose **Start > Settings > Control Panel > System**. In the System Properties window, click the Advanced tab, then click **Environment Variables**. In the System variables group box, delete the environment variables ORACLE_HOME and TNS_ADMIN. Edit the PATH environment variable to remove any folder path that contains the string `Oracle`. Edit the PATH, CLASSPATH, and PERL5LIB environment variables to remove any folder path that contains the string `Oracle`.

6. Choose **Start > Settings > Control Panel > Administrative Tools > Services**. In the Services window, verify that Windows services with names starting with `Oracle` are not running. Some examples of such services are OracleJobSchedulerORCL and OracleOraDb*version*home1TNSListener. If the services still are running, stop them.

7. Delete the \Oracle and \Program Files\Oracle folders on your hard drive.

Troubleshooting Oracle Errors

Follow the instructions in this section to troubleshoot common Oracle errors.

ORA-01034: ORACLE not available; ORA-27101: shared memory realm does not exist

These errors occur because the Oracle instance is not running. You could be receiving ORA-27101 because you tried to modify database parameters such as SGA size.

ORA-12154: TNS could not resolve service name

Describes how to troubleshoot ORA-12154.

This error is always related to your local copy of tnsnames.ora. Check the file in *REPOSITORY_CLIENT_HOME*\RMW Repository Client. It should contain the following entry:

RMW_REPOSITORY=
(DESCRIPTION =
(ADDRESS_LIST =
(ADDRESS = (PROTOCOL = TCP)(HOST=*hostname*)(PORT = 1521))
)
(CONNECT_DATA = (SID=RTI))
)

where *hostname* is the TCP/IP host name of the machine hosting the MW repository.

If tnsnames.ora exists in the correct location and does not contain syntax errors, then this error indicates that another Oracle version is installed on the machine. Uninstall the Oracle version.

ORA-12170: TNS: Connect timeout occurred

This error occurs because of firewall issues, database down, listener down, network trouble, and the like. Contact your system administrator or on-site support services personnel for assistance.

ORA-12505: TNS: listener could not resolve SID given in connection description

This error occurs when the SID specified in the connection was not found in the listener's tables. Check listener.ora in *ORACLE_HOME*\NETWORK\ADMIN on the machine hosting the MW repository. It should contain the following entries:

```
SID_LIST_LISTENER =
(SID_LIST =
(SID_DESC =
(SID_NAME = PLSExtProc)
(ORACLE_HOME = C:\Oracle\RMW21_10201\home)
(PROGRAM = extproc)
)
)
LISTENER =
(DESCRIPTION_LIST =
(DESCRIPTION =
(ADDRESS = (PROTOCOL = IPC)(KEY = EXTPROC1))
(ADDRESS = (PROTOCOL = TCP)(HOST = hostname)(PORT = 1521))
)
)
```

If listener.ora exists in the correct location and does not contain syntax errors, then this error indicates that another Oracle version is installed on the machine. Uninstall the Oracle version.