webMethods Fix Manager User's Guide

Version 1.0

Prepared by

Igor Androsov.

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Overview

The webMethods Fix Manager 1.0 is a tool that enables users of webMethods platform to simplify and automate fix managements for various environments and configurations.

The webMethods Fix Manager designed to manage all required operations related to fix installation.

- It automates the standard manual process of fix installation and de installation.
- It provides ability to organize fixes into logical groups (Profiles) to match specific installation environment.
- It provides backup and restore facility for Integration Server packages to seamlessly install and uninstall sets of fixes on multiple environments where webMethods is installed.
- It provides fix analysis facility that inspects the webMethods environment and compares it to configured profile set of fixes and shows a visual picture of status for currently installed fixes.
- It provides intuitive user interface to manage fixes.
- It provides command line interface for installation of fixes.
- It provides multinational language support.
- It keeps a detailed logs of all operations performed on webMethods environment.

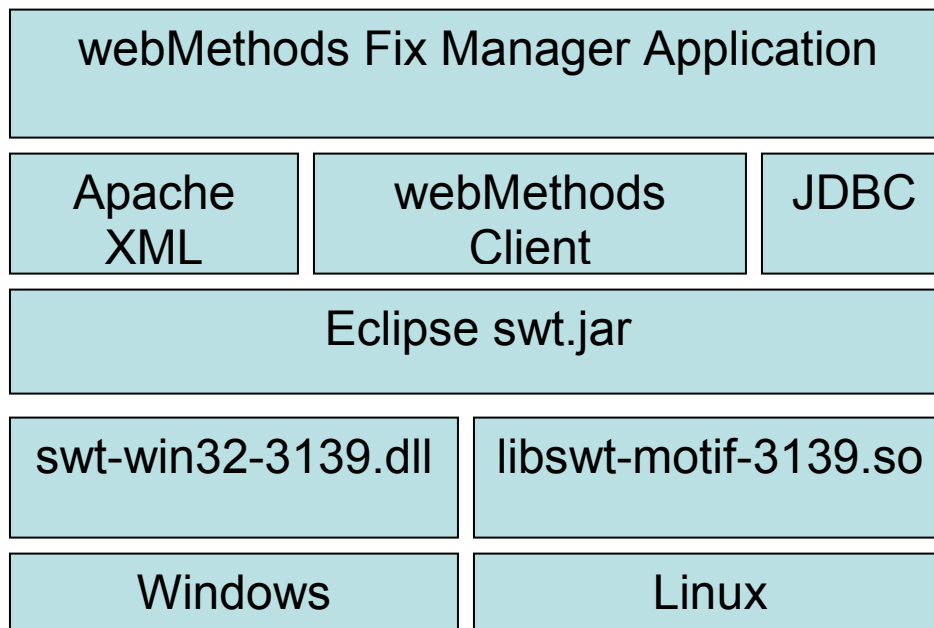Following list of webMethods products supported by the Fix Manager:

- Integration Server 6.x (all respective packages and components)
- Developer 6.x
- Broker 6.x
- TN Console
- Modeler

Purpose

This document describes webMethods Fix Manager features and its use.

Design and Architecture

The webMethods Fix Manager is Java application based on Eclipse SWT. It requires Eclipse SWT binaries for target platform in GUI mode. It can also be used in console mode where Display is not available only to install Profiles.

webMethods Fix Manager Application		
Apache XML	webMethods Client	JDBC
Eclipse swt.jar		
swt-win32-3139.dll	libswt-motif-3139.so	
Windows	Linux	

NOTE: When using console mode the configuration of fixes must be performed manually by updates to ini.xml file. Visual GUI configuration only available on OS with windowing display capability. Analyzer is not available in console mode.

Installation and Configuration

webMethods Fix Manager is distributed as an executable jar file and supported on all platforms which support webMethods Integration Server and JVM. The distribution includes only application binary and basic configuration files.
Required dependent libraries must be downloaded and installed separately.

Installation on Windows

1. Unzip WmFixManagerInstaller.zip into some temporary directory on local drive.

2. Run WmFixManagerInstaller.exe windows installer on the system where webMethods platform is installed.

3. During installation select target directory where WmFixManager is to be installed. Recommended location is webMethods platform home directory.

4. Installer will create required directories and copy application files to target system and create start menu shortcut to run the program from Windows Start menu.
NOTE: WmFixManager is java program and in order to execute it in Windows OS directly Windows Explorer must be configured to run java jar files. If this configuration is not available for any reason user can run the utility from command line using run.cmd command file provided with installation.

If user downloaded a complete distribution file, it includes all supporting libraries and after installation process is complete no further process is required. The webMethods Fix Manager can be executed at this time.
If distribution file downloaded has only WmFixManager binary user must add required dependent libraries manually. To download and configure all dependencies follow steps 5 through 7.

5. After setup is completed user must add required dependency libraries to new installation.
Following set of libraries must be available to run this program:
webMethods Client libraries:
client.jar,
entbase.jar,
entcertlist.jar,
entcms.jar,
entjsse.jar,
entmisc.jar

The webMethods libraries can be copied directly from WM platform installation, example: <IS dir>/lib/client.jar.

JDBC Driver for database used by webMethods platform:
Oracle - classes12.jar
JDBC driver for target database can be downloaded or copied form database installation directory.

Apache XML parser: xerces.jar <xerces-J-bin.1.0.0.zip>

Apache XML parser is open source library and can be downloaded from:
http://xerces.apache.org/xerces2-j/download.cgi or archive:
http://archive.apache.org/dist/xml/xerces-j/old_xerces1

Eclipse SWT library: swt.jar
Current version of Eclipse SWT support library is 3.1.2
Eclipse SWT library is open source and can be downloaded from:
http://download.eclipse.org/eclipse/downloads/drops/R-3.1.2-200601181600/index.php
SWT provides several components, native binaries and jar file. Only swt.jar and native
binary files are required for this tool.

All jar files must be placed in <WmFixManager App>/lib directory.

6. Eclipse SWT requires target platform OS native library for GUI components. For
windows it is a dynamically linked library (dll) file, for Unix it is shared library (so) files.
Following Eclipse library must be installed:
Native Eclipse SWT library: swt-win32-3139.dll for windows or libswt-motif-2049.so
for Linux. Native library must be placed in application home directory where
WmFixManager_1.0.jar is located.

For other platforms support visit Eclipse website http://www.eclipse.org

7. At this point the installation is complete and user can proceed to set up his fix
configurations for target environment.

Installation on Unix

1. Unpack WmFixManagerInstall.tar into selected directory on local drive. This step will
create fix manager directory structure and copy all files.

2. Update run.sh script based on local system. Set JVM home directory and application
home to run this script.

3. The preinstalled ini.xml sample file uses default paths that must be updated by user to
reflect actual location for fix archive and target directory.

4. I installation archive file was complete set no further configurations is required.
However, if archive contain only webMethods Fix Manager binary user need ot
download and install all supporting libraries for target platform. Follow steps 5 through 7
to complete the installation and configuration of the product.

Note: For command line execution read section: Running Fix Manager in Console mode
of this document.

Getting Started on Fix Management

After installation of webMethods Fix Manager user can start configuration of fixes and manage webMethods platform. The installation provides a sample fix file and also creates a basic webMethods directory structure for simple test. However, to manage real environment user must have set of actual fixes for webMethods that he intends to apply and manage on particular environment.

The webMethods Fix Manager can use any directory as fix repository. User must create a directory and copy all required fix files in this location to serve as repository of fixes on this local environment.

webMethods Fix Manager intuitive user interface allows users to organize multiple fixes into logical tree hierarchy of Profiles and fixes.
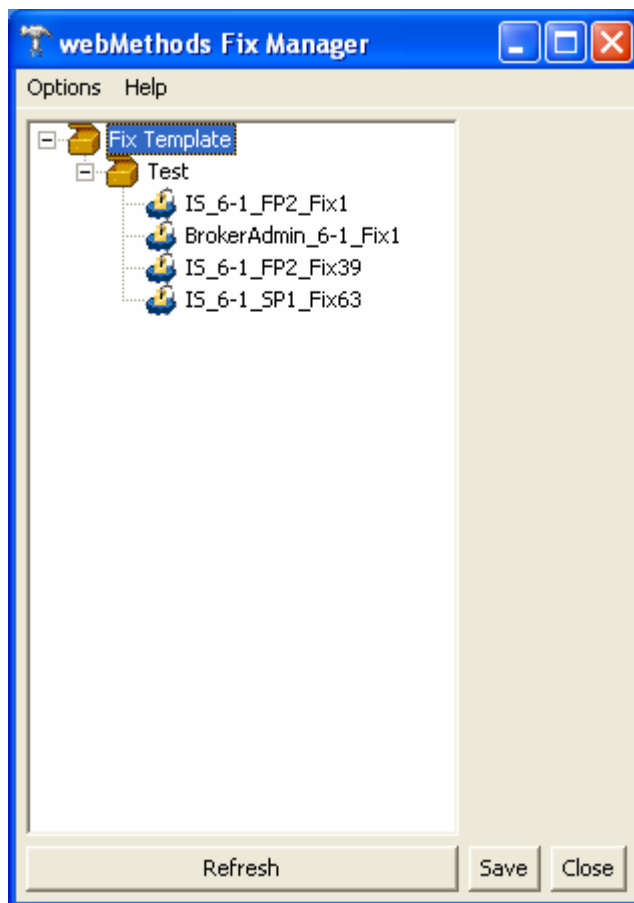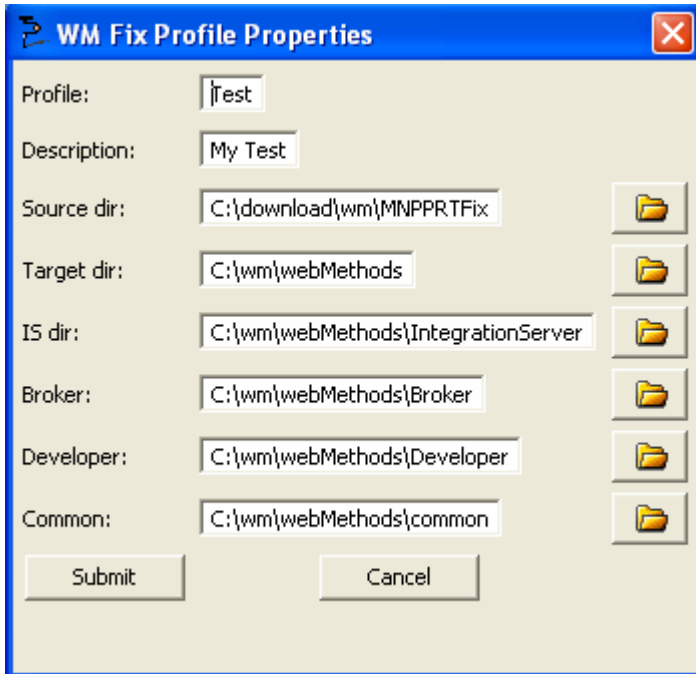

Fix Profile Configuration Properties

The webMethods Fix Manager organizes fixes into logical groups called Profiles. Each profile represents actual webMethods installation and has properties describing that environment. Some of the properties indicate profile name used as identifier, others indicate installation directory for webMethods products. Profiles can contain any number of fixes for environment. And Fix Manager can contain any number of profiles. Depending on use cases user may setup multiple profiles targeting same environment. It may be used to test specific fixes or for incremental fix installation or other organizational requirements.

To create new profile or edit existing one use tree object and popup editor menu. Right click on the top/root tree node named Fix Template to add new profile or select and right click mouse button on specific profile tree node to edit existing one.
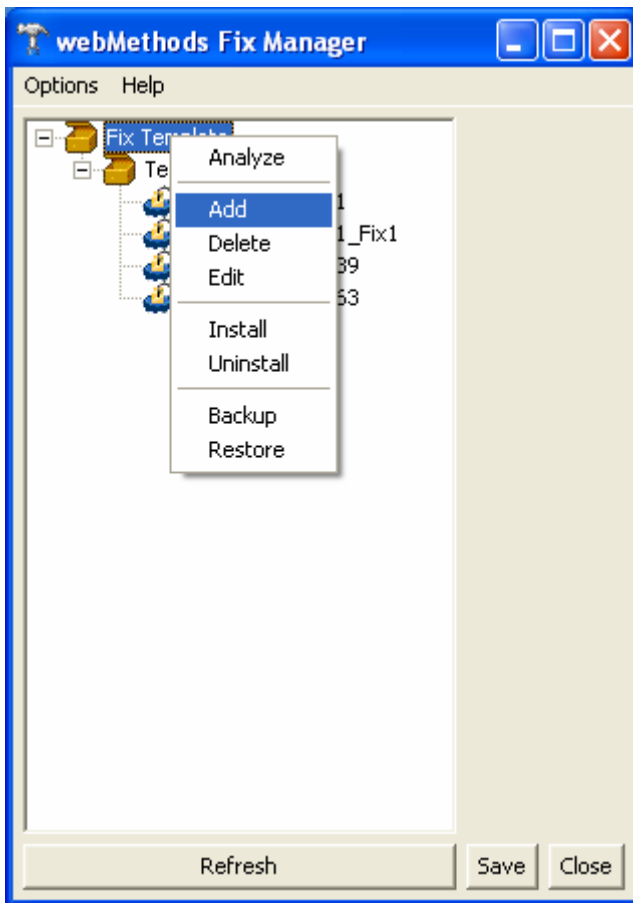

Using profile property dialog user can configure details for target environment profile specifying Profile name, description, fix source repository directory and target directories for webMethods products installed on target system.

Fix Configuration Properties

Each webMethods fix has specific set of instruction for its installation. User can configure these instructions in webMethods Fix Manager by adding and selecting fixes and building profile configuration.

To add new fix right click on the Profile tree node and select Add from popup menu. On the Fix Property dialog select a fix name from drop down list and configure its target directories, install options and database settings as required.
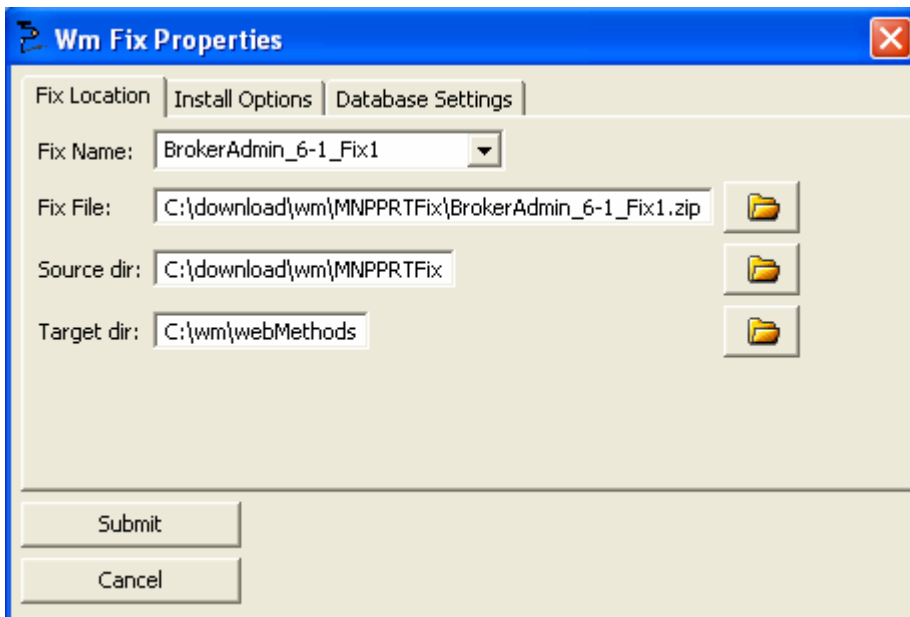
Basic rule to select target directory for a fix is to use fix instruction provided by webMethods and set target directory indicated by the instructions. There are some exception to this rule that depend on the fix and its requirements.
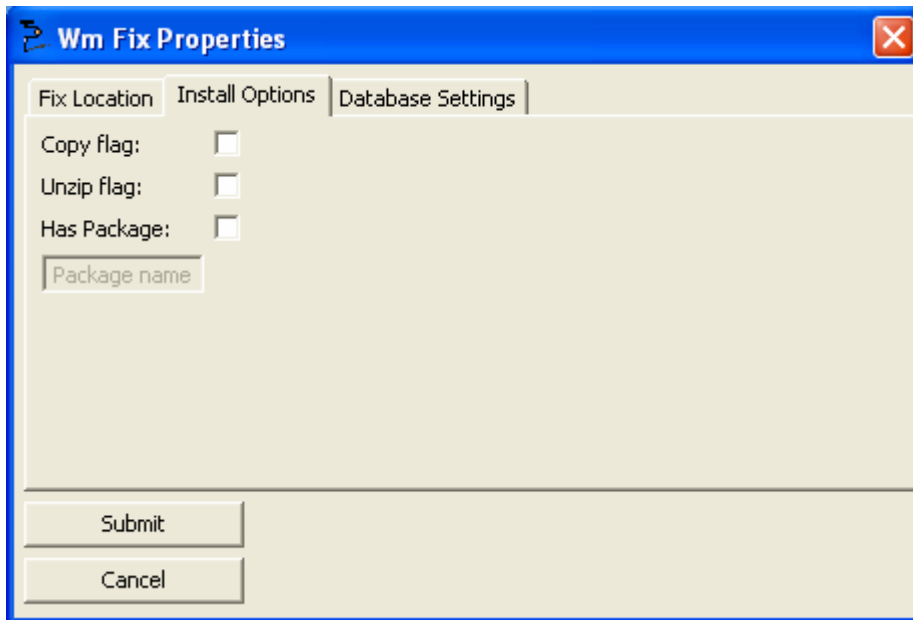
Setting Fix Install Options

Each fix has set of installation options required to be set on Install Options property panel. Depending on the fix it may be a combination of options required.
Copy flag – indicates that fix is available as jar file or other format and only need to be copied for installation.
Unzip flag – indicates that fix file is zip archive that need to be unpacked into target location and may contain several packages or files to be installed.
Has package – indicates that fix includes at least one or more integration server packages that must be installed. By selecting this option Fix Manager will inspect the fix archive in repository and search inside for IS packages. If packages are found it will display the package name in the entry below. This option will direct Fix Manager to update existing IS packages with new ones provided by the fix. During installation packages will be unpacked and installed automatically into target IS directory.
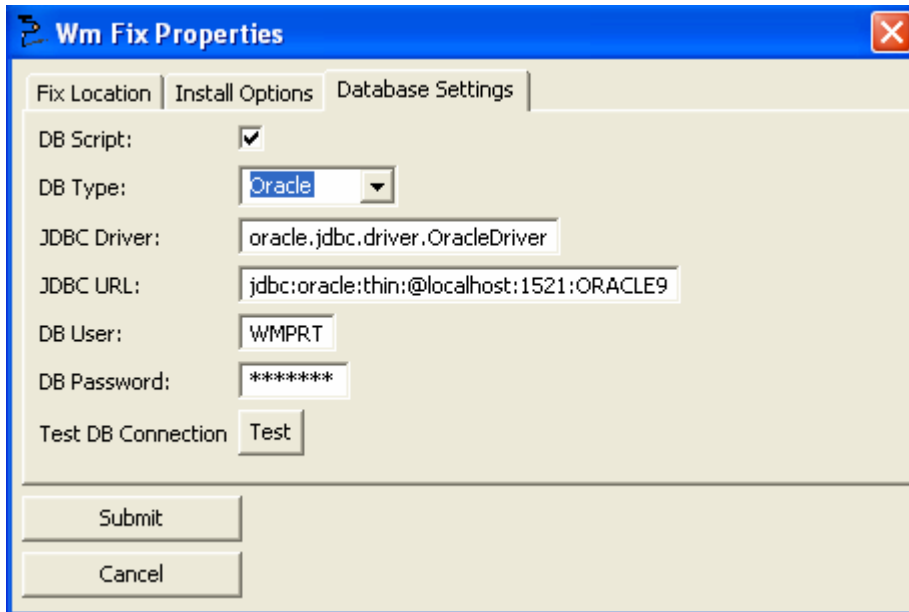

Sometime fix is distributed as IS package zip file which usually installed by copying to replicate/inbound directory of Integration Server. In this case user must specify target location for this fix as <IS Home>/replicate/inbound, then select Install Options to Copy the file to target location and also select Has Package check box. This operation will check zip archive to find target package name and display it in entry below. In case package name could not be found inside zip archive user must enter target package name manually to ensure correct fix installation.

Fix Database Settings

Some of the fixes include database update files that must be run on the database to update tables or other DB objects. Based on fix requirements user can configure database settings which typically has to match Integration Server main JDBC Pool settings to run these update files automatically during fix installation.

During fix installation process webMethods Fix Manager will create detailed log indicating operation that took place and their status for audit trail and confirmation or error resolution.

To edit existing fix properties right click on the fix tree node and select Edit popup menu item. In edit mode user can change any settings for existing fix. Note that name of the fix can also be changed as well as its source location. It may be useful in some special situation to correct a fix configuration, but it is not recommended as general practice. Fix name is used as unique identifier and changing its name may cause duplications or inconsistency. There are no reasons to install 2 copies of exact same fix on same environment. The recommended practice is to simply remove unwanted fix and add another one if required.

Installation of Fixes

The webMethods Fix Manager provides user with ability to install individual fix or complete set of fixes included into profile. Install of any fixes required for webMethods components to be shutdown during the process. To install individual fix user can select fix tree node or select a profile node and use Install item of popup menu.

Depending on configuration and fixes the install process may take time. During the process Fix Manager display process progress and shows the log entries indicating activities and changes that taking place.

Uninstall of Fixes

The webMethods Fix Manager provides user with ability to uninstall individual fixes only. Uninstall of fixes can be performed one at the time. Complete set of fixes included into profile cannot be uninstalled. To uninstall full profile user must use backup/restore option. Uninstall of any fixes required for webMethods components to be shutdown during the process. To uninstall individual fix user can select fix tree node and use Uninstall item of popup menu.
Depending on configuration and fixes the uninstall process may take time. During the process Fix Manager display process progress and shows the log entries indicating activities and changes that taking place.

Backup Restore

Backup and restore options are provided specifically for Integration Server. It is recommended to take a backup of target environment before installing any fixes.
Use Fix Manager Backup menu option will save all webMethods Integration Server standard packages such as WmRoot, WmPub etc. This is required because many fixes make updates or install new versions of these packages incrementally as you install fixes. Such incremental updates make uninstall or rollback of these fixes almost impossible without a backup copy of the original packages.
Backup is only available for complete profile. This process will create a backup directory in <IS>/replicate based on Profile name and copy all standard packages from IS installation to this new location as backup. This data will be used to restore original packages.
        As an example, user has installed a set of Integration Server fixes on the environment, and at some point need to uninstall some of these fixes. The safe procedure to do this is to select profile and run restore option. This will restore all original packages before fixes were installed. After this user can select and install individual fixes that may be still required. Another action may be changing the profile by removing unwanted fixes and reinstall complete profile. This process will ensure that all incremental package updates for all required fixes are applied correctly and in order.

Analyzer

webMethods Fix Manager Analyzer feature enables users to test their environment fixes against their configuration and visually identify fixes that are installed, partial or not installed. Analyzer can test individual fix or set of fixes in Profile. To run the analyzer user must have configured at least 1 fix for target environment.

Select a profile or fix node on the tree right click mouse button and using popup menu select Analyze item. This action will start the analyzer process. This may take several seconds or minutes depending on number of fixes to be tested and the environment.
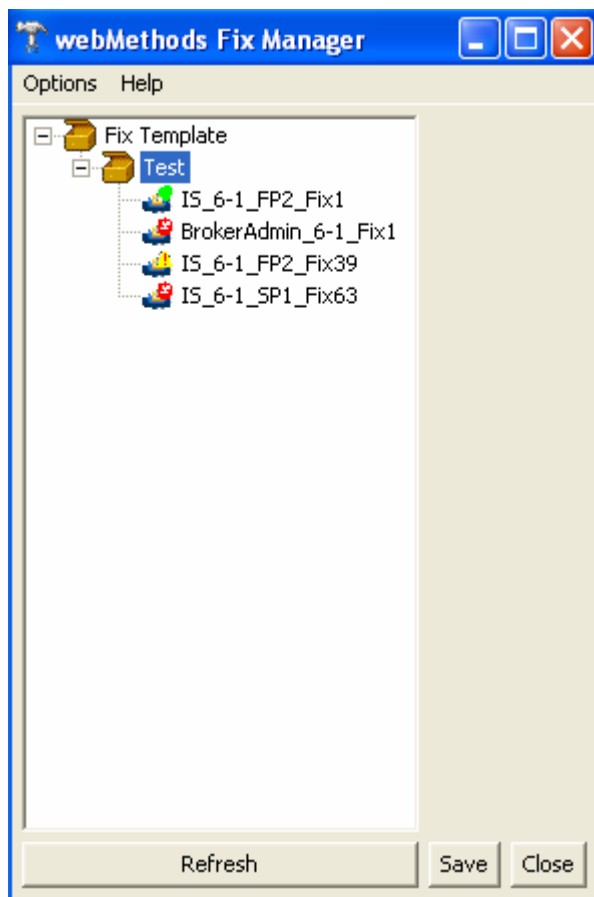
Note: when running the analyzer Fix manager uses main thread and program may appear to be not responding while analysis is in progress.

After analyzer completed the test it will update user interface tree of fixes with appropriate icons to show the status of configured fixes:

Installed – green mark
Not installed – red mark
Partial install – yellow warning sign

NOTE: The uninstall option as a rule does not remove database scripts that are part of the fix. This does not cause any harm however, since these files are left on the environment analyzer will flag such fixes as warnings or partial install. This is done to alert the user that after uninstall there may be some manual operations still required to completely remove the fix form the system. Some database operations do not provide scripts to rollback the changes. Such updates may need to be done manually by user whil inspecting update db scripts for changes made to database.

Running Fix Manager in Console Mode

The webMethods Fix Manager provides console mode of execution. Console mode can be used to only install individual profile. Other features are not available in console mode. Configuration of new or existing fixes can be preformed manually by updates to ini.xml file, for detail instructions consult Manual Configuration section of this document. Following example of Fix manager command line:

java -jar WmFixManager_1_0.jar -console -cnf ini.xml -logdir <log> -audit -logtofile - profile "Test"

Command line options for console mode:
console - Indicates that Fix Manager will run in console mode
cnf – location and name of configuration file to initialize fix manager
logdir – directory to write log files to if audit log is selected
audit – perform audit log
logtofile – write log to file
profile – name of configured profile to be installed

Multilingual Support

webMethods Fix Manager provides support for multilingual versions of the program. User can select and set language preference for the user interface and log data.
To change language use Options menu and select Language item. On the language selection panel select available language from dropdown list and click OK to save it. The interface will change all if its display value into selected language dynamically without restarting the program. This dynamic feature allows user to switch languages at runtime on any OS locale where the computer is installed.
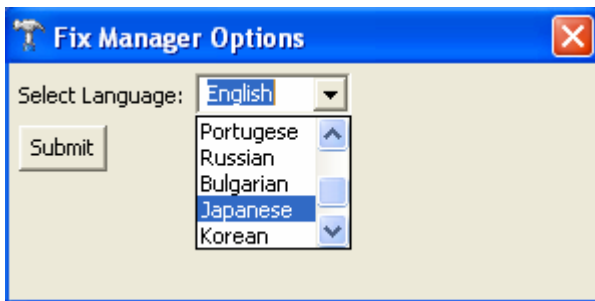
webMethods Fix Manager install comes with several languages upon installation. Supported languages are: English, Japanese, Russian and Portuguese.
In addition to available languages user can add new language support by translating text pages and adding new language to configuration. New languages are being added upon requirements.

Add new Language Support

To add new language support to webMethods Fix Manager user has to provide a translation of resource text file and add new language to program configuration. Language configuration file is located in <Wm Fix Manager Home>/config directory, file name: language.xml. Update xml data with new language and save the file in same location as following example add French language support:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<root>
        <language>
                <name>English</name>
                <desc>English US</desc>
                <active>true</active>
                <cnffile>config/lang/en.lng</cnffile>
        </language>
        <language>
                <name>French</name>
                <desc>French</desc>
                <active>false</active>
                <cnffile>config/lang/french.lng</cnffile>
        </language>
</root>
```

The translation text is located in <Wm Fix Manager Home>/config/lang directory and stored as regular text file, named by language name, example: chinese.lng or french.lng. This naming convention is not limitation, user may select different file names and locations, but in that case the above language configuration must be changed to reflect those changes. These files are text resource files to be translated. The language support for standard ASCII character set languages can be translated in ASCII mode. For other languages using Unicode or DBCS characters such as Chinese, Korean, Japanese, Russian or Arabic languages the translation process requires an extra step of encoding. For double byte character set languages user must translate a text file and save it as Unicode to preserve the format and then encode translated file with JDK tool native2ascii.exe.
To perform this conversion here is example command:

native2ascii –encoding Unicode <translated source file name> <new encoded file>

The new encoded file saves text data in hex values that are not readable. This file must be used as new language resource file in this format. Copy new encoded file into:
<Wm Fix Manager Home>/config/lang directory to enable new language support.

Customizing User Interface

webMethods Fix Manager has ability to customize the look of the user interface by changing graphic icons used to represent objects. User can select completely custom set of icons and replace the default images if required.
To change images user need to provide a set of new images in gif file format, name them exactly same file names as default set, and copy new images to <Wm Fix Manager Home>/images directory. Restart Fix Manger for changes to take effect.

Manual Configuration

Fixes and Profiles for webMethods Fix Manager can be manually configured if needed. Manual configuration is required for console mode in case Windows interface is not available for target platform or cannot be accessed. The standard user interface allows user transparently add, remove and edit Profiles and fix properties. This section describes how to configure same properties manually.

All of the profile and fix properties are saved in single XML file normally located in install directory for Fix Manager: ini.xml. User can modify this file manually to change these properties. This file serves as fix metadata of installation instructions.
Main root tag of the xml is a container for other data. Profile tag is a list may contain 1 or more profiles. Profile stores fix objects and have properties representing the target environment.

Example file bellow represents a sample configuration with all options.

```
<?xml version="1.0" encoding="UTF-8"?>
<root>
        <profile>
                <name>Test</name>
                <desc>My Test</desc>
                <sourcedir>C:\ WFM \samples\fixsrc</sourcedir>
                <trg>C:\ WFM \samples\webMethods</trg>
                <trg_dev>C:\ WFM \samples\webMethods\Developer</trg_dev>
                <trg_broker>C:\ WFM \samples\webMethods\Broker</trg_broker>
                <trg_is>C:\WFM\samples\webMethods\IntegrationServer</trg_is>
                <trg_common>C:\WFM\samples\webMethods\common</trg_common>
                <fix>
                        <name>IS_6-1_SP1_Fix1</name>
                        <file_name>C:\WFM\samples\fixsrc\IS_Fix1.zip</file_name>
                        <src>C:\WFM\samples\fixsrc</src>
                        <trg>C:\WFM\samples\webMethods\IntegrationServer</trg>
                        <copy>false</copy>
                        <unzip>true</unzip>
```

```
                    <pkg_install>false</pkg_install>
                    <db_script>true</db_script>
                    <db_type>Oracle</db_type>
                    <jdbc_driver>oracle.jdbc.driver.OracleDriver</jdbc_driver>
                    <jdbc_url>jdbc:oracle:thin:@host:1521:SID</jdbc_url>
                    <db_user>user</db_user>
                    <db_password>password</db_password>

            </fix>
        </profile>
</root>
```

User Notes

The webMethods Fix Manager provides intuitive GUI interface to manage fixes and updates. Each webMethods fix must be configured using installation instructions that are provided with fix distribution. Interface organizes fixes into logical Profiles to serve as containers for specific webMethods installation environment. Each Profile requires environment specific properties to be set such as target and source directories where all fixes are located and where they are to be installed.
User can add profiles and fixes by using popup menu. Each fix must be configured individually based on its instructions.