

IBM MobileFirst Platform Foundation V7.1.0

*Applying a fix pack for MobileFirst  
Server V7.1.0*



**Note**

Before you use this information and the product it supports, read the information in “Notices” on page A-1.

**IBM MobileFirst Platform Foundation V7.1.0**

This edition applies to version V7.1.0 of IBM MobileFirst Platform Foundation and to all subsequent releases and modifications until otherwise indicated in new editions.

This edition was updated last on 1 December 2015.

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## Contents

<b>Applying a fix pack . . . . .</b>	<b>1-1</b>	Applying the fix pack with Ant tasks . . . . .	3-6
		Applying the fix pack manually . . . . .	3-7
<b>Running IBM Installation Manager ..</b>	<b>2-1</b>	Updating MobileFirst Operational Analytics . . . . .	3-7
Running Installation Manager in graphical mode	2-1	Applying the fix pack with Ant tasks . . . . .	3-8
Running Installation Manager in command-line		Applying the fix pack manually . . . . .	3-9
mode . . . . .	2-3	Updating MobileFirst Data Proxy . . . . .	3-9
		Applying the fix pack with Ant tasks . . . . .	3-9
		Applying the fix pack manually . . . . .	3-10
<b>Updating the application server. . . . .</b>	<b>3-1</b>		
Updating MobileFirst Server Administration		<b>Support and comments . . . . .</b>	<b>4-1</b>
Service, MobileFirst Operations Console, and			
MobileFirst runtime environment . . . . .	3-1	<b>Notices . . . . .</b>	<b>A-1</b>
Applying the fix pack with the Server		Trademarks . . . . .	A-3
Configuration Tool. . . . .	3-3	Terms and conditions for product documentation	A-3
Applying the fix pack with Ant tasks . . . . .	3-4	IBM Online Privacy Statement . . . . .	A-4
Applying the fix pack manually . . . . .	3-5		
Verifying the updates . . . . .	3-5	<b>Index . . . . .</b>	<b>X-1</b>
Updating Application Center . . . . .	3-6		



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## Applying a fix pack

The instructions to apply a fix pack or interim fix on IBM MobileFirst™ Platform Foundation V7.1.0 are provided in the following two main tasks:

- “Running IBM Installation Manager” on page 2-1
- “Updating the application server” on page 3-1 by one of the following ways:
  - With Server Configuration Tool

**Note:** Only for MobileFirst Server applications. Not for Application Center, MobileFirst Operational Analytics, and MobileFirst Data Proxy.

- With Ant tasks
- Manually



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# Running IBM Installation Manager

## About this task

First, run Installation Manager to update the binary files of IBM MobileFirst Platform Foundation on your disk. Then, update the MobileFirst Server components on your application server by following the steps that are described in “Updating the application server” on page 3-1.

Installation Manager can be run in two ways: by graphical user interface (GUI), or by command-line. The effect of running Installation Manager to apply a fix pack depends on the choice that you made at the initial installation.

If Application Center is installed at the initial installation and deployed to an application server, Installation Manager updates Application Center in the application server when you apply the fix pack. If Installation Manager fails to find Application Center on the application server (such Application Center WAR file is removed), the update fails, and Installation Manager fails to apply the fix pack.

If Application Center is not installed at the initial installation and deployed to an application server, Installation Manager updates only the binary files on your disk. This operation usually does not fail unless an error occurs during the updating of the files. For example, on Windows environment, you run a process (such as Ant task or Server Configuration Tool) inside the MobileFirst installation directory while you apply the update.

**Tip:** To determine whether Application Center is installed with Installation Manager, you can check the registry of Installation Manager.

- If you run Installation Manager in GUI mode, the choice is displayed in the wizard pane when you are at the **Configuration Choice** panel.
- If you do not run Installation Manager in GUI mode, you can look at the content of the `product_install_dir/shortcuts/application-center.sh` file.
  - If it contains the line  
`url='${appserver.root.url} ${appserver.appcenter.console.path}'`, it means that Application Center is not installed by Installation Manager.
  - If it contains a URL that is defined (such as `url='http://localhost:9080/appcenterconsole/'`), it means that Application Center is installed by Installation Manager.

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## Running Installation Manager in graphical mode

### Procedure

1. Run Installation Manager from the user account that is used at the initial installation.

To apply an update, Installation Manager must run with the same list of registry files that are used at the initial installation. The list of Software that is installed and the options that are used during the installation time are stored in those registry files. If you run Installation Manager in administrator mode, the registry files are installed at the system level. In `/var` folder on UNIX or Linux. In `c:\ProgramData` folder on Windows. The location is independent from the user who runs Installation Manager (although root is needed on UNIX and

Linux). However, if you run Installation Manager in single user mode, the registry files are stored by default in the user's home directory.

2. Select **File > Preferences**.

Enter the repository of IBM MobileFirst Platform Foundation V7.1.0 and also the repository of the fix pack if you plan to make a fresh installation of V7.1.0 with a fix pack or interim fix. The fix packs are delivered as delta installers and cannot be installed if the base version is not among the listed repositories.

For example, if you decompress the base installer in *710\_installer\_directory* folder, the repository file to enter is *710\_installer\_directory/MobileFirst\_Platform\_Server/disk1/diskTag.inf*. If you decompress the interim fix file in *ifix\_directory* folder, the repository file to enter is *ifix\_directory/MobileFirst\_Platform\_Server/disk1/diskTag.inf*.

If you plan to update an existing IBM MobileFirst Platform Foundation V7.1.0 (apply a fix pack or interim fix), the repository of product is not needed.

3. After the repositories are entered, click **OK** to close the **Preferences** display.

4. Click **Update** and select the package that you need to update. Installation Manager displays a list of packages. By default, the package to update is named as IBM MobileFirst Platform Server. The name might change due to the following scenarios:

- If you have multiple installations of IBM MobileFirst Platform Server, a suffix might be appended to the package name. For example, IBM MobileFirst Platform Server\_2.
- If you install the product with a version earlier than V6.3.0, the package name uses the name of the product for that version. For example, IBM Worklight for the product name that is installed for V6.2.0, and then upgraded to V7.1.0.
- If the package is not in the list, the cause might be that you did not run Installation Manager with the same user account that was used at the initial installation. Either find the user account that was used to run Installation Manager, or make a fresh installation of the product and the interim fix by clicking **Install** instead of **Update**.
  - If you need to make a fresh installation, but Application Center is already installed with Installation Manager, the procedure does not update Application Center in the application server.
  - If Application Center is installed with Installation Manager, but the package is not found when you click **Update**, then you have to update Application Center manually.

5. Accept the license terms, and click **Next**. You might have to determine whether you need to activate token licensing or not. Token Licensing is a new feature that is introduced with an interim fix released on 15 September 2015 or later.

- If you do not have a contract to use token licensing with the Rational<sup>®</sup> License Key Server, click **Do not activate token licensing**.
- If you activate token licensing, make sure that the Rational License Key Server is configured, and enough tokens can be obtained to run MobileFirst Server and the applications it serves. Otherwise, the MobileFirst Server administration application and the runtime environments cannot be run.

All choices are disabled in the panes, excepted some passwords (databases and server administrator) that you can update if they are modified since the last installation.

6. In the **Thank You** panel, click **Next**. A summary is displayed.

7. Click **Update** to start the update procedure.



## What to do next

“Updating the application server” on page 3-1

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## Running Installation Manager in command-line mode

### Procedure

1. Download the silent install files from [http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v710/Silent\\_Install\\_Sample\\_Files.zip](http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v710/Silent_Install_Sample_Files.zip).
2. Decompress the file, and select 7.1/upgrade-initially-mfpserver.xml file.
  - If you initially installed the product in V6.0.0, V6.1.0 or V6.2.0, select the 7.1/upgrade-initially-worklightv6.xml file instead.
  - If you initially installed the product in V5.x, select this 7.1/upgrade-initially-worklightv5.xml file instead.

The file contains the profile identity of the product. The default value of this identity changes over the releases of the product. In V5.x, it is Worklight. In V6.0.0, V6.1.0, and V6.2.0, it is IBM Worklight. In V6.3.0, V7.0.0, and V7.1.0, it is IBM MobileFirst Platform Server.

3. Make a copy of the file you selected.
4. Open the copied XML file with a text editor or XML editor. Modify the following elements:

- a. The repository element that defines the repository list.

Create a repository entry for the repository of IBM MobileFirst Platform Foundation V7.1.0 and also the repository of the fix pack if you plan to make a fresh installation of V7.1.0 with a fix pack or interim fix. The fix packs are delivered as delta installers and cannot be installed if the base version is not among the listed repositories.

For example, if you decompress the base installer in *710\_installer\_directory* folder, the repository file to enter is *710\_installer\_directory/MobileFirst\_Platform\_Server/disk1/diskTag.inf*. If you decompress the interim fix file in *ifix\_directory* folder, the repository file to enter is *ifix\_directory/MobileFirst\_Platform\_Server/disk1/diskTag.inf*.

If you plan to update an existing IBM MobileFirst Platform Foundation V7.1.0 (apply a fix pack or interim fix), the repository of product is not needed.

- b. Optional: Update the passwords for the database and the application server.

If Application Center is installed at the initial installation with Installation Manager, and the passwords for the database or the application server are changed, you can modify the value in the XML file. These passwords are used to validate that the database has the right schema version, and to upgrade it if it is in a version older than V7.1.0. They are also used to run **wsadmin** for an installation of Application Center on WebSphere® Application Server full profile. Uncomment the appropriate lines in the XML file:

```
<!-- Optional: If the password of the WAS administrator has changed-->
<!-- <data key='user.appserver.was.admin.password2' value='password' /> -->
<!-- Optional: If the password used to access the DB2 database for
Application Center has changed, you may specify it here-->
<!-- <data key='user.database.db2.appcenter.password' value='password' /> -->
<!-- Optional: If the password used to access the MySQL database for
Application Center has changed, you may specify it here -->
<!-- <data key='user.database.mysql.appcenter.password' value='password' /> -->
```

```
<!-- Optional: If the password used to access the Oracle database for
Application Center has changed, you may specify it here -->
<!-- <data key='user.database.oracle.appcenter.password' value='password' /> -->
```

- c. If you have not made a choice before to activate token licensing that is released with an interim fix on 15 September 2015 or later, uncomment the line `<data key='user.licensed.by.tokens' value='false'/>`. Set the value to true if you have a contract to use token licensing with the Rational License Key Server. Otherwise, set the value to false.

If you activate token licensing, make sure that the Rational License Key Server is configured, and enough tokens can be obtained to run MobileFirst Server and the applications it serves. Otherwise, the MobileFirst Server administration application and the runtime environment cannot be run.

**Restriction:** After the decision is made to activate token licensing or not, it cannot be modified. If you run an upgrade with the value true, and later another upgrade with the value false, the second upgrade fails.

- d. Review the profile identity and the installation location. The profile identity and the installation location must match what is installed:
- This line: `<profile id='IBM MobileFirst Platform Server' installLocation='/opt/IBM/MobileFirst_Platform_Server'>`
  - And this line: `<offering id='com.ibm.mobilefirst.foundation.server' version='7.1.0.00-20150913-2345' profile='IBM MobileFirst Platform Server' features='main.feature' installFixes='none' />`
  - To review the profile identity and the installation directories that are known to Installation Manager, you can type the command:  

```
installation_manager_path/eclipse/tools/imcl listInstallationDirectories -verbose
```

- e. Update the version attribute to and set it to the version of the interim fix. For example, if you install the interim fix (7.1.0.0-IF201510051721), replace `<offering id='com.ibm.mobilefirst.foundation.server' version='7.1.0.00-20150913-2345' profile='IBM MobileFirst Platform Server' features='main.feature' installFixes='none' />` by `<offering id='com.ibm.mobilefirst.foundation.server' version='7.1.0.00-20151005-1721' profile='IBM MobileFirst Platform Server' features='main.feature' installFixes='none' />`. Installation Manager does not only use the repositories that are listed in the installation file, but also the repositories that are installed in its preferences. Specifying the version attribute in the offering element is optional. However, by specifying it, you ensure that the interim fix that is defined is the version that you intend to install. This specification overrides the other repositories with interim fixes that are listed in the Installation Manager preferences.

**Note:** For V6.3.0 or earlier, the version number is not the same as the interim fix number. You can find the version number in `ifix_directory/MobileFirst_Platform_Server/disk1/md/repository.xml` file, in the line `<offering id=... version='6.2.0.00-20141005-1729'>`.

5. Open a session with the user account that is used at the initial installation. To apply an update, Installation Manager must run with the same list of registry files that are used at the initial installation. The list of Software that is installed and the options that are used during the installation time are stored in those registry files. If you run Installation Manager in administrator mode, the registry files are installed at the system level. In /var folder on UNIX or Linux. In c:\ProgramData folder on Windows. The location is independent from the user who runs Installation Manager (although root is needed on UNIX and

Linux). However, if you run Installation Manager in single user mode, the registry files are stored by default in the user's home directory.

6. Run the command `installation_manager_path/eclipse/tools/imcl input <responseFile> -log /tmp/installwl.log -acceptLicense`

Where

- `<responseFile>` is the XML file that you edit in 4 on page 2-3.
- `-log /tmp/installwl.log` is optional. It specifies a log file for the output of Installation Manager.
- `-acceptLicense` is mandatory. It means that you accept the license terms of IBM MobileFirst Platform Foundation V7.1.0. Without that option, Installation Manager cannot proceed with the update.

## What to do next

“Updating the application server” on page 3-1



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## Updating the application server

### About this task

IBM MobileFirst Platform Foundation provides several components that you might have installed. Here is a description of their dependencies to update them:

#### **MobileFirst Server Administration Service, MobileFirst Operations Console, and MobileFirst runtime environment**

These three components compose as MobileFirst Server. They must be updated together. In particular, the MobileFirst Server Administration Service and the runtime environment communicate through a JMX API that must be at the same level between those components. The runtime environment might fail to start due to the binary incompatibilities between the JMX API in the Administration Service and the runtime environment.

Although the runtime is provided by your development team and built with MobileFirst Studio or MobileFirst Platform Command Line Interface (CLI), you need to update it when you apply a fix pack. This is because the runtime environment is installed together with a shared Java™ library (`worklight-jee-library.jar`) that might contain fixes. However, it is not needed to apply an interim fix to MobileFirst Studio or CLI to update the runtime environment. For more information about migrating the project WAR file so that it is binary compatible with the `worklight-jee-library.jar` library, see “Updating MobileFirst Server Administration Service, MobileFirst Operations Console, and MobileFirst runtime environment.”

#### **Application Center**

The installation of this component is optional. This component is independent of the other components. It can be run at a different interim fix level than the others if needed.

#### **MobileFirst Operational Analytics**

The installation of this component is optional. The MobileFirst components send data to MobileFirst Operational Analytics via a REST API. It is preferable to run MobileFirst Operational Analytics with the other components of MobileFirst Server of the same interim fix level.

#### **MobileFirst Data Proxy and the MobileFirst OAuth Trust Association Interceptor (TAI)**

The installation of these components is optional. These components communicate with the runtime environment to get and authenticate the OAuth tokens. It is preferable to run these components with the other components of MobileFirst Server of the same interim fix level.

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## Updating MobileFirst Server Administration Service, MobileFirst Operations Console, and MobileFirst runtime environment

### About this task

You can update these components in three ways:

- With Server Configuration Tool
- With Ant tasks
- Manually

The updating procedure depends on the method you used at the initial installation.

#### **The product is installed with Server Configuration Tool**

- You can apply the fix pack with Server Configuration Tool.
- You can apply the fix pack with Ant tasks. Server Configuration Tool can export the Ant files of a configuration by using **File > Export Configuration as Ant files....** When you select this option, you are prompted to select a directory. A subdirectory that is named after the name of the configuration is created in the directory you selected. An Ant file for the Administration Service is saved in this subdirectory. One subdirectory per runtime environment is also created in this configuration directory. It is named after the name of the runtime in the configuration. An Ant file for this runtime is also saved in the subdirectory.
- You can apply the fix pack manually.

#### **The product is installed with Ant tasks**

- You can apply the fix pack with Ant tasks. Use the Ant tasks that are created at the initial installation. This way, you are certain to have the same parameters as the initial installation.
- You can apply the fix pack manually.

#### **The product is installed manually**

- You can apply the fix pack manually.
- An attempt to apply the fix pack with Ant tasks might fail. The target of the Ant tasks to apply a fix pack assume that the installation is made in a certain way.

You need to restart the application server after the update is completed. Applying a fix pack not only updates the WAR files but also updates a shared library (`worklight-jee-library.jar`). As a result, the application servers usually need to be restarted for these changes to take effect.

When the application server starts, MobileFirst runtime environment (the application that replies to the requests of mobile apps) needs some times to be available. The MobileFirst Server Administration Service needs to be started first. Then, the runtime environment contacts the Administration Service to synchronize itself, get the list of adapters and applications it needs to serve. The runtime environment can reply to the mobile apps requests only after this synchronization is complete.

#### **Important:**

- Impact on high availability:

When you stop the runtime application or the server that runs the runtime application, two possible behaviors might happen:

- If the runtime application is configured for session-dependent mode, all sessions, that are connected to the server, are closed after you stop the server. The users might need to reauthenticate. The session-dependent mode is the default mode for the apps that are developed with V7.0.0 or earlier. To avoid this behavior, you can consider duplicating the environment and draining the servers before you stop the servers. For more information, see Rolling upgrade procedure to apply a fix pack to IBM MobileFirst Platform Foundation V7.1.0 in stateful mode.
- If the runtime application is configured for session-independent mode (default mode for the apps that are developed with V7.1.0), there is no impact

on the open sessions when the server stops. However, in some rare cases, the users might experience problems with login on existing session during all the time where the cluster or farm is in hybrid mode.

Management operations must be forbidden until all the cluster or the farm is upgraded. Such operations can be uploading an application or a new version of an adapter, or any operation that is performed from MobileFirst Operations Console or `wladm` command.

- WebSphere Application Server specifics:
  - The user that runs the upgrade needs to have at least the privileges of a Deployer role to update the WAR files and a shared library.
  - The order of operations is important. Make sure that you follow the sequence that is described in the following sections to update the MobileFirst Server Administration component first. Then, the runtime environments. If the runtime environments fail to synchronize with the MobileFirst Server Administration (such as JMX binary incompatibility that is introduced in the fix pack), they would fail to start.

## Applying the fix pack with the Server Configuration Tool Procedure

1. Start the Server Configuration Tool from the product installation that contains the fix pack or interim fix.

To verify that the Server Configuration Tool is the correct version, open the menu **Help > About the Server Configuration Tool**. A dialog appears with the build number. It must match the fix pack that you install with Installation Manager. For example, make sure that the build number of the Server Configuration Tool is `7.1.0.00.20151005-1721` if the interim fix `7.1.0.0-IF201510051721` is installed.

The Server Configuration Tool updates the application server with the WAR files and JAR files that it finds in its installation directory. If you start the Server Configuration Tool from a product installation that does not contain the correct fix pack or interim fix, it will not update the application server to the right level.

2. Select the configuration to update.
3. Select **Configurations > Upgrade a Previous Configuration**. A dialog opens.
  - a. Enter the requested passwords (database / application server).
  - b. Verify the path of the project WAR file (runtime path).

If the path is not to the current project WAR file produced by your development team, update the path. This WAR file is to be migrated (to be binary compatible with the `worklight-jee-library.jar` of the fix pack or interim fix) and redeployed to the application server. The base name of the project WAR file must be the same as the one that is previously installed.
  - c. Click **OK**.
  - d. The upgrade starts. The Server Configuration Tool connects to the database to verify that they are at the right version level. If they are not at version 7.1, it upgrades them.
4. Optional: Alternative method to apply a fix pack without contacting the database:
  - a. Select a configuration.
    - 1) Select **Configurations > Replace Administration Service WAR files (use this to apply a fix pack)...** The configuration wizard opens for you to update some passwords if needed.

- 2) Click **OK** and the configuration details panel appears.
- 3) Click **Update WAR...**
- b. In the tree view, expand **Runtime environments**. For each runtime, do the following steps:
  - 1) Select the runtime in the tree view.
  - 2) Select **Runtimes > Replace project WAR File...** The runtime wizard opens for you to update the database and application server passwords if needed.
  - 3) Verify the path of the project WAR file. If the path is not to the current project WAR file produced by your development team, update the path. This WAR file is to be migrated (to be binary compatible with the `worklight-jee-library.jar` of the fix pack or interim fix) and redeployed to the application server. The base name of the project WAR file must be the same as the one that is previously installed.
  - 4) Click **OK** and the runtime environment configuration description panel appears.
  - 5) Click **Update WAR...**
5. Restart the application server.

## Applying the fix pack with Ant tasks

### About this task

Run the `minimal-admupdate` target to update the Administration Service WAR file. Then, run the `minimal-update` target to update the runtime WAR file and the `worklight-jee-library.jar` library. Restart the application server for these updates to take effect.

### Procedure

1. Use the Ant files that are used at the initial installation. This way, you are certain to have the same parameters as the initial installation.
  - a. Open the Ant file and verify the value of the `worklight.server.install.dir` property.

Make sure that `worklight.server.install.dir` points to the installation of the product that contains the interim fix. The Ant tasks update the application server with the WAR files and JAR files that are found in this installation directory. If the property points to an installation without the interim fix, the update to the application server is not to the right level. To verify that the product installation directory contains the interim fix, open `product_install_dir/README.html`. This file contains the build number. For example, if interim fix `IFIX 7.1.0.0-IF201510051721` is installed, the build number in the `README.html` file must contain this line: `Build number: IMF 00-20151005-1721`.
  - b. Verify the value of the `worklight.project.war.file` property in the Ant file.

If the path is not to the current project WAR file produced by your development team, update the path. This WAR file is to be migrated (to be binary compatible with the `worklight-jee-library.jar` of the fix pack or interim fix) and redeployed to the application server. The base name of the project WAR file must be the same as the one that is previously installed.
  - c. Verify the passwords.



The Ant file might contain `*****` as value for the passwords. You need exactly 12 stars (`*****`) if you want the password to be prompted interactively (such as during the deployment on WebSphere Application Server).

If the value is defined in the Ant file, verify that the passwords are still up to date.

2. Run the `minimal-admupdate` target to update the MobileFirst Server Administration Service and MobileFirst Operations Console WAR files. For example,

```
product_install_dir/shortcuts/ant -f your_ant_file.xml minimal-admupdate
```

3. Run the `minimal-update` target to update each MobileFirst runtime. For example,

```
product_install_dir/shortcuts/ant -f your_ant_file.xml minimal-update
```

This `minimal-update` target makes a copy of the project WAR file that is specified by the property `worklight.project.war.file` and migrates the copy so that it is binary compatible with the new `worklight-jee-library.jar` library. It also installs this copy of the WAR file into the application server and updates the `worklight-jee-library.jar` library.

4. Restart the application server for these updates to take effect.
5. Repeat this operation for all the servers of a farm.

## Applying the fix pack manually

### Procedure

1. Locate the WAR and JAR files of the fix pack or interim fix. The new versions of these files that you need to update are in `product_install_dir/WorklightServer` folder.
2. Replace the `worklightadmin.war` and `worklightconsole.war` files in your application server.

**Note:** For WebSphere Application Server full profile, make sure that the configured values of the JNDI properties are not erased.

3. Replace the `worklight-jee-library.jar` library.
4. Make sure that the project WAR file (MobileFirst runtime WAR file) is binary compatible with the updated `worklight-jee-library.jar` library.
  - a. Find the most current version of the project WAR file that is published by your development team.
  - b. Migrate the project WAR file as described in Migrating a project WAR file for use with a new MobileFirst Server.
  - c. Replace the project WAR file in your application server.
  - d. On WebSphere Application Server Network Deployment, do a full synchronization of the servers.
5. Restart the application servers for these updates to take effect.

## Verifying the updates

### Procedure

1. Log in to MobileFirst Operations Console.
2. Select the menu **Hello, your\_name** > **About** on the upper right of the window.
3. Verify the version. It must match the fix pack or interim fix version that is installed.

For example, if the interim fix 7.1.0.0-IF201510051721 is installed, the version displays in **About** must be Server version: 7.1.0.00.20151005-1721.

4. Run **wladm** command with **show versions** command to verify the version of the `worklight-jee-library.jar` library. In the output, the value of `productVersion` and the value of `serverVersion` for each runtime environment ought to correspond to the fix pack or interim fix version. For more information about the commands, see *Administering MobileFirst applications through the command line and Commands for troubleshooting*.

---

## Updating Application Center

### About this task

You can update this component in three ways:

- With Installation Manager
- With Ant tasks
- Manually

The updating procedure depends on the method you used at the initial installation.

#### The component is installed with Installation Manager

Application Center is automatically upgraded when you run Installation Manager to update your installation. There is no further action required.

#### The component is installed with Ant tasks

- You can apply the fix pack with Ant tasks. Use the Ant tasks that are created at the initial installation. This way, you are certain to have the same parameters as the initial installation.
- You can apply the fix pack manually.

#### The component is installed manually

- You can apply the fix pack manually.
- An attempt to apply the fix pack with Ant tasks might fail. The target of the Ant tasks to apply a fix pack assume that the installation is made in a certain way.

## Applying the fix pack with Ant tasks

Run the `minimal-update` target to update the Application Center service and the Application Center console WAR files.

### Procedure

1. Use the Ant files that are used at the initial installation. This way, you are certain to have the same parameters as the initial installation.
  - a. Open the Ant file and verify the value of the `worklight.server.install.dir` property.

Make sure that `worklight.server.install.dir` points to the installation of the product that contains the interim fix. The Ant tasks update the application server with the WAR files and JAR files that are found in this installation directory. If the property points to an installation without the interim fix, the update to the application server is not to the right level. To verify that the product installation directory contains the interim fix, open `product_install_dir/README.html`. This file contains the build number. For

example, if interim fix IFIX 7.1.0.0-IF201510051721 is installed, the build number in the README.html file must contain this line: Build number: IMF 00-20151005-1721.

b. Verify the passwords.

The Ant file might contain `*****` as value for the passwords. You need exactly 12 stars (`*****`) if you want the password to be prompted interactively (such as during the deployment on WebSphere Application Server).

If the value is defined in the Ant file, verify that the passwords are still up to date.

2. Run the `minimal-update` target to update Application Center. For example, `product_install_dir/shortcuts/ant -f your_ant_file.xml minimal-update`

This `minimal-update` target updates the WAR files of Application Center service and the Application Center application.

3. Restart the application server for these updates to take effect.

**Note:** On WebSphere Application Server full profile, it is sufficient to restart the Application Center applications.

## Applying the fix pack manually

### Procedure

1. Locate the Application Center WAR files. The new versions of these files that you need to update are in `product_install_dir/ApplicationCenter/console` folder.
2. Replace the `appcenterconsole.war` and `applicationcenter.war` files in your application server.

**Note:** For WebSphere Application Server full profile, make sure that the configured values of the JNDI properties are not erased.

3. On WebSphere Application Server Network Deployment, do a full synchronization of the servers.
4. Restart the application servers for these updates to take effect.

---

## Updating MobileFirst Operational Analytics

### Before you begin

On WebSphere Application Server, applying a fix pack creates a significant peak of memory usage in the heap. If the server has insufficient memory heap, this might cause `OutOfMemory` issues, and seriously impact the performance of the application server.

Before you perform the following procedure, verify that your server has the memory settings that are described at [Setting up a production cluster](#).

### About this task

You can update this component in two ways:

- With Ant tasks
- Manually

The updating procedure depends on the method you used at the initial installation.

#### The component is installed with Ant tasks

- You can apply the fix pack with Ant tasks. Use the Ant tasks that are created at the initial installation. This way, you are certain to have the same parameters as the initial installation.
- You can apply the fix pack manually.

#### The component is installed manually

- You can apply the fix pack manually.
- An attempt to apply the fix pack with Ant tasks might fail. The target of the Ant tasks to apply a fix pack assume that the installation is made in a certain way.

## Applying the fix pack with Ant tasks

Run the `minimal-update` target to update the MobileFirst Operational Analytics service and the MobileFirst Operational Analytics console WAR files.

### Procedure

1. Use the Ant files that are used at the initial installation. This way, you are certain to have the same parameters as the initial installation.
  - a. Open the Ant file and verify the value of the `worklight.server.install.dir` property.

Make sure that `worklight.server.install.dir` points to the installation of the product that contains the interim fix. The Ant tasks update the application server with the WAR files and JAR files that are found in this installation directory. If the property points to an installation without the interim fix, the update to the application server is not to the right level. To verify that the product installation directory contains the interim fix, open `product_install_dir/README.html`. This file contains the build number. For example, if interim fix `IFIX 7.1.0.0-IF201510051721` is installed, the build number in the `README.html` file must contain this line: `Build number: IMF 00-20151005-1721`.

- b. Verify the passwords.

The Ant file might contain `*****` as value for the passwords. You need exactly 12 stars (`*****`) if you want the password to be prompted interactively (such as during the deployment on WebSphere Application Server).

If the value is defined in the Ant file, verify that the passwords are still up to date.

2. Run the `minimal-update` target to update MobileFirst Operational Analytics. For example,

```
product_install_dir/shortcuts/ant -f your_ant_file.xml minimal-update
```

This `minimal-update` target updates the WAR files of MobileFirst Operational Analytics service and the analytics console.

3. Restart the application server for these updates to take effect.

**Note:** On WebSphere Application Server Network Deployment, it is sufficient to restart the MobileFirst Operational Analytics applications.

## Applying the fix pack manually

### Procedure

1. Locate the MobileFirst Operational Analytics WAR files. The new versions of these files that you need to update are in *product\_install\_dir/Analytics* folder.
2. Replace the *analytics-service.war* and *analytics-ui.war* files in your application server.
3. On WebSphere Application Server Network Deployment, synchronize the servers.
4. Restart the application servers for these updates to take effect.

---

## Updating MobileFirst Data Proxy

### About this task

You can update this component in two ways:

- With Ant tasks
- Manually

The updating procedure depends on the method you used at the initial installation.

#### The component is installed with Ant tasks

- You can apply the fix pack with Ant tasks. Use the Ant tasks that are created at the initial installation. This way, you are certain to have the same parameters as the initial installation.
- You can apply the fix pack manually.

#### The component is installed manually

- You can apply the fix pack manually.
- An attempt to apply the fix pack with Ant tasks might fail. The target of the Ant tasks to apply a fix pack assume that the installation is made in a certain way.

## Applying the fix pack with Ant tasks

Run the `minimal-update` target to update the MobileFirst Data Proxy and the MobileFirst OAuth Trust Association Interceptor (TAI). On WebSphere Application Server Network Deployment, the TAI needs to be updated manually on every server.

### Procedure

1. Use the Ant files that are used at the initial installation. This way, you are certain to have the same parameters as the initial installation.
  - a. Open the Ant file and verify the value of the `worklight.server.install.dir` property.

Make sure that `worklight.server.install.dir` points to the installation of the product that contains the interim fix. The Ant tasks update the application server with the WAR files and JAR files that are found in this installation directory. If the property points to an installation without the interim fix, the update to the application server is not to the right level. To verify that the product installation directory contains the interim fix, open *product\_install\_dir/README.html*. This file contains the build number. For

example, if interim fix IFIX 7.1.0.0-IF201510051721 is installed, the build number in the README.html file must contain this line: Build number: IMF 00-20151005-1721.

b. Verify the passwords.

The Ant file might contain `*****` as value for the passwords. You need exactly 12 stars (`*****`) if you want the password to be prompted interactively (such as during the deployment on WebSphere Application Server).

If the value is defined in the Ant file, verify that the passwords are still up to date.

2. Run the `minimal-update` target to update MobileFirst Data Proxy. For example, `product_install_dir/shortcuts/ant -f your_ant_file.xml minimal-update`

This `minimal-update` target updates the MobileFirst Data Proxy WAR files. On Apache Tomcat, WebSphere Application Server Liberty profile, and stand-alone WebSphere Application Server, it updates the TAI. However, on WebSphere Application Server Network Deployment, the TAI needs to be updated manually.

3. For WebSphere Application Server Network Deployment, replace the `com.ibm.worklight.oauth.tai_*.jar` file with the new version on all nodes of your WebSphere Application Server cell. This JAR file can be found in `product_install_dir/WorklightServer/external-server-libraries` folder. For more information, see `install the MobileFirst Data Proxy manually`.
4. Restart the application server for these updates to take effect.

**Note:** It is needed to restart the application servers for WebSphere Application Server Network Deployment since the TAI is modified.

## Applying the fix pack manually

### Procedure

1. Locate the MobileFirst Data Proxy WAR file. This `imf-data-proxy.war` file is in `product_install_dir/Datastore` folder.
2. Replace the `imf-data-proxy.war` file in your application server.
3. Stop the application server.
4. Locate the TAI JAR file. This `com.ibm.worklight.oauth.tai_*.jar` file is in `product_install_dir/WorklightServer/external-server-libraries` folder.
5. Replace the TAI JAR file in your application server.
6. Optional: On WebSphere Application Server Liberty profile, replace the TAI feature manifest in your application server.  
The `OAuthTai-1.0.mf` manifest file can be found in `product_install_dir/WorklightServer/external-server-libraries` folder.
7. Restart the application server for these updates to take effect.

---

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For the entire IBM MobileFirst Platform documentation set, training material and online forums where you can post questions, see the IBM® website at:

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# Index

## A

applying  
  fix pack 1-1  
  interim fix 1-1

## U

updating  
  Application Center 1-1  
  MobileFirst Data Proxy 1-1  
  MobileFirst Operational  
    Analytics 1-1

updating (*continued*)  
  MobileFirst Server 1-1  
  V7.1.0 1-1