

Version 11 Release 1  
March 15, 2019

*IBM Marketing Operations Installation  
Guide*



**Note**

Before using this information and the product it supports, read the information in “Notices” on page 107.

This edition applies to version 11, release 1, modification 0 of IBM Marketing Operations and to all subsequent releases and modifications until otherwise indicated in new editions.

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## Chapter 1. Installation overview

An installation of Marketing Operations is complete when you install, configure, and deploy Marketing Operations. The Marketing Operations Installation Guide provides detailed information about installing, configuring, and deploying Marketing Operations.

Use the Installation Roadmap section to obtain a broad understanding about using the Marketing Operations Installation Guide.

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### Installation Roadmap

Use the installation roadmap to quickly find the information that you need for installing Marketing Operations.

You can use Table 1 to scan the tasks that must be completed for installing Marketing Operations. The **Description** column in the following table provides links to the topics that describe the tasks for installing Marketing Operations:

*Table 1. Marketing Operations installation roadmap*

Topic	Description
Chapter 1, "Installation overview"	This topic provides the following information: <ul style="list-style-type: none"><li>• "How the installers work" on page 2</li><li>• "Modes of installation" on page 3.</li><li>• "Marketing Operations documentation and help" on page 3.</li></ul>
Chapter 2, "Planning the Marketing Operations installation," on page 5	This topic provides the following information: <ul style="list-style-type: none"><li>• "Prerequisites" on page 5</li><li>• "Marketing Operations data source information worksheet" on page 7.</li><li>• "Installation order for IBM Marketing Software products" on page 7</li></ul>
Chapter 3, "Preparing the data sources for IBM Marketing Operations," on page 11	This topic provides the following information: <ul style="list-style-type: none"><li>• "Creating the Marketing Operations system table database or schema" on page 11</li><li>• "Configuring the web application server for your JDBC driver" on page 12</li><li>• "Creating the JDBC connections in the web application server" on page 13</li></ul>
Chapter 4, "Installing Marketing Operations," on page 19	<ul style="list-style-type: none"><li>• "Installing Marketing Operations by using the GUI mode" on page 20.</li><li>• "Installing Marketing Operations using the console mode" on page 25</li><li>• "Installing Marketing Operations silently" on page 26</li><li>• "Installation prompt windows" on page 28</li><li>• "Creating an EAR file after running the installer" on page 27</li><li>• "JAVA environment variables" on page 28</li><li>• "Installation prompt windows" on page 28</li></ul>

Table 1. Marketing Operations installation roadmap (continued)

Topic	Description
Chapter 5, “Configuring IBM Marketing Operations before deployment,” on page 31	This topic provides the following information: <ul style="list-style-type: none"> <li>• “Registering Marketing Operations manually” on page 31</li> <li>• “Creating and populating the Marketing Operations system tables” on page 32</li> <li>• “Setting environment variables” on page 34</li> </ul>
Chapter 6, “Overview,” on page 35	This topic provides the following information: <ul style="list-style-type: none"> <li>• “Deploying Marketing Operations on Websphere” on page 35</li> <li>• “Deploying Marketing Operations on WebLogic” on page 38</li> </ul>
Chapter 7, “Configuring IBM Marketing Operations after deployment,” on page 43	This topic provides the following information: <ul style="list-style-type: none"> <li>• “Granting the asm_admin user access to Marketing Operations” on page 43</li> <li>• “Configuring the markup option” on page 44</li> <li>• “Configuring the email settings” on page 45</li> <li>• “Configuring the integration with Campaign” on page 45</li> <li>• “Verifying your installation” on page 43</li> </ul>
Chapter 8, “Installing reports,” on page 49	This topic provides the following information: <ul style="list-style-type: none"> <li>• “Next steps for Reporting” on page 49</li> </ul>
Chapter 9, “Installing IBM Marketing Operations in a cluster,” on page 51	This topic provides the following information: <ul style="list-style-type: none"> <li>• “WebSphere guidelines” on page 51</li> <li>• “WebLogic guidelines” on page 53</li> <li>• “Configuring the shared folder properties” on page 55</li> <li>• “Configure ehcache” on page 56</li> </ul>
Chapter 10, “Uninstalling Marketing Operations,” on page 59	This topic provides the information about how to uninstall Marketing Operations.
Chapter 11, “configTool,” on page 61	Read more about the Config tool utilities in Marketing Operations.

## How the installers work

You must use the suite installer and the product installer when you install or upgrade any IBM® Marketing Software product. For example, for installing Marketing Operations, you must use the IBM Marketing Software suite installer and the IBM Marketing Operations installer.

Make sure that you use the following guidelines before you use the IBM Marketing Software suite installer and the product installer:

- The suite installer and the product installer must be in the same directory on the computer where you want to install the product. When multiple versions of a product installer are present in the directory with the master installer, the master installer always shows the latest version of the product on the IBM Marketing Software Products screen in the installation wizard.
- If you are planning to install a patch immediately after you install an IBM Marketing Software product, make sure that the patch installer is in the same directory as that of the suite and product installers.

- The default top-level directory for IBM Marketing Software installations is /IBM/IMS for UNIX or C:\IBM\IMS for Windows. However, you can change the directory during installation.

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## Modes of installation

The IBM Marketing Software suite installer can run in one of the following modes: GUI mode, console mode, or silent mode (also called the unattended mode). Select a mode that suits your requirements when you install Marketing Operations.

For upgrades, you use the installer to perform many of the same tasks that you perform during the initial installation.

### GUI mode

Use the GUI mode for Windows or the X Window System mode for UNIX to install Marketing Operations by using the graphical user interface.

### Console mode

Use the console mode to install Marketing Operations by using the command line window.

**Note:** To display the Installer screens correctly in console mode, configure your terminal software to support UTF-8 character encoding. Other character encoding, such as ANSI, will not render the text correctly, and some information will not be readable.

### Silent mode

Use the silent or unattended mode to install Marketing Operations multiple times. The silent mode uses response files for installation, and does not require user input during the installation process.

**Note:** Silent mode is not supported for upgrade installations in clustered web application or clustered listener environments.

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## Marketing Operations documentation and help

The following table describes the various tasks in the installation of Marketing Operations.

The **Documentation** column contains names of documents where you can find more information about the tasks.

*Table 2. Get up and running*

Task	Documentation
View a list of new features, known issues, and workaround	<i>IBM Marketing Operations Release Notes</i>
Install or upgrade Marketing Operations and deploy the Marketing Operations web application	One of the following guides: <ul style="list-style-type: none"><li>• <i>IBM Marketing Operations Installation Guide</i></li><li>• <i>IBM Marketing Operations Upgrade Guide</i></li></ul>

The following tables describes administrative tasks in Marketing Operations. The **Documentation** column contains names of documents where you can find more information about the tasks.

Table 3. Configure and use Marketing Operations

Task	Documentation
<ul style="list-style-type: none"> <li>Set up and configure the system for users</li> <li>Adjust security settings</li> <li>Map tables, define offer templates and custom attributes</li> <li>Run utilities and perform maintenance</li> </ul>	<i>IBM Marketing Operations Administrator's Guide</i>
<ul style="list-style-type: none"> <li>Create and deploy marketing campaigns</li> <li>Analyze campaign results</li> </ul>	<i>IBM Marketing Operations User's Guide</i>

The following tables contains information about Online Help and obtaining PDFs for Marketing Operations. The **Instructions** column describes how to open Online Help and access documentation for the Marketing Operations.

Table 4. Getting help

Task	Instructions
Open online help	<ol style="list-style-type: none"> <li>Choose <b>Help &gt; Help for this page</b> to open a context-sensitive help topic.</li> <li>Click the <b>Show Navigation</b> icon in the help window to display the full help.</li> </ol> <p>You must have web access to view context-sensitive online help. Contact IBM Support for more information about accessing and installing IBM Knowledge Center locally for offline documentation.</p>
Obtain PDFs	<p>Use either of the following methods:</p> <ul style="list-style-type: none"> <li>Choose <b>Help &gt; Product Documentation</b> to access Marketing Operations PDFs.</li> <li>Choose <b>Help &gt; All IBM Marketing Software Suite Documentation</b> to access all available documentation.</li> </ul>
To access the IBM Knowledge Center, choose <b>Help &gt; Support for this product</b> .	To access the IBM Knowledge Center, choose <b>Help &gt; Support for this product</b> .
Get support	Go to <a href="http://www.ibm.com/support">http://www.ibm.com/support</a> and click <b>Support &amp; downloads</b> to access the IBM Support Portal.



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## Chapter 2. Planning the Marketing Operations installation

When you plan your Marketing Operations installation, ensure that you have set up your system correctly, and that you have configured your environment to deal with any failures.

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### Prerequisites

Before you install or upgrade any IBM Marketing Software product, you must ensure that your computer complies with all of the prerequisite software and hardware.

#### System requirements

For information about system requirements, see the *Recommended Software Environments and Minimum System Requirements* guide.

#### Network domain requirements

The IBM Marketing Software products that are installed as a suite must be installed on the same network domain to comply with the browser restrictions that are designed to limit the security risks that can occur with cross-site scripting.

#### JVM requirements

IBM Marketing Software applications within a suite must be deployed on a dedicated Java™ virtual machine (JVM). IBM Marketing Software products customize the JVM that is used by the web application server. If you encounter errors that are related to the JVM, you must create an Oracle WebLogic or WebSphere® domain that is dedicated to the IBM Marketing Software products.

#### Knowledge requirements

To install IBM Marketing Software products, you must have a thorough knowledge of the environment in which the products are installed. This knowledge includes knowledge about operating systems, databases, and web application servers.

#### Internet browser settings

Make sure that your internet browser complies with the following settings:

- The browser must not cache web pages.
- The browser must not block pop-up windows.

#### Access permissions

Verify that you have the following network permissions to complete the installation tasks:

- Administration access for all necessary databases
- Read and write access to the relevant directory and subdirectories for the operating system account that you use to run the web application server and IBM Marketing Software components

- Write permission for all files that you must edit
- Write permission for all directories where you must save a file, such as the installation directory and backup directory if you are upgrading
- Appropriate read, write, and execute permissions to run the installer

Verify that you have the administrative password for your web application server.

For UNIX, all installer files for IBM products must have full permissions, for example, `rwxr-xr-x`.

**Note:** If you are installing version 11.1 with non-root user permissions and you plan to install IBM Campaign using those non-root user credentials, then you must add that user into the Sudo list so that the GSKIT components are installed successfully. Refer to the IBM Campaign Installation Guide for more information.

### **Points to consider before you install Campaign**

For Campaign installation you are required to consider the points underneath before beginning the installation. IBM Campaign 10.0 and subsequent versions install IBM GSKIT with the Campaign installation. IBM GSKIT requires "root" credentials for the installation, based on this requirement, before proceeding with IBM Campaign installation you are required to consider / follow the steps underneath:

**Note:** If you are installing IBM Campaign or other products in the IBM Marketing Software product suite as "root" / "administrator" users these considerations are not applicable. If you are installing IBM Campaign or other products in the IBM Marketing Software suite then the following points should be considered:

#### **Linux / Unix Installations:**

Installing IBM Campaign with non root user:

1. You can add the installation user (operating system user) in sudoers list – As a result, during the IBM Campaign installation you will be prompted for the sudo password. After entering this password IBM GSKIT gets installed.

**Note:** In this case IBM Campaign cannot be installed in silent mode.

2. You can add the installation user (operating system user) in sudoers list and disable the password prompt. (for example rbhagat is the operating system user for the installation, this user when added in the sudoers list with the sudo password prompt disabled then IBM Campaign installation will get successful along with IBM GSKIT installation successfully.

**Note:** In this case you can install IBM Campaign in silent mode.

#### **Windows:**

In Windows, the IBM Campaign user should be added in the administrators group.

### **JAVA\_HOME environment variable**

If a **JAVA\_HOME** environment variable is defined on the computer where you install an IBM Marketing Software product, verify that the variable points to a supported

version of JRE. For information about system requirements, see the *IBM Marketing Software Recommended Software Environments and Minimum System Requirements* guide.

If the **JAVA\_HOME** environment variable points to an incorrect JRE, you must clear the **JAVA\_HOME** variable before you run the IBM Marketing Software installers.

You can clear the **JAVA\_HOME** environment variable by using one of the following methods:

- Windows: In a command window, enter **set JAVA\_HOME=** (leave empty) and press **Enter**.
- UNIX: In the terminal, enter **export JAVA\_HOME=**(leave empty) and press **Enter**.

The IBM Marketing Software installer installs a JRE in the top-level directory for the IBM Marketing Software installation. Individual IBM Marketing Software application installers do not install a JRE. Instead, they point to the location of the JRE that is installed by the IBM Marketing Software installer. You can reset the environment variable after all installations are complete.

For more information about the supported JRE, see the *IBM Marketing Software Recommended Software Environments and Minimum System Requirements* guide.

## Marketing Platform requirement

You must install or upgrade Marketing Platform before you install or upgrade any IBM Marketing Software products. For each group of products that work together, you must install or upgrade Marketing Platform only once. Each product installer checks whether the required products are installed. If your product or version is not registered with Marketing Platform, a message prompts you to install or upgrade Marketing Platform before you proceed with your installation. Marketing Platform must be deployed and running before you can set any properties on the **Settings > Configuration** page.

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## Marketing Operations data source information worksheet

Use the Marketing Operations installation worksheet to gather information about the Marketing Operations database and about other IBM Marketing Software products that are required for the installation of Marketing Operations.

Table 5. Data source information worksheet

Item	Value
Data source type	
Data source name	
Data source account user name	
Data source account password	
JNDI name	plands
Path to the JDBC driver	

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## Installation order for IBM Marketing Software products

When you install or upgrade multiple IBM Marketing Software products, you must install them in a specific order.

The following table provides information about the order that you must follow when you install or upgrade multiple IBM Marketing Software products.

*Table 6. Installation or upgrade order for IBM Marketing Software products*

For this product or combination:	Install or upgrade in this order:
Campaign (with or without eMessage)	<ol style="list-style-type: none"> <li>1. Marketing Platform</li> <li>2. Campaign</li> </ol> <p><b>Note:</b> eMessage is installed automatically when you install Campaign. However, eMessage is not configured or enabled during the Campaign installation process.</p>
Interact	<ol style="list-style-type: none"> <li>1. Marketing Platform</li> <li>2. Campaign</li> <li>3. Interact Design Time environment</li> <li>4. Interact Run Time environment</li> <li>5. Interact Extreme Scale Server</li> </ol> <p>If you want to install or upgrade the Interact design time environment only, then install or upgrade the Interact design time environment in the following order:</p> <ol style="list-style-type: none"> <li>1. Marketing Platform</li> <li>2. Campaign</li> <li>3. Interact Design Time environment</li> </ol> <p>If you want to install or upgrade the Interact runtime environment only, then install or upgrade the Interact runtime environment in the following order:</p> <ol style="list-style-type: none"> <li>1. Marketing Platform</li> <li>2. Interact Run Time environment</li> </ol> <p>If you want to install the Interact Extreme Scale Server only, then install the Interact Extreme Scale Server in the following order:</p> <ol style="list-style-type: none"> <li>1. Marketing Platform</li> <li>2. Interact Run Time environment</li> <li>3. Interact Extreme Scale Server</li> </ol>
Marketing Operations	<ol style="list-style-type: none"> <li>1. Marketing Platform</li> <li>2. Marketing Operations</li> </ol> <p><b>Note:</b> If you are integrating Marketing Operations with Campaign, you must also install Campaign. The order of installation for those two products does not matter.</p>
Distributed Marketing	<ol style="list-style-type: none"> <li>1. Marketing Platform</li> <li>2. Campaign</li> <li>3. Distributed Marketing</li> </ol>
Contact Optimization	<ol style="list-style-type: none"> <li>1. Marketing Platform</li> <li>2. Campaign</li> <li>3. Contact Optimization</li> </ol>
Opportunity Detect	<ol style="list-style-type: none"> <li>1. Marketing Platform</li> <li>2. Opportunity Detect</li> </ol>

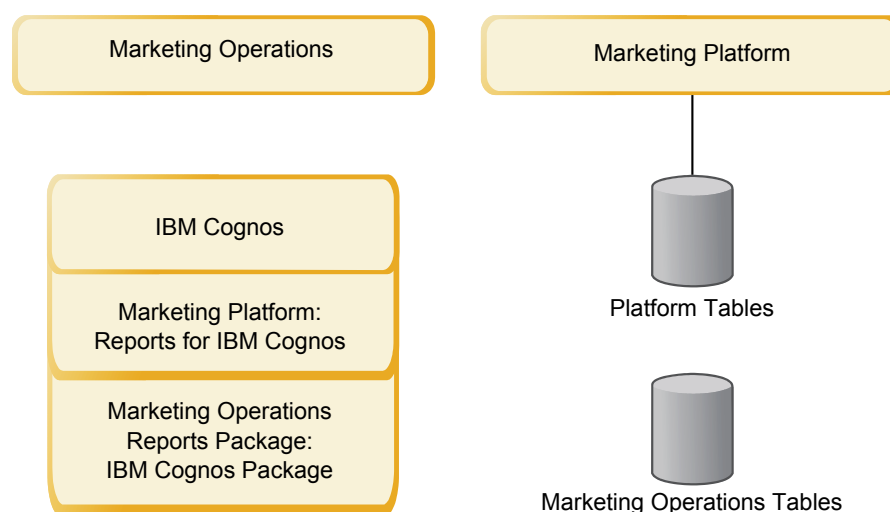
Table 6. Installation or upgrade order for IBM Marketing Software products (continued)

For this product or combination:	Install or upgrade in this order:
Interact Advanced Patterns	<ol style="list-style-type: none"> <li>1. Marketing Platform</li> <li>2. Campaign</li> <li>3. Interact</li> <li>4. Interact Advanced Patterns</li> </ol>
IBM SPSS® Modeler Advantage Enterprise Marketing Management Edition	<ol style="list-style-type: none"> <li>1. IBM SPSS Modeler Advantage Enterprise Marketing Management Edition</li> </ol>

## Where to install Marketing Operations and the Marketing Platform

The following diagram provides a brief overview of where to install Marketing Operations. It illustrates the most basic functional installation.

You may require a more complex, disparate installation to meet your security and performance requirements.



**Marketing Operations:** For best performance, install Marketing Operations on its own machine, where no other IBM Marketing Software products are installed, or on a machine that it shares with only the Marketing Platform.

The Marketing Operations system tables should be **on a separate machine**.

**Marketing Operations reports package:** The reports package for Marketing Operations contains the IBM Cognos® package only. (Other applications also have reporting schemas to configure, but Marketing Operations does not.) Install the reports package on the IBM Cognos system.

**Marketing Platform:** The Marketing Platform application contains the IBM common navigation, reporting, user administration, security, scheduling, and configuration management features. For each IBM Marketing Software environment, you must install and deploy the Marketing Platform once.



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## Chapter 3. Preparing the data sources for IBM Marketing Operations

You can use the Marketing Operations worksheet to enter the information that is required when you install Marketing Operations.

Print the “Marketing Operations data source information worksheet” on page 7 located at the end of this chapter. Then, as you complete each task in this chapter, fill in the information in your checklist. Having this information written down makes it easier for you to provide the database connection information when you run the IBM installer later in the installation process.

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### Creating the Marketing Operations system table database or schema

Create the Marketing Operations system table database or schema with the help of your database administrator. After you create the database, complete the data source information worksheet for future reference.

Complete the following steps to create Marketing Operations system tables database or schema:

1. Work with a database administrator to create the required database for Marketing Operations.
2. Have the database administrator create an account for you to specify for a system user later in the installation process.

This account must have CREATE, SELECT, INSERT, UPDATE, DELETE, and DROP rights for both tables and views, as appropriate. In addition:

  - The database must use UTF-8 encoding.
  - If you are using SQL Server, ensure that TCP/IP is enabled.
  - If you are using DB2®, ensure that the buffer pool for the table space is at least 32K.
3. Print and complete the “Marketing Operations data source information worksheet” on page 7. You use the information later in the installation process.

### IBM DB2 database tablespaces

The DB2 database manages Database-managed Space (DMS) tablespaces. A tablespace is a storage location that contains the data sets where the DB2 tables are stored. Create tablespaces for the IBM DB2 database before you install Marketing Operations.

You can specify the following types of tablespaces for the application data:

- Online transaction Processing (OLTP) data tablespace. Use this tablespace to store the transactional data from the application.
- OLTP index tablespace. Use this tablespace to store the indexes that are created to access the OLTP data tables.
- Discussion Support System (DSS) data tablespace. Use this tablespace to store the OLTP data that is loaded into the DSS schema. The DSS schema organizes data from the OLTP to make it easier to generate reports of the application's activity.

- DSS index tablespace. Use this tablespace to store the indexes that are created to access the DSS data tables.

Make note of the names of the tablespaces and the name of the server where you create the database. These tablespaces must exist before you install Marketing Operations. You must allocate at least 100 MB of space each for the OLTP data and DSS data tablespaces, and at least 50 MB each for the OLTP index and DSS index tablespaces.

If you do not want to maintain all four tablespaces, you can specify the same tablespace for multiple fields in the installation program. For example, you can supply the same tablespace for both the OLTP data and OLTP index tables, or a single tablespace for all four types of tables. Allocate sufficient space for all the tables that are written to the tablespace.

In addition, you must provide a temporary (TMP) tablespace of at least 10 MB.

The database user that you specify when you install Marketing Operations must be associated with the tablespaces, or have permissions to administer the tablespaces. The Leads application must be able to create schema in these tablespaces and write initial data to them.

## Configuring the web application server for your JDBC driver

The web application server where you plan to deploy Marketing Operations must contain the correct JAR file to support JDBC connections. This enables your web application to connect to the system tables. The location of the JAR file must be included in the class path of the web application server.

If you are using WebSphere, and if you allow the installer to create the data source when you install the product, you can skip the step in this procedure about setting the classpath. To enable automatic data source creation during installation, on the Datasource Creation panel, select the **Create Marketing Operations Datasource** check box and supply information about your WebSphere profile. If you do not want to allow the installer to create the data source, then perform this entire procedure.

If you are using WebLogic, you must perform this entire procedure.

**Note:** If you are installing Marketing Operations on the same machine where you installed Marketing Platform, this task is already complete. Continue to “Creating the JDBC connections in the web application server” on page 13.

1. Obtain the latest Type 4 JDBC drivers and any required associated files (for example, Oracle requires several associated files) for the database you plan to use. See the *Recommended Software Environments and Minimum System Requirements* guide for details.

You should always use the latest vendor-provided Type 4 driver.

- If the driver does not exist on the machine where Marketing Operations will be installed, obtain it and copy it to any location on the Marketing Operations machine.
  - If you obtain the driver from a machine where the database client is installed, verify that the version is the latest supplied by the database vendor. See your IBM consultant for a list of supported JDBC drivers.
2. Include the full path to the driver in the CLASSPATH of the web application server where you plan to deploy Marketing Operations, as follows.



- For all supported versions of WebLogic, add the jar files to the CLASSPATH variable in DOMAIN\_DIR\bin\setDomainEnv.cmd. Yours must be the first entry of the CLASSPATH values to ensure that the web application server uses the correct driver. For example, if you are using SQL Server you might set the path as follows.  

```
set CLASSPATH=c:\SQLDRIVER\sqljdbc.jar;%PRE_CLASSPATH%;  
%WEBLOGIC_CLASSPATH%; %POST_CLASSPATH%;%WLP_POST_CLASSPATH%
```
- For all supported versions of WebSphere, set the CLASSPATH in the Administration Console.

## Creating the JDBC connections in the web application server

The Marketing Operations web application uses JDBC connections to communicate with the system table database and with the IBM Marketing Platform system table database.

You must create this JDBC connection in the web application server where you plan to deploy Marketing Operations.

You can allow the installer to create this data source when you install Marketing Operations. To enable automatic data source creation during installation, on the Datasource Creation panel, select the **Create Marketing Operations Datasource** check box and supply information about your application server.

- The installer creates the data source using plands as the JNDI name.
- Note that, if you are using WebLogic, you must add the JDBC driver to your classpath manually even if you allow the installer to create the data source. The installer does this automatically for WebSphere.
- Also, if you are using Tomcat, you must add the JDBC driver to your classpath manually even if you allow the installer to create the data source.
- Automatic data source creation during installation is not supported for the JBoss Application Server.

Follow these guidelines if you decide to create the data source manually.

In WebSphere, set the classpath for your database driver during this process.

In Tomcat, set the classpath for your database driver during this process.

In JBoss, set the classpath for your database driver by adding the module for the JDBC driver and register the SQL JDBC driver.

**Important:** For the connection to the database holding the Marketing Operations system tables, you must use plands as the Java Naming and Directory Interface (JNDI) name. This value is the required JNDI name.

**Important:** For the connection to the database holding the Marketing Platform system tables, you must use UnicaPlatformDS as the JNDI name. This is the required JNDI name. If you are deploying Marketing Operations and Marketing Platform in the same JVM, this connection should already exist.

If you expect to have many concurrent users in Marketing Operations, you may need to increase the number of connections in your web server. For best results, set your web server to allow 50 connections.

## Information for creating JDBC connections

Use default values when you create JDBC connections if specific values are not provided. For more information, see the application server documentation.

**Note:** If you are not using the default port setting for your database, make sure that you change it to the correct value.

### WebLogic

Use the following values if your application server is WebLogic:

#### SQLServer

- Database Driver: Microsoft MS SQL Server Driver (Type 4) Versions: 2012, 2012 SP1 and SP3, 2014, 2014 SP1, 2016 SP1
- Default port: 1433
- Driver class: `com.microsoft.sqlserver.jdbc.SQLServerDriver`
- Driver URL: `jdbc:sqlserver://<your_db_host>[\\<named_instance>]:<your_db_port>;databaseName=<your_db_name>`
- Properties: Add user=`<your_db_user_name>`

#### Oracle

- Driver: Other
- Default port: 1521
- Driver class: `oracle.jdbc.OracleDriver`
- Driver URL:  
`jdbc:oracle:thin:@<your_db_host>:<your_db_port>:<your_db_service_name>`  
Enter the driver URL by using the format that is shown. IBM Marketing Software applications do not allow the use of Oracle's RAC (Real Application Cluster) format for JDBC connections.
- Properties: Add user=`<your_db_user_name>`

#### DB2

- Driver: Other
- Default port: 50000
- Driver class: `com.ibm.db2.jcc.DB2Driver`
- Driver URL: `jdbc:db2://<your_db_host>:<your_db_port>/<your_db_name>`
- Properties: Add user=`<your_db_user_name>`

### WebSphere

Use the following values if your application server is WebSphere:

#### SQLServer

- Driver: N/A
- Default port: 1433
- Driver class:  
`com.microsoft.sqlserver.jdbc.SQLServerConnectionPoolDataSource`
- Driver URL: `jdbc:sqlserver://<DBhostName>:1433;databaseName=<DBName>`

In the **Database Type** field, select **User-defined**.

After you create the JDBC Provider and data source, go to the **Custom Properties** for the data source, and add, modify properties as follows.

- `serverName=<your_SQL_server_name>`
- `portNumber =<SQL_Server_Port_Number>`
- `databaseName=<your_database_name>`

Add the following custom property:

**Name:** `webSphereDefaultIsolationLevel`

**Value:** 1

**Datatype:** Integer

Oracle

- Driver: Oracle JDBC Driver
- Default port: 1521
- Driver class: `oracle.jdbc.OracleDriver`
- Driver URL:  
`jdbc:oracle:thin:@<your_db_host>:<your_db_port>:<your_db_service_name>`  
Enter the driver URL by using the format that is shown. IBM Marketing Software applications do not allow the use of Oracle's RAC (Real Application Cluster) format for JDBC connections.

DB2

- Driver: JCC Driver Provider
- Default port: 50000
- Driver class: `com.ibm.db2.jcc.DB2Driver`
- Driver URL: `jdbc:db2://<your_db_host>:<your_db_port>/<your_db_name>`

Add the following custom property:

**Name:** `webSphereDefaultIsolationLevel`

**Value:** 2

**Datatype:** Integer

## **JBoss**

Specify the native library path of the database driver JAR file on your server. For example: `db2jcc4.jar/ojdbc8.jar/sqljdbc4.jar`.

Use the following values if your application server is JBoss:

SQLServer

- Database Driver: Microsoft MS SQL Server Driver (Type 4) Versions: 2012, 2012 SP1 and SP3, 2014, 2014 SP1, 2016 SP1
- Default port: 1433
- Driver class: `com.microsoft.sqlserver.jdbc.SQLServerDriver`
- Driver URL: `jdbc:sqlserver://<your_db_host>[\\<named_instance>]:<your_db_port>;databaseName=<your_db_name>`,

```
valid-connection-checker-class-name  
=org.jboss.jca.adapters.jdbc.extensions.mssql.MSSQLValidConnectionChecker
```

For example `/subsystem=datasources/data-source=UnicaPlatformDS:add(jndi-name="java:/UnicaPlatformDS",connection-url="jdbc:sqlserver://localhost:1433;databaseName=plat11",driver-name=sql,username=sa,password=test1234,valid-connection-checker-class-name="org.jboss.jca.adapters.jdbc.extensions.mssql.MSSQLValidConnectionChecker")`

#### Oracle

- Driver: Oracle JDBC Driver
- Default port: 8232
- Driver class: `oracle.jdbc.OracleDriver`
- Driver URL:  
`jdbc:oracle:thin:@<your_db_host>:<your_db_port>:<your_db_service_name>`  
`valid-connection-checker-class-name=valid-connection-checker-class-name="org.jboss.jca.adapters.jdbc.extensions.oracle.OracleValidConnectionChecker"`

For example `/subsystem=datasources/data-source=UnicaPlatformDS:add(jndiname=" java:/UnicaPlatformDS",connection-url="jdbc:oracle:// localhost:8232;databaseName=plat11",driver-name=oracle,username= plat,password=test1234,valid-connection-checker-class-name="org.jboss.jca.adapters.jdbc.extensions.oracle.OracleValidConnectionChecker")`

#### DB2

- Driver: JCC Driver Provider
- Default port: 50000
- Driver class: `com.ibm.db2.jcc.DB2Driver`
- Driver URL: `jdbc:db2://<your_db_host>:<your_db_port>/<your_db_name>`  
`valid-connection-checker-class-name="org.jboss.jca.adapters.jdbc.extensions.db2.DB2ValidConnectionChecker"`

For example `/subsystem=datasources/data-source=UnicaPlatformDS:add(jndiname=" java:/UnicaPlatformDS",connection-url="jdbc:db2:// localhost:50000;databaseName=plat11",driver-name=db2,username= plat,password=test1234,valid-connection-checker-class-name="org.jboss.jca.adapters.jdbc.extensions.db2.DB2ValidConnectionChecker"`

#### Tomcat

Specify the native library path of the database driver JAR file on your server. For example: `db2jcc4.jar/ojdbc8.jar/sqljdbc4.jar`. to create a datasource under Tomcat Interact Instance, add folder hierarchy as `<Tomcat_Home>/conf/Catalina/localhost`, create a xml file with the name `interact.xml` under `localhost` folder. Add data source pointing to Runtime, Test, Production and learning database in `interact.xml`, refer platform or Campaign xml file which is created through installers under there respective Tomcat instance directory. You will need to create these Data source entry in Campaign Tomcat instance too.

**Note:** If you want to encrypt password then run utility `encryptTomcatDBPasswords.sh` from `<PLATFORM_HOME>/tools/bin` To know more about utility, visit Platform Admin Guide > Chapter 20. IBM Marketing Platform utilities and SQL scripts > Marketing Platform Utilities > `encryptTomcatDBPassword`.

Use the following values if your application server is Tomcat:

#### SQLServer

- Database Driver: Microsoft MS SQL Server Driver (Type 4) Versions: 2012, 2012 SP1 and SP3, 2014, 2014 SP1, 2016 SP1
- Default port: 1433
- Driver class: `com.microsoft.sqlserver.jdbc.SQLServerDriver`
- Driver type: `javax.sql.DataSource`
- Driver URL: `jdbc:sqlserver://<your_db_host>[\\<named_instance>]:<your_db_port>;databaseName=<your_db_name>`

#### Oracle

- Driver: Oracle JDBC Driver
- Default port: 1521
- Driver class: `oracle.jdbc.OracleDriver`
- Driver URL: `jdbc:oracle:thin:@<your_db_host>:<your_db_port>:<your_db_service_name>`

#### DB2

- Driver: JCC Driver Provider
- Default port: 50000
- Driver class: `com.ibm.db2.jcc.DB2Driver`
- Driver URL: `jdbc:db2://<your_db_host>:<your_db_port>/<your_db_name>`



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## Chapter 4. Installing Marketing Operations

You must run the IBM Marketing Software installer to start the installation of Marketing Operations. The IBM Marketing Software installer starts the Marketing Operations installer during the installation process. Make sure that the IBM Marketing Software installer and the product installer are saved at the same location.

Each time that you run the IBM Marketing Software suite installer, you must first enter database connection information for the Marketing Platform system tables. When the Marketing Operations installer starts, you must enter the required information for Marketing Operations.

After installing Marketing Operations, you can create an EAR file for your product, and you can install the reports package for your product. Creating the EAR file and installing the reports package are not mandatory actions.

**Important:** Before you install Marketing Operations, make sure that the available temporary space on the computer where you install Marketing Operations is more than three times the size of the Marketing Operations installer.

### Installation files

The installation files are named according to the version of the product and the operating system on which they must be installed, except UNIX. For UNIX, different installation files exist for the X Window System mode and the console mode.

The following table displays examples of the installation files that are named according to the product version and the operating system:

**Note:** For Suse Linux operating system use the corresponding product Linux build except for Campaign and Contact Optimization.

**Note:** : EAR deployments are not supported on Tomcat application server

Table 7. Installation files

Operating system	Installation file
Windows: GUI and console mode	<i>Product_N.N.N.N_win64.exe</i> , where <i>Product</i> is the name of your product, <i>N.N.N.N</i> is the version number of your product, and Windows 64-bit is the operating system on which the file must be installed.
UNIX: X Window System mode	<i>Product_N.N.N.N_linux.bin</i> , where <i>Product</i> is the name of your product, and <i>N.N.N.N</i> is the version number of your product.
UNIX: Console mode	<i>Product_N.N.N.N.bin</i> , where <i>Product</i> is the name of your product, and <i>N.N.N.N</i> is the version number of your product. This file can be used for installation on all UNIX operating systems.

## Installing Marketing Operations by using the GUI mode

For Windows, use the GUI mode to install Marketing Operations. For UNIX, use the X Window System mode to install Marketing Operations.

**Important:** Before you use the GUI mode to install Marketing Operations, make sure that the available temporary space on the computer where you install Marketing Operations is more than three times the size of the Marketing Operations installer.

Make sure that the IBM Marketing Software installer and the Marketing Operations installers are in the same directory on the computer where you want to install Marketing Operations.

To install Marketing Operations by using the GUI mode (for Windows) or the X Window System mode (for UNIX):

1. Go to the folder where you have saved the IBM Marketing Software installer and double-click the installer to start it.
2. Click **OK** on the first screen to see the Introduction window.
3. Follow the instructions on the installer, and click **Next**. Use the information in the following table to take the appropriate actions on each window in the IBM Marketing Software installer.

*Table 8. IBM Marketing Software installer GUI*

Window	Description
Introduction	<p>This is the first window of the IBM Marketing Software suite installer. You can open the Marketing Operations installation and upgrade guides from this window.</p> <p>Click <b>Next</b> to go to the next window.</p>
Response Files Destination	<p>Click the <b>Generate Response File</b> check box if you want to generate response files for your product. Response files store the information that is necessary for the installation of your product. You can use response files for an unattended installation of your product.</p> <p>Click <b>Choose</b> to browse to a location where you want to store the response files.</p> <p>Click <b>Next</b> to go to the next window.</p>
IBM Marketing Software Products	<p>In the <b>Install Set</b> list, select <b>Custom</b> to select the products that you want to install.</p> <p>In the <b>Install Set</b> area, you can see all the products whose installation files are in the same directory on your computer.</p> <p>In the <b>Description</b> field, you can view the description of the product that you select in the <b>Install Set</b> area.</p> <p>Click <b>Next</b> to go to the next window.</p>
Installation Directory	<p>Click <b>Choose</b> to browse to the directory where you want to install IBM Marketing Software.</p> <p>Click <b>Next</b> to go to the next window.</p>



Table 8. IBM Marketing Software installer GUI (continued)

Window	Description
Select Application Server	<p>Select one of the following application servers for the installation:</p> <ul style="list-style-type: none"> <li>• IBM WebSphere</li> <li>• Oracle WebLogic</li> <li>• JBoss</li> <li>• Tomcat</li> </ul> <p>Click <b>Next</b> to go to the next window.</p>
Platform Database Type	<p>Select the appropriate Marketing Platform database type.</p> <p>Click <b>Next</b> to go to the next window.</p>
Platform Database Connection	<p>Enter the following information about your database:</p> <ul style="list-style-type: none"> <li>• Database host name</li> <li>• Database port</li> <li>• Database name or System ID (SID)</li> <li>• Database user name</li> <li>• Database password</li> </ul> <p>Click <b>Next</b> to go to the next window.</p> <p><b>Important:</b> If IBM Marketing Software products are installed in a distributed environment, you must use the machine name rather than an IP address in the navigation URL for all of the applications in the suite. Also, if you are on a clustered environment and choose to use ports that are different from the default ports 80 or 443 for your deployment, do not use a port number in the value of this property.</p>
Platform Database Connection (continued)	<p>Review and confirm the JDBC connection.</p> <p>Click <b>Next</b> to go to the next window.</p>
Preinstallation Summary	<p>Review and confirm the values that you added during the installation process.</p> <p>Click <b>Install</b> to start the installation process.</p> <p>The Marketing Platform installer opens. If a previous instance of Marketing Platform exists, the instance is upgraded to the current version. If a previous instance of Marketing Platform does not exist, Marketing Platform is installed.</p>

4. Follow the instructions on the Marketing Platform installer to install or upgrade Marketing Platform. See *IBM Marketing Platform Installation Guide* for more information.
5. In the Installation Complete window, click **Done**. The Marketing Platform installation is complete, and the Marketing Operations installer opens.
6. Use the information in the following table to navigate the Marketing Operations installer. In the Platform Database Connection window, enter all the required information and click **Next** to start the Marketing Operations installer.

Table 9. IBM Marketing Operations installer GUI

Window	Description
Introduction	<p>This is the first window of the Marketing Operations installer. You can open the Marketing Operations installation and upgrade guides from this window.</p> <p>Click <b>Next</b> to go to the next window.</p>
Software License Agreement	<p>Carefully read the agreement. Use <b>Print</b> to print the agreement. Click <b>Next</b> after you accept the agreement.</p>

Table 9. IBM Marketing Operations installer GUI (continued)

Window	Description
Installation Directory	<p>Click <b>Choose</b> to browse to the directory where you want to install Marketing Operations.</p> <p>Click <b>Next</b> to go to the next window.</p>
Marketing Operations Components	<p>Select the components that you want to install.</p> <p>Click <b>Next</b> to go to the next window.</p>
Marketing Operations Database Setup	<p>Select one of the following options for setting up the Marketing Operations database:</p> <ul style="list-style-type: none"> <li>• Automatic database setup</li> <li>• Manual database setup</li> </ul> <p>Click <b>Next</b> to go to the next window.</p>
Marketing Operations Database type	<p>Select the appropriate database type.</p> <p>Click <b>Next</b> to go to the next window.</p>
Marketing Operations Database connection	<p>Enter the following details for the Marketing Operations database:</p> <ul style="list-style-type: none"> <li>• Database host name</li> <li>• Database port</li> <li>• Database system ID (SID)</li> <li>• Database user name</li> <li>• Password</li> </ul> <p><b>Important:</b> If IBM Marketing Software products are installed in a distributed environment, you must use the machine name rather than an IP address in the navigation URL for all of the applications in the suite. Also, if you are on a clustered environment and choose to use ports that are different from the default ports 80 or 443 for your deployment, do not use a port number in the value of this property.</p> <p>Click <b>Next</b> to go to the next window.</p>
Marketing Operations JDBC connection	<p>Review and confirm the JDBC connection.</p> <p>Click <b>Next</b> to go to the next window.</p>
Marketing Operations Connection Settings	<p>Enter the following connection settings:</p> <ul style="list-style-type: none"> <li>• Network domain name</li> <li>• Host name</li> <li>• Port number</li> </ul> <p>Select the <b>Use secure connection</b> check box if necessary.</p> <p>Click <b>Next</b> to go to the next window.</p>

Table 9. IBM Marketing Operations installer GUI (continued)

Window	Description
Datasource creation	<p>The installer can create the JDBC data source in your web application server (WebSphere or WebLogic). This data source is required to enable the Marketing Operations web application to connect to the Marketing Operations system tables. You have the option to skip this step in the installer and create the data source in the administration console of your web application server after installation is complete.</p> <p>If you select the <b>Create Marketing Operations Datasource</b> check box, the installer creates the data source using information you provide..</p> <ul style="list-style-type: none"> <li>• Your application server must be running.</li> <li>• Enter any name for the datasource. The installer creates the JNDI name automatically (plands).</li> <li>• Enter the directory in which the application server is installed. For WebSphere, this is the directory that contains the profiles directory. You must restart WebSphere after the installer finishes and before you use this data source. For WebLogic, this is the directory that contains the common directory.</li> </ul> <p>Click <b>Next</b> to go to the next window.</p>
Application server information (WebSphere)	<p>Applies only if your application server is WebSphere.</p> <ul style="list-style-type: none"> <li>• Enter the application server profile where you plan to deploy Marketing Operations.</li> <li>• Enter the name of the server in the profile.</li> <li>• If security is enabled in WebSphere, enter the administrator user ID and password.</li> </ul> <p>Click <b>Next</b> to go to the next window.</p>
Application server information (WebLogic)	<p>Applies only if your application server is WebLogic.</p> <p>Enter the domain server name and the administrator user ID and password. If SSL is enabled, enter the HTTP port for the domain.</p> <p>Note that you must add the database driver classpath to WebLogic in the WebLogic administration console.</p> <p>Click <b>Next</b> to go to the next window.</p>
Application server information (WebLogic)	<p>Applies only if your application server is WebLogic.</p> <p>Enter the domain server name and the administrator user ID and password. If SSL is enabled, enter the HTTP port for the domain.</p> <p>Note that you must add the database driver classpath to WebLogic in the WebLogic administration console.</p> <p>Click <b>Next</b> to go to the next window.</p>
Application server information (JBoss)	<p>Applies only if your application server is JBoss.</p> <p>Enter the domain server name and the administrator user ID and password. If SSL is enabled, enter the HTTP port for the domain.</p> <p>Note that you must add the database driver classpath to JBoss.</p> <p>Click <b>Next</b> to go to the next window.</p>

Table 9. IBM Marketing Operations installer GUI (continued)

Window	Description
Application server information (Tomcat)	<p>Applies only if your application server is Tomcat.</p> <p>Enter the domain server name and the administrator user ID and password. If SSL is enabled, enter the HTTP port for the domain.</p> <p>Note that you must add the database driver classpath to Tomcat.</p> <p>Click <b>Next</b> to go to the next window.</p>
Supported Locales	This window displays all the locales supported by Marketing Operations.
Default Locale	<p>Select a default locale for your installation. English is selected by default.</p> <p>Click <b>Next</b> to go to the next window.</p>
Pre-Installation Summary	<p>Review and confirm the values that you added during the installation process.</p> <p>Click <b>Install</b> to start the installation process.</p> <p>The Marketing Operations installer opens.</p>
Installation Complete	Click <b>Done</b> to close the Marketing Platform installer and go back to the IBM Marketing Software installer.

7. In the Installation Complete window, click **Done** to exit the Marketing Operations installer and go back to the IBM Marketing Software installer.
8. Follow the instructions on the IBM Marketing Software installer to finish installing Marketing Operations. Use the information in the following table to take the appropriate actions on each window in the IBM Marketing Software installer.

Table 10. IBM Marketing Software installer GUI

Window	Description
Deployment EAR file	<p>Specify whether you want to create an enterprise archive (EAR) file to deploy your IBM Marketing Software products.</p> <p>Click <b>Next</b> to go to the next window.</p>
Package EAR file	<p>You can see this window if you select <b>Create an EAR file for deployment</b> in the Deployment EAR file window.</p> <p>Select the applications that you want to package in the EAR file.</p>
EAR file details	<p>Enter the following information for your EAR file:</p> <ul style="list-style-type: none"> <li>• Enterprise application identifier</li> <li>• Display name</li> <li>• Description</li> <li>• EAR file path</li> </ul>
EAR file details (continued)	<p>Select <b>Yes</b> or <b>No</b> to create an additional EAR file. If you select <b>Yes</b>, you must enter the details for the new EAR file.</p> <p>Click <b>Next</b> to complete the installation of your product.</p>
Deployment EAR file	<p>Specify whether you want to create another EAR file to deploy your IBM Marketing Software products.</p> <p>Click <b>Next</b> to go to the next window.</p>

Table 10. IBM Marketing Software installer GUI (continued)

Window	Description
Installation Complete	<p>This window provides the locations of the log files that are created during installation.</p> <p>Click <b>Previous</b> if you want to change any installation details.</p> <p>Click <b>Done</b> to close the IBM Marketing Software installer.</p>

## Installing Marketing Operations using the console mode

The console mode allows you to install Marketing Operations using the command-line window. You can select various options in the command-line window to complete tasks such as selecting the products to install, or selecting the home directory for the installation.

Before you install Marketing Operations, ensure that you have configured the following.

- An application server profile
- A database schema

To display the installer screens correctly in console mode, configure your terminal software to support UTF-8 character encoding. Other character encodings, such as ANSI, do not render the text correctly, and some information is not readable with these encodings.

1. Open a command-line prompt window and navigate to the directory where you have saved the IBM Marketing Software installer and the Marketing Operations installer.
2. Complete one of the following actions to run the IBM Marketing Software installer.
  - For Windows, enter the following command:  
`ibm_ims_installer_full_name -i console`  
 For example, `IBM_Marketing_Software_Installer_11.1.0.0_win.exe -i console`
  - For UNIX, invoke the `ibm_ims_installer_full_name.sh` file.  
 For example: `IBM_Marketing_Software_Installer_11.1.0.0.sh`
3. Follow the directions that are displayed in the command-line prompt. Use the following guidelines when you have to select an option in the command-line prompt:
  - The default options are defined by the symbol [X].
  - To select or clear an option, type the number that is defined for the option, and then press Enter.

For example, suppose that the following list displays the components that you can install:

- 1 [X] Marketing Platform
- 2 [X] Campaign
- 3 [ ] Contact Optimization
- 4 [ ] Distributed Marketing

If you want to install Distributed Marketing, and do not want to install Campaign, enter the following command: **2,4**

The following list would then display the options that you selected:

- 1 ☒ Marketing Platform
- 2 ☐ Campaign
- 3 ☐ Contact Optimization
- 4 ☒ Distributed Marketing

**Note:** Do not clear the option for Marketing Platform unless you have already installed it.

4. The IBM Marketing Software installer launches the Marketing Operations installer during the installation process. Follow the instructions in the command-line prompt window of the Marketing Operations installer.
5. After you enter `quit` in the Marketing Operations installer command-line prompt window, the window shuts down. Follow the instructions in the command-line prompt window of the IBM Marketing Software installer to complete the installation of Marketing Operations.

**Note:** If any error occurs during the installation, a log file is generated. You must exit the installer to view the log file.

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## Installing Marketing Operations silently

Use the unattended or silent mode to install Marketing Operations multiple times.

Before you install Marketing Operations, make sure that you have configured the following elements:

- An application server profile
- A database schema

When you install Marketing Operations by using the silent mode, response files are used to obtain the information that is required during installation. You must create response files for a silent installation of your product. You can create response files by using one of the following methods:

- Using the sample response files as a template for creating your response files. The sample response files are included with your product installers in the `ResponseFiles` compressed archive. For more information about sample response files, see “Sample response files” on page 27.
- Running the product installers in the GUI (Windows) or X Window System (UNIX) mode or the console mode before you install the product in the silent mode. One response file is created for the IBM Marketing Software suite installer, and one or more response files are created for your product installer. The files are created in the directory that you specify.

**Important:** For security reasons, the installer does not save database passwords in the response files. When you create response files, you must edit each response file to enter database passwords. Open each response file and search for `PASSWORD` to find where you must edit the response file.

When the installer runs in the silent mode, it looks for the response files in the following directories sequentially:

- In the directory where the IBM Marketing Software installer is saved
- In the home directory of the user who installs the product

Make sure that all response files are in the same directory. You can change the path where response files are read by adding arguments to the command line. For example: **-DUNICA\_REPLAY\_READ\_DIR="myDirPath" -f myDirPath/installer.properties**

Use the following command for Windows:

- **ibm\_ims\_installer\_full\_name -i silent**

For example:

**IBM\_Marketing\_Software\_Installer\_11.1.0.0\_win.exe -i silent**

Use the following command for Linux:

- **ibm\_ims\_installer\_full\_name\_operating\_system .bin -i silent**

For example:

**IBM\_Marketing\_Software\_Installer\_11.1.0.0\_linux.bin -i silent**

## Sample response files

You must create response files to set up a silent installation of Marketing Operations. You can use sample response files to create your response files. The sample response files are included with the installers in the ResponseFiles compressed archive.

The following table provides information about sample response files:

*Table 11. Description of sample response files*

Sample response file	Description
installer.properties	The sample response file for the IBM Marketing Software master installer.
installer_product initials and product version number.properties	The sample response file for the Marketing Operations installer.  For example, installer_ucn.n.n.n.properties is the response file of the Campaign installer, where n.n.n.n is the version number.
installer_report pack initials, product initials, and version number.properties	The sample response file for the reports pack installer.  For example, installer_urpcn.n.n.n.properties is the response file of the Campaign reports pack installer, where n.n.n.n is the version number

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## Creating an EAR file after running the installer

You can create an EAR file after you install IBM Marketing Software products. You might do this to create an EAR file with a desired combination of products.

**Note:** Run the installer in console mode from the command line.

Use the following procedure if you want to create an EAR file after you install IBM Marketing Software products:

1. If this is the first time you are running the installer in console mode, make a backup copy of the installer's .properties file for each of your installed products.
  - Each IBM product installer creates one or more response files with a .properties extension. These files are in the same directory where you placed the installers. Be sure to back up all files with the .properties

extension, including the `installer_<product initials><product version number>.properties` files and the file for the IBM installer itself, which is named `installer.properties`.

For example, the properties files for Marketing Platform `installer_ump11.1.0.0.properties` and the properties file for Optimize `installer_uo11.1.0.0.properties`.

- If you plan to run the installer in unattended mode, you must back up the original `.properties` files, because when the installer runs in unattended mode, it clears these files. To create an EAR file, you need the information that the installer writes in the `.properties` files during the initial installation.
2. Open a command window and change directories to the directory that contains the installer.
  3. Run the installer executable with this option:  
`-DUNICA_GOTO_CREATEEARFILE=TRUE`  
On UNIX type systems, run the `.bin` file rather than the `.sh` file.  
The installer wizard runs.
  4. Follow the instructions in the wizard.
  5. Before you create more EAR files, overwrite the `.properties` file or files with the backups you created before you ran in console mode for the first time.  
**Please note EAR is not supported for Tomcat application server.**

---

## JAVA environment variables

Java environment variables are global system variables that store system-wide values. To install IBM Marketing Software products, ensure that your machine has a Java Runtime Environment (JRE) version 1.6 or above.

**Note:** The `JAVA_HOME` environment variable is not required for installing IBM Marketing Software products, but if it is present, it must be the 1.6 version of the Sun JRE.

If you have a `JAVA_HOME` environment variable, and it points to an incorrect JRE, you must unset the `JAVA_HOME` variable before you run the IBM Marketing Software installers. To unset `JAVA_HOME` variable:

- Windows: In a command window, enter  
`set JAVA_HOME=`leave empty and press return key
- UNIX type systems: In the terminal, enter  
`export JAVA_HOME=`leave empty and press return key

After the environment variable is unset, the IBM Marketing Software installers use the JRE bundled with the installers.

You can reset the environment variable after installation is complete.

---

## Installation prompt windows

During the installation of Marketing Operations, several prompt windows display. After you enter the required information, prompt windows display your responses and require a confirmation before you continue. Prompt windows give you the opportunity to make corrections, if needed.



For reference, an example of the prompts that display during installation on a UNIX server using console mode follows. Be sure to read and follow the instructions that display during your actual installation.

Use the following example to help you gather required information before you begin your installation and for reference during your installation.

*Table 12. Example installation prompts and responses*

Prompt	Response
-bash-4.0\$	Initial prompt. Supply the name of the master installer file and any variables for the database setup utility that you want to use for the installation.
Choose Locale	Supply a number to choose one of the listed languages. To use the default locale, 2- English, press Enter.
Introduction	<p>If a previous version of the product is installed, an upgrade is initiated.</p> <p>If the same version of the product is installed, proceeding drops all tables and data.</p>
Response Files Generation	Supply a number to choose whether to generate response files for use in an unattended installation. If you generate response files, you can supply a destination path.
Choose Product Features	<p>A numbered list of features displays. Features with a check mark [X] are selected for installation, features with no check mark [ ] are not selected. To change the selections, supply numbers to switch from selected to cleared (or vice versa) by using a comma-separated list, then press Enter.</p> <p>For example, you see this list of features:</p> <p>1- [X] IBM Marketing Platform 2- [X] IBM Marketing Operations</p> <p>To install Marketing Platform only, supply 2 and press Enter.</p>
<b>Master (Marketing Platform) installation</b>	
Installation Directory	
Select Application Server	
Platform Database Type	Supply information for the Marketing Platform system table database.
Platform Database Host Name	
Platform Database Port	
Platform Database Name/System ID (SID)	
Platform Database User Name	
Platform Database Password	
JDBC Connection	
JDBC Driver Classpath	
<b>Product-specific (Marketing Operations) installation</b>	
Introduction	For each product feature you chose to install, the specific product name displays followed by the reinstallation warning.
Installation Directory	

Table 12. Example installation prompts and responses (continued)

Prompt	Response
Marketing Operations Database Setup	<p>Supply a number to choose automatic or manual.</p> <ul style="list-style-type: none"> <li>Automatic setup uses the same information for this feature that you supplied for the master installation.</li> <li>Manual setup prompts you for each database and JDBC characteristic separately to accommodate any feature-specific differences.</li> </ul>
Marketing Operations Server/Host	
Marketing Operations Server Port	
Marketing Operations Domain Name	<p>Supply the same company domain, in all lowercase, for every feature you install.</p> <p><b>Note:</b> To avoid any issues if an IP address must be changed after the product is installed, use a fully qualified domain name instead of an IP address.</p>
Supported Locales	Supply a number to choose a language. You can also supply a comma-separated list to select multiple locales.
Default Locale	Supply a number to choose a language.
Deployment EAR File	Supply a number to choose whether to create an enterprise archive (EAR) file.

---

## Chapter 5. Configuring IBM Marketing Operations before deployment

Complete the configuration tasks before you deploy the web application.

---

### Registering Marketing Operations manually

If the Marketing Operations installer cannot connect with the Marketing Platform system table database during the installation, your installation fails. In this case, you must register Marketing Operations manually.

Even if the installers fail to connect to the system tables, the installation process proceeds. In this case, you must import the product information into the Marketing Platform system tables manually.

The configTool utility that is mentioned in this procedure is in the tools/bin directory under your Marketing Platform installation. For detailed instructions on using the configTool utility, see Chapter 11, “configTool,” on page 61.

Complete the following steps to register Marketing Operations manually:

1. Set the environment variable by completing following actions:
  - For Windows, set an environment variable named NAVIGATION\_DIR to the Marketing Operations conf directory.
  - For Unix, set an environment variable named \$NAVIGATION\_DIR to the Marketing Operations conf directory.

2. Run the configTool utility by using the following example commands as guidelines.

- For Windows, use the following commands:

```
configTool.bat -v -i -p "Affinium" -f "%NAVIGATION_DIR%\plan_registration.xml"
configTool.bat -v -i -p "Affinium|suite|uiNavigation|mainMenu" -f "%NAVIGATION_DIR%\plan_navigation_operations.xml"
```

Run the following command if the Financial Module is installed in Marketing Operations.

```
configTool.bat -v -i -p "Affinium|suite|uiNavigation|mainMenu|Analytics" -f "%NAVIGATION_DIR%\plan_navigation_analytics.xml"
configTool.bat -v -i -p "Affinium|suite|uiNavigation|settingsMenu" -f "%NAVIGATION_DIR%\plan_navigation_settings.xml"
configTool.bat -v -i -p "Affinium|suite|uiNavigation|alerts" -f "%NAVIGATION_DIR%\plan_alerts_registration.xml"
configTool.bat -v -i -p "Affinium|suite|uiNavigation|mainMenu" -f "%NAVIGATION_DIR%\plan_navigation_financials.xml"
configTool.bat -v -i -p "Affinium|suite|quicklinksCategory" -f "%NAVIGATION_DIR%\umo_quicklinks_registration.xml"
```

- For Unix, use the ./configTool.sh file to run configTool utility with the help of following commands:

```
./configTool.sh -v -i -p "Affinium" -f "$NAVIGATION_DIR/plan_registration.xml"
```

```
./configTool.sh -v -i -p "Affinium|suite|uiNavigation|mainMenu" -f
"$NAVIGATION_DIR/plan_navigation_operations.xml"
```

Run the following command if the Financial Module is installed in Marketing Operations.

```
./configTool.bat -v -i -p
"Affinium|suite|uiNavigation|mainMenu|Analytics" -f
"$NAVIGATION_DIR/plan_navigation_analytics.xml"
./configTool.bat -v -i -p "Affinium|suite|uiNavigation|settingsMenu"
-f "$NAVIGATION_DIR/plan_navigation_settings.xml"
./configTool.bat -v -i -p "Affinium|suite|uiNavigation|alerts" -f
"$NAVIGATION_DIR/plan_alerts_registration.xml"
./configTool.sh -v -i -p "Affinium|suite|uiNavigation|mainMenu" -f
"$NAVIGATION_DIR/plan_navigation_financials.xml"
./configTool.bat -v -i -p "Affinium|suite|quicklinksCategory" -f
"$NAVIGATION_DIR/\umo_quicklinks_registration.xml"
```

**Note:** In case manual registration, if Marketing Platform is not installed on same computer as Marketing Operations, you must install the Marketing Platform tools on the computer or copy the Marketing Operations xml configuration files to your computer.

---

## Creating and populating the Marketing Operations system tables

If the automatic database setup fails during the installation of Marketing Operations, you must create and populate Marketing Operations system tables manually. To generate Marketing Operations system tables, you must run the umodbsetup utility.

The umodbsetup utility completes one of the following tasks:

- Creates the required system tables in the Marketing Operations database and populates the tables with required default data.
- Outputs the database creation and population scripts to a file that you or your DBA can then run in your own database client.

### Configuring environment variables

Before you run the umodbsetup utility, complete the following steps to configure the environment variables properly:

1. From the `<IBM_IMS_Home>\<MarketingOperations_Home>\tools\bin` directory, locate and open the `setenv` file in a text editor.
2. Verify that the `JAVA_HOME` variable indicates the correct directory for your installation of Java, and that the JDBC drivers are the first entry for the `DBDRIVER_CLASSPATH` variable. For more information about setting this environment variable, see “JAVA environment variables” on page 28.
3. Save and close the file.
4. From the `<IBM_IMS_Home>\<MarketingOperations_Home>\tools\bin` directory, locate and open the `umo_jdbc.properties` file.
5. Set values for the following parameters.
  - `umo_driver.classname`
  - `umo_data_source.url`
  - `umo_data_source.login`
  - `umo_data_source.password`

6. Save and close the file.

## Running the database setup utility

From a command prompt or UNIX shell, go to the <IBM\_IMS\_Home>\<MarketingOperations\_Home>\tools\bin directory. Run the umodbsetup utility and provide appropriate input for the parameters that are required for your situation.

For example, the following command runs a full database installation (rather than an upgrade), sets the locale to en\_US, and sets the logging level to high:

```
./umodbsetup.sh -t full -L en_US -l high
```

Following is a description of all the possible variables for the utility:

Table 13. Variables for the umodbsetup.sh utility

Variable	Description
-h	Provides help for the utility.
-l	Records the output in the umo-tools.log file from the actions of the umodbsetup utility. This file is in the <IBM_IMS_Home>\<MarketingOperations_Home>\tools\logs directory. This variable specifies the logging level.  You can set the logging level to high, medium, or low.
-L	Sets the default Locale for the installation. For example, use -L de_DE for a German installation.  The valid entries for locales include de_DE, en_GB, en_US, es_ES, fr_FR, it_IT, ja_JP, ko_KR, pt_BR, ru_RU, and zh_CN. <b>Note:</b> The locale information is case-sensitive and must be used as mentioned in the guide.
-m	Outputs the scripts to a file in the <IBM_IMS_Home>\<MarketingOperations_Home>\tools directory, which you can then run manually. Use this option if there is a reason you must run scripts from your own database client application. When you use this variable, the umodbsetup tool does not run the script.
-t	Type of database installation. Valid values are full and upgrade. For example, -t full
-v	Verbose.
-b	For upgrades only. Identifies the base version of the database that you are attempting to upgrade.  By default, the utility detects the version of the database you are upgrading. However, if an earlier attempt to upgrade the database failed in some way, the version might be the updated one, even though the upgrade failed. When you have correct the problem and run the utility again, you use this variable with the -f variable to specify the correct base version.  For example, -f -b 9.0.0.0
-f	For upgrades only. Instructs the utility to use the base version that is specified by the -b variable, overriding the base version that may detect in the database. See the description of the -b variable.
-E	This option is used to encrypt existing password available in file. You can use this option along with other options like -t, -P.  For example, <b>umodbsetup.bat/sh -E</b>

Table 13. Variables for the `umodbsetup.sh` utility (continued)

Variable	Description
-P	<p>This option is be used to change existing password and encrypt it. If user chooses this option, the tool prompts user to enter new password. The new password is stored in <code>umo_jdbc.properties</code> file after encrypting. Use this option independently as it prompts for new password.</p> <p>For example, <code>umodbsetup.bat/sh -P</code></p>

## Running the database scripts manually

If you used the `-m` variable to output the scripts so you can run them from your own database client application, run the scripts now.

Do not deploy the `plan.war` file before you create and populate the system tables.

---

## Setting environment variables

Specify the environment variables if you plan to deploy Marketing Operations on a WebLogic web application server that is installed on a Windows machine.

On the machine where WebLogic is installed, add the following values to the Path System environment variable:

- Full path to the `bin` directory where the Sun JDK is installed.
- Full path to the `server\bin` directory where WebLogic is installed.

---

## Chapter 6. Overview

There are general guidelines for deploying Marketing Operations on WebSphere and WebLogic.

If you created an EAR file after running the installer and your EAR file includes any other IBM products, you must follow all the deployment guidelines detailed in the individual install guides for the products included in the EAR file in addition to those listed in this chapter.

It is assumed that you know how to work with your web application server. Consult your web application server documentation for details about things like how to use the Administration console.

---

### Deploying Marketing Operations on Websphere

You can deploy the Marketing Operations application from a WAR file or an EAR file on the WebSphere Application Server (WAS).

Consider the following points before you deploy Marketing Operations on Websphere:

- Verify that your version of WebSphere meets the requirements that are described in the *Recommended Software Environments and Minimum System Requirements* document, including any necessary fix packs or upgrades.
- You use the WebSphere Integrated Solutions console to configure your WebSphere Application Server. The steps that follow provide guidance for setting specific controls.

**Note:** Different versions of WebSphere Application Server present user interface controls in varying sequences and with alternative labels.

Complete the following steps to set up the environment for deploying Marketing Operations:

1. Define a custom property: On the **Application servers** > **<servers>** > **Web container** > **Custom properties** form, click **New** and enter following values:
  - **Name:** com.ibm.ws.webcontainer.invokefilterscompatibility
  - **Value:** true
2. Create the JDBC provider: On the **Resources** > **JDBC** > **JDBC providers** form, click **New**. Complete the Create a new JDBC provider wizard, including the following fields:

Datasource creation in the web app server can be skipped if you configure through the installer.

  - a. For **Implementation type**, select **Connection pool** data source.
  - b. Specify the native library path of the database driver JAR file on your server. For example, db2jcc4.jar/ojdbc6.jar/sqljdbc4.jar.
3. Create the data source: On the **Resources** > **JDBC** > **Data sources** form, click **New**. Complete the Create a data source wizard by completing the following actions:

Datasource creation in the web app server can be skipped if you configure through the installer.

- a. Specify a data source name.
  - b. For JNDI name, enter plans.
  - c. Select the JDBC provider that you created in step 2.
  - d. Specify the database name and server name.
  - e. For **Mapping-configuration** alias select **WSLogin**.
4. Define custom properties for the data source: On the **JDBC providers > <database provider> > Data sources > Custom properties** form click **New** to add two properties:
    - **Name:** user
    - **Value:** <user\_name>
    - **Name:** password
    - **Value:** <password>

If your Marketing Operations system tables are in DB2, locate the resultSetHoldability property and set its value to 1. If this property does not exist, add it.

5. Configure the JVM: On the **Application servers > <server> > Process definition > Java Virtual Machine** form, identify the Classpath then add the following entries as Generic JVM arguments, separated by a space:
  - -Dplan.home=<IBM\_IMS\_Home>\<MarketingOperations\_Home>  
where <IBM\_IMS\_Home> is the path to the top-level IBM directory and <MarketingOperations\_Home> is the path to the directory where you installed Marketing Operations. Typically this path is IBM\_IMS/MarketingOperations.
  - -Dclient.encoding.override=UTF-8
  - Make sure that the following JVM parameters are present. If not add them:
    - 
    - Dlog4j2.contextSelector=org.apache.logging.log4j.core.async.AsyncLoggerContextSelector
    - -Dlog4j2.configurationFile=file:/// <Plan\_home>\conf\plan\_log4j\_11.1.0.0.xml
    - -Dlog4j.configuration=file:/// <Plan\_home>\conf\plan\_log4j\_1x.xml

**Note:**

- In case of upgrade and fast upgrade, if there is a plan\_log4j\_11.1.0.0.xml file apart from the plan\_log4j.xml, use the plan\_log4j\_11.1.0.0.xml.
  - In the -Dlog4j2.configurationFile=file:/// <Plan\_home>\conf\plan\_log4j\_11.1.0.0.xml setting, if you have customized the plan\_log4j.xml and made some changes to suit your organization, then ensure that you make those settings in the plan\_log4j\_11.1.0.0.xml specified here as per the -Dlog4j2.configurationFile that we have deployed to you now. If you have used the plan\_log4j\_11.1.0.0.xml file, make your changes in that file. Any customization present in the file plan\_log4j.xml prior to upgrade needs to be done in plan\_log4j\_11.1.0.0.xml as per new log4j2 syntax. For this, you will need to refer the log4j2 documentation for details by referring to the link: <https://logging.apache.org/log4j/2.0/manual/configuration.html>
  - In Windows, the file path contains a back slash. Whereas, in UNIX, it must contain a forward slash.
  - The path separator in the log4j configuration file name should be set as Windows style() or UNIX (/ ) style based on the underlying operating system.
6. Set the JSP Compilation level in the WebSphere application server to 18.



## Deploying the WAR or EAR file

When you deploy a new enterprise application, the WebSphere Integrated Solutions Console presents a series of forms. The steps that follow provide guidance for setting specific controls on these forms. Different versions of WebSphere can present controls in another sequence or with other labels.

Complete the following steps to deploy the WAR or EAR file:

1. Select **Applications > New Application > New Enterprise Application**.
2. On the initial form, select **Remote** file system and then **Browse** to the `plan.war` file or your EAR file.
3. On the next Preparing for the Application Installation window:
  - Select **Detailed**.
  - Select **Generate Default Bindings**.
  - Select **Override existing bindings**.
4. On the Select Installation Options window, complete the following actions:
  - Select **Precompile JavaServer Pages files**.
  - For **Application name**, enter `plan`.
  - Select **Override class reloading settings for Web and EJB modules**.
  - For **Reload interval in seconds**, enter an integer such as 4.
5. On the Map Modules to Servers window, select the **Module**. If you deployed an EAR, select every WAR file.
6. On the Provide Options to Compile JSPs window, select the **Web module**. If you deployed an EAR, select every WAR file.
7. Set the **JDK Source Level** to 18.
8. On the JSP reloading options for Web modules form, select **JSP enable class reloading** and for **JSP reload interval in seconds** enter 5.
9. On the Map shared libraries window, select the **Application** and the **Module**.
10. On the Map shared library relationships window, select the **Application** and the **Module**.
11. On the Map resource references to resources window, select the module and for **Target Resource JNDI Name** enter `plands`.
12. On the Map context roots for Web modules window, for **Context Root** enter `/plan`.
13. Review and save your settings.

### Defining class loader policy

Class loader policy defines how the application is configured on WAS. You must change some of the default settings on WAS before you deploy Marketing Operations.

Complete the following steps to define the class loader policy:

1. On the **Enterprise Applications > plan > Class loader**, select **Override class reloading settings for Web and EJB modules**.
2. For **Class loader order**, select **Classes loaded with local class loader first (parent last)**.
3. For **WAR class loader policy**, select **Single class loader for application**.
4. Click **Apply** and **Save Settings**.

## Defining settings for cookies

You must define and set settings for cookies by using **Session Management** option on the **Websphere Enterprise Applications**.

Complete the following steps to define the settings for cookies:

1. Go to the **Enterprise Applications > plan > Session management**.
2. Select **Override session management**.
3. Select **Enable cookies**.
4. Click **Apply**, then go to the **Enterprise Applications > plan > Session management > Cookies**.
5. Change the Marketing Operations **Cookie name** from JSESSIONID to UMOSESSIONID.
6. Click **Apply** and **Save Settings**.

## Defining EAR module settings

If you deployed an EAR file, you must define settings for the individual WAR files that are contained by the EAR files.

Complete the following steps to define EAR file module settings:

1. Go to **Enterprise Applications** and select the EAR file.
2. On the **Manage Modules** form, select one of the WAR files; for example, MktOps.war.
3. On the **Enterprise Applications > EAR > Manage Modules > WAR** form, complete the following substeps:
  - a. Set **Starting weight** to 10000.
  - b. For **Class loader order**, select **Classes loaded with application class loader first**.
4. On the **Enterprise Applications > EAR > Manage Modules > WAR > Session management**, select **Enable cookies**.
5. On the **Enterprise Applications > EAR > Manage Modules > WAR > Session Management > Cookies**, complete the following steps:
  - a. Set the **Cookie name** to CMPJSESSIONID.
  - b. For the **Cookie maximum age**, select **Current browser session**.
6. On the **Enterprise Applications > EAR > Manage Modules > WAR > Session management**, enter the following information:
  - a. Select **Allow overflow**.
  - b. For **Maximum in-memory sessions**, enter 1000.
  - c. For **Session timeout**, select **Set timeout** and enter 30.
7. Define the same settings for each of the other WAR files, including unica.war and plan.war.

**Note:** If the Campaign.war file also exists in the EAR file and you plan to integrate Marketing Operations with Campaign, define the same settings for the Campaign.war file.

---

## Deploying Marketing Operations on WebLogic

Use the following guidelines for deploying Marketing Operations on WebLogic.

- IBM Marketing Software products customize the JVM used by WebLogic. You might create a WebLogic instance dedicated to IBM Marketing Software products if you encounter JVM-related errors.
- Do not install more than one Marketing Operations application under the same WebLogic domain.
- Verify that the Software Development Kit (SDK) selected for the WebLogic domain you are using is the Sun SDK by looking in the startup script (startWebLogic.cmd) for the JAVA\_VENDOR variable. It should be set to JAVA\_VENDOR=Sun. If it is set to JAVA\_VENDOR=BEA, JRockit has been selected. JRockit is not supported. To change the selected SDK, refer to the WebLogic documentation.

Complete the following steps to deploy Marketing Operations to WebLogic:

1. If your operating system is AIX®, extract the Marketing Operations WAR file, delete the xercesImpl.jar file from WEB\_INF/lib directory, and recreate the WAR file. If the installer combined products in an EAR file, you must first extract that file to obtain the WAR file, and you must recreate the EAR file.
  2. If you are configuring WebLogic to use the IIS plug-in, review the WebLogic documentation to determine whether you have additional requirements.
  3. From the bin directory under your WebLogic domain directory, locate and open the setDomainEnv script in a text editor. Scroll to the JAVA\_OPTIONS property, and add the following entries. Use a space to separate entries.
    - -Dplan.home=<IBM\_IMS\_Home>\<MarketingOperations\_Home>  
Where <IBM\_IMS\_Home> is the path to the top-level IBM directory and <MarketingOperations\_Home> is the path to the directory where you installed Marketing Operations. Typically this directory is IBM\_IMS/MarketingOperations.
    - -Dfile.encoding=UTF-8
    - Make sure that the following JVM parameters are present. If not add them:
      - -Dlog4j2.contextSelector=org.apache.logging.log4j.core.async.AsyncLoggerContextSelector
      - -Dlog4j2.configurationFile=file:///<Plan\_home>\conf\plan\_log4j\_11.1.xml
      - -Dlog4j.configuration=file:/// <Plan\_home>\conf\plan\_log4j\_1x.xml
- Note:**
- In case of upgrade and fast upgrade, if there is a plan\_log4j\_11.1.0.0.xml file apart from the plan\_log4j.xml, use the plan\_log4j\_11.1.0.0.xml.
  - In the -Dlog4j2.configurationFile=file:///<Plan\_home>\conf\plan\_log4j\_11.1.xml setting, if you have customized the plan\_log4j.xml and made some changes to suit your organization, then ensure that you make those settings in the plan\_log4j.xml specified here as per the -Dlog4j2.configurationFile that we have deployed to you now. If you have used the plan\_log4j\_11.1.0.0.xml file, make your changes in that file.
  - In Windows, the file path contains a back slash. Whereas, in UNIX, it must contain a forward slash.
  - The path separator in the log4j configuration file name should be set as Windows style() or UNIX (/ ) style based on the underlying operating system.
4. Save and close the file.
  5. Restart WebLogic.
  6. Deploy Marketing Operations as a web application module: select plan.war.

7. Start the deployed web application.

---

## Deploying Marketing Operations on JBoss

You must follow a set of guidelines when you deploy Marketing Operations on JBoss.

1. Existing customers who want to upgrade to JBOSS + 11.1, must perform the following steps:
  - Clear the recent items for all the users. Note: Administrator: Please communicate to all the users to clear their respective recent items prior to the migration to JBOSS.
  - Clear the directory <plan\_home>/recentdata.
  - Migrate to JBOSS + 11.1.
2. No change is needed to be done by new customers who are installing JBOSS + 11.1. This is because recent items will not be present in their case.

From the bin directory under your JBoss installation directory, locate and open the standalone.conf or standalone.conf.bat script appropriate for your operating system in a text editor. Scroll to the JAVA\_OPTIONS property, and add the following entries. Use a space to separate entries.

- -Dplan.home=<IBM\_IMS\_Home>\<MarketingOperations\_Home>  
Where <IBM\_IMS\_Home> is the path to the top-level IBM directory and <MarketingOperations\_Home> is the path to the directory where you installed Marketing Operations. Typically this directory is IBM\_IMS/MarketingOperations.
- -Dfile.encoding=UTF-8
- Make sure that the following JVM parameters are present. If not add them:
  - 
  - Dlog4j2.contextSelector=org.apache.logging.log4j.core.async.AsyncLoggerContextSelector
  - Dlog4j2.configurationFile=file:/// <Plan\_home>\conf\plan\_log4j\_11.1.xml
  - Dlog4j.configuration=file:/// <Plan\_home>\conf\plan\_log4j\_1x.xml

### Note:

- In the -Dlog4j2.configurationFile=file:/// <Plan\_home>\conf\plan\_log4j\_11.1.xml setting, if you have customized the plan\_log4j.xml and made some changes to suit your organization, then ensure that you make those settings in the plan\_log4j.xml specified here as per the -Dlog4j2.configurationFile that we have deployed to you now. If you have used the plan\_log4j\_11.1.0.0.xml file, make your changes in that file.
- In Windows, the file path contains a back slash. Whereas, in UNIX, it must contain a forward slash.
- The path separator in the log4j configuration file name should be set as Windows style() or UNIX (/) style based on the underlying operating system.

Make sure that the version of JBoss meets the requirements that are described in the *IBM Enterprise Products Recommended Software Environments and Minimum System Requirements* document. Use the following guidelines when you deploy Marketing Operations on JBoss:

Use the following guidelines when you deploy the Marketing Operations products on any supported version of JBoss:

1. Deploy the IBM plan.war file as an enterprise application.

For example: `deploy <Marketing_Operations_Install>\plan.war`

See <https://docs.jboss.org/jbossweb/3.0.x/deployer-howto.html> for instructions on Deploying Web Server Application in JBoss.

2. Complete the following tasks if your installation must support non-ASCII characters, for example for Portuguese or for locales that require multi-byte characters:
  - a. Edit the `standalone.conf` script in the `bin` directory under your JBOSS `/bin` directory to add `-Dfile.encoding=UTF-8 -Dclient.encoding.override=UTF-8` to `JAVA_VENDOR`.
  - b. Restart JBoss server.

---

## Deploying Marketing Operations on Apache Tomcat

You must follow a set of guidelines when you deploy Marketing Operations on Apache Tomcat.

Make sure that the version of Apache Tomcat meets the requirements that are described in the *IBM Enterprise Products Recommended Software Environments and Minimum System Requirements* document. Use the following guidelines when you deploy Marketing Operations on Apache Tomcat:

From the `bin` directory under your Apache Tomcat installation directory, locate or create the `setenv.sh` or `setenv.bat` script appropriate for your operating system in a text editor, and add or modify `JAVA_OPTIONS` property, and add the following entries. Use a space to separate entries.

- `-Dplan.home=<IBM_IMS_Home>\<MarketingOperations_Home>`

Where `<IBM_IMS_Home>` is the path to the top-level IBM directory and `<MarketingOperations_Home>` is the path to the directory where you installed Marketing Operations. Typically this directory is `IBM_IMS/MarketingOperations`.

- `-Dfile.encoding=UTF-8`
- Make sure that the following JVM parameters are present. If not add them:
  - `-Dlog4j2.contextSelector=org.apache.logging.log4j.core.async.AsyncLoggerContextSelector`
  - `-Dlog4j2.configurationFile=file:/// <Plan_home>\conf\plan_log4j_11.1.xml`
  - `-Dlog4j.configuration=file:/// <Plan_home>\conf\plan_log4j_1x.xml`

### Note:

- In the `-Dlog4j2.configurationFile=file:/// <Plan_home>\conf\plan_log4j_11.1.xml` setting, if you have customized the `plan_log4j.xml` and made some changes to suit your organization, then ensure that you make those settings in the `plan_log4j.xml` specified here as per the `-Dlog4j2.configurationFile` that we have deployed to you now. If you have used the `plan_log4j_11.1.0.0.xml` file, make your changes in that file.
  - In Windows, the file path contains a back slash. Whereas, in UNIX, it must contain a forward slash.
  - The path separator in the `log4j` configuration file name should be set as Windows style() or UNIX (/) style based on the underlying operating system.
1. Deploy the IBM `plan.war` file as an enterprise application on Tomcat Apache server.

**Note:** Deployment of IBM EAR file is not supported in Tomcat.

2. Complete the following tasks if your installation must support non-ASCII characters, for example for Portuguese or for locales that require multi-byte characters:
  - a. Edit the `setenv.sh` file for the respective product instances script in the `bin` directory under your tomcat instances directory to add  
`-Dfile.encoding=UTF-8 -Dclient.encoding.override=UTF-8` to  
`JAVA_VENDOR`.
  - b. Restart Tomcat.
3. If deploying in a production environment, you can add JVM heap setting for that tomcat instance in `app-one/bin/setenv.sh` file respectively for all the instances.

---

## Chapter 7. Configuring IBM Marketing Operations after deployment

After you deploy and start the Marketing Operations application, log in and verify the installation. There are some basic configuration steps such as configuring the system user and a test user, setting up email and markup.

**Note:** You can find more system setup tasks in the *Marketing Operations Administrator's Guide*.

In addition, if you plan to use the IBM Marketing Software reporting feature, you must complete the tasks that are described in Chapter 8, "Installing reports," on page 49.

---

### Verifying your installation

After you install Marketing Platform, verify that the installation is successful. The installation is successful if you can see the name of the IBM Marketing Software product in the **Configuration** list on the Settings page after you log in to IBM Marketing Software.

Complete the following steps to verify your Marketing Platform installation:

1. Access the IBM Marketing Software URL by using Internet Explorer.  
If you entered a domain when you installed, the URL is the following, where *host* is the machine where the Marketing Platform is installed, *domain.com* is the domain in which the host machine resides, and *port* is the port number on which the web application server listens.  
`http://host.domain.com:port/unica`
2. Log in using the default administrator login. The username for administrator login is `asm_admin`.  
The first time you log in, the default value of user password is `password`. You are asked to change the password. You can enter the existing password, but you must choose a new one. You must change user's password when you verified your Marketing Platform installation.  
The default home page is the Dashboard, which is a blank page until dashboards are set up. See the *Marketing Platform Installation Guide* for instructions about deploying the Dashboard WAR file.
3. Select **Settings > Configuration** and verify that Marketing Operations is displayed in the list on the left. Then, expand the Marketing Operations section and verify that the **umoConfiguration** category is displayed in the list.
4. Optional: Make the Configuration Settings page as your "home" page until you configure the dashboard. That way, a blank page is not displayed each time you log in.

---

### Granting the `asm_admin` user access to Marketing Operations

The default admin user (`asm_admin`) can access the Marketing Operations configuration properties automatically. However, there are no default users with access to the Marketing Operations application until you configure them.

Complete the following steps to grant the `asm_admin` user access to Marketing Operations:

1. Create a group. For example, select **Settings > User groups > New Group** and set up **Default-MarketOps-Group**.
2. Assign the **PlanAdminRole** and **PlanUserRole** roles to the group.
3. Assign the **asm\_admin** user to the group.
4. Restart the application server.
5. Log back in as **asm\_admin**.
6. Verify that you have access to Marketing Operations features by selecting **Operations > Plans**.

---

## Configuring the markup option

Marketing Operations provides markup tools for making comments on attachments. When Marketing Operations users send approvals for review, the approver can enter the comments directly in the electronic file which can be viewed by other users.

Marketing Operations provides following markup tools:

- **Native Marketing Operations markup:** The native markup option provides various markup functions that can be applied to files in PDF, HTML, JPG, PNG, GIF, and BMP format. Users can mark up whole websites if a URL is supplied. The comments can then be saved in Marketing Operations. Native markup is the default option. It does not require Acrobat to be installed on client machines.
- **Adobe Acrobat markup:** This markup tool requires the installation of Adobe Acrobat on each client machine. Users can apply all Acrobat commenting features, and then save the edited PDF in Marketing Operations.

The markup option is a global setting. You cannot enable different markup options for different groups of users.

**Note:** For more information about the versions of Adobe Acrobat that are supported for your operating system, see the *IBM Marketing Software Products 11.1 Recommended Software Environments and Minimum System Requirements* guide.

### Configuring the Adobe markup option

When you deploy Marketing Operations, the system is configured to use the native markup option by default. If you want to use the Adobe markup option instead, complete the following steps:

- Select **Settings > Configuration > Marketing Operations > umoConfiguration > markup**. Then, configure the markup properties with the following values
- Set **markupServerType** to SOAP.
- Set **markupServerURL** to the URL of the Marketing Operations host server, including the fully qualified host name and the port where the web application server listens. Use the path format that is shown here, with your values substituted for `<server>` and `<port>`.  
`http://<server>:<port>/plan/services/collabService?wsdl`

Configuration settings enable Adobe markup for all users.



## Installing and configuring Adobe on client machines

For users to effectively use Adobe markup, you must install the supported version of Adobe Acrobat Professional on each client machine that is used to access IBM Marketing Operations.

In addition, users who use the Internet Explorer browser to access IBM Marketing Operations must set Internet Explorer preferences to display PDFs in the browser.

---

## Configuring the email settings

Identify your SMTP server when you install Marketing Operations so you can configure the email settings during the installation process.

Complete the following steps to configure the email settings:

1. Select **Settings > Configuration > Marketing Operations > umoConfiguration > email**.
2. Click **Edit Settings**.
3. Set the value of the `notifyEmailMonitorJavaMailHost` property to the machine name or IP address of your organization's SMTP server.
4. Specify a valid email address for the `notifyDefaultSenderEmailAddress` property. The system uses this address to send emails when there is no valid email address available to send a notification email to.
5. Save your changes.

---

## Configuring the integration with Campaign

Marketing Operations optionally integrates with IBM Campaign. When Marketing Operations and Campaign are integrated, you can use the marketing resource management features in Marketing Operations to create, plan, and approve campaigns.

When Campaign integration is enabled, you can also enable offer integration to complete offer lifecycle management tasks in Marketing Operations.

To enable your integration with Campaign, log in to Marketing Operations and set the following properties on the **Settings > Configuration** page:

- **IBM Marketing Software > Marketing Platform:**
  - IBM Marketing Operations - Campaign integration (MO\_UC\_integration must be enabled)
  - IBM Marketing Operations - Offer integration (optional, if Campaign integration is enabled)
- **IBM Marketing Software > Campaign > partitions > partition[n] > server > internal:**
  - MO\_UC\_integration (Set this option to Yes if you plan to enable any of the following three optional settings)
  - MO\_UC\_BottomUpTargetCells
  - Legacy\_campaigns
  - IBM Marketing Operations - Offer integration
- **IBM Marketing Software > Marketing Operations > umoConfiguration > campaignIntegration:**
  - defaultCampaignPartition

- `webServiceTimeoutInMilliseconds`

For more information, see the *Marketing Operations and Campaign Integration Guide*.

## Configuring DB2 database for integrated systems

Configure the time parameters in the DB2 database to avoid deadlock situations if you plan to use integrated systems and integrated offers in Marketing Operations.

Complete the following steps to configure DB2 database:

1. Use the DB2 admin utility (`get db cfg`) to review the settings for the **LOCKTIMEOUT** and **DLCHKTIME** parameters.
2. Set the lock timeout period to 10 seconds as follows:  
`update db cfg using LOCKTIMEOUT 10`
3. Set the deadlock check time to 15,000 milliseconds as follows:  
`update db cfg using DLCHKTIME 15000`

Setting deadlock check time prevents deadlock conditions from occurring when multiple users access database tables simultaneously.

---

## Integration with Workflow Service on Cloud

IBM Marketing Operations optionally integrates with Workflow Services on Cloud. When Marketing Operations and Workflow Services are integrated, you can use the Advanced Workflow capabilities in Marketing Operations to create workflows with rework loops.

### Information exchange

When Marketing Operations and Workflow Service are integrated, the workflow information from Marketing Operations is used by Workflow Service.

- When a project is started, Marketing Operations shares the workflow information with Workflow Service. Only the task numbers and the task sequence is shared.
- Marketing Operations makes an API call to the Workflow Service server on a regular basis, every one second, to get information about the status of the tasks in the workflow.
- Marketing Operations makes an API call to the Workflow Service server to provide a status update when the following actions are completed for a workflow:
  - The workflow starts. This occurs when a project starts.
  - A task is started.
  - A task is completed.
  - A task is skipped.
  - An approval task is completed.
  - An approval task is denied (OnHold).
  - An approval task is canceled.

**Important:** No API calls are made from the on-cloud Workflow Service server to the on-premise Marketing Operations server and hence no firewall changes are required.

## Upgrading to 11.1 from previous versions

If you are upgrading from a previous version of Marketing Operations and have not enabled Workflow Service integration, Workflow Service integration is disabled by default and Advanced Workflow capabilities are not available.

## Configuring the integration with Workflow Service

Before you can use the Advanced Workflow capabilities, you must configure the integration of Marketing Operations with Workflow Service.

Complete the following prerequisites before you configure the integration of Marketing Operations with Workflow Services:

- Integration Services must be enabled. For more information, see “Marketing Operations | umoConfiguration | integrationServices” on page 83.
- The configuration properties for Workflow Services must be set. For more information, see “Marketing Operations | umoConfiguration | WorkflowService” on page 103.
- The PlanAPIUser user must be present and be part of PlanAdmin group in Marketing Operations.

To register the Marketing Operations instance with the Workflow Service, complete the following steps:

1. Go to **Settings > Marketing Operations Settings > Workflow Service Integration**.
2. Enter the **Client Organization ID**. The Client Organization ID must be unique, numeric, and can have a maximum of eight digits. You can use your IBM Customer Number as the Client Organization ID.
3. Enter the **Client Application Name**. This is the name of the Marketing Operations instance that you are registering. For example, DEV, SAT, UAT, PROD and so on.
4. Enter the **Customer Name, Contact Person, and Email Address**.
5. Click **Submit**.

When the Marketing Operations instance is registered successfully, an **Account ID** is created. This Account ID is used for any communications regarding the Workflow Service.

The registration page also displays the following information:

- The current status of the integration of Marketing Operations with Workflow Service.
- The current status for the Workflow Service Polling scheduler.
- The current status of the communication between Marketing Operations with Workflow Service.

**Note:** If required, you can edit the contact information fields for **Customer Name, Contact Person, and Email Address** after registration is completed.

You must restart the Marketing Operations web application.

---

## Additional configuration for enhanced security

The procedures in this section describe some additional configurations in the web application server. They are optional, but you might want to perform them for enhanced security.

### Disabling the X-Powered-By flag

If your organization is concerned that the X-Powered-By flag in the header variable is a security risk, you can disable it using this procedure.

1. If you are using WebLogic, in the administration console, under *domainName* > **Configuration > Web Application**, set **X-Powered-By Header** to **X-Powered-By Header will not be sent**.
2. If you are using WebSphere, perform the following steps.
  - a. In the WebSphere administration console, navigate to **Servers > Server Types > WebSphere application servers > *server\_name* > Web Container Settings > Web container**.
  - b. Under **Additional Properties** select **Custom Properties**.
  - c. On the Custom Properties page, click **New**.
  - d. On the Settings page, create a custom property named `com.ibm.ws.webcontainer.disableXPoweredBy` and set the value to `false`.
  - e. Click **Apply** or **OK**.
  - f. Click **Save** on the console task bar to save your configuration changes.
  - g. Restart the server.

### Configuring a restrictive cookie path

In your web application server, you can restrict cookie access to a specific application for enhanced security. If not restricted, cookies are valid across all the deployed applications.

1. If you are using WebLogic, perform the following steps.
  - a. Extract the `weblogic.xml` file from the WAR or EAR package where you want to add the restrictive cookie path.
  - b. Add the following to the `weblogic.xml` file, where *context-path* is the context path for the deployed application. For IBM Marketing Software applications the context path is typically `/unica`.

```
<session-descriptor>
  <session-param>
    <param-name>CookiePath</param-name>
    <param-value>/context-path</param-value>
  </session-param>
</session-descriptor>
```
  - c. Rebuild the WAR or EAR file.
2. If you are using WebSphere, perform the following steps.
  - a. In the WebSphere administration console, navigate to the **Session Manager > Cookie** tab.
  - b. Set the **Cookie Path** to the context path of your application.  
For IBM Marketing Software applications the context path is typically `/unica`.

---

## Chapter 8. Installing reports

For the reporting feature, Marketing Operations integrates with IBM Cognos, a separate business intelligence application.

Reporting relies on the following components:

- An IBM Cognos installation that meets the requirements that are specified in *Recommended Software Environments and Minimum System Requirements*.
- A set of IBM Marketing Software components that integrate the IBM system with the IBM Cognos installation.
- The example reports for the Marketing Operations application, which are built with IBM Cognos Report Studio.

Marketing Platform provides the IBM side of the reporting integration. To finish installing reporting, you run all of the following report package installers on the IBM Cognos system:

- IBM
- IBM Marketing Platform
- IBM Marketing Operations

For information about how to install and set reporting for IBM Marketing Operations, and information about the individual components and how they interact with each other, see the *IBM Marketing Software Reports Installation and Configuration Guide*.

---

### Next steps for Reporting

After you successfully install the Report feature, use the following guidelines for working further with reports:

- If you configured the system to use the "authenticated per user" mode, ensure that the appropriate IBM users can run the reports from the IBM applications. The easiest way to do this is to assign the default ReportsUser role to the appropriate user groups or users.
- For general information about the Framework Manager data models and Report Studio reports, see the chapter named "Configuring Reporting" in the *IBM Marketing Platform Administrator's Guide*. For information about configuring and customizing the Marketing Operations reports, see the chapter on "Using Reports" in the *IBM Marketing Operations Administration Guide*.
- To use the Cognos dashboard reports in your dashboards, see the chapter on "Creating and Managing Dashboards" in the *IBM Marketing Platform Administrator's Guide*.



---

## Chapter 9. Installing IBM Marketing Operations in a cluster

You can install Marketing Operations in a cluster by completing additional tasks while installing Marketing Operations.

To install IBM Marketing Operations in a cluster, follow the instructions from chapters 2 through 7 and supplement those instructions with information from this chapter.

When you install Marketing Operations in a cluster, there are many ways to configure the installation. However, the basic process follows.

1. Run the installers on one system: typically, the administration server (or whatever the equivalent is for your application server type).
2. Create and share a file directory to hold the upload files for all the Marketing Operations installations.
3. Create the EAR file, and then deploy it on each machine in the cluster.
4. Configure each system to share the same Marketing Platform system tables and the same Marketing Operations system tables.
5. Configure each system to use the shared file directory.
6. Determine which machine in the cluster should send notifications. Then suppress the notification process on all the other machines.
7. Enable the UMOSESSIONID cookie for all servers in the cluster.
8. Configure `plan_ehcache.xml` for distributed caching of templates and offer folders.

---

### WebSphere guidelines

If you are installing Marketing Operations on a cluster in WebSphere, complete the extra steps in addition to the steps for installing Marketing Operations on WebSphere.

#### Preparing the data sources

The data source chapter instructs you to create a database for Marketing Operations and then configure a JDBC data source for it in your application server. When you complete these tasks for a cluster on WebSphere, note the following extra instructions:

- The Marketing Operations database must be on a machine that is accessible to all machines in the cluster, but it does not need to be on a machine in the cluster.
- When you configure the JDBC provider, specify the cluster as the scope.

#### Installing the products

When you follow the instructions for running the installer, be sure that you install Marketing Platform and Marketing Operations only once, on a machine that is accessible to all machines in the Marketing Operations cluster.

You do not need to install the software on each cluster member. Instead, you install it only once, create the EAR, and then deploy the EAR file on each cluster member.

## Extra pre-deployment steps

Before you deploy Marketing Operations, complete the following tasks in addition to the ones specified in the pre-deployment configuration chapter:

- Share the top-level directory in which Marketing Operations is installed. For example, say that Marketing Operations is installed in `C:\MktOpsCluster\IBM_IMS\MarketingOperations`. In this case, you would share the entire `MktOpsCluster` directory.
- Create and share a folder on the administration server to contain the upload files for Marketing Operations. This folder is known as the `Shared_UMO_Artifacts` folder. All cluster members must have full control (read, write, change, and delete) of this folder. Placing this folder below the IBM home directory in the local file system hierarchy is optional.

## Extra deployment steps

In addition to the instructions in the deployment chapter, note the following additions:

### 1. Map modules to servers

When you set the options in the **Select Installation Options** wizard for WebSphere, select the cluster and the web server when mapping modules to servers.

### 2. Extra instructions for the Generic JVM property

Remember to configure the Generic JVM property on each machine in the cluster.

The path that you specify in the `plan.home` and other properties must point to the shared installation directory.

You set the following extra parameters for clusters:

- `-DPLAN_CONFIG_GUID=Plan`
- `-Dplan.log.config=\\umoMachine\SharedUnicaHome\MarketingOperations\conf\plan_log4j_client.xml`
- `-Dplan.local.log.dir=local_log_dir` (where `local_log_dir` is the writeable folder on the physical machine where Marketing Operations creates logs)
- On the machines that must not send notifications, set the "suppress notifications" parameter as follows:  
`-Dplan.suppressNotifications=true`  
Set this property on every node except one: the one you want to send notifications.
- To use a different `plan_ehcache.xml` file in place of the default file that is defined in the `CONF` directory for a node, set the `-plan_ehcache` parameter for that node to specify the location of the file.

## Configure session management cookie

You must define the name of the session management cookie that is used by servers in the cluster. To configure the session management cookie:

1. In the WebSphere console, access the properties for a server in the cluster. Go to the web container settings and open the session management configuration.



2. Enable cookies and specify UMOSESSIONID as the cookie name.
3. Save the settings and repeat this procedure for all servers in the cluster.

## Extra post-deployment steps

If you are using a plug-in for load balancing, you must complete the following configuration steps:

- For IBM Marketing Operations to work effectively in a clustered environment, users must remain on a single node for their entire session. This option for session management and load balancing is known as session affinity. For more information about configuring your installation to use session affinity, refer to the documentation for your application server.

**Note:** When a node fails on a system that uses this configuration option, every user session on that node also fails. The load balancer does not, and must not, switch users to another available node, as user authentication applies only to a single node in Marketing Operations. Users are prompted to log in again, and in some cases an unexpected error and corresponding data loss can occur.

- Log in to Marketing Operations. Select **Settings > Configuration**, and configure the following URL parameters so that all references to the Marketing Operations server use the proxy host and port.
  - Marketing Operations | navigation | serverURL
  - Marketing Operations | umoConfiguration | markup | markupServerURL
  - Marketing Operations | umoConfiguration | notifications | notifyPlanBaseURL

---

## WebLogic guidelines

You must complete extra steps if you plan to install Marketing Operations on a cluster in WebLogic.

### Preparing to install

Before you begin, you must create a WebLogic domain for the cluster. For help with this step, see the WebLogic documentation.

### Preparing the data sources

The data source chapter instructs you to create a database for Marketing Operations and then configure a JDBC data source for it in your application server. When you complete these tasks for a cluster, note the following extra instructions:

- You must configure the web application servers to use the correct JDBC driver on all machines in the cluster.
- Create the data source for the Marketing Platform system tables (UnicaPlatformDS) on both the administration server and the cluster members.
- When you create the data source for the Marketing Operations system tables (plands), deploy it to the cluster and not to the administration server. Select **All servers in the cluster**.

### Installing the products

When you run the installer, be sure that you install Marketing Platform and Marketing Operations once on the machine that is designated as the administration server for the cluster. You do not need to install the software on each cluster

member. Instead, you install it once on the administration server, create the EAR, and then deploy the EAR file on each cluster member.

## Pre-deployment steps

Before you deploy Marketing Operations, complete the following tasks in addition to the ones specified in the pre-deployment configuration chapter:

- Share the top-level directory in which Marketing Operations is installed. For example, say that Marketing Operations is installed in the following directory: `C:\MktOpsCluster\IBM_IMS\MarketingOperations`. In this case, you would share the entire `MktOpsCluster` directory.
- Create and share a folder on the administration server to contain the upload files for Marketing Operations. This folder is known as the `Shared_UMO_Artifacts` folder. All cluster members must have full control (read, write, change, and delete) of this folder. Placing this folder below the IBM home directory in the local file system hierarchy is optional.

## Deploying the application on WebLogic

In addition to the instructions in the deployment chapter, note the following additions:

### 1. Set Source accessibility option

When you deploy the EAR on the administration server, set the **Source accessibility** option to **Use the defaults defined by the deployment's targets**.

### 2. Extra instructions for setting the `JAVA_OPTIONS`

Remember to configure the `JAVA_OPTIONS` property in the `setenv` file on each machine in the cluster.

The path that you specify in the `plan.home` property must point to the shared installation directory.

There are two extra parameters to set for clusters:

- `-DPLAN_CONFIG_GUID=Plan`
- On the machines that must not send notifications, set the "suppress notifications" parameter as follows:  
`-Dplan.suppressNotifications=true`  
Verify that the `suppressNotifications` property is set to `false` on the machine that is designated to send notifications. Set this property to `true` on every other machine.

### 3. Define an alternate ehcache file

The `plan_ehcache.xml` file that is defined in the `CONF` directory is used for every node in the cluster. To override this default file on a node, edit `startWeblogic.cmd` (Windows) or `startWeblogic.sh` (UNIX) on that node to configure the `JAVA_OPTIONS` property: add the `-plan_ehcache` parameter to specify the location of another `plan_ehcache.xml` file.

## Configuring the session management cookie

To define the name of the session management cookie that is used by servers in the cluster, you edit the `plan.war` file that is created by the installer and deployed on your application server.

Complete the following steps to configure the session management cookie:

1. Open a Command Prompt and verify that the Java version is the same as the JRE used by Marketing Operations: type `java -version`.
2. Copy `plan.war` into a temporary folder and rename the original `plan.war` file.
3. Unpack the contents of the new, temporary `plan.war` archive: type `jar -xvf plan.war`.
4. Delete the unpacked `plan.war`: type `rm plan.war`.
5. Change to the `WEB-INF` directory: type `cd WEB-INF`.
6. Edit the `web.xml` file to add this tag to override the cookie name:

```
<init-param>
  <param-name>CookieName</param_name>
  <param-value>UMOSESSIONID</param-value>
</init-param>
```

7. Repack the `plan.war`: type `cd ..` then `jar -cvf * plan.war`.
8. Copy the updated `plan.war` back to its original location on the server.
9. Deploy the updated `plan.war`.

## Post-deployment steps

If you are using a plug-in for load balancing, complete the following configuration steps:

- For IBM Marketing Operations to work effectively in a clustered environment, users must remain on a single node for their entire session. This option for session management and load balancing is known as sticky sessions or sticky load balancing. For more information about configuring your installation to use this option, see the documentation for your application server.

**Note:** When a node fails on a system that uses this configuration option, every user session on that node also fails. The load balancer must switch users to another available node, as user authentication applies only to a single node in Marketing Operations. Users are prompted to log in again, and in some cases an unexpected error and corresponding data loss can occur.

- Log in to Marketing Operations and select **Settings > Configuration**. Configure the following URL parameters so that all references to the Marketing Operations server use the proxy host and port:
  - Marketing Operations | navigation | serverURL
  - Marketing Operations | umoConfiguration | markup | markupServerURL
  - Marketing Operations | umoConfiguration | notifications | notifyPlanBaseURL

---

## Configuring the shared folder properties

The `Shared_UMO_Artifacts` folder is a shared folder, and is created before you deploy Marketing Operations. After successfully deploying Marketing Operations, make sure that all the upload files point to the subfolders in the `Shared_UMO_Artifacts` folder.

Complete the following steps to set the shared folder properties:

1. Log in and select **Settings > Configuration**.
2. Select **Marketing Operations > umoConfiguration > templates**.
3. Click **Edit Settings** and then update the value for the templatesDir property to point to a subfolder in the Shared\_UMO\_Artifacts folder.
4. Save your changes
5. Select **Marketing Operations > umoConfiguration > attachmentFolders**.
6. Click **Edit Settings** and then update the values for all the properties in this category to point to subfolders in the Shared\_UMO\_Artifacts folder.
7. Save your changes.

---

## Configure ehcache

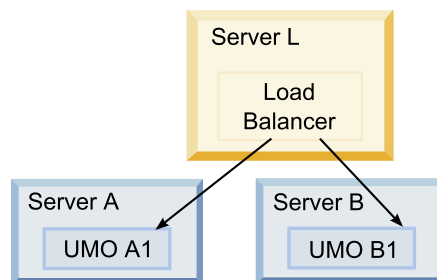
The ehcache is an open source Java distributed cache for caching, Java EE, and light-weight containers. Every node in the cluster can use the same plan\_ehcache.xml file or you can set a different plan\_ehcache.xml file for each node. For installations in a cluster, edit the plan\_ehcache.xml file so you do not have restart the computer if you make changes to templates or offer folders.

**Important:** If your installation is upgraded from a previous version, some or all of the sections in the plan\_ehcache.xml file might not be present. In that case, add and edit the file as shown in the sections that follow.

Use one of the following procedures to configure the ehcache file.

### Configuring ehcache with Remote Method Invocation (RMI)

Marketing Operations systems that have the following topography typically use RMI:



Clustered topography 1:  
Configure ehcache with RMI

Go to the <IBM\_IMS\_Home>\<MarketingOperations\_Home>\conf directory and open the plan\_ehcache.xml file in a text editor. Then, make the following edits:

- Uncomment the following section of the file.

You must customize the items that are shown in bold (machineA, machineB, and port) to reflect your environment. Provide a pipe-separated list of all machines in the cluster, by using fully qualified host names.

```
<!--
<cacheManagerPeerProviderFactory
class="net.sf.ehcache.distribution.RMICacheManagerPeerProviderFactory"
properties="peerDiscovery=manual,
rmiUrls=//<ServerA>:40000/planApplicationCache|//<ServerB>:
40000/planApplicationCache"/>
```

```
<cacheManagerPeerListenerFactory
class="net.sf.ehcache.distribution.RMICacheManagerPeerListenerFactory"
properties="port=40000, socketTimeoutMillis=20000"/>
-->
```

- Uncomment the following section of the file.

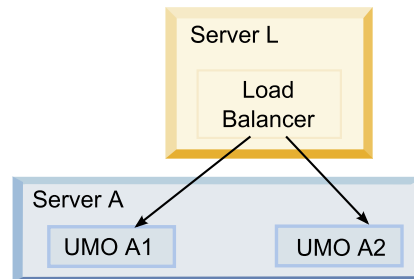
```
<!--
<cacheEventListenerFactory
class="net.sf.ehcache.distribution.RMICacheReplicatorFactory"
properties="replicateAsynchronously=true, replicatePuts=true,
replicateUpdates=true, replicateUpdatesViaCopy=true,
replicateRemovals=true"/>
<cacheEventListenerFactory
class="com.unicacorp.uap.common.cache.PlanCacheEventListenerFactory
"net.sf.ehcache.distribution.RMIBootstrapCacheLoaderFactory" />
-->
```

- If the following lines are present in the file, remove them.

```
<bootstrapCacheLoaderFactory class=net.sf.ehcache.distribution.
RMIBootstrapCacheLoaderFactory"/>
```

## Configuring ehcache with multicast

Marketing Operations systems that have the following topography typically use multicast:



Clustered topography 2:  
Configure ehcache with Multicast

Go to the `<IBM_IMS_Home>\<MarketingOperations_Home>\conf` directory and open the `plan_ehcache.xml` file in a text editor. Then, make the following edits:

- Uncomment the following section of the file.

You must customize the items that are shown in bold (multicastGroupAddress and multicastGroupPort) to reflect the multicast group and port in your environment.

```
<!--<cacheManagerPeerProviderFactory
class="net.sf.ehcache.distribution.RMICacheManagerPeerProviderFactory"
properties="peerDiscovery=automatic, multicastGroupAddress=230.0.0.1,
multicastGroupPort=4446, timeToLive=32"/>
```

```
<cacheManagerPeerListenerFactory
class="net.sf.ehcache.distribution.RMICacheManagerPeerListenerFactory"/>
-->
```

- Uncomment the following section of the file.

```
<!--
<cacheEventListenerFactory
class="net.sf.ehcache.distribution.RMICacheReplicatorFactory"
properties="replicateAsynchronously=true, replicatePuts=true,
replicateUpdates=true, replicateUpdatesViaCopy=true,
```

```
replicateRemovals=true"/>  
<cacheEventListenerFactory  
class="com.unicacorp.uap.common.cache.PlanCacheEventListenerFactory" />  
-->
```

- If the following lines are present in the file, remove them.

```
<bootstrapCacheLoaderFactory  
class="net.sf.ehcache.distribution.RMIBootstrapCacheLoaderFactory"/>
```

---

## Chapter 10. Uninstalling Marketing Operations

Run the Marketing Operations uninstaller to uninstall Marketing Operations. When you run the Marketing Operations uninstaller, the files that were created during the installation process are removed. For example, files such as configuration files, installer registry information, and user data are removed from the computer.

When you install IBM Marketing Software products, an uninstaller is included in the `Uninstall_Product` directory, where *Product* is the name of your IBM product. On Windows, an entry is also added to the **Add or Remove Programs** list in the Control Panel.

If you manually remove the files in your installation directory instead of running the uninstaller, the result might be an incomplete installation if you later reinstall an IBM product in the same location. After uninstalling a product, its database is not removed. The uninstaller only removes default files that are created during installation. Any file that is created or generated after installation is not removed.

**Note:** On UNIX, the same user account that installed Marketing Operations must run the uninstaller.

1. If you have deployed the Marketing Operations web application, undeploy the web application from WebSphere or WebLogic.
2. Shut down WebSphere or WebLogic.
3. Stop the processes that are related to Marketing Operations.
4. If the `ddl` directory exists in the product installation directory, run the scripts that are provided in the `ddl` directory to drop tables from the system table database.
5. Complete one of the following steps to uninstall Marketing Operations:
  - Click the Marketing Operations uninstaller that exists in the `Uninstall_Product` directory. The uninstaller runs in the mode in which you installed Marketing Operations.
  - In a command-line window, navigate to the directory where the uninstaller exists, and run the following command to uninstall Marketing Operations by using the console mode:

**Uninstall\_Product -i console**

- In a command-line window, navigate to the directory where the uninstaller exists, and run the following command to uninstall Marketing Operations by using the silent mode:

**Uninstall\_Product -i silent**

When you uninstall Marketing Operations by using the silent mode, the uninstallation process does not present any dialogs for user interaction.

**Note:** If you do not specify an option for uninstalling Marketing Operations, the Marketing Operations uninstaller runs in the mode in which Marketing Operations is installed.





---

## Chapter 11. configTool

The properties and values on the Configuration page are stored in the Marketing Platform system tables. You can use the configTool utility to import and export configuration settings to and from the system tables.

### When to use configTool

You might want to use configTool for the following reasons.

- To import partition and data source templates that are supplied with Campaign, which you can then modify and duplicate by using the Configuration page.
- To register (import configuration properties for) IBM Marketing Software products, if the product installer is unable to add the properties to the database automatically.
- To export an XML version of configuration settings for backup or to import into a different installation of IBM Marketing Software.
- To delete categories that do not have the **Delete Category** link. You do this by using configTool to export your configuration, then manually deleting the XML that creates the category, and by using configTool to import the edited XML.

**Important:** This utility modifies the `usm_configuration` and `usm_configuration_values` tables in the Marketing Platform system table database, which contains the configuration properties and their values. For best results, either create backup copies of these tables, or export your existing configurations by using configTool and back up the resulting file so you have a way to restore your configuration if you make an error when you use configTool to import.

### Syntax

```
configTool -d -p "elementPath" [-o]
```

```
configTool -i -p "parent ElementPath" -f importFile [-o]
```

```
configTool -x -p "elementPath" -f exportFile
```

```
configTool -vp -p "elementPath" -f importFile [-d]
```

```
configTool -r productName -f registrationFile [-o] configTool -u  
productName
```

### Commands

**-d -p "elementPath" [o]**

Delete configuration properties and their settings, specifying a path in the configuration property hierarchy.

The element path must use the internal names of categories and properties. You can obtain them by going to the Configuration page, selecting the wanted category or property, and looking at the path that is displayed in parentheses in the right pane. Delimit a path in the configuration property hierarchy by using the | character, and surround the path with double quotation marks.

Note the following.

- Only categories and properties within an application can be deleted by using this command, not whole applications. Use the `-u` command to unregister a whole application.
- To delete categories that do not have the **Delete Category** link on the Configuration page, use the `-o` option.

When you use `-d` with the `-vp` command, the `configTool` deletes any child nodes in the path you specify if those nodes are not included in the XML file you specify.

**`-i -p "parentElementPath" -f importFile [o]`**

Import configuration properties and their settings from a specified XML file.

To import, you specify a path to the parent element under which you want to import your categories. The `configTool` utility imports properties under the category you specify in the path.

You can add categories at any level below the top level, but you cannot add a category at same level as the top category.

The parent element path must use the internal names of categories and properties. You can obtain them by going to the Configuration page, selecting the required category or property, and looking at the path that is displayed in parentheses in the right pane. Delimit a path in the configuration property hierarchy by using the `|` character, and surround the path with double quotation marks.

You can specify an import file location relative to the `tools/bin` directory or you can specify a full directory path. If you specify a relative path or no path, `configTool` first looks for the file relative to the `tools/bin` directory.

By default, this command does not overwrite an existing category, but you can use the `-o` option to force an overwrite.

**`-x -p "elementPath" -f exportFile`**

Export configuration properties and their settings to an XML file with a specified name.

You can export all configuration properties or limit the export to a specific category by specifying a path in the configuration property hierarchy.

The element path must use the internal names of categories and properties, which you can obtain by going to the Configuration page, selecting the wanted category or property, and looking at the path that is displayed in parentheses in the right pane. Delimit a path in the configuration property hierarchy by using the `|` character, and surround the path with double quotation marks.

You can specify an export file location relative to the current directory or you can specify a full directory path. If the file specification does not contain a separator (`/` on UNIX, `/` or `\` on Windows), `configTool` writes the file to the `tools/bin` directory under your Marketing Platform installation. If you do not provide the `xml` extension, `configTool` adds it.

**`-vp -p "elementPath" -f importFile [-d]`**

This command is used mainly in manual upgrades, to import configuration properties. If you applied a fix pack that contains a new configuration property, and you then upgrade, importing a configuration file as part of a manual upgrade process can override values that were set when the fix pack was applied. The `-vp` command ensures that the import does not override previously set configuration values.

**Important:** After you use the `configTool` utility with the `-vp` option, you must restart the web application server on which Marketing Platform is deployed so the changes are applied.

When you use `-d` with the `-vp` command, the `configTool` deletes any child nodes in the path you specify if those nodes are not included in the XML file you specify.

#### **`-r productName -f registrationFile`**

Register the application. The registration file location can be relative to the `tools/bin` directory or can be a full path. By default, this command does not overwrite an existing configuration, but you can use the `-o` option to force an overwrite. The `productName` parameter must be one of those names that are listed above.

Note the following.

- When you use the `-r` command, the registration file must have `<application>` as the first tag in the XML.  
Other files can be provided with your product that you can use to insert configuration properties into the Marketing Platform database. For these files, use the `-i` command. Only the file that has the `<application>` tag as the first tag can be used with the `-r` command.
- The registration file for the Marketing Platform is named `Manager_config.xml`, and the first tag is `<Suite>`. To register this file on a new installation, use the `populateDb` utility, or rerun the Marketing Platform installer as described in the *IBM Marketing Platform Installation Guide*.
- After the initial installation, to re-register products other than the Marketing Platform, use `configTool` with the `-r` command and `-o` to overwrite the existing properties.

The `configTool` utility uses product names as parameters with the commands that register and unregister products. With the 8.5.0 release of IBM Marketing Software, many product names changed. However, the names that are recognized by `configTool` did not change. The valid product names for use with `configTool` are listed below, along with the current names of the products.

*Table 14. Product names for configTool registration and unregistration*

Product name	Name used in configTool
Marketing Platform	Manager
Campaign	Campaign
Distributed Marketing	Collaborate
eMessage	emessage
Interact	interact
Contact Optimization	Optimize
Marketing Operations	Plan

Table 14. Product names for configTool registration and unregistration (continued)

Product name	Name used in configTool
Opportunity Detect	Detect
IBM SPSS Modeler Advantage Enterprise Marketing Management Edition	SPSS
Digital Analytics	Coremetrics

### **-u *productName***

Unregister an application that is specified by *productName*. You do not have to include a path to the product category; the product name is sufficient, and it is required. The process removes all properties and configuration settings for the product.

## **Options**

### **-o**

When used with -i or -r, it overwrites an existing category or product registration (node).

When used with -d, you can delete a category (node) that does not have the **Delete Category** link on the Configuration page.

## **Examples**

- Import configuration settings from a file named Product\_config.xml in the conf directory under the Marketing Platform installation.  
`configTool -i -p "Affinium" -f Product_config.xml`
- Export an existing Campaign partition (complete with data source entries), save it to a file named partitionTemplate.xml, and store it in the default tools/bin directory under the Marketing Platform installation.  
`configTool -x -p "Affinium|Campaign|partitions|partition1" -f partitionTemplate.xml`
- Manually register an application named productName, by using a file named app\_config.xml in the default tools/bin directory under the Marketing Platform installation, and force it to overwrite an existing registration of this application.  
`configTool -r product Name -f app_config.xml -o`
- Unregister an application named productName.  
`configTool -u productName`
- Run the following command to enable encodeCSV feature:  
`configTool -vp -p "Affinium|Plan|umoConfiguration" -f MarketingOperations_Home\conf\Plan_encodeProperty_11.1.xml`

---

## Chapter 12. IBM Marketing Operations configuration properties

This section describes the IBM Marketing Operations configuration properties on the **Settings > Configuration** page.

---

### Marketing Operations

Properties in this category specify the default and supported locales for your installation of IBM Marketing Operations.

#### **supportedLocales**

##### **Description**

Specifies the locales available in your installation of IBM Marketing Operations. List only the locales that you are using. Each locale you list uses memory on the server. The amount of memory that is used depends on the size and number of templates.

If you add locales after the initial installation or upgrade, you must run the upgrade servlets again. See upgrade documentation for details.

If you change this value, you must stop and restart your Marketing Operations deployment before the change takes effect.

##### **Default value**

en\_US

#### **defaultLocale**

##### **Description**

Specifies the supported locale in which you want IBM Marketing Operations to display for all users, unless explicitly overridden for specific users by Marketing Operations administrators.

If you change this value, you must stop and restart your Marketing Operations deployment before the change takes effect.

##### **Default value**

en\_US

---

### Marketing Operations | navigation

The properties in this category specify options for navigation, such as Uniform Resource Identifiers, URLs, and ports.

#### **welcomePageURI**

##### **Description**

The Uniform Resource Identifier of the IBM Marketing Operations index page. This value is used internally by IBM Marketing Software applications. Changes to this value are not recommended.

##### **Default value**

affiniumPlan.jsp?cat=projectlist

## **projectDetailpageURI**

### **Description**

The Uniform Resource Identifier of the IBM Marketing Operations detail page. This value is used internally by IBM Marketing Software applications. Changes to this value are not recommended.

### **Default value**

blank

## **seedName**

### **Description**

Used internally by IBM Marketing Software applications. Changes to this value are not recommended.

### **Default value**

Plan

## **type**

### **Description**

Used internally by IBM Marketing Software applications. Changes to this value are not recommended.

### **Default value**

Plan

## **httpPort**

### **Description**

The port number that is used by the application server for connections to the IBM Marketing Operations application.

### **Default value**

7001

## **httpsPort**

### **Description**

The port number that is used by the application server for secure connections to the IBM Marketing Operations application.

### **Default value**

7001

## **serverURL**

### **Description**

The URL of the IBM Marketing Operations installation. Accepts locators with either the HTTP or HTTPS protocol.

If users access Marketing Operations with the Chrome browser, use the fully qualified domain name (FQDN) in the URL. If the FQDN is not used, the Chrome browser cannot access the product URLs.

**Default value**

`http://<server>:<port>/plan`

**Note:** <server> must be lowercase.

**logoutURL**

**Description**

Used internally. Changes to this value are not recommended.

IBM Marketing Platform uses this value to call the logout handler of each registered application if the user clicks the logout link in suite.

**Default value**

`/uapsysservlet?cat=sysmodules&func=logout`

**displayName**

**Description**

Used internally.

**Default value**

Marketing Operations

---

## Marketing Operations | about

The configuration properties in this section list information about your IBM Marketing Operations installation. You cannot edit these properties.

**displayName**

**Description**

The display name of the product.

**Value**

IBM Marketing Operations

**releaseNumber**

**Description**

The currently installed release.

**Value**

`<version>.<release>.<modification>`

**copyright**

**Description**

The copyright year.

**Value**

`<year>`

**os****Description**

The operating system on which IBM Marketing Operations is installed.

**Value** *<operating system and version>*

**java****Description**

The current version of Java.

**Value** *<version>*

**support****Description**

Read documentation and place service requests.

**Value**

[http://www-947.ibm.com/support/entry/portal/open\\_service\\_request](http://www-947.ibm.com/support/entry/portal/open_service_request)

**appServer****Description**

The address of the application server on which IBM Marketing Operations is installed.

**Value**

*<IP address>*

**otherString****Description****Value**

blank

---

## Marketing Operations | umoConfiguration

These properties specify information about the basic configuration of IBM Marketing Operations.

**serverType****Description**

Application Server Type. Used for Calendar export.

**Valid values**

WEBLOGIC or WEBSPHERE

**Default value**

*<server type>*

**userManagerSyncTime****Description**



Time in milliseconds to between scheduled synchronizations with IBM Marketing Platform.

**Default value**

10800000 (milliseconds: 3 hours)

**encodeCSV**

**Description**

When the value of this setting is true, when the TCS grid in a Campaign integrated project is exported, the values of strings in cells are enclosed in quotes. When such data is imported and if there is a formula in a string, it is prevented from running when user visits the TCS grid page

**Valid values**

True | False

**Default value**

False

**firstMonthInFiscalYear**

**Description**

Set to the month that you would like your account fiscal year to begin. The Summary tab for the account contains a view-only table, which lists budget information by month for the fiscal years of the account. The first month in this table is determined by this parameter.

January is represented by 0. To have your fiscal year to begin in April, set **firstMonthInFiscalYear** to 3.

**Valid values**

Integers 0 to 11

**Default value**

0

**maximumItemsToBeRetainedInRecentVisits**

**Description**

The maximum number of links to recently viewed pages to display on the **Recent** menu.

**Default value**

10 (links)

**maxLimitForTitleString**

**Description**

The maximum number of characters that can display in a page title. If titles are longer than the specified number, IBM Marketing Operations clips them.

**Default value**

40 (characters)

## **maximumLimitForBulkUploadItems**

### **Description**

The maximum number of attachments you can upload at the same time.

### **Default value**

5 (attachments)

## **workingDaysCalculation**

### **Description**

Controls how IBM Marketing Operations calculates durations.

### **Valid values**

- **bus**: Business days only, includes working days only. Does not include weekends and days off.
- **wkd**: Business days + Weekends, includes working days and weekends. Does not include days off.
- **off**: Business days + Days off, includes all working days and days off. Does not include weekends.
- **all**: includes all days in the calendar.

### **Default value**

all

## **validateAllWizardSteps**

### **Description**

When users create a program, project, or request with the wizard, IBM Marketing Operations automatically validates that the required fields on the current page have values. This parameter controls whether Marketing Operations validates the required fields on all pages (tabs) when a user clicks **Finish**.

### **Valid values**

- **True**: Marketing Operations checks the required fields on pages that the user did not view (except workflow, tracking, and attachments). If a required field is blank, the wizard opens that page and displays an error message.
- **False**: Marketing Operations does not validate required fields on pages the user did not view.

### **Default value**

True

## **enableRevisionHistoryPrompt**

### **Description**

Ensures that users are prompted to add change comments when they save a project, request, or approval.

### **Valid values**

True | False

### **Default value**

False

## **useForecastDatesInTaskCalendar**

### **Description**

Specifies the type of dates that are used when tasks display in calendar view.

### **Valid values**

- True: uses forecast and actual dates to display tasks.
- False: uses target dates to display tasks.

### **Default value**

False

## **copyRequestProjectCode**

### **Description**

Controls whether you want to carry the Project Code (PID) over from a request to a project. If you set this parameter to False, the project and the request use different codes.

### **Valid values**

True | False

### **Default value**

True

## **projectTemplateMonthlyView**

### **Description**

Controls whether the monthly view is allowed in the workflow for a project template.

### **Valid values**

True | False

### **Default value**

False

## **disableAssignmentForUnassignedReviewers**

### **Description**

Specifies how work is assigned by role for approvals. The **disableAssignmentForUnassignedReviewers** parameter controls the behavior of **Assign work by Role** on the People tab for assignment of approvers in workflow approvals.

### **Valid values**

- True: unassigned reviewers in the People tab are not added to the approval as new steps.
  - Append option: The existing, owner-assigned approvers without an assigned role do not change. New approver steps are not added even if the People tab has reviewers with the role "unassigned."

- Replace option: The existing owner assigned approvers without a role are replaced with a blank. New approver steps would not be added even if the people tab has reviewers with the role "unassigned."
- False: unassigned reviewers are added to the approval.
  - Append option: All reviewers without a role are appended to the approval as reviewers if the approval has owner assigned steps without defined roles.
  - Replace Option: The existing approvers of approvals are replaced with the unassigned approvers in the People tab.

#### **Default value**

False

### **enableApplicationLevelCaching**

#### **Description**

Indicates whether application-level caching is enabled or not. For best results in a clustered environment on which multicasting of caching messages is not enabled, consider turning off application level caching for Marketing Operations.

#### **Valid values**

True | False

#### **Default value**

True

### **customAccessLevelEnabled**

#### **Description**

Determines whether you use custom access levels (project roles) in IBM Marketing Operations.

#### **Valid values**

- True: user access to projects and requests is evaluated according to Object Access Levels and Custom Access Levels (project roles). Tab security is enabled for custom tabs.
- False: user access to projects and requests is evaluated according only to Object Access Levels (object implicit roles), and tab security is turned off for custom tabs.

#### **Default value**

True

### **enableUniqueIdsAcrossTemplatizableObjects**

#### **Description**

Determines whether you use unique internal IDs for all of the objects that are created from templates, including programs, projects, plans, and invoices.

#### **Valid values**

- True enables unique internal IDs across all objects that are created from templates. This configuration simplifies cross-object reporting by allowing the system to use the same table for different object types.

- False disables unique internal IDs across all objects that are created from templates.

**Default value**

True

**FMEEnabled**

**Description**

Enables and disables the Financial Management Module, which determines whether the Accounts, Invoices, and Budget tabs appear in the product.

**Valid values**

True | False

**Default value**

False

**FMProjVendorEnabled**

**Description**

Parameter that is used to show/hide vendor column for project line items.

**Valid values**

True | False

**Default value**

False

**FMPrgmVendorEnabled**

**Description**

Parameter that is used to show/hide vendor column for program line items.

**Valid values**

True | False

**Default value**

False

---

## Marketing Operations | umoConfiguration | Approvals

These properties specify options for approvals.

**specifyDenyReasons**

**Description**

Enables a customizable list of reasons for denying an approval. When enabled, administrators populate the Approval Deny Reasons list with options, then associate deny reasons with each workflow template and each project template that defines a workflow. Users who deny an approval, or an item within an approval, are required to select one of these predefined reasons.

**Valid values**

True | False

**Default value**

False

**approveWithChanges**

**Description**

Enables the **Approve with changes** option for an approval. When enabled, The **Allow approvers to approve with changes** option is selected by default when a user sets up approvals in a project template, project, or a standalone approval. The **Allow approvers to approve with changes** option can be edited if the **overrideApproveWithChanges** property is set to True.

An approver can approve a task by selecting the **Approve with changes** option if the **Allow approvers to approve with changes** option is selected when the approval is set up.

**Valid values**

True | False

**Default value**

True

**overrideApproveWithChanges**

**Description**

Set to True to allow a user to edit the default setting for the **Allow approvers to approve with changes** option when a user sets up approvals in a project template, project, or a standalone approval. The default setting is determined by the **approveWithChanges** property.

**Valid values**

True | False

**Default value**

True

---

## Marketing Operations | umoConfiguration | templates

These properties specify information about templates in IBM Marketing Operations. For best results, do not change the default values of these parameters.

**templatesDir**

**Description**

Identifies the directory that contains all of your project template definitions, which are stored in XML files.

Use a fully qualified path.

**Default value**

<IBM\_IMS\_Home>/<MarketingOperations\_Home>/templates

## **assetTemplatesFile**

### **Description**

The XML file that defines the templates for assets. This file must be in the directory that is specified by **templatesDir**.

### **Default value**

asset\_templates.xml

## **planTemplatesFile**

### **Description**

The XML file that defines the templates for plans. This file must be in the directory that is specified by **templatesDir**.

### **Default value**

plan\_templates.xml

## **programTemplatesFile**

### **Description**

The XML file that defines the templates for programs. This file must be in the directory that is specified by **templatesDir**.

### **Default value**

program\_templates.xml

## **projectTemplatesFile**

### **Description**

The XML file that defines the templates for projects. This file must be in the directory that is specified by **templatesDir**.

### **Default value**

project\_templates.xml

## **invoiceTemplatesFile**

### **Description**

The XML file that defines the templates for invoices. This file must be in the directory that is specified by **templatesDir**.

### **Default value**

invoice\_templates.xml

## **componentTemplatesFile**

### **Description**

The XML file that defines the templates for custom marketing object types. This file must be in the directory that is specified by **templatesDir**.

### **Default value**

component\_templates.xml

## **metricsTemplateFile**

### **Description**

The XML file that defines the templates for metrics. This file must be in the directory that is specified by **templatesDir**.

### **Default value**

metric\_definition.xml

## **teamTemplatesFile**

### **Description**

The XML file that defines the templates for teams. This file must be in the directory that is specified by **templatesDir**.

### **Default value**

team\_templates.xml

## **offerTemplatesFile**

### **Description**

The XML file that defines the templates for offers. This file must be in the directory that is specified by **templatesDir**.

### **Default value**

uap\_sys\_default\_offer\_comp\_type\_templates.xml

---

## **Marketing Operations | umoConfiguration | attachmentFolders**

These properties specify directories to upload and store attachments.

### **uploadDir**

#### **Description**

The upload directory where attachments for projects are stored.

#### **Default value**

<MarketingOperations\_Home>/projectattachments

### **planUploadDir**

#### **Description**

The upload directory where attachments for plans are stored.

#### **Default value**

<MarketingOperations\_Home>/planattachments

### **programUploadDir**

#### **Description**

The upload directory where attachments for programs are stored.

#### **Default value**

<MarketingOperations\_Home>/programattachments



## **componentUploadDir**

### **Description**

The upload directory where attachments for marketing objects are stored.

### **Default value**

*<MarketingOperations\_Home>/componentattachments*

## **taskUploadDir**

### **Description**

The upload directory where attachments for tasks are stored.

### **Default value**

*<MarketingOperations\_Home>/taskattachments*

## **approvalUploadDir**

### **Description**

The upload directory where approval items are stored.

### **Default value**

*<MarketingOperations\_Home>/approvalitems*

## **assetUploadDir**

### **Description**

The upload directory where assets are stored.

### **Default value**

*<MarketingOperations\_Home>/assets*

## **accountUploadDir**

### **Description**

The upload directory where attachments for accounts are stored.

### **Default value**

*<MarketingOperations\_Home>/accountattachments*

## **invoiceUploadDir**

### **Description**

The upload directory where attachments for invoices are stored.

### **Default value**

*<MarketingOperations\_Home>/invoiceattachments*

## **graphicalRefUploadDir**

### **Description**

The upload directory where attribute images are stored.

### **Default value**

*<MarketingOperations\_Home>/graphicalrefimages*

## **templateImageDir**

### **Description**

The upload directory where template images are stored.

### **Default value**

*<MarketingOperations\_Home>/images*

## **recentDataDir**

### **Description**

The temporary directory that stores the recent data (serialized) for each user.

### **Default value**

*<MarketingOperations\_Home>/recentdata*

## **workingAreaDir**

### **Description**

The temporary directory that stores CSV files that are uploaded during grid imports.

### **Default value**

*<MarketingOperations\_Home>/umotemp*

## **managedListDir**

### **Description**

The upload directory where managed list definitions are stored.

### **Default value**

*<MarketingOperations\_Home>/managedList*

---

## **Marketing Operations | umoConfiguration | fileUpload**

The properties in this category specify options for file uploads.

## **validateFileUpload**

### **Description**

You can choose True to validate a file that is uploaded or False if you do not want to validate a file that is uploaded.

## **allowedFileTypes**

### **Description**

The type of file allowed to be uploaded. File types can include .doc, .ppt, .xls, .pdf, .gif, .jpeg, .png, and .mpp.

## **fileMaxSize**

### **Description**

The maximum size allowed for the file that you upload.

---

## Marketing Operations | umoConfiguration | Email

These properties specify information for sending email notifications in IBM Marketing Operations.

### **notifyEMailMonitorJavaMailHost**

#### **Description**

Optional string that specifies either the DNS host name of the email notifications mail server or its dot-formatted IP address. Set to the machine name or IP address of your SMTP server.

This parameter is necessary if you did not provide IBM Marketing Operations with an existing JavaMail session that uses the session parameter and the delegate is marked "Complete."

#### **Default value**

[CHANGE-ME]

### **notifyDefaultSenderEmailAddress**

#### **Description**

Set to a valid email address. The system sends email messages to this address when there is no valid email address available to send the notification email messages.

#### **Default value**

[CHANGE-ME]

### **notifySenderAddressOverride**

#### **Description**

Use this parameter to specify a standard value for the REPLY-TO and FROM email addresses for notifications. By default, these addresses are populated with the email address of the event owner.

#### **Default value**

blank

---

## Marketing Operations | umoConfiguration | markup

These properties specify markup options. IBM Marketing Operations provides markup tools for making comments on attachments. You can use either Adobe Acrobat markup or native Marketing Operations markup. Use the properties in this category to configure which option to use.

### **markupServerType**

#### **Description**

Determines which markup option to use.

#### **Valid values**

- SOAP enables users to edit and view markups in PDF documents. Adobe Acrobat Professional is required for markups. If specified, users cannot view markups that were made previously in a web browser with the native Marketing Operations method.

If you specify SOAP, you must also configure the **markupServerURL** parameter.

If you specify SOAP, you must delete the customized `UMO_Markup_Collaboration.js` that was copied in the JavaScripts subdirectory of the directory where Adobe Acrobat is installed. For example: `C:\Program files (x86)\Adobe\Acrobat 10.0\Acrobat\Javascripts\UMO_Markup_Collaboration.js`. This file is no longer required.

- MCM enables the native Marketing Operations markup method that allows users to edit and view markups in a web browser. If specified, users cannot edit or view markups that were made previously in a PDF with Adobe Acrobat.
- If blank, the markup function is disabled and the **View/Add Markup** link does not appear.

**Default value**

MCM

**markupServerURL**

**Description**

Dependent on **markupServerType** = SOAP.

Set to the URL for the computer that hosts the markup server, including the number of the port the web application server uses for listening. The URL must contain the fully qualified host name.

Accepts locators with either the HTTP or HTTPS protocol.

**Default value**

`http://<server>:<port>/plan/services/collabService?wsdl`

**instantMarkupFileConversion**

**Description**

If True, IBM Marketing Operations converts PDF attachments to images as soon as they are uploaded, rather than doing this conversion the first time a user opens the item for markup.

**Valid values**

True | False

**Default value**

False

---

## Marketing Operations | umoConfiguration | grid

These properties specify options for grids.

**gridmaxrow**

**Description**

An optional integer to define the maximum number of rows to be retrieved in grids. The default, -1, retrieves all rows.

**Default value**

## **reloadRuleFile**

### **Description**

An optional boolean parameter that indicates whether the grid validation plug-in needs to be reloaded or not.

### **Valid values**

True | False

### **Default value**

True

## **gridDataValidationClass**

### **Description**

An optional parameter to specify custom grid data validation class. If not specified, the default, the built in plug-in is used for grid data validation.

### **Default value**

blank

## **tvcDataImportFieldDelimiterCSV**

### **Description**

Delimiter to use to parse data imported into a grid. Default is comma (,).

### **Default value**

, (comma)

## **maximumFileSizeToImportCSVFile**

### **Description**

Represents the maximum file size in MB that can be uploaded while importing comma-separated data for TVC.

### **Default value**

0 (unlimited)

## **maximumRowsToBeDisplayedPerPageInGridView**

### **Description**

Specifies the number of rows to display per page in grid view.

### **Valid values**

positive integers

### **Default value**

100

## **griddatxsd**

### **Description**

Name of grid data XSD file.

**Default value**

griddataschema.xsd

**gridpluginxsd****Description**

Name of grid plug-ins XSD file.

**Default value**

gridplugin.xsd

**gridrulesxsd****Description**

Name of grid rules XSD file.

**Default value**

gridrules.xsd

---

## Marketing Operations | umoConfiguration | workflow

These properties specify options for the workflow in IBM Marketing Operations.

**hideDetailedDateTime****Description**

Optional show/hide parameter for detailed date time in the tasks page.

**Valid values**

True | False

**Default value**

False

**daysInPastRecentTask****Description**

This parameter determines how long tasks are considered "recent." If the task is "active" and started less than this number of days ago, or the Target End Date of the task is between today and this number of days in the past, the task displays as a recent task.

**Valid values**

positive integers

**Default value**

14 (days)

**daysInFutureUpcomingTasks****Description**

This parameter determines how many days in the future to look for upcoming tasks. If the task starts in the next **daysInFutureUpcomingTasks** or does not end before the current date, it is an upcoming task.

**Valid values**

positive integers

**Default value**

14 (days)

**beginningOfDay**

**Description**

Begin hour of the working day. This parameter is used to calculate the datetimes in workflow using fractional durations.

**Valid values**

integers from 0 to 12

**Default value**

9 (9 AM)

**numberOfHoursPerDay**

**Description**

Number of hours per day. This parameter is used to calculate the datetimes in workflow using fractional durations.

**Valid values**

integers from 1 to 24

**Default value**

8 (hours)

**mileStoneRowBGColor**

**Description**

Defines the background color for workflow tasks. To specify the value, insert the # character before the six-character Hex code for the color. For example, #0099CC.

**Default value**

#DDDDDD

---

## Marketing Operations | umoConfiguration | integrationServices

These properties specify information about IBM Marketing Operations Integration Services module. The Integration Services module extends the function of Marketing Operations with web services and triggers.

**enableIntegrationServices**

**Description**

Enables and disables the Integration Services module.

**Valid values**

True | False

**Default value**

False

## **integrationProcedureDefinitionPath**

### **Description**

Optional full file path to the custom procedure definition XML file.

### **Default value**

`[plan-home]/devkits/integration/examples/src/procedure/procedure-plugins.xml`

## **integrationProcedureClasspathURL**

### **Description**

URL to the class path for custom procedures.

### **Default value**

`file:/// [plan-home]/devkits/integration/examples/classes/`

---

## **Marketing Operations | umoConfiguration | campaignIntegration**

The properties in this category specify options for the Campaign integration.

### **defaultCampaignPartition**

#### **Description**

When IBM Marketing Operations is integrated with IBM Campaign, this parameter specifies the default Campaign partition if the campaign-partition-id is not defined in the project template.

#### **Default value**

`partition1`

### **webServiceTimeoutInMilliseconds**

#### **Description**

Added for Web Service integration API calls. This parameter is used as a timeout for web services API calls.

#### **Default value**

`1800000 milliseconds (30 minutes)`

---

## **Marketing Operations | umoConfiguration | reports**

These properties specify information about reports that are used by IBM Marketing Operations.

### **reportsAnalysisSectionHome**

#### **Description**

Indicates the home directory for the Analysis Section reports.

#### **Default value**

`/content/folder[@name='Affinium Plan']`



## reportsAnalysisTabHome

### Description

Indicates the home directory for the Analysis Tab reports.

### Default value

/content/folder[@name='Affinium Plan - Object Specific Reports']

## cacheListOfReports

### Description

This parameter enables caching of a list of reports on object instance's analysis page.

### Valid values

True | False

### Default value

False

---

## Marketing Operations | umoConfiguration | invoiceRollup

The properties in this category specify options for invoice rollups.

## invoiceRollupMode

### Description

Specifies how rollups occur. Acceptable values follow.

### Valid values

- immediate: rollups occur every time that an invoice is marked PAID.
- schedule: rollups occur on a scheduled basis.

If this parameter is set to schedule, the system uses the following parameters to determine when rollups occur.

- invoiceRollupScheduledStartTime
- invoiceRollupScheduledPollPeriod

### Default value

immediate

## invoiceRollupScheduledStartTime

### Description

If **invoiceRollupMode** is schedule, this parameter is used as follows.

- If this parameter contains a value (for example, 11:00 pm), that value is the start time for the schedule to start.
- If this parameter is undefined, the rollup schedule starts when the server starts.

If **invoiceRollupMode** is immediate, this parameter is not used.

### Default value

11:00 pm

## invoiceRollupScheduledPollPeriod

### Description

If **invoiceRollupMode** is `schedule`, this parameter specifies the poll period in seconds for rollup to occur.

If **invoiceRollupMode** is `immediate`, this parameter is not used.

### Default value

3600 (1 hour)

---

## Marketing Operations | umoConfiguration | database

These properties specify information about the database that is used for IBM Marketing Operations.

### fileName

#### Description

Path to file for loading data sources using JNDI lookup.

#### Default value

plan\_datasources.xml

### sqlServerSchemaName

#### Description

Specifies the database schema to use. This parameter applies only if you are using SQL Server for your IBM Marketing Operations database.

#### Default value

dbo

### db2ServerSchemaName

**Important:** Changes to the default value supplied for this parameter are not recommended.

#### Description

Used internally by IBM Marketing Software applications.

#### Default value

blank

### thresholdForUseOfSubSelects

#### Description

Specifies the number of records beyond which a subquery must be used in the IN clause of SQL (for listing pages) instead of the actual entity IDs in the IN clause. Setting this parameter improves performance for IBM Marketing Operations installations that have a large application data set. As a best practice, do not change this value unless you encounter performance issues. If this parameter is missing or commented out, the database behaves as if the threshold is set to a large value.

#### Default value

3000 (records)

### **commonDataAccessLayerFetchSize**

#### **Description**

This parameter specifies resultset fetch size for certain performance sensitive, critical queries.

#### **Default value**

0

### **commonDataAccessLayerMaxResultSetSize**

#### **Description**

This parameter specifies maximum resultset size for certain performance sensitive, critical queries.

#### **Default value**

-1

### **useDBSortForAllList**

#### **Description**

This parameter is used to configure ALL IBM Marketing Operations List Handlers. Use another **useDBSortFor<module>List** parameter to override the paging behavior of a particular list.

#### **Valid values**

- True: get one page of list data from the database at a time.
- False: cache all list data.

#### **Default value**

True

### **useDBSortForPlanList**

#### **Description**

This parameter is used to configure the Plan List Handler.

#### **Valid values**

- True: get one page of list data from the database at a time.
- False: cache all list data.

#### **Default value**

True

### **useDBSortForProjectList**

#### **Description**

This parameter is used to configure the Project List Handler.

#### **Valid values**

- True: get one page of list data from the database at a time.
- False: cache all list data.

#### **Default value**

True

### **useDBSortForTaskList**

#### **Description**

This parameter is used to configure the Task List Handler.

#### **Valid values**

- True: get one page of list data from the database at a time.
- False: cache all list data.

#### **Default value**

True

### **useDBSortForProgramList**

#### **Description**

This parameter is used to configure the Program List Handler.

#### **Valid values**

- True: get one page of list data from the database at a time.
- False: cache all list data.

#### **Default value**

True

### **useDBSortForApprovalList**

#### **Description**

This parameter is used to configure the Approval List Handler.

#### **Valid values**

- True: get one page of list data from the database at a time.
- False: cache all list data.

#### **Default value**

True

### **useDBSortForInvoiceList**

#### **Description**

This parameter is used to configure the Invoice List Handler.

#### **Valid values**

- True: get one page of list data from the database at a time.
- False: cache all list data.

#### **Default value**

True

### **useDBSortForAlerts**

#### **Description**

This parameter is used to configure the Alerts List Handler.

#### **Valid values**

- True: get one page of list data from the database at a time.
- False: cache all list data.

**Default value**

True

---

## Marketing Operations | umoConfiguration | listingPages

These properties specify information about listing items, such as marketing objects or projects, on pages in IBM Marketing Operations.

### listItemsPerPage

**Description**

Specifies how many items (rows) are displayed in one list page. This value must be greater than 0.

**Default value**

10

### listPageGroupSize

**Description**

Specifies the size of visible page numbers in the list navigator in the list page. For example, pages 1-5 is a page group. This value must be greater than 0.

**Default value**

5

### maximumItemsToBeDisplayedInCalendar

**Description**

The maximum number of objects (plans, programs, projects, or tasks) the system displays on calendars. Use this parameter to limit the number of objects that display when users select the calendar view. The number 0 indicates that there is no restriction.

**Default value**

0

### listDisplayShowAll

**Description**

Display "Show All" link on listing pages.

**Default value**

False

**Valid Values**

True | False

---

## Marketing Operations | umoConfiguration | objectCodeLocking

These properties specify information about object locks for plans, programs, projects, assets, and marketing objects in IBM Marketing Operations.

## **enablePersistentObjectLock**

### **Description**

This parameter must be set to True if IBM Marketing Operations is deployed in a clustered environment. The object lock information is persistent in the database.

### **Valid values**

True | False

### **Default value**

False

## **lockProjectCode**

### **Description**

Determines whether users can edit the Project Code or PID on the Summary tab of a project.

### **Valid values**

- True: enables locking.
- False: disables locking.

### **Default value**

True

## **lockProgramCode**

### **Description**

Determines whether users can edit the Program Code or PID on the Summary tab of a program.

### **Valid values**

- True: enables locking.
- False: disables locking.

### **Default value**

True

## **lockPlanCode**

### **Description**

Determines whether users can edit the Plan Code or PID on the Plan Summary tab for a plan.

### **Valid values**

- True: enables locking.
- False: disables locking.

### **Default value**

True

## **lockMarketingObjectCode**

### **Description**

Determines whether users can edit the Marketing Object Code or PID on the Summary tab of a marketing object.

**Valid values**

- True: enables locking.
- False: disables locking.

**Default value**

True

**lockAssetCode**

**Description**

Determines whether users can edit the Asset Code or PID on the Summary tab of an asset.

**Valid values**

- True: enables locking.
- False: disables locking.

**Default value**

True

---

## Marketing Operations | umoConfiguration | thumbnailGeneration

These properties specify information about how and when IBM Marketing Operations generates thumbnails.

**trueTypeFontDir**

**Description**

Specifies the directory where the True Type fonts are located. This parameter is required for thumbnail generation on operating systems other than Windows that use Aspose. For Windows installations, this parameter is optional.

**Default value**

blank

**coreThreadPoolSize**

**Description**

Specifies the number of persistent threads that are kept in the thread pool for thumbnail generator threads.

**Default value**

5

**maxThreadPoolSize**

**Description**

Specifies the maximum number of threads that are allowed in the thread pool for thumbnail generator threads.

**Default value**

10

## **threadKeepAliveTime**

### **Description**

Parameter to configure the keep-alive time for thumbnail generator threads.

### **Default value**

60

## **threadQueueSize**

### **Description**

Parameter to configure the thread queue size for thumbnail generator threads.

### **Default value**

20

## **disableThumbnailGeneration**

### **Description**

Determines whether thumbnail images are generated for uploaded documents. A value of True enables thumbnail generation.

### **Default value**

False

### **Valid values**

True | False

## **markupImgQuality**

### **Description**

Magnification or zoom factor to apply to the rendered page.

### **Default value**

1

---

## **Marketing Operations | umoConfiguration | Scheduler | intraDay**

This property specifies how frequently the scheduler runs during the day.

## **schedulerPollPeriod**

### **Description**

Defines how frequently, in seconds, a batch job to calculate project health status runs each day.

**Note:** Only the daily batch job updates the project health status history, which is used by reports.

### **Default value**

60 (seconds)



---

## Marketing Operations | umoConfiguration | Scheduler | daily

This property specifies what time the scheduler starts each day.

### **schedulerStartTime**

#### **Description**

Defines the start time for a batch job that calculates project health status. This job also:

- Updates the project health status history that is used by reports.
- Initiates distribution of email notifications to users who subscribe to them.

**Note:** The system initiates this batch job only if the calculation is not already running. Define this parameter so that the job starts at a different time than the **intraDay** parameter, and at a time when users are not likely to request this calculation manually.

#### **Default value**

11:00 pm

---

## Marketing Operations | umoConfiguration | Notifications

These properties specify information about notifications in IBM Marketing Operations, including information about the event monitor.

### **notifyPlanBaseURL**

#### **Description**

The URL for your IBM Marketing Operations deployment, including the host name and port number. Marketing Operations includes this URL in notifications that contain links to other information in Marketing Operations.

**Note:** Do not use "localhost" as a server name unless your mail client and IBM Marketing Operations server are running on same server.

#### **Default value**

http://<server>:<port>/plan/affiniumplan.jsp

### **notifyDelegateClassName**

#### **Description**

The fully qualified Java class name of the delegate implementation to be instantiated by the service. This class must implement the `com.unicacorp.afc.service.IServiceImpl` interface. Defaults to a local implementation if not specified.

#### **Default value**

blank

### **notifyIsDelegateComplete**

#### **Description**

Optional Boolean string that indicates whether the delegate implementation is complete. Defaults to True if not specified.

**Default value**

True

**Valid Values**

True | False

**notifyEventMonitorStartTime**

**Description**

Specifies when the event notification monitor process begins for the first time after IBM Marketing Operations starts. Format the value according to the short version of the `java.text.DateFormat` class for the current locale. For example, in US English locale, a valid string might be 11:45 pm.

**Default value**

Blank (Immediately after Marketing Operations is started.)

**notifyEventMonitorPollPeriod**

**Description**

Defines the approximate time, in seconds, for the event monitor to sleep between polls. Events accumulate in the event queue between polling periods; shorter polling periods process notifications sooner, but impose more system overhead. If you erase the default and leave the value blank, the poll period defaults to a short period, usually under a minute.

**Default value**

5 (seconds)

**notifyEventMonitorRemoveSize**

**Description**

Specifies the number of events to remove from the queue in one shot. The event monitor removes events from the event queue in the increments that are specified by this value until none are left.

**Note:** You can set this value to a number other than 1 to increase event processing performance. However, if the service host goes down before removed events are processed, there is a risk of event loss.

**Default value**

10

**alertCountRefreshPeriodInSeconds**

**Description**

Specifies, in seconds, the system-wide alert count refresh period for the alerts count. This count displays near the top of the navigation bar after a user logs in.

**Note:** Changing the refresh period to poll faster can have performance implications in a multi-user environment.

**Default value**

180 (3 minutes)

---

## Marketing Operations | umoConfiguration | Notifications | Email

These properties specify information about email notifications in IBM Marketing Operations.

**notifyEMailMonitorStartTime****Description**

Specifies when the email monitor process runs for the first time after IBM Marketing Operations starts. Format the value according to the short version of the `java.text.DateFormat` class for the current locale. For example, in US English locale, a valid string might be 11:59 pm.

**Default value**

Blank (Immediately after IBM Marketing Operations starts.)

**notifyEMailMonitorPollPeriod****Description**

Defines the approximate time, in seconds, for the email monitor to sleep between polls.

**Note:** As with events, email messages accumulate in the queue between polling periods; shorter polling times send email messages sooner, but can increase system overhead.

**Default value**

60 (seconds)

**notifyEMailMonitorJavaMailSession****Description**

JNDI name of an existing, initialized JavaMail Session to use for email notifications. If not specified and the delegate is marked `Complete`, then the JavaMail host parameter must be supplied so IBM Marketing Operations can create a session.

**Default value**

blank

**notifyEMailMonitorJavaMailProtocol****Description**

Specifies the mail server transport protocol to use for email notifications.

**Default value**

smtp

**notifyEMailMonitorRemoveSize****Description**

Specifies the number of email messages to remove from queue at one time. The email monitor continues to remove messages from the email queue incrementally until none remain.

**Note:** You can set this value to a number other than 1 to increase email processing performance. However, if the service host goes down before removed email messages are processed, there is a risk of message loss.

**Default value**

10 (messages)

## **notifyEmailMonitorMaximumResends**

**Description**

Specifies the maximum number of times the system attempts to send an email message that failed in the first attempt to send it. When a send fails, the email is put back into the queue until it reaches the maximum number of attempts that are allowed by this parameter.

For example, **notifyEmailMonitorPollPeriod** is set to poll every 60 seconds. Setting the **notifyEmailMonitorMaximumResends** property to 60 attempts causes the email monitor to resend a failed message one time in each poll (every minute), for up to 1 hour. A value of 1440 (24x60) causes the email monitor to try every minute for up to 24 hours.

**Default value**

1 (attempt)

## **showUserNameInEmailNotificationTitle**

**Description**

Specifies whether the IBM Marketing Operations notification and alert systems includes the user name in the **From** field of email notifications.

**Note:** This setting is applicable only to email messages sent by the notification and alert systems in IBM Marketing Operations.

**Valid values**

- True: Marketing Operations appends the user name to the title of the message and displays both in the **From** field of the email
- False: Marketing Operations displays only the message title in the **From** field

**Default value**

False

## **notifyEmailMonitorJavaMailDebug**

**Description**

Specifies whether JavaMail debug mode is set.

**Valid values**

- True: enables JavaMail debug.
- False: disables debug tracing.

**Default value**

---

## Marketing Operations | umoConfiguration | Notifications | project

These properties specify information about project alarms in IBM Marketing Operations.

### **notifyProjectAlarmMonitorStartTime**

#### **Description**

Specifies when the project alarm monitors run for the first time after IBM Marketing Operations starts. Format the value according to the short version of the `java.text.DateFormat` class for the current locale. For example, in US English locale, a valid string might be 11:59 pm. If you erase the default and leave the value blank, this monitor starts immediately after you create it.

#### **Default value**

10:00 pm

### **notifyProjectAlarmMonitorPollPeriod**

#### **Description**

Defines the approximate time, in seconds, for the project and program alarm monitors to sleep between polls.

#### **Default value**

Blank (60 seconds)

### **notifyProjectAlarmMonitorScheduledStartCondition**

#### **Description**

Defines the number of days before the start date of a project for IBM Marketing Operations to send notifications to users.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

#### **Default value**

1 (day)

### **notifyProjectAlarmMonitorScheduledEndCondition**

#### **Description**

Defines the number of days before the end date of a project for IBM Marketing Operations to send end notifications to users.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

#### **Default value**

3 (days)

### **notifyProjectAlarmMonitorTaskScheduledStartCondition**

#### **Description**

Defines the number of days before the start date of a task for IBM Marketing Operations to send start notifications to users.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

**Default value**

1 (day)

**notifyProjectAlarmMonitorTaskScheduledEndCondition**

**Description**

Defines the number of days before the end date of a task for IBM Marketing Operations to send end notifications to users.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

**Default value**

3 (days)

**notifyProjectAlarmMonitorTaskLateCondition**

**Description**

Defines the number of days after the start date of a task for IBM Marketing Operations to send users notification that a task did not start.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

**Default value**

3 (days)

**notifyProjectAlarmMonitorTaskOverdueCondition**

**Description**

Defines the number of days after the end date of a task for IBM Marketing Operations to send users notification that a task did not finish.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

**Default value**

3 (days)

**notifyProjectAlarmMonitorTaskScheduledMilestoneCondition**

**Description**

Defines the number of days before the start date of a milestone task for IBM Marketing Operations to send notifications.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

**Default value**

1 (day)

---

## Marketing Operations | umoConfiguration | Notifications | projectRequest

These properties specify information about project request alarms in IBM Marketing Operations.

### **notifyRequestAlarmMonitorLateCondition**

#### **Description**

Defines the number of days for IBM Marketing Operations to send a notification that the request is late.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

#### **Default value**

3 (days)

### **notifyRequestAlarmMonitorScheduledEndCondition**

#### **Description**

Defines the number of days before the end date of a request for IBM Marketing Operations to send end notifications to users.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

#### **Default value**

1 (day)

---

## Marketing Operations | umoConfiguration | Notifications | program

The properties in this category specify options for program notification schedules.

### **notifyProgramAlarmMonitorScheduledStartCondition**

#### **Description**

Defines the number of days before the start date of a program that IBM Marketing Operations sends start notifications to users.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

#### **Default value**

1 (day)

### **notifyProgramAlarmMonitorScheduledEndCondition**

#### **Description**

Defines the number of days before the end date of a program that IBM Marketing Operations sends end notifications to users.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

#### **Default value**

3 (days)

---

## Marketing Operations | umoConfiguration | Notifications | marketingObject

These properties specify information about marketing object alarms in IBM Marketing Operations.

### notifyComponentAlarmMonitorScheduledStartCondition

#### Description

Specifies the number of days before the start date of a marketing object for IBM Marketing Operations to send start notifications to users.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

#### Default value

1 (day)

### notifyComponentAlarmMonitorScheduledEndCondition

#### Description

Specifies the number of days before the end date of a marketing object for IBM Marketing Operations to send end notifications to users.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

#### Default value

3 (days)

---

## Marketing Operations | umoConfiguration | Notifications | approval

These properties specify information about approval alarms in IBM Marketing Operations.

### notifyApprovalAlarmMonitorStartTime

#### Description

Specifies when the approval alarm monitor begins processing for the first time after IBM Marketing Operations starts. Format the value according to the short version of the `java.text.DateFormat` class for the current locale. For example, in US English locale, a valid string might be 11:59 pm. If you delete the default and leave this value blank, the monitor starts immediately after it is created.

**Note:** For best results, configure the alarm monitors to start during off-peak hours and stagger their start times to spread out the data processing load.

#### Default value

9:00 pm



## **notifyApprovalAlarmMonitorPollPeriod**

### **Description**

Specifies the approximate time, in seconds, for the approval alarm monitor to sleep between polls.

### **Default value**

Blank (60 seconds)

## **notifyApprovalAlarmMonitorLateCondition**

### **Description**

Specifies the number of days after the start date of an approval for the system to begin notifying users that the approval is late.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

### **Default value**

3 (days)

## **notifyApprovalAlarmMonitorScheduledEndCondition**

### **Description**

Specifies the number of days before the end date of an approval for the system to begin sending end notifications to users.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

### **Default value**

1 (day)

---

## **Marketing Operations | umoConfiguration | Notifications | asset**

These properties specify information about asset alarms in IBM Marketing Operations.

## **notifyAssetAlarmMonitorStartTime**

### **Description**

Specifies when the asset alarm monitor process runs for the first time after IBM Marketing Operations starts. Format the value according to the short version of the `java.text.DateFormat` class for the current locale. For example, in US English locale, a valid string might be 11:59 pm. If you delete the default and leave this value blank, the monitor starts immediately after it is created.

**Note:** For best results, configure the alarm monitors to start during off-peak hours and stagger their start times to spread out the data processing load.

### **Default value**

11:00 pm

## **notifyAssetAlarmMonitorPollPeriod**

### **Description**

Specifies the time, in seconds, for the asset alarm monitor to sleep between polls.

### **Default value**

Blank (60 seconds)

## **notifyAssetAlarmMonitorExpirationCondition**

### **Description**

Specifies the number of days before an asset is going to expire for IBM Marketing Operations to notify users that the asset is about to expire.

**Note:** If this value is -1, Marketing Operations does not check for expiration.

### **Default value**

5 (days)

---

## **Marketing Operations | umoConfiguration | Notifications | invoice**

These properties specify information about invoice alarms in IBM Marketing Operations.

## **notifyInvoiceAlarmMonitorStartTime**

### **Description**

Specifies when the invoice alarm monitor process runs for the first time after IBM Marketing Operations starts. Format the value according to the short version of the `java.text.DateFormat` class for the current locale. For example, in US English locale, a valid string might be 11:59 pm. If you delete the default and leave the value blank, the monitor starts immediately after you create it.

**Note:** For best results, configure the alarm monitors to start during off-peak hours and to stagger their start times to spread out the data processing load.

### **Default value**

9:00 pm

## **notifyInvoiceAlarmMonitorDueCondition**

### **Description**

Specifies the number of days before the due date for IBM Marketing Operations to notify users that an invoice is due.

**Note:** If this value is -1, then Marketing Operations does not send these notifications.

### **Default value**

5 (days)

---

## Marketing Operations | umoConfiguration | WorkflowService

The properties in this category control authentication and data exchange between IBM Marketing Operations and IBM Workflow Service if the products are integrated.

### **isWfIntegrationEnabled**

#### **Description**

Enables integration between IBM Marketing Operations and IBM Workflow Service. Set to True to enable integration.

#### **Valid values**

True | False

#### **Default value**

False

### **wfServiceUrl**

#### **Description**

The **wfServiceUrl** indicates the URL where IBM Marketing Operations can access the IBM Workflow Service.

For a non-production instance, use the following URL:  
`https://jd-pilot-wf.ibmmarketingcloud.com/wf`

For a production instance, use the following URL: `https://wf.ibmmarketingcloud.com/wf`

#### **Default value**

None

### **taskUpdateAPI**

#### **Description**

Need info

#### **Default value**

`/api/v1/task`

### **executeBPMNProcessAPI**

#### **Description**

Need info

#### **Default value**

`/api/v1/process`

### **encryptAuthenticationAPI**

#### **Description**

Need info

#### **Default value**

`/tokens/encrypttoken`

## **workItemPollAPI**

### **Description**

Need info

### **Default value**

/api/v1/workItem

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If you encounter a problem that you cannot resolve by consulting the documentation, your company's designated support contact can log a call with IBM technical support. Use these guidelines to ensure that your problem is resolved efficiently and successfully.

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- Detailed steps to reproduce the issue.
- Related log files, session files, configuration files, and data files.
- Information about your product and system environment, which you can obtain as described in "System information."

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