

Version 11 Release 1
March 15, 2019

IBM Interact Installation Guide

IBM

Note

Before using this information and the product it supports, read the information in "Notices" on page 75.

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

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Chapter 1. Installation overview

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

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

Installation roadmap

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

You can use the following table to scan the tasks that must be completed for installing Interact:

Table 1. Interact installation roadmap

Topic	Information
Chapter 1, "Installation overview"	This chapter provides the following information: <ul style="list-style-type: none">• "How the installers work" on page 2• "Modes of installation" on page 3• "Interact documentation and help" on page 3
Chapter 2, "Planning the Interact installation," on page 5	This chapter provides the following information: <ul style="list-style-type: none">• "Prerequisites" on page 5• "Interact installation worksheet" on page 7• "Installation order for IBM Marketing Software products" on page 10
Chapter 3, "Preparing data sources for Interact," on page 13	This chapter provides the following information: <ul style="list-style-type: none">• "Creating databases or schemas" on page 13• "Creating ODBC or native connections" on page 15• "Configuring the web application server for your JDBC driver" on page 15• "Creating JDBC connections in the web application server" on page 17
Chapter 4, "Installing Interact," on page 23	This chapter provides the following information: <ul style="list-style-type: none">• "Interact components" on page 24• "Installing Interact by using the GUI mode" on page 24• "Installing Interact using the console mode" on page 29• "Installing Interact silently" on page 30• "Interact Report Package components" on page 31
Chapter 5, "Configuring Interact before deployment," on page 35	This chapter provides the following information: <ul style="list-style-type: none">• "Creating and populating the Interact system tables" on page 35.• "Creating Interact user profile tables" on page 38• "Registering Interact manually" on page 40

Table 1. Interact installation roadmap (continued)

Topic	Information
Chapter 6, "Deploying Interact," on page 41	This chapter provides the following information: <ul style="list-style-type: none"> • "Deploying Interact on WebSphere Application Server" on page 41 • "Deploying Interact on WebLogic" on page 44
Chapter 7, "Configuring Interact after deployment," on page 49	This chapter provides the following information: <ul style="list-style-type: none"> • "Configuring Interact runtime environment properties" on page 49 • "Multiple Interact runtime servers" on page 50 • "Configuring the test run data source" on page 51 • "Adding server groups" on page 52 • "Selecting a server group for interactive flowchart test run" on page 53 • "Configuring the contact and response history module" on page 53 • "Creating Interact system users" on page 53 • "Verifying the Interact installation" on page 55
Chapter 8, "Configuring multiple partitions for Interact," on page 61	This chapter provides the following information: <ul style="list-style-type: none"> • "How multiple partitions work" on page 61 • "Setting up multiple partitions for the Interact design time environment" on page 62
Chapter 9, "Uninstalling Interact," on page 65	This chapter provides information about how to uninstall Interact.
Chapter 10, "configTool," on page 67	This chapter provides information about how to use the configTool utility.

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 Interact, you must use the IBM Marketing Software suite installer and the IBM Interact 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.

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 Interact.

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 Interact by using the graphical user interface.

Console mode

Use the console mode to install Interact 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 Interact 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.

Interact documentation and help

Interact provides documentation and help for users, administrators, and developers.

Use the following table to get information about how to get started with Interact:

Table 2. Get up and running

Task	Documentation
View a list of new features, known issues, and workarounds	<i>IBM Interact Release Notes</i>
Learn about the structure of the Interact database	<i>IBM Interact System Tables and Data Dictionary</i>
Install or upgrade Interact and deploy the Interact web application	One of the following guides: <ul style="list-style-type: none">• <i>IBM Interact Installation Guide</i>• <i>IBM Interact Upgrade Guide</i>
Implement the IBM Cognos® reports provided with Interact	<i>IBM Marketing Software Reports Installation and Configuration Guide</i>

Use the following table to get information about how to configure and use Interact:

Table 3. Configure and use Interact

Task	Documentation
<ul style="list-style-type: none"> • Maintain users and roles • Maintain data sources • Configure Interact optional offer serving features • Monitor and maintain runtime environment performance 	<i>IBM Interact Administrator's Guide</i>
<ul style="list-style-type: none"> • Work with interactive channels, events, learning models, and offers • Create and deploy interactive flowcharts • View Interact reports 	<i>IBM Interact User's Guide</i>
Use Interact macros	<i>IBM Macros for IBM Marketing Software: User's Guide</i>
Adjust components to obtain optimal performance	<i>IBM Interact Tuning Guide</i>

Use the following table to get information about how to get help if you face issues when you use Interact:

Table 4. Get help

Task	Instructions
Open online help	<ol style="list-style-type: none"> 1. Choose Help > Help for this page to open a context-sensitive help topic. 2. Click the Show Navigation icon in the help window to display the full help. <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"> • Choose Help > Product Documentation to access Interact PDFs. • Choose Help > All IBM Marketing Software Documentation to access all available documentation.
IBM Knowledge Center	To access the IBM Knowledge Center, choose Help > Support for this product .
Get support	Go to http://www.ibm.com/support to access the IBM Support Portal.

Chapter 2. Planning the Interact installation

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

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, `rwrxr-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.

Campaign requirement

You must install or upgrade and configure Campaign before you install or upgrade the Interact design time environment.

Interact installation worksheet

Use the Interact installation worksheet to gather information about the database that contains your Interact system tables and about other IBM Marketing Software products that are required for the installation of Interact.

Note: All the Interact data sources must be of the same type. For example, if your Campaign system tables are in Oracle databases, all the other databases must be Oracle.

Runtime tables

Runtime tables contain deployment data from the design time environment, staging tables for contact and response history, and runtime statistics.

Enter the database information for each runtime environment in the following table:

Table 5. Information for the Interact runtime environment

Database information	Notes
Database schema 1	
JNDI name 1	

Contact response history tables

Contact response history tables are used when you implement cross-section tracking. The contact response history tables can be in the same schema as your Campaign contact response history tables, or they can be in a different database server or schema.

Enter the database information for the contact response history tables in the following table:

Table 6. Information for the Interact contact response history tables

Database information	Notes
Database schema	
JNDI name	

Learning tables

Learning tables are used only if you want to use the Interact built-in learning feature. Learning tables are optional.

Enter the database information for the learning tables in the following table:

Table 7. Information for the Interact learning tables

Database information	Notes
Database schema	
JNDI name	

User profile tables

User profile tables contain customer data that is required by interactive flowcharts to place visitors into smart segments.

Enter the database information for the user profile tables in the following table:

Table 8. Information for the Interact user profile tables

Database information	Notes
Database schema	
JNDI name	

Test run tables

Test run tables are used for test runs of interactive flowcharts only. Test run tables contain data that is required by interactive flowcharts to place visitors into smart segments.

Enter the database information for the test run tables in the following table:

Table 9. Information for the Interact test run tables

Database information	Notes
Database schema	
DSN (ODBC or native connection name)	
JNDI name	

Marketing Platform database information

The installation wizards for each IBM Marketing Software product must be able to communicate with the Marketing Platform system table database to register the product. Each time that you run the installer, you must enter the following database connection information for the Marketing Platform system table database:

- Database type
- Database host name
- Database port
- Database name or schema ID
- User name and password for the database account
- JDBC connection URL to the Marketing Platform database

Information about the web component

Obtain the following information for all IBM Marketing Software products that have a web component, which you deploy on a web application server:

- The name of the systems on which the web application servers are installed. You can have one or several web application servers, depending on the IBM Marketing Software environment you are setting up.
- The port on which the application server listens. If you plan to implement SSL, obtain the SSL port.
- The network domain for your deployment system. For example, example.com.

IBM Site ID

If you are installing an IBM Marketing Software product in one of the countries that is listed on the Country for Install screen of your product installer, you must enter your IBM Site ID in the space provided. Your IBM Site ID can be found on one of the following documents:

- IBM Welcome letter
- Tech Support Welcome letter
- Proof of Entitlement letter
- Other communications that are sent when you purchase your software

IBM might use the data that is provided by the software to better understand how customers use our products and to improve customer support. The data that is gathered does not include any information that identifies individuals. Complete the following actions if you do not want to have such information to be collected:

1. After Marketing Platform is installed, log in to Marketing Platform as a user with administration privileges.

- Go to **Settings > Configuration**, and set the **Disable Page Tagging** property under the **Platform** category to True.

Installation order for IBM Marketing Software products

When you install or upgrade multiple IBM Marketing Software products, you must install or upgrade 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 10. Installation or upgrade order for IBM Marketing Software products

Product	Installation or upgrade order
Campaign (with or without eMessage)	<ol style="list-style-type: none"> Marketing Platform Campaign <p>Note: 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"> Marketing Platform Campaign Interact Design Time environment Interact Run Time environment <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"> Marketing Platform Campaign Interact Design Time environment <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"> Marketing Platform Interact Run Time environment <p>Note: In case of upgrade to 11.1, if the base has the CacheManager as 'EHCACHE' with 'CacheType' as 'Distributed' or CacheManager as 'ExtremeScale', then the upgrade would update to 'CacheManager' as Ignite and 'CacheType' as 'Distributed'.</p>
Marketing Operations	<ol style="list-style-type: none"> Marketing Platform Marketing Operations <p>Note: 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"> Marketing Platform Campaign Distributed Marketing
Contact Optimization	<ol style="list-style-type: none"> Marketing Platform Campaign Contact Optimization

Table 10. Installation or upgrade order for IBM Marketing Software products (continued)

Product	Installation or upgrade order
Opportunity Detect	<ol style="list-style-type: none"> 1. Marketing Platform 2. Opportunity Detect <p>If Opportunity Detect is integrated with Interact, install the products in the following order:</p> <ol style="list-style-type: none"> 1. Marketing Platform 2. Campaign 3. Interact 4. Opportunity Detect
IBM SPSS® Modeler Advantage Enterprise Marketing Management Edition	<ol style="list-style-type: none"> 1. IBM SPSS Modeler Advantage Enterprise Marketing Management Edition

Chapter 3. Preparing data sources for Interact

The Interact runtime environment uses data sources to store user and interaction data.

Complete the following steps to prepare data sources for Interact.

1. Create a database or a database schema for the Interact system tables. The empty database that you set up for IBM Campaign can have any name.
2. Create a database user account.
The database user account must have the following rights: CREATE, DELETE, DROP, INSERT, SELECT, and UPDATE.
3. Create ODBC or native connections. If you use UA_SYSTEM_TABLES as the ODBC name for that database, the IBM Campaign system tables will be mapped automatically.
4. Configure the web application server for your JDBC driver.
5. Create JDBC data sources in the web application server.

Creating databases or schemas

Set up data sources so that the Interact system can store user and interaction data. Use Customer (user) tables or set up unique data sources based on the type of data that is stored.

Complete the following steps to create databases or schemas for Interact.

1. Create a database or a database schema for the Interact system tables. The following table provides information about vendor-specific guidelines for creating a database or a database schema for the Interact system tables.

Table 11. Guidelines for creating databases or schemas

Database vendor	Guidelines
Oracle	Enable the auto commit feature for the environment open. See the Oracle documentation for instructions.
DB2®	Set the database page size to at least 16K, or 32K if you need to support Unicode. See the DB2 documentation for instructions.
SQL Server	Use either the SQL Server authentication, or both the SQL Server and Windows authentication, because Marketing Platform requires SQL Server authentication. If necessary, change the database configuration so that your database authentication includes SQL Server. Also, be sure that TCP/IP is enabled in your SQL Server.

Note: If you plan to enable locales that use multi-byte characters, such as Chinese, Korean, and Japanese, ensure that the database is created to support them.

Note: When you create your databases, you should use the same code page for all of your databases. You cannot change this code page once it is set. If you did not create your databases to use the same code page, you must use only

the characters supported in the code page. For example, if you create a zone in global offers that does not use a character in the profile database code page, the global offer does not work.

Note: Database names in Interact must follow the naming convention for ordinary identifiers (also known as "non-quoted identifiers or regular identifiers) for the brand of SQL used (DB2, Oracle, SQL Server, and so on). Refer to your database provider documentation for specific details. Typically, alphabetic letters, numbers, and underscores are allowed by all flavors of SQL. Hyphens and other characters not permitted in ordinary identifiers will likely cause SQL exceptions.

- http://www-01.ibm.com/support/knowledgecenter/SSEPGG_9.7.0/com.ibm.db2.luw.sql.ref.doc/doc/r0000720.html?cp=SSEPGG_9.7.0%2F2-10-2-2
- http://docs.oracle.com/cd/E11882_01/server.112/e41084/sql_elements008.htm#SQLRF51129
- <https://msdn.microsoft.com/en-us/library/ms175874.aspx>

2. Create a database user account.

The account that you create must have at least CREATE, SELECT, INSERT, UPDATE, DELETE, and DROP rights.

3. Obtain information about your databases or schemas and database accounts and then print and add the information to the "Interact installation worksheet" on page 7. You can use this information later in the installation process.

Required databases or schemas for Interact

The Interact runtime environment requires several databases to hold user and interaction data. You can use your Campaign Customer (user) tables or set up a unique data source.

The Interact design time environment tables are manually created by running the scripts to the database or schema that holds the Campaign system tables.

According to the type of data that must be stored, determine how many databases or schemas you must create for use with the Interact runtime environment.

The following list provides a brief summary of the databases or schemas that are required for the Interact runtime environment:

- Database or schema to hold the Interact runtime tables. There must be a separate database or schema for each server group.
- Database, schema, or view to hold the user profile tables. The user profile tables can be in the same database as your Campaign Customer (user) tables. There can be a separate set of user profile tables for each interactive channel.
- Database, schema, or view to hold the test run tables. The test run tables can be in the same database as your Campaign Customer (user) tables.
- If you want to use built-in learning, there must be a database or schema to hold the learning tables.
- If you want to use cross-session response tracking, there must be a database or schema to hold a copy of the Campaign contact history tables. Alternatively, instead of creating a copy, you can use the Campaign system tables database to run the cross-session response tracking scripts.

Creating ODBC or native connections

Create ODBC or native connections so that the Campaign server can access the database that contains the Interact test run tables of the design time environment. Create ODBC or native connections on the computer where you installed the Campaign server.

If you use the Campaign customer (user) tables as your test run tables, then the ODBC connection is already created when Campaign was installed.

If the Interact design time environment test run tables are not the same as your customer (user) tables, use the following guidelines to create the ODBC or native connection to the database that holds them:

- For databases on UNIX: Create a new native data source in an ODBC.ini file. The procedure for creating a native data source differs depending on the data source type and the version of UNIX. See the data source and operating system documentation for specific ODBC driver installation and configuration instructions.
- For databases on Windows: Browse to Control Panel and click **Administrative Tools > Data Sources (ODBC)** to create an ODBC data source.

Note: If you are configuring just one partition, name the data source UA_SYSTEM_TABLES. For all other partitions as well name the system data source as UA_SYSTEM_TABLES, refer Configuring multiple partitions for Campaign.

Record the connection names in the “Interact installation worksheet” on page 7.

Configuring the web application server for your JDBC driver

The web application server where you plan to deploy Interact 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.

1. Obtain the latest vendor-provided Type 4 JDBC driver for your system table database that is supported by IBM Marketing Software, as described in the *Recommended Software Environments and Minimum System Requirements* guide.

Use the following guidelines after you obtain the JDBC driver.

- If the driver does not exist on the server where you plan to deploy Interact, obtain it and unpack it on the server. Unpack the drivers in a path that does not include spaces.
 - If you obtain the driver from a server where the data source client is installed, verify that the version is the latest supported by Interact.
2. Add the full path to the driver, including the file name, to the class path of the web application server where you plan to deploy Interact.

Use the following guidelines.

- For all supported versions of WebLogic, set the class path in the **setDomainEnv** script in the *WebLogic_domain_directory/bin* directory where environment variables are configured. Your driver entry must be the first entry in the class path list of values, before any existing values, to ensure that the web application server uses the correct driver. For example:

UNIX

```

CLASSPATH="/opt/drivers/ojdbc8.jar":
${PRE_CLASSPATH}${CLASSPATHSEP}${WEBLOGIC_CLASSPATH}
${CLASSPATHSEP}${POST_CLASSPATH}${CLASSPATHSEP}${WLP_POST_CLASSPATH}"
export CLASSPATH

```

```

product="Campaign DAOP DistMkt eMessage Interact Leads MktOps
Optimize Platform AttribMod IntHist"> Windows

```

```

set CLASSPATH=c:\oracle\jdbc\lib\ojdbc8.jar;%PRE_CLASSPATH%;
%WEBLOGIC_CLASSPATH%;%POST_CLASSPATH%;%WLP_POST_CLASSPATH%

```

- For all supported versions of WebSphere, set the class path when you set up the JDBC providers for Interact.

3. Make a note of the database driver class path in the Interact installation worksheet, as you must enter the path when you run the installer.

4. Restart the web application server so that your changes take effect.

During startup, monitor the console log to confirm that the class path contains the path to the database driver.

1. Obtain the latest vendor-provided Type 4 JDBC driver for your system table database that is supported by IBM Marketing Software, as described in the *Recommended Software Environments and Minimum System Requirements* guide.

Use the following guidelines after you obtain the JDBC driver.

- If the driver does not exist on the server where you plan to deploy Interact, obtain it and unpack it on the server. Unpack the drivers in a path that does not include spaces.
- If you obtain the driver from a server where the data source client is installed, verify that the version is the latest supported by Interact.

2. Add the full path to the driver, including the file name, to the class path of the web application server where you plan to deploy Interact.

Use the following guidelines.

- For all supported versions of JBoss, add the JDBC driver as module. Use the following procedure to add the JDBC driver as a module.

```

For example for SQL Server:module add
--name=com.microsoft.sqlserver.jdbc
--resources=<JDBC_Driver_Location>\sqljdbc4.jar
--dependencies=javax.api,javax.transaction.api

```

- Register this SQL JDBC Driver using the following guidelines: For example:

```

- /subsystem=datasources/jdbc-driver=sql:add(driver-module-
name=com.microsoft.sqlserver.jdbc,driver-name=sql,driver-xa-
datasource-class-
name=com.microsoft.sqlserver.jdbc.SQLServerXADataSource)
- /subsystem=datasources/jdbc-driver=sql:read-resource
- /subsystem=ee/service=default-bindings:write-
attribute(name=datasource, value=undefined)

```

3. Make a note of the database driver class path in the Interact installation worksheet, as you must enter the path when you run the installer.

4. Restart the web application server so that your changes take effect.

During startup, monitor the console log to confirm that the class path contains the path to the database driver.

1. Obtain the latest vendor-provided Type 4 JDBC driver for your system table database that is supported by IBM Marketing Software, as described in the *Recommended Software Environments and Minimum System Requirements* guide.

Use the following guidelines after you obtain the JDBC driver.

- If the driver does not exist on the server where you plan to deploy Interact, obtain it and unpack it on the server. Unpack the drivers in a path that does not include spaces.
 - If you obtain the driver from a server where the data source client is installed, verify that the version is the latest supported by Interact.
2. Add the full path to the driver, including the file name, to the class path of the (<Tomcat_Installed Location>/lib) web application server where you plan to deploy Interact.
 3. Make a note of the database driver class path in the Interact installation worksheet, as you must enter the path when you run the installer.
 4. Restart the web application server so that your changes take effect.
During startup, monitor the console log to confirm that the class path contains the path to the database driver.

Creating JDBC connections in the web application server

Create JDBC connections on each of the web application servers where Campaign and Interact is deployed. Campaign and Interact use the JDBC connections to access the required databases.

You can use the list to simplify configuration because the names in the list match the default values of the configuration properties that refer to the JDBC connections.

Use the following table to create JDBC connections to the databases that hold the Interact, Campaign, and Marketing Platform tables:

Table 12. JDBC connections in the web application server

Deployed web application	JDBC connections required to the databases
Campaign	<p>In the web application server where Campaign is deployed, create JDBC connections to the databases that hold the following tables:</p> <ul style="list-style-type: none"> • Interact runtime tables JNDI name: InteractRTDS • Interact test run tables (which can be the same as the Customer (User) tables) JNDI name: testRunDataSource

Table 12. JDBC connections in the web application server (continued)

Deployed web application	JDBC connections required to the databases
<p>Interact runtime environment</p> <p>(The Interact runtime environment is typically deployed in a different JVM from Campaign)</p>	<p>In the web application server where the Interact runtime environment is deployed, create JDBC connections to the databases that hold the following tables:</p> <ul style="list-style-type: none"> • Interact runtime tables JNDI name: InteractRTDS • Interact profile tables JNDI name: prodUserDataSource • Interact test run tables (required for test run server group only) JNDI name: testRunDataSource • Interact learning tables (if you are using built-in learning) JNDI name: InteractLearningDS • Campaign contact and response history tables (if you are using cross-session response tracking) JNDI name: contactAndResponseHistoryDataSource • Marketing Platform system tables JNDI name: UnicaPlatformDS <p>Important: This is the required JNDI name for connections to the Platform system table database.</p> <p>You must set up the JDBC connection only if you install the Interact runtime environment in a web application server where Marketing Platform is not currently deployed. If Marketing Platform is deployed in the same web application server, the JDBC connection is already defined.</p> <p>All JNDI names are recommended, unless otherwise indicated.</p>

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,user-name=sa,password=test1234,valid-connection-checker-class-name="org.jboss.jca.adapters.jdbc.extensions.mssql.MSSQLValidConnectionChecker")`

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>`

For example

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>`

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>

Chapter 4. Installing Interact

You must run the IBM Marketing Software installer to start the installation of Interact. The IBM Marketing Software installer starts the Interact 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 Interact installer starts, you must enter the required information for Interact.

After installing Interact, 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 Interact, make sure that the available temporary space on the computer where you install Interact is more than three times the size of the Interact 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 13. Installation files

Operating system	Installation file
Windows: GUI and console mode	<i>Product_N.N.N.N_win.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.

Interact components

You must install a single instance of the Interact design time environment. In the design time environment, you define events, interaction points, smart segments, and treatment rules. You can install multiple Interact runtime servers to present offers to the customers.

Before you install the Interact design time environment, you must install and configure Campaign and an associated instance of Marketing Platform.

Before you install the Interact runtime environment, you must install a separate instance of Marketing Platform. A runtime environment must have an instance of Marketing Platform and at least one instance of the Interact runtime server. You can configure multiple instances of the Interact runtime server to work in the same runtime environment.

For best performance, install a runtime server on its own workstation, where no other IBM Marketing Software products are installed.

The following table describes the components that you can select when you install Interact:

Table 14. Interact components

Component	Description
Interact Runtime Environment	<p>The Interact runtime server.</p> <p>You can integrate Interact runtime servers with a touchpoint, such as a website, to present offers that are based on real-time data.</p> <p>You can install multiple runtime servers in your environment and organize them into server groups. Each server group must have one instance of Marketing Platform that must be separate from the Marketing Platform for Campaign and separate from other server groups.</p>
Interact Design Time Environment	<p>The design time environment for Interact.</p> <p>You must install the design time environment on the same computer as Campaign. You must install only one design time environment.</p>
Interact Extreme Scale Server	IBM Extreme Scale is not supported in the 11.1 release.
Interact Pattern State ETL	To process large amounts of Interact event pattern data and to make that data available for queries and reporting purposes, by default a Extract, Transform, Load (ETL) process is installed on any supported server for optimal performance.

Installing Interact by using the GUI mode

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

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

Important: 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.

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

Make sure that you install Marketing Platform and Campaign before installing the Interact design time environment. For more information about installing Marketing Platform, see the *IBM Marketing Platform Installation Guide*. For more information about installing Campaign, see the *IBM Campaign Installation Guide*.

Complete the following actions to install Interact by using the GUI mode:

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 15. 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 Interact installation and upgrade guides from this window. You can also see a link for the installation and upgrade guides for the products whose installers are saved in the installation directory.</p> <p>Click Next to go to the next window.</p>
Response Files Destination	<p>Click the Generate Response File 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>In the Response files destination field, click Choose to browse for a destination where you want to save the response files. Alternatively, click Restore Default Folder to save the response files in the default C:\ location.</p> <p>Click Next to go to the next window.</p>
IBM Marketing Software Products	<p>In the Install Set list, select Custom to select Interact as the product that you want to install.</p> <p>In the Install Set area, you can see all the products whose installation files are in the same directory on your computer.</p> <p>In the Description field, you can view the description of the product that you select in the Install Set area.</p> <p>Click Next to go to the next window.</p>

Table 15. IBM Marketing Software installer GUI (continued)

Window	Description
Installation Directory	<p>In the Specify the installation directory field, click Choose to browse to the directory where you want to install your product.</p> <p>If you want to install the product in the folder where the installers are stored, click Restore Default Folder.</p> <p>Click Next to go to the next window.</p>
Select Application Server	<p>Select one of the following application servers for the installation:</p> <ul style="list-style-type: none"> • IBM WebSphere • Oracle WebLogic • Tomcat • JBOSS <p>Click Next to go to the next window.</p>
Platform Database Type	<p>Select the appropriate Marketing Platform database type.</p> <p>Click Next 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"> • Database host name • Database port • Database name or System ID (SID) • Database user name • Database password <p>Click Next to go to the next window.</p>
Platform Database Connection (continued)	<p>Review and confirm the JDBC connection.</p> <p>Click Next 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 Install to start the installation process.</p> <p>The IBM Interact installer opens.</p>

4. Follow the instructions on the Interact installer to start installing Interact. Use the information in the following table to navigate through the Interact installer and take appropriate actions on each window in the IBM Interact installer:

Table 16. IBM Interact installer GUI

Window	Description
Introduction	<p>This is the first window of the IBM Interact installer. You can open the installation guide, upgrade guide, and all documentation available for Interact from this window.</p> <p>Click Next to go to the next window.</p>
Software License Agreement	<p>Carefully read the agreement. Use Print to print the agreement. Click Next after you accept the agreement.</p>

Table 16. IBM Interact installer GUI (continued)

Window	Description
Installation Directory	<p>Click Choose to browse to the directory where you want to install Interact.</p> <p>Click Next to go to the next window.</p>
Interact Components	<p>In the Install Set list, select Typical to install only the Interact Runtime Environment.</p> <p>In the Install Set area, select Custom to install the Interact Runtime Environment, Interact Design Time Environment and Pattern State ETL.</p> <p>To install the Pattern State ETL, the Interact Runtime Environment must already be installed or selected for installation.</p> <p>In the Description field, you can view the description of the item that you select in the Install Set area.</p> <p>Click Next to go to the next window.</p>
Interact Database Setup	<p>Select one of the following options for setting up the Interact database:</p> <ul style="list-style-type: none"> • Automatic database setup • Manual database setup <p>Click Next 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 Install to start the Interact installation.</p>
Installation Complete	<p>Use this window to view information about the locations of log files that are created during installation.</p> <p>Click Done to exit the IBM Interact installer and to go back to the IBM Marketing Software suite installer.</p>

5. Follow the instructions on the IBM Marketing Software installer to finish installing Interact. Use the information in the following table to take the appropriate actions on each window in the IBM Marketing Software installer:

Table 17. 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 Next to go to the next window.</p> <p>Note: Ear deployment on Tomcat server is not supported.</p>
Package EAR file	<p>You can see this window if you select Create an EAR file for deployment in the Deployment EAR file window.</p> <p>Select the applications that you want to package in the EAR file.</p>

Table 17. IBM Marketing Software installer GUI (continued)

Window	Description
EAR file details	Enter the following information for your EAR file: <ul style="list-style-type: none"> Enterprise application identifier Display name Description EAR file path
Deployment EAR file	Select Yes or No to create an additional EAR file. If you select Yes , you must enter the details for the new EAR file. Click Next to complete the installation of your product.
Installation Complete	Use this window to view information about the installation log, error log, and output log of your installation. Click Done to exit the IBM Marketing Software installer.

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:

- 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.
- Open a command window and change directories to the directory that contains the installer.
- 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.
- 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.

Installing Interact using the console mode

The console mode allows you to install Interact 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 Interact, 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 Interact 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 [X] Marketing Platform
- 2 [] Campaign
- 3 [] Contact Optimization
- 4 [X] 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 Interact installer during the installation process. Follow the instructions in the command-line prompt window of the Interact installer.
5. After you enter `quit` in the Interact 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 Interact.

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

Installing Interact silently

Use the unattended or silent mode to install Interact multiple times.

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

- An application server profile
- A database schema

When you install Interact 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 31.
- 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 Interact. 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 18. 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 Interact 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

Interact Report Package components

To use the reporting feature for Interact, install the IBM Cognos package and reporting schemas on the Marketing Platform system.

The following table describes the components that you can select when you install the report package for Interact:

Table 19. Interact Report Package components

Component	Description
IBM Interact reporting schemas (to be installed on the IBM Marketing Software system)	The Interact reporting schemas make the following data from all Interact data sources available for reporting: <ul style="list-style-type: none">• Interactive channel-based campaign• Offers• Cells
IBM Cognos package for IBM Interact (to be installed on the IBM Cognos system)	The IBM Cognos package includes the following components: <ul style="list-style-type: none">• A reporting metadata model for the Interact database tables• A set of example reports that you can use to track campaign, offer, and cell performance

For information about installing the report package for Interact, see the *IBM Marketing Software Reports Installation and Configuration Guide*.

Post installation steps

After Interact run time is successfully installed, it is required to set the INTERACT_HOME environment variable pointing to the Interact installation directory before starting the Application Server.

If this is not done, Interact logs will not get generated.

Installing the ETL process

To process large numbers of event pattern ETL processes, you can install the ETL process for optimal performance. By default, the ETL process is installed when installing InteractRT.

Before you can install the Interact Event Pattern ETL process, you must have completed the following tasks:

- Install a complete IBM Interact setup, including the IBM Marketing Platform server and one or more Interact run-time servers.

The installation process is described in detail in the *Interact Installation Guide*.

- Install and configure the data source in which you want the event pattern ETL process to store its data. This may be the same data source in which the Interact runtime tables are stored, or it may be a different data source for performance reasons.
- Collect and have available the Marketing Platform server networking information, as described in the *Interact Installation Guide*. You need this information during this installation process.
- Be sure that a supported Java run-time environment is installed on the server where you are installing the ETL process.
- Connect to the server on which you are installing the ETL process with administrator or root privileges.

When you complete this task, the files necessary to run the ETL process will be available on the server. You will still need to configure the process before you can run it.

1. On the server where you want to run the event pattern ETL process, copy the IBM Marketing Software master installation program for the operating system along with the IBM Marketing Software Interact installer. Remember that both the master installer and the Interact installer must be in the same directory, and that you must run the installer as a user with administrator-level privileges on the server.
2. Follow the instructions in the *IBM Interact Installation Guide* to launch the master installation program. Be sure to provide the connection information for the IBM Marketing Platform server used by your runtime servers and design time server.
3. When the IBM Interact installer launches and displays the Interact Components page, select **Interact Runtime** component, and then the **Interact Event Pattern ETL** option under the Interact Runtime component to install.
4. Follow the prompts until you complete the installation.
5. On the server where you installed the ETL process, locate the <Interact_Home>/PatternStateETL/ddl directory.
6. Using your database management software, run the appropriate script in the DDL directory against the database that you will use as the target database for the output from the ETL process.

The scripts in this directory create four tables in the target database that are required to use the ETL process. Depending on the target database you are using, run one of the following scripts:

- aci_evpattab_db2.ddl if the target database is IBM DB2.
- aci_evpattab_ora.ddl if the target database is Oracle.
- aci_evpattab_sqlsvr.ddl if the target database is Microsoft SQL Server.

You have now installed the event pattern ETL process on the server. If you accepted the default installation directory during installation, you can find the installed files in C:\IBM\IMS\Interact on a supported Microsoft Windows platform, or in /IBM/IMS/Interact on a supported UNIX-like operating system.

To continue with the event pattern ETL process, you need to configure the process by modifying files on the ETL process server, and in the Marketing Platform configuration pages. For more information, see [Configuring the ETL process](#).

Chapter 5. Configuring Interact before deployment

You must complete specific tasks before you deploy Interact. There are no pre-deployment configuration tasks for Interact Design Time and Interact Run Time.

Creating and populating the Interact system tables

If you have not created and populated the system tables during the installation process, use your database client to run the Interact SQL scripts against the appropriate database or to create and populate the Interact runtime environment, design time environment, learning, user profile, and contact and response tracking data sources.

Design time environment tables

Before you can enable the Interact design time environment in Campaign, you must add some tables to your Campaign system table database.

The SQL scripts are in the *INTERACT_HOME/interactDT/ddl* directory under your Interact design time environment installation.

If your Campaign system tables are configured for Unicode, use the appropriate script that is in the *INTERACT_HOME/interactDT/ddl* directory in your Interact design time environment. There are no Unicode equivalent scripts for the **aci_populate_systab** scripts that are used to populate the design time environment tables.

Use the scripts in the following table to create the Interact design time environment tables:

Table 20. Scripts for creating design time environment tables

Data source type	Script name
IBM DB2	aci_systab_db2.sql The user table space and system temporary table space where the Campaign system tables exist must each have a page size of 32K or greater.
Microsoft SQL Server	aci_systab_sqlsvr.sql
Oracle	aci_systab_ora.sql

Use the scripts in the following table to populate the Interact design time environment tables:

Table 21. Scripts for populating design time environment tables

Data source type	Script name
IBM DB2	aci_populate_systab_db2.sql
Microsoft SQL Server	aci_populate_systab_sqlsvr.sql
Oracle	aci_populate_systab_ora.sql

Runtime environment tables

The SQL scripts are in the <INTERACT_HOME>/ddl directory under your Interact installation.

If your Interact runtime tables are configured for Unicode, use the appropriate script that is in the <INTERACT_HOME>/ddl/Unicode directory to create the runtime tables. There are no Unicode equivalent scripts for the **aci_populate_runtab** scripts that are used to populate the runtime tables.

You must run the SQL scripts once for each server group data source.

Use the scripts in the following table to create the Interact runtime tables:

Table 22. Scripts for creating runtime environment tables

Data source type	Script name
IBM DB2	aci_runtab_db2.sql The user table space and system temporary table space where the Interact runtime environment tables exist must each have a page size of 32K or greater.
Microsoft SQL Server	aci_runtab_sqlsvr.sql
Oracle	aci_runtab_ora.sql

Use the scripts in the following table to populate the Interact runtime tables:

Table 23. Scripts for populating runtime environment tables

Data source type	Script name
IBM DB2	aci_populate_runtab_db2.sql You must use the following command when you run the script: db2 +c -td@ -vf aci_populate_runtab_db2.sql
Microsoft SQL Server	aci_populate_runtab_sqlsvr.sql
Oracle	aci_populate_runtab_ora.sql

Note: You should alter the size of the UACI_EligStat.offerName column from 64 to 130 (or 390 for Unicode tables) to preserve compatibility with Campaign. Use the following sample SQL statements for this modification.

Non-Unicode

```
DB2: ALTER table UACI_EligStat ALTER COLUMN OfferName SET DATA TYPE varchar(130);
ORACLE: ALTER TABLE UACI_EligStat MODIFY OfferName varchar2(130);
SQLSVR: ALTER TABLE UACI_EligStat alter column OfferName varchar(130) not null;
```

Unicode

```
DB2: ALTER table UACI_EligStat ALTER COLUMN OfferName SET DATA TYPE varchar(390);
ORACLE: ALTER TABLE UACI_EligStat MODIFY OfferName varchar2(390);
SQLSVR: ALTER TABLE UACI_EligStat alter column OfferName nvarchar(390) not null;
```

Learning tables

You can use SQL scripts to create and populate tables for optional features such as learning, global offers, score override, and contact and response history tracking.

All the SQL scripts are in the <Interact_HOME>/ddl directory.

Note: The built-in learning module requires a separate data source from the Interact runtime environment tables. For the built-in learning module, you must create a data source to hold all the learning data. The separate data source can communicate with all server groups, which means you can learn from your different touchpoints at the same time.

If your Interact runtime tables are configured for Unicode, use the appropriate script that is in the `<Interact_HOME>/ddl/Unicode` directory to create the learning tables.

Use the scripts in the following table to create the Interact learning tables:

Table 24. Scripts for creating learning tables

Data source type	Script name
IBM DB2	<code>aci_lrntab_db2.sql</code>
Microsoft SQL Server	<code>aci_lrntab_sqlsvr.sql</code>
Oracle	<code>aci_lrntab_ora.sql</code>

Contact and response history tables

You must run SQL scripts against the contact history tables if you want to use cross-session response tracking or the advanced learning feature.

All the SQL scripts are in the Interact installation directory.

Note: Using contact and response history features requires a separate data source from the Interact runtime environment tables. To use the contact and response history features, you must create a data source to reference contact and response data. The separate data source can communicate with all server groups.

If your contact history tables are configured for Unicode, use the appropriate script that is in the Unicode directory under the same location as the standard script to create the learning tables.

Use the scripts in the following table to create the Interact contact and response history tables:

Table 25. Scripts for creating contact history tables

Data source type	Script name
IBM DB2	<ul style="list-style-type: none"> • <code>aci_crhtab_db2.sql</code> in the <code><Interact_HOME>/ddl/</code> directory. The script impacts the Interact runtime tables. • <code>aci_lrnfeature_db2.sql</code> in the <code><Interact_HOME>/interactDT/ddl/acifeatures/</code> directory. The script impacts the design time tables.
Microsoft SQL Server	<ul style="list-style-type: none"> • <code>aci_crhtab_sqlsvr.sql</code> in the <code><Interact_HOME>/ddl/</code> directory. • <code>aci_lrnfeature_sqlsvr.sql</code> in the <code><Interact_HOME>/interactDT/ddl/</code> directory.
Oracle	<ul style="list-style-type: none"> • <code>aci_crhtab_ora.sql</code> in the <code><Interact_HOME>/ddl/</code> directory. • <code>aci_lrnfeature_ora.sql</code> in the <code><Interact_HOME>/interactDT/ddl/</code> directory.

Creating Interact user profile tables

Some features of Interact, such as global offers, offer suppression, and score override, require specific tables in your user profile databases. Run SQL scripts to create the required user tables.

Use your database client to run the appropriate SQL scripts against the appropriate database or schema and create the required user tables. If you have multiple audience levels defined, you must create a table for each audience level.

When you create your databases, you should use the same code page for all of your databases. You cannot change this code page once it is set. If you did not create your databases to use the same code page, you must use only the characters supported in the code page. For example, if you create a zone in global offers that does not use a character in the profile database code page, the global offer does not work.

For more information about the profile database, and the role that offer suppression, global offers, and score override tables play in offer serving, see the *IBM Interact Administrator's Guide*.

User profile tables

You must use SQL scripts to create the following optional profile tables:

- Global offers table (UACI_DefaultOffers)
- Offer suppression table (UACI_BlackList)
- Score override table (UACI_ScoreOverride)

The SQL scripts are in the `ddl` directory under your Interact installation.

You must run the SQL scripts once for every audience level. Modify the script for each audience level, after the first, and rename the profile tables that are created after you run the scripts.

Use the scripts in the following table to create the Interact user profile tables:

Table 26. Scripts for creating user profile tables

Data source type	Script name
IBM DB2	<code>aci_usrtab_db2.sql</code>
Microsoft SQL Server	<code>aci_usrtab_sqlsvr.sql</code>
Oracle	<code>aci_usrtab_ora.sql</code>

Advanced scoring (optional)

For Interact built-in learning, you can use the advanced scoring feature to override components of the Interact learning algorithm.

All the SQL scripts are in the `ddl/aci/features` directory under your Interact installation.

If your scoring tables are configured for Unicode, use the appropriate script in the `ddl/aci/features/Unicode` directory under your Interact installation to create the learning tables. You must run the SQL scripts against the User Profile database.

Use the scripts in the following table to create the Interact scoring tables:

Table 27. Scripts for creating advanced scoring tables

Data source type	Script name
IBM DB2	aci_scoringfeature_db2.sql
Microsoft SQL Server	aci_scoringfeature_sqlsvr.sql
Oracle	aci_scoringfeature_ora.sql

Running database scripts to enable Interact features

To use the optional features that are available in Interact, run database scripts against the database to create tables or update existing tables.

Your Interact installation, both the design time environment and runtime environment, includes feature **ddl** scripts. The **ddl** scripts add required columns to your tables.

To enable any of the optional features, run the appropriate script against the database or table that is indicated.

dbType is the database type, such as sqlsvr for Microsoft SQL Server, ora for Oracle, or db2 for IBM DB2.

Use the following table to run database scripts against the database to create tables or update existing tables:

Table 28. Database scripts

Feature Name	Feature Script	Run Against	Change
Global offers, offer suppression, and score override	aci_usrtab_dbType.sql in <i>Interact_Home\ddl\acifeatures\</i> (Runtime environment installation directory)	Your profile database (userProdDataSource)	Creates the UACI_DefaultOffers, UACI_BlackList, and UACI_ScoreOverride tables.
Scoring	aci_scoringfeature_dbType.sql in <i>Interact_Home\ddl\acifeatures\</i> (Runtime environment installation directory)	Score override tables in your profile database (userProdDataSource)	Adds the LikelihoodScore and AdjExploreScore columns.
Learning	aci_lrnfeature_dbType.sql in <i>Interact_Home\interactDT\ddl\acifeatures\</i> (Design time environment installation directory)	Campaign database that contains your contact history tables	Adds the columns RTSelectionMethod, RTLearningMode, and RTLearningModelID to the UA_DtlContactHist table. Also adds the columns RTLearningMode and RTLearningModelID to the UA_ResponseHistory table. This script is also required by the reporting features provided by the optional Interact Reports Pack.

Registering Interact manually

If the Interact installer cannot connect to the Marketing Platform database during the installation process, you must register Interact manually.

You must import the Interact information into the Marketing Platform system tables manually after the installer closes to register Interact manually.

Registering the Interact design time environment manually

Run the **configTool** utility to register the Interact design time environment manually if the environment was not automatically registered during the installation process.

The **configTool** utility imports menu items and sets configuration properties. You must run the **configTool** utility as many times as there are files.

The following commands can be used as an example to register the Interact design time environment manually:

- **configTool -i -p "Affinium|suite|uiNavigation|mainMenu" -f "full_path_to_Interact_DT_installation_directory\interactDT\conf\interact_navigation.xml"**
- **configTool -v -i -o -p "Affinium|Campaign|about|components" -f "full_path_to_Interact_DT_installation_directory\interactDT\conf\interact_subcomponent_version.xml"**

The Interact design time environment configuration properties are included with the configuration properties for Campaign.

You can manually enable Interact by setting the **interactInstalled** property in the **Campaign > partitions > partitionN > server > internal** category to yes.

Registering the Interact runtime environment manually

Run the **configTool** utility to register the Interact runtime environment manually if the environment was not automatically registered during the installation process.

The **configTool** utility imports configuration properties. You must run the **configTool** utility as many times as there are files.

Important: You must register only one instance of the Interact runtime environment with the Marketing Platform for each server group. All instances of Interact runtime server in a server group use the same set of configuration properties. If you register a second Interact runtime server with Marketing Platform, you can overwrite previous configuration settings.

Use the following example commands as guidelines to register the Interact runtime environment manually:

```
configTool -r Interact -f "full_path_to_Interact_RT_installation_directory\conf\interact_configuration.xml"
```

```
configTool -i -p "Affinium|suite|uiNavigation|mainMenu|Interact" -f "full_path_to_Interact_RT_installation_directory\conf\interact_navigation.xml"
```

Chapter 6. Deploying Interact

You must deploy the Interact runtime environment for every instance of the runtime server that you install. The Interact design time environment is deployed automatically with the Campaign EAR or WAR file.

You must know how to work with your web application server. Consult your web application server documentation for details.

HTTP proxy support in API and the OMO gateway

- When triggered messages are configured to use a HTTP connection, a HTTP proxy can be configured optionally with authentication between Interact and the endpoint.
- When the client library (interact_client.jar) is used to connect the client to Interact run time servers, an HTTP proxy can be configured optionally with authentication between the client application and Interact runtime.

Deploying the design time environment

After you install Interact, the design time environment is deployed automatically when you deploy Campaign. After you deploy the Campaign.war file, configuration procedures automatically enable the Interact design time environment in Campaign. The Campaign.war file is in the Campaign installation directory.

Deploying the runtime environment

You must deploy the Interact runtime environment by deploying the InteractRT.war file for every instance of the runtime server that you install or upgrade. For example, if six instances of a runtime server exist, you must install and deploy the Interact runtime environment six times. You can deploy the runtime environment on the same server as the design time environment, or you can deploy the Interact runtime environment on a separate server. The InteractRT.war is in the Interact installation directory.

Note: When you deploy the Interact runtime environment, the context root must be set to /interact. Do not use any other value for the context root, or navigation to the runtime environment, and within Interact runtime links and pages, do not operate correctly.

Note: If Interact is upgraded it is required to set the INTERACT_HOME environment variable pointing to the Interact installation directory to generate interact.log file. Release 11.1 onwards, the log4j is changed to 'log4j2'. You will need to copy any custom entries from the 'interact_log4j.properties' file of base setup to the 11.1 target setup in the 'interact_log4j2.xml'.

Deploying Interact on WebSphere Application Server

You can deploy Interact runtime environment on supported versions of WebSphere Application Server (WAS) from a WAR file or EAR file. The Interact design time environment is deployed automatically with the Campaign EAR or WAR file.

- Make sure that multiple language encoding is enabled in WAS.

- When you run the Install New Application wizard, ensure that you set the JDK Source Level to 18.

Important: If you are using IBM WebSphere Application Server 8.5.5.x Fix Pack 9 or earlier, you must use the following workaround to disable the annotation scanning for the xstream jar and to allow the application to be deployed correctly.

Go to the `app_server_root/properties` folder in the WebSphere installation. In the `amm.filter.properties` file, add the following line under Ignore-Scanning-Packages.

```
com.thoughtworks.xstream
```

Deploying Interact on WAS from a WAR file

You can deploy the Interact application from a WAR file on WAS.

Complete the following tasks before you deploy Interact:

- Confirm that your version of WebSphere meets the requirements in the *Recommended Software Environments and Minimum System Requirements* document, including any necessary fix packs or upgrades.
- Confirm that you created the data sources and database provider in WebSphere.
- Please follow the below steps while deploying Campaign.war file on IBM Websphere Application Server 8.5.5.x Fix Pack 9 or below versions
 - a) Go to `<app_server_install_directory>/properties` location
Example: `/data/webservers/IBM/WebSphere8.5.5/properties`
 - b) Edit "amm.filter.properties" file to include "com.thoughtworks.xstream"

Example:

```
Ignore-Scanning-Packages = javassist, \
organtlr, \
org.apache.avalon, \
org.apache.batik, \
org.apache.bcel, \
org.apache.commons, \
org.apache.log4j, \
org.apache.poi, \
org.apache.regex, \
org.apache.xalan, \
org.apache.xerces, \
org.apache.xml, \
org.apache.xpath, \
org.ajax4jsf, \
org.dbunit, \
org.richfaces, \
org.jboss.el, \
org.jchrontab, \
org.omg, \
org.seasar, \
org.slf4j, \
com.thoughtworks.xstream
```

By doing this, WebSphere will disable the annotation scanning for the xstream jar

and allow the application deployed properly.

This is also mentioned in here <http://x-stream.github.io/faq.html>

This steps are not required for Websphere version 8.5.0.x or 8.5.5 Fix Pack 10 or higher.

1. Go to the WebSphere Integrated Solutions Console.
2. Complete the following steps if your system tables are in DB2:
 - a. Click the data source that you created. Go to the Custom Properties for the data source.
 - b. Select the Custom properties link.
 - c. Set the value for the **resultSetHoldability** property to 1.
If you do not see the **resultSetHoldability** property, create the **resultSetHoldability** property and set its value to 1.
3. Go to **Applications > Application Types > WebSphere enterprise applications** and click **Install**.
4. In the Preparing for the application installation window, select the **Detailed - Show all options and parameters** check box and click **Next**.
5. Click **Continue** to see the Install New Application wizard.
6. Accept the default settings on the windows of the Install New Application wizard except the following windows:
 - In step 1 of the Install New Application wizard, select the **Precompile JavaServer Pages files** check box.
 - In step 3 of the installation wizard, set the **JDK Source Level** to 18.
 - In step 8 of the installation wizard, set the **Context Root** to `/interact`.
7. In the left navigation panel of WebSphere Integrated Solutions Console, navigate to **Applications > Application Types > WebSphere enterprise applications**.
8. In the Enterprise Applications window, click the `InteractRT.war` file.
9. In the **Web Module Properties** section, click **Session Management** and select the following check boxes:
 - **Override session management**
 - **Enable Cookies**
10. Click **Enable Cookies**, and in the **Cookie name** field, enter a unique cookie name.
11. In the **Applications > Enterprise Applications** section of the server, select the WAR file that you deployed.
12. In the **Detail Properties** section, select **Class loading and update detection**.
13. In the **Class loader order** section, select the **Classes loaded with local class loader first (parent last)** option.
14. For **WAR class loader policy**, select **Single class loader for application**.
15. Start your deployment.

Deploying Interact on WAS from an EAR file

You can deploy Interact by using an EAR file if you included Interact in an EAR file when you ran the IBM Marketing Software installer.

- Confirm that your version of WebSphere meets the requirements in the *Recommended Software Environments and Minimum System Requirements* document, including any necessary fix packs or upgrades.
- Confirm that you created the data sources and database provider in WebSphere.
 1. Go to the WebSphere Integrated Solutions Console.
 2. Complete the following steps, if your system tables are in DB2:
 - a. Click the data source that you created. Go to the **Custom Properties** for the data source.
 - b. Select the Custom properties link.
 - c. Set the value for the **resultSetHoldability** property to 1.
If you do not see the **resultSetHoldability** property, create the **resultSetHoldability** property and set its value to 1.
 3. Go to **Applications > Application Types > WebSphere enterprise applications** and click **Install**.
 4. In the Preparing for the application installation window, select the **Detailed - Show all options and parameters** check box and click **Next**.
 5. Click **Continue** to see the Install New Application wizard.
 6. Accept the default settings on the windows of the Install New Application wizard except the following windows:
 - In step 1 of the Install New Application wizard, select the **Precompile JavaServer Pages files** check box.
 - In step 3 of the installation wizard, set the **JDK Source Level** to 18.
 7. In the left navigation panel of WebSphere Integrated Solutions Console, navigate to **Applications > Application Types > WebSphere enterprise applications**.
 8. In the Enterprise Applications window, select the EAR file that you want to deploy.
 9. In the **Web Module Properties** section, click **Session Management** and select the following check boxes:
 - **Override session management**
 - **Enable Cookies**
 10. Click **Enable Cookies**, and in the **Cookie name** field, enter a unique cookie name.
 11. In the **Detail Properties** section, select **Class loading and update detection**.
 12. In the **Class loader order** section, select the **Classes loaded with parent class loader first** option.
 13. Start your deployment.
For more information about WebSphere Application Server version 8.5, see *Welcome to the WebSphere Application Server information center*.

Deploying Interact on WebLogic

You can deploy IBM Marketing Software products on WebLogic.

Use the following guidelines when you deploy Interact on WebLogic:

- IBM Marketing Software products customize the JVM used by WebLogic. You might need to create a WebLogic instance that is dedicated to IBM Marketing Software products if you encounter JVM-related errors.
- Verify that the 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.

- Deploy the IBM Marketing Software products as web application modules.
- On UNIX systems, you must start WebLogic from the console to allow correct rendering of graphical charts. The console is usually the machine on which the server is running. However, in some cases the web application server is set up differently.

If a console is not accessible or does not exist, you can emulate a console using Exceed. You must configure Exceed so that your local Xserver process connects to the UNIX machine in root window or single window mode. If you start the web application server using Exceed, you must keep Exceed running in the background to allow the web application server to continue running. Contact IBM Technical Support for detailed instructions if you encounter problems with chart rendering.

Connecting to the UNIX machine via telnet or SSH always causes problems rendering charts.

- If you are configuring WebLogic to use the IIS plug-in, review the WebLogic documentation.
- If you are deploying in a production environment, set the JVM memory heap size parameters to at least 1024 by adding the following line to the setDomainEnv script:

```
Set MEM_ARGS=-Xms1024m -Xmx1024m -XX:MaxPermSize=256m
```

- Under certain circumstances, deploying older legacy interactive channels or interactive channels with large deployment histories can stress the system and require 2048mb or greater of Campaign design time and/or Interact runtime Java heap space.

System administrators can adjust the amount of memory available to the deployment systems via the following JVM parameters:

```
-Xms####m -Xmx####m -XX:MaxPermSize=256m
```

Where the characters #### should be 2048 or higher (depending on their system load.) Note that a 64-bit application server and JVM are usually necessary for values greater than 2048.

These are the suggested minimum values. Analyze your sizing requirements to determine correct values for your needs.

Deploying Interact on Tomcat Application Server

You can deploy the Interact WAR on the Tomcat Application Server (TAS).

Procedure to include during Tomcat Application Server configuration

When you configure Interact on Tomcat Application Server you must perform the following steps:

You must add Test, Production and Interact Runtime Data Source in Campaign.xml of the Campaign Tomcat instance for eg. :

```
<Resource name="<testDataSource>" factory="com.unica.manager.tomcat.utils.TomcatDSFactory"
auth="Application" type="javax.sql.DataSource"
maxActive="30" maxIdle="10" maxWait="10000"
username="<db user for test schema>" password="<db password>" driverClassName=
"<db specific class name>" url="<db specific jdbc url>"/>
```

```

<Resource name="<prodDataSource>" factory="com.unica.manager.tomcat.utils.TomcatDSFactory"
  auth="Application" type="javax.sql.DataSource"
  maxActive="30" maxIdle="10" maxWait="10000"
  username="<db user for prod schema>" password="<db password>" driverClassName=
  "<db specific class name>" url="<db specific jdbc url>"/>

<Resource name="<InteractRunTimeDataSource>" factory="com.unica.manager.tomcat.utils.TomcatDSFactory"
  auth="Application" type="javax.sql.DataSource"
  maxActive="30" maxIdle="10" maxWait="10000"
  username="<db user for runtime schema>" password="<db password>"
  driverClassName="<db specific class name>" url="<db specific jdbc url>"/>

<Resource name="<InteractLearningDS>" factory="com.unica.manager.tomcat.utils.TomcatDSFactory"
  auth="Application" type="javax.sql.DataSource"
  maxActive="30" maxIdle="10" maxWait="10000"
  username="<db user for runtime schema>" password="<db password>"
  driverClassName="<db specific class name>" url="<db specific jdbc url>"/>
Note - {{You can encrypt DB password using }}encryptTomcatDBPasswords utility located in <Platform>

```

Deploying Interact on JBoss

You can deploy the Interact application from a WAR file or an EAR file on the JBoss Application Server (JAS).

Consider the following points before you deploy Interact on JBoss:

- Verify that your version of JBoss 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 JBoss Integrated Solutions console to configure your JBoss Application Server. The steps that follow provide guidance for setting specific controls.

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

Complete the following steps to set up the environment for deploying Interact:

1. JVM settings can be added to the standalone.conf script in the JBOSS_EAP_HOME/bin folder.
2. If you are deploying in a production environment, set the JVM memory heap size parameters to at least 1024 by adding the following line to the standalone.conf script:
Set MEM_ARGS=-Xms1024m -Xmx1024m -XX:MaxPermSize=256m
3. Under certain circumstances, deploying older legacy interactive channels or interactive channels with large deployment histories can stress the system and require 2048mb or greater of Campaign design-time and/or Interact runtime Java heap space.
System administrators can adjust the amount of memory available to the deployment systems via the following JVM parameters:
-Xms####m -Xmx####m -XX:MaxPermSize=256m
where the characters #### should be 2048 or higher (depending on their system load.)
Note: A 64-bit application server and JVM are usually necessary for values greater than 2048. These are the suggested minimum values. Analyze your sizing requirements to determine correct values for your needs.
4. Go to the JBoss Enterprise Application Platform Admin Console.
5. Deploy interact.ear /interactRT.war on JBOSS.

Configuring activityOrchastrator feature with JBOSS

To use activityOrchastrator feature please perform following steps.

1. Start JBOSS Standalone service with following command:
standalone.bat --server-config=standalone-full.xml
standalone.sh --server-config=standalone-full.xml
2. Open JBOSS CLI and connect to JBoss server and execute following commands:
jms-queue add --queue-address=<queue-name> --entries=[java:/jms/<queue-name>]
<queue-name>: Queue Name (For e.g. test)
3. Add application server user as well using following command from <JBOSS-HOME>/bin location by using:
add-user.bat/sh -a -u <username> -p <password> -g guest
For e.g. uname/pass : jboss/jboss123
4. Create JDBC connections as mentioned in JBOSS section of “Information for creating JDBC connections” in this guide.
5. Deploy <path-to-war>/interactRT.war
6. You needs to add two receiver parameters to configure activityOrchastrator - Username and Password .
Note - [Username and Password is the credential of JBOSS application server]
7. Restart the server.

Chapter 7. Configuring Interact after deployment

After you deploy Interact, you must configure the Interact design time and runtime environments. Configuring the environments completes a basic installation of Interact.

The Interact configuration properties on the Configuration page are used to complete important functions. If you want, you can adjust the Interact configuration properties.

For more information about the properties, see the *IBM Interact Administrator's Guide* or the context help.

1. Complete the following steps to configure the Interact runtime environment after you deploy Interact:
 - a. Configure Interact runtime environment properties
 - b. Configure multiple Interact runtime servers
2. Complete the following steps to configure the Interact design time environment after you deploy Interact:
 - a. Configure the test run data source
 - b. Add server groups
 - c. Select a server group for interactive flowchart test run
 - d. Configure the contact and response history module
3. Optional: If you want to use the IBM Marketing Software reporting feature, you must install the Reports Package for Interact. For more information about Interact reports, see the *IBM Marketing Software Reports Installation and Configuration Guide*.

Configuring Interact runtime environment properties

For Interact runtime operation, you must configure data sources for every server group in the Interact runtime environment.

You must configure the following configuration properties on the Configuration page for every server group:

- Data source for the profile tables for the runtime environment
- Data source for the runtime environment system tables
- Data source for the test run tables
- Data source for built-in learning tables

The data source properties are required only if you use built-in learning.

- Data source of the contact and response history tables for cross-session response tracking

The data source properties are required only if you use cross-session response tracking.

- Audience levels for the profile

The audience level configuration properties must match the audience levels that you define for Campaign. However, you must configure the audience levels that are used in interactive flowcharts only. Set the **Audience Levels** configuration property in the **Interact > profile** category.

Multiple Interact runtime servers

When you install multiple Interact runtime servers, configure the runtime server group to use the same schema for runtime tables, profile tables, learning tables, and Marketing Platform.

For best performance, install each production Interact server group with its own instance of Marketing Platform, although this is not a firm requirement. By default, Interact runtime servers in the same server group use the same instance of Marketing Platform, as in the following example:

1. Install and configure Marketing Platform and the Interact runtime environment on the first server and ensure that they are configured and working correctly.
2. Install only Interact runtime environment on the second server. Provide the same Marketing Platform data source details and credentials that you used for the Marketing Platform installation on the first server. This configuration registers the second Interact server to use the same instance of Marketing Platform.
3. Deploy the Interact runtime WAR file on the second server.
4. Verify that Interact runtime environment is deployed and running correctly on the second server.
5. Use the URL of the first Interact runtime server and the second server in a single server group in your Interact design time configuration.

Although not required, you can also install a unique instance of Marketing Platform for each Interact runtime server, or a few instances of Marketing Platform that support subsets of runtime servers. For example, for your server group that contains 15 runtime servers, if five runtime servers report to one instance of Marketing Platform, you have a total of three instances of Marketing Platform for 15 runtime servers.

If you have multiple instances of Marketing Platform, the Interact configuration must match across all instances of Marketing Platform for a server group. You must define the same runtime tables, profile tables, and learning tables for all instances of Marketing Platform in each server group. All Interact servers that belong to the same server group must share user credentials. If you have separate Marketing Platform instances for each Interact server, you must create the same user and password on each instance of Marketing Platform.

If you install a test environment and have multiple Interact runtime servers on the same system, you must make sure that you complete the following requirements:

- Each Interact runtime server instance must be in a separate web application instance.
- If you configure JMX monitoring for Interact servers that are running on the same system, you must configure the JMX monitoring for each Interact runtime server to use a different port and instance name. Edit **JAVA_OPTIONS** in your web application server startup script and add the following options:
 - **-Dinteract.jmx.monitoring.port=portNumber**
 - **-Dinteract.runtime.instance.name=instanceName**

You must also set the instance name if you use a database load utility to work with several Interact servers that run on the same computer.

Configuring multiple Interact runtime servers

You can install multiple runtime servers in your environment and organize the servers into server groups. The Interact runtime servers enable the design time environment to complete test runs of interactive flowcharts.

When you install multiple Interact runtime servers, you must remove network connectivity for the Interact runtime computer before you run the installer. Removing the network connectivity ensures that additional Interact runtime server installations do not overwrite the Marketing Platform configuration.

After you install all instances of the Interact runtime server, restart Marketing Platform.

If possible, you must configure your server groups to work with a load balancer with persistent (sticky) sessions enabled. Alternatively, you can use a method of selecting runtime servers from a server group when you work with the Interact API.

If you cannot use a load balancer with persistent (sticky) sessions, you can configure the runtime servers in a server group to use distributed cache. All the servers must comprise a single server group.

Note: If you use a distributed cache, you must enable multicast to work between all members of a server group.

To enable a distributed cache, configure the following configuration properties under the **Affinium | interact | cacheManagement | Cache Managers | EHCACHE | Parameter Data** category:

- **cacheType** - set to Distributed.
- **multicastIPAddress** - define the IP address that all the Interact servers for the server group use for listening. The IP address must be unique across your server groups.
- **multicastPort** - define the port that all the Interact servers use for listening.

Note: If you are using the WebSphere application server and are using JDK 1.8, you must add the following JVM parameter for all additional runtime servers. The JVM parameter is not required for the first runtime server.

```
-Djavax.xml.stream.XMLInputFactory=com.ibm.xml.xpath.api.stax.XMLInputFactoryImpl
```

Note: When you uninstall an Interact server from a server group, make sure that you do not accidentally remove all IBM Marketing Software configuration.

Configuring the test run data source

Add the Interact test run tables as a Campaign data source so that Campaign can complete test runs of interactive flowcharts.

To add additional Campaign data sources, add data source configuration properties to the **Campaign > partitions > partitionN>datasources** category on the Configuration page by using the appropriate data source template. For more information, see the *IBM Campaign Installation Guide*.

Use the **OwnerForTableDisplay** property to define a database schema to limit the tables that are displayed when you map tables in an interactive channel.

The test run data source that is used in the Interact design time environment must specify the JNDI name of the design time test run tables.

If you configure your Interact environment for multiple locales, see the *IBM Campaign Administrator's Guide* for information about configuring the encoding properties as required for your database type.

If you use an SQLServer database and you set your locale to Japanese or Korean, you must configure the following properties in the **Campaign > partitions > partitionN>datasources > testRunDataSource** category for the test run data source:

- **ODBCUnicode** - set to UCS-2
- **stringEncoding** - set to WIDEUTF-8

Adding server groups

Create server groups for Campaign to complete test runs of interactive flowcharts. Define the location of at least one runtime server in the server group.

Important: You must fully install and deploy Marketing Platform for each server group. If you install multiple Interact server groups, you must fully install and deploy Marketing Platform for each runtime server group. Each Interact runtime server can be associated with one design time environment only.

You must define the locations of the Interact runtime servers on the Configuration page in Marketing Platform. The design time environment must be able to access the runtime servers for deploying and completing test runs of interactive flowcharts.

You must create at least one server group, and the server group must contain at least one Interact runtime server that is defined by the instance URL.

You can have multiple server groups. For example, you can have one server group to interact with your website, one server group to interact with your call center, and one server group for testing. Each server group can contain multiple instance URLs, and each instance URL can represent one instance of Interact runtime.

If you have multiple Interact design time systems running in your environment, an Interact runtime server that is configured with a design time cannot be configured with any other design time. If two different design times send deployment data to the same Interact runtime, the deployments can become corrupted and undefined behavior occurs.

For every server group in the Interact design time configuration, you must specify the JNDI name for the user profile tables. This is necessary to support runtime features in Interact, such as global offers, offer suppression, score override, and SQL offers in the **Interact List** process box.

Create server groups by setting the **serverGroup** configuration property in the **Campaign > partitions > partitionN>Interact > serverGroups** template category. The name is used only for organizational purposes. However, you can use the same name for the property as the **serverGroupName** property to avoid confusion.

Selecting a server group for interactive flowchart test run

Select a server group from the server groups that you created so that Campaign can complete a test run of interactive flowcharts.

Interactive flowcharts require an instance of the Interact runtime to run. You cannot use the Campaign batch flowchart engine to run an interactive flowchart. You must define a server group for Campaign to reference for completing test runs of interactive flowcharts. The server group is used to validate the table mapping for the interactive channel, and check the syntax of user macros in interactive flowcharts.

Set the following configuration properties in the **Campaign > partitions > partitionN>Interact > flowchart** category to configure the test run of an interactive flowchart:

- **serverGroup**
- **dataSource**

The data source that you specify for the **dataSource** property must be a Campaign data source.

Configuring the contact and response history module

You must make contact and response history data available for reporting and use with Campaign. You must copy the data from the staging tables in the Interact runtime servers to the Campaign contact and response history tables.

Note: You must configure the Interact runtime data source credentials in the design time environment configuration page for the contact and response history module to function.

Complete the following steps to collect contact and response history data for each Interact runtime server group:

1. Confirm that you have added the Interact runtime databases to the web application server that hosts Campaign.
2. Add a runtime data source by setting the **runtimeDataSource** configuration property in the **Campaign > partitions > partitionN > Interact > contactAndResponseHistTracking > runtimeDataSources** template category.
3. Repeat the preceding steps for each Interact runtime server group from which you want to collect contact and response history data.

Creating Interact system users

The Interact runtime environment users work with the Interact runtime servers to send configuration data from the design time environment to the runtime environment. The Interact design time environment users can edit interactive flowcharts.

Interact has the following types of system users:

- **Runtime environment users** are IBM user accounts that are configured to work with the Interact runtime servers. The users must be able to send the Interact configuration and deployment data from the design time environment to the runtime environment.

- **Design time environment users** are Campaign users. Configure the security for the various members of your design time team as described in the *IBM Campaign Administrator's Guide*.

Runtime environment user

The Interact runtime user account must be an internal user account.

The person who sends Interact configuration data from the design time environment to the runtime environment must log in as an IBM Marketing Software user. The internal user account must exist in the instance of the Marketing Platform that the Interact runtime server is dependent on.

All Interact servers that belong to the same server group must share user credentials for runtime deployment. If you have separate Marketing Platform instances for each Interact server, you must create an account with the same user login name and password on each Marketing Platform instance.

If you enable security for JMX monitoring with the JMXMP protocol, you might require a separate user for JMX monitoring security.

Design time environment users

Configure the Interact design time environment users in the same way you configure Campaign users, as described in the *IBM Campaign Administrator's Guide*.

You must configure an Interact design time environment user to have all the permissions of a Campaign user to edit flowcharts.

For a Campaign user who has permission to edit interactive flowcharts, you must store data source credentials for the Interact test run tables in their account.

The following table provides information about the permissions that a Campaign user must have to edit campaigns, channels, and flowcharts:

Table 29. Permissions for design time environment users

Category	Permissions
Campaigns	<p>The following list provides information about the permissions that users must have to modify campaigns:</p> <ul style="list-style-type: none"> • View Campaign Interaction Strategies - Ability to see but not edit interaction strategy tabs in a campaign. • Edit Campaign Interaction Strategies - Ability to change the interaction strategy tabs, including treatment rules. • Delete Campaign Interaction Strategies - Ability to remove interaction strategy tabs from campaigns. Deletion of an interaction strategy tab is restricted if the interactive channel to which it is already assigned is deployed. • Add Campaign Interaction Strategies - Ability to create new interaction strategy tabs in a campaign. • Initiate Campaign Interaction Strategy Deployments - Ability to mark an interaction strategy tab for deployment or undeployment.

Table 29. Permissions for design time environment users (continued)

Category	Permissions
Interactive Channels	<p>The following list provides information about the permissions that users must have to modify interactive channels:</p> <ul style="list-style-type: none"> • Deploy Interactive Channels - Ability to deploy an interactive channel to Interact runtime environments. • Edit Interactive Channels - Ability to change the interactive channels. • Delete Interactive Channels - Ability to remove interactive channels. Deletion of interactive channels is restricted if the interactive channel is already deployed. • View Interactive Channels - Ability to see but not edit interactive channels. • Add Interactive Channels - Ability to create new interactive channels. • View Interactive Channel Reports - Ability to see the analysis tab of the interactive channel. • Add Interactive Channel Child Objects - Ability to add interaction points, zones, events, and categories.
Sessions	<p>The following list provides information about the permissions that users must have to modify flowcharts:</p> <ul style="list-style-type: none"> • View Interactive Flowcharts - Ability to see an interactive flowchart in a session. • Add Interactive Flowcharts - Ability to create new interactive flowcharts in a session. • Edit Interactive Flowcharts - Ability to change the interactive flowcharts. • Delete Interactive Flowcharts - Ability to remove interactive flowcharts. Deletion of interactive flowcharts is restricted if the interactive channel to which this interactive flowchart is assigned is already deployed. • Copy Interactive Flowcharts - Ability to copy interactive flowcharts. • Test Run Interactive Flowcharts - Ability to initiate a test run of an interactive flowchart. • Review Interactive Flowcharts - Ability to see an interactive flowchart and open processes to view settings, but unable to make changes. • Deploy Interactive Flowcharts - Ability to mark an interactive flowcharts for deployment or undeployment.

Verifying the Interact installation

You must verify whether Interact is correctly installed by confirming that you can access the interactive channels and the Interact runtime URL.

1. To verify that the Interact design time environment is installed, log in to the IBM Marketing Software console and confirm that you can access **Campaign > Interactive Channels**.
2. Complete the following steps to verify that the Interact runtime environment is correctly installed:
 - a. Access the Interact runtime URL by using a supported web browser.
The runtime URL is:
`http://host.domain.com:port/interact/jsp/admin.jsp`
where *host.domain.com* is the computer where Interact is installed and *port* is the port number on which the Interact application server is listening.
 - b. Click **Interact Initialization Status**.

If the Interact server is running correctly, Interact responds with the following message:

System initialized with no errors!

If the initialization fails, review the installation procedure and confirm that you followed all the instructions.

Configuring the ETL process

After you install the Interact ETL process, you need to configure the process by modifying files on the ETL process server, and in the Marketing Platform configuration pages.

To configure the ETL process, there are files in the Interact home directory on the ETL process server to indicate where the necessary Java runtime files are found, as well as other environment variables. Then, you need to connect to the IBM Marketing Platform server associated with this installation and use the configuration pages there to set up the necessary properties to run the ETL process.

1. On the server on which you installed the ETL process, open the following file in any text editor: <Interact_home>\PatternStateETL\bin\setenv.bat on Microsoft Windows, or <Interact_home>\PatternStateETL\bin\setenv.sh on a UNIX-like operating system.
 - a. Complete the line that reads `set JAVA_HOME=[CHANGE ME]`, changing `[CHANGE ME]` to the actual path to the 64-bit Java runtime you want to use.

Note: Although the IBM Marketing Software installer provides a Java runtime in <Interact_home>\.\jre, such as C:\IBM\IMS\jre, this is a 32-bit Java runtime used only for installation. This runtime is not suitable for running the ETL process. Install a supported 64-bit Java runtime if one is not already installed, and update the setenv file to use that runtime.

- b. Complete the line that reads `set JDBC_DRIVER_CP=` with the actual location of the JDBC driver for the connection to the database that contains the system tables. For example, if you were connecting to an Oracle database, you might specify the path to a local copy of `ojdbc7.jar`.
2. In a supported web browser, connect to the IBM Marketing Platform server associated with this installation and log in using administrator-level credentials.
 3. Open the Configuration page by clicking **Settings > Configuration** in the toolbar.

The Configuration page shows the Configuration Categories tree.

4. Navigate to **interact | ETL** in the Configuration Categories tree.
5. Click **PatternStateETLConfig Template** under **patternStateETL** in the tree to create a new Pattern State ETL configuration.

In the right pane, complete the following information:

- **New category name.** Provide a name that uniquely identifies this configuration. Note that you must provide this exact name when you run the ETL process. For convenience in specifying this name on the command line, you might want to avoid a name that contains spaces or punctuation, such as `ETLProfile1`.
- **runOnceADay.** Determines whether the ETL process in this configuration should run once each day. Valid answers are **Yes** or **No**. If you answer **No** here, the **processSleepIntervalInMinutes** determines the run schedule for the process.
- **preferredStartTime.** The preferred time at which the ETL process should start. Specify the time in the format `HH:MM:SS AM/PM`, as in `01:00:00 AM`.

- **preferredEndTime.** The preferred time at which the ETL process should stop. Specify the time in the format HH:MM:SS AM/PM, as in 08:00:00 AM.
 - **processSleepIntervalInMinutes.** If you have not configured the ETL process to run once a day (as specified in the **runOnceADay** property), this property specifies the interval between ETL process runs. For example, if you specify 15 here, the ETL process will wait for 15 minutes after it stops running before starting the process again.
 - **maxJDBCInsertBatchSize.** The maximum number of records of a JDBC batch before committing the query. By default, this is set to 5000. Note that this is not the maximum number of records that the ETL processes in one iteration. During each iteration, the ETL processes all available records from the UACI_EVENTPATTERNSTATE table. However, all those records are broken into **maxJDBCInsertSize** chunks.
 - **maxJDBCFetchBatchSize.** The maximum number of records of a JDBC batch to fetch from the staging database.
You might need to increase this value to tune the performance of the ETL.
 - **communicationPort.** The network port on which the ETL process listens for a stop request. Under normal circumstances, there should be no reason to change the network port from the default value.
 - **queueLength.** A value used for performance tuning. Collections of pattern state data are fetched and transformed into objects that are added to a queue to be processed and written to the database. This property controls the size of the queue.
 - **completionNotificationScript.** Specifies the absolute path to a script to run when the ETL process is completed. If you specify a script, three arguments are passed to the completion notification script: start time, end time, and total number of event pattern records processed. The start time and end time are numeric values representing number of milliseconds elapsed since 1970.
 - **requireAuthentication.** Specifies whether a password is required to run the Pattern State ETL command. The platform user who is running the Pattern State ETL command must have administrative privileges.
6. When you finish completing the configuration, click **Save**. When you save the configuration, three additional categories are automatically created in the tree underneath the new configuration: Report, RuntimeDS, and TargetDS. Use the Report category to configure the report aggregation ETL integration. Use the RuntimeDS and TargetDS categories to specify the data source where the ETL process should retrieve the data that it will process (the database that contains the Interact runtime tables), and the data source where the results are stored.
 7. Configure the **Interact | ETL | patternStateETL | <patternStateETLName> | Report** categories for the report aggregation ETL integration configuration.
In the right pane, click **Edit Settings** and complete the following fields:
 - **enable** . Enable or disable the report integration with ETL. This property is set to disable by default.
 - **retryAttemptsIfAggregationRunning.** The number of times the ETL attempts to check whether the report aggregation is completed if the lock flag is set. This property is set to 3 by default.
 - **sleepBeforeRetryDurationInMinutes.** Sleep time in minutes between consecutive attempts. This property is set to 5 minutes by default.
 - **aggregationRunningCheckSql.** Use this property to define a custom SQL, which can be run to see whether the report aggregation lock flag is set. By default this property is empty.

When this property is not set, the ETL runs the following SQL to get the lock flag.

```
select count(1) AS ACTIVERUNS from uari_pattern_lock where islock='Y'  
=> If ACTIVERUNS is > 0, lock is set
```

- **aggregationRunningCheck.** Enable or disable the check if the report aggregation is running before the ETL run is performed. This property is set to enable by default.

Save the changes when you are done.

8. Configure the **Interact | ETL | patternStateETL | <patternStateETLName> | RuntimeDS** and **Interact | ETL | patternStateETL | <patternStateETLName> | TargetDS** categories for the ETL configuration.

The two categories determine the data sources for retrieving and storing the event pattern data used by the ETL process.

Note: The data source that you specify for the **TargetDS** configuration might be the same data source in which the Interact runtime tables are stored, or it might be a different data source for performance reasons.

- a. Click the category (**RuntimeDS** or **TargetDS**) that you want to configure.
- b. In the right pane, click **Edit Settings** and complete the following fields:

- **type.** A list of the supported database types for the data source you are defining.

- **dsname.** The JNDI name of the data source. This name must also be used in the user's data source configuration to ensure that the user has access to the target and runtime data sources.

- **driver.** The name of the JDBC driver to use, such as any of the following:

Oracle: oracle.jdbc.OracleDriver

Microsoft SQL Server: com.microsoft.sqlserver.jdbc.SQLServerDriver

IBM DB2: com.ibm.db2.jcc.DB2Driver

- **serverUrl.** The data source URL, such as any of the following:

Oracle: jdbc:oracle:thin:@

<your_db_host>:<your_db_port>:<your_db_service_name>

Microsoft SQL Server: jdbc:sqlserver://

<your_db_host>:<your_db_port> ;databaseName= <your_db_name>

IBM DB2: jdbc:db2:// <your_db_host>:<your_db_port>/<your_db_name>

- **connectionpoolSize.** A value that indicates the size of the connection pool, provided for performance tuning. Pattern state data is read and transformed concurrently depending upon the available database connections. Increasing the connection pool size allows for more concurrent database connections, subject to limitations of memory and database read/write capabilities. For example, if this value is set to 4, four jobs run concurrently. If you have a large amount of data, you might need to increase this value to a number such as 10 or 20, as long as sufficient memory and database performance is available.
- **schema.** The name of the database schema to which this configuration is connecting.
- **connectionRetryPeriod.** The `ConnectionRetryPeriod` property specifies the amount of time in seconds Interact automatically retries the database connection request on failure. Interact automatically tries to reconnect to

the database for this length of time before reporting a database error or failure. If the value is set to 0, Interact retries indefinitely; if the value is set to -1, no retry is attempted.

- **connectionRetryDelay**. The `ConnectionRetryDelay` property specifies the amount of time in seconds Interact waits before it tries to reconnect to the database after a failure. If the value is set to -1, no retry is attempted.

Save the changes when you are done specifying both the runtime and target data sources.

9. Still in IBM Marketing Platform server, click **Settings > Users** in the toolbar.
10. Edit the user that is running the ETL process and click **Edit Data Sources**.
11. Define data sources for the user to match the **TargetDS** and **RuntimeDS** categories you defined for the ETL category. The Data Source name that you specify for the user data source must match the value of the `dsname` property for **TargetDS** or **RuntimeDS** configuration. The event pattern state ETL read the user name and password you specify here to connect to the database during processing.

You have now configured the Marketing Platform for use with the event pattern ETL process. Be aware that any changes you make to the ETL configuration other than the communication port are automatically implemented in the next run of the ETL process. There is no need to restart the ETL process after you change the configuration, unless you specify a new communication port.

With the installation and configuration of the event pattern ETL process that is completed, you are now ready to run the process.

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. Configuring multiple partitions for Interact

In the Campaign family of products, partitions provide a way to secure the data that is associated with different groups of users. When you configure Campaign or a related IBM Marketing Software application to operate with multiple partitions, users can see each partition as a separate instance of the application. There is no indication that other partitions exist on the same computer.

How multiple partitions work

For the IBM Marketing Software applications that operate with Campaign, you can configure the application within the partitions where you have configured an instance of Campaign. Application users within each partition can access the Interact functions, data, and customer tables that are configured for Interact in the same partition.

Partition benefits

Multiple partitions are useful for setting up strong security between groups of users, because each partition has its own set of Interact system tables. Multiple partitions cannot be used when groups of users must share data.

Each partition has its own set of configuration settings, and Interact can be customized for each group of users. However, all partitions share the same installation binaries. With the same binaries for all partitions, you can minimize the installation and upgrade efforts for multiple partitions.

Partition user assignment

Access to partitions is managed through membership in Marketing Platform groups.

With the exception of the partition superuser (`platform_admin`), each IBM user can belong to one partition. A user who requires access to multiple partitions must have a separate IBM user account for each partition.

If there is only one Interact partition, users do not have to be explicitly assigned to that partition to have access to Interact.

Partition data access

In a multi-partition configuration, partitions have the following security characteristics:

- A user cannot access a partition if the user is not a member of a group that is assigned to a partition.
- A user of one partition cannot view or change data in another partition.
- Users cannot navigate the Interact file system above the root directory of their partition from the browse dialog boxes in Interact. For example, if two partitions, named `partition1` and `partition2` exist, and you belong to the group that is associated with `partition1`, you cannot navigate the directory structure for `partition2` from a dialog box.

Setting up multiple partitions for the Interact design time environment

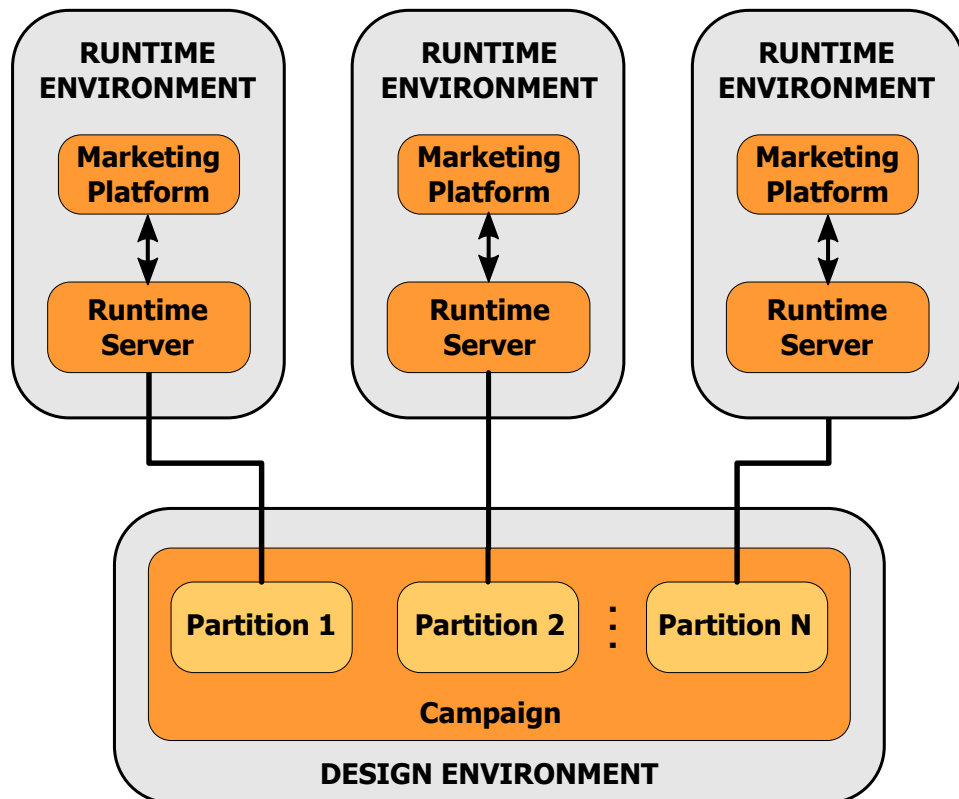
In the Campaign family of products, partitions provide a way to secure the data that is associated with different groups of users. You can create multiple partitions only for the Interact design time environment.

You can create multiple partitions to use with Campaign and the Interact design time environment. You can use partitions to configure Interact and Campaign so that different groups of users have access to different sets of Interact and Campaign data.

Note: The Interact runtime environment does not support multiple partitions. You cannot configure the Interact runtime environment to work in multiple partitions, nor can one Interact runtime environment work with multiple partitions from a design time.

If you set up multiple partitions with Campaign, you set up multiple partitions for Interact. You must configure each partition in the design time environment to communicate with a separate Interact runtime environment, including separate Marketing Platform and runtime tables. If you set up multiple partitions with Campaign, you must configure each partition to communicate with a separate Interact runtime environment.

The following diagram shows multiple partitions configured for Interact:



Complete the following steps to set up multiple partitions for the Interact design time environment:

1. You must manually enable Interact for each partition by setting the **interactInstalled** configuration property in the **Campaign > partitions > partitionN > server > internal** to yes.
2. Complete the following configuration steps for each partition:
 - a. Configure the test run data source
 - b. Add server groups
 - c. Select a server group for interactive flowchart test runs
 - d. Configure the contact and response history module

Chapter 9. Uninstalling Interact

Run the Interact uninstaller to uninstall Interact. When you run the Interact 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.

In addition to the general instructions for uninstalling IBM Marketing Software products, follow the guidelines when you uninstall Interact:

- If you have multiple Interact runtime installations using the same Marketing Platform installation, you must remove network connectivity for the Interact runtime workstation before you run the uninstaller. Failure to do so uninstalls the configuration data for all the other Interact runtime installations from Marketing Platform.
- You can safely ignore any warnings about failure to unregister with Marketing Platform.
- You can export a copy of your configuration as a precaution before uninstalling Interact.
- If you uninstall the Interact design time environment, after you run the uninstaller, you may need to manually unregister Interact. Use the **configtool** utility to unregister `full_path_to_Interact_DT_installation_directory\interactDT\conf\interact_navigation.xml` and `full_path_to_Interact_RT_installation_directory\conf\interact_navigation.xml`.

Note: On UNIX, the same user account that installed Interact must run the uninstaller.

1. If you have deployed the Interact web application, undeploy the web application from WebSphere or WebLogic.
2. Shut down WebSphere or WebLogic.
3. Stop the processes that are related to Interact.
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 Interact:
 - Click the Interact uninstaller that exists in the `Uninstall_Product` directory. The uninstaller runs in the mode in which you installed Interact.

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

`Uninstall_Product -i silent`

When you uninstall Interact 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 Interact, the Interact uninstaller runs in the mode in which Interact is installed.

Chapter 10. 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 30. 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 30. 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
```
- Import one of the supplied Campaign data source templates into the default Campaign partition, `partition1`. The example assumes that you placed the Oracle data source template, `OracleTemplate.xml`, in the `tools/bin` directory under the Marketing Platform installation.

```
configTool -i -p "Affinium|Campaign|partitions|partition1|dataSources" -f OracleTemplate.xml
```
- Export all configuration settings to a file named `myConfig.xml` in the `D:\backups` directory.

```
configTool -x -f D:\backups\myConfig.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
```

Before you contact IBM technical support

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.

If you are not a designated support contact at your company, contact your IBM administrator for information.

Note: Technical Support does not write or create API scripts. For assistance in implementing our API offerings, contact IBM Professional Services.

Information to gather

Before you contact IBM technical support, gather the following information:

- A brief description of the nature of your issue.
- Detailed error messages that you see when the issue occurs.
- 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."

System information

When you call IBM technical support, you might be asked to provide information about your environment.

If your problem does not prevent you from logging in, much of this information is available on the About page, which provides information about your installed IBM applications.

You can access the About page by selecting **Help > About**. If the About page is not accessible, check for a `version.txt` file that is located under the installation directory for your application.

Contact information for IBM technical support

For ways to contact IBM technical support, see the IBM Product Technical Support website: (http://www.ibm.com/support/entry/portal/open_service_request).

Note: To enter a support request, you must log in with an IBM account. This account must be linked to your IBM customer number. To learn more about associating your account with your IBM customer number, see **Support Resources > Entitled Software Support** on the Support Portal.

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