

IBM Unica Leads
Version 8 Release 6
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Installation Guide



Note

Before using this information and the product it supports, read the information in "Notices" on page 57.

This edition applies to version 8, release 6, modification 0 of IBM Unica Leads and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. About the IBM Unica Leads Environment

When installing and deploying Leads, you must include the following three logical components:

- **Web server:** The web server, or HTTP server, provides access to the database client computers through the internet. It processes the HTTP requests from Leads. It passes processing requests from the application JSP pages to the application server, and receives HTML results displayed in the Leads application.
- **Application server:** The application server runs application-level Java code to produce dynamic content. In order to create the response returned to the HTTP server for display, the application server reads from and writes to the Leads database.
- **Database server:** The database server supports the Leads database and processes requests to update and return data. The database contains the current information used for Leads, including users, referrals, leads, lead assignments, contacts, and companies.

Application server considerations

The application server is the machine on which you install Leads. The web server transfers data between the Leads installed on the application server, and the Leads database installed on the database server.

Note: Do not install Leads in an environment configured with additional caching engines or proxy servers. Caching application pages can slow performance.

Note: You cannot use an application server that has been "hardened." A hardened system, also known as a "bastion host," has been configured to remove all possible security vulnerabilities. The Leads applications cannot run under these limitations.

Note: You must deploy Leads on a dedicated Java Virtual Machine (JVM). You cannot deploy other IBM® or non-IBM applications on the same JVM.

Before installing Leads on the application server, check that your equipment meets the requirements for the following software:

- Operating System requirements
- Java Virtual Machine requirements
- Database client requirements
- Application server software requirements

Clustering

Leads can be configured as a clustered environment. In a clustered environment, two or more application servers in a cluster share the application processing load.

For information about how to set up a clustered environment, contact IBM Unica® Consulting Services.

Configuring a mail server

The Message Assistant feature sends email notification of events relevant to lead handling. Notification features in Leads require an SMTP compliant email server. Make note of your SMTP server name and port so that you can enter the information during installation.

Chapter 2. Preparing to Install IBM Unica Leads

Installing IBM Unica products is a multi-step process that involves working with a number of software and hardware elements that are not provided by IBM Unica . While the IBM Unica documentation provides some guidance regarding specific configurations and procedures required to install IBM Unica products, for details on working with these systems that are not provided by IBM Unica you should consult those products' documentation.

Before you begin to install the IBM Unica Marketing software, you should have engaged in a planning process that takes into consideration both your business objectives and the hardware and software environment required to support them.

Basic installations of Leads

The instructions in this guide are designed to enable you to successfully perform a basic installation of Leads. Basic installation is a necessary step, but it is not the end of the installation process. IBM Unica Marketing products typically require additional configuration steps to prepare them for use in achieving your business objectives.

We define a basic installation as follows.

- All components of the product are installed.
- A system user is configured, with administrator-level access to the Leads system tables.

You can find information about advanced configurations as shown in the following table.

Topic	Guide
Customizing IBM Unica reporting schemas and sample reports	<i>The Marketing Platform Administrator's Guide</i>
Integrating with LDAP and web access control systems	<i>Marketing Platform Administrator's Guide</i>
Configuring SSL	<i>Marketing Platform Administrator's Guide</i>

Prerequisites

The following are prerequisites for installing IBM Unica Marketing products.

System requirements

For detailed system requirements, see the *IBM Unica Marketing Enterprise Products Recommended Software Environments and Minimum System Requirements* guide.

JVM requirement

IBM Unica Marketing applications within a suite must be deployed on a dedicated Java Virtual Machine (JVM). IBM Unica Marketing products customize the JVM used by the web application server. You might need to create an Oracle WebLogic

or WebSphere® domain dedicated to IBM Unica Marketing products if you encounter JVM-related errors.

Network domain requirement

IBM Unica Marketing products that are installed as a Suite must be installed on the same network domain, to comply with browser restrictions designed to limit cross-site scripting security risks.

Knowledge requirement

To install IBM Unica Marketing products, you must possess or work with people who possess a thorough knowledge of the environment in which the products are installed. This knowledge includes the operating systems, databases, and web application servers.

Client machines

Client machines should meet the following configuration requirements.

- The browser should not cache pages. In Internet Explorer, select **Tools > Internet Options > Settings** and choose the option that causes the browser to check for a newer version of the page on each visit.
- If pop-up blocker (ad blocker) software is installed on the client machine, Leads might not function properly. We recommend disabling pop-up blocker software while running Leads.

Access permissions

Verify that your network permissions allow you to perform the procedures in this guide, and that you have access to all appropriate logins, including the following.

- The administrative password for your web application server.
- Administration access for all necessary databases.
- 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 the backup directory if you are upgrading.
- Appropriate read/write/execute permissions to run the installer.
- The operating system account that you use to run the web application server and IBM Unica Marketing components must have read and write access to the relevant directory and subdirectories.
- On UNIX, the user account that performs the IBM Unica product installation must be a member of the same group as the user account that installed the web application server on which it will be deployed. This is because the web application server needs access to the product's file system.

On UNIX, all of the installer files for IBM Unica products must have full execute permissions (for example, `rwxr-xr-x`).

If you are upgrading

You should always read and understand the installation process as a whole before performing an installation. In addition, if you are upgrading, you should read and understand the section on preparing to upgrade and the upgrade section for each IBM Unica Marketing product.

Chapter 3. Preparing the Data Source for IBM Unica Leads

This section provides the information you need to set up the database and JDBC connection for the Leads system tables. You will enter the details about this database when you run the IBM Unica installer later in the installation process, so you should print and fill in the “Leads data source information checklist” on page 9.

Step: Create the Leads system table database or schema

1. Work with a database administrator to create the Leads system table database or schema.
Follow these guidelines.
 - If your Leads installation must support non-ASCII languages, the database must use UTF-8 encoding.
 - If your Leads system tables are in SQL Server, ensure that TCP/IP is enabled.
The Leads application only works on case-sensitive collation; however, as best practice, use the Latin1_General_Bin collation.
2. Obtain the information about your database or schema and the database account and then print and complete the “Leads data source information checklist” on page 9. You will need this information during later steps in the installation process.

About IBM DB2 database tablespaces

You can specify four different tablespaces for the application data:

- An OLTP data tablespace to store the transactional data from the application.
- An OLTP index tablespace to store the indexes created to access the OLTP data tables.
- A DSS data tablespace to store the OLTP data loaded into the DSS schema. The DSS schema organizes data from the OLTP to make it easier to generate reports of the application’s activity.
- A DSS index tablespace to store the indexes created to access the DSS data tables.

Make note of the names of these tablespaces, as well as the name of the server on which you create the database. These tablespaces must exist before installing Leads. You should initially allocate at least 100 MB of space each for the OLTP data and DSS data tablespaces, and at least 50 MB each for the OLTP index and DSS index tablespaces.

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

In addition, you should provide a TMP tablespace of at least 10MB.

The database user you specify when installing Leads must be associated with these tablespaces, or have permissions to administer them. The program must be able to create schema in these tablespaces and write initial data to them.

Create the tablespaces for the IBM DB2® database in a database-managed space (DMS).

Configuring IBM DB2 on your database server

1. Install and configure IBM DB2. Ensure that the database is configured for UTF-8 encoding.
2. Be sure that IBM DB2 is configured to use extended shared memory on the database server.
 - a. Add the environment variable EXTSHM to the DB2 environment list. At a DB2 command prompt, type the following command:

```
db2set DB2ENVLIST=EXTSHM
```
 - b. Enable the environment variable EXTSHM, so that it is set appropriately each time you log in to IBM DB2. In the file `sql1lib/db2profile`, add the following lines:

```
EXTSHM=ON  
export EXTSHM
```

Note: Restart the database server to enable any changes.

3. Create a blank database for Leads to use.
 - a. The **temporary** tablespace for the database must have the following properties:
 - Temporary table space must system-managed space (SMS) type.
 - **System Temporary data** must be included in the tablespace contents.
 - Page size must be at least 32768 bytes (32K).
 - b. Set the SQL statement heap size (STMTHEAP) to at least 32K.
4. Assign the database user full DBA authority. At a minimum, the user you create for the Leads database must have CONNECT and IMPLICIT_SCHEMA authority for the database. The following example command grants this authority to the user:

```
GRANT CONNECT, IMPLICIT_SCHEMA ON DATABASE TO USER USER_NAME
```

Note: When a new database is created, PUBLIC is given IMPLICIT_SCHEMA database authority. This means that any user can create a schema by creating an object and specifying a schema name that does not exist. SYSIBM becomes the owner of the implicitly created schema and PUBLIC is given the privilege to create objects in this schema.

5. Create tablespaces for the Leads application data.
6. Note the following information about this database for use during the installation process:
 - Database name
 - User name and password Leads can use to access the database

Step: Configure the web application servers for your JDBC drivers

Use the following procedure to obtain the correct JDBC drivers for your IBM Unica Marketing installation, and to configure your web application server to use it.

Important: Perform this procedure for every web application server where you plan to deploy your IBM Unica Marketing products.

1. Obtain the latest vendor-provided Type 4 JDBC drivers supported by IBM Unica Marketing. See the reference table or tables in this section for details.
 - If the drivers do not exist on the machine where the product is installed, obtain them and copy them to the machine or machines where you plan to deploy IBM Unica Marketing web applications. You may copy them to any location on the machine where you plan to deploy the IBM Unica Marketing product. To avoid potential path issues, unpack the drivers in a path that does not include spaces.
 - If you obtain the drivers from a machine where the data source client is installed, verify that the version is the latest supported by IBM Unica Marketing.

The following table lists the driver file name or names for database types supported for IBM Unica Marketing system tables.

Database	Drivers
Oracle 11	ojdbc6.jar
DB2	db2jcc.jar
SQL Server 2008 and 2008 R2	sqljdbc4.jar

2. Include the full path to the drivers in the classpath of the web application servers where you plan to deploy IBM Unica Marketing products, as follows.
 - For all supported versions of WebLogic, set the classpath 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 CLASSPATH list of values, before any existing values, to ensure that the web application server uses the correct driver. For example:

UNIX

```
CLASSPATH="/home/oracle/product/10.2.0/jdbc/lib/ojdbc14.jar:
${PRE_CLASSPATH}${CLASSPATHSEP}${WEBLOGIC_CLASSPATH}
${CLASSPATHSEP}${POST_CLASSPATH}${CLASSPATHSEP}${WLP_POST_CLASSPATH}"
export CLASSPATH
```

Windows

```
set CLASSPATH=c:\oracle\jdbc\lib\ojdbc14.jar;%PRE_CLASSPATH%;
%WEBLOGIC_CLASSPATH%;%POST_CLASSPATH%;%WLP_POST_CLASSPATH%
```

- For all supported versions of WebSphere, include the full path to the drivers in the classpath. To include the full path of your database drivers in the classpath, you will need to navigate to **Application servers > server1 > Process definition > Java Virtual Machine**.
3. Restart the web application server so your changes take effect.

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

Step: Create the JDBC connections in the web application server

The Leads web application must be able to communicate with its system table database and with the Marketing Platform system table database using JDBC connections. You must create these JDBC connections in the web application server or servers where you plan to deploy Leads.

Important: You must create JDBC connections in each of the web application servers on which Leads will be deployed as described in the following table.

Required JDBC connection	Required JNDI name
Leads system tables	WebLogic: jdbc/LeadsData
	WebSphere: LeadsData
Marketing Platform system tables	UnicaPlatformDS

Note the following guidelines.

- When the Leads system tables are created in a different schema from the default schema of the database login user, you must specify that non-default schema name in the JDBC connection used to access the system tables.
- For all deployments using WebLogic, you must set Connection Pool properties for the Leads data source as follows.
 - Initial Capacity: 15
 - Maximum Capacity: 250
 - Capacity Increment: 5
 You may need to tune Connection Pool properties, based on your requirements.
- For all deployments using WebSphere, you must set Connection Pool properties for the Leads data source as follows.
 - Maximum Connections: 250
 - Minimum Connections: 25
 - Reap Time: 5

Information for JDBC connections

When you create a JDBC connection, you can use this section to help you determine some of the values you must enter. If you are not using the default port setting for your database, change it to the correct value.

This information does not exactly reflect all of the information required by the web application servers. Where this section does not provide explicit instructions, you can accept the default values. Consult the application server documentation if you need more comprehensive help.

WebLogic

Use these values if your application server is WebLogic.

SQLServer

- Driver: Microsoft MS SQL Server Driver (Type 4) Versions: 2008, 2008R2
- Default port: 1433
- Driver class: com.microsoft.sqlserver.jdbc.SQLServerDriver
- Driver URL: jdbc:sqlserver://
`<your_db_host>:<your_db_port>;databaseName=<your_db_name>`
- Properties: Add user=`<your_db_user_name>`

Oracle 11 and 11g

- 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>
- 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 these values if your application server is WebSphere.

SQLServer

- Driver: N/A
- Default port: 1433
- Driver class: com.microsoft.sqlserver.jdbc.SQLServerConnectionPoolDataSource
- Driver URL: N/A

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 and modify properties as follows.

- serverName=<your_SQL_server_name>
- portNumber =<SQL_Server_Port_Number>
- databaseName=<your_database_name>
- enable2Phase = false

Oracle 11 and 11g

- 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: DB2 Universal JDBC 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>

Leads data source information checklist

Field	Notes®
Data source type	

Field	Notes[®]
Data source name	
Data source account user name	
Data source account password	
JNDI name	

Chapter 4. Installing IBM Unica Leads

Obtain the following installation files.

Important: Place all of the files in the same directory. This is an installation requirement.

- The IBM Unica master installer.
- The Leads installer.

The IBM Unica Marketing product installation files are named according to the version of the product and the operating system with which they are meant to be used, except for UNIX files intended to be run in console mode, which are not operating system-specific. For UNIX, different files are used depending on whether the installation mode is X-windows or console. For example:

Windows - GUI and console mode - *ProductN.N.N.N_win.exe* is version N.N.N.N and is intended for installation on the Windows operating system.

UNIX - X-windows mode - *ProductN.N.N.N_solaris.bin* is version N.N.N.N and is intended for installation on the Solaris operating system.

UNIX - console mode - *ProductN.N.N.N.sh* is version N.N.N.N and is intended for installation on all UNIX operating systems.

Copying installation files (DVD only)

If you received your IBM Unica installation files on a DVD, or if you created a DVD from a downloaded ISO image file, you must copy its contents to a writable directory available to the system on which you are installing the IBM Unica products before running the installers.

Note: For more information about where to place the installation files, see “How the IBM Unica Marketing installers work” on page 12.

Step: Obtain required information

Gather the following information that you must enter when you run the Leads installer.

Marketing Platform information

Leads uses the IBM Unica Marketing Platform for authentication. During the installation process, the Leads installer must communicate with the Marketing Platform database. Gather the information about your Marketing Platform installation that you must enter in the Leads installer, as described in this section.

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.

You obtained this information when you created the Marketing Platform database or schema.

Web component information

You must obtain the following information about the application server or servers on which you plan to deploy Leads.

- The name of the machines on which the web application servers are installed. You may have one or several, depending on the 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 on which your deployment machines reside. For example, mycompany.com.

How the IBM Unica Marketing installers work

You should read this section if you are not familiar with the basic functions of the IBM Unica installer.

Single directory requirement for installer files

When you install IBM Unica enterprise products, you use a combination of installers.

- A master installer, which has Unica_Installer in the file name
- Product-specific installers, which all have the product name as part of their file names

To install IBM Unica Marketing products, you must place the master installer and the product installers in the same directory. When you run the master installer, it detects the product installation files in the directory. You can then select the products you want to install.

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 Unica Products screen in the installation wizard.

Installing patches

You might be planning to install a patch immediately after you perform a new installation of an IBM Unica product. If so, place the patch installer in the directory with the base version and master installer. When you run the installer, you can select both the base version and the patch. The installer then installs both in correct order.

Choosing product installation directories

You can install to any directory on any network-accessible system. You can specify an installation directory by entering a path or by browsing and selecting it.

You can specify a path relative to the directory from which you are running the installer by typing a period before the path.

If the directory you specify does not exist, the installer creates it, assuming that the user performing the installation has appropriate permissions.

The default top-level directory for IBM Unica installations is named IBM/Unica. The product installers then install in subdirectories under the Unica directory.

Installation types

The IBM Unica installer performs the following types of installation.

- **New installation:** When you run the installer and select a directory where an IBM Unica Marketing product has never been installed, the installer automatically performs a new installation.
- **Upgrade installation:** When you run the installer and select a directory where an *earlier* version of an IBM Unica Marketing product is installed, the installer automatically performs an upgrade installation. For products where installers automatically update the database, upgrade installation adds new tables but does not overwrite data in existing tables.

For products where installers automatically update the database, errors can occur during an upgrade because the installer does not create tables in the database if they exist. You can safely ignore these errors. See the chapter on Upgrading for details.

- **Reinstallation:** When you run the installer and select a directory where *the same* version of an IBM Unica Marketing product is installed, the installer automatically performs a new installation. For products where installers automatically update the database, reinstallation drops all existing tables and data and then creates new tables and populates them with default data. Reinstallation also overwrites all of the data in your existing installation directory for products where installers automatically update the database. To retain or restore data for a reinstallation:
 - When you run the installer, select the **Manual database setup** option.
 - Use the Marketing Platform `configTool` utility to export modified configuration settings, such as customized navigation menu items, before you reinstall.

Typically, reinstallation is not recommended.

Installation modes

The IBM Unica installer can run in the following modes.

- Console (command line) mode

In console mode, options are presented to you in numbered lists. You supply a number to select the option you want. If you press Enter without entering a number, the installer uses the default option.

The default option is indicated by one of the following symbols:

– -->

To select an option when this symbol appears, type the number of the option you want to select then press Enter.

– [X]

This symbol indicates that you can choose one, several, or all of the options in the list. If you type the number of an option that has this [X] symbol next to it then press Enter, you clear or deselect that option. If you type the number of an option that is not currently selected (it has [] next to it), that option is selected when you press Enter.

To deselect or select more than one option, enter a comma-separated list of option numbers.

- Windows GUI or UNIX X-windows mode
- Unattended, or silent, mode, which allows no user interaction

Unattended mode can be used to install an IBM Unica product multiple times, for example when you set up a clustered environment. For more information, see “Installing multiple times using unattended mode.”

Installing multiple times using unattended mode

If you must install IBM Unica Marketing products multiple times, for example when setting up a clustered environment, you may want to run the IBM Unica installer in unattended mode, which requires no user input.

About the response files

Unattended mode (also known as silent mode) requires a file or set of files to provide the information that a user would enter at the installation prompts when using the console or GUI modes. These files are known as response files.

You can use either of these options to create response files.

- You can use the sample response file as a template for directly creating your response files. The sample files are included with your product installers in a compressed archive named ResponseFiles. The response files are named as follows.
 - IBM Unica installer - `installer.properties`
 - Product installer - `installer_` followed by initials for the product name. For example, the Campaign installer has a response file named `installer_uc.properties`.
 - Product reports packs installer - `installer_` followed by initials for the product name plus `rp`. For example, the Campaign reports pack installer has a response file named `installer_urpc.properties`.

Edit the sample files as needed and place them in the same directory with your installers.

- Before you set up an unattended run, you can run the installer in Windows GUI or UNIX X-windows mode or in Console mode and choose to create the response files.

The IBM Unica master installer creates one file, and each IBM Unica product you install also creates one or more files.

The response files have `.properties` extensions, such as `installer_product.properties` and the file for the IBM Unica installer itself, which is named `installer.properties`. The installer creates these files in the directory you indicate.

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

Where the installer looks for response files

When the installer runs in unattended mode, it looks for the response file as follows.

- First, the installer looks in the installation directory.
- Next, the installer looks in the home directory of the user performing the installation.

All response files must be 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
```

Effect of unattended mode when you uninstall

When you uninstall a product that was installed using unattended mode, the uninstall is performed in unattended mode (without presenting any dialogs for user interaction).

Unattended mode and upgrades

When you are upgrading, if a response file was previously created and you run in unattended mode, the installer uses the installation directory that was previously set. If you want to upgrade using unattended mode when no response file exists, create a response file by running the installer manually for your first installation, and be sure to select your current installation directory in the installation wizard.

IBM Site ID

The installer might prompt you to enter your IBM Site ID. Your IBM Site ID can be found on the IBM Welcome letter, Tech Support Welcome letter, Proof of Entitlement letter, or other communications sent when you purchased your software.

IBM might use data provided by the software to better understand how customers use our products and to improve customer support. The data gathered does not include any information that identifies individuals.

If you do not want to have such information collected, after the Marketing Platform is installed, log on to the Marketing Platform as a user with administration privileges. Navigate to the **Settings > Configuration** page, and set the **Disable Page Tagging** property under the **Platform** category to **True**.

Order of installation

You must install IBM Unica Marketing products in the sequence described in this section.

Before you install any IBM Unica Marketing products, the Marketing Platform must be installed with its system tables either automatically created by the installer or manually created. The IBM installer automatically runs the Marketing Platform installer first if you are installing products in addition to the Marketing Platform.

If your company policy allows you to create the Marketing Platform system tables automatically, choose **Automatic database setup** during Marketing Platform installation.

However, if your company does not allow you to create Marketing Platform system tables automatically, choose **Manual database setup** during Marketing Platform installation.

Before you install other IBM Unica Marketing products, be sure to have the system tables created (automatically or manually). This is required because other products' installation wizard registers itself with Marketing Platform by inserting data into the Marketing Platform system tables. If Marketing Platform system tables do not exist, then registering the products manually will also fail.

Note that for each group of IBM Unica Marketing products that you plan to have work together, you need to install the Marketing Platform only once.

Step: Run the IBM Unica installer

Before you run the installer, verify that you have met the following prerequisites.

- You have obtained the IBM Unica master installer and the Leads installer, and you have put both the installer and the product in the same directory.
- You have available the information you gathered as described in “Step: Obtain required information” on page 11.

Important: If you plan to deploy Leads on WebLogic, do not include Leads in an EAR file. On WebLogic, you must extract the two Leads WAR files (leads.war and admin.war), and then deploy the extracted directory.

Expand the EAR file to a deployment directory Leads is installed in prebuilt EAR form; leads.ear contains admin.war and leads.war. You must unpack the installed EAR file to a deployment directory, and deploy the application so that the Leads custom pages can be generated. After the custom pages are generated, you must repackage the application for deployment to production. Tools for preparing the application for development deployment and then repackaging are provided in an Ant build file. This file can be found in AFFINIUM_HOME\Leads\bin\weblogic\leads-ant.xml. You can run the ant script file by using WebLogic's 9.x built-in ant command.

- Open the leads-ant.xml file and verify that the property name AFFINIUM_HOME is set to the location where Leads is installed. For example, if Leads is installed in c:\Affinium, the property name setting is: property name="AFFINIUM_HOME" value="c:/Affinium"/
- Open a Command Prompt.
- Navigate to the WebLogic bin directory. For example: cd c:\bea\weblogic92\server\bin
- Initialize the environment variables using setWLSEnv.cmd. For example: C:\bea\weblogic92\server\bin>setWLSEnv.cmd
- Unpackage the EAR file using the Ant unpack command. For example: C:\bea\weblogic92\server\bin> ant -f c:\AFFINIUM_HOME\Leads\bin\weblogic\leads-ant.xml unpack. By default, the EAR file is unpacked to c:\AFFINIUM_HOME\Leads\deploy\dev\.

See the other topics in this section for details about the installer, or if you need help entering information in the wizard.

Run the IBM Unica installer as described here, and follow the instructions in the wizard.

- **GUI or X-windows mode**
Run the Unica_Installer file. On UNIX-type systems, use the .bin file.
- **Console mode on Windows**

Open a command prompt, and from the directory where you placed the IBM Unica software, run the Unica_Installer executable file with `-i console`. For example,

```
Unica_Installer_N.N.N.N_OS -i console
```

- **Console mode on UNIX-type systems**

Open a command prompt, and from the directory where you placed the IBM Unica software, run the Unica_installer .sh file with no switch.

- **Unattended mode**

Open a command prompt, and from the directory where you placed the IBM Unica software, run the Unica_Installer executable file with `-i silent`. On UNIX-type systems, use the .bin file.

For example, to specify a response file located in the same directory as the installer:

```
Unica_Installer_N.N.N.N_OS -i silent
```

To specify a response file in a different directory, use `-f filepath/filename`. Use a fully qualified path. For example:

```
Unica_Installer_N.N.N.N_OS -i silent -f filepath/filename
```

For more information about unattended mode, see “Installing multiple times using unattended mode” on page 14.

Pay close attention to the installation summary windows. If errors are reported, check the installer log files, and contact IBM Unica technical support if necessary.

Platform Database Connection screen reference

The installation wizards for each IBM Unica Marketing product must be able to communicate with the Marketing Platform system table database, to register the product. Once a IBM Unica Marketing is registered with Marketing Platform, you cannot have another instance or install of the same product registered with Marketing Platform. For example, if Leads application is registered with Platform once, you cannot have one more instance or install of Leads to register with the same Marketing Platform. Each time you try to install a IBM Unica Marketing product in a new location, you must enter database connection information of a new IBM Unica Marketing system database that is already populated with default values and that does not has this product registered already. In subsequent runs in the same location, the installer uses the values you entered during the first run as the defaults.

The Marketing Platform installation wizard also uses this information to create and populate the Marketing Platform system tables. If the installer is not able to communicate with the Marketing Platform database, or if you do not allow the installer to create the Marketing Platform system tables because your company policy does not allow an installer program to do so, after the installer finishes you must manually create and populate the Marketing Platform system tables. This procedure is described in the *IBM Unica Marketing Platform Installation Guide*.

Field	Description
Database Host Name	The name of the machine that hosts the Marketing Platform system table database or schema.
Database Port	The port number of the Marketing Platform system table database or schema.

Field	Description
Database Name/System ID (SID)	The name of the Marketing Platform system table database or schema.
Database User Name	User login name for an account in the Marketing Platform system table database or schema. This account must have SELECT, INSERT, UPDATE, and DELETE rights.
Database Password	Password for the same account in the Marketing Platform system table database or schema used in the Database User Name field.

Connection Settings reference

This section describes the Connection Settings window in the installation wizard. This window appears when you install any IBM Unica Marketing web component. It prompts you to enter information about your planned deployment.

Field	Valid values
HTTP or HTTPS radio buttons or Secure connection checkbox	Protocol used by the server in which the EAR file is deployed. Select HTTPS or the Secure connection checkbox if SSL is implemented in the web application server.
Host	The name of the machine on which the product is deployed.
Port	The port on which the web application server is listening.
Domain name	The company domain of each machine where IBM Unica Marketing products are installed. All products should be installed in the same company domain.

Uninstalling IBM Unica products

You might need to uninstall an IBM Unica product if you are doing the following.

- Retiring a system.
- Removing an IBM Unica product from your system.
- Freeing up space on a system.

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

Running the IBM Unica uninstaller ensures that all configuration files, installer registry information, and user data are removed from the system. 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 Unica product in the same location. After uninstalling a product, its database is not removed. The uninstaller only removes default files that get created during installation. Any file created or generated after installation is not removed.

To uninstall IBM Unica products

Follow these instructions to properly remove IBM Unica products from your system.

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

1. Undeploy the IBM Unica Marketing product web application from WebSphere or WebLogic.
2. Shut down WebSphere or WebLogic.
3. Stop any running processes that are related to the product you are uninstalling. For example, stopping the Campaign or Optimize Listener services before uninstalling those products.
4. Run the IBM Unica Marketing uninstaller and follow the directions in the wizard.

The uninstaller is located in the `Uninstall_Product` directory, where *Product* is the name of your IBM Unica Marketing product.

When you uninstall a product that was installed using unattended mode, the uninstall is performed in unattended mode (without presenting any dialogs for user interaction).

Chapter 5. Configuring IBM Unica Leads Before Deployment

You must perform the tasks described in this section before you deploy the web application.

Step: Register Leads manually, if necessary

If the Leads installer cannot connect to the IBM Unica Marketing Platform database to register the menu items and configuration properties, perform the following steps.

Run the configTool utility, using the following example commands as guidelines. This imports configuration properties and menu items. Note that you run the utility as many times as there are files.

```
configTool.bat -v -i -p "Affinium" -f
"full_path_to_Leads_installation_directory\conf\leads_configuration.xml"
configTool.bat -v -i -p "Affinium" -f
"full_path_to_Leads_installation_directory\conf\leads_registration.xml"
configTool.bat -v -i -p "Affinium|suite|uiNavigation|mainMenu" -f
"full_path_to_Leads_installation_directory\conf\leads_navigation_menu.xml"
configTool.bat -v -i -p "Affinium|suite|uiNavigation|mainMenu|Analytics" -f
"full_path_to_Leads_installation_directory\conf\
leads_navigation_analytics.xml"
configTool.bat -v -i -p "Affinium|suite|uiNavigation|settingsMenu" -f
"full_path_to_Leads_installation_directory\conf\
admin_navigation_settings.xml"
```

Step: Configure an email connection, if necessary

To access an email server and provide email authentication, Leads uses a connection to an email server provided by the application server. If you plan to use the Leads Message Assistant feature, configure a connection as described in the appropriate procedure below.

To create a mail resource in WebSphere

If you plan to deploy Leads on WebSphere, and if you plan to use the Leads Message Assistant feature, configure the mail session as described here.

1. Access the WebSphere Administration Console.
2. Expand **Resources > Mail**, and click **Mail sessions**.
3. Click **New**.
4. Enter a name for the mail session.
5. Enter mail/LeadsEmail for the JNDI name.
6. Do one of the following, depending on your version of WebSphere.
 - If you are using WebSphere 6.1, enter the mail server name in the **Mail transport host** field.
 - If you are using WebSphere 7.0, enter the mail server name in the **Server** field in Outgoing Mail Properties and Incoming Mail Properties.

Note: Both mail properties in WebSphere 7.0 are the same in WebSphere 8.0

7. Click **Apply**, and then click **Save directly to the master configuration**.

To create a mail resource in WebLogic

If you plan to deploy Leads on WebLogic, and if you plan to use the Message Assistant feature, configure the mail session as described here.

1. In the WebLogic Administration Console, select **Services > Mail Sessions > New**.
2. Enter a name for the mail session and click **OK**.
3. Click the mail session name on the Summary of Mail Sessions page and complete the fields as follows.
 - JNDI name: **mail/LeadsEmail**
 - JavaMail Properties: Enter a connection path for the mail server
For example: **mail.host=emailserver.corporation.com**
 - Enter additional JavaMail properties as necessary for your configuration and then click **Save**.
 - On the Targets tab, select the server on which you plan to deploy Leads.

Step: Complete WebSphere configuration

If you plan to deploy Leads on WebSphere, complete the remaining required steps described in this section.

To add port numbers to the Host Aliases list in WebSphere (IHS server only)

Only if you are using the IBM HTTP Server (IHS) web server, follow these steps to add port numbers to the Host Aliases list in the default server for the web server and, optionally, to add encryption for SSL.

1. In the WebSphere Administrative Console, expand the **Environment** category and navigate to **Virtual Hosts > default host > Host Aliases > New**.
2. On the **New** page, follow these steps:
 - a. In the **Host Name** field, add an asterisk (*).
 - b. In the **Port** field, add the port number for your web server. This is the port IHS is configured to listen on. This is also the port you supply in the URL you enter in a Web browser to launch Leads.
 - c. Click **Apply**.
3. **Optional:** If you are enabling SSL for encryption, repeat the previous steps to create a new Host Alias and add the SSL port to the virtual host list. Typically, port number 443 is assigned to the SSL connection.
4. Save your changes and update the web server plug-in as follows.
 - a. On the left side of the Administrative Console, expand the Servers category, and click **Web Servers**.
 - b. Select the checkbox next to the server.
 - c. Click **Generate Plug-in**.
 - d. Click **Propagate Plug-in** if the web server is on another physical server.
 - e. In the **Messages** section at the top of the page, click **Save**.
 - f. In the section **Save to Master Configuration**, click **Save**.

- g. Notice the message confirming that the plug-in was saved successfully, then click **OK**, and exit from the WebSphere console.
5. Open the generated configuration file `WebSphereroot/ AppServer/config/cells/plugin-cfg.xml` in a text editor.
6. Edit the UriGroup and URI Name list section in `plugin-cfg.xml` so that it matches the code shown here.


```
<UriGroup Name="default_host_AffiniumLeads_<servername>_
Cluster_URIs">
<Uri AffinityCookie="JSESSIONID" AffinityURLIdentifier="jsessionid"
Name="/admin/*"/>
<Uri AffinityCookie="JSESSIONID" AffinityURLIdentifier="jsessionid"
Name="/leads/*"/>
</UriGroup>
<Uri Name="/leads/" />
<Uri Name="/leads/*.do" />
<Uri Name="/leads/*.jsp" />
<Uri Name="/leads/*.js" />
<Uri Name="/admin/" />
<Uri Name="/admin/*.do" />
<Uri Name="/admin/*.jsp" />
<Uri Name="/admin/*.js" />
```
7. Save and close the `plugin-cfg.xml` file.

To set application server swap space (AIX, Solaris, and Linux only)

Only if your operating system is AIX®, Solaris, or Linux, and you plan to deploy Leads on WebSphere, allocate at least 1GB of swap space to the server running WebSphere. You may need to further increase the swap space if you have many processes running on the server. If the swap space is too small, you may have performance problems, problems restarting the application, problems creating new custom attributes, or other unexpected behaviors. You may also encounter "Out of Memory" errors.

Chapter 6. Deploying IBM Unica Leads

When you ran the IBM Unica installer, you created WAR files for Leads and the Admin Console. You must now deploy the applications in your web application server.

We assume that you know how to work with your web application server. Consult your web application server documentation for details.

WebSphere guidelines

Follow these guidelines when deploying Leads on WebSphere.

- Deploy as an enterprise application, and choose to show all settings in the deployment process, so you can set the required properties as described in this procedure.

You can deploy the `admin.war` and `leads.war` files separately, or you can deploy an EAR file that contains the `admin.war` and `leads.war` files. These files are located in the `<LEADS_HOME>/install` folder.

- Select **Precompile JDK source level**.
- If you are planning to use the Leads Message Assistant feature, under **Map resource references to resources**, select the mail resource you created in an earlier step.
- When the deployment wizard is complete, save your changes.
- Under **Applications > Enterprise Applications** select each of the WAR files, or the EAR if you deployed one, and do the following.

Select **Class loading and update detection** and set class loader order and policy as follows.

- If you deploy a WAR file, select:
 - Class loader order - Classes loaded with local class loader first (parent last)
 - WAR class loader policy - Single class loader for application
- If you deploy an EAR file, select:
 - Class loader order - Classes loaded with local class loader first (parent last)
 - WAR class loader policy - Class loader for each WAR file in application

Under **General Properties**, enter a number of seconds for the **Polling interval for updated files** setting. (For example, you could enter 600000.)

- Save your changes.
- Select **Servers > Application Servers** and select the server on which you deployed Leads and do the following.

Select **Multiple** from the **Classloader policy** list.

Under **Java and Process Management > Process Definition > Java Virtual Machine**, set the following properties.

- Enter the following `JAVA_OPTIONS` in the **Generic JVM arguments** field. You can enter them as all one string, separated by a space between each argument.
 - `-Dconf.path=Leads_install_directory/conf`
 - `-Dleads.path=/WebSphere_deployed_applications_directory/leads.ear/leads.war`

```
-DAFFINIUM_HOME=Unica_root_install_directory
-Dclient.encoding.override=UTF-8 If you're supporting Non-ASCII
characters, you may want to enter -Dfile.encoding=UTF-8.
```

Only if you are using SQL Server 2005 for your Leads system tables, you must add a custom property with the following settings.

Name: webSphereDefaultIsolationLevel

Value: 1

Datatype: Integer

- Save your changes and restart WebSphere.

WebLogic guidelines

Follow these guidelines when deploying Leads on WebLogic.

- On WebLogic, you must extract the two Leads WAR files (`leads.war` and `admin.war`) and then deploy the extracted WAR files. If you mistakenly created an EAR file containing these two WAR files, you must extract the EAR file to obtain the two WAR files, and then extract the WAR files.

You can use a zip utility or the Java `jar` command to extract the files. If you use the Java command, you can use the JDK packaged with your web server. See <http://download.oracle.com/javase/1.4.2/docs/tooldocs/windows/jar.html> for information on using this command.

- Deploy the extracted `leads.war` and `admin.war` as web applications.
- Add the following `JAVA_OPTIONS` in the `setDomainEnv` script, located in the `bin` directory under your WebLogic domain directory.

```
-Dconf.path=/path_to_Leads_install_directory/conf
```

```
-Dleads.path=/path_to_WebLogic_deployed_applications_directory/leads.ear/leads.war
```

```
-DAFFINIUM_HOME=/path_to_Unica_root_install_directory
```

The server has to be restarted for changes to take effect.

Step: Configure the IBM IHS web server for SSL, if necessary

Perform the procedures in this section if you are using the IBM IHS web server, and you want to configure SSL and/or compression. You will configure the IBM IHS web server so that it can communicate with the web application server.

These instructions make the following assumptions.

- You already have working installations of your web server and the appropriate web application server.
- You have completed the installation of the Leads application.

To enable HTTP compression and SSL encryption

This section describes how to edit the IHS configuration file to enable HTTP compression and SSL encryption.

Specifically, this section describes how to configure the IBM HTTP Server (IHS) with a WebSphere application server if you want to use compression and/or SSL encryption of the HTML transmission between the web server and the browser client. As an option, Leads supports standard HTML compression, as defined in the W3C HTTP specification (RFC 2616), for the Leads application pages

(HTML/JSP, JavaScript, and style sheets) between the web server and the browser client. Specifically, Leads supports compression using the IHS mod_deflate module and encryption through the SSL capabilities built into the IBM HTTP Server (IHS).

Note: To start the Leads application when SSL is enabled, you must connect to the web server by entering `https://host/` in a browser window, substituting the name of the machine you supplied for host, for example: `https://LeadsServer`

1. If necessary, shut down the IHS web server:
 - a. Change directories to the IHS bin directory. By default this directory is `/opt/IBMIHS/bin`. For example, at the command prompt type:

```
cd /opt/IBMIHS/bin
```
 - b. Stop IHS by typing:

```
./apachectl stop
```
2. Change directories to the IHS configuration directory. By default this directory is: `/opt/IBMIHS/conf`. For example, type at the command prompt:

```
cd /opt/IBMIHS/conf
```
3. Edit the configuration file `httpd.conf`.
 - a. In a text editor, such as Notepad, open the configuration file `httpd.conf`.
 - b. Copy these lines to the bottom of the `httpd.conf` file:

```
LoadModule was_ap20_module /opt/[WebSphere-root]/AppServer/bin/mod_was_ap20_http.so
WebSpherePluginConfig /opt/[WebSphereroot]/AppServer/config/cells/plugin-cfg.xml
#AddModule mod_was_ap20_http.c
LoadModule was_ap20_module /opt/IBMIHS/modules/mod_was_ap20_http.so
WebSpherePluginConfig /opt/IBMIHS/modules/conf/plugin-cfg.xml
#AddModule mod_was_ap20_http.c
```
 - c. Continue to the next section.

Optionally Enable HTTP compression

Use these steps if you want to enable HTTP compression between the web server and the browser client using the `mod_deflate` module built into IHS. If you do not want to enable compression, skip to step 2.

1. Continue from step b in *Enable HTTP compression and SSL encryption*.
 - a. Search for the following line:

```
#LoadModule deflate_module modules/mod_deflate.so
```

This line loads the module to support compression in the web server.
 - b. Remove the comment character, #, from the line that you found in Step b.
 - c. The following lines set specific configuration settings for compression. Copy these lines to the bottom of the `httpd.conf` file:

```
# Turn on compression for everything except images
#
<Location />
# Insert filter
SetOutputFilter DEFLATE
# Netscape 4.x has some problems...
BrowserMatch ^Mozilla/4 gzip-only-text/html
# Netscape 4.06-4.08 have some more problems
BrowserMatch ^Mozilla/4\.0[678] no-gzip
# MSIE masquerades as Netscape, but it is fine
BrowserMatch MSIE !no-gzip !gzip-only-text/html
# Don't compress images
SetEnvIfNoCase Request_URI "\.(?:gif|jpe?g|png)$" no-gzip dont-vary
# Don't compress .js & .css files as IE cannot handle that
```

```

SetEnvIfNoCase Request_URI "\.(?:js|css)$" no-gzip dont-vary
# Make sure proxies don't deliver the wrong content
#Header append Vary User-Agent env=!dont-vary
</Location>
#
DeflateFilterNote ratio
LogFormat '%t "%r" %b (%{ratio}n)' deflate
CustomLog logs/deflate_log deflate

```

2. **Optionally: Enable SSL encryption.** If you want to enable SSL encryption, enter the encryption information into the configuration file as described in "Add SSL encryption." Otherwise, skip to Step 3.
3. Save and close the `httpd.conf` file.
4. Restart the server.
5. Change directories to the IHS bin directory. By default this directory is `/opt/IBMIHS/bin`. For example, at the command prompt type:

```
cd /opt/IBMIHS/bin
```
6. Start IHS by typing:

```
./apachectl start
```

Add SSL encryption

This procedure describes how to add SSL encryption. Before you enable SSL encryption, confirm the following settings:

- In the `ms.config` file, confirm that the `transmitter.nonSSLServerHostAndPort` property is set to WebSphere's internal Application Server HTTP port, often 9080 or 9081. Leads cannot create and distribute user notifications over an encrypted port. During installation, the application should set the `transmitter.nonSSLServerHostAndPort` property to a non-encrypted port. After installation, you should confirm that this property has been set correctly to a port that is pure HTTP (no SSL).
- In the `plugin-cfg.xml` file, be sure that the `VirtualHostGroup` includes an entry for this same internal Application Server HTTP port, in addition to your SSL port. For more information about the port numbers, see step 2 in "Configure WebSphere Administration." For more information about editing `plugin-cfg.xml`, refer to "Edit the server configuration file."

1. If it is not already opened, open the file `httpd.conf` in a text editor. By default this file is in the directory `/opt/IBMIHS/conf`.
2. Search for the following line:

```
# Dynamic Shared Object (DSO) Support
```

3. Go to the end of the list of modules in the section. Add the following line to the end of the list of modules:

```
LoadModule ibm_ssl_module modules/mod_ibm_ssl.so
```

This line loads the module to support SSL encryption in the web server.

4. To enable SSL support, add lines similar to those below to the end of the `httpd.conf` file. The details of these lines depend on your environment. The lines below are only an example.

```

LISTEN 443
SSEnable
Keyfile /opt/IBMIHS/bin/key.kdb
SSLServerCert TestCertificate
SSLStashfile /opt/IBMIHS/bin/key.sth

```

Modify these lines to correspond to your environment:

- a. LISTEN 443 specifies the port used for SSL access. Port 443 is commonly used. The port you specify should match the port you specified when creating the VirtualHost Name in the plugin-cfg.xml file on the application server. See "Edit the server configuration file."
- b. SSLEnable is included exactly as is.
- c. The remaining lines provide information to support the use of a certificate with your SSL deployment:

```
Keyfile /opt/IBMIHS/bin/key.kdb  
SSLServerCert <certificate_name>  
SSLStashfile /opt/IBMIHS/bin/key.sth
```

The /opt/IBMIHS/bin directory is the default location for the Keyfile and the SSLStashfile. Confirm that this is the location of these files in your environment.

Following the SSLServerCert property, replace <certificate_name> with the name of the certificate you will be using to access your site. For more information about using certificates, see the section "Getting started quickly with secure connections" in the online manual installed by IBM with IHS 2.0.

Note: To disable SSL encryption, open the configuration file and comment out the line shown in Step 3 and the lines that you added to the end of the file in step 4. Save the file, then restart the server.

Chapter 7. About post-deployment configuration

You must perform the tasks described in this section in the order shown after you deploy IBM Unica Leads.

In addition, if you are using the reporting feature, you must perform the tasks described in the "Installing Reports" chapter in the *IBM Unica Marketing Platform Installation Guide*.

Step: Set up a Leads system user

The Leads system user is a IBM Unica Marketing user account that is configured for use by the Leads application. You create users in Leads, which get created in Marketing Platform, and depending on the User Roles, they can or cannot perform Leads administrative tasks.

Guidelines for setting up the Leads system user

For general instructions on setting up a new user, assigning permissions, and saving data source login credentials to a user, see the *The IBM Unica Marketing Platform Administrator's Guide*.

You must create a Leads system user according to the following guidelines:

- Create a Leads administrators group in the Marketing Platform. Name the group All Users, and assign it the role LeadsAdminRole.
- Create a system user account and assign that user to the All Users group .

Step: Log in to the Admin Console

1. Open a browser and enter the URL for the Leads Admin Console.
The URL is `http://host:port/admin` where
 - *host* is the name of the application server.
 - *port* is the port on which the application server listens.
2. Initially, only `asm_admin` can login. Afterward, login using the Leads system user account created in the Marketing Platform in the previous step.
3. Remain logged in, and go on to "Step: Create the Leads system tables."

Step: Create the Leads system tables

In the Leads Admin Console, you can create the Leads system tables automatically, or you can preview and save the SQL in a file and give it to your database administrator to apply. This procedure describes both options.

1. For IBM DB2 or Oracle, enter the names of the tablespace(s) you created for Leads in the Leads Admin Console. If you are using only one tablespace, enter the tablespace name in all four fields.
2. Choose one of the following options.
 - If your company policy requires that only a database administrator can make changes to the Leads database, click **Preview SQL** to display the SQL code for this schema on the page. Then click **Download SQL** to save the SQL in a

file you can then give to your database administrator to apply. Exit the Admin Console and do not proceed to “Step: Install stored procedures” until the system tables have been created.

- If your company policy allows automatic changes to the Leads database, click **Update Schema** to create the system tables. The Initialize Stored Procedures page appears after the system tables have been created.
3. Remain logged in, and go on to “Step: Install stored procedures.”

Step: Install stored procedures

You can install the Leads stored procedures automatically, or you can preview and save the SQL in a file and give it to your database administrator to apply. This procedure describes both options.

1. For IBM DB2 or Oracle, enter the names of the tablespace(s) you created for in the Admin Console. If you are using only one tablespace, enter the tablespace name in all four fields.
2. Choose one the following options.
 - a. If your company policy requires that only a database administrator can make changes to the database, click **Preview SQL**, to display the SQL code for the stored procedures on the page. Then click **Download SQL**, to save the SQL in a file you can then give to your database administrator to install. If you are using IBM DB2, the saved SQL must be split into two files:
 - b. If your company policy allows automatic changes to the database, click **Install Stored Procedures** to install the stored procedures into the database. A progress bar appears as the stored procedures are installed. After the installation completes, the Initializing the database page appears. Remain logged in and go on to “Step: Initialize the database.”

About the stored procedure SQL for DB2

If a database administrator is going to execute the stored procedure SQL file manually using the DB2 console, perform this procedure before running the SQL.

1. Download the file from the Admin Console.
2. Separate the contents of the file into two SQL files, the first fileA.sql containing the section, delimited by "~," the second fileB.sql containing the second section delimited by ";".
3. Execute fileA.sql using db2 -td~ -vf fileA.sql.
4. Execute fileB.sql using db2 -tf fileB.sql.

Step: Initialize the database

Use the Initializing the Database page in the Leads Admin Console to assign the Admin Organization Name for the initial user for the Leads system. The initialization program assigns a name to this instance of the application and creates it as the default organization in the Admin Console.

1. If you have logged out of the Leads Admin Console, log in again.
2. Enter your organization name in the **Administrator’s Organization** field.
3. Click **Next**.

A progress bar appears as the database is initialized. When the database is initialized, the Configure Server Information page appears.

4. Remain logged in and go on to “Step: Configure web server information”

Step: Configure web server information

1. Use the Configure Server Information page to specify the following web server information:
 - **Server Host and Port:** Enter the URL for the Leads application. Use the format:
`http://host:port/context_root`
 - *host* is the name of your web server computer.
 - *port* is the port number on which the web server listens.
 - *context_root* should default to `/leads/` on the page. If it does not, edit it to be `/leads/`. The context root is the root directory for the application in the application server hierarchy. The installation program uses this directory by default.
If you change the *context_root* to be something other than `/leads/`, be sure to change this in WebSphere as well.

Note: If you enable encryption using SSL in the IHS web server, the URL format should use `https` instead of `http`. For more information, see “Step: Configure the IBM IHS web server for SSL, if necessary” on page 26.

 - If you plan to use Cognos® reports, enter the Cognos URL. For example, `http://cognos`.
2. Click **Next**.
The Configure Message Assistant page appears.
3. Remain logged in and go on to “Step: Enable notifications for the Message Assistant”

Step: Enable notifications for the Message Assistant

You have the option to configure Leads to send event notifications through email. If you do, the email transmitter starts up when you start Leads.

1. To enable the Message Assistant, click the **Message Assistant Enabled** checkbox on the Configure Message Assistant page, and specify the following fields.
 - **SMTP Server:** Enter the name or IP address of the email server for email notifications from Leads to users. Using the IP address may yield better performance because it removes the need for a DNS lookup.
 - **From Address:** Enter the email address of the person who administers the Leads application(s). This address is used as the source of email messages and notifications generated by Leads, and it is required for the reception of bounced email messages.
 - **Email Rendering HTTP Server Host and Port:** Enter the URL that uses the non-SSL port to connect to the application server. Use the format: `http://host:port`. Leads needs the non-secure port to render HTML or text.
 - **Message Store Directory:** Enter a path for the temporary directory on the application server in which email messages are stored if they cannot be sent out. The Admin Console creates a directory called `/messagestore` in that path. If there are too many messages, or if the SMTP server is down, the system temporarily stores the messages in the message store directory.

2. Click **Next** to save the settings.
3. Remain logged in and go on to “Step: Review Admin Console settings.”

Step: Review Admin Console settings

The Review settings page appears after configuration. Review and edit the settings, if necessary, using the Admin Console. See “Using the Admin Console” on page 36 for more information.

Note: If you are using a new database for the Leads system tables, you may notice version errors in your admin main log during Admin Console configuration. These errors are normal at this point because the database is not configured.

Note: You must restart the application server before you can log in to the main application.

Log out of the Admin Console and go on to the steps under “Completing Leads configuration.”

Completing Leads configuration

After you have finished performing the configuration steps in the Admin Console, perform the steps in this section to finish the basic configuration of your Leads installation.

- “Step: Add the Leads URL to the Marketing Platform”
- “Step: Check log files”
- “Step: Create a backup” on page 35

In addition, you may have to perform some advanced configuration steps, as follows.

- If your Leads installation must support languages that use non-ASCII characters, see Chapter 8, “Localizing IBM Unica Leads,” on page 39.
- If you plan to use the reporting feature in Leads, see the “Installing Reports” chapter in the IBM Unica Marketing Platform Installation Guide.

Step: Add the Leads URL to the Marketing Platform

If users will access Leads through the Marketing Platform, you must set the Leads URL configuration property.

Within the Marketing Platform, open **Settings > Configuration..** In the configuration properties tree, navigate to **Unica > Unica Leads > Navigation.** Then set the server name and port for the serverURL property.

Note: Ensure that the server and port value you enter matches the values specified in the `transmitter.serverHostAndPort` property in the `Leads ms.config` file, located in the `conf` directory under your Leads installation.

Step: Check log files

During installation, the installer creates a log file to record any errors that occur during the installation. Check the log file to verify that there are no errors. If there are errors, resolve the errors before deploying or configuring Leads. You may have

to reinstall after resolving the errors. If there are any errors that can be fixed without much trouble, they can be done without needing to reinstall.

The install log file name includes the date and time with a MM_DD_YYYY_HH_MM_SS format. For example:

Leads_Install_04_24_2012_19_42_18.log. It is located in the top folder of your Leads installation. (For example, if you install Leads in C:\Unica\Leads, the log file is C:\Unica\Leads\Leads_InstallLog.log.) In a case where there are serious fatal errors in the Leads_InstallLog.log, you have to uninstall the Leads application and reinstall.

A separate leadsAdmin.log is now generated in the logs folder for the admin module of Leads and a leadsBatch.log for the LI execution. For the LI batch mode, the system parameter can be used to specify the different log4j configuration file than the default (leadsBatch.log) while running multiple scripts; for example, Dlog4j.conf=C:\Unica\Leads\conf\log_conf_custom.xml.

Step: Create a backup

After installing and configuring Leads, create a backup copy of the application directories.

Optional: Set the Admin Console context root

You can set a context root for the Leads Admin Console.

Note, however, that you set the context root configuration for the Admin Console using the application server only. Unlike setting the context root for the Leads application, you cannot use the Admin Console to set its own context root.

To configure the context root for Leads and the Admin Console

To configure the context root for Leads, first enter the context root through the Leads Admin Console, then update the application server.

To configure the context root for the Leads application through the Admin Console:

1. Login in to the Admin Console.
2. Click the Home navigation link
3. Click the Server Information link
4. From the Configuration Server Information page, navigate to the Server Information section.
5. Enter the desired value of the context root in the Context Root field of the Leads Server Information section.

To update WebLogic with the context root

In WebLogic, you must modify the application.xml file, located in <Unica_Home>\applications directory.

1. Navigate to the <Unica_Home>\applications directory.
2. Open the application.xml file.

3. Modify the <context-root> setting. By default it will be set to /admin and will look like: <context-root>/admin</context-root>
4. Save the file and restart the application server.

To update WebSphere with the context root

In IBM WebSphere, set the context root using the WebSphere UI. See the IBM WebSphere documentation on setting up the Context Root for Web Modules for more information.

Using the Admin Console

Review and edit configuration data, log out, or use the Environment Migration from the Admin Console. To use the Admin Console, you must have appropriate user role permissions. See “Step: Log in to the Admin Console” on page 31.

Note: To use Environment Migration, you must configure each instance. Refer to Chapter 10, “Migrating the IBM Unica Leads Environment,” on page 49.

- To edit the configuration data, click any of the editable configuration links.
 - **JDBC Data Source:** identifies the name of the JDBC data source. For information only, the JDBC data source cannot be changed on this page.
 - **Command Line JDBC Connection:** configure JDBC connection information for Leads Integrator programs that run from the command line.
 - If you select DB2 as the Database Type, you must replace <database_Name> with the actual name of you database.
 - **Message Assistant:** configure email notification.
 - **Server Information:** includes web server and reports server specification. See “Step: Configure web server information” on page 33 for web server configuration information.
 - **Cluster Information:** includes a list of cluster hosts and ports.
 - **View Patch Information:** includes a list of individual fixes applied with each patch to this Leads installation. This page displays associated documentation for each of the fixes in a patch.
- To access the system repair tools, click **System Repair Tools**.
 - **Run InitDB:** re-initialize the database.
 - **Check Database Schema:** update the database schema.
 - **Reinstall Stored Procedures:** update the stored procedures in the database.
 - **Create Leads Users In IBM Unica Marketing Platform:** create Leads users in the Marketing Platform.
 - **Load Derived Attributes:** load an XML file containing derived attributes to be added to the system.
 - **View Table Hierarchy and Create Localization Files:** generate a table hierarchy and localization files.

Note: If editing in the Admin Console after the initial installation, you must restart the application server in order for the changes to take effect.

Note: When using the Admin Console to configure Leads, a configuration file called `ms.config` is written. When `ms.config` entries are configured using the Admin Console, the Admin Console inserts settings at the end of the file rather

than changing the settings throughout. When there are multiple entries for the same setting, the last entry in the file changes the setting. The `ms.config` file does not group like settings together.

Chapter 8. Localizing IBM Unica Leads

Leads supports the following languages.

- English (United States)
- French (France)
- German (Germany)
- Italian (Italy)
- Japanese (Japan)
- Korean (Korea)
- Portuguese (Brazil)
- Simplified Chinese (China)
- Spanish (Spain)

The first stages of the installation process can be performed only in English. However, after installation, you can set up different languages for users, who can then view the Leads user interface in their preferred language. In Leads you set the locale on the user's detail page. If you want the user to see a localized login page, you must also set that user's locale on the user's detail page in the IBM Unica Marketing Platform.

You should remove references to unused languages from the `ms.config` file, located in the `config` directory under your Leads installation directory. The default locale of `en_US` should not be changed, however.

To add UTF-8 support in WebSphere

1. Under **Servers > Application Servers > server1 > Server Infrastructure**, select **Java and Process Management > Process Definition > Java Virtual Machine**. Append the following argument to the Generic JVM arguments field:
2. Add the `JAVA_OPTION` in the **Generic JVM arguments** field. Insert a space after any existing text before you add the following string.
`-Dclient.encoding.override=UTF-8`

About converting properties file encodings

Leads can process only files that are encoded with the ISO 8859-1 character encoding. Therefore, you must ensure that any properties files that contain characters not supported by ISO 8859-1 are converted before they will display properly in the Leads interface.

About converting properties files

Leads automatically performs the ISO 8559-1 conversion for some files. Whenever you enter localizations using the Leads Attribute Editor, the conversion takes place automatically. For example, if you use the Attribute Editor to enter localizations for system and custom attributes, Leads converts the characters in these properties files to their Unicode escape forms.

While Leads automatically converts some language property files this is not true of all property files. If you plan to localize to a non-ISO 8559-1 language, you must perform a manual conversion on these files:

- Files that you cannot modify using the Attribute Editor.
- Any file that you choose to edit manually. If you decide to modify system and custom attribute files manually rather than through the Attribute Editor, you must manually convert these files.

In summary, whenever you edit a locale-specific property file directly, outside of the Leads UI, you must manually convert the file to use Unicode escape characters if you are localizing to a non ISO 8559-1 language.

About manually converting properties files to Unicode encoded characters

The Native-to-ASCII converter is a utility packaged in the JDK that allows you to convert files containing characters not supported by ISO 8559-1 to files containing Unicode encoded or Unicode escaped characters.

You can find complete documentation for this utility on the <http://java.sun.com> web site. This section provides an example of how you might use this utility to accommodate a Japanese translation of Leads

To convert Japanese characters to Unicode escapes in your properties files, run the following command:

```
native2ascii -encoding UTF-8 sample_ja_JP_UTF8.properties sample_ja_JP.properties
```

To convert the Unicode escapes back to UTF-8 encoding, run the following command:

```
native2ascii -reverse -encoding UTF-8  
sample_ja_JP.properties sample_ja_JP_UTF8.properties
```

Importing non-ISO 8859-1 data with Leads Integrator

Leads Integrator (LI) can process data that is encoded in non-8859-1 formats regardless of whether you have specified a Unicode file encoding for the entire Java runtime. To use LI to import non-8859-1 formats, you must determine and specify the encoding of:

- The data file being imported
- The LI configuration file

Each LI mode requires a different method of specifying these encodings. This section describes how to specify non-ASCII encodings using these LI modes:

- Batch Mode
- JSP Mode
- Web Services Mode

Importing non-ISO 8859-1 data in batch mode

In Batch Mode, you pass the encodings of the data and LI configuration file using the Java program arguments described in the following table:

Property	Description
-charEncoding <encoding name>	Used to specify the file encoding LI uses for all file operations other than reading configuration XML files. If not you do not specify an encoding, LI uses the default system file encoding.
-confCharEncoding <encoding name>	Used to specify the file encoding LI uses for reading configuration XML files. If you do not specify an encoding, LI uses the default system file encoding.

The file encoding of the LI configuration file you create depends on whether you would like to use fixed non-ISO 8859-1 characters as part of the import logic. If you do, then you must save the configuration file in an encoding that supports the character set you are using, and pass the name of that encoding to the LI runtime for use when processing configuration files.

Importing non-ISO 8859-1 data using JSP mode

When running LI in JSP mode, you specify the desired Unicode encodings in Java statements. These statements must appear before the execution of the LI process in the JSP file.

The table below illustrates how to set the parameters within the context of a JSP file:

Java statement	Description
Import.DefaultEncoding = "UTF-8";	Used to specify the file encoding LI uses for all file operations other than reading configuration XML files. If not you do not specify an encoding, LI uses the default system file encoding.
-Import.DefaultConfFileEncoding = "UTF-8";	Used to specify the file encoding LI uses for reading configuration XML files. If you do not specify an encoding, LI uses the default system file encoding.

In addition to specifying some combination of the above parameters, you must also ensure that the content type of any HTML or JSP page(s) used in your LI setup is set to the desired file encoding. If your page is running from within the same web container as the Leads application, you can use the following JSP directive (which uses the file encoding set in the Leads ms.config):

```
<%@ include file="/include/localeSetup.jsi"%>
```

If the HTML or JSP page runs outside of the Leads web container, you can use the standard JSP directive:

```
<%@ page language="java" contentType="UTF-8" %>
```

Importing non-ISO 8859-1 data using Web services mode

In Web Services mode, you must specify Unicode encodings for the data file and the default configuration file by specifying one or both of the following properties in your -server file.

Property	Description
msi.charEncoding	Used to specify the file encoding LI uses for all file operations other than reading configuration XML files. If not you do not specify an encoding, LI uses the default system file encoding.
-msi.confCharEncoding	Used to specify the file encoding LI uses for reading configuration XML files. If you do not specify an encoding, LI uses the default system file encoding.

In addition, you must set the desired character encoding for any JSP or HTML pages used by the LI system.

Additional notes for using LI to import non-ISO 8859-1 characters

Keep the following in mind when using LI to import non-ISO 8859-1 characters:

- When configuring the Leads application to use UTF-8 , the underlying database is configured to support this encoding. UTF-8 is the only non ISO 8859-1 encoding supported by Leads at this time. While you can specify import data and configuration files in any encoding, the characters used in the files must be supported by UTF-8, or you risk losing data when it is saved to the Leads database.
- In any LI setup, if you would like to set fields with fixed values that contain international characters, you must specify the desired encoding using the default conf file encoding parameter. When writing the LI XML configuration file, you should include the `<?xml >` header and specify the encoding to match the encoding you are using.
- When using an encoding that allows for a Byte Order Marker (BOM), be sure to save without BOM if you are using the encoding in an LI XML configuration file.

Chapter 9. Upgrading IBM Unica Leads

Before you upgrade from any version of Leads, be sure to read all of the topics in this section to ensure a successful upgrade process.

Upgrade prerequisites

To upgrade Leads, you must meet all of the prerequisites and the prerequisites listed in this section.

User account requirement (UNIX only)

On UNIX, the same user account that installed the product must perform the upgrade.

Knowledge requirements

These instructions assume that the person performing the upgrade has an understanding of the following.

- The basic function of the IBM Unica installer
- General Leads product functionality and components, including the structure of the file system
- The installation and configuration process for the source product version and for the new version
- Maintaining configuration properties in your source and target systems
- The installation and configuration process for reports, if you are using these reports

Order of upgrading

You must upgrade the Marketing Platform before you upgrade Leads.

Upgrading in a clustered environment

If you are upgrading Leads in clustered environment with more than one node, configuration changes made through the Leads Admin Console could go to any one of your load-balanced servers. So for example, `attachmentHome=/attachments` could be committed to Server A's `ms.config` file, while `createManagerUserDefaultPassword=password` could be committed to Server B's `ms.config` file.

It is a best practice to leave only one node running during upgrade, so that all changes are consolidated to the `ms.config` file of the server that is running. Then when the upgrade is completed, you should update the rest of the servers' `ms.config` files, and restart all the nodes.

Leads upgrade scenarios

Follow these guidelines for upgrading Leads.

Important: If you are using the Leads reporting features, you must also upgrade reports. See the "Upgrading Reports" chapter in the *IBM Unica Marketing Platform Installation Guide*.

Source version	Upgrade path
Leads versions 7.1.0.x	You must upgrade to Leads version 7.1.1, then upgrade to version 8.1.0, and finally upgrade to version 8.6.0. The interim upgrades are described in the installation guides for those versions. The upgrade to version 8.6.0 is described in this guide.
Leads versions 7.1.1.x and 7.2.x	You must upgrade to Leads version 8.1.0, then upgrade to version 8.6.0. The interim upgrades are described in the installation guide for that version. The upgrade to version 8.6.0 is described in this guide.
Leads version 8.1.0	Upgrade your installation to version 8.6.0 as described in this guide.
Leads version 8.5.0	Upgrade your installation to version 8.6.0 as described in this guide.

Customizations and upgrading

Customizations are not maintained during an upgrade. After you upgrade, you must recreate any customizations in your current version of Leads that you want to keep. Customized language properties files can be merged using the Automerge tool.

Custom validation and upgrading

If you are using custom validation, if the validator (class file) is under the WEB_INF directory, prior to upgrade you must backup file and then re-insert to that location after upgrade is complete. Alternately, prior to upgrade you could move the class file to the *Unica_Home*\Leads\conf\ directory and update the Classpath variable in *ms.config* accordingly.

Step: Upgrade your Leads installation

Before you start to run the installer, obtain the following information.

- If your Leads system tables are on Oracle: obtain the DSSDATA and DSSINDEX tablespace names
 - If your Leads system tables are on DB2: obtain the OLTP and DSS tablespace names
1. Undeploy your existing version of Leads.
 2. Back up all files and folders in your existing installation folder.
 3. Back up your system table database. This is required so you can restore your system tables if errors occur. Also, even if the upgrade is completely successful, upgrade steps overwrite the *etl_parm* and *src_tbl_import_stat* tables, and you must restore data to these tables using your backup.
 4. Run the IBM Unica master installer and specify your existing installation directory as the installation directory to use.

The installer detects that you have an earlier version installed and runs in upgrade mode.

5. Copy the `ms.config` file from the `conf` directory under your backed-up Leads directory to your upgraded installation's `conf` directory, overwriting the file that the installer laid down and restoring your original file.
6. Deploy Leads in your web application server as described in Chapter 6, "Deploying IBM Unica Leads," on page 25.
7. Start Leads and log in to the Admin Console.
The Schema Upgrade screen loads automatically.
 - If your Leads system tables are on Oracle, the `OLTPDATA` and `OLTPINDX` tablespace names will be prepopulated. Enter or verify the `DSSDATA` and `DSSINDX` tablespace names
 - If your Leads system tables are on DB2, enter or verify the `OLTP` and `DSS` tablespace information.
8. Do one of the following.
 - If your company policy requires that only a database administrator can make changes to the database, click **Preview SQL** to display the SQL code for this schema on the page. Then click **Download SQL** to save the SQL in a file you can then give to your database administrator to apply. After the schema have been updated, click **Next** to proceed to the next screen.
 - If your company policy allows automatic changes to the database, click **Upgrade Schema**.

The Initialize Stored Procedures screen opens.
9. Do one of the following.
 - If your company policy requires that only a database administrator can make changes to the database, click **Preview SQL** to display the SQL code for this schema on the page. Then click **Download SQL** to save the SQL in a file you can then give to your database administrator to apply. After the stored procedures have been installed, click **Next** to proceed to the next screen.
 - If your company policy allows automatic changes to the database, click **Install Stored Procedures**.

The Application Upgrade Tasks screen opens.
10. Click **Perform Upgrade Tasks**.
The Initialize Data screen opens.
11. Click **Next** to upgrade the Leads data.
The Finalize Application Upgrade screen opens.
12. Click **Perform Final Upgrade Tasks**.
13. The previous upgrade steps have restored default values in the `etl_parm` and `src_tbl_import_stat` tables. Restore the data from your old version, using data from the backup you made in an earlier step.
14. The upgrade enables the Change Request and Referral features. You can disable these features by changing the `ChangeRequests.enabled` and `Referral.enabled` parameters in the `ms.config` file, located in the `conf` directory under your upgraded Leads installation.
15. Restart the application server and then login to Leads to verify that it is running properly.

To make changes required for the Leads Sub-Status feature

If you are upgrading from a version of Leads earlier than 7.5.0, and you want to continue to use the Sub-Status feature, you must complete the following steps.

1. Replace the existing sub-status control with the new sub-status editor so that changes in substatus will be recorded in the sub-status history.
2. Add sub-status history to the Leads Details page.

For instructions, see the *IBM Unica Leads Administrator's Guide*.

Merging customized language properties files

If you have customized the Leads user interface, you must ensure that your customizations are preserved when you upgrade Leads versions 8.1.0 or 8.2.0.

About the Leads user interface

The Leads user interface is made up of:

- Attributes, which represent information about the referrals, leads, companies, contacts, products, and other objects stored in Leads. An example of an attribute might be Contact's First Name.
- Non-attribute text. For instance, labels or titles may appear on the screen to help group attributes and help the user understand required information. An example of non-attribute text might be the Find Leads page title.

The attributes and non-attribute text that make up the user interface are stored in properties files. If you are using multiple locales, the Attribute Editor automatically creates a separate property file for each locale.

Understanding Leads customizations

You may want to modify the user interface for a number of reasons. You may customize the interface to support multiple locales, or to incorporate specific business terminology.

You can make the following customizations to attributes:

- Global customizations to attributes—The Attribute Editor allows you to set the display of attributes globally throughout the user interface.
- Page-level customizations to attributes—The Detail Page Editor allows you to set or change the display of an attribute at the page level. Note that changes you make here apply only to the page you are editing.

If, however, you want to customize non-attribute text that appears in the user interface, you must do so by manually modifying the property files.

How customizations are handled during the upgrade

During the upgrade process, be aware that modifications you have made to any attributes using the Attribute Editor or the Detail Page Editor will be automatically preserved; you need to take no particular action beyond running the upgrade to preserve these changes.

The following table summarizes the action you must take to preserve Leads user interface customizations during an upgrade.

To preserve...	...take this action
Global customizations made to attributes through the Attribute Editor	No action required; the upgrade process automatically preserves these customizations.
Page-level customizations made to attributes through the Detail Page Editor.	No action required; the upgrade process automatically preserves these customizations

Chapter 10. Migrating the IBM Unica Leads Environment

You must have the same privileges as the person who installed Leads to perform this migration, plus have an account within Leads that has Administrator privileges.

The term *environment* describes an installation of Leads. Typically, organizations employ three types of environments, each with its own purpose:

Development

A development environment allows organizations to develop and experiment with changes to a copy of the Leads database. Dedicating an installation of Leads for development allows organizations to isolate changes without affecting production users.

Test

A test environment allows organizations to test additions and changes to Leads before importing them into production. There could be multiple test environments, such as system test and certification test environments.

Production

In a production environment, the Leads product is used to satisfy business needs. This is the live, active system.

What is Environment Migration?

Environment Migration allows a development team to migrate configuration data (such as attributes, rules, tables, users, and organizations) between development, testing, and production environments of Leads within the Admin Console.

Environment Migration is typically used by a development team, often in conjunction with test and production teams.

Environment Migration enables you to move configuration data between systems using data files. These files can be moved using normal file transfer mechanisms such as FTP, email, and network file copy. Configuration data files in baseline and change set files are automatically archived on the servers.

Note: The tool only allows the collection and movement of configuration data. It cannot be used to move transaction or application data such as leads, contacts, referrals, or sales.

Where is Environment Migration installed?

Environment Migration must be configured on each Leads environment that will use it.

How is Environment Migration implemented?

Each separate installation of Environment Migration is called an *instance*. Each instance is configured to the function, or role, it plays in the environment migration process. There must be at least two instances, referred to here as development and production, but there could be three or more including test.

What are the Environment Migration roles?

Each instance of Environment Migration must be configured to have a *role*. That role determines what actions Environment Migration can perform. The roles correspond with the purpose of the environment in which the instance is installed.

- **Production:** When role of the instance is set to Production, Environment Migration can export baselines and import change sets.
- **Development:** When role of the instance is set to Development, Environment Migration can import baselines and export change sets.
- **Test:** When role of the instance is set to Test, Environment Migration can import baselines and import change sets. (There is no export from the test role.)

What is a baseline?

A *baseline* is a snapshot of the entire set of configuration data. A baseline is created from a production instance and used to synchronize other instances, such as development or test, from that point in time.

A baseline may include:

- all attributes (system and custom)
- rules
- tables
- inbound channels
- users
- organizations
- companies
- lead filters
- campaigns
- user roles
- permissions
- server settings (configure referral recipient)
- products
- UIC pages
- menu bar
- leadbox
- leadbox capacity

Note: Companies are a special case. They are included in a baseline, but not migrated in a change set unless another object is dependant on them.

Important: When a baseline is imported into a development or test instance, all transaction data is deleted. Transaction data may include leads, referrals, change requests, and customer information. Transaction data is deleted to prevent database integrity problems.

What is a change set?

A *change set* is a collection of changes to configuration data. Change sets:

- Always depend on a particular baseline
- May also depend on change sets created since that baseline was established
- Are created by the Recorder (the Recorder is not seen through the user interface)

Leads records all changes to configuration data as they happen. When you create a change set, it captures the creation, modification, or deletion of configuration data such as rules.

A change set is exported as a ZIP file, containing XML files with all the changed configuration data, as well as a control file that describes the operations of add, change, and delete for that data. The change set can be imported to the test system for verification, and then imported to the production system.

Details and exceptions

Important: Do not make changes to configuration data on production after taking the baseline. Any changes to production would invalidate the baseline. The development and production instances become out of sync. Also, if you added objects with the same name in production and in development, the next change set could cause you to have multiple objects with the same name in production.

- You must restart the application server if field validation is set in a UIC page. Schedule accordingly.
- Delete any test users created on the development instance or they will migrate to production. Edits made to “real” users on development will also migrate to production unless you elect not to bring edited users over on the change set.
- Objects accessed but not changed in the Development environment appear in the change set export list. When objects within the system are created, modified, or deleted, they appear in the change set listing. If you click OK for an object in the details page the object appears in the change set listing as modified, regardless of whether the object has actually been modified.
- Items edited on development that are not included on a change set (if you elect not to include them) will continue to be part of any future change sets.
- Company and inbound channel objects are only migrated through a change set if another object is dependant on them.
- Change sets do not include system files such as attachment files, language jar files, or DSS tables. Attachment objects are migrated, but the attachment files themselves must be moved manually for baselines and for change sets.
- Customizations are not migrated. For example, customizations to JSP pages or the rulewizard.xml are not migrated and the changes must be done manually.
- Importing a baseline removes transactional data, such as leads. To incorporate leads into an instance, consider using the Leads Integrator.
- Importing tables that have pending change requests invalidates those requests.

Baselines and change sets do not include:

- contacts, unless they are part of a user
- certifications, unless it is part of a user
- attachments
- leads

- sales
- referrals
- contract line items
- attachments (the attachment is not migrated but the reference to it is)
- language .jar files
- DSS tables

Workflow for migrating baselines and change sets

This section describes the workflow for environment migrations. In the typical scenario for using Environment Migration, you would follow these steps:

1. Configure Environment Migration on each instance.

Configure the role of each instance appropriately: production, test, or development. (At a minimum, you need a production instance and a development instance.) The configuration controls what actions can be performed using Environment Migration on that instance.

2. Use Environment Migration to create a baseline of configuration data from the production machine.

This step exports a copy of all configuration data (such as attributes, rules, tables, users, and organizations) from the production system into a file that you can save anywhere the desktop can access. It also automatically saves a copy on the server. The exported file is a zip file containing comma-separated value (CSV) files as well as a XML control file.

Note: Do not make changes to configuration data on production after taking the baseline. Any changes to production would invalidate the baseline.

3. Use Environment Migration to import the baseline into the development instance and the test instance.

This step synchronizes those instances with production. It also removes all existing data from the database (leads, etc.) and imports only the new configuration data.

4. Make your changes to configuration data on the development instance.
5. Use Environment Migration to export a change set from the development instance.

The change set only captures configuration data that has been modified, added, or deleted. The change set is a zip file. The zip file can be saved anywhere that the desktop can access. The tool automatically saves a copy on the server.

6. Use Environment Migration to import the change set to the test instance. Verify the change set.

The test instance can import baseline and change sets only, it cannot export. If you want to make changes to the configuration data, do so on the development instance, create a new change set, and import it to the test instance.

7. When you are satisfied with the new configuration data on your development machine, import the change set to the production machine. If you had to go through multiple iterations on development, import all the change sets into production in the order the change sets were created.

Note: If changes were made to configuration data on production after taking the baseline, you will see conflict error messages and the change set import will fail. If it fails, your only option is to take a new baseline and start over from the beginning.

To configure Environment Migration on an instance

To configure an instance of Leads to participate in migration activities you must name the instance and set its role. The instance name will help you identify where exported files came from and the role controls what actions it can perform.

Note: Configure Environment Migration on each Leads instance. (For example, you might install it on development, test, and production instances.)

1. Log in to the Admin Console and select **Migration**.
2. Select **Instance**.
3. On the Configure Instance page, type the instance name and select the role from the **Role** drop-down list.
4. Click **Configure**.

This instance is now configured and is ready to be used.

Repeat these steps for each instance of Leads for which you want to use Environment Migration.

Rolling back a change set

If an export of a change set fails, or if you must modify a change set that you have already exported and export it again, you can roll back your changes and perform the export again as described in this procedure.

1. Log in to the Leads Admin console.
2. Modify the URL in your browser by deleting the portion after admin and adding /changeset/revertchangeset.jsp, and then press **Enter**.

For example, if your Admin URL looks like this:

```
http://myHost.myDomain.com:7001/admin/home/home.do
```

you would modify it as follows:

```
http://myHost.myDomain.com:7001/admin/changeset/revertchangeset.jsp
```

The Revert Change set window opens.

3. Enter the number of the change set to which you want to roll back and click **OK**.

You can now re-export the change set that failed or that you modified.

Debug logging

Migration information is written to the main log file located in the *Unica Home*\Leads\logs directory.

The default log level for migration events is INFO. To enable very specific debug logging when you are importing a change set into production, change the logging level for the Affinium.Leads.migration category in the log_conf.xml file to DEBUG. log_conf.xml is located in the *Unica Home*\Leads\conf directory.

Important: Set this logging level only before you import a change set into production. Be sure to set it back after you are done or your log file will become quite large.

The log for environment migration is leadsMigration.log.

Contacting IBM Unica 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 Unica technical support. Use the information in this section to ensure that your problem is resolved efficiently and successfully.

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

Information to gather

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

- A brief description of the nature of your issue.
- Detailed error messages 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 Unica 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 Unica applications.

You can access the About page by selecting **Help > About**. If the About page is not accessible, you can obtain the version number of any IBM Unica application by viewing the `version.txt` file located under the installation directory for each application.

Contact information for IBM Unica technical support

For ways to contact IBM Unica technical support, see the IBM Unica Product Technical Support website: (<http://www.unica.com/about/product-technical-support.htm>).

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