

Magic xpi *Guide to Installation & License Management*

Magic xpi 3.4



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Magic xpi Guide to Installation & License Management - Magic xpi 3.4

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1

Installing Magic xpi

This chapter describes the different stages of the Magic xpi installation process.

In this chapter:

- Installing Magic xpi
- General Installation Screens
- Installing the Magic xpi Suite
- Upgrading an Installation
- Uninstall - Backup Files



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Installing Magic xpi

Before you install Magic xpi:

- Ensure that the Magic xpi computer has access to a supported database gateway.
- Ensure your system meets the Magic xpi requirements (see [Appendix A, System Requirements](#)).
- Back up the **magic.ini** file from any previous Magic xpi installation.

General Installation Screens

When you first run the Magic xpi installation wizard, the **Welcome** screen, shown below, opens.

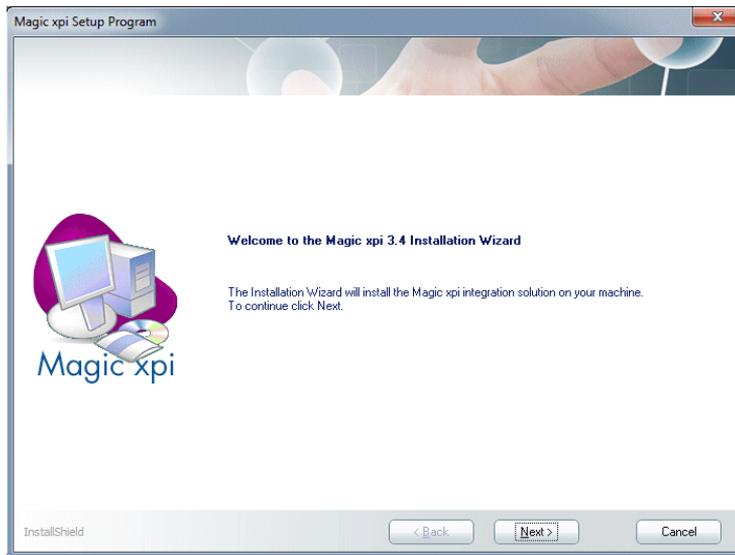


Figure 1-1 Welcome Screen

Click **Next** to continue to the **License Agreement** screen. Read and accept the license agreement, and then click **Next** to progress to the [Module Selection Screen](#).

Magic xpi Module Selection

In this screen, shown below, you can select which Magic xpi module you want to install. The choices are:

- **Magic xpi Suite:** Includes the Magic xpi Studio, a Magic xpi Server, and Magic xpi Monitor. The Magic xpi Server and Magic xpi Monitor installed with this option are used for development purposes.
- **Magic xpi Server and Magic xpi Monitor:** A Magic xpi Server that runs your integration project at deployment and the Magic xpi Monitor that provides monitoring functionality during deployment.
- **Magic xpi Server:** Magic xpi Server that runs your integration project at deployment.
- **Magic xpi Monitor:** The Magic xpi Monitor that provides monitoring functionality during deployment.

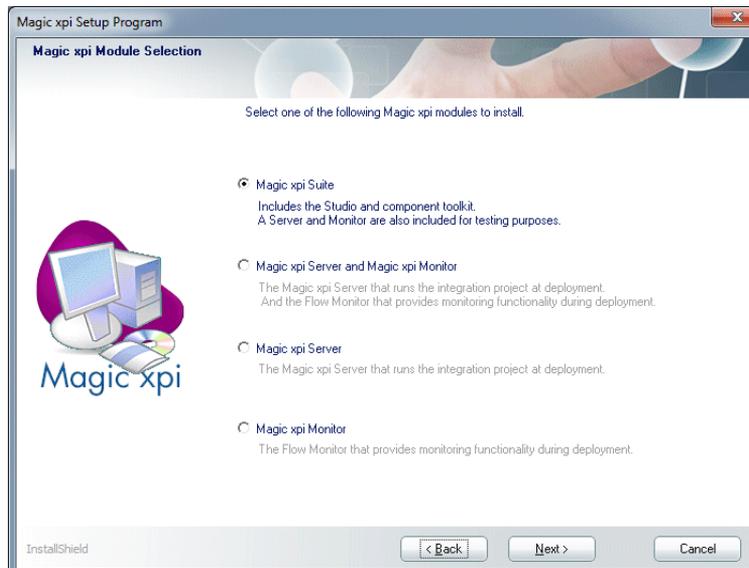


Figure 1-2 Module Selection Screen

Installing the Magic xpi Suite

This section describes how to install the Magic xpi Suite.

Installation Directory

Enter the folder or directory where you want to install the Magic xpi Suite. By default, Magic xpi is installed in the **C:\Magic xpi x.x** folder. To install in this directory, click **Next**. If you do not have a directory with this name, the installation wizard asks if you want the wizard to create this directory. Click **Yes** to confirm and to progress to the next screen. If you do not want to install Magic xpi in this folder, click **Browse** and select a different folder. You must install Magic xpi in an empty folder.

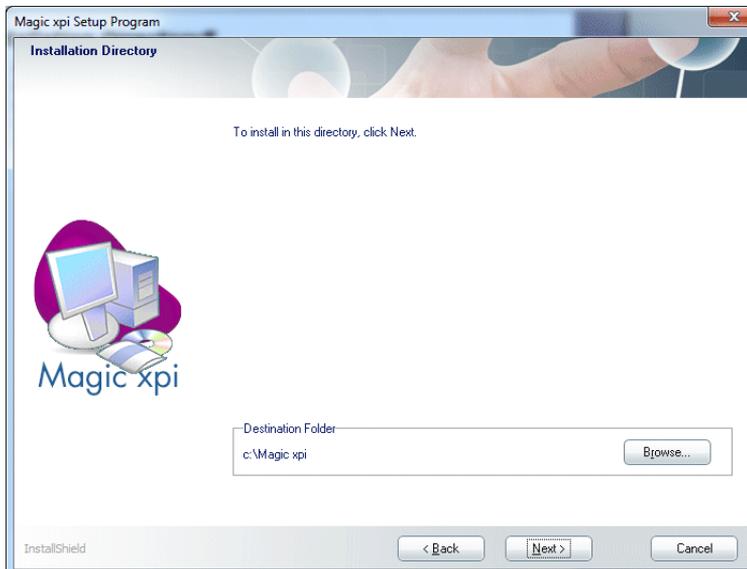


Figure 1-3 Installation Directory Screen

Click **Next**, to open the [Database Selection Screen](#).

Databases

In the **Database Support** screen, click the database to be used as your internal Magic xpi database. This screen only provides information to the installation wizard required to set up the installation. Magic xpi supports the following databases:

- [MSSQL](#): Microsoft SQL Server 2000 and 2005
- [Oracle 9i, 10g, and 11g](#): OCI 32bit only
- [DB2](#): UDB8
- [DB2/400](#): IBM DB2 for System i
- [MySQL \(Using the ODBC protocol\)](#): 5.x

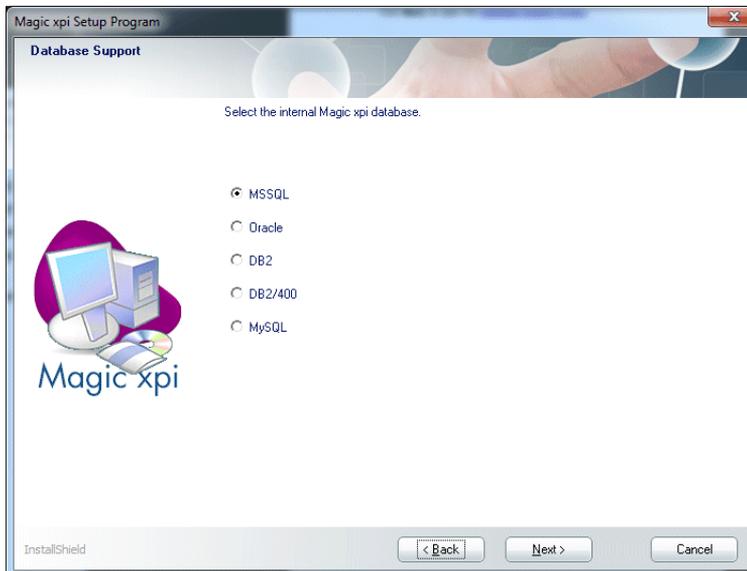


Figure 1-4 Database Selection Screen

After you select a database, click **Next**.

The following steps are used to set up information about your Magic xpi internal database. The information you are required to provide depends on which database you are using.

i The Magic xpi installation creates a subfolder called **db** and within it nested subfolders for each database supported by Magic xpi. If you previously chose to install the database at a later stage, you can install it from these scripts (under the required database). A **Read me** file that explains how to run the scripts is included in the folder.

If there was a problem creating the internal database during the Magic xpi installation, a log file will be created under the relevant database folder.

MSSQL

If you select MSSQL, the MSSQL Database Support Screen opens.

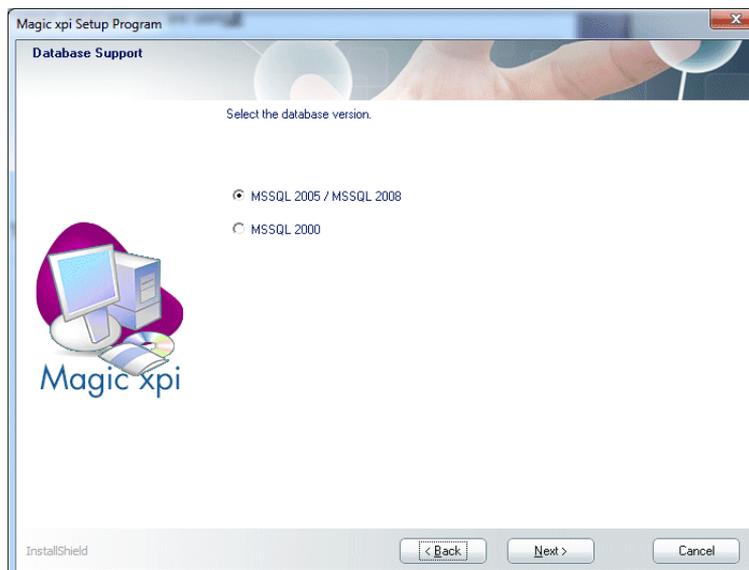


Figure 1-5 MSSQL Database Support Screen

Then, click **Next** to open the **Running Scripts** screen. Here, you determine whether the installation wizard sets up your database tables during the installation. The options are: **Now** and **Later**.

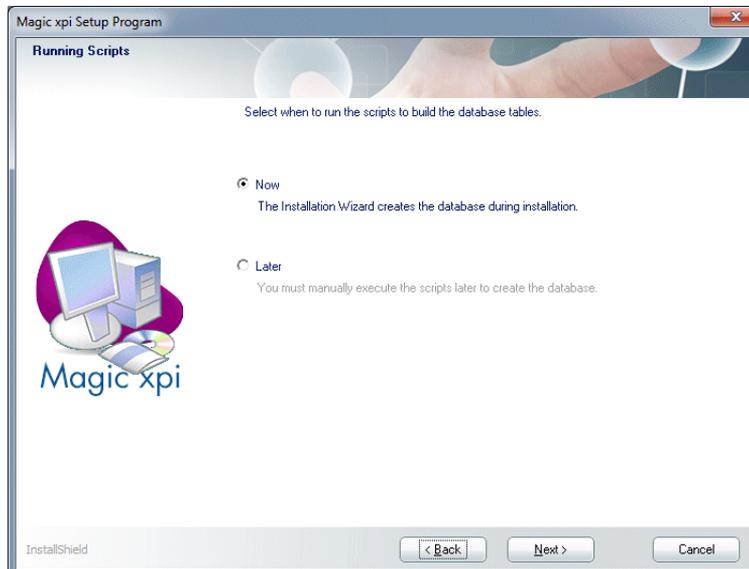


Figure 1-6 Running Scripts Screen

- If you click **Now**, the installation wizard will create the database tablespace and tables during the installation.
- If you select **Later**, the tables are not created during installation, and you can create them manually after the installation.

i When selecting to install the database later, all the required environment variables for this database will be available in the **magic.ini** file but some will be commented with a semicolon.

For example, in Oracle if only the DB_SERVER_NAME was missing, the **magic.ini** would include:

```
;DB_SERVER_NAME=dbservername
```

The installation wizard will go to the [Magic xpi Shortcut Screen](#) when you click **Next**.

If you clicked **Now** in the previous screen, the [MSSQL Database Details Screen](#) opens. In this screen, you enter the information about where your database server resides and the database's User and Password.

If the database server is located on the same computer where you are installing Magic xpi, you should leave the **Server** field in its default state. The default state is **(local)**.

If you want to work with a remote database server, click **Selection** to open the **Server List**. From the **Server List**, select the name of the computer where the database server is located, and click **Select**. The **Server List** closes and you can enter the user name and password for your database. You must be sure that the user name of the Database Administrator is entered in the **User** field.

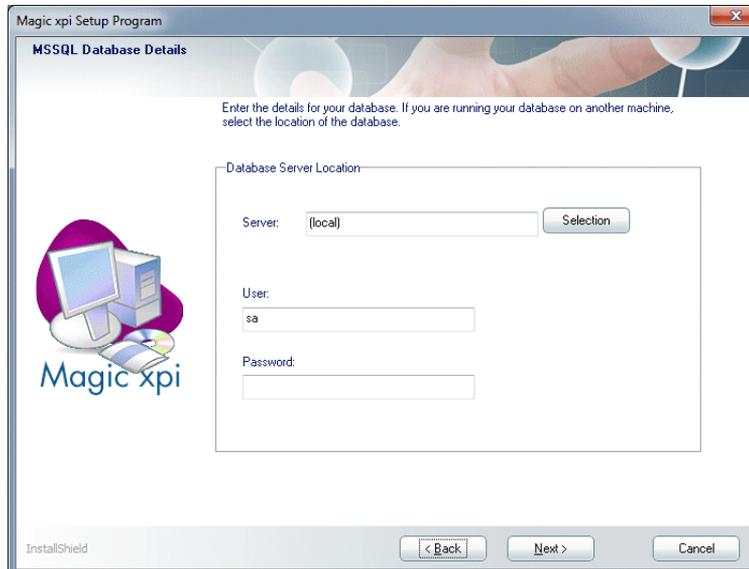


Figure 1-7 MSSQL Database Details Screen

Oracle 9i, 10g, and 11g

Magic xpi supports Oracle Database Server V9i, V10g, and V11g. If you selected an Oracle database as your Magic xpi internal database, when you click **Next** in the **Database support** screen, the [Running Scripts Screen](#) opens. In this screen you can determine whether the installation wizard sets up your database tables during the installation. The options are: **Now** and **Later**. If you select **Now**, the installation wizard will create the database tablespace and tables during the installation.

If you select **Later**, the tables are not created during installation, and you can create them manually after the installation. The installation wizard will progress to the [Magic xpi Shortcut Screen](#) when you click **Next**.

If you selected **Now** in the previous screen, the Oracle Database Details screen opens. In this screen you enter the information about where your Database Server resides, and the database User and Password.

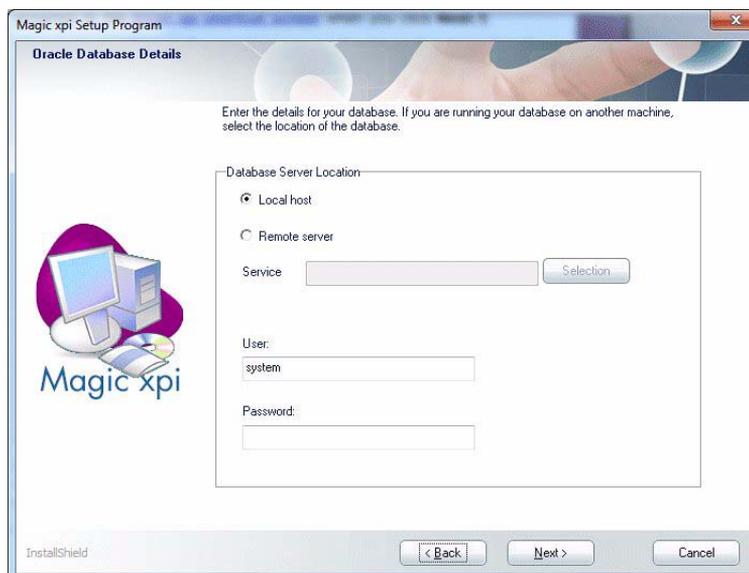


Figure 1-8 Oracle Database details Screen

Select **Local Host** if the database server is located on the same computer where you are installing Magic xpi. Select **Remote Server** if the database server is located on a different computer. If you select **Remote Server**, the

Service field becomes active. Click the **Selection** button to browse the **Server List**. From the **Server List**, select the name of the Oracle Database Client for your database. The **TNS Names.ora** file for Home-0 defines the list of clients. Choose a client and click **Select**. The **Server List** closes and you can enter the database user name and password. Ensure that the user name of the Database Administrator is entered in the **User** field as well as any password.

When you install Oracle as an internal database, an error message regarding incorrect syntax may appear. This does not affect the installation process or the operation of Magic xpi.

DB2

If you select **DB2** as your Magic xpi internal database (DB2 runs on the Windows operating system), when you click **Next** in the **Database Support** screen, DB2 Database Details Screen opens.

i For DB2 databases, you must run the Magic xpi scripts to create the database tables **later** (see the relevant **Readme.txt** file that is located at: **<Magic xpi installation>\db\<database name>**).

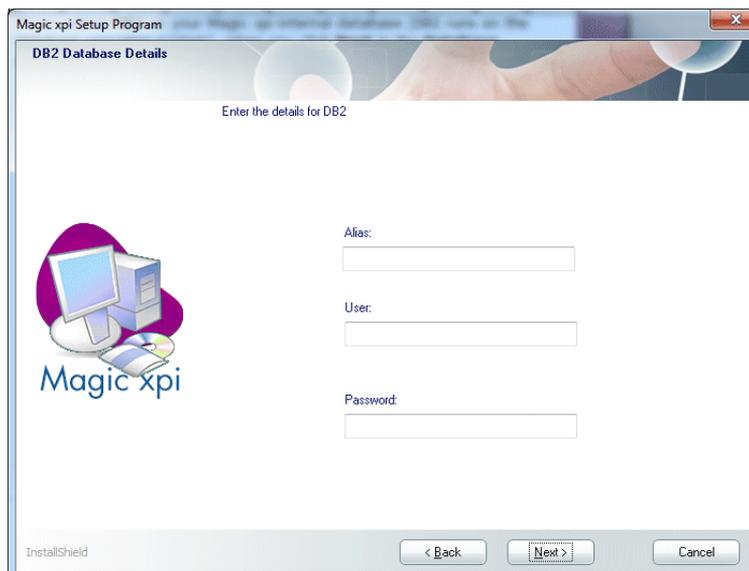


Figure 1-9 DB2 Database Details Screen

In the **Alias Name** field, type the alias name for the DB2 database you are using. The alias is defined in the DB2 client software. It defines the computer where the DB2 database server is located, the user, and the user's password. For information on creating aliases, see the *DB2 User Guide*.

DB2/400

Select DB2/400 if your DB2/400 database resides in a System i environment. Click **Next** and DB2/400 Language Screen opens, wherein you select your DB2/400 database's language.

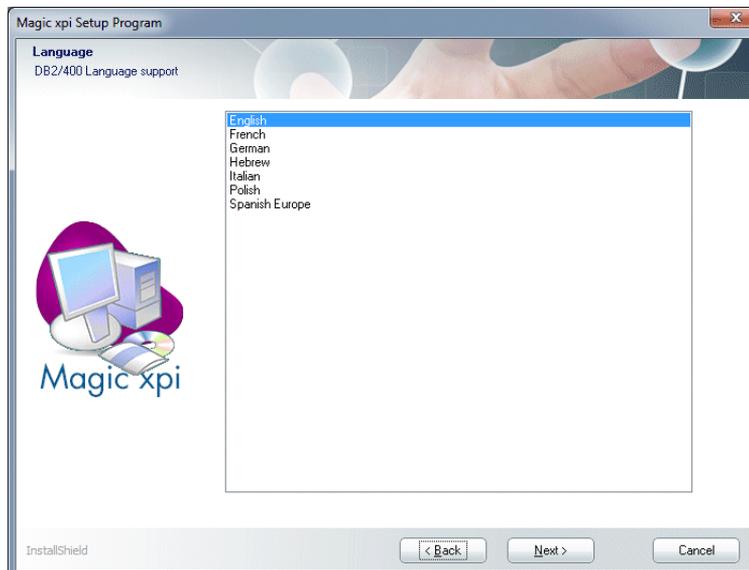


Figure 1-10 DB2/400 Language Screen

After you select the language, click **Next** to open the [Running Scripts Screen](#). In this screen you can determine whether the installation wizard should set up your database tables during the installation. The options are: **Now** and **Later**. If you select **Now**, the installation wizard will create the database tablespace and tables during the installation.

Then click **Next** to open the **DB2/400 Database Details Screen**. In the **Database Name** field, type the name of the database that you are using as the Magic xpi internal database.

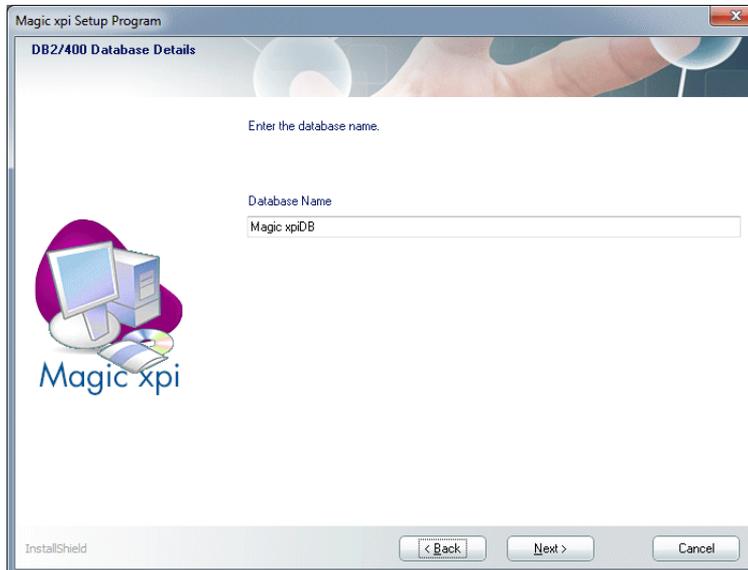


Figure 1-11 DB2/400 Database Details Screen

After you enter the name of the database, click **Next** to open the [DB2/400 Data Source Parameters Screen](#). Enter the following information in this screen:

- In the **Server** field, type the IP address or location of the computer where the DB2 database server is located.
- In the **User** field, type the user name for the person authorized to access the database.

- In the **Password** field, type the authorized user's (as entered in the **User** field) password.

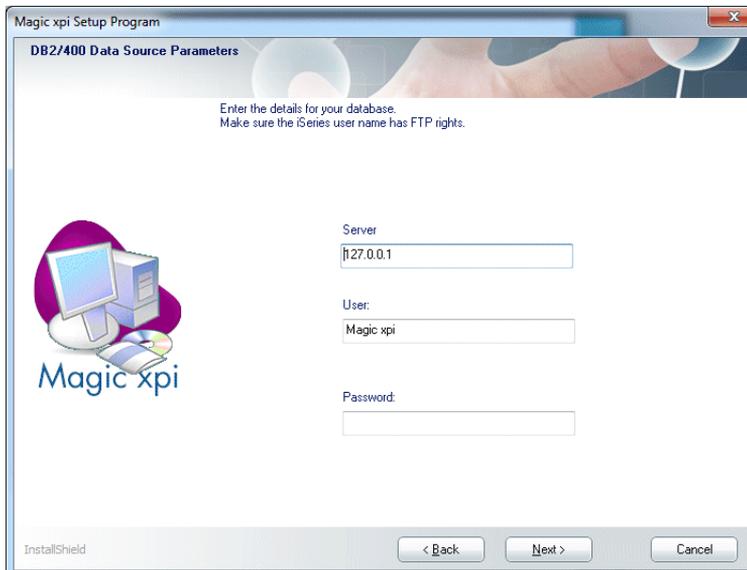


Figure 1-12 DB2/400 Data Source Parameters Screen

MySQL (Using the ODBC protocol)

If you are using an ODBC data source as your Magic xpi internal database, you must select MySQL from the [Database Selection Screen](#). When you click **Next**, the ODBC Data source parameters Screen opens.

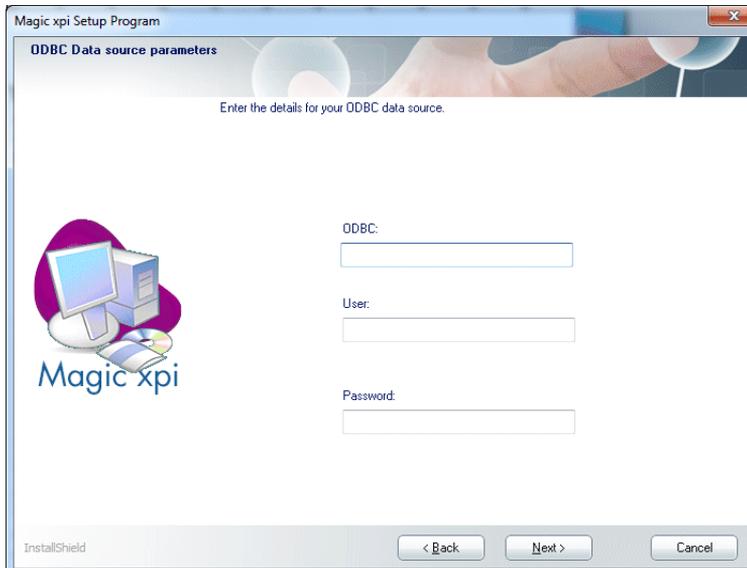


Figure 1-13 ODBC Data source parameters Screen

In the **Name** field of the **ODBC Data source** screen, enter the name of the ODBC data source driver for your database. Magic xpi reads the data using the ODBC protocol.

The ODBC data source driver is configured in the **Windows ODBC Data Source Administrator**. If you have not configured your system to work with the driver you are using, you must first set this up. For information on how to configure a MySQL database and an ODBC data source driver, see the relevant **Readme.txt** file that is located at:

<Magic xpi installation>\db\<database name>

Note: The MySQL database is not created during the installation process. It must be created (previously) manually.

When you click **Next**, the installation wizard goes to the [Magic xpi Shortcut Screen](#).

i If you postpone running database scripts during the Magic xpi installation, or you have to recreate a database, or you are using DB2 or DB2/400 as your internal database, then you will need to set up the respective databases to work with Magic xpi.

For instructions on how to do this, you should open the **Readme.txt** file for the relevant database. The **Readme.txt** files are located at:
<Magic xpi installation>\db\<database name>

Magic xpi Shortcut

In this screen, you can enter a name for the Magic xpi shortcut in your **Programs** menu. A default name is provided, which you can change. If the selected Program Folder already exists, you will be asked if you want to enter a new shortcut name. If you select **Yes**, you can change the program folder. If you select **No**, the chosen program folder will replace the existing one.

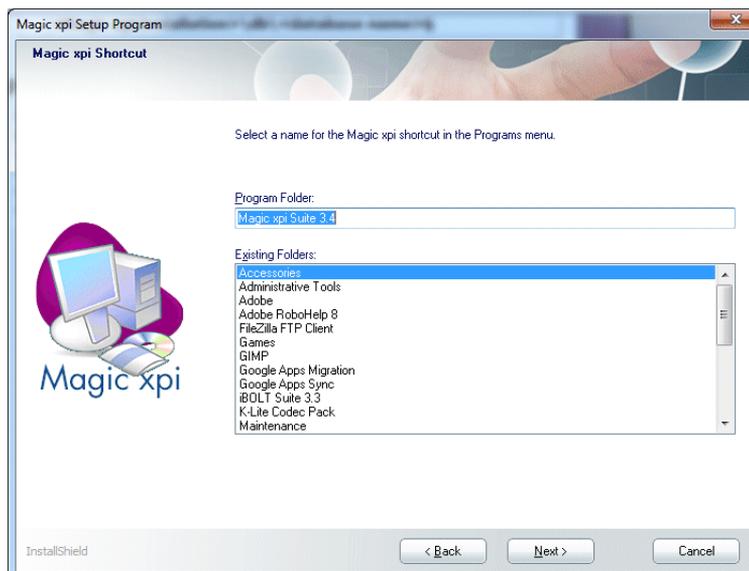


Figure 1-14 Magic xpi Shortcut Screen

When you click **Next** in the **Magic xpi Shortcut** screen:

- If you did not select DB2/400 as your internal database, the [System i Configuration Screen](#) opens.
- If you selected DB2/400 as your internal database, the [Options Screen](#) opens.

System i Configuration

You must indicate whether you use System i servers in any part of your Magic xpi projects, because Magic xpi must be configured to work with your current system language. If the DB/400 is used as your Magic xpi internal database, Magic xpi updates the configuration file (**magic.ini**) to support the System i and DB2/400 database native language.

If DB2/400 is not your internal database and you want to use it or System i programs for other activities in your projects, such as mapping data, indicate this by selecting the **Access System i programs and data** check box in the screen. Magic xpi will update the configuration file to support System i and the DB2/400 database. A System i host library installation is available at the Magic Software Download area.

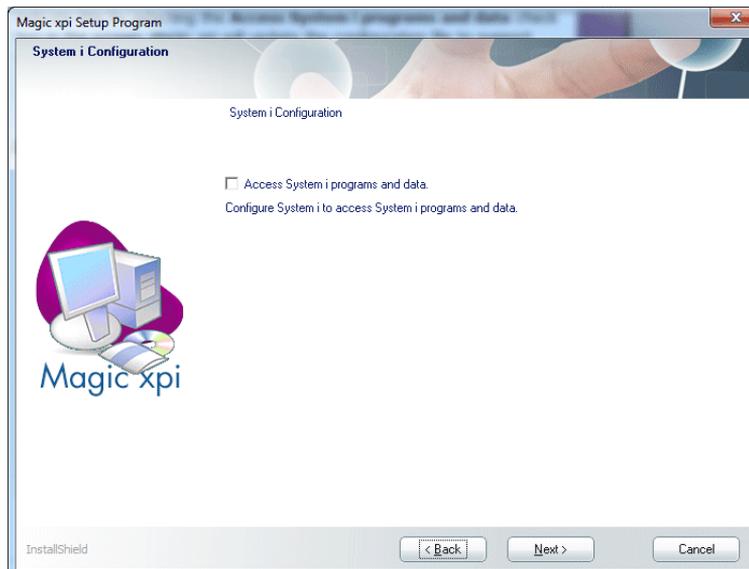


Figure 1-15 System i Configuration Screen

Options

- Select the **Create Shortcut Folder** check box to create a shortcut folder on your desktop that includes shortcuts for the Magic xpi Studio, Magic xpi Monitor, Magic xpi Server, and the uniPaaS Studio. The default is checked.
- Select the **Install License Server** check box to install the license server to manage the licensing for the Magic xpi Servers used in your projects. For more information, see [Chapter 5, Magic xpi Licenses](#). The default is unchecked.
- Select the **Install Sample Projects** check box to install a set of Magic xpi projects that help you understand how to work with different Magic xpi features and functionality. The default is unchecked.
- Select the **Install Web Service Framework** check box to install the Systinet Web service. The default is checked.

If there is a properly installed Java 6.0, Magic xpi uses it. Otherwise, Magic xpi installs its own. Magic xpi searches the registry for the Java installation and uses the path to Java that it finds. Therefore, if there is a mismatch between the registry and the actual installation, the SSJ installation fails.

Note: When installing Magic xpi, the new Systinet installation upgrades the existing Systinet installation to version 6.6. If an earlier version was already installed on this machine, this Systinet upgrade has two side effects:

1. Getting the "**java.lang.UnsupportedClassVersionError: Bad version number in .class file ...**" error in the Studio and the Server. This is because jars that are compiled by JDK 6.0 (such as the **uniRequester.jar** and the **uniSSJ.jar**) are loaded by the 5.0 JVM that is used by Magic xpi. You will get this error in any component that uses Java, such as: Salesforce, Email, SharePoint, Dynamics CRM, and Web Services.
2. The new Systinet version cannot be used with versions up to V3.2 SP1b.



If you want to use V3.2 SP2a and any version up to V3.2 SP1b on the same machine, you will need to maintain two versions of Systinet and use only one at a time. You can do this by renaming or removing the **WASP_HOME** environment variable and renaming the existing Systinet folder *prior* to the new Magic xpi installation. The result will be a new installation of Systinet 6.6, and the **WASP_HOME** environment variable will point to this version.

When using any version up to V3.2SP1b, you need to point the **WASP_HOME** environment variable to the Systinet 6.5.2 installation. When using V3.2 SP2a, you need to point the **WASP_HOME** environment variable to the Systinet 6.6 installation.

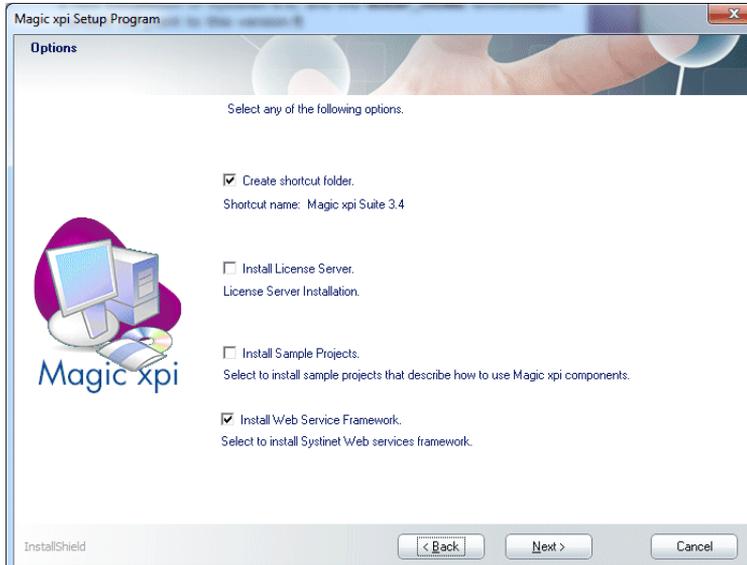


Figure 1-16 Options Screen

When you have finished with this screen, click **Next** to proceed to the [Broker Configuration Screen](#).

Broker Configuration

The Magic xpi Broker is responsible for managing the various internal Magic xpi tasks, such as handling threads from Magic xpi Servers as well as receiving and processing requests from external resources, such as HTTP and Web services. This screen lets you specify how you wish to install the Magic xpi Broker.

- If you choose **Install Magic xpi Broker as an executable**, control over the broker will be via the broker icon, which will be shown in the status bar of the operating system. When this option is selected, the broker will load when the Magic xpi Studio loads.
- If you choose **Install Magic xpi Broker as a service**, control over the broker will be via the broker service in the operating system's Services table. In this case, a name should be provided for the service. When this option is selected, the broker loads when the operating system loads.

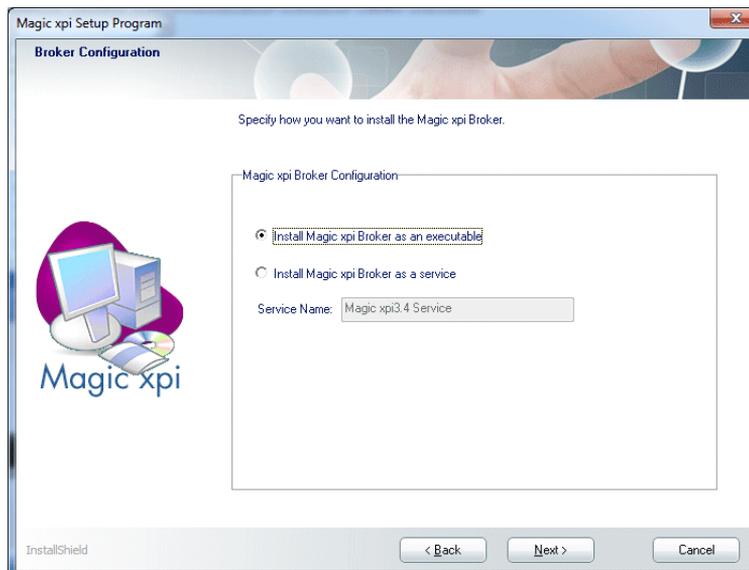


Figure 1-17 Broker Configuration Screen

When you have completed this screen, click **Next** to proceed to the [Setup Information Screen](#).

Setup Information

The **Setup Information** screen, shown below, indicates that the Magic xpi installation wizard is ready to install Magic xpi. If you need to change any installation settings, click **Back** to return to previous screens. When you are ready, click **Next** to begin the installation process.

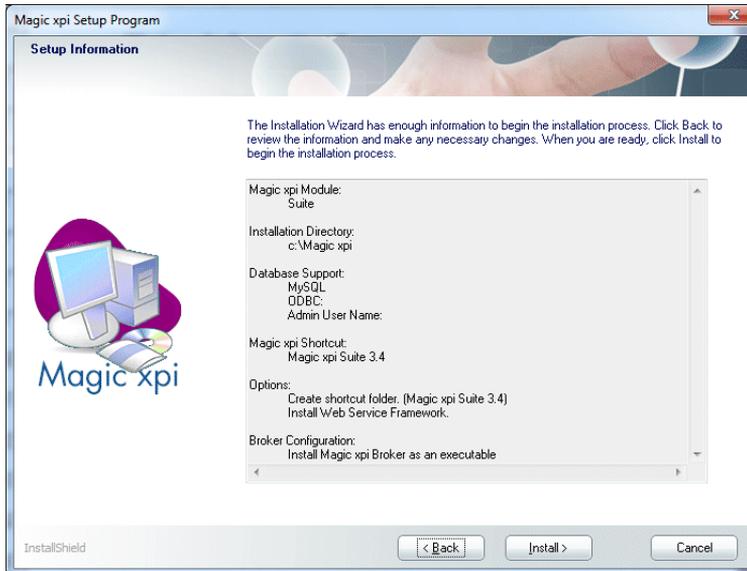


Figure 1-18 Setup Information Screen

Installation Wizard Complete

When the installation wizard has completed the installation successfully, the **Installation Complete** screen opens. Select the check box to view the Release Notes.

Click **Finish** to exit the installation wizard.

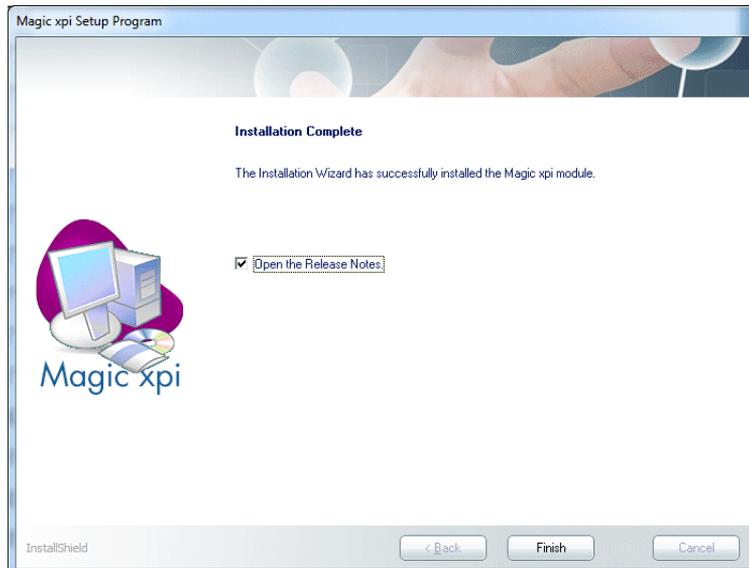


Figure 1-19 Installation Complete Screen

Multiple Installations

For information about multiple Magic xpi installations, please see the **Working with Multiple Magic xpi Installations** topic, in the Magic xpi Help.

Language Support

When you install Magic xpi, the default language is English. For other languages, you need to set the **magic.ini** file's **ConstFile** parameter for the language that you want to use. For example, for Chinese language support, you should set the **Constfile** parameter as follows:

ConstFile =C:\Magic xpi x.x\Chinese support\mgconstw.chn

In addition, make sure that the relevant "mglocal" dll file is located in the Magic xpi root directory. For example, for Chinese language support you should copy the **mglocal19ch.dll** file from the **C:\Magic xpi x.x\Chinese support** folder into the Magic xpi root folder.

Uninstall - Backup Files

When you uninstall Magic xpi, all INI files in the Magic xpi root directory are backed up as .bck extension files. This preserves any changes that you made to the INI files.



2 *Magic xpi Files*

This chapter describes the files that are installed for the different Magic xpi modules and provides important information to help you maintain your Magic xpi files in an orderly and logical fashion.

Magic xpi Suite Files

The Magic xpi Suite installation contains all the Magic xpi Suite files, including the Studio, Components, Server, and Monitor modules, as well as a full installation of Magic Software's uniPaaS product.

The table below provides an explanation of some of the different folders contained in the Magic xpi root folder.

Folder	Contains
Builders	Hold the web service JAR files that are deployed to Systinet. These JAR files can be deployed manually.
db	Database scripts available for the manual execution of the internal database installation.
Gateways	Database gateways.
icons	All the images used for the various Magic xpi components. This is also where you should add images for any components you develop yourself.
icons/ BP_Image	The images used for the Business Process Editor.
ifclib	The Component files. Each component is located in a separate folder with the same name as the component. The files in these folders are used for component configuration in the Editor.

Folder	Contains
java	Magic xpi Java classes and JAR files.
jre	The Sun Java JRE product, which is installed automatically.
logs	Directory for logs created during project runtime.
Messaging	Files required for message queuing.
projects	Root directory for Magic xpi projects.
projects/ <Project Name>	All the project files of a specific project. Each Magic xpi project will have a separate folder and have the same name as the project name defined in the Magic xpi Suite. The project configuration file with the .ibs extension, the project executable file with the .ibp extension, and project XML source files are stored in this folder.
Scripts	Contains web-related scripts. A web alias is defined in the server that references this folder. See the 64-Bit Support section below.
System i	Files used for running Magic xpi with the System i environment.
temp	Temporary files used in Magic xpi activity.
User Resources	The SDK components are created into this folder.

- i** During the Magic xpi installation, the installation wizard saves certain files in a **Magic xpi** folder in your system's **Common Files** folder. Different Magic xpi modules use these files and therefore you should not delete this folder.

64-Bit Support

When installing Magic xpi on 64-bit machines, the 64-bit requester dlls are installed in the **scripts** folder.

In addition, two subfolders called **32bit** and **64bit** are created and contain the relevant dlls. If your Web server is configured to use 32-bit dlls, you need to manually copy the 32-bit dlls to the **scripts** folder.



3

Component Setup

This chapter explains the setup requirements for the different Magic xpi flow components.

In this chapter:

• COM
• Directory Scanner
• Domino
• Dynamics CRM
• EJB
• Email
• Encryption
• Exchange 2007
• File Archive
• File Management
• File Splitter
• FTP
• Google Calendar
• Google Docs
• HTTP
• ItemField Connector
• JD Edwards Enterprise One
• JD Edwards World
• JMS

• LDAP
• Microsoft Excel
• Microsoft Word
• MSMQ
• .NET Service
• Notes DB
• Salesforce
• SAP A1
• SAPB1
• SAP R/3
• SharePoint
• System i
• TCP Listener
• uniPaaS Service
• Validation
• WebSphere MQ
• W4
• XML Handling
• XSLT



COM

You do not need to perform any prior procedures to be able to use the COM component.

Directory Scanner

You do not need to perform any prior procedures to be able to use the Directory Scanner component.

Domino

To be able to use the Domino component, ensure that you have **Lotus Notes** client VR5, or later, installed on your computer. You are required to supply the following information:

- Notes server name
- Notes database name and password

Before you use the Domino component, you must do the following:

- Enter the complete path of the Notes.jar (for example, **D:\lotus\notes\Notes.jar**) in the Windows Environment Variables CLASSPATH. This .jar file is located in the Lotus Notes client installation folder.
- Enter the complete path of the Lotus Notes installation folder where all the Lotus Notes DLLs reside in the Windows Environment Variables PATH.

Dynamics CRM

To use the Dynamics CRM connector, you need to have a valid Dynamics CRM account. There are no technical prerequisites. No additional jar files are necessary, and there is no client installation.



EJB

To be able to use the EJB component, ensure that you have a J2EE Server with client software and Java SDK 1.4 installed. Java runtime is required to access the Java Beans.

To complete configuration for the EJB component:

1. Open the **Mgreq.ini** file in the main Magic xpi root directory.
2. Enable the requester to listen to Java requests. You do this by removing the semicolon in the MGRVR05 property of the [MAGIC_MESSAGING_GATEWAYS] section.
3. In the **MaxThreads** parameter, enter a percentage of threads of the total permitted thread count, according to your Magic xpi Server license, to define the number of concurrent EJB requests the Magic xpi Server will accept. For example:

```
MGRVR05 = , , , MaxThreads=10%
```

i Ensure that you have an up-to-date copy of the Magic xpi **Mgejbgnrc.jar** file in the %JAVA_HOME%\jre\lib\ext folder. You can find this file in the **Magic xpi x.x\Support** folder.

To enable use of the Magic xpi EJB component to access Enterprise Java Beans (EJB):

1. Copy the **Mgejbgnrc.jar** file to the **Magic xpi x.x\jre\lib\ext** folder. This file is in the **Magic xpi x.x\Support** folder.
2. Define the **J2ee.jar** path in the CLASSPATH property in the [MAGIC_JAVA] section.
3. Define the class or deployed EJB path in the **magic.ini** file. For example:

[MAGIC_JAVA]

```
CLASSPATH =  
C:\j2ee\lib\j2ee.jar; C:\jdk\jre\lib\ext\mgejbgnrc.jar; C:\JAVAClass  
\; C:\magic940\Components\EJB\JAVAEJB\Sun\JAVAEJBClient.jar;
```



4. Open your computer's System Properties dialog box and click the **Advanced** tab.
5. Enter the following in the **User Variables** field:
 - J2EE_HOME: to the J2EE directory path
6. Enter the following in the **System Variables** field:
 - CLASSPATH: to the Mgejbgnc.jar file, J2EE directory location
 - PATH: to the Jvm.dll file location

Email

To use the Email component you need access to an email server and the following information:

- The **SMTP** and **POP3** or **IMAP** server address
- The respective user name and password

Encryption

You do not need to perform any prior procedures to be able to use the Encryption component.

Exchange 2007

To use the Exchange 2007 connector, you need to have the following:

- An Exchange 2007 account
- A valid user name
- A valid password



File Archive

You do not need to perform any prior procedures to be able to use the File Archive component.

File Management

You do not need to perform any prior procedures to be able to use the File Management component.

File Splitter

You do not need to perform any prior procedures to be able to use the File Splitter component.

FTP

You do not need to perform any prior procedures to be able to use the FTP component.

Google Calendar

To use the Google Calendar™ component, you must have **SMTP** and **POP3** or **IMAP** servers installed on your network.

To configure the Google Calendar component you should know the following information:

- If your internet connection is through a proxy, you need to know its **SMTP** and **POP3** or **IMAP** server address.
- The respective gmail user name (for example, xyz@gmail.com) and password.



Google Docs

To use the Google Docs™ component, you must have **SMTP** and **POP3** or **IMAP** servers installed on your network.

To configure the Google Docs component you should know the following information:

- If your Internet connection is through a proxy, you need to know its SMTP and POP3 or IMAP server address.
- The respective Gmail user name (for example, xyz@gmail.com) and password.

HL7

You do not need to perform any prior procedures to be able to use the HL7 component.

HTTP

To be able to use the HTTP component and access Web sites using a proxy server, set the following entries in the **MAGIC_ENV** section of the **magic.ini** file:

HTTPProxyAddress = <ProxyAddress>: <Port>

- For example: 10.9.3.16:8080

HTTPTimeout = <Timeout>

- For example: 5000

i A Web server is required for triggering execution of Magic xpi flows.

ItemField Connector

To be able to use the ItemField Connector component, install the ItemField software – Content Master V3.2 (or above) on your machine and obtain a valid license.

To be able to use ItemField services in the Magic xpi ItemField Connector component, publish the required service on your machine, such as PDF for PDF conversion, using the ContentMaster software, which is an ItemField online tool.

Enter the complete path of the ItemField installation folder in the Windows Environment Variables PATH.

JD Edwards Enterprise One

The JD Edwards Enterprise One connector relies on the JDE Dynamic Java connector. Ensure that the JDE Dynamic Java connector is fully configured and working on your computer. You can test this by running the JDE example application for the Dynamic Java connector (supplied with the JDE installation).

JD Edwards World

To be able to use the JD Edwards World connector, you need to have access to a DB2/400 database server.



JMS

Before you use the JMS component, install JMS client software and perform the following steps:

1. Install the Jre13.exe and J2sdkee-1_3_1-win.exe files.
2. Configure your operating system so that you can test the J2EE environment. To do this, open your machine's **Environment Variables** dialog box and set the following:

Variable Name	Value
%JAVA_HOME%	The directory where the JDK is installed
%J2EE_HOME%	The directory where the J2EE product is installed
%CLASSPATH%	Add these paths: %J2EE_HOME%\lib\j2ee.jar; %J2EE_HOME%\lib\locale
%PATH%	Add this path: %J2EE_HOME%\bin

3. Set the following property values in the Magic xpi **magic.ini** file's **[MAGIC_JAVA]** section:

Property	Enter This:
CLASSPATH=	.\; .\JAVA_CLASSES
JVM_ARGS=	- Djms.properties=%J2EE_HOME%\config\jms.client.properties

JMS Provider Settings

The J2EE server is the JMS provider. To access the server from the JMS client, you need to enter these settings:

1. Open the %J2EE_HOME%\config\orb.properties file.
2. Set the J2EE server path and port number.

For example:

%J2EE_HOME% - C:\j2sdkee1.3.1

LDAP

You do not need to perform any prior procedures to be able to use the LDAP Connector component.

Microsoft Excel

To use the Microsoft® Excel component, ensure that Microsoft® OfficeXP® Excel, or later, is installed on your computer.

Prior knowledge of Microsoft Excel is necessary to use this component.

Microsoft Word

To use the Microsoft® Word component, ensure that Microsoft® OfficeXP® Word, or later, is installed on your computer.

Prior knowledge of Microsoft Word is necessary to use this component.

MSMQ

To be able to use the MSMQ component, ensure that you have MSMQ services installed on your computer. Also, define a queue that you will access using the MSMQ component.



.NET Service

To deploy Magic xpi projects that use .NET services, a .NET framework installation is needed.

To edit .NET service code, you must purchase Microsoft® Visual Studio .NET.

Notes DB

To be able to use the Notes DB connector, ensure that you have Lotus Notes Client VR5, or later, installed on your computer. You will need to provide the following information:

- The Lotus Notes server name
- The Lotus Notes database name and password

Before you use the Notes DB connector, you need to do the following:

- Enter the full path of the Notes.jar (for example, D:\lotus\notes\notes.jar) in the Windows Environment Variables CLASSPATH. This .jar file is located in the Lotus Notes clients installation folder.
- Enter the full path to the Lotus Notes DLLs folder in the Windows Environment Variables PATH.

Salesforce

To use the Salesforce connector, ensure that you have the following:

- A licensed Magic xpi Special Edition for salesforce.com installation.
- A valid salesforce.com user name, password, and security token.



SAP A1

To use the SAP A1 connector, you should have a thorough knowledge of SAP A1, and have access to a functional SAP A1 system.

SAPB1

To use the SAPB1 connectors, ensure that the following are installed on your network:

- An SQL database
- SAP Business One server tools
- SAPB1 Data Interface API

The SAPB1 connector supports SAP Business One 2004, 2005, 2007, and 8.8.

SAP R/3

To use the SAP R/3 connector, you should have a thorough knowledge of SAP R/3, and have access to a functional SAP R/3 system (4.6 or later).

SharePoint

To use the SharePoint connector, you need to have access to a SharePoint server.

System i

To be able to use the System i Connector component with System i you should install the Magic xpi Host Library on a System i computer.



TCP Listener

You do not need to perform any prior procedures to be able to use the TCP Listener component.

uniPaaS Service

You do not need to perform any prior procedures to be able to use the uniPaaS service.

Validation

You do not need to perform any prior procedures to be able to use the Validation component.

WebSphere MQ

To be able to use the WebSphere MQ component, you need to have the WebSphere MQ server/client installed on your network, where Magic xpi can access it.

W4

To use the W4 component, ensure that you can access a W4 engine, which includes the W4 Java library. The relevant W4 engine can either be installed on your local machine or you can access it on a remote machine.

XML Handling

To use the XML Handling component, you should have a basic knowledge of working with XML.



XSLT

To use the XSLT component, ensure that you have the Java Runtime Environment installed on your computer. You must also have the ability to edit Java code using a dedicated Java Editor or text editor.



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4

Magic xpi Server on UNIX and Linux Platforms

This chapter describes how to install, configure, and manage the Magic xpi Server on Unix and Linux platforms.

In this chapter:

- Prerequisites
- Installing Magic xpi
- Verifying Installation and Configuration
- Running a Test Project
- Managing Magic xpi
- Magic xpi Monitor on Windows
- License Registration



Prerequisites

Database Prerequisites

You need to have a supported database and database client installed either locally or on a remote server. The Magic xpi Server supports the following databases for use as the Magic xpi Server's internal database:

- Oracle, Versions 9 and 10. Oracle 32-bit client libraries are required.
- DB2 (AIX only).
- MySQL (Linux only). unixODBC libraries and MyODBC ODBC driver are required.

Java Prerequisites

Magic xpi requires 32-bit Java 2 Runtime Environment version 1.5 or above.

Installing Magic xpi

Carry out the steps below to install the Magic xpi Server on your system:

Note: The administrator needs to define a user for Magic xpi. In this document, **magicxpidev** will be the user name.

1. Login as a Magic xpi Unix user (**magicxpidev**).
2. Create a directory named **software** and copy the installation file to this folder. For example: **magicxpi_<version>.<os>.tar.Z**.
3. Uncompress the installation file.
4. Change the directory to the **software** directory and run this command:

```
tar xvf software/magicxpi_<version>.<os>.tar.Z
```

5. Change the directory to this home directory:

```
run mgxpiinstall
```



The following information describes the user interface of the **magicxpiinstall** script. The text in italics is the information provided by the script. Anything in bold is information that the user needs to input.

Magic xpi Installation Procedure

mgxpiinstall is an interactive shell script to help you install the Magic xpi Server for Unix.

You may press CTRL+C to exit this script at any time and start again.

When asked to type <CR>, press ENTER.

Type <CR> to continue...

The Installation log file is /<Magic xpi user's home directory>/logs/inst_log.

Magic xpi Server Installation

Enter the Magic xpi broker information

(host/port) (default <Host Name>/4400) :<Host Name>/4400

Enter license server address (default: 1744@<HOST NAME>):

/<Magic xpi user home directory>/etc/license.dat

*Enter license type (default: IBPRSRV) : **IBPRSRV***

Enter the database name to be used by Magic xpi : Oracle

*(default: Oracle) : **Oracle***

*Enter the Oracle version to be used : 9 or 10 (default 9) : **9***

Enter the Oracle database connection string : oracle_sid.hostname

(default: ora920.<HOST NAME>) : <ORA SID>.<HOST NAME>



Enter the Oracle database home directory : ***/dir/to/oracle/home***
(default: */opt/oracle/product/9.2.0*) : ***/opt/oracle/product/9.2.0***

Specify locals Oracle Home directory

Enter the Web server alias for accessing the Magic xpi CGI Requester
(default: */cgi-bin*) : ***/mgrqcgi019***

Enter the file path to ***/mgrqcgi019*** alias

(default: */usr/local/httpd/cgi-bin*) : ***/usr/local/apache2/cgi-bin/mgrqcgi019***

Enter the destination directory for the Magic xpi utility files

(default: */usr/local/httpd/magicxpiutils*) :
/usr/local/apache2/cgi-bin/mgrqcgi019

Magic xpi will use broker/port: *<HOST NAME>/4400* with the supervisor password IFS.

Oracle Database connection string *<ORA SID>.<HOST NAME>*

Oracle Home */opt/oracle/product/9.2.0*

Would you like to proceed using the above information (Y or N)? **Y**

To configure the Apache Web Server, append the file */<Magic xpi user home directory>/web_utils/magic.conf* to the Apache configuration file (*httpd.conf*).

To complete the Magic xpi installation, run *sbin/mgroot.sh* script as the root user.



Database Gateway

The \$HOME/etc/mgenv file lists the server gateway information. Gateways with a # at the beginning of the line are not activated. The gateway for the database that you selected when you installed Magic xpi is always active. To activate database gateways, remove the # from the line.

Note: When you use the Oracle gateway, make sure that the \$ORACLE_HOME and \$ORACLE_SID parameters are defined in the \$HOME/etc/mgenv file. Also, make sure that the \$LD_LIBRARY_PATH environment variable includes the \$ORACLE_HOME/lib directory. Additional libraries are located under the \$ORACLE_HOME directory structure.

If you are using Oracle, make sure the library path points to the Oracle 32-bit libraries.

For Oracle and DB2 databases you must enter the connection string and then the home directory. For MySQL databases, you must enter the unixODBC installation directory.

unixODBC must be preinstalled on your machine for MySQL to work. You must also install the MyODBC ODBC driver.

Note: If ODBC is not installed on your machine, you need to do the following:

- For MySQL databases, install unixODBC-2.2.11. You can download this from <http://www.unixodbc.org/>
- For MySQL, you must also install the myodbc driver. You can download this from <http://dev.mysql.com>



Web Server Configuration

To install the Web components, such as CGI and Apache-related, the system administrator should run the following script:

```
/<Magic xpi user home directory>/sbin/mgroot.sh
```

Java-related Configuration

To configure Magic xpi to load the Java VM:

- Edit the user logon file to `.profile`, `.cshrc`, or `.bash_profile`.
- Add `<local JRE home>/lib/sparc` to the `LD_LIBRARY_PATH`.
- Remove `<Magic xpi user home>/lib/stub`.
- Logout and login again as an Magic xpi user.

License Information

- Edit the license file `license.dat`, located in `/<Magic xpi user home directory>/etc`, and copy your license information into this file.
- Log out and then log back on to the system as the Magic xpi user.

Magic xpi Internal Database Configuration

Depending on the database server that you configured Magic xpi to use, follow the instructions in the `Readme.txt` file in the folder `<Magic xpi user home directory>/db/<database type>`. This should be carried out by a Database Administrator.



Verifying Installation and Configuration

To verify that the configuration was done properly, and that all the required libraries can be accessed by Magic xpi, use the **ldd** command using these commands:

- `cd $HOME/bin`
- `ldd mgxpiserver`
- You should also use `ldd` on the database gateway. For example: `ldd mgoracle9`

If all the libraries are found, you have completed the installation successfully. If the `ldd` utility reports that there are missing libraries, this indicates an incomplete configuration.

Running a Test Project

You should prepare an Magic xpi project for testing purposes. It can be a simple project with a single auto start flow that writes a BAM message. Call it **TEST1**.

1. Build the **TEST1** project on Windows using **rebuild all**. Do not use a debug build.
2. Pack the **TEST1** project folder on Windows using **tar**.
3. Copy the **TEST1** project folder to the UNIX **/<Magic xpi user home directory>/projects** directory using **scp**.
4. Unpack the **TEST1** project folder in the **IF/projects** directory using **tar**. Check if the (IBP) file-size is the same for Windows and AIX, for example with the command: **tar -x -f <filename.tar>**.
5. In the project, an **ifs** file is created with project configuration data. You may want to specify the number of threads used by this project by setting **[MAGIC_ENV] MaxConcurrentRequests = <max number of threads for this project>**. You may also want to add your own environment variables here.
6. Run the **mgxpisetup** script.



7. Check that the broker is running.
8. Check that the project is running: **checkm**.
9. Start the Server using **mgxpistart.projectname**, and verify that the project was executed correctly.

Managing Magic xpi

You can find the Magic xpi scripts in the /<Magic xpi user home directory>/sbin folder. Use the scripts as follows:

- Start the Magic xpi Server's Broker. You only need to start the Broker if it is not already running (the Broker process name is **mgrqmr**):
startb
- Start the Magic xpi Server:
mgxpistart.projectname
- Stop the Magic xpi Server:
mgxpistop.projectname

Magic xpi Monitor on Windows

The Magic xpi Monitor on Windows should be configured to access the Magic xpi Server Activity Log. You need access to the Oracle database.

You should verify that the Magic xpi Server is running using the Magic xpi Monitor and the **checkm** command.



License Registration

You should make sure that you have a permanent Magic xpi license. The steps described above will ensure that a temporary license is installed. When you receive your permanent license, copy the file to the **\$MAGIC_HOME/etc/** directory. If you do not have the permanent license, you can use the **license.dat** evaluation license temporarily, which you can find in **\$MAGIC_HOME/etc/**.



5

Magic xpi Licenses

This chapter describes Magic xpi licenses, and explains how they are managed.

In this chapter:

- License Management
- Working with the License Server



License Management

Magic xpi is designed to work with a separate license for each part of the product:

License	Description
Studio	This license allows you to: <ul style="list-style-type: none">• Open the Magic xpi Studio.• Develop Magic xpi projects.• Run the Debugger for testing purposes.
Server	This license allows you to run the Magic xpi Server. The licenses are different for Windows and non-Windows operating systems. The default Magic xpi installation includes an evaluation version of the Server license.
Monitor	This license allows you to use the Magic xpi Monitor.

Evaluation Licenses

An evaluation license gives you access to a fully functional Magic xpi version for up-to a 90-day period from the product's initial installation date. When you access an evaluation product, a message indicates when the evaluation license expires.



License Types

The following table shows the various parts of the Magic xpi license file.

Name	Description
IBNPSTD	The Studio license.
IBMON	The Monitor license. Note: You cannot open the Studio using the Monitor license.
IBNPSRV	The license for the non-production Server. (When using this license, the Server will stop running after 24 hours.)
IBPRSRVI	The production license for the Server in an Intel environment.
IBPRSRVN	The production license for the Server in a non-Intel environment.

Installing Magic xpi License Files

A default evaluation license is installed when you install Magic xpi.

To replace the evaluation license:

1. Extract your license **ZIP** file, and copy the **.txt** file to your Magic xpi root directory.
2. Open the **magic.ini** file, and locate the **LicenseFile** entry. This tells Magic xpi which license file to read. Modify this entry to point to your license, for example:
LicenseFile=c:\Magic xpi x.x\MyLicense.txt.
3. Verify that the following license names are correctly set in the [MAGIC_ENV]LicenseName section of the respective .ini files:
 - In the Server's **ifs.ini** file: [MAGIC_ENV]LicenseName=IBPRSRVI or IBNPSRV or IBPRSRVN
 - In the Studio's **ife.ini** file: [MAGIC_ENV]LicenseName=IBNPSTD
 - In the Monitor's **ifm.ini** file: [MAGIC_ENV]LicenseName=IBMON



If the license name in the .ini file is not identical to the license's name in the license itself, the following error appears in the relevant log file:

"Failed to set the license file parameters."

License Features

The following license features are optional. You can purchase them separately and add them to the existing license file.

- **IBA1** – The license for the SAP A1 environment.
- **IBDYCRM** – The license for the Dynamics CRM environment.
- **IBHL7** – The license for the HL7 environment.
- **IBJDE** – The license for the JDE E1 environment.
- **IBNotes** – The license for the Lotus Notes environment. This feature grants access to Notes databases using the Notes DB connector.
- **IBR3** – The license for the SAP R/3 environment.
- **IBSBO** – The license for the SAP Business One environment.
- **IBSFDC** – The license for the Salesforce environment.
- **IBSHAREP** – The license for the SharePoint environment.
- **IBSystemi** – The license for the System i environment. The Data Mapper can access DB2/400 on System i regardless of this keyword.
- **IBEXCHANGE** – The license for the Exchange 2007 environment.
- **IBJDEWRLD** – The license for the JD Edwards World environment.

Note: License features are only required in the Deployment environment. All features are available during project development (in the Studio environment).

Working with the License Server

Finding a HOST ID

A Magic xpi license may be restricted for use on a specific computer or server. The Magic xpi license checks the computer's HOST ID for the machine where the license server is installed. When you install the license server, a file called **LicenseInfo.txt** is installed in the FlexLM folder. This file contains the HOST ID for the computer where the license server is installed. Report the HOST ID to your system integrator or Magic xpi sales representative.

Although you can only use the license on one machine, you can use more than one machine in your Magic xpi deployment. The license server machine manages all the users in your system, regardless of which machine they are using.

License Server Files

When you install the license server, a folder called FlexLM is installed on the root of your computer's **C:** drive. This folder contains these files:

- LMG.exe
- LMGRD.exe
- LM Tools.exe
- LMUTIL.exe
- Makekey.exe
- LMGR327A.dll
- LicenseInfo.txt

In addition, the following files are installed in the Magic xpi installation's root directory:

- LMUTIL.exe
- Makekey.exe
- LMGR327A.dll



License File Location

When you install the license server, the license file called **license.dat** is installed in the FlexLM folder. If you do not install the license server, the license is installed on your root Magic xpi directory. Check with your sales representative to be sure that the correct license file is installed on your computer and all machines with the Magic xpi Server installed in your project deployment.

The location of the license file is indicated in the **magic.ini** configuration file in the [Magic_Env] section in the **LicenseFile** line. If Magic xpi cannot find your license file, make sure that the path to the license file is indicated on this line. For example:

```
LicenseFile=C:\Magic xpi x.x\License.dat
```



A *System Requirements*

This appendix describes the minimum system and database requirements for installing the Magic xpi server on your computer.

System Requirements

Development System

- **RAM:** At least 2GB
- **Free disk space:** At least 1GB
- **Operating system:** Use Windows XP and above
- **Web Server:** A Web Server is required if an HTTP trigger is used in the project

Deployment System

- **RAM:** At least 4GB
- **Free disk space:** At least 1GB
- **Operating system:** Windows server supported by Microsoft
- **Web Server:** A Web Server is required if an HTTP trigger is used in the project

Notes:

- When installing Magic xpi with the Windows 2000 operating system, the following warning message may appear: "The installation package cannot be installed by the Windows installer service. You must install a Windows service pack that contains a newer version of Windows installer service."

You need to install Windows Installer 3.1 before installing Magic xpi. Please use the following link:

<http://www.microsoft.com/downloads/details.aspx?familyid=889482fc-5f56-4a38-b838-de776fd4138c&displaylang=en>

- A security enhancement for Internet Information Services (IIS) 6.0 on Windows® 2003 restricts DLL files and executables from working, unless they are explicitly allowed. Therefore, some security settings in the IIS need to be changed to allow the ISAPI/CGI requester to work. For more information, see the *Magic xpi Help* to access the *Allowing ISAPI of Magic on Windows 2003* technical note.
- There are certain settings that need to be made when working with Magic xpi and IIS 7. For more information, see the *Magic xpi Help* to access the *Working with Magic xpi and IIS 7* technical note.
- The system requirements above are only for the installation of the Magic xpi Server on your machine. These requirements do not include the installation of other Magic xpi modules.
- The deployment requirements are for a Magic xpi Server running up to 35 concurrent flows.
- The minimum system requirements do not take into consideration any project-specific requirements.
- The information above does not refer to additional requirements for running Magic xpi components, such as component configuration or additional software.

Database Requirements

You must use one of the following databases when you install the Magic xpi Server on the Windows platform:

- Oracle Database Server 9i, 10g, or 11
- Microsoft SQL Server 2000, 2005, or 2008
- DB2 and DB2/400
- MySQL

The database does not have to be on the same machine as the Magic xpi Server, but if not, you will need the client software for your database on the machine where the Magic xpi Server is installed.

Internal Database Platform Support

The following table shows the level of support provided for each internal database under various platforms.

Database	Windows	System i	AIX	Linux	Solaris
MSSQL 2000	✓				
MSSQL 2005	✓				
MSSQL 2008	✓				
MySQL	✓			✓	
Oracle 9.0	✓		✓	✓	
Oracle 10	✓		✓	✓	✓
Oracle 11	✓				✓
DB2/400		✓			
DB2 UDB 8		✓	✓		