IBM Maximo Asset Management
Version 7 Release 5

Planning for Deployment

Note
Before using this information and the product it supports, read the information in "Notices" on page 45.

This edition applies to version 7, release 5, modification 0 of IBM Maximo Asset Management and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

Chapter 1. Installation overview

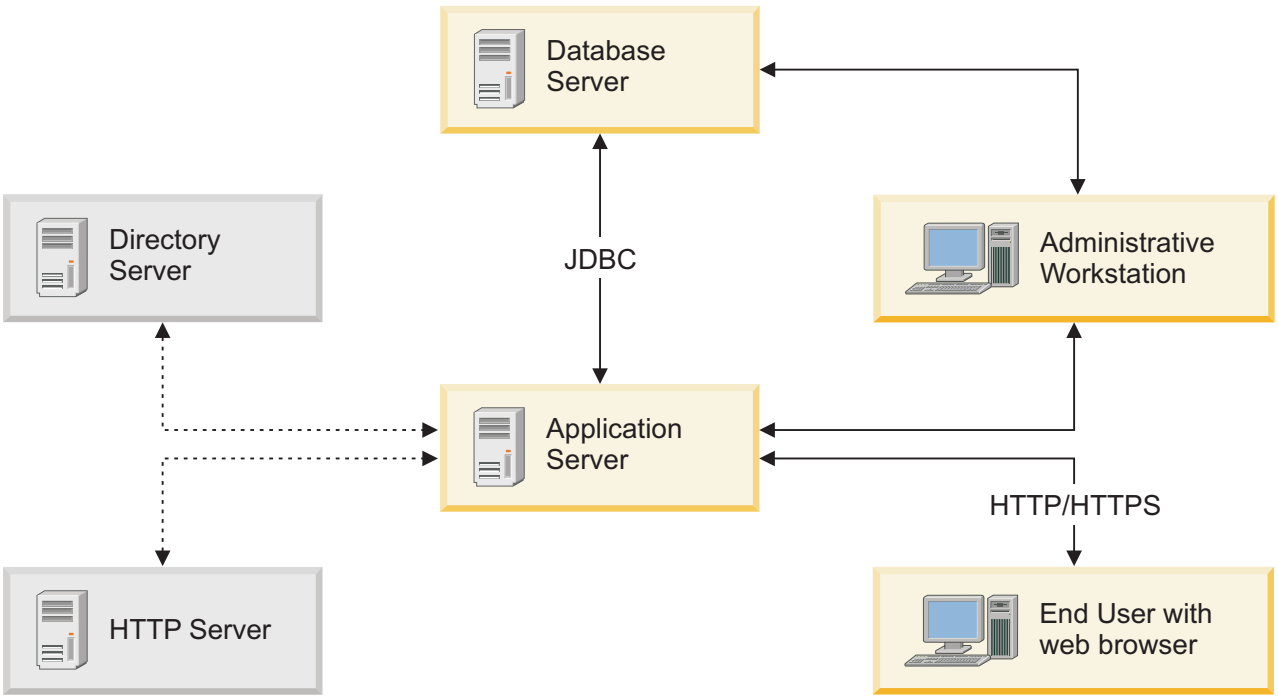
You plan the installation of IBM® Maximo® Asset Management and prepare your environment by using a deployment scenario that fits your requirements.

Installing Maximo Asset Management requires system administrator rights and privileges.

System architecture and components

To prepare for installation, you must set up the required components of a Maximo Asset Management deployment.

Maximo Asset Management requires multiple software servers that are referred to as middleware. The middleware components can run on one or more computers. The components that are used in a typical Maximo Asset Management installation are illustrated in the following figure.



The following components are required for a Maximo Asset Management installation:

Administrative workstation

Used to install Maximo Asset Management. The administrative workstation must be installed on a Microsoft Windows operating system. After the installation, use the administrative workstation to make updates or changes to the configuration.

Database

Stores all information about assets, such as their conditions, their locations, and related records in any of the supported databases.

You can store this information in the IBM DB2® database that is provided in the product installation image.

A list of supported databases is provided in the system requirements information, available from the *Quick Start*.

Application server
Manages the Maximo Asset Management JavaServer Pages (JSPs), XML, and business logic components. Maximo Asset Management uses a commercial Java 2 Platform, Enterprise Edition (J2EE) application server.

You can use the IBM WebSphere® Application Server software that is provided in the product installation image.

Maximo Asset Management supports Oracle WebLogic Server.

Web browser

You access the Maximo Asset Management applications by using a Web browser, connected over a company network or over the Internet.

In addition to the required components, you can use the following optional components with Maximo Asset Management:

HTTP server
You can configure a separate, dedicated HTTP server to work with the J2EE application server.

Directory server
You can configure a directory server, such as a Lightweight Directory Access Protocol (LDAP) server, to provide identity management and authentication for the J2EE server.

Product information

Before you install Maximo Asset Management, review the product installation information.

Quick Start
Provides brief information to help you get started. The *Quick Start*

download and the IBM Maximo Asset Management 7.5. Information Center (http://publib.boulder.ibm.com/infocenter/tivihelp/v49r1/topic/com.ibm.mam.doc/welcome.html) contain copies of the *Quick Start* in several languages.

Download document
Describes how to download the product installation images if you do not

have a product DVD. For more information, see the IBM Maximo Asset Management 7.5 Download Document (www.ibm.com/support/docview.wss?uid=swg24029458).

Product support site

The IBM Software Support website (www.ibm.com/support/entry/portal/Overview/Software/Tivoli/Maximo_Asset_Management) gives you access to the latest fixes and technical notes.

Upgrade Guide

For information about upgrading to version 7.5, see the *Upgrade Guide, IBM Maximo Products V7.1 to V7.5* on the Maximo Upgrade Resources website (www.ibm.com/support/docview.wss?rs=3214uid=swg21266217).

Supported languages

This section describes the languages supported by Maximo Asset Management.

The following are the supported languages:

- Arabic
- Brazilian Portuguese
- Croatian
- Czech
- Danish
- Dutch
- English
- Finnish
- French
- German
- Hebrew
- Hungarian
- Italian
- Japanese
- Korean
- Norwegian
- Polish
- Russian
- Simplified Chinese
- Slovenian
- Spanish
- Swedish
- Traditional Chinese
- Turkish

Note: While Maximo Asset Management itself supports the Turkish language, the installation program does not support Turkish. Furthermore, the administrative workstation must not be set to the Turkish locale before or after installing Maximo Asset Management. After Maximo Asset Management has been installed successfully, Turkish can be deployed as either the base or as an additional language using the language pack installation program. The administrative workstation must remain set to a non-Turkish locale to accommodate future product deployment actions.

Chapter 2. Planning to deploy

Planning your Maximo Asset Management installation is critical to ensure that your deployment is successful.

Review the deployment information and prepare your environment to suit your business needs. Use the planning worksheets that are provided to record the values you use during the installation process. Recording this information is useful for future installations of Maximo Asset Management.

When you have reviewed the deployment information, and when your deployment plan is complete, refer to the Maximo Asset Management installation information to begin your installation. The installation information is available in the IBM Maximo Asset Management 7.5 Information Center (http://publib.boulder.ibm.com/infocenter/tivihelp/v49r1/topic/com.ibm.mam.doc/welcome.html).

Deployment topologies

Determine the most suitable deployment option for your environment and business needs.

Maximo Asset Management works with various databases and J2EE server software, as listed in the system requirements information.

You use the middleware installation program to install IBM middleware products. You can also reuse existing resources in your environment, which can include supported versions of both IBM and non-IBM middleware.

Although IBM middleware is included with Maximo Asset Management, you can deploy Maximo Asset Management with non-IBM middleware exclusively.

There are two primary strategies to deploying Maximo Asset Management in your enterprise.

Single-server

The *single-server* topology consists loading all Maximo Asset Management components, including all Maximo Asset Management middleware, the Maximo Asset Management administrative workstation, process managers, and other components, onto one server. This deployment is typical for proof-of-concept purposes, as a demonstration, or to create a learning environment. For managing enterprise assets and processes, you would typically implement a *multi-server* topology.

Multi-server

The *multi-server* topology consists of splitting Maximo Asset Management components across several different servers. This method is beneficial, as it optimizes resource use and decreases the workload for each system. This type of deployment would be typical for production use within an enterprise.

In a disparate environment, the collection of computers in this deployment can be a mixture of Windows and UNIX computers.

In IBM WebSphere Application Server Network Deployment, you can create deployment managers that provide centralized administration of managed application server nodes and custom nodes as a single cell. IBM WebSphere Application Server Network Deployment provides basic clustering and caching support, including work balancing, automated performance optimization, and centralized management and monitoring.

The Oracle WebLogic Server configuration requires, at a minimum, a single administration server on a single computer.

A typical deployment lifecycle can begin with a single-server topology and progress to a multi-server topology. This progression can occur if you start with a demonstration phase and then move onward to a functional proof-of-concept. Next, you test the integration in the existing environment and move toward a pilot multi-server environment. Finally, you move to a multi-server production deployment in the enterprise.

Maximo Asset Management is built upon the process automation engine. The process automation engine is a core set of functions used by Integrated Service Management (ISM) products. It serves as a common base for shared services and applications inherited by all Maximo Asset Management based products. Process managers are workflow-based applications that you can use to create executable process flows.

Process managers provide a user interface that can be used to:

- Perform process procedures
- Gather information from various sources
- Interact with external tools
- Use and update information in a database
- Provide information to monitoring, analysis, and reporting tools

In addition, you can track execution metrics and use dashboards and reports to identify bottlenecks and improve organizational productivity.

Administrative workstation

You install Maximo Asset Management on an *administrative workstation* that is running a Windows operating system. The administrative workstation is where the product EAR files are built and later deployed to the application server.

The administrative workstation is used in all phases of the product life cycle. It is required for the initial installation and configuration of Maximo Asset Management. You also use the administrative workstation to install program fixes, product upgrades, new applications, new process managers, and additional language packs.

Single server deployment

You can use a single server deployment as a proof-of-concept, as an educational tool, or as a demonstration configuration.

The following figure illustrates Maximo Asset Management deployed on a single computer, which serves as the Maximo Asset Management administrative system and hosts the middleware.

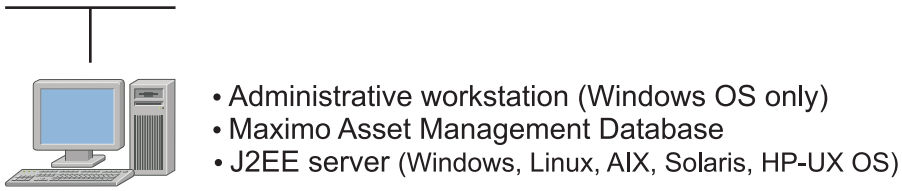


Figure 1. Single server deployment

During installation on a single server, you must select either the simple installation path or the custom installation path. If you choose the simple installation path, Maximo Asset Management middleware is installed on the system with default values that you cannot change. If you choose the custom installation path, you can specify your own values.

Multiple server deployment

You can implement a multiple server deployment by reusing existing components or by installing all new components.

You can simplify the deployment by installing all new components with the Maximo Asset Management middleware and product installation programs. If you plan to reuse or migrate resources that exist in your network, adjust your rollout plan to allow time for additional tasks. For example, you must bring the existing resources to version levels that are compatible with Maximo Asset Management.

The required components for Maximo Asset Management are all installed on different servers.

Important: In certain cases, you must avoid the sharing of resources. For example, do not share one DB2 database instance between Maximo Asset Management and IBM Tivoli® Directory Server. During installation, the database instance is restarted, which can disrupt the availability of IBM Tivoli Directory Server for your enterprise.

If you are using the automated installation programs, separate database instances are created for use by Maximo Asset Management and IBM Tivoli Directory Server.

In a disparate environment, the collection of servers can be a combination of Windows and UNIX servers.

You can create deployment managers that provide centralized administration of managed application servers. Basic caching support is provided, which includes work balancing, performance optimization, and centralized management and monitoring.

With WebSphere Application Server Network Deployment, you can manage nodes as a single cell. WebSphere Application Server Network Deployment also provides basic clustering support and automated performance optimization.

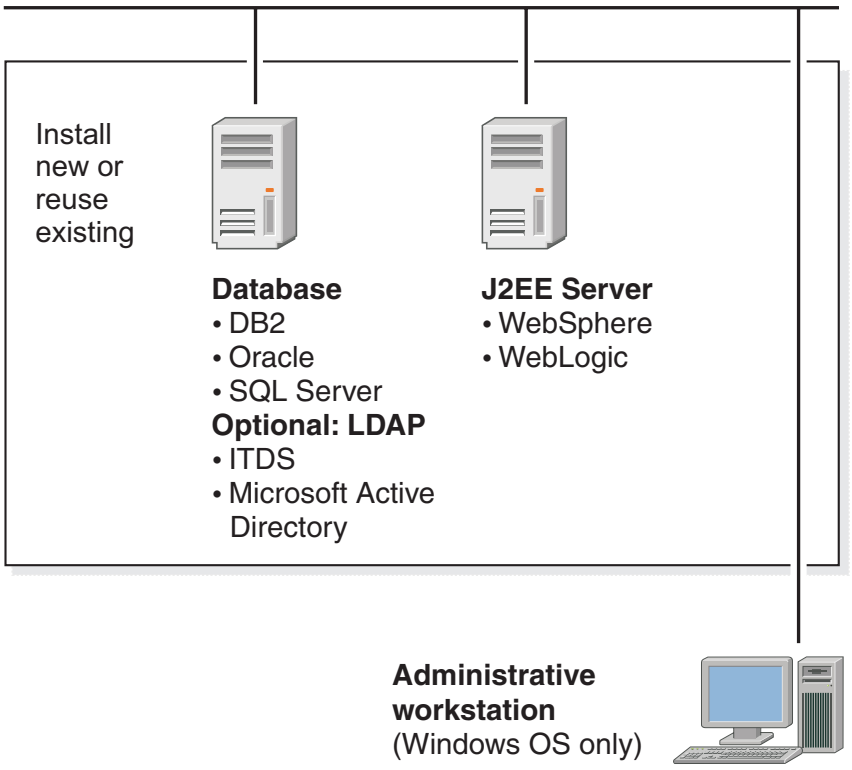


Figure 2. Multiple server deployment

Planning for security

You must choose a security option and decide which system users work with applications in Maximo Asset Management.

Maximo Asset Management can be configured to manage system users and their memberships in security groups. The following user information is required:

Maximo administration user
The product administrator user that is used for initial configuration and for adding users. By default, the value is *maxadmin*.

Maximo system registration user
The user that is used for the self-registration of users. By default, the value is *maxreg*.

Maximo system integration user
The user that is used with enterprise adapters. By default, the value is *maxintadm*.

Default users are created and stored in the Maximo database. You can log in to Maximo Asset Management by using the default users or you can modify the users to suit your security requirements.

When you install Maximo Asset Management, you must choose a method for managing users and groups. This method applies to all products that you install together. If you are installing Maximo Asset Management with another product

that is already installed, the choice you made when installing the first product is used for Maximo Asset Management as well.

If you are using Oracle WebLogic Server, Maximo Asset Management internal authentication is used as the default security option and a directory server is not required. You create and manage users and groups in the Users and Security Groups applications, separately from any corporate user data.

Choosing a security option

The security option you choose determines how your system performs *authentication* and *authorization*. Authentication is the validation of a user signing in to Maximo Asset Management. Authorization uses security groups to control which users can work with each application.

Choose one of the following security options:

Use application server and LDAP for authentication and user/group management
: With this option, you create all your users and security groups in your directory (LDAP) server. The information from the directory server is updated in your Maximo database by using a cron task. With this option, you can create additional security groups and assign group memberships in Maximo. All users must be added in the directory - adding users is not allowed in Maximo. Information entered in Maximo is never propagated to your directory.

Use application server and LDAP for authentication only
: With this option, you can create your users and groups in the directory (LDAP) server or in Maximo. The information from the directory server is updated in your Maximo database by using a cron task. With this option, you can create additional users, security groups and assign group memberships in Maximo. Information entered in Maximo is never propagated to your directory.

Use Maximo internal authentication
: With this option, a directory server is not required. Use the default users that are provided or manage users and groups in the Users and Security Groups applications. Configure the users and groups to protect any corporate user data you might have.

Planning for serviceability

Serviceability refers to problem analysis from a central point, using data collected from a wide range of sources.

Serviceability is different from the method used in the previous version of the product. Serviceability is supported in Maximo Asset Management 7.5 through the use of the IBM Support Assistant Workbench. The workbench is a free utility that you can configure to work with many different products.

Log files for the middleware installation program can be found in the workspace directory you defined when you ran the installation program. These files can be analyzed by the Log Analyzer tool.

Log files for the Maximo Asset Management installation program are on the administrative system in the following directories, where *install_home* equals `C:\IBM\SMP`.

Table 1. Log file directories

Log file directory	Details
install_home\logs	
install_home\solutions\logs	
install_home\maximo\tools\logs	
install_home\CTG_DE	
The `ACULogger.properties` and `deexlogger.properties` files contain *fileDir keys whose values provide the location for the log files. The properties files can be found in *install_home*\CTG_DE..	Log files are generated here if a problem occurs during the validation sequence of the installation program.

After installation, during normal usage of Maximo Asset Management, it can be useful to examine the logs generated for the MXServer application server.

It can also be useful to examine the WebSphere deployment manager and the WebSphere node agent logs.

For more information about log information and the IBM Support Assistant Workbench, see the troubleshooting section of the Maximo Asset Management information center.

Planning language support

Maximo Asset Management includes language support for languages that are supported by UTF-8 and UCS-2.

When Maximo Asset Management is deployed with Microsoft SQL Server, UTF-8 is not supported. Language support is limited to those languages supported by the current Windows system code page. Supported language set choices are:

- All Latin languages and English
- One double-byte character set (DBCS) language and English

If you plan to add language support to Maximo Asset Management, you must use the Maximo Asset Management product installation program to define the base language before you perform any post-installation steps. You can add additional languages at a later date.

If you specify DB2 as the database type, you can disable non-English language support to prevent the process automation engine from deploying languages other than English. Disabling non-English language support enhances database performance, but prevents you from deploying additional languages at a later stage.

Installation program log information

Log files generated by the Maximo Asset Management installation program can provide details on completed installation tasks and any installation errors that might occur.

Maximo Asset Management installation program log locations

Logs can be found in the following locations:

- *install_home*\logs
- *install_home*\solutions\logs
- *install_home*\maximo\tools\logs
- *install_home*\CTG_DE\logs

If you encounter an error during a validation task, logs can also be located within the home directory of the user that started the installation program. For example, C:\Documents and Settings\Administrator.

In addition, if you receive an error credited to the J2EE server, examine the logs in the log directories for the deployment manager, node agent, and WebSphere Application Server application server.

When engaging IBM product support services, be prepared to provide these log files in an archive file. The LogZipper utility provided in the *install_home*\scripts directory can be used for this task. If you use the LogZipper utility, all relevant log files are archived in *install_home*/debug/*YYYYMMDD_hhmmss*.zip.

Chapter 3. Deployment scenario roadmaps

Deployment scenario roadmaps are summaries of product deployment tasks.

The product installation information provides the following deployment scenarios:

- Scenario 1: Deploying with automatic middleware configuration
- Scenario 2: Deploying automatically reusing existing middleware
- Scenario 3: Deploying manually reusing existing middleware

In scenarios 2 and 3, you reuse existing middleware installations as Maximo Asset Management components. For example, you might have an existing instance of a database. This instance might be hosted in an existing database server farm. Corporate access policies, redundancy measures, and backup plans might affect how you deploy software in your organization.

If you plan to reuse existing middleware, ensure that they are at the level supported by Maximo Asset Management. The middleware and product installation programs do not provide a mechanism for updating servers with unsupported versions of middleware. These programs do not provide remote prerequisite checks to ensure that they are at the correct level. Use the prerequisite checking tool provided with the product.

Scenario 1: Deploying with automatic middleware configuration

In this scenario, you deploy this product in a new environment. You use the Maximo Asset Management installation programs and tools to install and automatically configure new installations of middleware and the product.

Oracle WebLogic Server must still be configured manually.

You can use the middleware installation program to install DB2, for example, and use the Maximo Asset Management installation program to automatically configure it.

This scenario is useful for setting up a demonstration environment.

Note: The middleware installation program does not support the HP-UX and Oracle Solaris platforms. However, the following installable images are provided with this product:

- WebSphere Application Server Network Deployment
- DB2
- IBM Tivoli Directory Server

Scenario 2: Deploying automatically reusing existing middleware

In this scenario, you deploy this product with middleware that exists in your enterprise. You use the product installation programs and tools to automatically configure your middleware. This scenario is applicable in situations where you already have existing middleware resources established in your enterprise.

Oracle WebLogic Server must be configured manually, but you can use the Maximo Asset Management installation program to automatically configure an existing database, for example.

Scenario 3: Deploying manually reusing existing middleware

In this scenario, you deploy this product with middleware that exists in your enterprise, and you manually configure that middleware. This scenario is applicable to those situations in which you have existing middleware resources. You might have particular company-sanctioned processes and regulations that restrict your use of automated configuration tools when you are deploying a new application. In this scenario, you do not use the middleware installation program at any time during the deployment. All manual middleware configuration information is contained in this scenario.

Chapter 4. Installation options

The installation programs provide options that give you flexibility in the way you deploy the middleware and product.

Simple or custom option

Early in the installation, you can choose which type of installation you want, simple, or custom.

Maximo Asset Management can be installed in one of two ways:

Simple
Select simple if you want to deploy all Maximo Asset Management components on a single system with all middleware provided by IBM. This deployment option is typically only used for demonstration, proof-of-concept, or training purposes.

Custom
Select custom if you want to deploy Maximo Asset Management components across several systems. This deployment option is typically used in a production environment.

If you are deploying Maximo Asset Management on Oracle WebLogic Server, you must choose this option.

In some instances, you want to avoid the sharing of resources. For example, most deployments do not use the same DB2 database instance between Maximo Asset Management and IBM Tivoli Directory Server. During the installation, the database instance is restarted, which can disrupt the availability of IBM Tivoli Directory Server to your enterprise. If you are using the automated installation programs, separate instances are created for use by Maximo Asset Management and IBM Tivoli Directory Server.

Chapter 5. Middleware

Before you can install Maximo Asset Management, there are several Maximo Asset Management middleware products that must be deployed. If you intend to reuse existing resources they must be configured either manually or with the Maximo Asset Management installation programs

The middleware installation program provides an interface for installing and deploying Maximo Asset Management middleware in a reliable and repeatable fashion. The middleware installation program records choices you make about your Maximo Asset Management deployment and configuration parameters associated with those choices. The middleware installation program installs and deploys Maximo Asset Management middleware based upon the information you entered.

The middleware includes the following software:

- Database server

  Maximo Asset Management uses the Maximo database to store details about the attributes and history of each configuration item and the details about the relationships between configuration items. A database is a required component for deploying Maximo Asset Management.

  You have the choice of installing a new instance of DB2 9.7 using the middleware installation program. You can also use a preexisting instance of DB2 9.5, or DB2 9.7.

  You can choose to use Microsoft SQL Server, but you must install and configure it manually.

  You can choose to use Oracle, but you must install and configure it manually.
- Directory server

  The directory server is an optional component that can be used to secure Maximo Asset Management if you choose to use an LDAP server for security.

  You can install a new instance of IBM Tivoli Directory Server 6.3 with the middleware installation program, or use a preexisting instance of IBM Tivoli Directory Server. If you choose to install a new version of IBM Tivoli Directory Server, you must choose to install a new DB2 instance or reuse an existing DB2 server. Alternatively, you can use the Maximo Asset Management database server for the DB2 data store if the Maximo Asset Management database server uses DB2. If you choose to install the directory server but not the database server, the middleware installation program attempts to locate an existing database instance to use. If it fails to locate an existing instance, it installs a database for use with the directory server.

  You can choose to use Microsoft Active Directory , but you must install and configure it manually.
- J2EE server

  The J2EE server is the application server used to serve and manage the Maximo Asset Management application.

  The J2EE server can optionally be secured with a directory server.

  WebSphere Application Server Network Deployment includes the following subcomponents:

  – IBM HTTP Server

IBM HTTP Server is used as the primary HTTP server.

You install a new instance of IBM HTTP Server.

– IBM HTTP Server plug-in

  The IBM HTTP Server plug-in is used as the interface between IBM HTTP Server and the J2EE server

  You install a new instance of IBM HTTP Server plug-in.

The middleware installation program does not install Oracle WebLogic Server and the Maximo Asset Management installation program cannot automatically configure it. Oracle WebLogic Server is a manual configuration effort.

The middleware installation program deploys software on a single server. To deploy Maximo Asset Management middleware on multiple servers, the middleware installation program must be started on each server in the topology configuration you chose. Ensure that you have a strategy for deploying Maximo Asset Management middleware for each system you plan to use in your Maximo Asset Management deployment.

If you install middleware with the middleware installation program, and want to add additional middleware to that system, you must first uninstall the original middleware. When you install middleware on a system, you must install all of the middleware intended for that system at one time.

A process ID is generated each time the middleware installation program is used to install or uninstall a set of middleware products. The process ID appears on the file system in various places related to logs and generated files, such as file names, directory names, and log messages. The process ID is used to group logs and other generated files that are related to the same invocation of the middleware installation program. It also separates logs and other generated files that are related to different invocations of the middleware installation program. The process ID is a string of the format [operation_MMdd_HH.mm]. The operation value indicates the operation performed, such as "INSTALL" or "UNINSTALL". The MM value is a two-digit number (1-12) indicating the current month. The dd value is a two-digit number (1-31) indicating the current day in the month. The HH value is a two-digit number (0-23) indicating the current hour. The mm value is a two-digit number (0-59) indicating the current minute. Here are some examples of process ID values:

- `[INSTALL_0924_15.45]`

  An installation started on September 24 at 3:45pm

- `[UNINSTALL_1216_09.59]`

  An uninstallation started on December 16 at 9:59am

Note: The middleware installation program does not support the HP-UX and Oracle Solaris platforms, however, installable images for DB2 is provided with Maximo Asset Management.

Note: The middleware installation program does not support the HP-UX and Oracle Solaris platforms, however, installable images for WebSphere Application Server Network Deployment is provided with Maximo Asset Management.

Note: The middleware installation program does not support the HP-UX and Oracle Solaris platforms, however, installable images for IBM Tivoli Directory Server is provided with Maximo Asset Management.

Middleware installation program workspace

The middleware installation program is designed to record the options you select during installation in a directory known as the **workspace**, and then configure the components selected as a single deployed application.

After a plan has been deployed, the middleware installation program cannot deploy additional features and products onto the system at a later time. The existing plan must first be undeployed with the middleware installation program before a different set of features and products can be deployed.

The composition and details of the deployment and any logs generated by the middleware installation program process are located in the workspace.

By default, the middleware installation program workspace is defined as:

Windows
`C:\ibm\tivoli\mwi\workspace`

AIX® `/ibm/tivoli/mwi/workspace`

Linux `/root/ibm/tivoli/mwi/workspace`

The workspace can be defined on a shared resource that is made available to all the systems that run the middleware installation program. Locating the workspace on a shared resource avoids the need to copy files such as the topology file manually from one system to another.

The workspace contains the following items:

Deployment Plan
The deployment plan is a collection of installation steps, configuration parameters for those steps, and target system information. It is generated by the middleware installation program and is located in the workspace directory.

When deployment steps are changed, the existing deployment plan is deleted and replaced with the new deployment plan.

The deployment plan configuration files contain information about the deployment plan itself. Whenever a deployment plan is modified, which includes reconfiguring existing deployment choices, the deployment plan configuration files are deleted. These files are regenerated when the deployment plan is redeployed.

Topology File
The topology file is a properties file that describes the configuration parameters of the Maximo Asset Management middleware deployment. This file is created and then updated after every deployment or undeployment. If you have not defined a workspace that is centrally located and accessible to all the systems receiving Maximo Asset Management middleware, this file must be copied to the workspace of each system where Maximo Asset Management middleware is being deployed. The contents of this file can be used by the Maximo Asset Management installation program to populate its panels with meaningful default values.

This file is saved in *workspace*`/topology.xml`.

Logs Log files that contain information about the deployment can be found in

the workspace directory. In addition, log files native to the Maximo Asset Management middleware itself are also contained in this directory.

Middleware configuration options

If middleware was installed by the middleware installation program or you have an existing middleware resource to use, you have two options for configuring the servers for use with Maximo Asset Management.

Auto-configure
The Maximo Asset Management installation program automatically configures middleware to work together with Maximo Asset Management.

Manual
You can manually configure middleware that either exists in your environment or was installed by the middleware installation program. This configuration must be completed before you start the Maximo Asset Management installation program.

When deploying Maximo Asset Management on Oracle WebLogic Server, you must manually configure it.

Middleware object naming conventions

When installing and configuring middleware in the middleware installation program and the Maximo Asset Management installation program, observe the conventions for object names that are described in this topic.

The following table lists the restrictions for names of middleware objects.

Table 2. Middleware object naming conventions

Header	Header
DB2 naming conventions for group names, user names, and user IDs.	Group names and user IDs on Linux and UNIX operating systems can contain up to eight characters and must consist of lowercase characters only. Group names and user names on Windows can contain up to 30 characters. Names and IDs cannot be any of the following values: USERS, ADMINS, GUESTS, PUBLIC, LOCAL, or any SQL-reserved word. Names and IDs cannot begin with IBM, SQL, or SYS. They must also not begin with the underscore (_) character.
DB2 naming conventions for DB2 instances.	Instance names can have up to 8 characters. On Windows, no instance can have the same name as a service name.
DB2 naming conventions for passwords.	For UNIX systems, passwords can be a maximum of 8 characters. For Windows systems, passwords can be a maximum of 14 characters.

Table 2. Middleware object naming conventions (continued)

Header	Header
IBM Tivoli Directory Server conventions for databases and database aliases.	Database names must be unique within the location in which they are cataloged. For Linux and UNIX, this location is a directory path. For Windows it is a logical disk. Database alias names must be unique within the system database directory. When a new database is created, the alias defaults to the database name. As a result, you cannot create a database using a name that exists as a database alias, even if there is no database with that name. Database and database alias names can have up to 8 characters. Be mindful that the special characters @, #, and $ are not common to all keyboards. Avoid using these characters when creating a database name.
IBM Tivoli Directory Server conventions for users, groups, databases, and instances	Values cannot be longer than 8 characters. Do not use any of the following values: USERS, ADMINS, GUESTS, PUBLIC, LOCAL, or idsldap. Values cannot begin with IBM, SQL, or SYS. Values cannot include accented characters. Values can include characters A through Z, a through z, and 0 through 9. Values must begin with characters A through Z or a through z. Double-byte characters cannot be used in administrator passwords values. Passwords cannot contain the following special characters: ` ' \ " |
WebSphere Application Server Network Deployment	The administrator name cannot contain the following characters: / \ * ,: ;=+?|< > & % '"] [> # $ ~ ( ) ! The administrator name cannot begin with a period. The administrator name cannot contain leading and trailing spaces. The administrator password must consist of 8 characters.

Table 2. Middleware object naming conventions (continued)

Header	Header
Middleware installation program	The middleware installation program does not validate that your password is compliant with the operating system of the target host. Ensure that the password values you provide are valid for your environment. You cannot use the '%' character on Windows or !, $, #, % characters on UNIX. The middleware installation program does not check for accented characters in user name values. The use of accented characters can cause errors. Do not include the underscore character (_) when entering host names. Using this character causes an error during middleware installation.

Important: When entering LDAP values for product installation panel fields, in LDIF files, or directly into a directory instance, be aware of the product-specific syntax rules for using special characters in an LDAP string. In most cases, special characters must be preceded by an escape character to make them readable by the directory server. Failing to escape special characters contained in an LDAP string used with Maximo Asset Management result in Maximo Asset Management errors.

Many directory server products consider a blank space as a special character that is part of the LDAP string. If you enter an LDAP string that contains a blank in a field, you encounter Maximo Asset Management errors that are difficult to troubleshoot. You must precede any blank characters with an escape character. See the product documentation for your directory server for more information about special characters in LDAP strings.

Chapter 6. Performing multiple product installations on one administrative workstation

You can use a single computer to deploy multiple installations, such as a test environment, a development environment, and a training environment.

A single administrative workstation can support multiple product deployments. During the Maximo Asset Management installation, you specify the installation directory for that particular deployment on the Choose installation folder panel. When the installation is complete, you can install another instance of the product on the same administrative workstation by specifying a new installation path. Enter a meaningful directory name that represents the purpose of the deployment.

Each instance of the product requires a dedicated database instance and a dedicated Java 2 Platform, Enterprise Edition (J2EE) server. You cannot share these resources between deployments.

Tip: For workstations with multiple product deployments, complete any post-installation actions for one single deployment at a time. The same practice applies to all future installation actions that are started from the process solution installer, from the product installation program, or from applying fix packs.

Chapter 7. Training databases

You can create *maxdemo* databases as a test environment for training purposes. You can populate the *maxdemo* database with sample data to gain experience of using Maximo Asset Management functions while you build your custom environment.

Maxdemo databases can be created during the installation of Maximo Asset Management or after the installation process is complete. For more information, refer to the Maximo Asset Management 7.5 installation information.

Chapter 8. Planning for system performance

When you plan your deployment, you need to understand the architecture and how implementation choices affect system performance.

The decisions that you make when planning and customizing your deployment affect system performance. However, deployments in virtualized environments that have shared memory and processors, such as VMware, might not see performance benefits from these implementation options.

Automated workflows
Automated workflows can be created to implement processes and validate certain inputs. If your users require many complicated workflows, more processing power is used. As a result, workflows can have a noticeable effect on performance. Setting up the system so that automated workflows are processed on dedicated JVMs can help your implementation to run efficiently and effectively.

Concurrent users on processing cycles
Consider the tasks and goals of your users. Are they entering items that use low processing cycles, such as service requests? Or are they completing complicated tasks that require additional memory, such as frequent database lookups? How many transactions per hour do you expect that your users to produce? Will your users all use the system at roughly the same hours or do your users work shifts throughout the day and night? You can set up separate Java virtual machines (JVMs) or clusters of JVMs to handle high load levels for a specific function. For example, you can deploy four clusters to separate the functions of the user interface, cron tasks, integration framework, and reports.

Cron tasks
Cron tasks are automated jobs that can run on a set schedule. As you plan your deployment, consider the volume and processing power that your cron tasks require and plan to schedule them outside of normal business hours. Additionally, you can use a clustered environment to run cron tasks on dedicated JVMs, which can minimize the system performance impact for users.

Customization
Extensive customization, such as conditional user interface or complex query restrictions, can result in few users per JVM because of the extra processing that is required. If your deployment requires complex customization, make sure that you have enough hardware and memory to handle the increased demands.

Hardware
The type of hardware used in your deployment can determine how many active users that each JVM can support. Whenever possible, use 64-bit hardware that has high processor clock speeds, which can support more users on each JVM.

Monitoring tools
When planning your deployment, consider which monitoring tools that you plan to use in production. For example, you might want to use the Tivoli Monitoring Agent for Maximo feature pack or IBM Tivoli Composite

Application Manager for application monitoring. You also can consider how you plan to monitor your middleware and your network bandwidth.

Network infrastructure

Ensure that you have sufficient bandwidth between the servers in your infrastructure. You might consider putting all servers on the same local area network to minimize network latency issues. Additionally, consider the available bandwidth between the servers and the clients. Before deployment, you can monitor the network throughput from various client locations to locate potential problems.

Performance testing

The best way to discover performance issues is to run performance tests before your deployment enters the live or production stage. Performance tests determine the responsiveness and stability of a system under a particular workload. You can design use cases that test the most frequently used and important functions for your deployment.

Appendix A. Installation program tasks

The Maximo Asset Management installation program performs a series of configuration and deployment tasks when you instruct it to automatically configure middleware.

The following list details the steps taken by the Maximo Asset Management installation program during a typical installation. This information is provided so it can be reviewed in order to ensure that the Maximo Asset Management installation program is compliant with your corporate application deployment policy.

For applicable tasks, links are provided to manual configuration instructions if you plan to opt out of the automatic middleware configuration provided by the Maximo Asset Management installation program. In this case, these tasks must be completed before running the Maximo Asset Management installation program

Table 3. Maximo Asset Management installation program tasks

Task Category	Automated Installation Action	Description	Manual Instructions
Access	Database user created for DB2	A system user named `maximo` by default is created on the DB2 server that are used to access the Maximo database. This default value can be modified.	You can manually create this system user on the DB2 server before running the Maximo Asset Management installation program using the methods prescribed by your organization.
WebSphere Application Server thin client	WebSphere Application Server thin client configuration	The keystore file is copied from the WebSphere Domain Manager to the Maximo Asset Management administrative system in order to establish communications between the two systems.	Instructions for manually copying the keystore file from the WebSphere Domain Manager can be found in the product installation information. Ensure that the SOAP port for the WebSphere Domain Manager is accessible by the Maximo Asset Management administrative system. By default, this port is 8879.
Database	Create a database instance	A new database instance is created for Maximo Asset Management on DB2 if one does not exist.	You can either reuse an existing database instance or create a database instance. Instructions for manually creating a database instance for DB2 can be found in the product installation information.
Database	Create a database instance	A new database instance is created for Maximo Asset Management on Oracle if one does not exist.	You can either reuse an existing database instance or create a database instance. Instructions for manually creating a database instance for Oracle can be found in the product installation information.

Table 3. Maximo Asset Management installation program tasks (continued)

Task Category	Automated Installation Action	Description	Manual Instructions
	Create a database	A new database is created for Maximo Asset Management for DB2.	Instructions for manually creating a database for DB2 can be found in the product installation information.
	Create a database	A new database is created for Maximo Asset Management for Microsoft SQL Server.	Instructions for manually creating a database for Microsoft SQL Server can be found in the product installation information.
	Database user created for Oracle.	A database user named `maximo` by default is created for Oracle that is used to access the Maximo database. This default value can be modified.	You can manually create this system user on Oracle before running the Maximo Asset Management installation program using the methods prescribed by your organization. Information on granting permissions to the user for Oracle can found in the product installation information.
	Database user created for Microsoft SQL Server.	A database user named `maximo` by default is created for Microsoft SQL Server that is used to access the Maximo database. This default value can be modified.	You can manually create this system user on Microsoft SQL Server before running the Maximo Asset Management installation program using the methods prescribed by your organization. For Microsoft SQL Server, this user must be the owner of the database.
	Create table spaces	Table spaces are created for the new DB2 database.	Instructions for manually creating table spaces for DB2 can be found in the product installation information.
	Create table spaces	Table spaces are created for the new Oracle database.	Instructions for manually creating table spaces for Oracle can be found in the product installation information.
	Deploy the Maximo database schema	The Maximo database schema is deployed into the newly created database.	The name of the database schema is required to be the same value as the owner of the table spaces defined.
	The maxinst command is run	maxinst deploys database tables and required data.	

Table 3. Maximo Asset Management installation program tasks (continued)

Task Category	Automated Installation Action	Description	Manual Instructions
WebSphere Application Server Network Deployment	Create a database instance and user ID	If you opt to persist JMS messages in a database, a new DB2 database instance is created. A database instance user ID is also created.	A new database instance for persisting JMS messages can be manually created using the standard procedures of your organization. If you are using Oracle or Microsoft SQL Server, and assuming that you do not intend to reuse existing resources, you must manually create a database instance and user ID for message persistence.
	Create a database	If you opt to persist JMS messages in a database, a new database is created on DB2.	A new database for persisting JMS messages can be manually created using the standard procedures of your organization. If you are using Oracle, and assuming that you do not intend to reuse existing resources, you must manually create a database for message persistence. If you are using Microsoft SQL Server, and assuming that you do not intend to reuse existing resources, you must manually create a database for message persistence.
	Create a data source	If you opt to persist JMS messages in a database, a data source is created.	Instructions for manually creating the data source for persisting messages can be found in the product installation information..
	Create an application server.	A new application server named `MXServer` is created if it does not already exist. This value is the default value. Right after the application server is created, the JVM heap size is set for it. If the application server has been previously created, then this step consists only of setting the JVM heap size for it.	Instructions for manually creating an application server can be found in the product installation information.
	Set JVM heap size on the WebSphere Deployment Manager.	The JVM heap size is set to 1536 for Initial Heap Size and Maximum Heap Size on the WebSphere Deployment Manager for 32-bit platforms. For 64-bit platforms, this value is 4096.	You can manually set the heap size on the WebSphere Deployment Manager using the standard procedures of your organization.

Table 3. Maximo Asset Management installation program tasks (continued)

Task Category	Automated Installation Action	Description	Manual Instructions
	Create system integration buses and system integration bus destinations	System integration buses and system integration bus destinations are created for messaging purposes.	Instructions for manually creating system integration buses and system integration bus destinations can be found in the product installation information.
	Create JMS queues	JMS queues are created for messaging purposes.	Instructions for manually creating JMS queues can be found in the product installation information.
	Modify web.xml files	The web.xml files located on the deployment manager are modified to include Maximo Asset Management deployment information, including letting the deployment manager know how the Maximo Asset Management application handles its authentication needs.	
	Integration Framework Adapter is enabled.		
	Users created within the LDAP repository.	The following default users and groups created in the LDAP repository. **Users** • wasadmin • maxadmin • mxintadm • maxreg	More information found in the product installation information.
	Process managers deployed.	The Maximo Asset Management components are deployed using the Process Solution installation program.	
	Applications deployed	The maximo and maximohelp applications are deployed to the `MXServer` application server.	
	`updatedb` command run	The **`updatedb`** command is run to update the Maximo database.	
	The VMMSYNC crontask. is modified.	The VMMSYNC crontask is used to schedule the synchronization between Virtual Member Manager and the LDAP repository you configure for authentication.	More information can be found in the product installation information.

You have the option of manually completing these tasks. You would then select the option to not automatically configure middleware servers Maximo Asset Management installation program.

Appendix B. Planning worksheets for middleware installation

Before you start the installation, use the planning worksheets to record values to specify when installing the components you choose for your deployment. For distributed deployments, record multiple values where appropriate.

The worksheets are also helpful if you intend to manually configure or reuse existing middleware.

Directory structure for middleware products

Do not install multiple middleware products into the same custom directory.

For example, when installing DB2, WebSphere Application Server Network Deployment, and IBM Tivoli Directory Server on the same computer, you cannot install them all in a `C:\ISM_middleware` directory. You can, however, install them in `C:\ISM_middleware\DB2`, `C:\ISM_middleware\WAS`, and `C:\ISM_middleware\ITDS`. You also cannot install one middleware product in a custom directory and then install another middleware product in a subdirectory of that custom directory. For example, if you install DB2 into `C:\ISM_middleware`, you cannot then install IBM Tivoli Directory Server into `C:\ISM_middleware\ITDS`.

Users and groups

When you run the middleware installation program, you are prompted for user IDs to initiate the installation of middleware. You can either supply an existing system user ID, or allow the middleware installation program to create a user ID.

Note: The installation can fail on Linux and UNIX operating systems if you specify an existing user account to install and that user account is not located under the `/home` directory.

In this table, list the users and groups that you want to create if you do not want to use the default values.

Table 4. Users and groups created during Maximo Asset Management deployment

User	Group	Description	Your value
db2admin (Windows only)	**Windows** • Administrators • DB2USERS • DB2ADMNS	DB2 administrator. Windows Service user ID. This user only required for deployments using DB2.	

Table 4. Users and groups created during Maximo Asset Management deployment (continued)

User	Group	Description	Your value
idsccmdb **Note:** The root user must also be a member of the primary group of the IBM Tivoli Directory Server instance user (by default, idsccmdb).	**Linux and UNIX** • dasadm1 This value cannot be changed when using the middleware installer. • idsldap This value cannot be changed when using the middleware installer. • dbsysadm This value cannot be changed when using the middleware installer.	IBM Tivoli Directory Server instance owner. Also the owner of the database used with the IBM Tivoli Directory Server instance. This user only required for deployments using IBM Tivoli Directory Server.	
maximo		Used for Maximo database configuration.	
ctginst1	**Linux and UNIX** • dasadm1 This value cannot be changed when using the middleware installer. • db2iadm1	The system user that is used as the database instance owner on UNIX systems. This user only required for deployments using DB2.	
db2fenc1	**Linux and UNIX** • db2fgrp1	System user that is used as the fenced user ID for the DB2 default instance of db2inst1. This user only required for deployments using DB2.	
ctgfenc1	**Linux and UNIX** • ctgfgrp1 This value cannot be changed when using the middleware installation program.	System user that is used as the fenced user ID for the DB2 server instance of ctginst1. This user only required for deployments using DB2.	
dasusr1	**Linux and UNIX** • dasadm1 This value cannot be changed when using the middleware installation program.	System user used as the administration server user. This user only required for deployments using DB2.	

Table 4. Users and groups created during Maximo Asset Management deployment (continued)

User	Group	Description	Your value
db2inst1	**Linux and UNIX** • dasadm1 This value cannot be changed when using the middleware installation program. • db2iadm1	System user used as the default database instance owner. This user only required for deployments using DB2.	
idsldap This value cannot be changed when using the middleware installer.	**Linux and UNIX** • idsldap This value cannot be changed when using the middleware installation program. • db2iadm1 • root	IBM Tivoli Directory Server user. This user only required for deployments using DB2.	
wasadmin	Not a system user.	User ID created for use with IBM WebSphere Application Server Network Deployment. This user only required for deployments using IBM WebSphere Application Server Network Deployment.	

For Linux and UNIX systems, the root user must be a member of the dasadm1, idsldap, and dbsysadm groups. The root user must also be a member of the primary group of the IBM Tivoli Directory Server instance user (by default, idsccmdb).

The following example illustrates users and groups created if you use the middleware installation program to install middleware on Linux and UNIX systems using default values. Use this information to determine the primary group of a user ID.

```
# id db2inst1
uid=510(db2inst1) gid=102(db2iadm1) groups=102(db2iadm1),101(dasadm1)

#id ctginst1
uid=512(ctginst1) gid=102(db2iadm1) groups=102(db2iadm1),101(dasadm1)

# id idsccmdb
uid=514(idsccmdb) gid=502(dbsysadm) groups=502(dbsysadm),101(dasadm1),501(idsldap)

# id db2fenc1
uid=511(db2fenc1) gid=103(db2fgrp1) groups=103(db2fgrp1)

# id ctgfenc1
uid=513(ctgfenc1) gid=104(ctgfgrp1) groups=104(ctgfgrp1)

# id dasusr1
uid=508(dasusr1) gid=101(dasadm1) groups=101(dasadm1)
```

```
# id idsldap
uid=513(idsldap) gid=501(idsldap) groups=501(idsldap),0(root),102(db2iadm1)

#id root
uid=0(root) gid=0(root) groups=0(root),1(bin),2(daemon),3(sys),4(adm),
6(disk),10(wheel),501(idsldap),502(dbsysadm)
```

The following entries are found in the `/etc/group` file:

```
dasadm1:x:101:db2inst1,ctginst1,idsccmdb

db2iadm1:x:102:idsldap

idsldap:x:501:idsldap,root,idsccmdb

dbsysadm:x:502:root
```

Directory locations

In this table, list the middleware directory locations to use.

Table 5. Directory locations

Setting	Default	Your value
Workspace directory	*user_home*\ibm\tivoli\mwi\workspace	
Middleware images source directory		
Compressed images directory		
Uncompressed images directory		

DB2 configuration

In this table, list the configuration values to use when you install DB2.

Table 6. DB2 configuration

Setting	Default	Your value
Installation directory	**Windows** *SystemDrive*\Program Files\IBM\SQLLIB **Linux, AIX, HP-UX, Solaris** /opt/IBM/db2/V9.7	
DAS user	**Windows** db2admin **Linux, AIX, HP-UX, Solaris** dasusr1	
Fenced user for the DB2 default instance	**Linux, AIX, HP-UX, Solaris** db2fenc1 The option to create the DB2 default instance is not enabled in the middleware installation program, by default.	

Table 6. DB2 configuration (continued)

Setting	Default	Your value
Fenced user group name for the DB2 default instance	**Linux, AIX, HP-UX, Solaris** db2fgrp1 The option to create the DB2 default instance is not enabled in the middleware installation program, by default.	
Fenced user for the DB2 default instance home directory	**Linux, AIX, HP-UX** `/home/db2fenc1` **Solaris** `/export/home/db2fenc1` The option to create the DB2 default instance is not enabled in the middleware installation program, by default.	
Fenced user for the DB2 server instance	**Linux, AIX, HP-UX, Solaris** ctgfenc1	
Fenced user group name for the DB2 server instance	**Linux, AIX, HP-UX, Solaris** ctgfgrp1	
Fenced user for the DB2 server instance home directory	**Linux, AIX, HP-UX** `/home/ctgfenc1` **Solaris** `/export/home/db2fenc1`	
Instance name	ctginst1	
Port	50005	
Instance user name home directory	**Linux, AIX, HP-UX** `/home/ctginst1` **Solaris** `/export/home/ctginst1`	
Database instance user ID	**Windows** db2admin **Linux, AIX, HP-UX, Solaris** ctginst1	
DB2 administrators group	**Windows** DB2ADMNS **Linux, AIX, HP-UX, Solaris** db2iadm1	
DB2 users group	**Windows** DB2USERS	
Use same user name and password for remaining DB2 Services	YES	
Configure Tools Catalog	NO This value is relevant for reuse scenarios only.	

Table 6. DB2 configuration (continued)

Setting	Default	Your value
Enable operating system security for DB2 objects	YES This value is relevant for reuse scenarios only.	
DB2 instance port		
Data table space name	MAXDATA	
Data table space size	medium (1000 MB) **DB2** Medium (5000 MB)	
Temporary table space name	MAXTEMP	
Temporary table space size	1000 MB	

Oracle configuration

In this table, list the configuration values to use when you install Oracle.

Table 7. Oracle configuration

Setting	Default	Your value
Installation directory	**Windows** *SystemDrive*\oracle\product\11.2.0\db_1 **Linux, AIX, HP-UX, Solaris** /opt/app/oracle/product/11.2.0/db_1	
Administrator User ID	sys	
Oracle Software Owner ID	**Windows** Administrator **Linux, AIX, HP-UX, Solaris** oracle	
Instance Location	**Windows** C:\oracle\product\11.2.0\db_1 **Linux, AIX, HP-UX, Solaris** /opt/app/oracle/product/11.2.0/db_1	
Data table space name	MAXDATA	
Data table space size	**Oracle** Medium (1000 MB)	
Temporary table space name	MAXTEMP	
Temporary table space size	1000 MB	

Microsoft SQL Server configuration

In this table, list the configuration values to use when you install Microsoft SQL Server.

Table 8. Microsoft SQL Server configuration

Setting	Default	Your value
Installation directory	*ProgramFiles*\Microsoft SQL Server\90	
Named instance	maximo	
Microsoft SQL Server administrator	sa	
Microsoft SQL Server administrator password		
Port	1433	
Database name	maxdb75	
User ID	maximo	
User ID password		
Data file name	maxdb75_dat	
Log file name	maxdb75_log	

WebSphere Application Server Network Deployment configuration

List the configuration values to use when you install WebSphere Application Server Network Deployment.

Table 9. WebSphere Application Server Network Deployment configuration

Setting	Default	Your value
Installation location	**Windows** C:\Program Files\IBM\WebSphere\AppServer **Linux, HP-UX, Solaris** /opt/IBM/WebSphere/AppServer **AIX** /usr/IBM/WebSphere/AppServer	
WebSphere Administration user name	wasadmin	
Deployment Manager profile name	ctgDmgr01	
Application server profile name	ctgAppSrv01	
Profile directory	**Linux, HP-UX, Solaris** /opt/IBM/WebSphere/AppServer/profiles **AIX** /usr/IBM/WebSphere/AppServer/profiles	
Cell name	ctgCell01	
Deployment Manager node name	ctgCellManager01	
Application server node name	ctgNode01	

Table 9. WebSphere Application Server Network Deployment configuration (continued)

Setting	Default	Your value

HTTP server installation location	**Windows**
	`C:\Program Files\IBM\HTTPServer`
	Linux, HP-UX, Solaris
	`/opt/IBM/HTTPServer`
	AIX `/usr/IBM/HTTPServer`	

HTTP port	80 On Windows, this port might already be in use. Ensure that you either free this port, or use another port that is unassigned.	
HTTP admin server port	8008	
HTTP plug-in profile name	ctgAppSvr01	

Oracle WebLogic Server configuration

List the configuration values to use when configuring Oracle WebLogic Server.

Table 10. Oracle WebLogic Server configuration

Setting	Default	Your value

Domain source	**Windows:**
	`\wlserver_10.3\common\templates\domains`
	Linux, Solaris:
	`/wlserver_10.3/common/templates/domains`	

Customize environment and services settings	No.	
Domain name	*my_domain* **Note:** Enter any name except for `MAXIMOSERVER`	
Administration server name	`MAXIMOSERVER`	
Listen address	All Local Addresses	
Listen port	`7001`	
Start Menu shortcut link name	Start Server	
Start Server program name	**`startWebLogic.cmd`**	

IBM Tivoli Directory Server configuration

In this table, list the configuration values to use when you install IBM Tivoli Directory Server.

Table 11. IBM Tivoli Directory Server configuration

Setting	Default	Your value

Install location	**Windows**
	`C:\Program Files\IBM\LDAP\V6.3`
	Linux, AIX, HP-UX, Solaris
	`/opt/IBM/ldap/V6.3`	

Administrator distinguished name	cn=root	
Organizational unit	ou=SWG	
Organization and country suffix	o=IBM,c=US	
Directory server port	389	
Directory server secure port	636	
Administration port	3538	
Administration secure port	3539	
Database name	security	
Instance name	idsccmdb	
Instance user name	idsccmdb	

Microsoft Active Directory configuration

List the configuration values to use when you install Microsoft Active Directory.

Table 12. Microsoft Active Directory configuration

Setting	Default	Your value
Directory server port	389	
LDAP base entry		
User suffix		
Group suffix		
Organization container suffix		
Bind distinguished name		

Appendix C. Planning worksheet for product installation

These tables list the values for settings you supply when using the Maximo Asset Management installation program. Values you enter depend on the components you select for the deployment.

Table 13. Settings for a custom installation

Setting	Default	Your value
Installation directory	**Windows** `C:\IBM\SMP`	
DB2 host name		
DB2 port	50005	
Maximo database name	maxdb75	
Maximo database instance	ctginst1	
Schema name	maximo	
Maximo database user ID	maximo	
DB2 installation directory	**Windows** `C:\Program Files\IBM\SQLLIB` **Linux** `/opt/ibm/db2/V9.7` **AIX** `/opt/IBM/db2/V9.7`	
DB2 instance administrator user ID	**Windows** db2admin **Linux** ctginst1 **AIX** ctginst1	
Windows DB2 service user ID	db2admin	
Oracle installation directory	**Windows** `C:\oracle\product\11.2.0\db_1` **Linux** `/opt/app/oracle/product/11.2.0/db_1` **AIX** `/opt/app/oracle/product/11.2.0/db_1`	
Oracle administrator user ID	sys	
Oracle software owner user ID	oracle	
SQL installation directory	`C:\Program Files\Microsoft SQL Server\90`	
Data table space name	MAXDATA	

Table 13. Settings for a custom installation (continued)

Setting	Default	Your value
Data table space size	medium (1000 Mb) **DB2** Medium (5000 Mb) **Oracle** Medium (1000 Mb) **Microsoft SQL Server (Initial data file size)** Medium (1000 Mb)	
Temporary table space name	MAXTEMP	
Temporary table space size	1000 Mb	
Index table space name	MAXDATA	
Index table space size	**DB2** Medium (5000 Mb) **Oracle** Medium (1000 Mb)	
Schema name	maximo (required to be the same value as the owner of the table spaces)	
WebSphere host name		
WebSphere SOAP port	8879	
WebSphere server home directory	**Windows** `C:\Program Files\IBM\WebSphere\AppServer` **Linux** `/opt/IBM/WebSphere/AppServer` **AIX** `/usr/IBM/WebSphere/AppServer`	
WebSphere admin user ID	wasadmin	
WebSphere profile name	ctgDmgr01	
Web server port	80	
Web server name	webserver1	
Node name	ctgNode01	
Application server	MXServer	
JMS data source name		
JMS database name	maxsibdb	
JMS server name		
Database server port	50000	
Instance admin user ID	db2inst1	
Group base entry	ou=groups,ou=SWG,o=IBM, c=US	
User base entry	ou=users,ou=SWG,o=IBM, c=US	
SMTP server		
Administrator e-mail		

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