

System Administration for MXES

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System Administration for MXES

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Key



Instructor-Led Training



Virtual Classroom Training

Foundation				
<u>Course #</u>	<u>Course Name</u>	<u>Length</u>	<u>Delivery Options</u>	<u>Prerequisites</u>
MED0138	MXES Navigation & Querying	½ day, or 3-hr virtual		None

Upgrade				
<u>Course #</u>	<u>Course Name</u>	<u>Length</u>	<u>Delivery Options</u>	<u>Prerequisites</u>
MED0136	MXES for EAM - New Features	3 days		None (Note: for users upgrading from Maximo 5)

Implementation				
<u>Course #</u>	<u>Course Name</u>	<u>Length</u>	<u>Delivery Options</u>	<u>Prerequisites</u>
MED0146	MXES Immersion Training for EAM	5 days		MXES Navigation & Querying
MED0155	Maintenance Best Practices Using MXES	2 days		None

End-User / Functional				
<u>Course #</u>	<u>Course Name</u>	<u>Length</u>	<u>Delivery Options</u>	<u>Prerequisites</u>
MED0137	System Administration for MXES	3 days		MXES Navigation & Querying
MED0139	Inventory Management Using MXES	3 days		MXES Navigation & Querying
MED0143	Work Management Using MXES	3 days		MXES Navigation & Querying
MED0147	Using SQL with MXES	1 day		MXES Navigation & Querying
MED0148	Workflow Management Using MXES	5 days		MXES Immersion Training for EAM (Note: Extensive hands-on Maximo experience preferred)
MED0150	Purchasing with MXES	3 days		MXES Navigation & Querying
MED0151	Developing MXES Reports with Actuate	TBD		MXES Navigation & Querying, Using SQL with MXES
MED0152	Contract Management Using MXES	TBD		MXES Navigation & Querying
MED0153	Using the MXES Application Designer	TBD		MXES Navigation & Querying, System Administration for MXES
MED0154	The MXES KPI Manager (VCT)	3-hr virtual		Using SQL with MXES



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Key






*Instructor-Led
Training*





*Virtual Classroom
Training*











Foundation

<u>Course #</u>	<u>Course Name</u>	<u>Length</u>	<u>Delivery Options</u>	<u>Prerequisites</u>
MED0138	MXES Navigation & Querying	½ day, or 3-hr virtual	 	None
MED0140	Introduction to ITIL (VCT)	3-hr virtual		None

Implementation

<u>Course #</u>	<u>Course Name</u>	<u>Length</u>	<u>Delivery Options</u>	<u>Prerequisites</u>
MED0149	MXES Immersion Training for IT	5 days		MXES Navigation & Querying
MED0145	Implementing ITIL with MXES	2 days		Introduction to ITIL (VCT)

End-User / Functional

<u>Course #</u>	<u>Course Name</u>	<u>Length</u>	<u>Delivery Options</u>	<u>Prerequisites</u>
MED0141	IT Service Management Using MXES	3 days		MXES Navigation & Querying
MED0142	IT Asset Configuration & Management in MXES	2 days		MXES Navigation & Querying
MED0137	System Administration for MXES	3 days		MXES Navigation & Querying
MED0147	Using SQL with MXES	1 day		MXES Navigation & Querying
MED0148	Workflow Management Using MXES	5 days		MXES Immersion Training for IT (<i>Note: Extensive hands-on Maximo experience preferred</i>)
MED0150	Purchasing with MXES	3 days		MXES Navigation & Querying
MED0151	Developing MXES Reports with Actuate	TBD		MXES Navigation & Querying, Using SQL with MXES
MED0152	Contract Management Using MXES	TBD		MXES Navigation & Querying
MED0153	Using the MXES Application Designer	TBD		MXES Navigation & Querying, System Administration for MXES
MED0154	The MXES KPI Manager (VCT)	3-hr virtual		Using SQL with MXES

Course Name	Manager Track		Implementation Track		Developer Track			Administrator Track			End-User Track			
	Managers, Supervisors, & Directors	Service Level Managers	Maximo Implementation Team	Workflow Implementation Team	Maximo Developer / Maximo App Support	Report Writer	Workflow Developer	Maximo Admin	Database Admin	Report Admin	Service Desk / Support Personnel & Supervisors	IT Asset Managers / Configuration Managers	Contracts Manager	Procurement Personnel
<u>MED0138</u> MXES Nav & Query (1/2 day)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<u>MED0137</u> System Admin for MXES (3 days)				✓	✓			✓	✓			✓		
<u>MED0140</u> Intro to ITIL (VCT) (3 hours)	✓													
<u>MED0141</u> IT Service Mgmt Using MXES (3 days)		✓									✓			
<u>MED0142</u> IT Asset Config & Mgmt in MXES (3 days)												✓		
<u>MED0145</u> Implement ITIL w/ MXES (2 days)	✓	✓	✓											
<u>MED0147</u> Using SQL with MXES (1 day)						✓			✓	✓				
<u>MED0148</u> Workflow Mgmt Using MXES (5 days)				✓			✓							
<u>MED0149</u> MXES Immersion Training for IT (5 days)			✓	✓	✓			✓						
<u>MED0150</u> Purchasing with MXES (3 days)														✓
<u>MED0151</u> Dev. MXES Reports w/ Actuate						✓				✓				
<u>MED0152</u> Contract Mgmt Using MXES													✓	
<u>MED0153</u> Using MXES App Designer			✓		✓									
<u>MED0154</u> The MXES KPI Manager (3 hours)						✓				✓				

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System Administration for MXES

Chapter 1: Course Overview



In This Chapter

This chapter contains the following topics:

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Course Goals and Objectives	1-2
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Course Introduction

Welcome

Welcome to the *System Administration for MXES* course. When you have completed this course, you should be acquainted with the key administration functionality provided in the Maximo Enterprise Suite (MXES).

Audience

This course is intended for anyone involved in Maximo system administration, including implementation, database setup, security, and maintenance.

Chapter Purpose

The purpose of this chapter is to:

- establish the goals and objectives for this course, and to
 - acquaint you with the features of both the course and the student guide.
-

Key Information

While working through some exercises in this course, you will need to make administrative changes to Maximo and then view those changes in Maximo. To access Maximo, you will need the information indicated below.

Maximo URL: _____

Maximo User Name: _____

Maximo Password: _____

Assigned Student Number: _____

Database Instance (if applicable): _____

Your instructor will now provide this information; please write the information in the spaces above.

Course Goals and Objectives

Course Overview

This course introduces you to the Maximo System Administration functions and applications. System administrators can use this information to administer and configure the database and applications in Maximo.

Course Prerequisites

The following are prerequisites for this course:

- *MXES Navigation & Querying* or demonstrable working experience with MAXIMO 5.x or greater,
- working knowledge of the Microsoft Windows operating system, and
- knowledge of database configuration, including table creation.

We also recommend:

- attendance at the MRO Software *Using SQL with Maximo* or *Using SQL with MXES* course or demonstrated knowledge of SQL.
-

Course Goal

The *System Administration for MXES* course introduces you to the applications used to set up the Maximo system environment. It also helps you to maintain that environment as changes occur at your facility.

continued on next page

Course Goals and Objectives continued

Course Objectives

After you have completed this course, you should know how to:

- use Maximo to access the administration and configuration applications
 - use *Multisite Setup* to create organizations and sites and to set application options
 - modify system configuration files
 - use *Signature Security* to add and modify people, users, and security groups, as well as grant access to organizations and sites
 - enable electronic signature and electronic audit functionality
 - use *Chart of Accounts* to set up business units and create GL accounts
 - use *Currency Management* to create multiple currencies
 - use *Exchange Rates* to manage exchange rates
 - use *Calendars* to create and modify work calendars and adjust time periods
 - use *Classifications* to create and manage classifications
 - use *Report Administration* to manage reports and their associated request pages
 - use *Configure Cron Tasks* to configure and manage cron tasks and their instances
 - use *Bulletin Board* to create and manage bulletins
 - use *Communication Templates* to set up and manage communication templates for use in SLAs, workflow, and escalations
 - use the *Actions* and the *Roles* applications to set up actions and roles for SLAs, workflow, and escalations
 - use *E-mail Listener* to set up and manage e-mail listeners for incident reporting
 - use *Database Configuration* to create and modify objects and their attributes
-

continued on next page

Course Goals and Objectives continued

Your Learning Objectives



Now that you understand the basic objectives for the course, it is most important that you define the learning objectives *you* bring to the course. We want to make sure that these are clearly stated, mutually understood, and achieved.

List your objectives in the space below. We will conclude the course by asking you whether you have met your objectives. If you have not, we will then address your questions and unmet objectives.

-
-
-
-
-
-
-
-
-

Course Organization

Organization

This course has been organized into teaching modules made up of chapters. Each chapter focuses on a specific aspect of configuring and administering Maximo to help you maintain your Maximo installation.

Chapters

Each chapter in this book is an individual teaching module designed to provide an overview of its topic(s) and then provide in-depth instruction and practice.

Each chapter contains these components:

- A subject-matter overview and objectives

This component provides orientation and perspective for the chapter, along with learning objectives.

- Instruction in concepts and procedures

In this part of the chapter, the instructor and the text review relevant concepts, components, and procedures.

- Hands-on practice

You will practice most of the important procedures and concepts that the instructor introduces. You will have opportunities for brief hands-on practice during the body of the module and, in some cases, longer hands-on practice in a workshop at the end of the unit.

Notes Pages

Notes pages are provided at the end of each chapter. You can use these pages to capture information specific to your situation, or important points covered in class discussions.

continued on next page

Course Organization continued

Special Note: **Shared vs.** **Independent** **Databases**



- Throughout this course there could be up to 20 participants accessing the same database. If you are *sharing* a single database, your instructor will assign you a two-digit student number (for example, 01–20) to avoid confusion and/or conflicting records in the database.

Some exercises throughout this course will have an *xx* appended to data entry items. Whenever an *xx* is appended, substitute your assigned student number for the *xx*.

- If you are taking this course in an *independent*-database environment—that is, your database is independent from other students' databases and the instructor's database—student numbers are unnecessary. You can simply do the exercises using the records indicated, without adding a student number.

If you are not sure whether you are sharing a database, check with your instructor.

continued on next page

Course Organization continued

Chapter Topics

The following table contains a list of chapters in this student guide:

Chapter	Name
1	Course Overview
2	Overview of System Files
3	Multisite Setup
4	Signature Security
5	Financial System Configuration
6	Administrative Applications
7	Application Setup
8	Database Configuration
9	Managing Domains and Multi-Language
Appendix A	Escalation—Online Help Example

Typographical Conventions

Introduction

We use a number of typographical conventions and icons in our course books.

Conventions Used in Course Materials

Here are some of the conventions you will see most frequently in the course materials:











Convention	Usage	Example
<i>Italics</i>	Introduces or emphasizes a term	A <i>system</i> is a single instance of a Maximo database.
Boldface	Indicates that the word or phrase names a menu item, field, button, or keyboard key	From the Go To drop-down menu, select Administration .
Arial font	Indicates that this is text you type into a field	Type ASSET_NDX8 in this field.
Courier font	Indicates programming code, a system message, or part of a screen display	Maximo displays the following message: Work order 1000 status changed to APPR.

continued on next page

Typographical Conventions continued

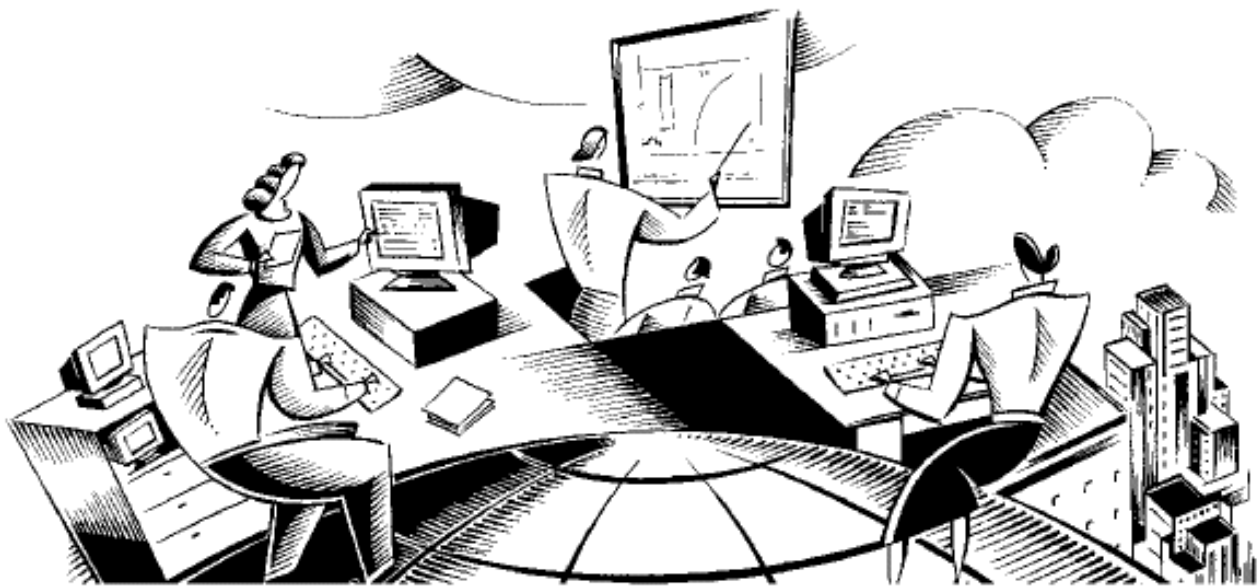
Icons

You will see several icons throughout this student guide. This table explains what they mean.

This icon...	Indicates...
	A procedure that you will practice on your own or with guidance from an instructor
	A paper-and-pencil exercise
	A special note or reminder
	A warning or cautionary note
	A question-and-answer session with the instructor, or a group discussion
	Your role in the next exercise is changing, e.g., from manager to user
	The data you are being asked to enter will be used in another exercise
	A challenge question or exercise
	An industry best practice, tip, or suggestion
	A recording that provides additional course content is available

System Administration for MXES

Chapter 2: Overview of System Files



In This Chapter

This chapter contains the following topics:

Topic	See Page
Chapter Overview	2-1
Changing the Interface Timeout Setting	2-3
The MAXIMO.PROPERTIES File	2-4
The LOGGING.PROPERTIES File	2-10
The DOCLINK.PROPERTIES File	2-15
Maximo Multi-Language Support	2-20
Server Deployment (EAR) Files	2-22
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Chapter Overview

Introduction

System files affect the way Maximo runs. Most of the parameters in these files are set during installation. However, you can manually change one or more parameters in system files to set or modify the operation of aspects of the system.

Purpose

A system administrator must have a thorough understanding of system configuration settings. In this chapter you will review some of the key system files in which these settings are set or modified.

Chapter Focus

In this chapter, we familiarize you with the locations and the contents of the key system files that you can modify after Maximo installation.

continued on next page

Chapter Overview continued

Learning Objectives

After you have completed this chapter, you should be able to:

- identify the system files;
- locate and open the MAXIMO.PROPERTIES file to identify properties that the Maximo Application Server uses to deliver services;
- locate and open the LOGGING.PROPERTIES file to identify properties that the Maximo Application Server uses to log various operations; and
- locate and open the DOCLINK.PROPERTIES file to identify properties that the Maximo Application Server uses for attached documents.



Note: MRO Software recommends that you modify error messages for foreign language translation purposes only!

System Files

This table lists the key system files and briefly describes their use:

File Name	Use
MAXIMO.PROPERTIES	Sets properties specific to the Maximo application server
LOGGING.PROPERTIES	Sets logging properties for Maximo processes
DOCLINK.PROPERTIES	<ul style="list-style-type: none"> • Indicates the path to attached documents • Allows default settings to be modified to reflect the path, or additional settings to reflect a non-standard path

Changing the Interface Timeout Setting

Introduction



By default, your Maximo session for all users will time out after 30 minutes. You can change this setting to any number of minutes you want.

Note: Please note, however, that this setting affects all users.

Timeout Setting File Name and Location

You change the timeout setting in the **web.xml** file. The directory path to this file is:

\\[*Maximo_root*]\applications\maximo\maximouiweb\webmodule\WEB-INF

Changing the Timeout Setting



Use the following steps to change your timeout setting.

Step	Action
1	Using Windows Explorer, locate your web.xml file in this directory: \\[<i>Maximo_root</i>]\applications\maximo\maximouiweb\webmodule\WEB-INF
2	Right-click on the web.xml file and select: Open with > Notepad If Notepad does not appear as a menu selection, then select Choose Program... and select Notepad from the resulting list in the Open With dialog box. <u>Note</u> : Do not check the Always use this program to open these files box.
3	Scroll down in the file until you see the timeout setting: <code><session-timeout>30</session-timeout></code>
4	Replace the value of 30 with a new value of 90 (for 90 minutes).
5	Save and close your web.xml file. <u>Note</u> : Your new setting will not take effect until you rebuild and redeploy your maximo.ear reference file. We will cover *.ear files later in this chapter.

The MAXIMO.PROPERTIES File

Introduction



The MAXIMO.PROPERTIES file provides many of the properties that the Maximo application server uses to start up and configure Maximo.

Note: This section highlights only some of the key parameters and sections in the MAXIMO.PROPERTIES file. Check your technical documentation for more details regarding the MAXIMO.PROPERTIES file.

File Location

The MAXIMO.PROPERTIES file is located in the following directory path:





`\\[Maximo_root]\applications\maximo\properties`

Opening Files



In this exercise we will open the MAXIMO.PROPERTIES file to start learning about it.

Note: Depending on your training environment's configuration, the code that you see on your screen in this section might not exactly match these pages.

Step	Action
1	Using Windows Explorer, locate the MAXIMO.PROPERTIES file in the <code>\\[Maximo_root]\applications\maximo\properties</code> directory.  <u>Note 1:</u> At this time, do not make any changes to your MAXIMO.PROPERTIES file.  <u>Note 2:</u> Any changes to any of your *.properties files will not take effect until you rebuild and redeploy your maximo.ear file. We will cover *.ear files later in this chapter.
2	Double-click on the MAXIMO.PROPERTIES file to open it in Notepad.  <u>Note:</u> If an Open With dialog box opens, select Notepad to open the file.
3	Using the scroll bar, take a moment to look at the contents of the file while your instructor briefly describes them.  <u>Note:</u> Do <i>not</i> close the file; leave it open as your instructor covers the sections of the MAXIMO.PROPERTIES file.

continued on next page

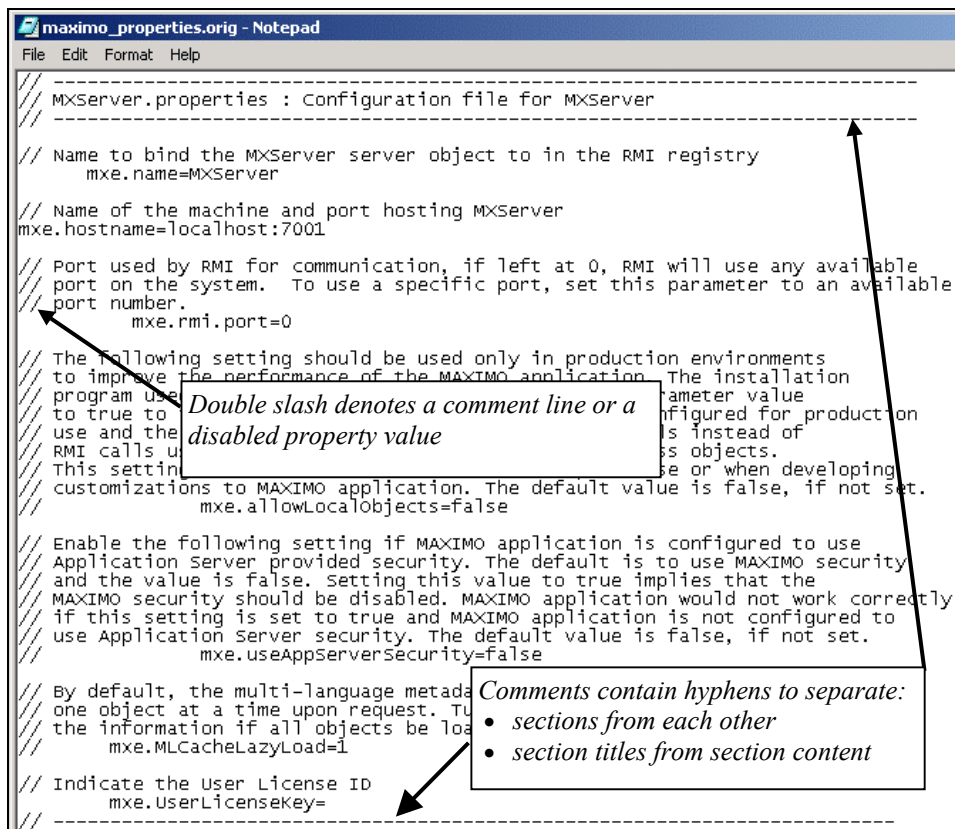
The MAXIMO.PROPERTIES File continued

File Commenting

The MAXIMO.PROPERTIES file is commented to provide brief descriptions of its properties and examples of how some of these properties are used. A *comment line* has a double forward slash (//) at the beginning of the line.

Comment lines are used:

- with hyphens to separate sections within the file for easier reading,
- to provide textual content in each section, and
- to disable properties.



continued on next page

The MAXIMO.PROPERTIES File continued

Section Breaks

New sections and their titles are comment lines preceded and followed by two sets of comment lines with a series of hyphens (-----).

A section header is often separated from its content by a single comment line with a series of hyphens.

Certain key sections of the MAXIMO.PROPERTIES file are described below.

Database Related Properties

The Database Related Properties section of the MAXIMO.PROPERTIES file contains properties that supply information regarding connectivity to the database.

```

-----
// Database Related Properties
// -----
// Database Schema Owner
// mxe.db.schemaowner=MAXIMO
//
// Specification of JDBC Driver
// e.g. Sqlserver i-net opta 2000 driver
// mxe.db.driver=com.inet.tds.TdsDriver
// e.g. DB2 driver:
// mxe.db.driver=com.ibm.db2.jcc.DB2Driver
// for oracle it is as follows...
// oracle thin driver
// mxe.db.driver=oracle.jdbc.driver.OracleDriver
//
// JDBC "url" of database -- varies with the particular database you're
// connecting to...
// e.g. Sqlserver 6.5 i-net opta 2000 driver
// mxe.db.url=jdbc:inetdae6:hostname:port?database=dbname&language=us_english&nowarnings=true
// e.g. sqlserver 7.0 or higher i-net opta 2000 driver
// mxe.db.url=jdbc:inetdae7a:hostname:port?database=dbname&language=us_english&nowarnings=true
// e.g. DB2:
// mxe.db.url=jdbc:db2://localhost:50000/dbalias
// e.g oracle thin mxe.db.url=jdbc:oracle:thin:@<HOST>:<PORT>:<SID>

```

Of particular interest in this section is the `mxe.db.url` property, which tells the Maximo application server which database to connect to.

Both the Oracle and SQL Server syntaxes are provided in the commented content section above the `mxe.db.url` property.

Note: As with the `mxe.db.url` property, the other properties in this section are identified using comments above the properties listed in the file.



continued on next page

The MAXIMO.PROPERTIES File continued

SMTP Section

The SMTP section provides the identity of the outgoing mail server (SMTP).

```
-----  
//  
// The name of the SMTP mail server  
// mail.smtp.host=mailhost.yourcompany.com  
//
```

Workflow Related Properties Section

The Workflow Related Properties section contains mx.e.workflow.admin, which indicates where you should send e-mail notes generated by Workflow processes.

```
-----  
// workflow Related Properties  
//  
// The e-mail address of your system administrator.  
// mx.e.workflow.admin=admin@yourcompany.com  
//
```

Reorder Related Properties Section

The MAXIMO.PROPERTIES file contains a section specifically related to the Maximo reorder process: how long a reorder preview should remain available (mx.e.reorder.previewtimeout).

```
-----  
// Reorder Related Properties  
//  
// The reorder preview timeout period (in minutes). It is recommended  
// that this be comparable to the web server session timeout.  
// The default value is 30 minutes.  
  
// mx.e.reorder.previewtimeout=30  
//
```

continued on next page

The MAXIMO.PROPERTIES File continued

Cron Task Manager Property Section

The Cron Task Manager Property section provides configuration for disabling cron tasks. We will cover the Cron Task application later in this course.

```

-----
// Cron Task Manager property.
//-----
// Exclude the listed cron task instances from being loaded by this server.
// use ALL for not running any cron task.
// mxe.crontask.donotrun=ALL
// or specify the cron task instance by crontaskname.instanceName
// mxe.crontask.donotrun=crontaskname.instanceName
//-----

```

Properties for Actuate Report Server Section

The Properties for Actuate Report Server section provides configuration parameters for coordinating Maximo applications with the Actuate Report Server. Report Administration is covered later in this course. The writing of reports via the Actuate tool set is covered in a separate course.

```

-----
// Properties for actuate report server.
// All the properties are required.
//-----
// The name of the report server with encyclopedia to be accessed.
// mxe.report.actuate.reportserver=ReportServerHost
// mxe.report.actuate.reportserver=zelda
// The URL of the active portal server including port number and folder.
// mxe.report.actuate.portalHost=http://zelda:8090/acweb
// mxe.report.actuate.portalHost=http://zelda:8090/acweb
// The URL of the Report iServer including port number.
// mxe.report.actuate.iServer=http://zelda:8000
// mxe.report.actuate.iServer=http://zelda:8000
// Actuate database connection string.
// mxe.report.actuate.db.connectstring=SID
// mxe.report.actuate.db.connectstring=z003
// Load Actuate Update User cron task.
// mxe.cronTask.psdi.app.report.ActuateUpdateCronTask=5m
// actuate encyclopedia root name
// mxe.report.actuate.rootEncycFolder=rpt
//-----

```

continued on next page

The MAXIMO.PROPERTIES File continued

Close the File



After reviewing the contents of the MAXIMO.PROPERTIES file, close it by exiting from the Notepad application.

Do *NOT* save any changes if prompted.

Note 1: Do not make any changes to your MAXIMO.PROPERTIES file at this time.

Note 2: Any changes to any of your *.properties files will not take effect until you rebuild and redeploy your maximo.ear file. We will cover *.ear files later in this chapter.

The LOGGING.PROPERTIES File

Introduction



For the various Maximo processes, MRO Software has included a third-party Apache logging package. Logging functionality is controlled through the *LOGGING.PROPERTIES* file.

Note: This section highlights only some of the key parameters and sections in the LOGGING.PROPERTIES file. Check your technical documentation for more details regarding the many properties in the LOGGING.PROPERTIES file.

File Location



The LOGGING.PROPERTIES file is located in the following default directory path: \\[*Maximo_root*]\applications\maximo\properties.

Opening Files



In this exercise we will open the LOGGING.PROPERTIES file to start learning about it.

Note: Depending on your training environment's configuration, the code that you see on your screen in this section might not exactly match these pages.

Step	Action
1	Using Windows Explorer, locate the LOGGING.PROPERTIES file in the \\[<i>Maximo_root</i>]\applications\maximo\properties default directory.
2	Double-click on the LOGGING.PROPERTIES file to open it in Notepad.  <u>Note:</u> If an Open With dialog box opens, select Notepad to open the file.
3	Using the scroll bar, take a moment to look at the contents of the file while your instructor briefly describes them.  <u>Note:</u> Do <i>not</i> close the file; leave it open as your instructor covers the sections of the LOGGING.PROPERTIES file.

continued on next page

The LOGGING.PROPERTIES File continued

File Commenting

The LOGGING.PROPERTIES file is commented to provide brief descriptions of its properties and examples of how some of these properties are used.

A *comment line* is identified by the number symbol (#) at the beginning of the line. Comment lines are used:

- to disable properties
- with the forward slash (/) to identify the beginning of a new section
- with a double tilde (~) to identify the section title

```
# /
# ~ MAXIMO Log configuration file
#
# MAXIMO Logging is currently based on
# open source project developed by Apa
# Apache Jakarta Project.
# Use the following url to get addition
# http://jakarta.apache.org/log4j/docs/maximum
#
# For the general syntax of property based configuration files see the
# documentation of org.apache.log4j.PropertyConfigurator.
# /
# ~ Levels supported by the Loggers
#
# FATAL
# The FATAL level logs very severe
# application failure.
# ERROR
# The ERROR level logs error messages that indicate errors
# in the application functionality that is processed.
# WARN
# The WARN level logs warning messages that indicate harmful situations
# in the functionality that is processed.
# INFO
# The INFO level logs inform
# of the functionality proces
# DEBUG
# The DEBUG level logs extensive messages that are useful to debug.
```

Comment lines contain a forward slash to identify the beginning of a new section

Comment lines contain a double tilde to identify the section title

The number symbol identifies a comment line

continued on next page

The LOGGING.PROPERTIES File continued

Verbosity Levels The logger program supports five levels of verbosity, as shown here.

```
# /
# ~~~ Levels supported by the Loggers
#
# FATAL
# The FATAL level logs very severe errors messages that indicate
# application failure.
# ERROR
# The ERROR level logs error messages that indicate errors
# in the application functionality that is processed.
# WARN
# The WARN level logs warning messages that indicate harmful situations
# in the functionality that is processed.
# INFO
# The INFO level logs informational messages that highlight the progress
# of the functionality processed.
# DEBUG
# The DEBUG level logs extensive messages that are useful to debug.
```

Each level increases the amount of information appended to the defined output log file.

Root Loggers

The Root loggers section identifies the verbosity level for the output destinations (appenders). There are two appenders: A1 and A2.

- Appender A1 is used to identify the logger program's system information.
- Use Appender A2 to identify the output file for Maximo processes.

In the following example, both A1 and A2 are set to the INFO level.

“ERROR, A1” is the default value.

```
# /
# ~~~ Log4j Root loggers
# Specify the comma separated list of appenders to the root logger.
# for example, to log messages to standard output as well as to a
# file called maximo.log, set
# log4j.rootLogger=ERROR, A1, A2
# log4j.rootLogger=ERROR, A1
# log4j.rootLogger=INFO, A1, A2
#
# ~~~ output destinations or appenders
#
# A1 is set to be a ConsoleAppender which outputs to System.out.
log4j.appender.A1=org.apache.log4j.ConsoleAppender
log4j.appender.A1.layout=org.apache.log4j.PatternLayout
log4j.appender.A1.layout.ConversionPattern=%d{dd MMM yyyy HH:mm:ss:SSS} [%-2p] %m%n
#
# A2 is set to be a RollingFileAppender which outputs to maximo.log file
log4j.appender.A2=org.apache.log4j.RollingFileAppender
log4j.appender.A2.File=maximo.log
log4j.appender.A2.MaxFileSize=5MB
log4j.appender.A2.MaxBackupIndex=20
log4j.appender.A2.layout=org.apache.log4j.PatternLayout
log4j.appender.A2.layout.ConversionPattern=%d{dd MMM yyyy HH:mm:ss:SSS} [%-2p] %m%n
```

continued on next page

The LOGGING.PROPERTIES File continued

Appenders



The Output destinations section identifies parameters for the appenders.

Warning: Do *not* change the settings for Appender A1.

Parameters for Appender A2 identify the properties for logging Maximo processes.

```
# /
# ~~~ Log4j Root loggers
# Specify the comma separated list of appenders to the root logger.
# for example, to log messages to standard output as well as to a
# file called maximo.log, set
#   log4j.rootLogger=ERROR, A1, A2
#   log4j.rootLogger=ERROR, A1
#   log4j.rootLogger=INFO, A1, A2
# /
# ~~~ output destinations or appenders
#
# A1 is set to be a ConsoleAppender which outputs to system.out.
log4j.appender.A1=org.apache.log4j.ConsoleAppender
log4j.appender.A1.layout=org.apache.log4j.PatternLayout
log4j.appender.A1.layout.ConversionPattern=%d{dd MMM yyyy HH:mm:ss:SSS} [%-2p] %m%n

# A2 is set to be a RollingFileAppender which outputs to maximo.log file
log4j.appender.A2=org.apache.log4j.RollingFileAppender
log4j.appender.A2.File=maximo.log
log4j.appender.A2.MaxFileSize=5MB
log4j.appender.A2.MaxBackupIndex=20
log4j.appender.A2.layout=org.apache.log4j.PatternLayout
log4j.appender.A2.layout.ConversionPattern=%d{dd MMM yyyy HH:mm:ss:SSS} [%-2p] %m%n
```

Maximo Loggers

Use the Maximo loggers section to set the verbosity level for each of the fixed Maximo loggers.

Take notice of the included note in the following graphic.

```
# /
# ~~~ loggers used by MAXIMO
#
# NOTE: Enable only the loggers that are needed, and use the
# logging information only for debugging purpose. Enabling
# more loggers and setting the log level to DEBUG produces
# lot of messages in the appenders and significantly reduces
# the performance of the application.
# /
# /
# ~~~ Fixed MAXIMO root loggers
log4j.logger.maximo=INFO
log4j.logger.maximo.application=ERROR
log4j.logger.maximo.crontask=ERROR
log4j.logger.maximo.datadictionary=ERROR
log4j.logger.maximo.event=ERROR
log4j.logger.maximo.mail=ERROR
log4j.logger.maximo.service=ERROR
log4j.logger.maximo.sql=ERROR
```

continued on next page

The LOGGING.PROPERTIES File continued

Cron Task Loggers

Use the Cron Task loggers section to set parameters for each of the supplied cron tasks. We will cover the Cron Task application later in this course.

```
# ~ CRONTASK loggers
# log4j.logger.maximo.crontask.<cron task name>=<level>
# The cron task name is the name of the cron task
# for example:
#   log4j.logger.maximo.crontask.EmailNotification=INFO
log4j.logger.maximo.crontask.KPICronTask=INFO
log4j.logger.maximo.crontask.LDAPSYNC=INFO
log4j.logger.maximo.crontask.EmailListnerCron=INFO
log4j.logger.maximo.crontask.ReconciliationCronTask=INFO
```

The DOCLINK.PROPERTIES File

Introduction



The *DOCLINK.PROPERTIES* file provides just a few settings, which are used to configure the Attached Documents functionality in Maximo.

Note: This section highlights only some of the key parameters and sections in the *DOCLINK.PROPERTIES* file. Check your technical documentation for more details regarding the many properties in the *DOCLINK.PROPERTIES* file.

File Location



The *DOCLINK.PROPERTIES* file is located in the following default directory path: \\[*Maximo_root*]\applications\maximo\properties.

Opening Files



In this exercise we will open the *DOCLINK.PROPERTIES* file to start learning about it.

Note: Depending on your training environment's configuration, the code that you see on your screen in this section might not exactly match these pages.

Step	Action
1	Using Windows Explorer, locate the <i>DOCLINK.PROPERTIES</i> file in the \\[<i>Maximo_root</i>]\applications\maximo\properties default directory.
2	Double-click on the <i>DOCLINK.PROPERTIES</i> file to open it in Notepad.  <u>Note:</u> If an Open With dialog box opens, select Notepad to open the file.
3	Using the scroll bar, take a moment to look at the contents of the file while your instructor briefly describes them.  <u>Note:</u> Do <i>not</i> close the file; leave it open as your instructor covers the sections of the <i>DOCLINK.PROPERTIES</i> file.

continued on next page

The DOCLINK.PROPERTIES File continued

File Commenting

The DOCLINK.PROPERTIES file is commented to provide brief descriptions of its properties and examples of how some of these properties are used. A *comment line* has the number symbol (#) at the beginning of the line.

Comment lines are used:

- with hyphens to separate sections within the file for easier reading
- to disable properties
- to provide contextual information for each section

```

# -----
# doclink.properties
# -----
#
# Maximum Size for Upload File:
#
#   Definition:
#
#   Specify the maximum size (in Megabytes) for a file that you can upload to to the
#   Attached Documents Library folders records.
#
#   Use:
#
#   mxe.doclink.maxfilesize = <value in Megabytes>
#
#   Note: To have no size limit, set value to 0.
#
#   Examples:
#
#   mxe.doclink.maxfilesize = 45
#   MAXIMO will prevent the user from uploading files larger than 45Mb.
#
#
#   mxe.doclink.maxfilesize = 0
#   MAXIMO will allow all file sizes to be uploaded.
#
#
#   Set value:      mxe.doclink.maxfilesize = 10
# -----

```

continued on next page

The DOCLINK.PROPERTIES File continued

Section Breaks

New sections and their titles are comment lines preceded and followed by two sets of comment lines with a series of hyphens (-----).

A section header is often separated from its content by a single comment line with a series of hyphens.

Max File Size

The **mxe.doclink.maxfilesize** property sets the maximum file size (in megabytes) for files uploaded to the Maximo application server.

- The default value is 10.
- Use 0 for unlimited file sizes.

```
-----  
# doclink.properties  
#-----  
#  
#-----  
# Maximum Size for Upload File:  
#  
# Definition:  
# Specify the maximum size (in Megabytes) for a file that you can upload to to the  
# Attached Documents Library folders records.  
#  
# Use:  
# mxe.doclink.maxfilesize = <value in Megabytes>  
# Note: To have no size limit, set value to 0.  
#  
# Examples:  
# mxe.doclink.maxfilesize = 45  
# MAXIMO will prevent the user from uploading files larger than 45Mb.  
#  
# mxe.doclink.maxfilesize = 0  
# MAXIMO will allow all file sizes to be uploaded.  
#  
# Set value: mxe.doclink.maxfilesize = 10  
#-----
```

continued on next page

The DOCLINK.PROPERTIES File continued

Default Path

Use the **mxe.doclink.doctypes.defpath** property to set the default path. The default path is used when you add new files to the Attached Documents Library. We will cover the management of Attached Documents later in this course.

```
-----  
# Default Directory Path for Folders with No Default Path  
#  
# Definition:  
# Specify the default file directory to use for folders in the library that do not have  
# a default path specified in the database.  
# MAXIMO will upload files for such folders to the physical location specified here.  
#  
# Use:  
# mxe.doclink.doctypes.defpath = <a physical path accessible by MAXIMO server>  
#  
# Note: You must make one entry.  
#  
# Examples:  
# MS-windows MAXIMO, documents uploaded to application server:  
# mxe.doclink.doctypes.defpath = C:\\DOCLINKS\\default  
#  
# Note: In windows use escape back-slash character \\  
#  
# MS-windows MAXIMO, documents uploaded to a mapped drive G: on the network:  
# mxe.doclink.doctypes.defpath = G:\\maintenance_docs\\default  
#  
# Note: In windows, use escape back-slash character \\  
#  
# UNIX-based:  
# mxe.doclink.doctypes.defpath = /DOCLINKS/default  
#  
# Note: In UNIX, use forward-slash.  
#  
# Set Value:  
# mxe.doclink.doctypes.defpath = c:\\DOCLINKS\\default  
#-----
```

continued on next page

The DOCLINK.PROPERTIES File continued

Application Server Setting

Use this setting to identify the URL for your specified server. An example for the BEA WebLogic Server is shown below. The text in the actual DOCLINK.PROPERTIES file gives a thorough explanation of its use and includes examples.

```
-----
# Translation of Specified Filepaths of Folders to URL's
#
# Definition:
# Specify the http server path to link documents attached to MAXIMO records.
#
# Use:
# <value specified in the default path of a folder> = <URL of where the files will be served from>
#
# Example:
#
# The MAXIMO environment is MS-Windows. In the Attached Documents area, under "Manage All Document Folders,"
# the "default file path" for the folder "diagrams" is "r:\documents\official_diagrams" where r: is a mapped
# drive on the MAXIMO server pointing to a physical folder on an HTTP server.
#
# The URL specified can be an absolute path or a relative URL to where MAXIMO runs.
#
# For MS-Windows systems, you must replace the colon with <PATH> for the drive
# letter referred to in this attribute. Also, the backslash character must have the
# escape backslash character.
#
# Example:
#
# You must enter C:\folder1\folder1a as c<PATH>\\folder1\\folder1a
#
# Set value:
#
# WEBLOGIC on MS-Windows
#
# c<PATH>\\DOCLINKS = http://<servername or IP>:<port number>/DOCLINKS
```

Maximo Multi-Language Support

Introduction

Maximo provides multiple language support. Maximo supports multi-language using dual objects in the database. For each multi-language enabled object there is an equivalent object with an **L_** prefix.

Multi-Language Enabled Objects

There are currently 16 multi-language enabled objects:

- Fourteen are internal (Maximo data dictionary) objects.
- The remaining two are the Companies object and the Item object.

Every object in the Maximo database has an ISLANG attribute:

- “1” indicates that it is language enabled.
 - “0” indicates that it is not language enabled.
-

Error Messages

Error messages reside in the MAXMESSAGES object and are imported via the messages.xml file. The messages.xml file resides in the following directory:

`\\[Maximo_root]\resources\messages`



Note: Do not modify data in the MAXMESSAGES object.

WARNING: Changing Error Messages



Warning: Changing the content of error messages can be dangerous. If error messages do not contain the original text, users can be misinformed when an error occurs.

MRO Software support staff will also have a harder time understanding user issues when users call MRO Support with problems.


MRO Software recommends making changes to the messages.xml file for localization and/or translation *only*.

continued on next page

Maximo Multi-Language Support continued

Multi-Language Utilities

There are four utilities (Windows command BATch files) Maximo uses in conjunction with multi-language support:

Utility	Explanation
exportlang.bat	The exportlang utility can be used to create a localized version of a Maximo database.
importlang.bat	The importlang utility takes an XML file (created from exportlang.bat) and populates the tables of the specified languages with its contents.
deletelang.bat 	The deletelang utility allows a user to delete language tables from the database. <u>Note:</u> This application will never delete the base language tables.
resetbaselang.bat	The resetbaselang utility allows a user to reset the base language in Maximo.

Server Deployment (EAR) Files

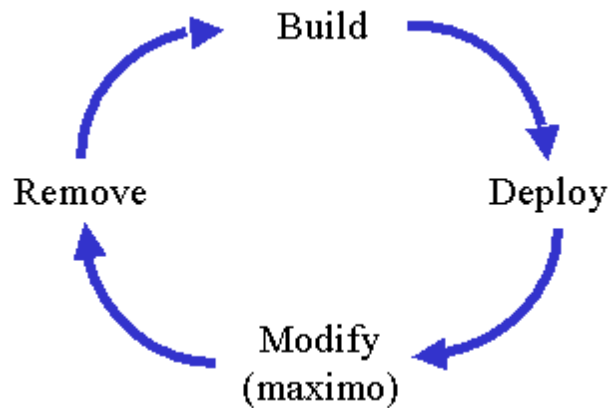
Introduction

Maximo has adopted a technology standard known as J2EE. As a part of this standard, XML files are compiled along with other files to create a set of Enterprise Application Archive (EAR) files.

This section describes the steps you need to perform if you make a change that requires you to rebuild and redeploy the EAR files.

The EAR files are the ones to which the application server actually refers when deploying Maximo.

The following chart depicts the steps you must take to rebuild and redeploy EAR files.



When to Rebuild and Redeploy EAR Files

Whenever you modify a Maximo application (for example, .xml files, maximo.properties, doclink.properties, or logging.properties), you must rebuild the EAR files. Any time you rebuild the EAR files you should first remove the old EAR files. Then you must rebuild the EAR files and redeploy the new EAR files for the modifications to be accepted.

continued on next page

Server Deployment (EAR) Files continued

Location of EAR Files

EAR files are located in the \\[*Maximo_root*]\deployment\default directory.

The contents of your **default** directory will look similar to this graphic, depending on the installed applications:

Name	Size	Type	Modified
jacweb.ear	23,275 KB	EAR File	10/27/2004 10:04 AM
maximo.ear	32,219 KB	EAR File	10/27/2004 10:04 AM
maximohelp.ear	78,859 KB	EAR File	10/25/2004 12:27 PM



Notes: The BEA WebLogic Server refers directly to EAR files. The IBM WebSphere server uses EAR files as the basis for creating deployed application files in another location.

An MRO Software standard training environment for Maximo uses BEA WebLogic 8.1.

You should speak with your Maximo server administrator for details regarding the setup at your company.

Deleting EAR Files



If the EAR files already exist in the \\[*Maximo_root*]\deployment\default directory during the rebuilding process, the system might not update the files.

Best Practice: It is strongly suggested that you delete the specific EAR file(s) that you want to rebuild before rebuilding, thus rebuilding them from scratch. This ensures that the files created during the rebuilding process are new and updated with your changes.

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Server Deployment (EAR) Files continued

Rebuilding EAR Files

Maximo uses Windows OS command files (*.cmd) to build the EAR files. The following table describes the *.cmd files. The files are located in the \\[Maximo_root]\deployment directory.

Build File Name	Purpose
BUILDMAXIMOEAR.CMD	Builds Maximo application reference file: maximo.ear
BUILDHELPEAR.CMD	Builds Maximo help reference file: maximohelp.ear, maximohelp.war
BUILDACWEBEAR.CMD	Builds Actuate (report server) reference file: acweb.ear

Example: You call the buildmaximoear.cmd file to rebuild the maximo.ear file for Maximo applications. You can call it from the command prompt or by double-clicking the file directly from Windows Explorer.

```

C:\Max60\MAXIM06\deployment>buildmaximoear
Buildfile: .\buildmaximoear.xml

init:
  [echo] maximo.deploydir=C:\Max60\MAXIM06\deployment\default
  [echo] maximo.basedir=.\..\applications\maximo
  [mkdir] Created dir: C:\Max60\MAXIM06\deployment\default\temp

propertiesBuild:
  [echo] properties.jar file=C:\Max60\MAXIM06\deployment\default\temp\propert
ies.jar
  [copy] Copying 10 files to C:\Max60\MAXIM06\deployment\default\temp\propert
ies
  [jar] Building jar: C:\Max60\MAXIM06\deployment\default\temp\properties.ja
r

businessObjectsBuild:
  [echo] businessobjects.jar file=C:\Max60\MAXIM06\deployment\default\temp\bu
sinessobjects.jar
  [jar] Building jar: C:\Max60\MAXIM06\deployment\default\temp\businessobjec
ts.jar
  
```

This graphic displays sample output from when the buildmaximoear.cmd file is running.



Best Practice: You should run the build*ear.cmd files from the command prompt.

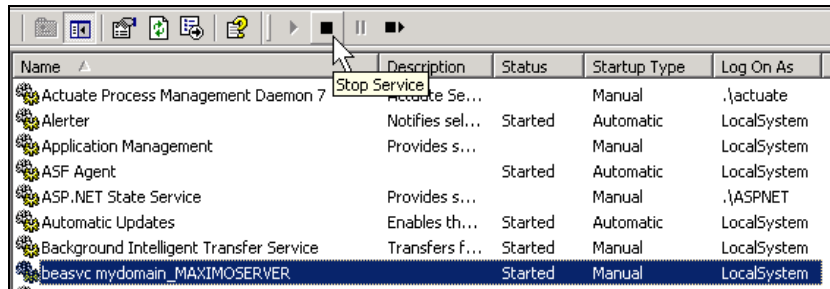
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Server Deployment (EAR) Files continued

Stopping the Maximo Server



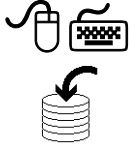
Before you rebuild and redeploy EAR files, you must first stop the Maximo Application Server. If you are in a standard MRO Software training environment, then you are using BEA WebLogic 8.1.3; otherwise, you may be using IBM WebSphere. Please check with your instructor and/or your system administrator.

Step	Action
1a	<p>If you started your BEA WebLogic Maximo Application Server through a Windows command, open the command window, press Ctrl + C, type Y in response to the system prompt, and then press Enter.</p> <p><u>Result:</u> You are done, and there is no need to continue these steps. You have stopped your Maximo Application Server.</p>
1b	<p>If your BEA WebLogic Maximo Application Server is running as a Windows Service, then follow the remaining steps below.</p>
2	<p>From the Windows Start menu, select:</p> <p style="text-align: center;">Settings > Control Panel > Administrative Tools > Services</p> <p><u>Result:</u> The Services window opens.</p>
3	<p>In the Services window, click to select:</p> <p style="text-align: center;">beasvc mydomain_MAXIMOSERVER</p> <p><u>Note:</u> Your service might have a different name. If you are unsure, ask your instructor.</p>
4	<p>In the Services window, click Stop, as shown here.</p>  <p><u>Result:</u> Your Maximo Application Server is now stopped.</p>
5	<p>You are done; now close the Services window.</p>

continued on next page

Server Deployment (EAR) Files continued

How to Delete Your EAR File(s)



Remember, you should delete the existing EAR file(s) that you need to rebuild *before* rebuilding it. Use the following steps to delete your maximo.ear file that we need to rebuild. (Remember that we want our new timeout setting to take effect.)

Step	Action
1	Using Windows Explorer, navigate to your \\[<i>Maximo_root</i>]\deployment\default directory.
2	When you are in this directory, delete your maximo.ear file.

How to Rebuild Your EAR File(s)


Earlier in this chapter we changed the timeout setting for our Maximo interface. Our change will not take effect until we rebuild and then redeploy the maximo.ear file. Use the following steps to rebuild your maximo.ear file.

Step	Action
1	If you have not already done so, use Windows Explorer to navigate to your \\[<i>Maximo_root</i>]\deployment\default directory and then delete your current maximo.ear file.
2	Use your Windows Start button to open a Windows Command Prompt session.
3	Using Windows DOS commands, navigate to your \\[<i>Maximo_root</i>]\deployment directory.
4	Enter <code>buildmaximoeear</code> at the Windows command prompt. <u>Result:</u> The <code>buildmaximoeear.cmd</code> file runs and displays results as it builds a new maximo.ear file.

continued on next page

Server Deployment (EAR) Files continued

How to Rebuild Your EAR File(s) continued

Step	Action
5	<p>When the buildmaximoear.cmd file finishes building your new maximo.ear file, it displays a “BUILD SUCCESSFUL” message, as shown in the following graphic.</p>  <pre>BUILD SUCCESSFUL Total time: 3 minutes 36 seconds C:\Max60\MAXIM06\deployment></pre> <p>At the Windows command prompt, type <code>exit</code> and then press Enter.</p>

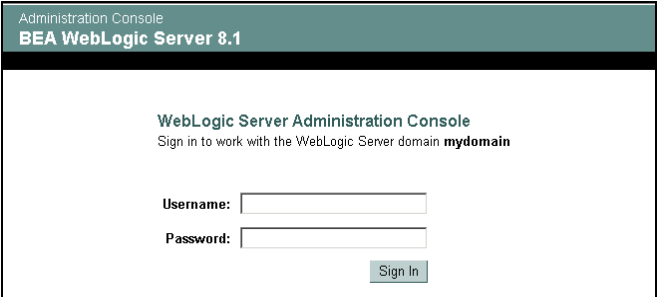
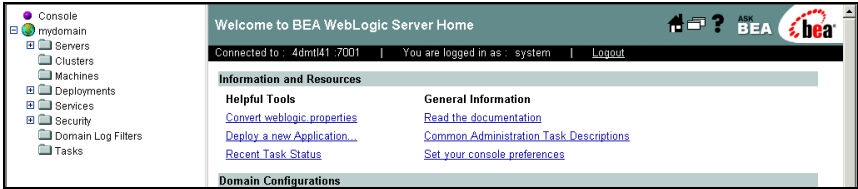
After rebuilding your EAR file(s), you must redeploy. Use the following steps (for BEA WebLogic 8.1.3) to redeploy your maximo.ear file.

Step	Action
1	Start your Maximo Application Server either by the Windows command or as a service, as directed by your instructor.
2	Start Maximo.

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Server Deployment (EAR) Files continued

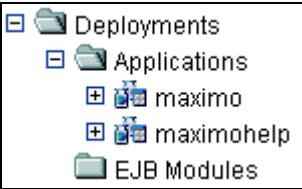

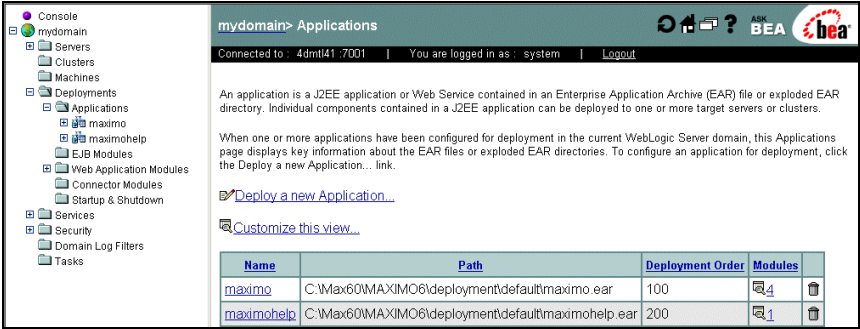
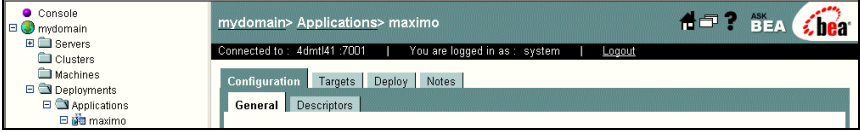
How to Rebuild Your EAR File(s) continued

Step	Action
3	<p>In the Address field of your browser window, replace: http://SERVER:7001/maximo/webclient/login/login.jsp with: http://SERVER:7001/console and then press Enter.</p> <p><u>Result:</u> The BEA WebLogic Server Administration Console sign-in page opens.</p> 
4	<p>Enter the user name and the password, and then click Sign In.</p> <p><u>Note:</u> Use the following user name and password in a standard MRO Software training environment:</p> <p style="padding-left: 40px;">Username: weblogic Password: weblogic</p> <p>These fields <i>are</i> case-sensitive.</p> <p><u>Note:</u> If you are <i>not</i> in a standard MRO Software training environment, ask your instructor/system administrator for the correct user name/password.</p> <p><u>Result:</u> The Welcome to BEA WebLogic Server Home page opens.</p> 

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Server Deployment (EAR) Files continued

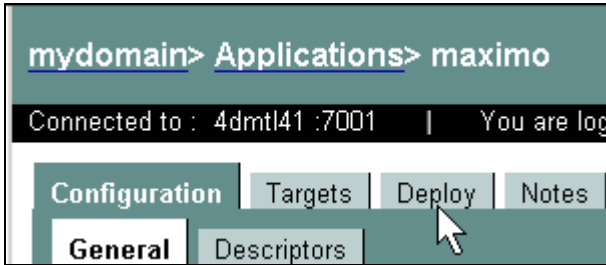
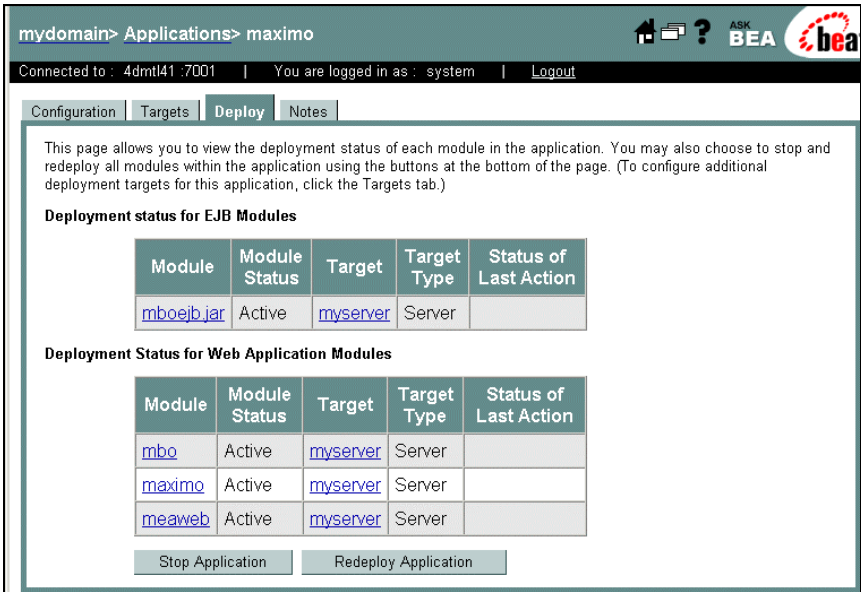
How to Rebuild Your EAR File(s) continued

Step	Action												
5	<p>On the Welcome to BEA WebLogic Server Home page, select Applications from either the left-side menu or the main content, as shown here:</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p><u>Result:</u> The Applications page opens.</p>  <table border="1"> <thead> <tr> <th>Name</th> <th>Path</th> <th>Deployment Order</th> <th>Modules</th> </tr> </thead> <tbody> <tr> <td>maximo</td> <td>C:\Max60\MAXIMO6\deployment\default\maximo.ear</td> <td>100</td> <td>4</td> </tr> <tr> <td>maximohelp</td> <td>C:\Max60\MAXIMO6\deployment\default\maximohelp.ear</td> <td>200</td> <td>1</td> </tr> </tbody> </table>	Name	Path	Deployment Order	Modules	maximo	C:\Max60\MAXIMO6\deployment\default\maximo.ear	100	4	maximohelp	C:\Max60\MAXIMO6\deployment\default\maximohelp.ear	200	1
Name	Path	Deployment Order	Modules										
maximo	C:\Max60\MAXIMO6\deployment\default\maximo.ear	100	4										
maximohelp	C:\Max60\MAXIMO6\deployment\default\maximohelp.ear	200	1										
6	<p>From either the left-side menu or the main content, select maximo.</p> <p><u>Result:</u> The maximo page opens.</p> 												

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Server Deployment (EAR) Files continued


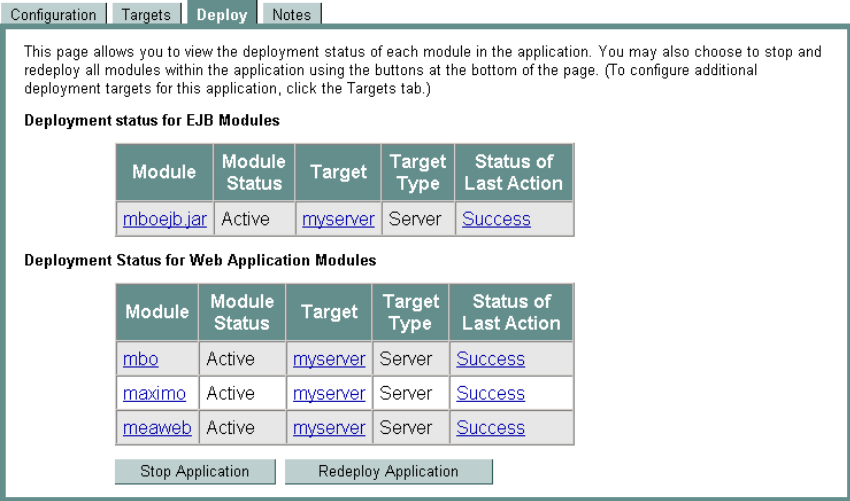


How to Rebuild Your EAR File(s) continued

Step	Action																														
7	<p>From the maximo page, select the Deploy tab, as shown here:</p>  <p>Result: The Deploy tab page opens.</p>  <p>The screenshot shows the 'Deploy' page with the following content:</p> <p>mydomain> Applications> maximo Connected to : 4dmtl41 :7001 You are logged in as : system Logout</p> <p>Configuration Targets Deploy Notes</p> <p>This page allows you to view the deployment status of each module in the application. You may also choose to stop and redeploy all modules within the application using the buttons at the bottom of the page. (To configure additional deployment targets for this application, click the Targets tab.)</p> <p>Deployment status for EJB Modules</p> <table border="1"> <thead> <tr> <th>Module</th> <th>Module Status</th> <th>Target</th> <th>Target Type</th> <th>Status of Last Action</th> </tr> </thead> <tbody> <tr> <td>mboejb.jar</td> <td>Active</td> <td>myserver</td> <td>Server</td> <td></td> </tr> </tbody> </table> <p>Deployment Status for Web Application Modules</p> <table border="1"> <thead> <tr> <th>Module</th> <th>Module Status</th> <th>Target</th> <th>Target Type</th> <th>Status of Last Action</th> </tr> </thead> <tbody> <tr> <td>mbo</td> <td>Active</td> <td>myserver</td> <td>Server</td> <td></td> </tr> <tr> <td>maximo</td> <td>Active</td> <td>myserver</td> <td>Server</td> <td></td> </tr> <tr> <td>meaweb</td> <td>Active</td> <td>myserver</td> <td>Server</td> <td></td> </tr> </tbody> </table> <p>Stop Application Redeploy Application</p>	Module	Module Status	Target	Target Type	Status of Last Action	mboejb.jar	Active	myserver	Server		Module	Module Status	Target	Target Type	Status of Last Action	mbo	Active	myserver	Server		maximo	Active	myserver	Server		meaweb	Active	myserver	Server	
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meaweb	Active	myserver	Server																												

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Server Deployment (EAR) Files continued

How to Rebuild Your EAR File(s) continued

Step	Action																														
8	<p>Click Redeploy Application, as shown here.</p>  <p>Result: The BEA WebLogic Server Administration Console shows a status of In Progress, redeploys the application, and then shows a final status of Success.</p>  <p>The screenshot shows the 'Deploy' tab selected. It contains a table for EJB Modules and a table for Web Application Modules. Both tables show a 'Success' status for the last action.</p> <table border="1"> <thead> <tr> <th>Module</th> <th>Module Status</th> <th>Target</th> <th>Target Type</th> <th>Status of Last Action</th> </tr> </thead> <tbody> <tr> <td>mboejb.jar</td> <td>Active</td> <td>myserver</td> <td>Server</td> <td>Success</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Module</th> <th>Module Status</th> <th>Target</th> <th>Target Type</th> <th>Status of Last Action</th> </tr> </thead> <tbody> <tr> <td>mbo</td> <td>Active</td> <td>myserver</td> <td>Server</td> <td>Success</td> </tr> <tr> <td>maximo</td> <td>Active</td> <td>myserver</td> <td>Server</td> <td>Success</td> </tr> <tr> <td>meaweb</td> <td>Active</td> <td>myserver</td> <td>Server</td> <td>Success</td> </tr> </tbody> </table> <p>Buttons: Stop Application, Redeploy Application</p>	Module	Module Status	Target	Target Type	Status of Last Action	mboejb.jar	Active	myserver	Server	Success	Module	Module Status	Target	Target Type	Status of Last Action	mbo	Active	myserver	Server	Success	maximo	Active	myserver	Server	Success	meaweb	Active	myserver	Server	Success
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maximo	Active	myserver	Server	Success																											
meaweb	Active	myserver	Server	Success																											
9	<p>When the Success status displays, select Logout, as shown here:</p>  <p>Result: You are now logged out of the BEA WebLogic Server Administration Console and returned to the sign-in page.</p>																														
10	<p>Close your Web browser.</p> <p>Note: There is no need to stop and restart your application server after redeploying an application.</p> 																														

Chapter Summary

The MAXIMO.PROPERTIES File

Most of the properties relating to the Maximo Application Server are set in the MAXIMO.PROPERTIES file.

The file is broken up into sections that relate to the types of properties in each section. Sections are denoted by a series of hyphens (-----).

Some properties can be turned “on” and “off” by commenting them using a double slash (/). Other properties use a binary 1 or 0 to turn them on and off, with 1 being “on” and 0 being “off.”

Server Deployment (EAR) Files

Maximo has adopted a technology standard known as J2EE. As a part of this standard, JSP files are compiled with other files to create a set of reference files.

These reference files are the ones to which the Web server actually refers when deploying Maximo. They are located in the DEPLOYMENT directory in the Maximo application directory.

NOTES:

System Administration for MXES

Chapter 3: Multisite Setup



In This Chapter

This chapter contains the following topics:

Topic	See Page
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Chapter Overview

Introduction

This chapter provides an overview of how Multisite is implemented in Maximo and the impact the setup has at the system, organization, and site levels.

Maximo is structured to contain and use your asset and maintenance information in a strategy that employs multiple levels of organizations and sites.

Chapter Focus

The focus of this chapter is a high-level introduction to the database structure used in multiorganizational/multisite implementations.

Learning Objectives

After you have completed this chapter, you should be able to:

- describe the functions of the Organization, Addresses, and Site tabs,
 - identify applications that are affected by a multisite setup,
 - describe the Maximo multilevel strategy,
 - plan and create organization and site levels,
 - discuss multisite options,
 - describe item and company sets,
 - create an item set,
 - create a company set, and
 - identify and set application options.
-

Overview of Multisite and Multiorganizational Strategy

Why Use a Multisite Setup?

Large businesses often consist of multiple facilities, or even multiple companies owned by a parent corporation. Some customers choose to install a separate Maximo database at each facility. Often these different facilities have common business practices or share common data, and separate databases do not meet the needs of the business.

Multisite is a way of implementing Maximo that allows a large company or corporation with multiple facilities to share data from a single database, while allowing the flexibility to have different business practices and data at different facilities.

With a multisite setup, you can organize your Maximo database to model your company's organizational structure, and allow facilities to share purchase agreements and vendors while keeping work orders and job plan data separate.

Example:

A utilities company owns several power plants, two water treatment plants, and a water distribution system. The business practices among the power plants are similar, but the water treatment plant has very different business practices.

To use a multisite setup, you categorize your company's facilities into *sites* and *organizations*. Sites and organizations are logical divisions of your company determined by:

- what types of operations are performed at each location, and
- what data can be shared by each location.

continued on next page

Overview of Multisite and Multiorganizational Strategy continued

Organizations and Sites

Multisite divides data storage into three different levels:

- Some elements reside at the **system** or **database** level, and are available for all users connected to the database.
- Other elements reside at the **organization** level and are available only to users in a specific organization.
- Finally, some data is available only to users at specific **sites** within an organization.

An *organization* is a major division of a company that contains one or more *sites*.

A *site* is a subdivision of an organization that might track inventory and other data separately from other sites.

Certain site information is unique to the site and is not visible to other sites, even though they belong to the same organization and share the same database.

Sharing Data Across Organizations

Maximo enables you to share data across organizations. There is also enhanced cross-site functionality. Data needs to be set up in a special way to do this.

Some of the data that can now be shared across sites includes:

- Items
- Companies
- Job plans
- Master PMs

Later you will do some exercises that more clearly demonstrate this powerful new feature.

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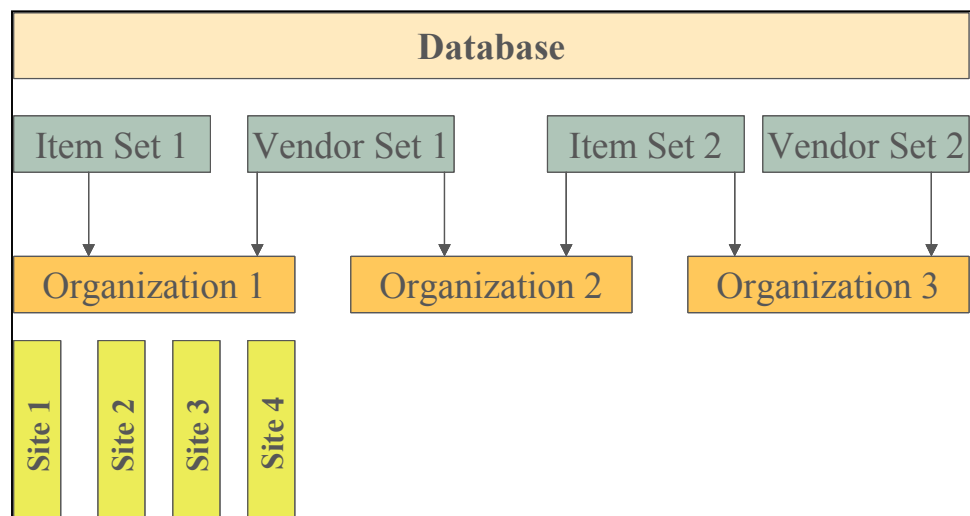
Overview of Multisite and Multiorganizational Strategy continued

Database Levels

A multisite setup allows clients to organize their database to model their organizational structure.

- Some elements reside at the **database** level and are available for the entire company.
- Other elements reside at the **organization** level and are available only to users within a particular organization.
- Items and vendors (companies) reside at the organization level and can be shared across organizations through sets. Sets are covered in detail later in this chapter.
- Finally, some data is available only to users at specific **sites** within an organization.

The following illustration is a graphical example of a multisite implementation:



continued on next page

Overview of Multisite and Multiorganizational Strategy continued

Implications

The ability to highly organize data creates a number of implications to consider before continuing a Maximo implementation:

- The entire structure of the organization must be analyzed closely to determine optimal database structure.
 - Some parts of the organization might not have access to data from other parts of the organization.
 - Integration requirements with legacy and other systems must be determined.
 - System administration might need to be divided up between sites or organizations.
 - One Maximo database might be able to meet all your CMMS or EAM needs, that is, there might no longer be a need for multiple databases or multiple schemas.
-

Database Level

A *system* is a single instance of a Maximo database. Database level information is generally used across the entire enterprise.

A single system can contain many organizations and sites.

For example, security controls are set at the database level. (These restrictions establish new user defaults, log-in tracking, and password requirements.)

continued on next page

Overview of Multisite and Multiorganizational Strategy continued

Applications at the Database Level

The following Maximo user applications are managed at the **database** level:

- Bulletin Board
- Communication Templates
- Currency Codes
- Escalations
- Labor Rate Contracts
- Lease/Rental Contracts
- Master Contracts
- Master PM
- Purchase Contracts
- Service Level Agreements (SLA)
- Solutions
- Tickets (SR, Incident, Problem)
- Warranty Contracts
- Workflow



Note 1: The majority of the Administrative applications (documented in the *Maximo System Administrator's Guide*) are also at the system level.



Note 2: Service desks often are set up to support all users, and information technology (IT) problems can affect an entire company; therefore, all of the applications that support the service desk are at the system level. In addition, because contracts are often negotiated for an entire company, the Contracts module is also at the system level.

Organization Level

An *organization* is a legal or logical entity, depending on the setup of the business, to which one or more sites can belong.

Chart of Accounts and *Base Currency* are defined at the organization level, and each individual site inherits the same values from its organization.

Vendors, *Items*, *Labor*, and *Purchase Contracts* are also defined at the organization level so that the sites belonging to that organization can share them.

A database can have many organizations, and each organization can have either one or many sites.

continued on next page

Overview of Multisite and Multiorganizational Strategy continued

Key Details of the Organization Level

Below are some key details surrounding the use of the organization level for the Maximo database:

- Organizations identify unique (legal entities or companies) data sets.
 - There can be many organizations in a single Maximo database.
 - Many sites can belong to the same organization.
 - An organization identifies unique base currencies, chart of accounts, and financial periods.
 - Certain records are available to be shared across organizations: items, companies, job plans, and master PMs.
 - Contracts are defined at the organization level. A PO is created for a site but can use contracts defined for the organization to which the site belongs.
 - Site addresses that are used to specify the Bill To and Ship To in purchase orders are defined with an address code at the organization level. While defining the site, you can specify the default Ship To and Bill To addresses by picking any of the address codes.
-

Transactions Across Organizations

Maximo allows you to perform some types of transactions across organizations. These transactions might involve inventory items and assets.

A concept called *sets* enables organizations to perform transactions on shared sets of assets.

continued on next page

Overview of Multisite and Multiorganizational Strategy continued

Applications at the Organization Level

The following Maximo user applications are managed at the **organization** level:

- Calendars
 - Chart of Accounts
 - Companies
 - Currency
 - Exchange Rates
 - Failure Codes
 - Labor
 - Labor Reporting
 - Meter Groups
 - Meters
 - Reports
 - Stocked Tools
 - Tools
-

Site Level

A *site* belongs to an organization. A site identifies a work location, such as a plant or facility.

Generally, sites:

- belong to the same organization,
- use the same currency, and
- share the same options for work orders equipment, labor, and other types of data.

Assets, deployed assets, and locations are site-specific records. As a result, work orders are also site specific. Inventory and purchasing are also managed at the site level.

Transactions across sites include:

- issues across sites
 - centralized purchasing
-

continued on next page

Overview of Multisite and Multiorganizational Strategy continued

Key Details of the Site Level

Key details surrounding the use of site level in a Maximo database include:

- A site identifies a work location, for example, a plant or facility.
 - A site belongs to only one organization.
 - Many sites can belong to the same organization.
 - All *transactions*—work orders, PRs, POs, invoices, issues, and transfers—are carried out within a site.
 - *Equipment* and *locations* belong to a site.
 - Equipment and locations must be unique within a site.
 - Equipment can be transferred from across sites within the same organization.
-

Transactions Across Sites

Maximo allows you to issue inventory items across sites.

This enables you to perform such advanced processes as creating a central purchasing location within your organization, then issuing items to storerooms and to work orders at other sites.

continued on next page

Overview of Multisite and Multiorganizational Strategy continued

Applications at the Site Level

The following Maximo user applications are managed at the **site** level:

- Assets
 - Assignment Manager
 - Computers
 - Condition Monitoring
 - Deployed Assets
 - Desktop Requisitions
 - Inventory
 - Invoices
 - Issues and Transfers
 - Job Plans
 - Locations
 - Network Devices
 - Network Printers
 - Preventive Maintenance (PM)
 - Purchase Orders (PO)
 - Purchase Requisitions (PR)
 - Receiving
 - Reconciliation
 - Request for Quotation (RFQ)
 - Routes
 - Service Items
 - Storerooms
 - Work Orders (WO)
-

Multisite Setup

Introduction

Use the Organizations application to set up the organizations and sites to be used in Maximo. You must define at least one organization and one site. The Organization application has the following four tabs:



- List
- Organization
- Addresses
- Sites

The List tab is universal to most Maximo applications. Use it here to search Maximo for organization records. This tab is covered in detail in this course.

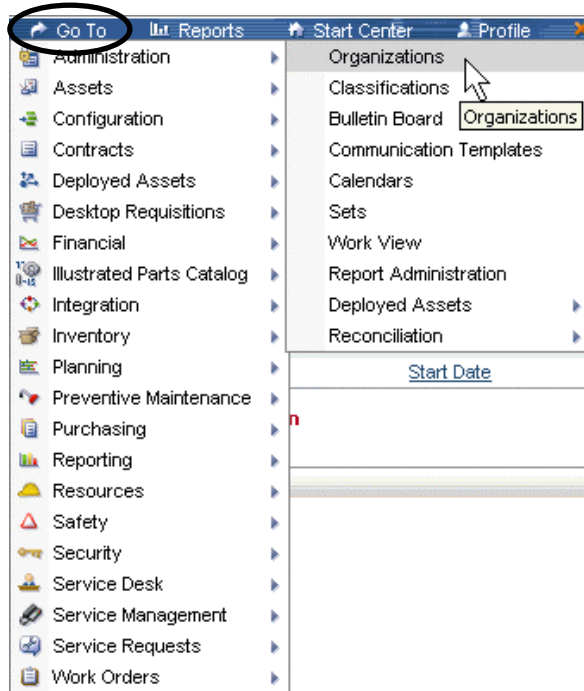
Details for the other three tabs can be found throughout the remainder of this chapter.

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Multisite Setup continued

Accessing the Organizations Application

Open the Organizations application from the Administration module off the Go To menu, as shown here:



Note: To open the Organizations application, Maximo users must have appropriate security permissions. Security is addressed later in this course.

continued on next page

Multisite Setup continued

Using the Organization Tab

You can add/modify/delete/disable/enable organizations from the Organization tab.

The screenshot shows the 'Organizations' tab in the Maximo application. The interface includes a search bar, a 'Find:' field, and a 'Select Action' dropdown. Below the search bar are tabs for 'List', 'Organization', 'Addresses', and 'Sites'. The 'Organization' tab is active, displaying a form with the following fields:

Organization	EAGLENA	EAGLE Inc. North America
Base Currency 1	USD	United States of America Dollar
Base Currency 2		
Item Set	SET1	Item set for EAGLENA
Company Set	COMPSET1	Company set 1
Clearing Account	6100-300-000	
Active?	<input checked="" type="checkbox"/>	

The Organization tab contains the following fields:

- Organization
- Description
- Base Currency 1
- Base Currency 2
- Item Set
- Company Set
- Clearing Account
- Active? (check box)

When you delete an organization, the record is removed from the table. However, if you inactivate an organization, the record is not deleted; instead, it is flagged as inactive.

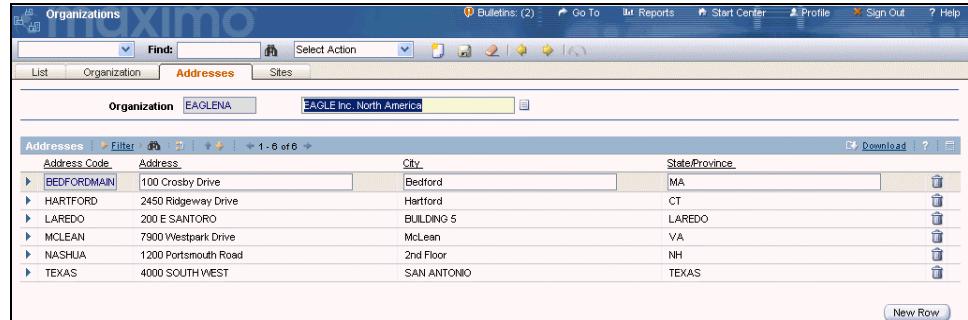
You always have the option to activate an inactive organization. This feature enables clients who might initially have separate organizations for each installation, but who later move on to a multisite single-organization model, to exploit the shared item, labor, and contract capability.

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Multisite Setup continued

Using the Addresses Tab

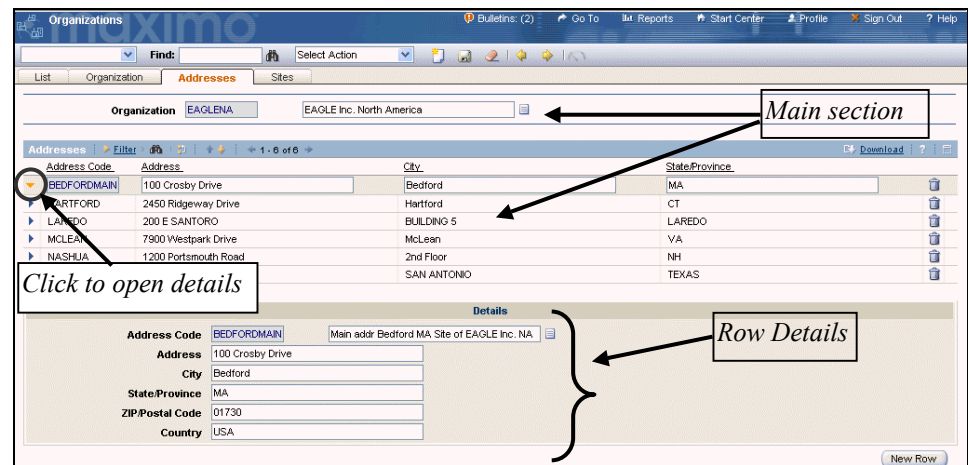
The sites' Bill To and Ship To address information on a PO comes from information on the Addresses tab.



Parts of the Addresses Tab

The Addresses tab has two sections:

- The main section displays the list of addresses that are currently defined under the selected organization.
- Open the detailed section by clicking on the arrow to the left of each Address Code. This opens the table *Row Details* for the chosen selection. Use this section to edit or add address information.



continued on next page

Multisite Setup continued

Using the Sites Tab

Use the Sites tab to define sites in an organization.

Site	Description	Ship to Address Code	Bill to Address Code	Active?
MCLEAN	McLean IT Operations Center	MCLEAN	MCLEAN	<input checked="" type="checkbox"/>
BEDFORD	Bedford MA Site of EAGLE Inc. North America	BEDFORDMAIN	BEDFORDMAIN	<input checked="" type="checkbox"/>
HARTFORD	Hartford, CT Site of Eagle Inc. North America	HARTFORD	BEDFORDMAIN	<input checked="" type="checkbox"/>
NASHUA	Nashua Site of Eagle Inc. North America	NASHUA	BEDFORDMAIN	<input checked="" type="checkbox"/>
FLEET	Corporate Fleet Management of Eagle, Inc.			<input checked="" type="checkbox"/>

Details	
Site	BEDFORD Bedford MA Site of EAGLE Inc. North America
Ship to Contact	
Ship to Address Code	BEDFORDMAIN Main addr Bedford MA Site of EAGLE Inc. NA
Bill to Contact	
Bill to Address Code	BEDFORDMAIN Main addr Bedford MA Site of EAGLE Inc. NA
Site Contact	WILSON Mike Wilson
Site Contact Group	
Active?	<input checked="" type="checkbox"/>

The Sites tab has two sections:

- The main section displays the list of sites that are currently defined under the selected organization.
- Open the detailed section by clicking on the arrow to the left of each site. This opens the table *Row Details* for the chosen selection. Use this section to edit or add address information.



Note: An active site has the **Active?** check box selected.

Adding Multisite Elements

Introduction



After using the Organizations application to create organizations and sites, you use the Sets application to create item/company sets.

Note: You must create at least one item set and one company set *before* you can create any organization.

In this section, you will first learn how to create an item/company set for an organization. Then you will learn how to add/set the following elements using the Organization application:

- Organizations
 - Addresses
 - Sites
 - Application options
-

Sets

Use the Sets application to create a framework for sharing item and company (vendor) data across multiple organizations.

Maximo stores both item and company master records in sets. These sets exist above the organization level so that organizations can share the same data.

Grouping items into sets allows users to transfer items among sites within different organizations.

Grouping companies into sets ensures that all sites and organizations use consistent names for vendor companies and that accurate consolidated vendor reporting can be performed.

The following relationships apply to sets and organizations:

- You can create as many item and company sets as your business practices require.
 - You must associate each organization with one, and only one, company set.
 - You must associate each organization with one, and only one, item set.
 - The same item or company set can be used by multiple organizations.
-

continued on next page

Adding Multisite Elements continued

Applications That Use Sets

The following Maximo applications use set-related data:

- Item Master
- Tools
- Company Master
- Master PM
- Job Plans

As we move through the course and interact with some of the applications, you will see how sets play a role.

The Sets Application

Open the Sets application from the Administration module.

The Sets application contains two table windows:

- *All Sets* to define sets
- *Organizations* to view the organizations associated with the sets.

Notice that this single-page application shows the sets that exist and the organizations that use them.

Note: Organizations are associated with sets in the Organizations application.



Set	Description	Type
COMPSET1	Company set 1	COMPANY
IT ITEMS	IT Items	ITEM
SET1	Item set for EAGLENA	ITEM
SET2	Item set for EAGLESA	ITEM

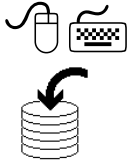
Organization	Description
EAGLENA	EAGLE Inc. North America
EAGLESA	Eagle South America, Inc.
EAGLEUK	European Headquarters of Eagle, Inc.
TEST	test

Sets do not inherently contain any items or vendors—they are just indicators. You create the sets in this application and use other applications to put items and vendors into the sets.


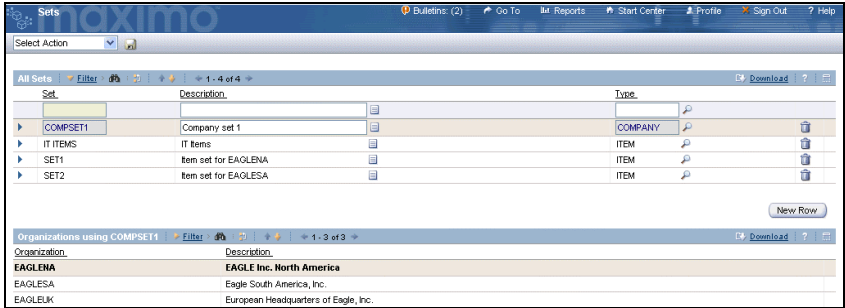
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Adding Multisite Elements continued

Creating an Item and a Company Set



Use the following steps to create a company set.

Step	Action
<p>1</p> 	<p>Sign in to Maximo with the following (case-sensitive) information: Username: wilson Password: wilson</p> <p><u>Note:</u> This username and password are used in a standard MRO Software training environment. If your environment differs or if you are unsure, check with your instructor.</p>
<p>2</p>	<p>Open the Sets application. <u>Hint:</u> You can use Go To > Administration > Sets. <u>Result:</u> The Sets application opens and is ready for editing.</p> 

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Adding Multisite Elements continued

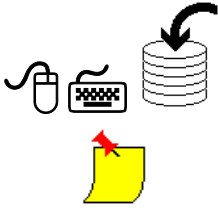
Creating an Item and a Company Set continued

Step	Action																		
3	<p>Click New Row, then enter the following information:</p> <table border="0"> <tr> <td><u>Field</u></td> <td><u>Value</u></td> </tr> <tr> <td>Set</td> <td>COMPSET2</td> </tr> <tr> <td>Description</td> <td>Company Set 2 for PAPER</td> </tr> <tr> <td>Type</td> <td>Company</td> </tr> </table>	<u>Field</u>	<u>Value</u>	Set	COMPSET2	Description	Company Set 2 for PAPER	Type	Company										
<u>Field</u>	<u>Value</u>																		
Set	COMPSET2																		
Description	Company Set 2 for PAPER																		
Type	Company																		
4	<p>Click New Row again, then enter the following information:</p> <table border="0"> <tr> <td><u>Field</u></td> <td><u>Value</u></td> </tr> <tr> <td>Set</td> <td>SET3</td> </tr> <tr> <td>Description</td> <td>Item set for PAPER</td> </tr> <tr> <td>Type</td> <td>Item</td> </tr> </table>	<u>Field</u>	<u>Value</u>	Set	SET3	Description	Item set for PAPER	Type	Item										
<u>Field</u>	<u>Value</u>																		
Set	SET3																		
Description	Item set for PAPER																		
Type	Item																		
5	<p>Save your record.</p> <p><u>Result:</u> Your screen should look similar to this one.</p> <table border="1"> <tbody> <tr> <td>COMPSET1</td> <td>Company set 1</td> <td>COMPANY</td> </tr> <tr> <td>COMPSET2</td> <td>Company Set 2 for PAPER</td> <td>COMPANY</td> </tr> <tr> <td>IT ITEMS</td> <td>IT Items</td> <td>ITEM</td> </tr> <tr> <td>SET1</td> <td>Item set for EAGLENA</td> <td>ITEM</td> </tr> <tr> <td>SET2</td> <td>Item set for EAGLESA</td> <td>ITEM</td> </tr> <tr> <td>SET3</td> <td>Item set for PAPER</td> <td>ITEM</td> </tr> </tbody> </table>	COMPSET1	Company set 1	COMPANY	COMPSET2	Company Set 2 for PAPER	COMPANY	IT ITEMS	IT Items	ITEM	SET1	Item set for EAGLENA	ITEM	SET2	Item set for EAGLESA	ITEM	SET3	Item set for PAPER	ITEM
COMPSET1	Company set 1	COMPANY																	
COMPSET2	Company Set 2 for PAPER	COMPANY																	
IT ITEMS	IT Items	ITEM																	
SET1	Item set for EAGLENA	ITEM																	
SET2	Item set for EAGLESA	ITEM																	
SET3	Item set for PAPER	ITEM																	

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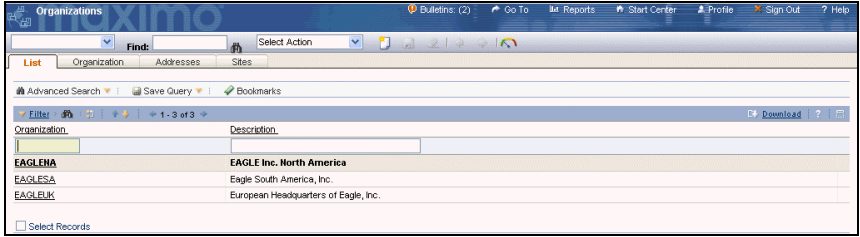
Adding Multisite Elements continued

Adding an Organization



Before you create an organization, a GL clearing account must exist for the new organization in order to activate it. However, we will be covering GL accounts later in this course.

Note: If you are not in a standard MRO training environment, then you might need to create a new GL clearing account before proceeding with this exercise. If you are unsure, please ask your instructor.


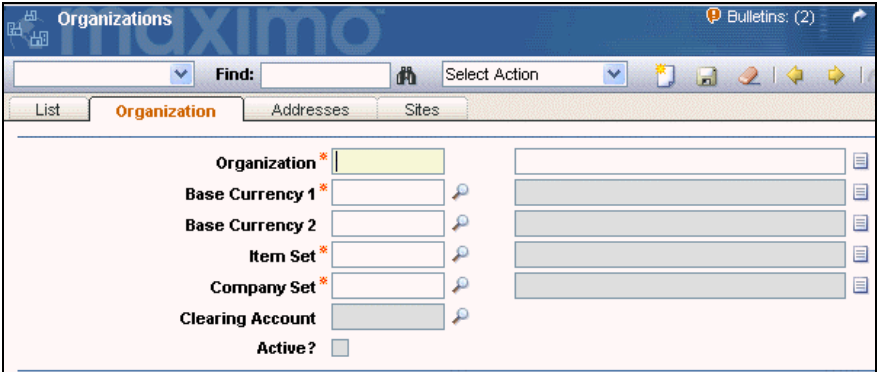

Step	Action
1	<p>Select Organizations from the Administration module.</p> <p><u>Result:</u> The Organizations application opens to the List tab, similar to the following graphic.</p> 

continued on next page

Adding Multisite Elements continued

Adding an Organization

continued


Step	Action																		
2	<p>Click the New Organization button, as shown here.</p>  <p><u>Result:</u> A blank new Organizations screen opens, similar to the following graphic, ready for your input.</p> 																		
3	<p>Enter the following information for the new organization:</p> <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Organization</td> <td>PAPER</td> </tr> <tr> <td>Organization Description</td> <td>Paper Division</td> </tr> <tr> <td>Base Currency 1</td> <td>USD</td> </tr> <tr> <td>Base Currency 2</td> <td>CAD</td> </tr> <tr> <td>Item Set</td> <td>SET3</td> </tr> <tr> <td>Company Set</td> <td>COMPSET2</td> </tr> <tr> <td>Clearing Account</td> <td><i>(Leave blank for now)</i></td> </tr> <tr> <td>Active?</td> <td><i>Unchecked (No)</i></td> </tr> </tbody> </table> <p> <u>Note:</u> Later in this course, when we discuss Financials, we will create the GL clearing account for this organization and then activate it.</p>	<u>Field</u>	<u>Value</u>	Organization	PAPER	Organization Description	Paper Division	Base Currency 1	USD	Base Currency 2	CAD	Item Set	SET3	Company Set	COMPSET2	Clearing Account	<i>(Leave blank for now)</i>	Active?	<i>Unchecked (No)</i>
<u>Field</u>	<u>Value</u>																		
Organization	PAPER																		
Organization Description	Paper Division																		
Base Currency 1	USD																		
Base Currency 2	CAD																		
Item Set	SET3																		
Company Set	COMPSET2																		
Clearing Account	<i>(Leave blank for now)</i>																		
Active?	<i>Unchecked (No)</i>																		

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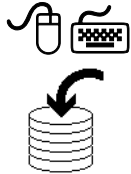
Adding Multisite Elements continued

Adding an Organization

continued

Step	Action
4	Click the Save Organization button.  <u>Result:</u> The basic elements of your new organization are saved into the database.

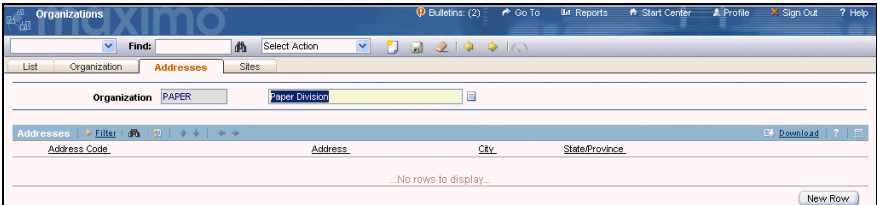
Adding Address Information



After you create an organization, you must add important address information.

You use the address information when you create new sites for your new organization. The address information also becomes the default Ship To and Bill To addresses for contracts, purchase requisitions, purchase orders, and invoices.

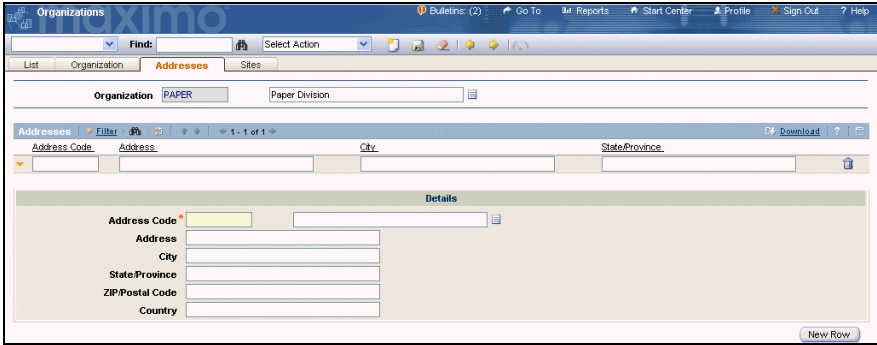
Use the following steps to add the address information.

Step	Action
1	Open the Addresses tab by clicking on it. <u>Result:</u> Maximo displays the Addresses tab, as shown here. 

continued on next page

Adding Multisite Elements continued

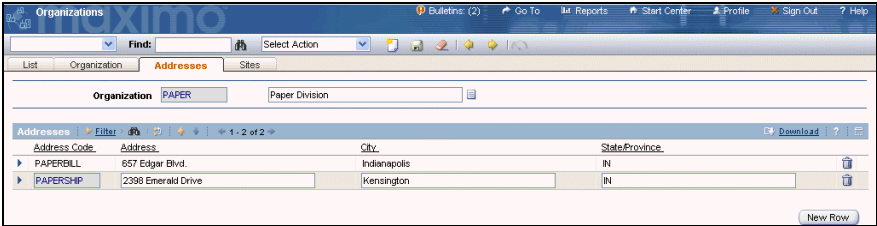
Adding Address Information continued

Step	Action																
2	<p>Click the New Row button to open and display the input form for the new address.</p> <p><u>Result:</u> A new line displays with details ready for input, similar to the following graphic.</p> 																
3	<p>Enter the following address information:</p> <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Address Code</td> <td>PAPERSHIP</td> </tr> <tr> <td>Description</td> <td>Paper Division – Kensington Shipping</td> </tr> <tr> <td>Address</td> <td>2398 Emerald Drive</td> </tr> <tr> <td>City</td> <td>Kensington</td> </tr> <tr> <td>State/Province</td> <td>IN</td> </tr> <tr> <td>Zip/Mail Code</td> <td>46219</td> </tr> <tr> <td>Country</td> <td>United States</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	Address Code	PAPERSHIP	Description	Paper Division – Kensington Shipping	Address	2398 Emerald Drive	City	Kensington	State/Province	IN	Zip/Mail Code	46219	Country	United States
<u>Field</u>	<u>Value</u>																
Address Code	PAPERSHIP																
Description	Paper Division – Kensington Shipping																
Address	2398 Emerald Drive																
City	Kensington																
State/Province	IN																
Zip/Mail Code	46219																
Country	United States																

continued on next page

Adding Multisite Elements continued

Adding Address Information continued

Step	Action																
4	<p>You will now add a second address to the new organization.</p> <p>Click the New Row button and enter the following additional new address information:</p> <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Address Code</td> <td>PAPERBILL</td> </tr> <tr> <td>Description</td> <td>Paper Division – Indianapolis Billing</td> </tr> <tr> <td>Address</td> <td>657 Edgar Blvd.</td> </tr> <tr> <td>City</td> <td>Indianapolis</td> </tr> <tr> <td>State/Province</td> <td>IN</td> </tr> <tr> <td>Zip/Mail Code</td> <td>46216</td> </tr> <tr> <td>Country</td> <td>United States</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	Address Code	PAPERBILL	Description	Paper Division – Indianapolis Billing	Address	657 Edgar Blvd.	City	Indianapolis	State/Province	IN	Zip/Mail Code	46216	Country	United States
<u>Field</u>	<u>Value</u>																
Address Code	PAPERBILL																
Description	Paper Division – Indianapolis Billing																
Address	657 Edgar Blvd.																
City	Indianapolis																
State/Province	IN																
Zip/Mail Code	46216																
Country	United States																
5	<p>Click Save to save the new address details.</p> <p><u>Result:</u> You now have two addresses in the PAPER organization from which to choose when setting up sites.</p> 																

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Adding Multisite Elements continued

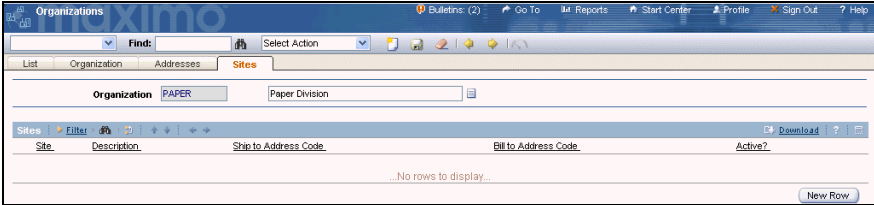
Adding Sites



For this next exercise, we will assume the following:

- The PAPER division has two plants.
- Each plant is located in a different state in the U.S.
- One site is in Indiana and uses the billing and shipping information that we just created.
- The other site is in Maine and requires different shipping information, but uses the same billing information.


Use the following steps to add the Indiana site.

Step	Action								
1	<p>Open the Sites tab.</p> <p><u>Result:</u> Maximo displays the Sites tab, similar to the following graphic.</p> 								
2	<p>Click New Row and enter the following information:</p> <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Site</td> <td>PAPERIN</td> </tr> <tr> <td>Description</td> <td>Paper Plant – Indiana Location</td> </tr> <tr> <td>Active?</td> <td><i>Unchecked (No)</i></td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	Site	PAPERIN	Description	Paper Plant – Indiana Location	Active?	<i>Unchecked (No)</i>
<u>Field</u>	<u>Value</u>								
Site	PAPERIN								
Description	Paper Plant – Indiana Location								
Active?	<i>Unchecked (No)</i>								

continued on next page

Adding Multisite Elements continued

Adding Sites continued

Step	Action												
3	<p>Using either the Select Value buttons or their respective fields (to the left of the button), enter the information indicated here:</p> <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Ship To Contact</td> <td>KELLY</td> </tr> <tr> <td>Ship To Address Code</td> <td>PAPERSHIP</td> </tr> <tr> <td>Bill To Contact</td> <td>ALLEN</td> </tr> <tr> <td>Bill To Address Code</td> <td>PAPERBILL</td> </tr> <tr> <td>Site Contact</td> <td>KELLY</td> </tr> </tbody> </table> <p> <u>Note</u>: Notice that the address codes are the ones that you entered on the Addresses tab.</p>	<u>Field</u>	<u>Value</u>	Ship To Contact	KELLY	Ship To Address Code	PAPERSHIP	Bill To Contact	ALLEN	Bill To Address Code	PAPERBILL	Site Contact	KELLY
<u>Field</u>	<u>Value</u>												
Ship To Contact	KELLY												
Ship To Address Code	PAPERSHIP												
Bill To Contact	ALLEN												
Bill To Address Code	PAPERBILL												
Site Contact	KELLY												
4	<p>Click Save Organization to save the record.</p> <p><u>Result</u>: You now have created a site record for the Indiana paper plant.</p>												

Exercise: Creating the Maine Site



In this exercise you should work with your instructor to create a site record for another paper plant located in Maine.

Business Problem: We do not want items shipped to Indiana that are meant for Maine.

Remember the following as you create the Maine site:

For this exercise, use fictitious information of your choosing (for example, **Site: PAPERME**). Before adding the Maine site, you will have to add an address for Maine shipping and a Ship To Contact.

The Indiana address can be used for billing purposes.

Note: It is important that you give sites codes and descriptions that will be easily recognizable to users.



Maximo Help

Please consult both the Maximo Help and the online *Maximo User's Guide* for more information on this topic.

Application Options: Overview

Introduction

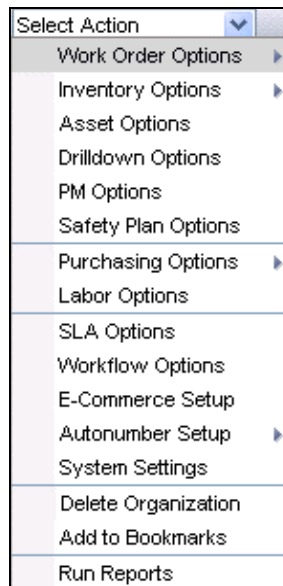
This section introduces you to the various options available from the Organization application's Select Action menu. Some options are set at the system level, some are set at the organization level, and some are set on a site-by-site basis.

The Select Action Menu

The Select Action menu enables you to carry out a number of functions, including:

- Changing/setting application options
- Determining approval limits
- Setting up e-commerce
- Autonumber setup
- System settings

The following graphic shows the options available from the Select Action menu.



Note: Most of these options are a UI to the MAXVARS (table) values.

continued on next page

Application Options: Overview continued

System Level Options

Application options are set using the Select Action menu. Some options are set at the *system* level, including:

- System Settings
-

Organization-Level Options

Some options are set at the *organization* level, including:

- Work Order Options
 - Inventory Options
 - Equipment Options
 - PO Options
 - Drilldown Options
 - Invoice Options
 - Labor Options
 - Approval Limits
 - Autonumber Setup (*both organization and site*)
-

Site-Level Options

The following *site*-level data options are set individually from site to site within an organization:

- Inventory Options
- Work Order Options
- Workflow Options
- PM Options
- E-Commerce Setup

In these cases, settings for one site do not affect data in other sites, even if they belong to the same organization.

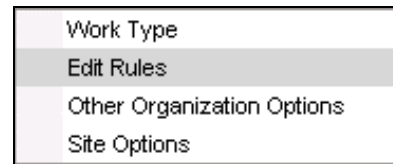
Application Options: Work Order

Introduction

To configure work order options, select **Work Order Options** from the Select Action menu in the toolbar.

Work Order Options has the following four submenus:

- Work Type
- Edit Rules
- Other Organization Options
- Site Options



Some of the Work Order Options apply to changes, releases, and/or work orders.

Configuring Work Types



Use the Work Type dialog box to add new work types or modify existing work types for the selected organization.

Work Type options determine how Maximo handles the different types of work orders during the Complete Transaction phase of work order processing.

Use the following steps to modify the work type for an organization.

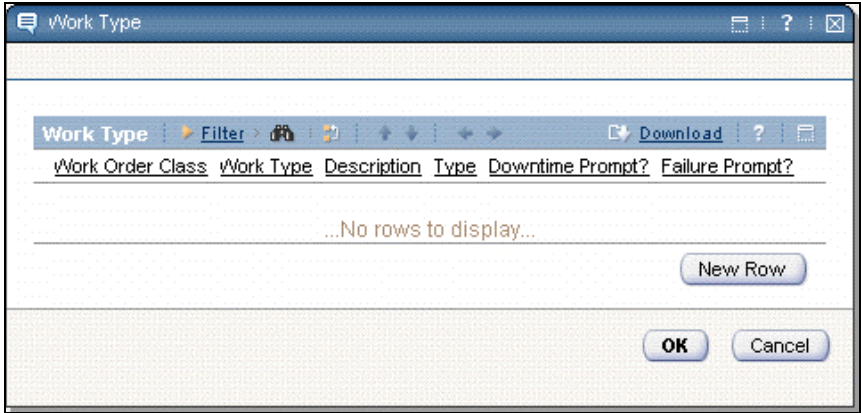


Step	Action
1	Ensure that your new PAPER organization is selected. <u>Note:</u> Your instructor might make a change in the EAGLENA organization and demonstrate the effect of the change during the instructor demo of this feature.

continued on next page

Application Options: Work Order continued

Configuring Work Types

continued

Step	Action
2	<p>From the Select Action menu, choose Work Type from Work Order Options.</p> <p><u>Result:</u> The Work Type dialog box opens.</p>  <p> <u>Note:</u> Because this is a newly created organization, there are no work types defined for your organization.</p>
3	<p>Click New Row.</p> <p><u>Result:</u> Maximo displays a new row with its details ready for input.</p>
4	<p>In the Work Order Class field, enter WORKORDER.</p>
5	<p>In the Work Type field, enter CM. Enter Corrective Maintenance as the description.</p>
6	<p>Click to select the Downtime Prompt? check box to cause the Downtime Report page to open after you complete (or close) this type of work order.</p>
7	<p>Click to select the Failure Prompt? check box to cause the List Failure Codes window to open when you complete (or close) this type of work order, allowing you to enter a failure report.</p> <p> <u>Note:</u> You can edit or delete user-defined work types at any time.</p>

continued on next page

Application Options: Work Order continued

Configuring Work Types

continued

Step	Action								
8	<p>Click New Row again to add another Work Type line. Then, follow the previous steps to insert these additional work types:</p> <table border="1"><thead><tr><th><u>Work Type</u></th><th><u>Description</u></th></tr></thead><tbody><tr><td>EM</td><td>Emergency Maintenance</td></tr><tr><td>EV</td><td>Event Report</td></tr><tr><td>PM</td><td>Preventive Maintenance</td></tr></tbody></table>	<u>Work Type</u>	<u>Description</u>	EM	Emergency Maintenance	EV	Event Report	PM	Preventive Maintenance
<u>Work Type</u>	<u>Description</u>								
EM	Emergency Maintenance								
EV	Event Report								
PM	Preventive Maintenance								
9	<p>Click OK to save your new records.</p> <p><u>Result:</u> Your records are saved to the database and the Work Type dialog box closes.</p>								

continued on next page

Application Options: Work Order continued

Configuring Edit Rules

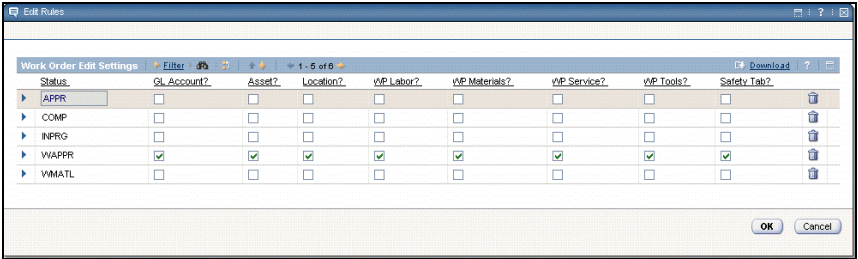
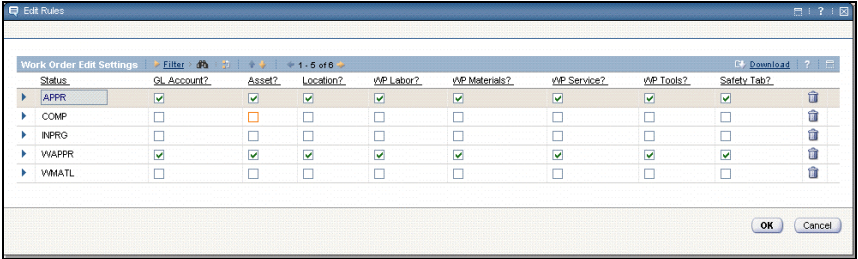


Use the Edit Rules dialog box to specify which work order fields users can edit while a work order has a specified status.

You also use Edit Rules to modify status validation rules for work orders for an organization.

Use the following steps to change the default edit rules for a newly created or existing organization.

Note: Ensure that your PAPER organization is selected.

Step	Action
<p>1</p>	<p>From the Select Action menu, choose Edit Rules from Work Order Options.</p> <p><u>Result:</u> The Edit Rules dialog box opens.</p>  <p><u>Note:</u> Because this is a newly created organization, there are no rules defined for your organization.</p>
<p>2</p>	<p>Open the details for the APPR status line, and check all the available boxes on that that line.</p> <p><u>Result:</u> Your screen should look similar to this one.</p>  <p><u>Note:</u> When this process is complete and the data is saved, all of the checked fields and the Safety tab for work orders with an APPR status will be editable.</p>

continued on next page

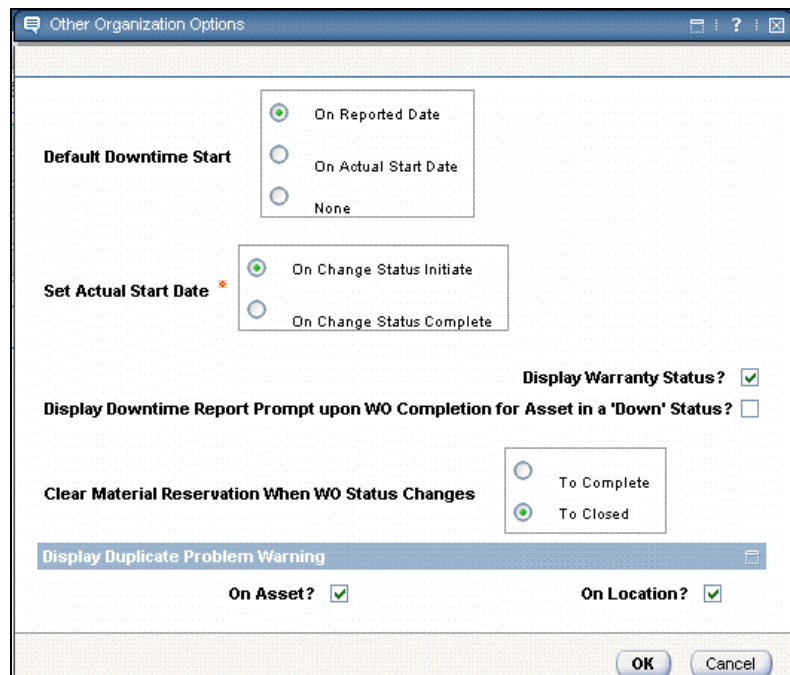
Application Options: Work Order continued

Configuring Edit Rules continued

Step	Action
3	Click OK to save and return. <u>Result:</u> Your changes to Edit Rules are saved.

Other Organization Options

Use the Other Organization Options dialog box to change various other settings, as shown here.



continued on next page

Application Options: Work Order continued

Other Organization Options

continued

The following table describes the options in the Other Organization Options dialog box. Please refer to the Maximo Help for more information.

Configuration Feature	Description
Default Downtime Start	<p>Select an option to specify which date/time will appear by default in the Start field when Maximo displays the Downtime Report dialog box.</p> <p>If you choose the default setting, <i>On Reported Date</i>, the Start field displays the date/time when someone reported the problem.</p> <p>If you choose <i>On Actual Start Date</i>, the Start field displays the actual start date/time of the work order.</p> <p>If you choose <i>None</i>, the Start field remains blank.</p>
Set Actual Start Date	<p>Select an option to set the start date when the Change Status is started or when it is finished.</p> <p>Choose <i>On Change Status Initiate</i> (the default) to make the actual start date the date when the work order status is changed to Initiate.</p> <p>Choose <i>On Change Status Complete</i> to make the actual start date the date when the work order status is changed to Complete.</p>
Display Warranty Status?	<p>Select this box to display a warranty message when someone enters equipment under warranty on a work order.</p> <p>If you clear this check box, Maximo does not display a warranty message after you enter equipment under warranty on a work order.</p>
Display Downtime Report Prompt upon WO Completion for Asset in a 'Down' Status?	<p>Select this check box if you want Maximo to display the Downtime Report prompt after you complete or close a work order while the associated equipment's status is still down. You can then change the status, or leave it as is. If downtime was reported already, this will not appear.</p>
Clear Material Reservation When WO Status Changes	<p>Specify when to clear the material reservation for a work order. Choose to clear it when the work order changes to either Complete or to Closed (the default).</p>
Display Duplicate Problem Warning	<p>This option specifies whether Maximo displays the Duplicate Problem Display dialog box when a duplicate problem is reported on an asset or location. By default, Maximo displays the warning for both asset and location. Clear the On Asset? and/or On Location? check boxes if you do not want Maximo to display the dialog box.</p>

continued on next page

Application Options: Work Order continued

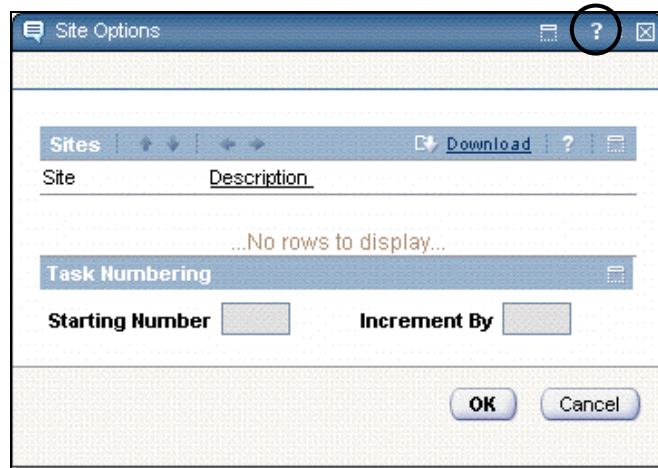
Configuring Other Organization Options

Follow these steps to configure one of the Other Organization Options selections: **Display Downtime Report Prompt**.

Step	Action
1	From the Select Action menu, choose Other Organization Options from Work Order Options . <u>Result</u> : The Other Organization Options dialog box opens. <u>Note</u> : The Other Organization Options dialog box is shown on a previous page.
2	Click to select the Display Downtime Report Prompt upon WO Completion for Asset in a 'Down' Status? check box.
3	Click OK to save and return. <u>Result</u> : Your changes to Other Organization Options are saved.

Site Options

Use the Site Options dialog box to specify how to increment task ID numbering for work orders.



You can refer to the Maximo Help for more information.

Maximo Help

Please consult both the Maximo Help and the online *Maximo User's Guide* for more information.

Application Options: Inventory

Introduction

To configure inventory options, select **Inventory Options** from the Select Action menu in the toolbar.

Inventory Options has the following submenus:

- Inventory Defaults
- Reorder
- Inventory Costs



Note: Inventory Defaults and Reorder both provide organization-level settings.

Inventory Defaults

Use the Inventory Defaults dialog box to set options for:

- ABC breakpoints
- Negative availability
- Negative current balances



Note: Shown here are the inventory defaults for a new organization. You should change the settings to model your company's inventory business process.

continued on next page

Application Options: Inventory continued

Reorder Options Use the Inventory Reorder dialog box to specify whether Maximo should create an approved or unapproved purchase requisition or purchase order when a reorder request is generated.

The screenshot shows the 'Inventory Reorder' dialog box. It features two main sections for configuration:

- External Request Creation:** Includes radio buttons for 'Unapproved PRs' (selected), 'Approved PRs', 'Unapproved POs', and 'Approved POs'.
- Internal Request Creation:** Includes radio buttons for 'Unapproved PRs' (selected), 'Approved PRs', 'Unapproved POs', and 'Approved POs'.

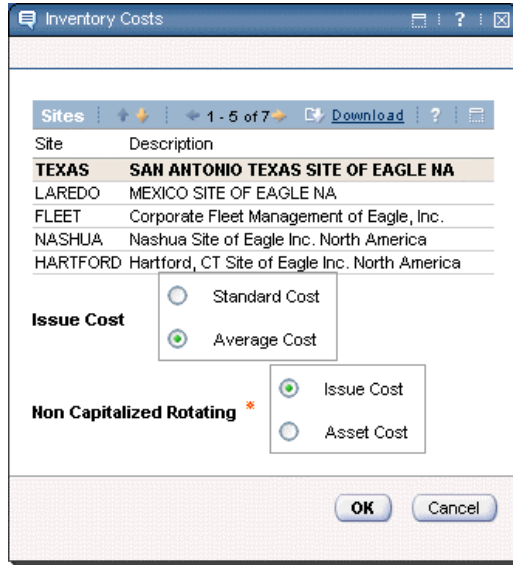
Below these sections is a text box labeled 'Maximum Number of Reorder Lines per PO/PR' with the value '40'. At the bottom right are 'OK' and 'Cancel' buttons.

Set separate values for reorder requests directed at external vendors and internal supply rooms.

continued on next page

Application Options: Inventory continued

Inventory Costs Use the Inventory Costs dialog box to select inventory cost options for the selected site. Settings for one site do not affect other sites.



The sections of this screen are described in the following table.

Screen Section	Description
Issue Cost	<ul style="list-style-type: none"> Issue Cost is the cost assigned to the item when it is used. By default, the issue cost is based on standard cost. To base issue cost on average cost, select the Average Cost option.
Non Capitalized Rotating	<ul style="list-style-type: none"> By default, costs for non-capitalized rotating items and equipment are based on the setting for issue cost. To base non-capitalized rotating costs on equipment cost, select the Asset Cost option.

Maximo Help

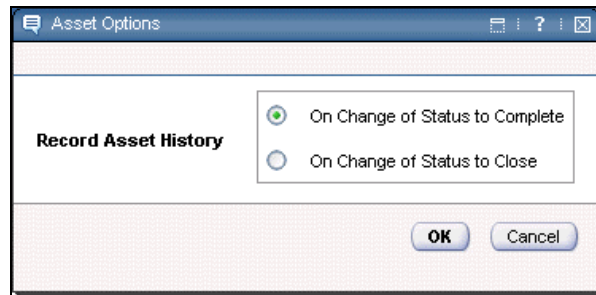
Please consult both the Maximo Help and the online *Maximo User's Guide* for more information.

Application Options: Asset Related

Asset Options

To configure Asset options, select **Asset Options** from the Select Action menu in the toolbar.

Asset Options has the following single dialog box:



Use the Asset Options dialog box to specify whether to record asset history when a work order's status changes to **Complete** or to **Close**.

Drilldown Options

To configure Drilldown options, select **Drilldown Options** from the Select Action menu in the toolbar.

Drilldown Options has the following single dialog box:



Use the Drilldown Options dialog box to specify how the Drilldown opens—whether to the Location tab or to the Asset tab—when both the location and asset fields on a record are empty. This also applies when a user in the Assets application selects **Open Drilldown** from the Select Action menu.

continued on next page

Application Options: Asset Related continued

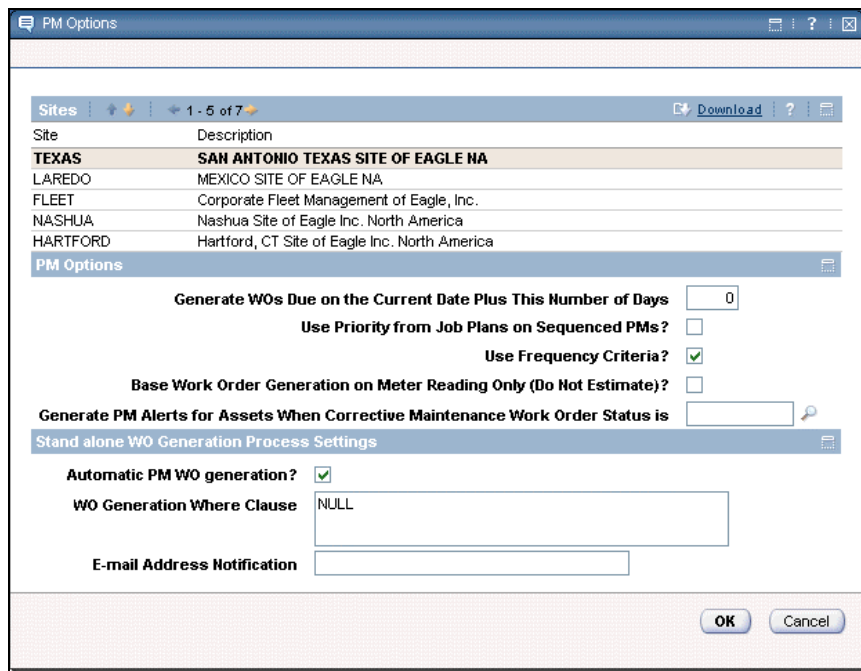
Drilldown Options continued

This option...	Does the following...
Top Level Starts at Top Level Location	This option might be useful for organizations with a large number of asset records that use a location hierarchy to organize these records. The display would begin with the top-level location of the primary system, rather than displaying all assets in Maximo without a parent.
Top Level Starts at Top Level Asset	This option might be useful if asset records are organized into a hierarchy with just a few top-level asset records. If the organization has a large number of top-level asset records, selecting this option might cause slower performance when displaying the records.

PM Options

To configure Preventive Maintenance options, select **PM Options** from the Select Action menu in the toolbar.

PM Options has the following single dialog box:



continued on next page

Application Options: Asset Related continued

PM Options

continued

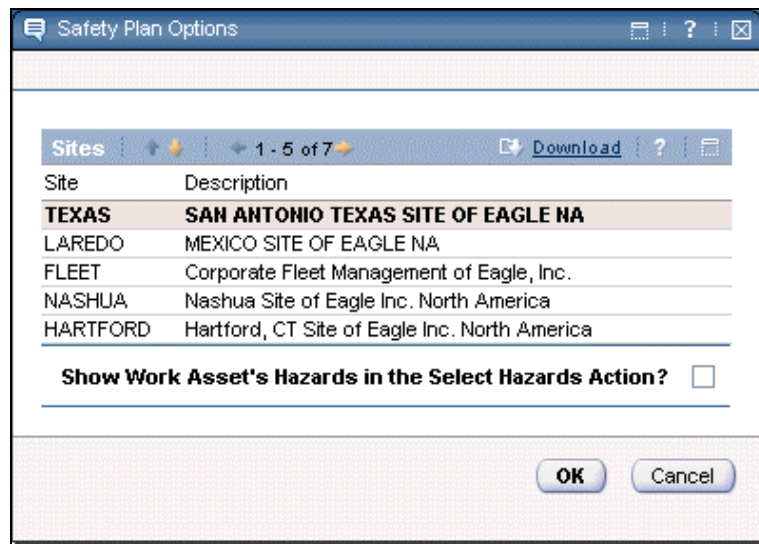
PM Options settings are configured at site level; therefore, each site can be configured to meet your business needs.



Note: Selecting the **Auto PM WO Generation?** check box will cause custom PM criteria to be considered automatically if the PM cron task is enabled.

Safety Plan Options

Use the Safety Plan Options dialog box, shown here, to specify that Maximo should display the work asset's hazards in the Select Hazards dialog box.



Maximo Help

Please consult both the Maximo Help and the online *Maximo User's Guide* for more information.

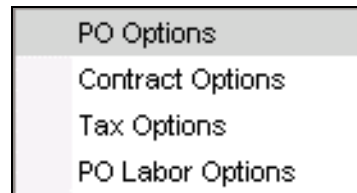
Application Options: Purchasing

Introduction

To configure purchasing options, select **Purchasing Options** from the Select Action menu in the toolbar.

Purchasing Options has the following four submenus:

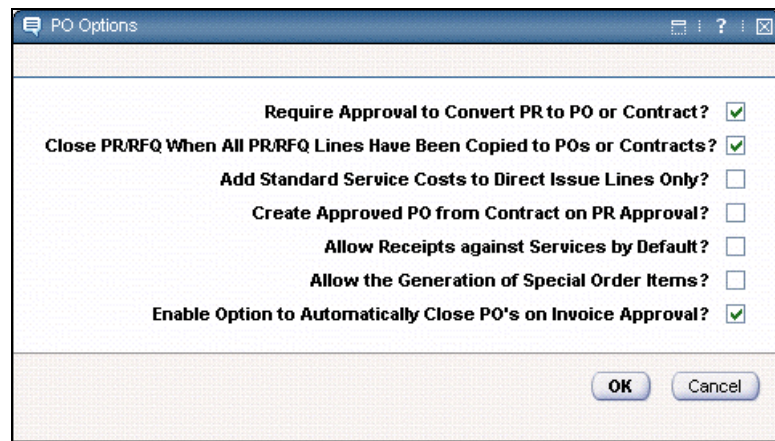
- PO Options
- Contract Options
- Tax Options
- PO Labor Options



Configuring PO Options



Use the PO Options dialog box to set a number of purchase order defaults, as shown here.



Use the following steps to modify the PO options for your PAPER organization.

continued on next page

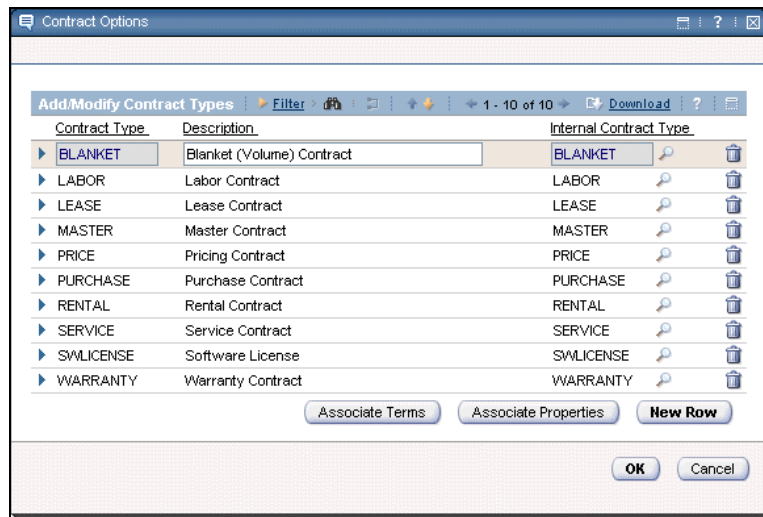
Application Options: Purchasing continued

Configuring PO Options continued

Step	Action
1	From the Select Action menu, choose PO Options from Purchasing Options . <u>Result:</u> The PO Options dialog box opens.
2	Click to select the Allow the Generation of Special Order Items? check box.
3	Click OK to save and return. <u>Result:</u> Your changes to PO Options are saved.

Contract Options

Use the Contract Options dialog box to associate terms and conditions with contract types.



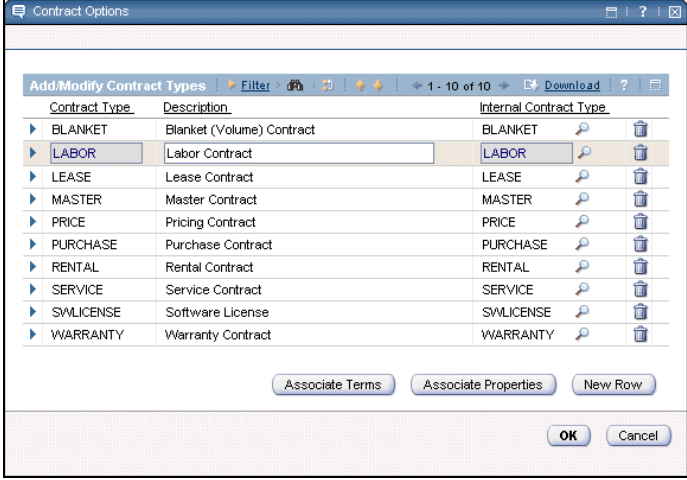
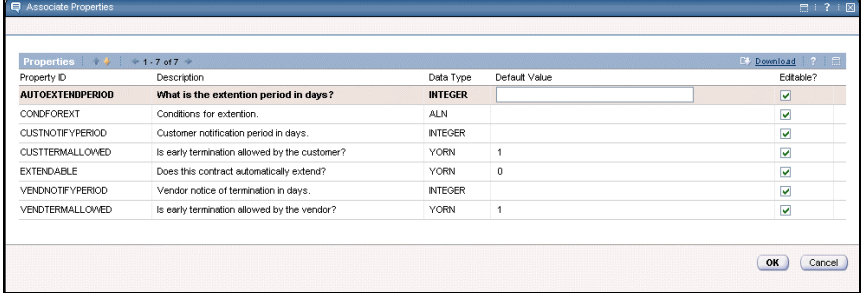
- You can associate specific terms with a contract by selecting the contract and clicking **Associate Terms**. When the Associate Terms and Conditions dialog box opens, select the terms you want to associate.
- You can associate a specific property with a contract by selecting the contract and clicking **Associate Properties**. When the Associate Properties dialog box opens, select the property you want to associate.

continued on next page

Application Options: Purchasing continued

Associate Properties

You can associate a specific property with a contract by selecting the contract and clicking **Associate Properties**. Use the following steps to change the associated properties.

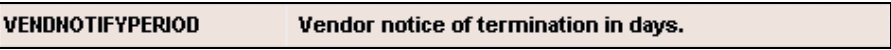
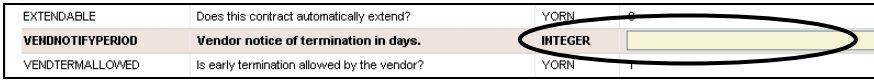
Step	Action
1	Ensure that your organization is selected in the Organizations application.
2	<p>Choose Purchasing Options >> Contract Options from the Select Action menu.</p> <p><u>Result:</u> The Contract Options dialog box opens.</p> 
3	Click to select LABOR .
4	<p>Click Associate Properties.</p> <p><u>Result:</u> The Associate Properties dialog box displays.</p> 

continued on next page

Application Options: Purchasing continued

Associate Properties

continued

Step	Action
5	Click to select the VENDNOTIFYPERIOD property. 
6	Click in (to edit) the Default Value field of this record. 
7	Enter a value of 30.
8	Click OK to save and close the Associate Properties dialog box.
9	Click OK to save and close the Contract Options dialog box.

continued on next page

Application Options: Purchasing continued

Tax Options

Tax options are set at the organization level. Use the Tax Options dialog box to specify default tax GL accounts and to define tax codes for Maximo to use in calculating the amount of tax that is due on a PR, RFQ, PO, or invoice. You can define up to five different tax types, each of which can have any number of tax codes. Maximo uses tax type and tax code as follows:

- A *tax type* corresponds to a kind of tax, for example, to federal, state, or city sales taxes. Another tax type might be special taxes for handling hazardous material.
- A *tax code* represents a particular tax rate, such as MA for the Massachusetts sales tax of 5%. Thus, one tax type might include tax codes for all state or provincial sales taxes.

How you specify the tax options will depend on the requirements of your financial system.



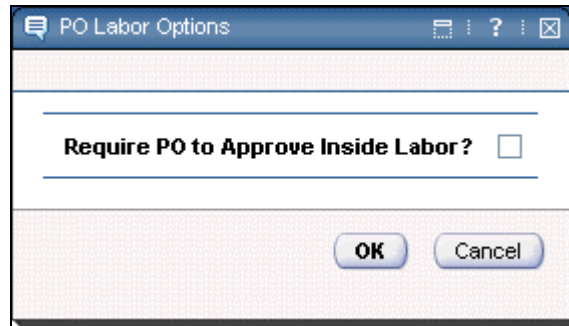
Note: Please refer to the online help for more information; specifically, for information on calculating compound taxes as used by some countries.

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Application Options: Purchasing continued

PO Labor Options

Use the PO Labor Options dialog box to set defaults for outside and inside labor.



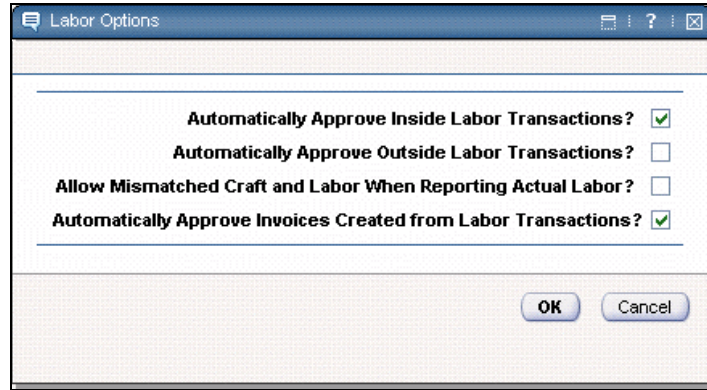
Maximo Help

Please consult both the Maximo Help and the online *Maximo User's Guide* for more information on this topic.

Application Options: Miscellaneous

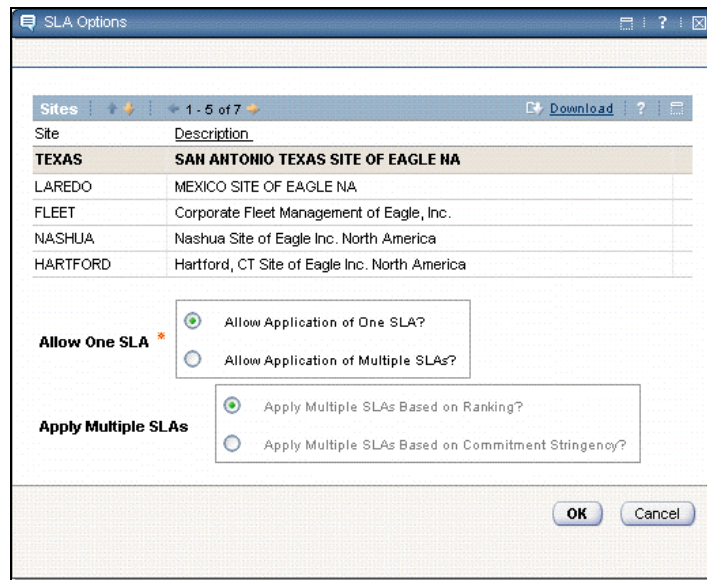
Labor Options

Use the Labor Options dialog box to set defaults for several labor transaction options, including the approval process for outside and inside labor.



SLA Options

Use the SLA Options dialog box to set service level agreement options.

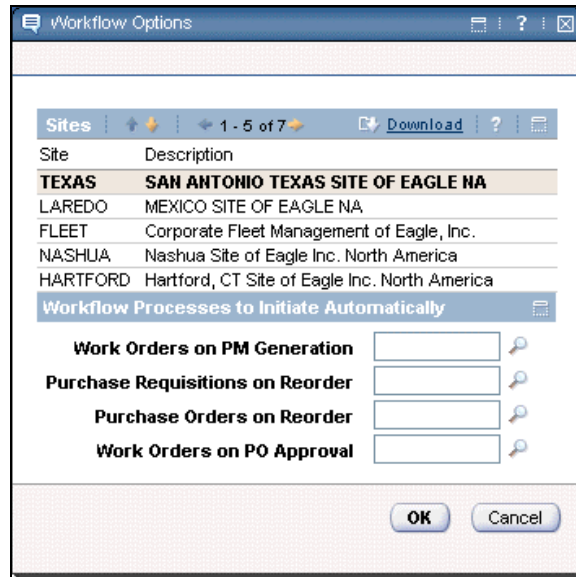


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Application Options: Miscellaneous continued

Workflow Options

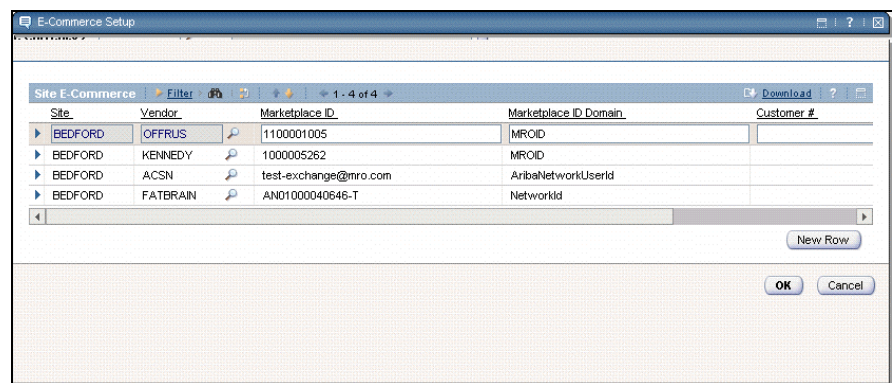
Use the Workflow Options dialog box to set several options regarding when workflow is activated.



See the *Workflow Designer Implementation Guide* for more details about Workflow operations.

E-Commerce Setup

Use the E-Commerce Setup dialog box to specify e-commerce parameters for various sites and vendors.



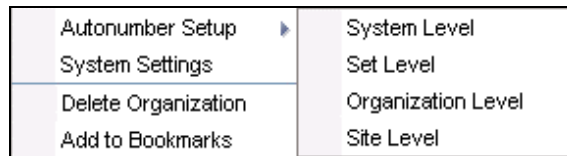
Application Options: System

Autonumber Setup Introduction

To configure autonumber options, select **Autonumber Setup** from the Select Action menu in the toolbar.

Autonumber Setup has the following submenus:

- System Level
- Set Level
- Organization Level
- Site Level

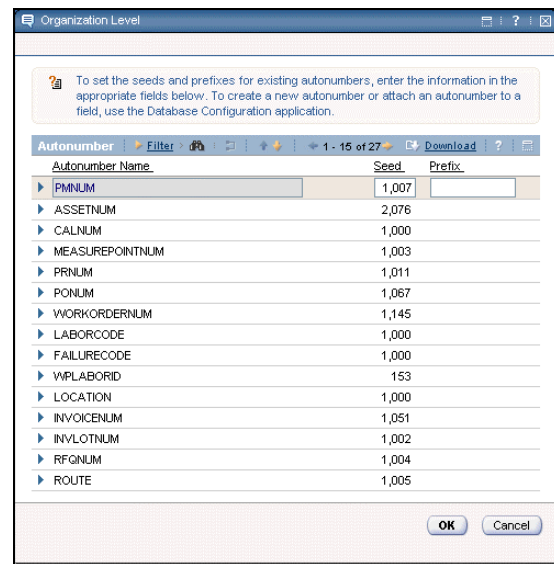


When you set up automatic numbering, Maximo increments record IDs by one when a user inserts a new record. Automatic numbering for some record ID fields is at the organization level; for other fields it is at the site level.

Autonumber Setup: Organization Level

Use the Organization Level dialog box to specify autonumber seeds and prefixes for record IDs that are unique at the organization level. Automatic numbering at the organization level increments record IDs by one for each new record, regardless of which site generates the new record.

Example: If the PM Number seed is 1001 at Organization A, and Organization A contains Sites 1, 2, and 3, then the first PM generated at any site is 1001. The next PM generated, even if it is generated at a different site, is 1002.

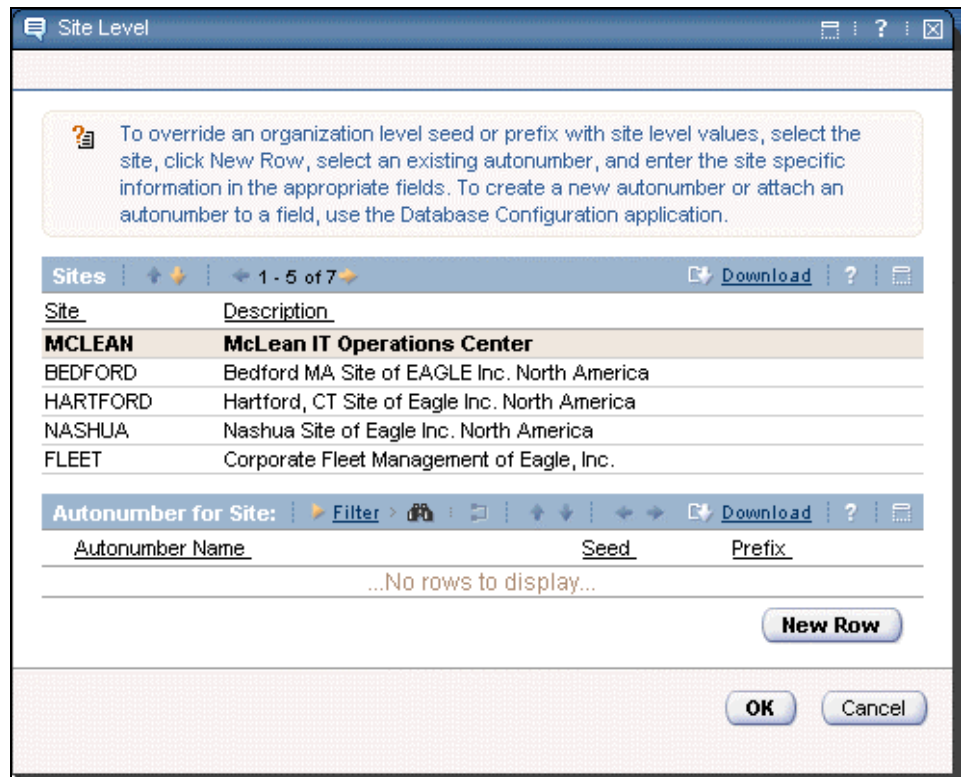


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Application Options: System continued

Autonumber Setup: Site Level

Use the Site Level dialog box to specify autonumber seeds and prefixes for record IDs that are unique at the site level. Multiple sites in the same organization can have their own automatic numbering. Therefore, multiple sites can have identical record IDs.



Maximo Help

Please consult both the Maximo Help and the online *Maximo User's Guide* for more information.

continued on next page

Application Options: System continued

System Settings Use the System Settings dialog box to specify a variety of system defaults. System settings apply to all sites and all organizations.

The screenshot shows the 'System Settings' dialog box with the following configuration:

- Calendar:** Start Date and End Date fields are empty.
- GL Configuration:** Character to Display for Unspecified GL Components is set to '?'. There is a small icon to the right of the text box.
- Classification Catalog:** Delimiter in Asset Descriptions is set to ','.
- Timer:** Confirm Time Calculated by Timer? is checked.
- People:** Name Sequence is set to 'Firstname Lastname'.

Chapter Summary

Overview of Multisite and Multiorganizational Strategy

This section provided some insight into how Maximo can model data to resemble your company's organizational structure.

The database is divided into three levels:

- System level
- Organization level
- Site level

The key details of the organization and site levels were provided.

Adding Elements

You learned how to add an organization using the Organization tab, add addresses using the Address tab, and add sites using the information from the other tabs combined with site information on the Site tab.

Configuring Application Options

Many application options are set through Multisite application options.

The options that are made available using the Select Action drop-down menu include:

- Work Order Options
 - Inventory Options
 - Equipment Options
 - PM Options
 - PO Options
 - Invoice Options
 - Labor Options
 - Workflow Options
 - Autonumber Options
-

NOTES:

System Administration for MXES

Chapter 4: Signature Security



In This Chapter

This chapter contains the following topics:

Topic	See Page
Chapter Overview	4-1
Security Overview	4-2
Person Records	4-6
Security Groups	4-9
The Security Groups Application	4-15
Creating Security Groups	4-24
Maximo Users	4-28
Creating Maximo Users	4-30
User Security Settings	4-38
Managing Users in Security Groups	4-40
Managing User Security Settings	4-47
Chapter Summary	4-58

Chapter Overview

Introduction

The primary purpose of the Signature Security application is to establish and maintain Maximo Users and Security Groups. This chapter also touches on person records and person groups.

- All security access to Maximo is based on Security Groups.
 - Each Maximo User is associated with one or more security groups, each of which can have different levels of access to Maximo.
 - Security setup is described in detail in the *System Administrator's Guide*, but you should be aware of how security settings can affect your ability to use Maximo.
 - When setting up a security group, you define access capabilities to applications and their menus.
 - A system administrator can add or delete Security Group users at any time.
 - Any Maximo user can be assigned as a system administrator.
-

Learning Objectives

When you have completed this chapter, you should be able to:

- describe the People application,
 - discuss Maximo Signature Security strategy,
 - create Maximo users,
 - create security groups,
 - set password protection, and
 - identify when and how to block and activate users.
-

Security Overview

Introduction

The following three applications are key to security in Maximo:

- People application (Resources module)
 - Users application (Security module)
 - Security Groups application (Security module)
-

The People Application

The People application captures common personal information:

- Labor
 - Users
 - Asset custodians
 - Asset owners
 - Help desk callers
-

The Users Application

The Users application identifies Maximo users and has the following features:

- Status with history
 - Forced password expiration
 - Single step to update settings for multiple users (Groups, Default Site, Default Storeroom)
-

The Security Groups Application

The Security Groups application is a *single* point of contact for group-dependent settings:

- Sites
 - Application authorizations
 - Purchasing limits
 - Invoice tolerances
 - Start Centers
 - GL component authorizations
 - Labor authorizations
 - Storeroom authorizations
 - Group restrictions
-

continued on next page

Security Overview continued

Users and Security Groups

Some of the Maximo security features are as follows:

- All security access to Maximo is based on Security Groups.
 - When setting up a security group, you define access capabilities to applications and their menus.
 - A description can be seen after you insert a new group.
 - One group's setting can be independent of other groups.
 - A user can be a member of multiple groups.
 - Any user can have administrative rights within a group.
 - Any Maximo user can be assigned as a system administrator.
 - A system administrator can add users to, or delete users from, a security group at any time.
 - "My Profile" has been added for users.
 - Maximo is Government FIPS 140-2 compliant.
 - Maximo is also Sarbanes-Oxley issues compliant.
-

Default Values

There are no default Start Centers for new groups. The **Start Center** field is not a required field. With out-of-the-box Maximo, create at least one new group that includes a Start Center Template.

Out-of-the-box Maximo includes a default user: maxadmin.

Use this user *only* to sign in to Maximo for the first time; then create new users and new groups, and thereafter use one of the new users to sign in.

Warning: Do not change any settings for the MAXADMIN user!



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Security Overview continued

How Access Is Determined

When a user tries to access an application, the security objects will check to see what the maximum access is, based on the combination of the user's roles:

- Application access types
- Read
- Insert
- Save
- Delete

In addition, the user's access to options (Actions) will be checked. Access always has a site component, as follows:

- All sites
 - Specified sites
 - No sites specified
 - Organization access is derived from the site access, not specified.
-

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Security Overview continued

LDAP, SSO, PKI, and PKE

LDAP: Lightweight Directory Access Protocol

- Authentication via a central directory for all applications in an organization.
- The Microsoft brand is Active Directory.

SSO: Single Sign-On

- User authenticates (provides user name and password) once and is granted access to all applications (OS, e-mail, Maximo) without providing credentials to an additional sign-in screen.
- SSO is often implemented in conjunction with LDAP.

PKI: Public Key Infrastructure

- The U.S. Government has set up an infrastructure for issuing public digital certificates to authenticate the identity of people and providers.

PKE: Public Key Encryption

- Encryption and decryption of information, usually using the combination of a public and private key or digital certificate to authenticate a user or provider.

Maximo supports these by leveraging the application server's authentication mechanisms.

Note: If you are using LDAP with Microsoft Active Directory, both users and security groups *must* be unique to each other.



What This Means to You

What this means to you:

- Maximo has very robust security features.
 - Maximo is an extremely flexible security architecture to meet a wide range of requirements.
 - There are three scenarios for implementation:
 - Simple: one site, one group per user, sites, applications, and so forth all in one group.
 - Moderate: multiple sites, single organization, can have multiple groups per user and site administration.
 - Complex: multiple organizations, multiple groups, functionality divided among groups, multiple levels of administration, multiple asset classes managed.
-

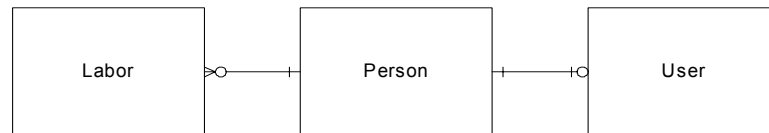
Person Records

Introduction

A *person record* is a record in the People application of an individual who might appear somewhere on a Maximo record—for example, in a **Reported By** or **Affected Person** field on a service request, as a **Supervisor** on a labor record, or as the value in a **Ship To** or **Bill To Attention** fields on a purchasing record.

Purpose

Person records are at the system level, so more than one labor or user can be associated with each person record, as long as the Labor and Users are in different organizations.



- Each person record might or might not be a Maximo User or Labor in Maximo.
 - Person records can stand by themselves.
 - Each Maximo User must have a corresponding person record.
 - Each Labor in Maximo must have a corresponding person record.
 - A Labor record and a Maximo User can have the same person record.
-

The People Application

Use the People application to create, modify, view, and delete person records. This application serves as a storehouse of personal and official information on individuals such as Maximo users, labors, asset owners, supervisors, and individuals who receive workflow notifications via e-mail.

The People application contains the following tabs:

- *List* to search Maximo for a person's record
 - *Person* to create, modify, view, or delete a person's record
-

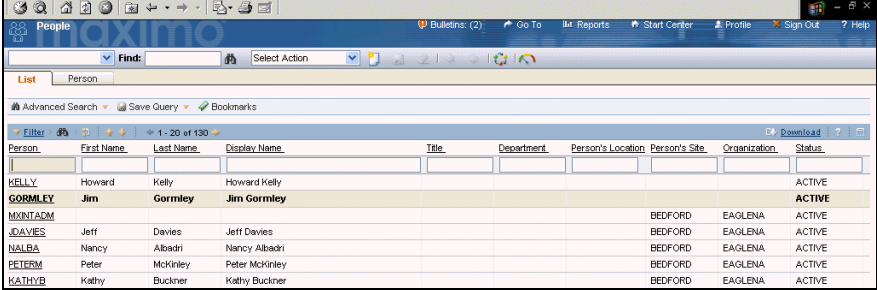

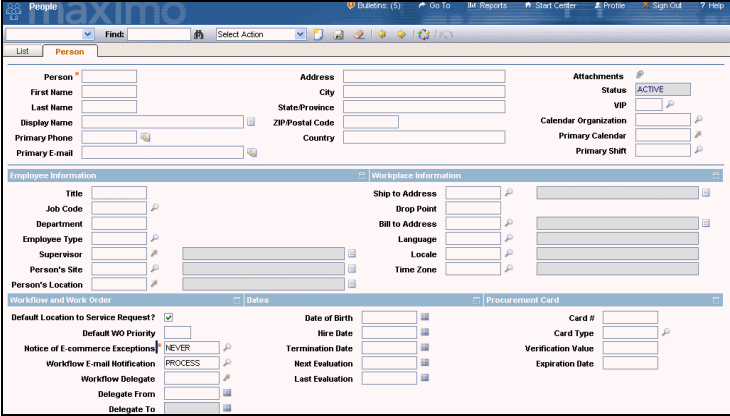
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Person Records continued

Create a New Person Record



Use the following steps to create a new people record in Maximo for yourself.

Step	Action																																																																																										
1	<p>Sign in to Maximo and open the People application.</p> <p><u>Hint:</u> The People application is in the Resources module.</p> <p><u>Result:</u> The People application opens and displays a list of existing people records.</p>  <table border="1"> <thead> <tr> <th>Person</th> <th>First Name</th> <th>Last Name</th> <th>Display Name</th> <th>Title</th> <th>Department</th> <th>Person's Location</th> <th>Person's Site</th> <th>Organization</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>KELLY</td> <td>Howard</td> <td>Kelly</td> <td>Howard Kelly</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>ACTIVE</td> </tr> <tr> <td>GORMLEY</td> <td>Jim</td> <td>Gormley</td> <td>Jim Gormley</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>ACTIVE</td> </tr> <tr> <td>MXINTADM</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>BEDFORD</td> <td>EAGLENA</td> <td></td> <td>ACTIVE</td> </tr> <tr> <td>JDAVIES</td> <td>Jeff</td> <td>Davies</td> <td>Jeff Davies</td> <td></td> <td></td> <td>BEDFORD</td> <td>EAGLENA</td> <td></td> <td>ACTIVE</td> </tr> <tr> <td>NALBA</td> <td>Nancy</td> <td>Albadri</td> <td>Nancy Albadri</td> <td></td> <td></td> <td>BEDFORD</td> <td>EAGLENA</td> <td></td> <td>ACTIVE</td> </tr> <tr> <td>PETERM</td> <td>Peter</td> <td>McKinley</td> <td>Peter McKinley</td> <td></td> <td></td> <td>BEDFORD</td> <td>EAGLENA</td> <td></td> <td>ACTIVE</td> </tr> <tr> <td>KATHYB</td> <td>Kathy</td> <td>Buckner</td> <td>Kathy Buckner</td> <td></td> <td></td> <td>BEDFORD</td> <td>EAGLENA</td> <td></td> <td>ACTIVE</td> </tr> </tbody> </table>	Person	First Name	Last Name	Display Name	Title	Department	Person's Location	Person's Site	Organization	Status											KELLY	Howard	Kelly	Howard Kelly						ACTIVE	GORMLEY	Jim	Gormley	Jim Gormley						ACTIVE	MXINTADM						BEDFORD	EAGLENA		ACTIVE	JDAVIES	Jeff	Davies	Jeff Davies			BEDFORD	EAGLENA		ACTIVE	NALBA	Nancy	Albadri	Nancy Albadri			BEDFORD	EAGLENA		ACTIVE	PETERM	Peter	McKinley	Peter McKinley			BEDFORD	EAGLENA		ACTIVE	KATHYB	Kathy	Buckner	Kathy Buckner			BEDFORD	EAGLENA		ACTIVE
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PETERM	Peter	McKinley	Peter McKinley			BEDFORD	EAGLENA		ACTIVE																																																																																		
KATHYB	Kathy	Buckner	Kathy Buckner			BEDFORD	EAGLENA		ACTIVE																																																																																		
2	<p>Click the New Person icon  to insert a new people record.</p> <p><u>Result:</u> The People application displays a blank record, ready for editing.</p>  <p>Note: The Person field and the Notice of E-commerce Exceptions are the <i>only</i> required fields.</p>																																																																																										

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Person Records continued

Create a New Person Record

continued

Step	Action										
3	Enter the following information: <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Person</td> <td>[<i>Your FI & Your Last Name</i>] Ex.: Jane Doe = JDoe</td> </tr> <tr> <td>First Name</td> <td>[<i>Your First Name</i>]</td> </tr> <tr> <td>Last Name</td> <td>[<i>Your Last Name</i>]</td> </tr> <tr> <td>Display Name</td> <td>[<i>Any desired Display Name</i>]</td> </tr> </tbody> </table> You can fill in any other optional information, such as Address , etc.	<u>Field</u>	<u>Value</u>	Person	[<i>Your FI & Your Last Name</i>] Ex.: Jane Doe = JDoe	First Name	[<i>Your First Name</i>]	Last Name	[<i>Your Last Name</i>]	Display Name	[<i>Any desired Display Name</i>]
<u>Field</u>	<u>Value</u>										
Person	[<i>Your FI & Your Last Name</i>] Ex.: Jane Doe = JDoe										
First Name	[<i>Your First Name</i>]										
Last Name	[<i>Your Last Name</i>]										
Display Name	[<i>Any desired Display Name</i>]										
4	Save your new people record.										

Person Groups

Use the Person Groups application to create, view, and modify person groups. A person group consists of people, who might or might not be workers. After you have created these groups, you can designate a person group as a work group or as an owner on a work order or on a ticket.

A person group can also be the recipient of a document routed by the Workflow application. If a document such as a purchase order or a work order is routed to a person group, everyone in the group can receive the document unless Workflow is configured to send it only to someone in the group whose calendar indicates that they are available.

Using the Person Groups Application

You also use the Person Groups application to:

- remove a person from a person group,
- assign a person group to a work order,
- define alternate people for workflow, and
- assign a person group to workflow.

Refer to the “How Do I ...” section of Maximo Help for more information.

Security Groups

Introduction

Security Groups are a key component in the Maximo security architecture. They provide system administrators with a flexible, robust way to manage user authorization and access. A security group allows you to set up access rights to sites, applications, menus, storerooms, labor, and GL components.

Each Maximo user can belong to one or more security groups, with each security group having different levels of access. By combining security groups, you have the ability to create a “virtual profile” that is flexible enough to meet the security needs of almost any organization.

Information

The following statements refer to security groups:

- You can have multiple security groups assigned to each Maximo user.
- Use security groups to define privileges.
- Privileges can be independent or cumulative.
- Privileges are controlled by a user with administrative privileges.

Note: We will discuss Maximo users after we discuss security groups.



continued on next page

Security Groups continued

Database Objects



When you create a new security group, Maximo creates a record in the MAXGROUP object. The following table lists the database objects where various kinds of security group information are stored.

Note: Some settings (denoted with an asterisk *) are security group dependent.

Security Setting	Database Object
Security Group	MAXGROUP
* Site Access	SITEAUTH
* Application Authorizations	APPLICATIONAUTH
* Purchasing Limits	MAXGROUP
* Invoice Tolerances	MAXGROUP
Start Centers	MAXGROUP
* GL Component Authorizations	GLAUTH
* Labor Authorizations	LABORAUTH
* Storeroom Authorizations	LOCAUTH
* Group Restrictions	GROUPRESTRICTION
Users	GROUPUSER

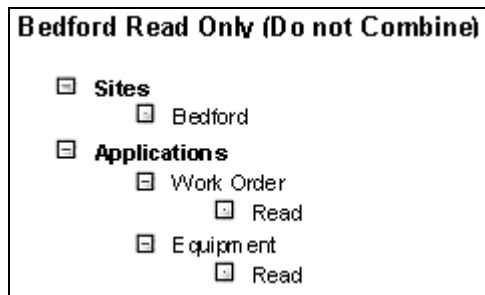
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Security Groups continued

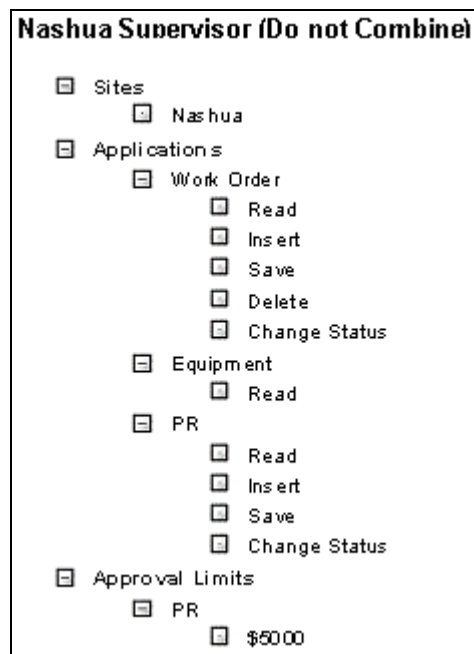
Security Group Profile Building: Example 1

By associating a user with two or more security groups, you can build a “virtual profile,” as demonstrated in the following example:

Security Group 1: Bedford Read Only



Security Group 2: Nashua Supervisor

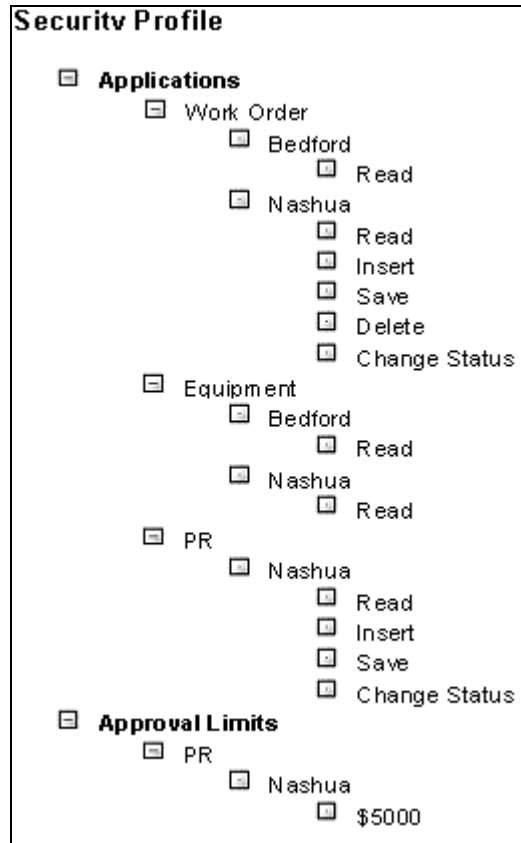


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Security Groups continued

Security Group Profile Building:
Example 1 continued

“Virtual Profile”: Maximo user added to both Security Groups (1 & 2)



Note: This example uses Independent (not combined) Security Groups.

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Security Groups continued

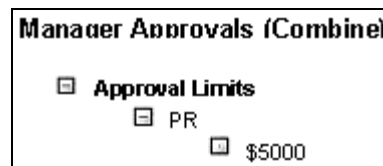
Security Group Profile Building: Example 2

This second example demonstrates a “Virtual Profile” with “combined” security groups.

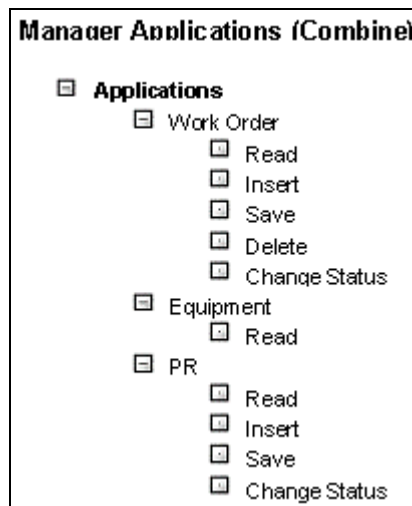
Security Group 1: Northeast Sites



Security Group 2: Manager Approvals



Security Group 3: Manager Applications

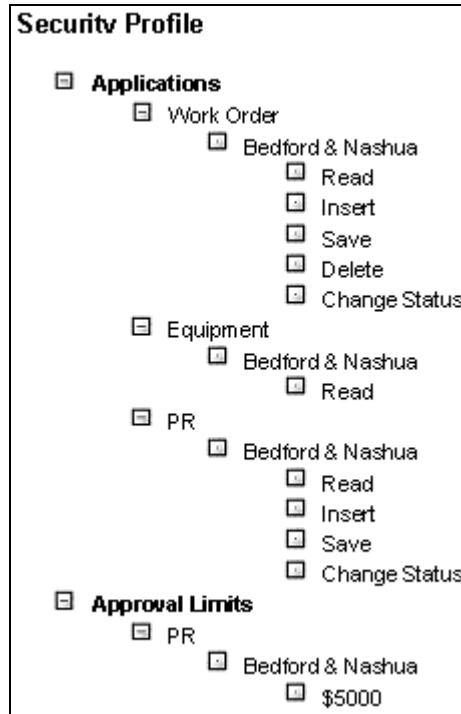


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Security Groups continued

Security Group Profile Building:
Example 2

“Virtual Profile”: Maximo user added to Security Groups (1, 2, & 3)

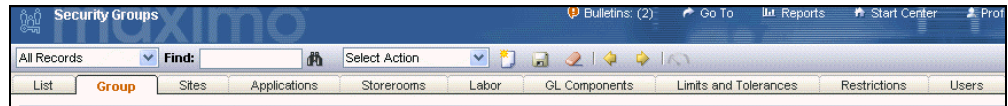


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The Security Groups Application

Introduction

The tabs of the Security Groups application enable you to create, search, and configure various settings for security groups.



Tabs

The following table describes each tab of the Security Groups application. See the *System Administrator's Guide* for more information.

This Tab...	Displays...
List	A list of security groups created for your system
Group	The selected security group name, description, and a Y/N flag indicating whether the attributes of this security group can be combined
Sites	Whether the security group is active; if it is, the Sites tab displays the names of all active sites
Applications	The applications that have been assigned to this security group and the appropriate level of access for each application: Read, Insert, Save, and Delete
Storerooms	The storerooms that have been assigned to this security group, including the storeroom name, description, and site location
Labor	The labor authorizations
GL Components	A list of GL component types that the security group has the authorization to change: Cost Center, Activity, Element, and Resource
Limits and Tolerances	Approval limits and tolerances for members of the security group at the organizational level

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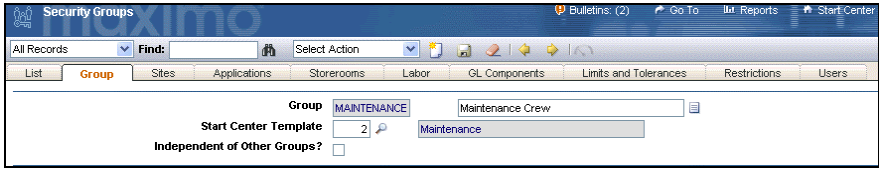
The Security Groups Application continued

Tabs continued

This Tab...	Displays...
Restrictions	Restrictions in the form of SQL statements that let you further grant or restrict access to Maximo features, functions, and data
Users	The users who are members of the security group

Reviewing the Group Tab

Follow these steps to get familiar with the **Group** tab of the Security Groups application.

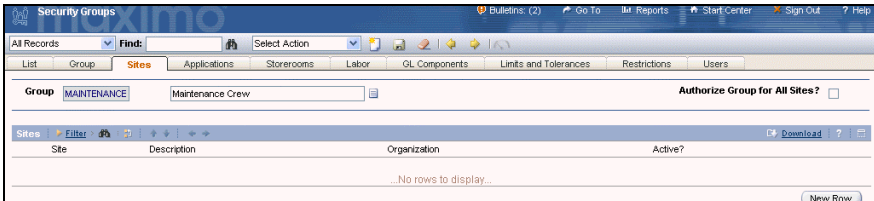
Step	Action
1	<p>Open the Security Groups application and select the Maintenance security group using the List tab.</p> <p><u>Result:</u> The Group tab displays the Maintenance security group.</p> 
2	Discuss the fields on the Group tab with your instructor.

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The Security Groups Application continued

Reviewing the Sites Tab

Follow these steps to get familiar with the **Sites** tab of the Security Groups application.

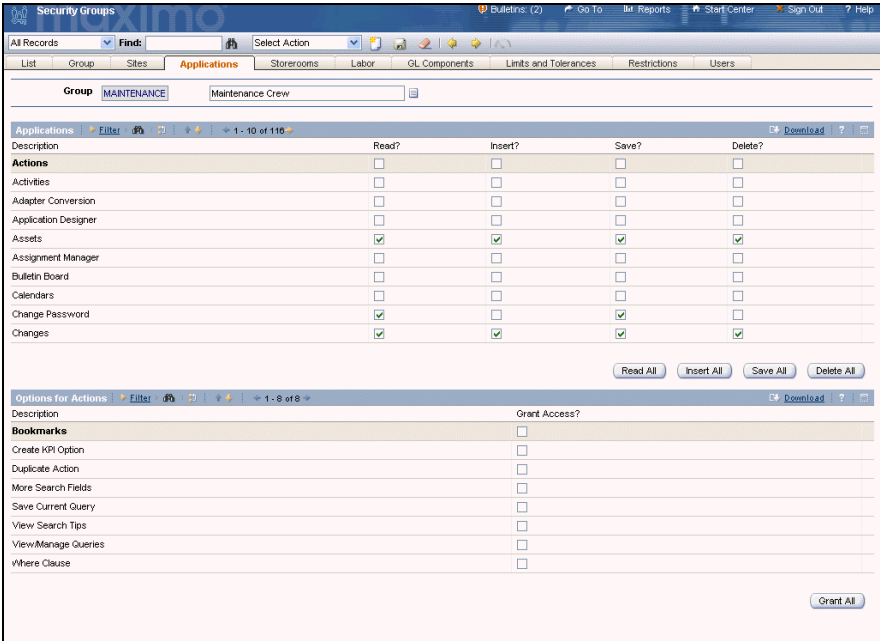
Step	Action
1	<p>Click to select the Sites tab.</p> <p><u>Result:</u> The Sites tab displays no sites available to the Maintenance security group.</p> 
2	<p>Discuss the Sites tab with your instructor.</p> <p><u>Question:</u> Why are there no sites associated with this security group?</p> <p><u>Hint:</u> Is this an independent security group?</p>

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The Security Groups Application continued

Reviewing the Applications Tab

Follow these steps to get familiar with the **Applications** tab of the Security Groups application.

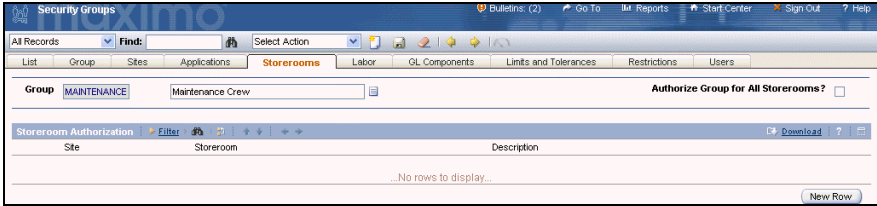
Step	Action
1	<p>Click to select the Applications tab.</p> <p><u>Result:</u> The Applications tab displays each application for which the security group has access, the level of access for each application, and the actions for each application.</p> 
2	<p>Discuss the available applications for the Maintenance security group with your instructor.</p> <p><u>Question:</u> Of those applications to which the Maintenance security group has any type of access (Read, Insert, Save, or Delete), which applications does the Maintenance security group not have access to <i>all</i> of the Options for [Application]?</p> <hr/> <p><u>Hint:</u> There are two.</p>

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The Security Groups Application continued

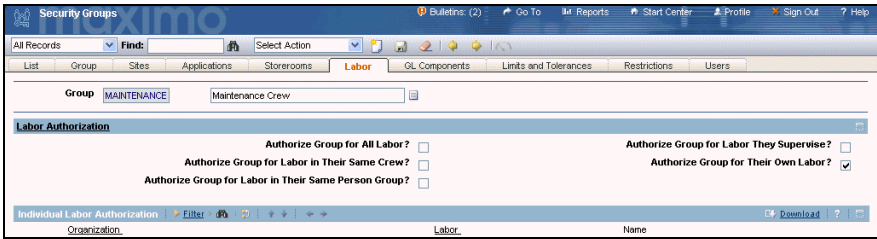
Reviewing the Storerooms Tab

Follow these steps to get familiar with the **Storerooms** tab of the Security Groups application.

Step	Action
1	<p>Click to select the Storerooms tab.</p> <p><u>Result:</u> The Storerooms tab displays no storerooms available to the Maintenance security group.</p> 
2	<p>Discuss the Storerooms tab with your instructor.</p> <p><u>Question:</u> Why might there be no storerooms assigned to the Maintenance security group?</p>

Reviewing the Labor Tab

Follow these steps to get familiar with the **Labor** tab of the Security Groups application.

Step	Action
1	<p>Click to select the Labor tab.</p> <p><u>Result:</u> The Labor tab displays the labor authorizations for the Maintenance security group.</p> 

continued on next page

The Security Groups Application continued

Reviewing the Labor Tab

continued

Step	Action
2	The following table explains each Labor Authorization setting.

Setting	Description
Authorize Group for All Labor?	If you want this Security Group to have access to all labor records, select this setting. When you select this, Maximo prevents you from making any other selections.
Authorize Group for Labor in Their Same Crew?	When you select this setting, the Security Group has access only to labor records in their same crew.
Authorize Group for Labor in Their Same Person Group?	When you select this setting, the Security Group has access only to labor records in their same person group.
Authorize Group for Labor They Supervise?	When you select this setting, the Security Group has access only to labor records of labor they supervise.
Authorize Group for Their Own Labor?	When you select this setting, the Security Group has access only to their own labor records.

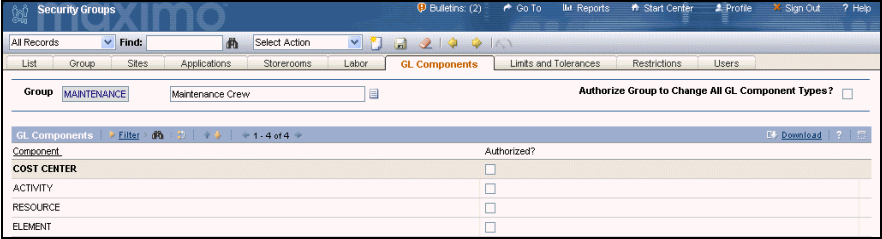
Step	Action
3	Discuss the Labor tab with your instructor. <u>Question:</u> What would happen to the remaining authorizations if you were to select Authorize Group for All Labor?

continued on next page

The Security Groups Application continued

Reviewing the GL Components Tab

Follow these steps to get familiar with the **GL Components** tab of the Security Groups application.

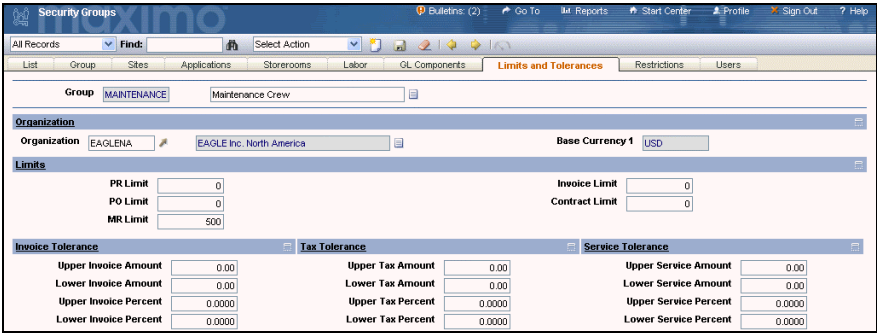
Step	Action
1	<p>Click to select the GL Components tab.</p> <p><u>Result:</u> The GL Components tab displays the GL components that this group has the authorization to change.</p> 
2	Discuss the GL Components tab with your instructor.

continued on next page

The Security Groups Application continued

Reviewing the Limits and Tolerances Tab

Follow these steps to get familiar with the **Limits and Tolerances** tab of the Security Groups application.

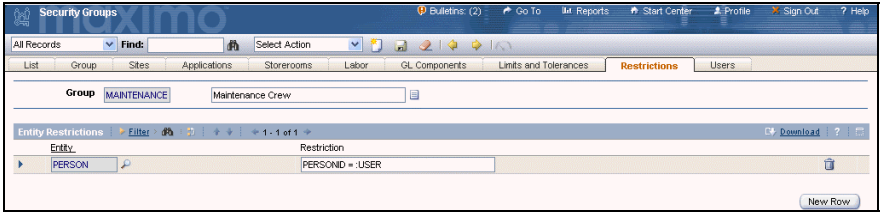
Step	Action
1	<p>Click to select the Limits and Tolerances tab.</p> <p><u>Result:</u> The Limits and Tolerances tab displays the limits and tolerances allocated to the Maintenance security group.</p> 
2	Discuss the Limits and Tolerances tab with your instructor.

continued on next page

The Security Groups Application continued

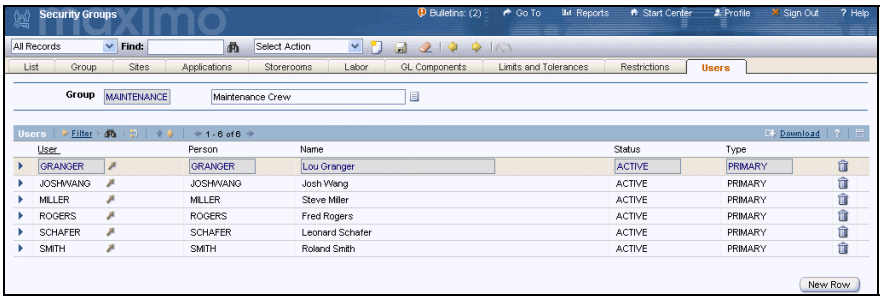
Reviewing the Restrictions Tab

Follow these steps to get familiar with the **Restrictions** tab of the Security Groups application.

Step	Action
1	<p>Click to select the Restrictions tab.</p> <p>Result: The Restrictions tab displays any additional restrictions on the Maintenance security group.</p> 
2	Discuss the Restrictions tab with your instructor.

Reviewing the Users Tab

Follow these steps to get familiar with the **Users** tab of the Security Groups application.

Step	Action
1	<p>Click to select the Users tab.</p> <p>Result: The Users tab displays all of the Maximo users assigned to the Maintenance security group.</p> 
2	Discuss the Users tab with your instructor.

Creating Security Groups

Introduction


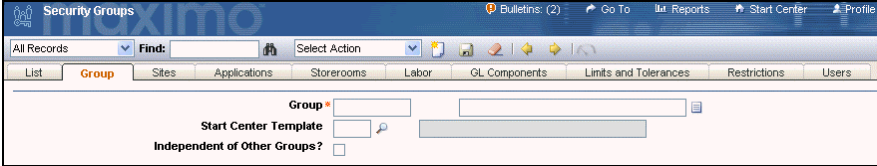

In this section you will create a new security group.

Creating a Security Group



Use the following steps to create a new security group.

Note: Remember, beyond training, you can always refer to the “How Do I...” section of Maximo Help.


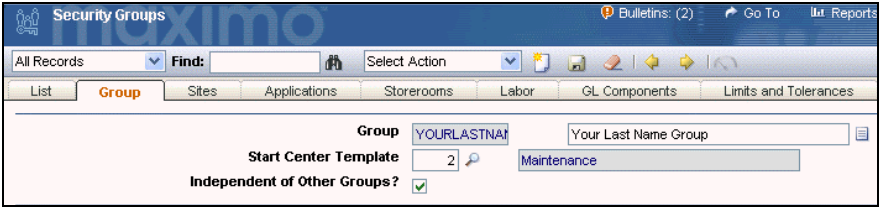
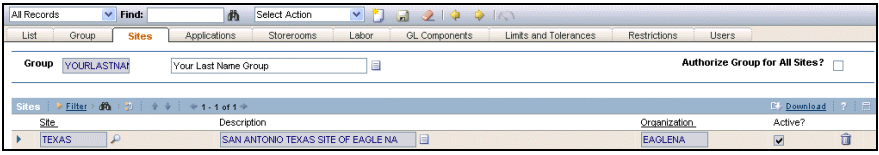
Step	Action										
1	Open the Security Groups application from the Security module.										
2	<p>Click on the New Group icon .</p> <p><u>Result:</u> The Group tab opens ready for editing.</p> 										
3	<p>Enter the following values:</p> <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Group</td> <td>[YourLastName]</td> </tr> <tr> <td>Description</td> <td>[YourLastName] Group</td> </tr> <tr> <td>Start Center Template</td> <td>2 (Maintenance)</td> </tr> <tr> <td>Independent of Other Groups?</td> <td>[checked]</td> </tr> </tbody> </table> <p><u>Note:</u> Normally, the Group and the Description fields should be descriptive of the group’s role. We are using your last name here solely for the training environment.</p> 	<u>Field</u>	<u>Value</u>	Group	[YourLastName]	Description	[YourLastName] Group	Start Center Template	2 (Maintenance)	Independent of Other Groups?	[checked]
<u>Field</u>	<u>Value</u>										
Group	[YourLastName]										
Description	[YourLastName] Group										
Start Center Template	2 (Maintenance)										
Independent of Other Groups?	[checked]										

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Creating Security Groups continued

Creating a Security Group

continued

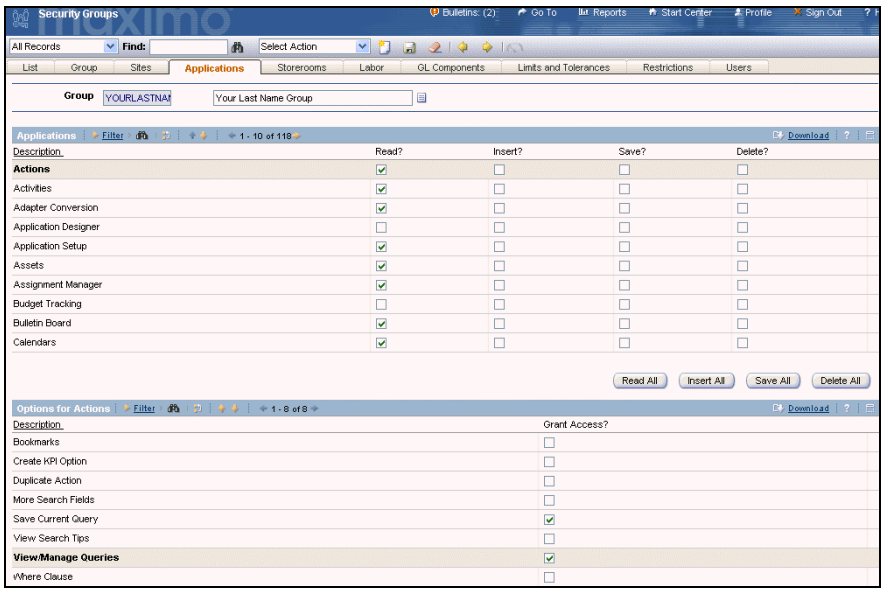
Step	Action				
<p>4</p> 	<p>Save your record and write your new group here:</p> <p><u>Note:</u> Remember to periodically save your work, especially before switching to another tab.</p> <p><u>Result:</u> Your new security group should look similar to this one.</p> 				
<p>5</p>	<p>Click to select the Sites tab.</p> <p><u>Result:</u> The Sites tab opens ready for editing.</p>				
<p>6</p>	<p>Click the New Row button, enter the following values, and then save your record:</p> <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Site</td> <td>Texas</td> </tr> </tbody> </table> <p><u>Result:</u> Your new security group should look similar to this one.</p> 	<u>Field</u>	<u>Value</u>	Site	Texas
<u>Field</u>	<u>Value</u>				
Site	Texas				
<p>7</p>	<p>Click to select the Applications tab.</p> <p><u>Result:</u> The Applications tab opens ready for editing.</p>				

continued on next page

Creating Security Groups continued

Creating a Security Group

continued

Step	Action
8	<p>In the Applications section, click the Read All button and then save your record.</p> <p><u>Result:</u> All appropriate check boxes in the Read column are selected.</p>
9	<p>Ensure that in the Applications section, the Actions application is selected.</p> <p>Then, in the Options for Actions [<i>Application</i>] section, click to select the Grant Access? check boxes for:</p> <p style="text-align: center;">Save Current Query View/Manage Queries</p>
10	<p>Save your record.</p> <p><u>Result:</u> Your new security group should look similar to this one.</p>  <p>The screenshot shows the 'Security Groups' interface. The 'Applications' section is active, displaying a table with columns: Description, Read?, Insert?, Save?, and Delete?. The 'Read?' column has checkmarks for 'Activities', 'Adapter Conversion', 'Assets', 'Bulletin Board', and 'Calendars'. Below this, the 'Options for Actions' section is shown with a 'Grant Access?' column. Checkmarks are present for 'Save Current Query' and 'View/Manage Queries'.</p>

continued on next page

Creating Security Groups continued

Creating a Security Group

continued

Step	Action
11	We will not be adding any information for this new security group right now. Close the Security Group application by returning to the Start Center. Next we will look at Maximo users, and then add a new user to our new security group.

Maximo Users

Introduction

The Users application, in the Security module, allows system administrators to add and manage Maximo users. System administrators can manage access rights and passwords, and display a hierarchical view of each Maximo user's security profile.

When you create new Maximo users, they are automatically added to a default security group (DEFLTREG) with limited authorizations and privileges.

Sarbanes-Oxley Compliance

Requirement: Auditing—exactly who has accessed what data. Implemented in Maximo through:

- Login tracking
 - No shared logins
 - E-audit (Chapter 8)
 - E-signature (Chapter 8)
 - Authentication is done within Maximo or via the application server (no database users by default)
-

Managing Users

When creating a new Maximo user, you can create the people record for the new user at the same time by populating the fields in the Personal section of the Users application.

The Login ID for a new user, which defaults to the newly created User ID, is the login name the user will use when signing in to Maximo. A user's Login ID can be their employee number, their e-mail address, or some other identification according to your business practices.

When adding a new user, you can also specify the user's default insert site and storeroom.

Note: Storerooms are only unique in combination with their site.

Moreover, and most important from a security standpoint, when adding or updating users you can assign each user to one or more security groups.



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Maximo Users continued

User Actions

The following table briefly describes some of the user actions available to system administrators.

Please refer to the *System Administrator's Guide* for more information.

Action	Description
Change Status	Allows you to change status for one or more users at one time.
View Status History	Status History displays a date and a time stamp whenever an administrative user changes the status of a user.
Database Access	Allows you to create or delete a native database user ID. You can also change the database password for an existing user with a database user ID.
Change Passwords	Allows you to change a user's Maximo and/or database passwords. You typically need to change a user's password when the user becomes blocked (for example, by entering an incorrect password too many times).
Set Password Hint	Allows an administrative user to force a user to verify their identity before resetting their password.
Set Security Profile	Allows an administrative user to update/change the security profile settings for a group of users.
Authorize Group Reassignment	Allows you to give a selected user the authority to assign users to one or more security groups.
Security Controls	Allows you to specify <i>systemwide</i> defaults: <ul style="list-style-type: none"> • Default security group for new users • Default user status for self-registered users • Tracking of user sign-in attempts • Specification of password configuration settings.
Change Person	Allows you to select a different people record to associate with a selected user.
Duplicate User	Allows you to create a new user quickly.
Delete User	Allows you to delete a Maximo user from the system.

Creating Maximo Users

The Users Application

Through the Users application:

- you can create a Person record when you create a user, and
- you can assign Security Groups.

Tables updated by the Users application include:

- MAXUSER – User information
- PERSON – Person record
- PHONE – Optional
- EMAIL – Optional
- GROUPUSER – Relationship between Security Groups and Users
- USERPURGL – Optional
- GRPREASSIGNAUTH - Optional

Tabs in the Users Application

The Users application is in the Security module and has four tabs:

- List
- User
- Groups
- Security Profile

We will look at these tabs as we do the following exercises in creating a new user.

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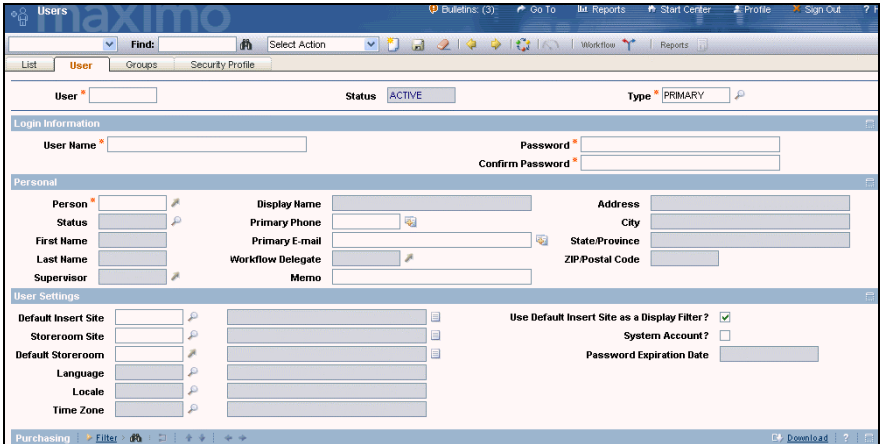
Creating Maximo Users continued

Creating a New User



Use the following steps to create a new Maximo user.

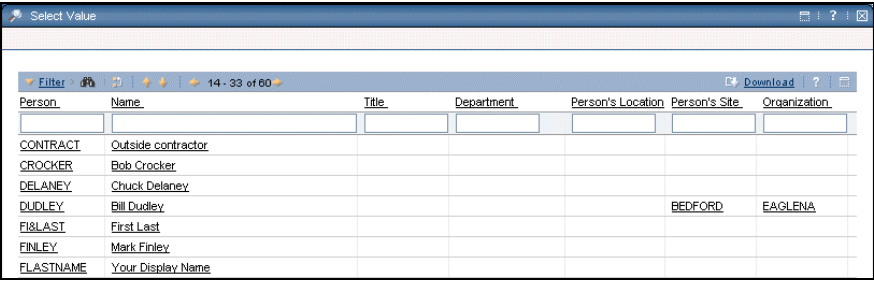
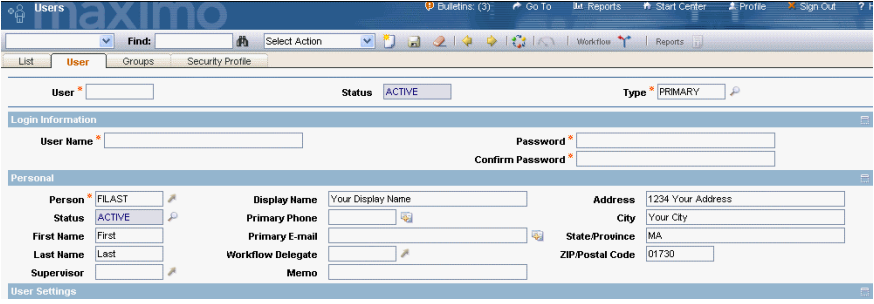
Note: Remember, beyond training, you can always refer to the “How Do I...” section of Maximo Help.

Step	Action
1	Open the Users application. <u>Result</u> : The Users application opens to the List tab.
2	Click on the New User icon  <u>Result</u> : The User tab opens ready for editing. 

continued on next page

Creating Maximo Users continued

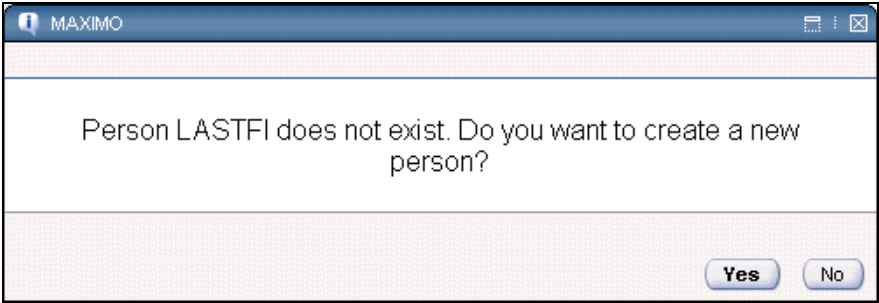


Creating a New User continued

Step	Action
3	<p>Click on the Detail Menu icon of the Person field and choose Select Value.</p> <p><u>Result:</u> The Select Value dialog box opens.</p> 
4	<p>Click to select the person you created earlier in this chapter.</p> <p><u>Example:</u> This course book uses: FILAST – Your Display Name</p> <p><u>Result:</u> The personal information from your people record is entered into your new user record.</p> 

continued on next page

Creating Maximo Users continued


Creating a New User continued

Step	Action										
5	<p>Enter the following information:</p> <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>User</td> <td>[<i>Your Last Name & Your FI</i>]</td> </tr> </tbody> </table> <p>Tab out of the Person field.</p> <p><u>Result</u>: Maximo displays the following message.</p> 	<u>Field</u>	<u>Value</u>	User	[<i>Your Last Name & Your FI</i>]						
<u>Field</u>	<u>Value</u>										
User	[<i>Your Last Name & Your FI</i>]										
6	<p>Click No and enter the following information:</p> <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>User Name</td> <td>[<i>Your Choice</i>]</td> </tr> </tbody> </table> <p> <u>Note 1</u>: Notice that the User Name field (case sensitive) defaults to an all-lowercase version of the User field's value.</p> <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Password</td> <td>Passw0rd</td> </tr> <tr> <td>Confirm Password</td> <td>Passw0rd</td> </tr> </tbody> </table> <p> <u>Note 2</u>: We will discuss password requirements later in this chapter. Passwords are case sensitive and the default setting requires a minimum of six characters.</p>	<u>Field</u>	<u>Value</u>	User Name	[<i>Your Choice</i>]	<u>Field</u>	<u>Value</u>	Password	Passw0rd	Confirm Password	Passw0rd
<u>Field</u>	<u>Value</u>										
User Name	[<i>Your Choice</i>]										
<u>Field</u>	<u>Value</u>										
Password	Passw0rd										
Confirm Password	Passw0rd										

continued on next page

Creating Maximo Users continued

Creating a New User continued

Step	Action								
7	Write down your user name and your login ID information here: User: _____. User Name: _____								
8	Save your record.								
9	Enter the following information in the User Settings section: <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Default Insert Site</td> <td>Bedford</td> </tr> <tr> <td>Storeroom Site</td> <td>Bedford</td> </tr> <tr> <td>Default Storeroom</td> <td>Central</td> </tr> </tbody> </table>  <u>Note:</u> Storerooms are unique only in combination with their site.	<u>Field</u>	<u>Value</u>	Default Insert Site	Bedford	Storeroom Site	Bedford	Default Storeroom	Central
<u>Field</u>	<u>Value</u>								
Default Insert Site	Bedford								
Storeroom Site	Bedford								
Default Storeroom	Central								
10	Save your record.								

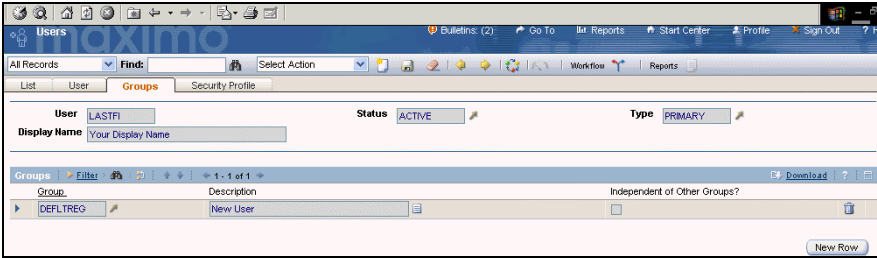
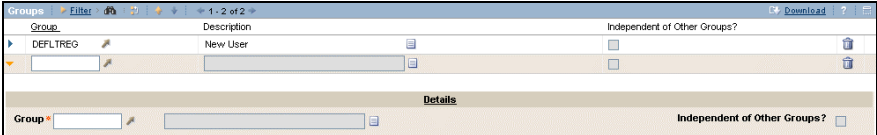
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Creating Maximo Users continued

Adding Users to Security Groups

Recall that new users, by default, are automatically added to the limited Security Group DEFLTREG. You can also change the security group to which new users default.

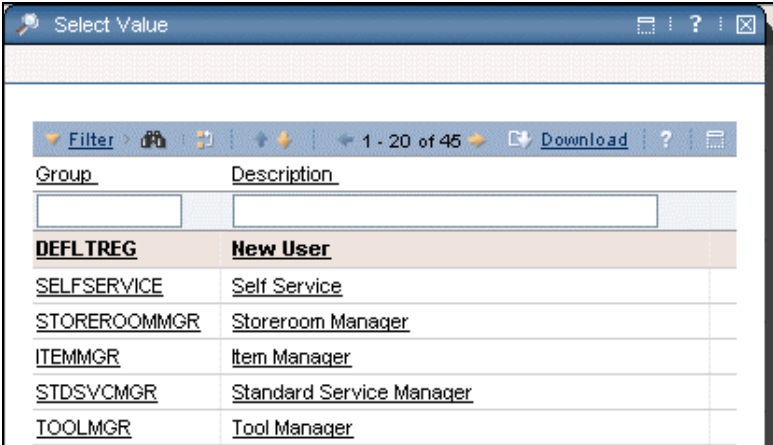
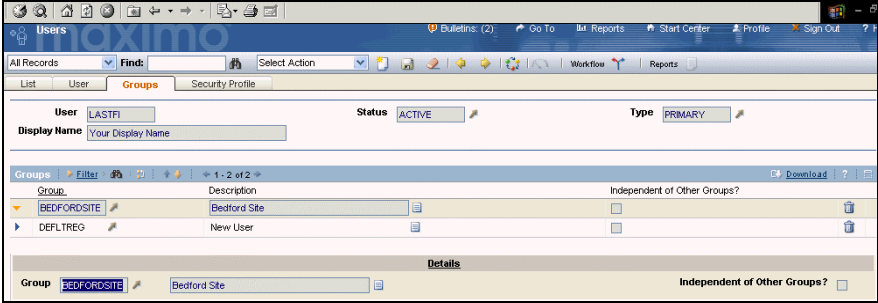
However, in this exercise we will add your new user to an existing security group.

Step	Action
1	If you are not already in the Users application, open it to the new user you created in an earlier exercise.
2	<p>Click to select the Groups tab.</p> <p><u>Result:</u> The Groups tab displays.</p> 
3	<p>Click the New Row button.</p> <p><u>Result:</u> A new row opens for editing.</p> 

continued on next page

Creating Maximo Users continued

Adding Users to Security Groups continued

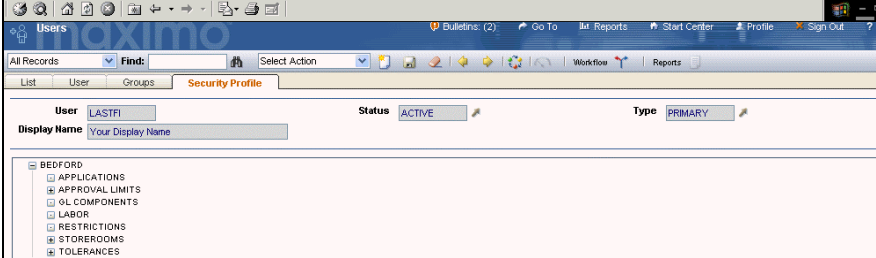
Step	Action
4	<p>Click on the Detail Menu icon of the Group field and choose Select Value.</p> <p><u>Result:</u> The Select Value dialog box opens.</p> 
5	<p>Find the BEDFORDSITE security group and click to select it.</p>
6	<p>Save your record.</p> <p><u>Result:</u> Your new user is now added to the BEDFORDSITE security group.</p> 

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Creating Maximo Users continued

The Security Profile Tab

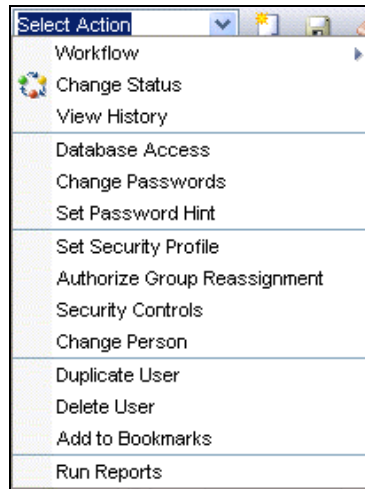
The **Security Profile** tab displays a hierarchical structure of the selected user's accesses and privileges based on the user's assigned security groups.

Step	Action
1	If you are not already in the Users application, open it to the new user you created in an earlier exercise.
2	<p>Click to select the Security Profile tab.</p> <p><u>Result:</u> Maximo displays the Security Profile tab.</p> 
3	Take some time to explore the security profile for your new user.
4	When you are finished exploring the security profile for your new user, return to the Start Center.

User Security Settings

Introduction

In this section we will look at some of the user security settings available from the Select Action menu.



Note: Workflow is beyond the scope of this course. Please refer to the *Workflow Management Using MXES* course.

continued on next page

User Security Settings continued

Security Settings


The following table briefly describes each setting.

Use This Setting...	To...
Change Status	Change the status between active and inactive for the selected user.
View History	View status history for the selected user.
Database Access	Manage database access for the selected user.
Change Passwords	Manage passwords for the selected user.
Set Password Hint	Manage a password hint for the selected user.
Set Security Profile	Manage the security profile for the selected user.
Authorize Group Reassignment	Authorize group reassignments for the selected user.
Security Controls	Set <i>systemwide</i> security controls.
Change Person	Change the password for the selected user.

Managing Users in Security Groups

Authorizing Group Reassignment

Earlier in this course you created both a new user and a new security group. However, you cannot yet add your new user to the new security group. As you might recall from an earlier discussion, each security group must have at least one user authorized to add new users to that security group. Use the following steps to authorize group reassignment for the user wilson to your new security group.

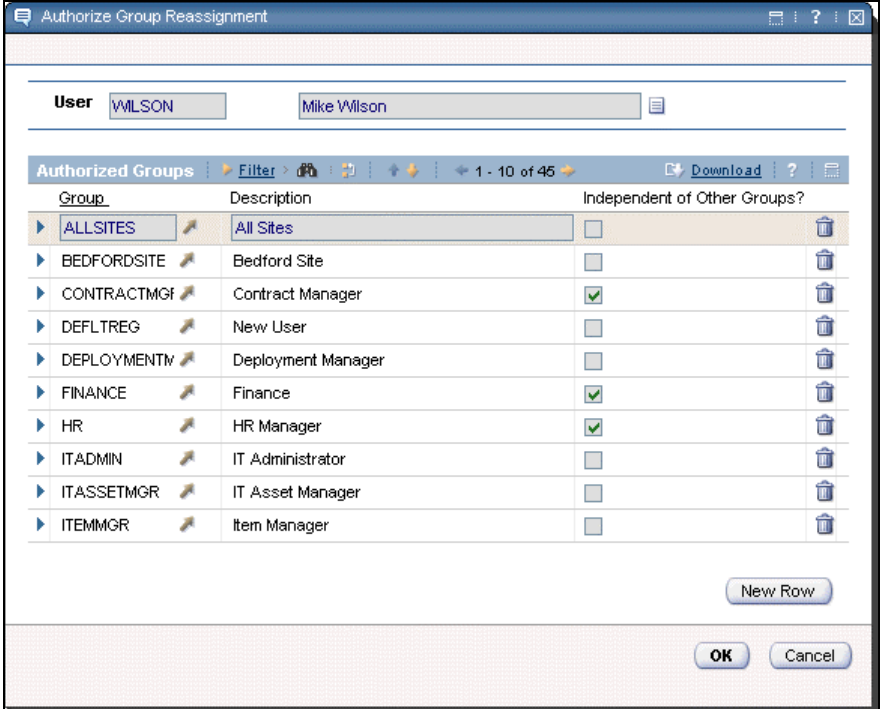
Step	Action
1	Sign in to Maximo as wilson (or as otherwise directed by your instructor): Username: wilson Password: wilson  <u>Note</u> : Usernames and passwords are case sensitive.
2	Open the Users application.
3	From the List tab, find and select the user WILSON (or as otherwise directed by your instructor).

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Managing Users in Security Groups continued

Authorizing Group Reassignment

continued


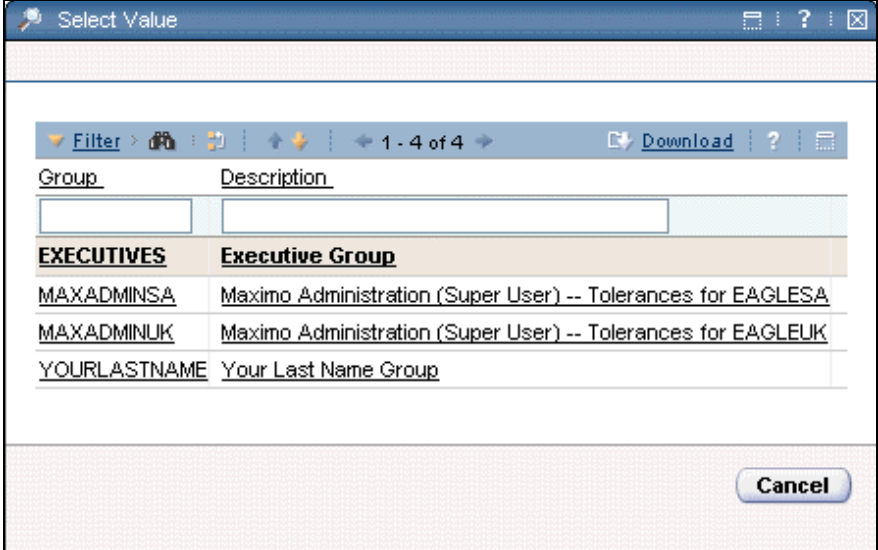
Step	Action																																	
4	<p>From the Select Action menu, choose Authorize Group Reassignment.</p> <p><u>Result:</u> The Authorize Group Reassignment dialog box opens.</p>  <table border="1"> <thead> <tr> <th>Group</th> <th>Description</th> <th>Independent of Other Groups?</th> </tr> </thead> <tbody> <tr> <td>ALLSITES</td> <td>All Sites</td> <td><input type="checkbox"/></td> </tr> <tr> <td>BEDFORDSITE</td> <td>Bedford Site</td> <td><input type="checkbox"/></td> </tr> <tr> <td>CONTRACTMGR</td> <td>Contract Manager</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>DEFLTREG</td> <td>New User</td> <td><input type="checkbox"/></td> </tr> <tr> <td>DEPLOYMENTMGR</td> <td>Deployment Manager</td> <td><input type="checkbox"/></td> </tr> <tr> <td>FINANCE</td> <td>Finance</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>HR</td> <td>HR Manager</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>ITADMIN</td> <td>IT Administrator</td> <td><input type="checkbox"/></td> </tr> <tr> <td>ITASSETMGR</td> <td>IT Asset Manager</td> <td><input type="checkbox"/></td> </tr> <tr> <td>ITEMMGR</td> <td>Item Manager</td> <td><input type="checkbox"/></td> </tr> </tbody> </table>	Group	Description	Independent of Other Groups?	ALLSITES	All Sites	<input type="checkbox"/>	BEDFORDSITE	Bedford Site	<input type="checkbox"/>	CONTRACTMGR	Contract Manager	<input checked="" type="checkbox"/>	DEFLTREG	New User	<input type="checkbox"/>	DEPLOYMENTMGR	Deployment Manager	<input type="checkbox"/>	FINANCE	Finance	<input checked="" type="checkbox"/>	HR	HR Manager	<input checked="" type="checkbox"/>	ITADMIN	IT Administrator	<input type="checkbox"/>	ITASSETMGR	IT Asset Manager	<input type="checkbox"/>	ITEMMGR	Item Manager	<input type="checkbox"/>
Group	Description	Independent of Other Groups?																																
ALLSITES	All Sites	<input type="checkbox"/>																																
BEDFORDSITE	Bedford Site	<input type="checkbox"/>																																
CONTRACTMGR	Contract Manager	<input checked="" type="checkbox"/>																																
DEFLTREG	New User	<input type="checkbox"/>																																
DEPLOYMENTMGR	Deployment Manager	<input type="checkbox"/>																																
FINANCE	Finance	<input checked="" type="checkbox"/>																																
HR	HR Manager	<input checked="" type="checkbox"/>																																
ITADMIN	IT Administrator	<input type="checkbox"/>																																
ITASSETMGR	IT Asset Manager	<input type="checkbox"/>																																
ITEMMGR	Item Manager	<input type="checkbox"/>																																

continued on next page

Managing Users in Security Groups continued

Authorizing Group Reassignment

continued


Step	Action
5	<p>Click New Row.</p> <p><u>Result</u>: A new row opens ready for data entry.</p> 
6	<p>Click the Detail Menu icon of the Group field and choose Select Value.</p> <p><u>Result</u>: The Select Value dialog box opens.</p> 

continued on next page

Managing Users in Security Groups continued

Authorizing Group Reassignment

continued

Step	Action
7	<p>Click to select the group that you created earlier in this course. <u>Hint:</u> You wrote down your new group on page 4-25. <u>Result:</u> The Select Value dialog box closes, with your selection populating the appropriate Group fields in the Authorize Group Reassignment dialog box.</p> 
8	<p>Click OK. <u>Result:</u> The Authorize Group Reassignment dialog box closes, and your selected user is now authorized to add users to your new security group.</p>
9	Save your record.

Challenge Exercise




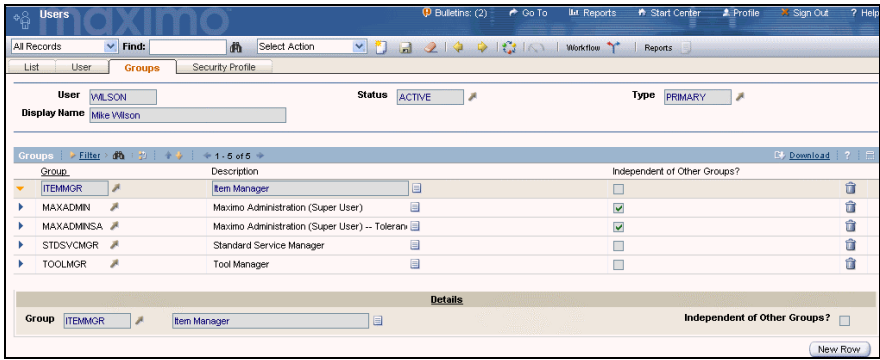
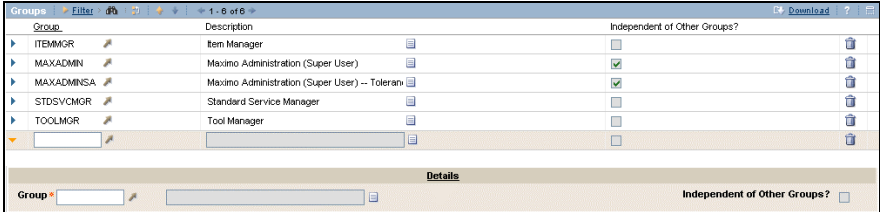
Authorize the new user you created earlier (page 4-34) to authorize group reassignment for your new security group.

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Managing Users in Security Groups continued

Adding Users to Security Groups

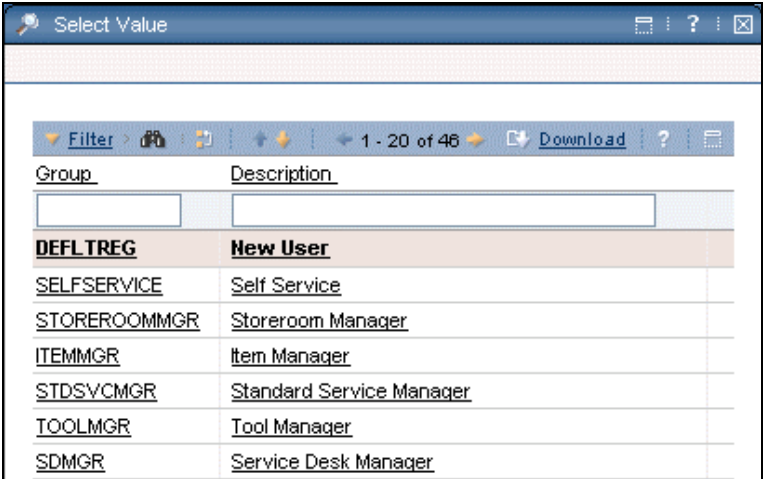
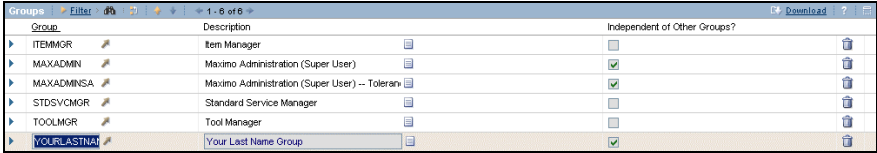
Use the following steps to add the user WILSON (or the user you are logged in as, if otherwise directed by your instructor) to your new security group that you created earlier in this chapter (page 4-25).

Step	Action
<p>1</p> 	<p>Sign in to Maximo as wilson (or as otherwise directed by your instructor):</p> <p>Username: wilson Password: wilson</p> <p><u>Note:</u> Usernames and passwords are case sensitive.</p>
<p>2</p>	<p>Open the Users application.</p>
<p>3</p>	<p>From the List tab, find and select the user WILSON (or as otherwise directed by your instructor).</p> <p><u>Result:</u> The User tab opens with the selected record.</p>
<p>4</p>	<p>Click on the Groups tab.</p> <p><u>Result:</u> The Groups tab opens ready for editing.</p> 
<p>5</p>	<p>Click on the New Row button.</p> <p><u>Result:</u> A new row opens ready for data entry.</p> 

continued on next page

Managing Users in Security Groups continued

Adding Users to Security Groups continued

Step	Action
6	<p>Click the Detail Menu icon of the Group field and choose Select Value.</p> <p><u>Result:</u> The Select Value dialog box opens.</p> 
7	<p>Click to select the group that you created earlier in this course.</p> <p><u>Hint:</u> You wrote down your new group on page 4-25.</p> <p><u>Result:</u> The Select Value dialog box closes with user WILSON now added to your new security group.</p> 
8	Save your record.

continued on next page

Managing Users in Security Groups continued

Challenge Exercise


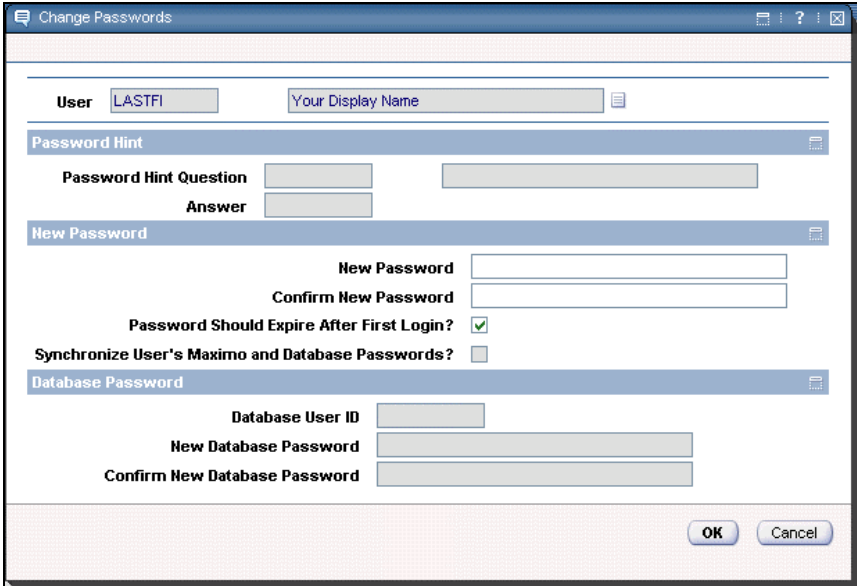


Add the new user you created earlier (page 4-34) to your new security group (page 4-25).

Managing User Security Settings

Changing a User's Password

Use the following steps to change your new user's password.

Step	Action
1	Sign in to Maximo as wilson (or as otherwise directed by your instructor): Username: wilson Password: wilson  <u>Note:</u> Usernames and passwords are case sensitive.
2	Open the Users application.
3	From the List tab, find and select your new user (page 4-34).
4	From the Select Action menu, choose Change Passwords . <u>Result:</u> The Change Passwords dialog box opens. 

continued on next page

Managing User Security Settings continued

Changing a User's Password continued

Step	Action						
5	<p>Enter the following information into the Change Passwords dialog box:</p> <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>New Password</td> <td>[Your Choice]</td> </tr> <tr> <td>Confirm Password</td> <td>[Your Choice]</td> </tr> </tbody> </table> <p>Write it here: _____.</p> <p><u>Note:</u> Force expiration of Password is not enabled.</p>	<u>Field</u>	<u>Value</u>	New Password	[Your Choice]	Confirm Password	[Your Choice]
<u>Field</u>	<u>Value</u>						
New Password	[Your Choice]						
Confirm Password	[Your Choice]						
6	Click OK , and save your record.						
7	Sign out of Maximo, and then sign back in to Maximo using your new user's User Name and new Password.						
8	After a successful sign-in with your new user, sign back out of Maximo.						

Creating Password Hints

Use the following steps to create a password hint for your new user.

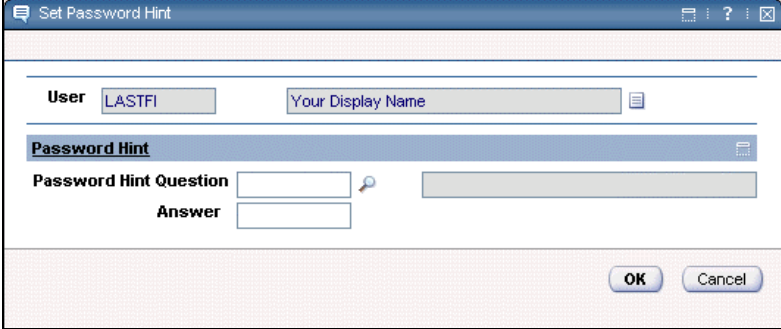
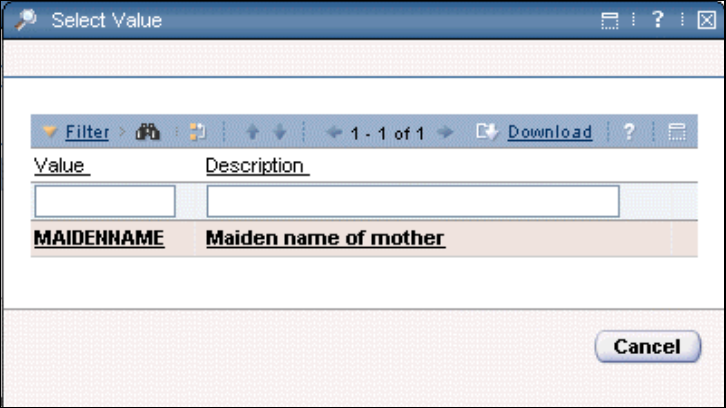
Step	Action
1	<p>Sign in to Maximo as wilson (or as otherwise directed by your instructor):</p> <p>Username: wilson</p> <p>Password: wilson</p> <p><u>Note:</u> Usernames and passwords are case sensitive.</p>
2	Open the Users application.
3	From the List tab, find and select your new user (page 4-34).

continued on next page

Managing User Security Settings continued

Creating Password Hints

continued

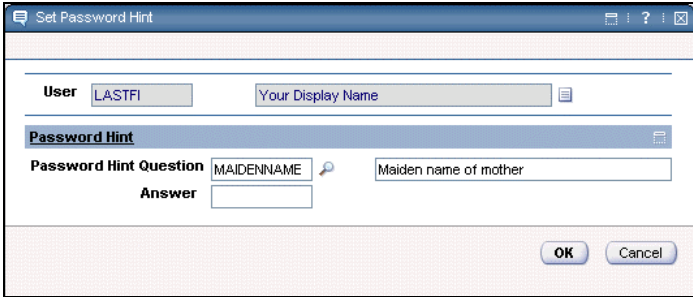

Step	Action
4	<p>From the Select Action menu, choose Set Password Hint.</p> <p><u>Result</u>: The Set Password Hint dialog box opens.</p> 
5	<p>Click the Select Value icon of the Password Hint Question field.</p> <p><u>Result</u>: The Select Value dialog box opens.</p> 

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Managing User Security Settings continued

Creating Password Hints

continued


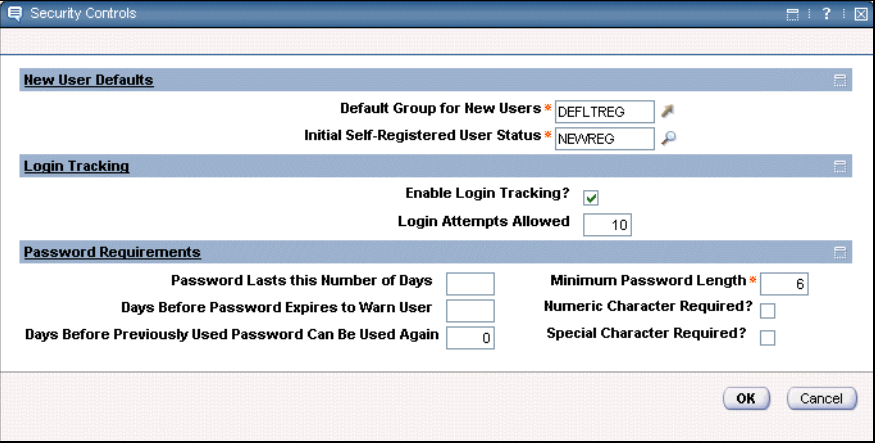
Step	Action				
6	<p>Click on MAIDENNAME to select it as the Password Hint value. Result: MAIDENNAME populates as the value in the Password Hint Question field of the Set Password Hint dialog box.</p>  <p> Note: We will add more values to the Password Hint Question field when we discuss Domains later in this course.</p>				
7	<p>Enter the following information into the Set Password Hint dialog box:</p> <table border="0"> <tr> <td><u>Field</u></td> <td><u>Value</u></td> </tr> <tr> <td>Answer</td> <td>[Your Choice]</td> </tr> </table> <p>Write it here: _____.</p>	<u>Field</u>	<u>Value</u>	Answer	[Your Choice]
<u>Field</u>	<u>Value</u>				
Answer	[Your Choice]				
8	<p>Click OK. Result: Your new user now has a password hint set.</p>				

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Managing User Security Settings continued

Security Controls

Security controls, unlike the remainder of the items on the Select Action menu, are systemwide (versus user-specific). Follow these steps to change some of the security controls.


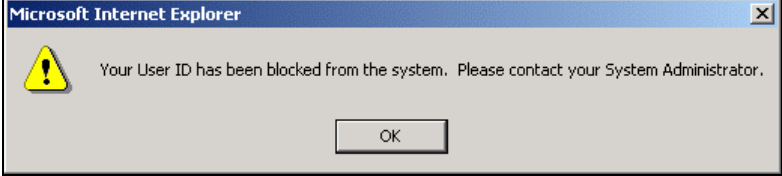
Step	Action				
1	Sign in to Maximo as wilson (or as otherwise directed by your instructor): Username: wilson Password: wilson  <u>Note:</u> Usernames and passwords are case sensitive.				
2	Open the Users application.				
3	From the List tab, find and select your new user (from page 4-34).				
4	From the Select Action menu, choose Security Controls . <u>Result:</u> The Security Controls dialog box opens. 				
5	Here you can see the various systemwide security controls. In the Login Tracking section, enter the following information: <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Login Attempts Allowed</td> <td>3</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	Login Attempts Allowed	3
<u>Field</u>	<u>Value</u>				
Login Attempts Allowed	3				

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Managing User Security Settings continued

Security Controls

continued


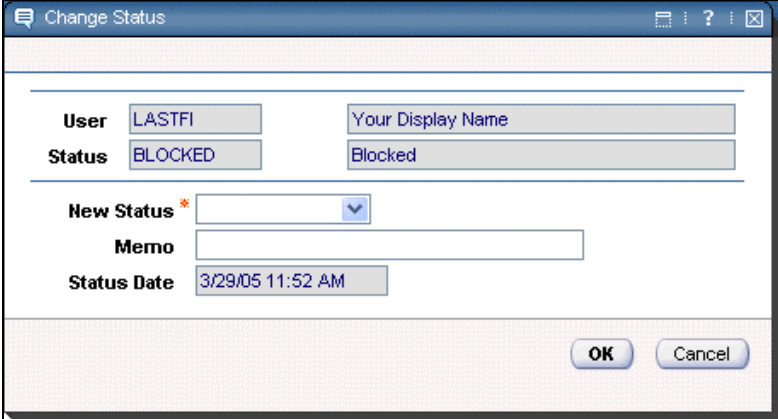
Step	Action
6	Click OK . <u>Result:</u> The number of sign-in attempts is changed to 3 and the Security Controls dialog box closes.
7	Sign out of Maximo.
8	Using your new user’s initial password “Passw0rd” (from page 4-33), sign back in to Maximo with your new user’s User Name (from page 4-34). <u>Result:</u> You should get an error message similar to this one: 
9	Click OK , and then repeat the previous step two more times, for a total of three attempts. <u>Hint:</u> Remember, we set the number of login attempts to 3. <u>Result:</u> After the third attempt, you should get an error message similar to this one: 
10	Click OK .

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Managing User Security Settings continued

Resetting a Blocked User


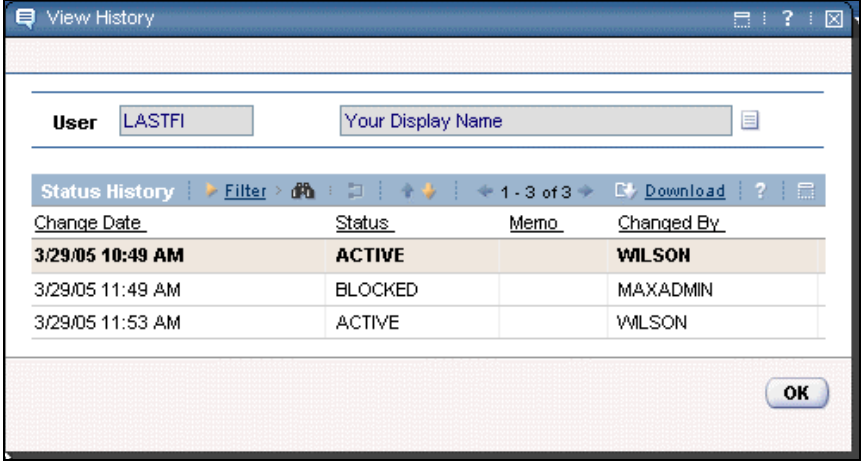
Use the following steps to reset a blocked user.

Step	Action
1	Sign in to Maximo as wilson (or as otherwise directed by your instructor): Username: wilson Password: wilson  <u>Note:</u> Usernames and passwords are case sensitive.
2	Open the Users application.
3	From the List tab, find and select your new user (from page 4-34).
4	From the Select Action menu, choose Change Status . <u>Result:</u> The Change Status dialog box displays. 
5	Change your new user's status from INACTIVE to ACTIVE.
6	Click OK . <u>Result:</u> Your new user can now sign in to Maximo.
7	Reset the Login Attempts Allowed setting back to 10.
8	Now sign out of Maximo and try to sign back in with your new user, using the new user's correct password (from page 4-48).
9	After a successful sign-in, sign back out of Maximo.

continued on next page

Managing User Security Settings continued

Viewing a User's Status History Use the following steps to view a user's status history.

Step	Action																
<p>1</p> 	<p>Sign in to Maximo as wilson (or as otherwise directed by your instructor):</p> <p>Username: wilson Password: wilson</p> <p><u>Note</u>: Usernames and passwords are case sensitive.</p>																
<p>2</p>	<p>Open the Users application.</p>																
<p>3</p>	<p>From the List tab, find and select your new user (from page 4-34).</p>																
<p>4</p>	<p>From the Select Action menu, choose View History. <u>Result</u>: The View History dialog box opens.</p>  <table border="1"> <thead> <tr> <th>Change Date</th> <th>Status</th> <th>Memo</th> <th>Changed By</th> </tr> </thead> <tbody> <tr> <td>3/29/05 10:49 AM</td> <td>ACTIVE</td> <td></td> <td>WILSON</td> </tr> <tr> <td>3/29/05 11:49 AM</td> <td>BLOCKED</td> <td></td> <td>MAXADMIN</td> </tr> <tr> <td>3/29/05 11:53 AM</td> <td>ACTIVE</td> <td></td> <td>WILSON</td> </tr> </tbody> </table>	Change Date	Status	Memo	Changed By	3/29/05 10:49 AM	ACTIVE		WILSON	3/29/05 11:49 AM	BLOCKED		MAXADMIN	3/29/05 11:53 AM	ACTIVE		WILSON
Change Date	Status	Memo	Changed By														
3/29/05 10:49 AM	ACTIVE		WILSON														
3/29/05 11:49 AM	BLOCKED		MAXADMIN														
3/29/05 11:53 AM	ACTIVE		WILSON														
<p>5</p>	<p>When you are finished viewing the history for your new user, click OK to close the View History dialog box.</p>																

continued on next page


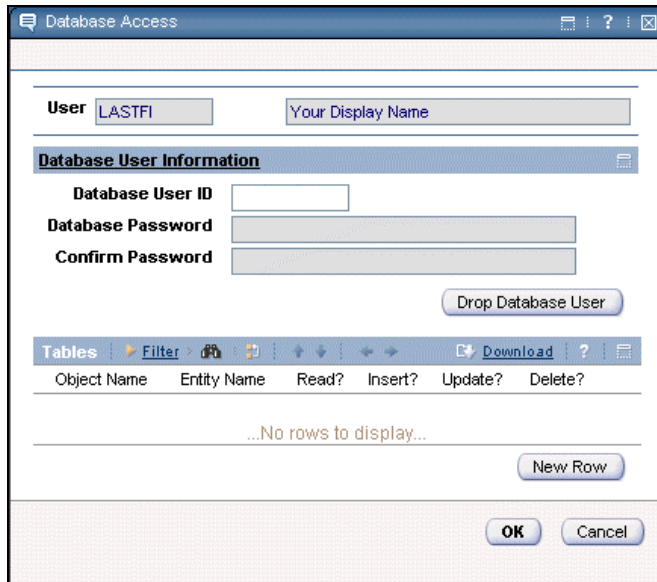
Managing User Security Settings continued

Creating Database Access



Create a user with Database access when you want to access the Maximo database outside of Maximo with a third-party tool. Use the following steps to create database access for your new user.

Note: Specific (Oracle) SQL commands need to be run against your Oracle Maximo user in order for this exercise to work. This exercise should work correctly in a standard MRO training environment. The necessary commands are listed at the end of this exercise.


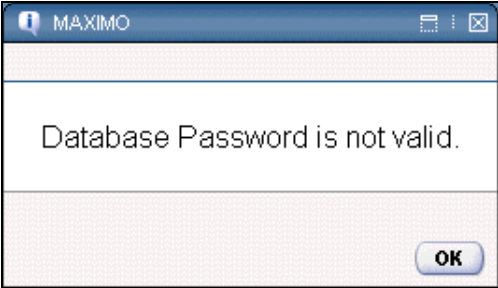
Step	Action
1	Sign in to Maximo as wilson (or as otherwise directed by your instructor): Username: wilson Password: wilson  <u>Note</u> : Usernames and passwords are case sensitive.
2	Open the Users application.
3	From the List tab, find and select your new user (from page 4-34).
4	From the Select Action menu, choose Database Access . <u>Result</u> : The Database Access dialog box displays. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">  </div>

continued on next page

Managing User Security Settings continued

Creating Database Access

continued

Step	Action												
5	<p>Enter the following information:</p> <table border="0"> <tr> <td><u>Field</u></td> <td><u>Value</u></td> </tr> <tr> <td>Database User ID</td> <td>[Your Choice]</td> </tr> <tr> <td colspan="2">Write your DB User ID here: _____</td> </tr> <tr> <td>Password</td> <td>[Your Choice]</td> </tr> <tr> <td>Confirm Password</td> <td>[Same as above]</td> </tr> <tr> <td colspan="2">Write your DB Password here: _____</td> </tr> </table>	<u>Field</u>	<u>Value</u>	Database User ID	[Your Choice]	Write your DB User ID here: _____		Password	[Your Choice]	Confirm Password	[Same as above]	Write your DB Password here: _____	
<u>Field</u>	<u>Value</u>												
Database User ID	[Your Choice]												
Write your DB User ID here: _____													
Password	[Your Choice]												
Confirm Password	[Same as above]												
Write your DB Password here: _____													
	<p><u>Warning:</u> You might get a MAXIMO dialog box, like this one.</p>  <p>If you do, this means that your database is not set up to allow Maximo to create database users. This topic is addressed later in this course.</p> <p>Click OK.</p> <p><u>Result:</u> The MAXIMO dialog box closes.</p>												
6	<p>Click OK (in the Database Access dialog box).</p> <p><u>Result:</u> Your database user is created.</p>												
7	<p>[Optional] To test, log in to SQL*Plus as your newly created database user.</p> <p>Log out of SQL*Plus after a successful login.</p>												

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Managing User Security Settings continued

Oracle SQL*Plus Commands

Use these SQL commands, connected as SYSTEM, to enable Maximo to create database users:

```
grant connect, resource to maximo identified by maximo;  
grant create session to MAXIMO with ADMIN OPTION;  
grant DBA to maximo;  
grant create user to MAXIMO;  
grant drop user to MAXIMO;  
grant alter user to MAXIMO;  
grant create public synonym to maximo;  
grant drop public synonym to maximo;  
commit;
```

Chapter Summary

Security Overview

The following three applications are key to security in Maximo:

- People application (Resources module)
 - Users application (Security module)
 - Security Groups application (Security module)
-

Person Records

A person record is a record in the People application of an individual who might appear somewhere on a Maximo record. Person records are at the system level, so more than one labor or user can be associated with each person record as long as the Labor and Users are in different organizations.

Security Groups

Security Groups are a key component in the Maximo security architecture. They provide system administrators with a flexible, robust way to manage user authorization and access. A security group allows you to set up access rights to sites, applications, menus, storerooms, labor, and GL components. Each Maximo user can belong to one or more security groups, with each security group having different levels of access. By combining security groups, you have the ability to create a “virtual profile” that is flexible enough to meet the security needs of almost any organization.

Maximo Users

The Users application, in the Security module, allows system administrators to add and manage Maximo users. System administrators can manage access rights and passwords, and display a hierarchical view of each Maximo user’s security profile.

When you create new Maximo users, they are automatically added to a default security group (DEFLTREG) with limited authorizations and privileges.

You can change the default group for new users and for self-registered users.

continued on next page

Chapter Summary continued

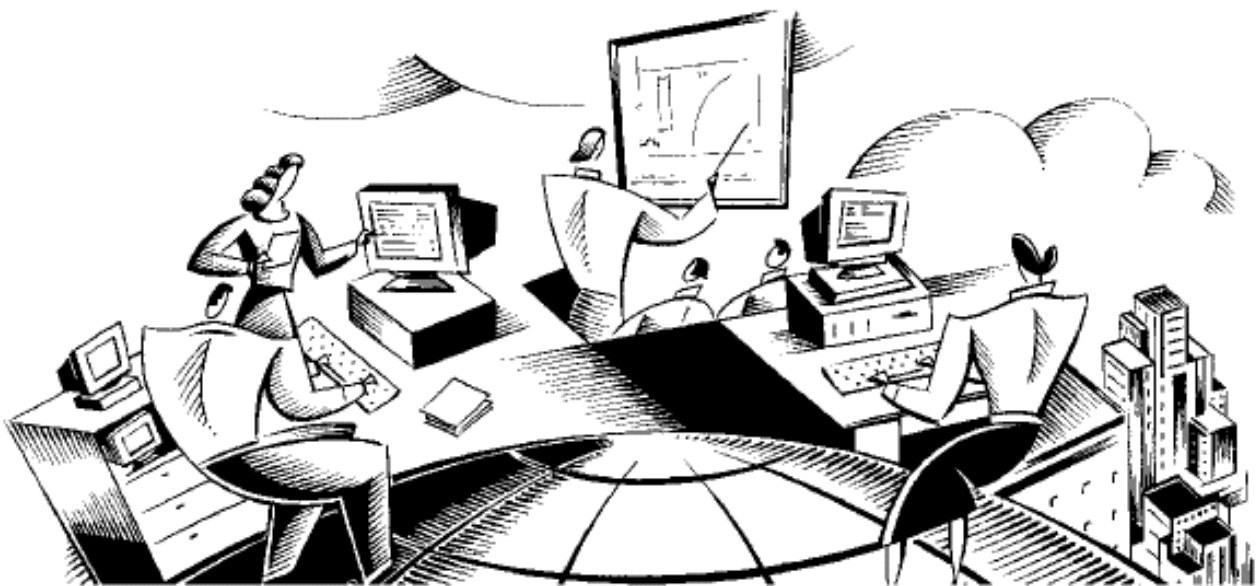
User Security Settings

You can set the following user security settings:

Use This Setting...	To...
Change Status	Change the status between active and inactive for the selected user
View History	View status history for the selected user
Database Access	Manage database access
Change Passwords	Manage passwords
Set Password Hint	Manage a password hint
Set Security Profile	Manage the security profile
Authorize Group Reassignment	Authorize group reassignments
Security Controls	Set <i>systemwide</i> security controls
Change Person	Change the password

System Administration for MXES

Chapter 5: Financial System Configuration



In This Chapter

This chapter contains the following topics:

Topic	See Page
Chapter Overview	5-1
Managing Currency Codes	5-2
Managing Exchange Rates	5-4
GL Account Configuration	5-9
The Chart of Accounts Application	5-13
GL Account Maintenance	5-15
Financial Periods	5-20
GL Component Maintenance	5-23
Application-Specific Accounts and Resource Controls	5-25
Updating the Database	5-30
Chapter Summary	5-32

Chapter Overview

Introduction

This chapter covers Financial Management topics and will give you hands-on experience in adding specific financial data.

Chapter Focus

The intent of this chapter is to provide a high-level overview of key application elements and functionality.

You will obtain maximum benefit if you:

- work actively with your instructor during demonstrations and exercises, and
 - ask many questions that relate to your additional informational needs.
-

Learning Objectives

When you have completed this chapter you should be able to perform some key functions of the Financial applications, including:

- entering a currency code
 - creating an exchange rate
 - entering a new GL account code
 - entering a new financial period
 - updating your database
-

Managing Currency Codes

Introduction

Use the Currency Codes application to define currency codes and to specify which codes can currently be used in Maximo. A *currency code* is a short, user-defined value that you create to represent a currency, for example, CND for the Canadian dollar.

The Currency Codes application contains all the currency codes used by Maximo.

Maximo stores currency codes at the system level. All organizations can view and use the defined currency codes and add new ones as needed.

After you establish an active currency code, you can use that currency code wherever a **Currency** field appears, such as in Purchase Requisitions, Purchase Orders, Invoices, and Companies.

Though you use the Currency Codes application to define currencies, you use the following applications to perform other currency administration tasks:

- *Organizations* to specify the base currency for an organization
 - *Exchange Rates* to set up exchange rates between currencies for defined periods
-

Creating a Currency Code



A currency code record consists of a currency code, its description, and a setting specifying whether it is currently available to be used in Maximo.

Maximo stores currency codes at the system level; all organizations can use them.

Note: To define exchange rates between currencies, use the Exchange Rates application. To establish a base currency, use the Organizations application.

Use the following steps to create a currency code.

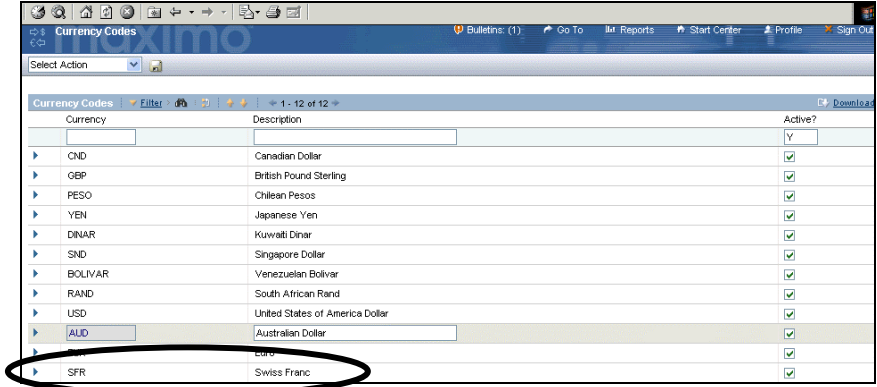
Step	Action
1	Open the Currency Codes application. <u>Hint:</u> It is in the Financial module. <u>Result:</u> The Currency Codes application opens.
2	Click the New Row button. <u>Result:</u> A new row opens for data entry.

continued on next page

Managing Currency Codes continued

Creating a Currency Code

continued

Step	Action
3	In the Currency field, enter SFR (for the Swiss Franc).
4	In the Description field, enter Swiss Franc.
5	By default, the Active field is checked. Leave this field checked.
6	<p>Save your record.</p> <p><u>Result:</u> Your new currency code is added to the database, and your display should look similar to this one.</p> 

Managing Exchange Rates

Introduction

Use the Exchange Rates application to enter, view, and modify exchange rates used for converting currencies.

When a user enters an amount in a foreign currency—for example, on a purchase requisition, purchase order, or invoice—Maximo finds the active exchange rate for that currency to calculate the cost in the organization’s base currency. If Maximo does not find the exchange rate between two currencies explicitly defined, it will use specific rules and logic to calculate the exchange rate from other exchange rates, if they exist.

Maximo stores exchange rates at the organization level. Therefore, each organization defines and maintains its own exchange rates. Currency codes are stored at the system level and are available to all organizations.

Though you use Exchange Rates to define exchange rates between currencies, you use the following applications to perform other aspects of currency administration:

- *Currency Codes* to define the currency codes
- *Organizations* to specify the base currency for an organization

The Exchange Rates Application

The Exchange Rates application contains an exchange rates table window in which you enter and modify exchange rates for a selected organization for specific periods.

The main table window lists all the exchange rates that have been entered for a selected organization (EAGLENA in this example).

The screenshot shows the Maximo Exchange Rates application interface. At the top, there is a navigation bar with 'Exchange Rates' and various menu options like 'Bulletins: (1)', 'Go To', 'Reports', 'Start Center', 'Profile', and 'Sign Out'. Below the navigation bar, there is a 'Select Action' dropdown and a table of organizations. The 'Organizations' table has columns for 'Organization' and 'Description'. The selected organization is 'EAGLENA', described as 'EAGLE Inc. North America'. Below the organizations table, there is a table of exchange rates for 'EAGLENA'. This table has columns for 'Convert from Currency', 'Convert to Currency', 'Exchange Rate', 'Active Date', and 'Expiration Date'. The exchange rates table lists various currencies and their corresponding exchange rates and dates.

Convert from Currency	Convert to Currency	Exchange Rate	Active Date	Expiration Date
AUD	USD	0.6016000	1/1/03	12/31/03
BOLIVAR	USD	0.0034500	3/3/99	12/31/02
BOLIVAR	USD	0.0006000	1/1/03	12/31/03
BOLIVAR	USD	0.0085208	1/1/04	12/31/06
DINAR	USD	3.3372000	3/3/99	12/31/02
GBP	USD	1.5598000	1/1/03	12/31/04
PESO	USD	0.0024300	3/3/99	12/31/02
PESO	USD	0.0014000	1/1/03	12/31/03
PESO	USD	0.0016010	1/1/04	12/31/06
RAND	USD	0.2742000	3/3/99	12/31/02

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Managing Exchange Rates continued

Notes About Exchange Rates in Maximo



Note: Exchange rates fluctuate over time. In Maximo, you can enter as many exchange rate rows for a single currency as needed. You can also edit the **Exchange Rate** and **Memo** fields in an existing Exchange Rate row. Also note the following properties:

- You can define multiple exchange rates between the same two currencies (A to B, for example), but the specified dates cannot overlap.
 - On any one given date, you can define only one exchange rate between two currencies (the **Active Date** and the **Expiration Date** fields do not include time of day).
 - If there is a gap between specified exchange rate periods for a currency pair, for example, a month when no rate is specified, then Maximo does not default to any existing rate. It finds no exchange rate.
 - There is no time stamp on records for both the effective date and the expiration date. The effective date and the expiration date become effective when the actual date on the server changes, essentially behaving as if a 12:00 a.m. time stamp were on the record.
-

Exchange Rate Rules and Logic: Two-Currency Logic

If Maximo does not find an explicitly defined exchange rate between two currencies, it will make the conversion using information from other defined exchange rates, if they exist.

In the Exchange Rates application, defining an exchange rate from one currency to another implies an inverse relationship. If Maximo does not find a particular currency exchange rate for a given date, it will look to see if the inverse relationship is defined and automatically use the inverse relationship to calculate the currency conversion.

Example: If the exchange rate from currency A to B is 4.0, then the exchange rate from currency B to A is 0.25 (if 1 A = 4 B, then 1 B = 0.25 A). If you specified only an A to B exchange rate, and the cost of a PO item is in currency B, a user can specify currency A on a PO and Maximo automatically makes the conversion to currency B.

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Managing Exchange Rates continued

Exchange Rate Rules and Logic: Three-Currency Logic

Maximo can also determine an exchange rate when two currencies are independently defined relative to a third.

Example: If you define exchange rates from A to C and from B and C, then Maximo can still calculate A to B or B to A. If $1 A = 2 C$ and $1 B = 4 C$, then B is twice the value of A. Therefore, $1 B = 2 A$ and $1 A = .5 B$. In terms of exchange rates for this example, the following relationships exist:

- A to C is 2.0
- B to C is 4.0
- A to B is 0.50
- B to A is 2.0



Note: For Maximo to use the three-currency logic, one of the three currencies must be the Base 1 currency.

Creating a New Exchange Rate

Use the following steps to create a new Exchange Rate for the new Currency Code you entered earlier in this course (SFR – Swiss Franc).

Step	Action
1	Open the Exchange Rates application. <u>Hint:</u> It is in the Financial module.
2	In the Organization section, click to select EAGLENA. <u>Result:</u> The “Exchange Rates for...” section displays all the defined exchange rates for the selected organization (EAGLENA).
3	Click the New Row button. <u>Result:</u> A new row opens for data entry.

continued on next page

Managing Exchange Rates continued

Creating a New Exchange Rate

continued


Step	Action
4	In the Convert from Currency field, click the Select Value button. <u>Result:</u> The Select Value dialog box opens.
5	Click to select SFR – Swiss Franc. <u>Result:</u> SFR is selected and the Select Value dialog box closes.
6	In the Convert To Currency field, click the Select Value button. <u>Result:</u> The Select Value dialog box displays.
7	Click to select USD – United States of America Dollar. <u>Result:</u> USD is selected and the Select Value dialog box closes.
8	<p>Enter .8765 in the Exchange Rate field.</p> <p>(Current real rate as of the development of this exercise @: http://finance.yahoo.com/currency)</p> <p><u>Note:</u> The exchange rate is the multiplier Maximo uses to calculate the conversion, as shown in the following equation:</p> $\text{Convert From Currency} \times \text{Exchange Rate} = \text{Convert To Currency}$ <ul style="list-style-type: none"> • The exchange rate can have up to seven digits (the default) to the right of the decimal point. • You can use the Database Configuration application (discussed later in this course) to change this.

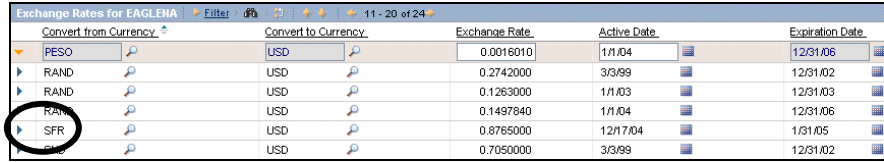
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Managing Exchange Rates continued

Creating a New Exchange Rate

continued

Step	Action
9	In the Active Date field, enter: [<i>Today's Date</i>] Hint: You can use the Select Date button  .
10	In the Expiration Date field, enter: [<i>One month from today</i>]
11	Save your record. Result: Maximo inserts the new row in the table, grouping it with other currency pairs of the same kind, if present.



Convert from Currency	Convert to Currency	Exchange Rate	Active Date	Expiration Date
PESO	USD	0.0016010	1/1/04	12/31/06
RAND	USD	0.2742000	3/3/99	12/31/02
RAND	USD	0.1263000	1/1/03	12/31/03
RAND	USD	0.1497840	1/1/04	12/31/06
SFR	USD	0.8765000	12/17/04	1/31/05
USD	USD	0.7050000	3/3/99	12/31/02

GL Account Configuration

Introduction

The objective of GL accounts is to collect financial data that corresponds in scope and format with an outside accounting system.

Before using GL account codes in Maximo, you will need to configure the format of your codes in the Database Configuration application.

After formatting codes, you can set up and manage specific account codes using the Chart of Accounts application.

GL Account Components



Each general ledger account code consists of a number of distinct components (also called *segments*). In Database Configuration, you define the account code format using the GL Account Configuration dialog box. In Chart of Accounts, you specify which components are valid for use in Maximo.

Note: Individual components are not GL account codes. GL account codes are defined as a specific set of combined components. Therefore, not all combinations of components are necessarily GL account codes.

For easy identification, you can use delimiters to separate components when they are displayed on the screen. For example, you might use hyphens to separate components: 6100-400-SAF.

By default, Maximo writes account strings to the database in a concatenated format, without delimiters. However, if required by the accounting system to which you are exporting Maximo data, you can specify that delimiters be included.



Note: This needs to be decided before any accounts are entered in the database.



Warning: Changing this setting with existing accounts in the database will cause existing accounts to become invalid.

For any account code, you can:

- define up to 20 components;
- restrict a single component's field length to a certain number of characters; and
- include a total of up to 254 characters/digits, not including delimiters (unless you choose to include the delimiters as part of the account code).

Note that components are not fixed length; they are only defined as a maximum length.

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GL Account Configuration continued

MAXDEMO GL Account Components

Account components are displayed in a sequential format, with the leftmost component in the string representing the highest level. For example, in the MAXDEMO database (used in a standard MRO training environment), four component levels are defined:

- Component 1 = Cost Center
- Component 2 = Activity
- Component 3 = Resource
- Component 4 = Element

The fourth component in MAXDEMO is optional and no accounts have been assigned to it. Because account components are concatenated, with the highest level component at the left, the MAXDEMO database account 6100-350-SAF can be represented as follows:

component 1	component 2	component 3	component 4
6100	350	SAF	
Cost Center	Activity	Resource	Element

The fourth component does not appear as part of the GL Account because it is an optional component and no values have been assigned to it in Chart of Accounts for the MAXDEMO database.

Your general ledger system has rules regarding whether an account is acceptable when partially defined, or whether it must be fully defined:

- A fully defined (or “fully specified”) account has no unknown values (placeholders) in required components.
- A partially defined (or “partially specified”) account contains placeholders in some required components.

In the above example, the account 6100-350-SAF is fully defined (the fourth component is optional and does not require any characters).

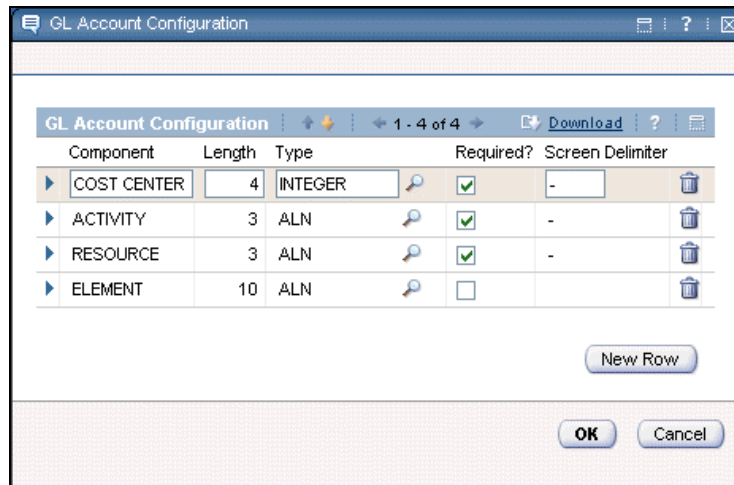
The account 6100-???-SAF is partially defined; the required Activity component is not specified and therefore contains placeholder characters.

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GL Account Configuration continued

The GL Account Configuration Dialog Box

To configure and set up Maximo GL accounts, you select the **GL Account Configuration** action in the Database Configuration application. The GL Account Configuration dialog box looks like this:



Use this dialog box to name each component segment and specify its characteristics.



Note: Configuration and setup of account code formats is generally done during initial implementation. Therefore, you should not have to do this as a system administrator.

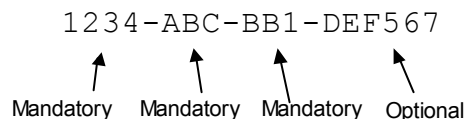
Required and Optional Components



You can specify whether a GL account component is required or optional using the Required column in the GL Account Configuration dialog box.

- If a component is required, the code is validated when data is entered into the component.
- If a component is optional, the presence of valid data is still required, but the user can omit it.

Note: Required components must appear in order before optional codes. For example:



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GL Account Configuration continued

Configuring the Database

You must complete two steps to configure GL account codes before you can use them to collect data and/or transmit it to your financial system:

1. Configure codes in the GL Account Configuration dialog box in the Database Configuration application and save your changes. This step stores the configuration data in the GLCONFIGURE object.



Note: Recall that individual components are not GL account codes. GL account codes are a specific set of combined components. Therefore, not all combinations of components are necessarily GL account codes.

2. Reconfigure the database. This step ensures that several objects that use the data are reconfigured properly.



Note: We will discuss database configuration later in this course.

Populating the Codes

With the code components set, you can download account code data—the data comprising each individual code—from your accounting system.

Clearing Accounts

You might recall that we learned earlier that a clearing account is required when you create a new organization. A *clearing account* is an accounting term. The actual clearing account is determined by your financial system.

A clearing (or holding) account is used for transfers between organizations. Suppose that you need a forklift transferred from one organization to another organization. While it is in transit, the associated cost needs to be put in a clearing account because it is not being used by either organization.

In Maximo a clearing account is required for all organizations, thus it is needed in order to activate a new organization.

The Chart of Accounts Application

Introduction

Whether you download GL accounts from your financial system or set them up manually, you use the Chart of Accounts application to maintain the list of account codes.

In this section we will look closely at the variety of screens and options in the Chart of Accounts application.

The Chart of Accounts Application



The Chart of Accounts application is the central repository for GL account data. With it, you define values for the different components. You then link various component values to create GL account codes for specific financial tracking purposes.

The GL Accounts tab displays a list of all the accounts for the selected organization.

Note: Chart of Accounts data is maintained at the organization level.

GL Account Codes in Maximo

Placeholder characters represent a component that has not been assigned a value; for example, 6000-???-350.

You define the format of the account code in Maximo in the following ways:

- To define the number, length, and data type of components; whether the components are required; and the delimiter (if any), use the **GL Account Configuration** action in the Database Configuration application.
- To specify a placeholder character, use the **System Settings** action in the Organizations application.

Maximo users enter GL account codes in **GL Account** fields using the Select GL Account dialog box. You, the administrator, specify the validation rules for what users can enter by using the Validation Option dialog box in Chart of Accounts. Among other things, the rules determine whether users can enter any combination of component values or whether they are restricted to GL account codes stored in Chart of Accounts.

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The Chart of Accounts Application continued

Usage

Use the Chart of Accounts application to:

- create, view, and modify general ledger account codes and components;
- set up financial periods;
- set up a number of default GL accounts, including an organization account, company-related accounts, and external labor control accounts;
- define resource codes; and
- specify GL validation options.

Maximo stores GL accounts at the organization level. Therefore, each organization must have its own chart of accounts system, and GL accounts cannot be shared across organizations.



Note: An organization must have a GL clearing account before you can make it active. Therefore, after you create an organization you must at minimum use Chart of Accounts to create a clearing account for the organization. You can create or download other accounts as well.

Maintaining Codes in History

When a component of an existing GL account code is modified, existing transaction records referencing that code *will not* update.

Using this methodology, accounting systems can then maintain accurate records in history.

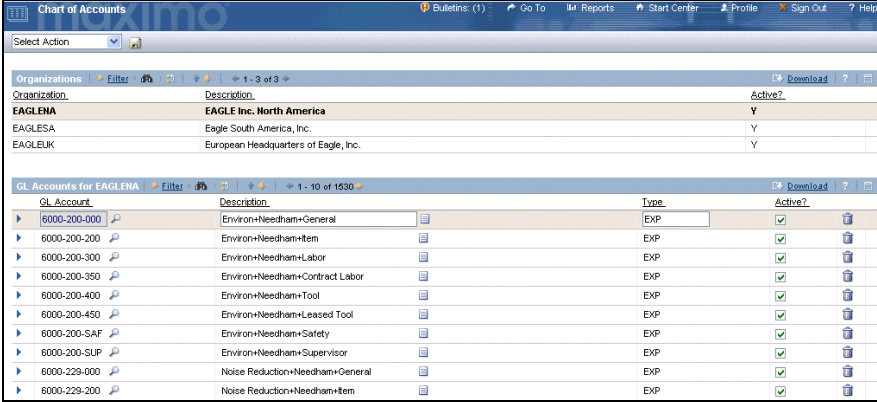

GL Account Maintenance

Creating a New GL Account



Although it is likely that you will add a new GL account code by downloading it from your accounting system, you can also add codes manually.

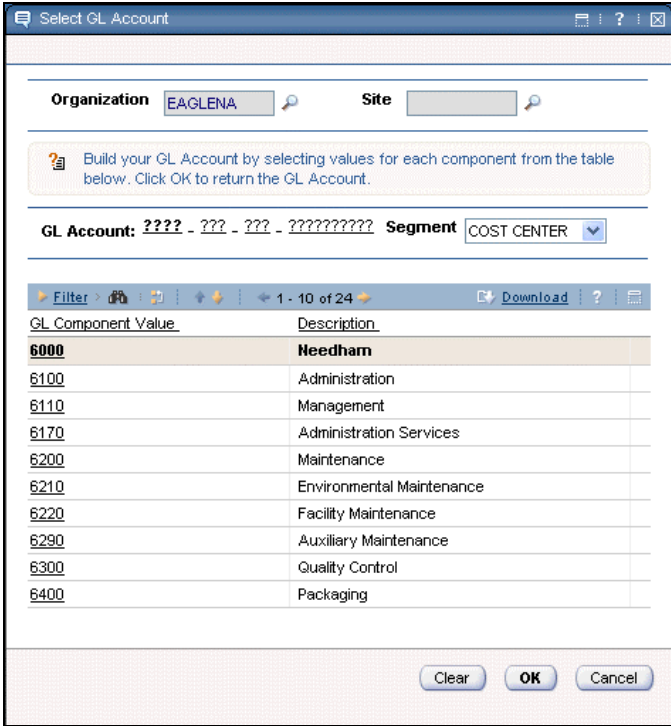
Use the following steps to add a GL account code manually .

Step	Action
1	Open the Chart of Accounts application from the Financial module.
2	<p>In the Organization section, select EAGLENA.</p> <p><u>Result:</u> A list of GL accounts for the EAGLENA organization displays, similar to this:</p> 
3	<p>Click the New Row button.</p> <p><u>Result:</u> A new row opens for data entry.</p> 

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GL Account Maintenance continued

Creating a New GL Account continued



Step	Action
4	<p>Click the Select Value button of the GL Account field.</p> <p><u>Result:</u> The Select GL Account dialog box opens. The first component is highlighted: in our example it is COST CENTER.</p> 
5	<p>Click to select 6100 – Administration.</p> <p><u>Result:</u> 6100 – Administration is selected and the Select GL Account dialog box displays a list of available second components. In our example, it is ACTIVITY.</p>

continued on next page

GL Account Maintenance continued

Creating a New GL Account

continued


Step	Action																																												
6	<p>Click to select 199 – Production Training.</p> <p><u>Result:</u> 199 – Production Training is selected and the Select GL Account dialog box displays a list of available third components. In our example, it is RESOURCE.</p>																																												
7	<p>Click to select 000 – General.</p> <p><u>Result:</u> 000 – General is selected and the Select GL Account dialog box displays a list of available fourth components. In our example, it is ELEMENTS.</p>																																												
8	<p>We are not adding any ELEMENTS.</p> <p>Click OK.</p> <p><u>Result:</u> The Select GL Account dialog box closes and your new GL account code (6100-199-000) is created.</p>																																												
9	<p>Tab to the Description field and enter the following description:</p> <p style="text-align: center;">Production Training+Admin+General</p>																																												
10	<p>Tab to the Type column and enter EXP.</p> <p> <u>Note:</u> This user-defined code signifies the type of account being added.</p>																																												
11	<p>Save your record.</p> <p><u>Result:</u> Your new GL account should look similar to the example below.</p> <p> <u>Note:</u> You will have to scroll through several pages or use the Filter functionality to find your new GL account.</p> <div style="border: 1px solid black; padding: 5px;"> <table border="1"> <thead> <tr> <th>GL Account</th> <th>Description</th> <th>Type</th> <th>Active?</th> </tr> </thead> <tbody> <tr> <td>6000-350-400</td> <td>Circulation Fan+Needham+Tool</td> <td>EXP</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>6000-350-450</td> <td>Circulation Fan+Needham+Leased Tool</td> <td>EXP</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>6000-350-SAF</td> <td>Circulation Fan+Needham+Safety</td> <td>EXP</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>6000-350-SUP</td> <td>Circulation Fan+Needham+Supervisor</td> <td>EXP</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>6000-400-000</td> <td>Supplies+Needham+General</td> <td>EXP</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>6000-400-200</td> <td>Supplies+Needham+Item</td> <td>EXP</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>6000-450-000</td> <td>Furnishing+Needham+General</td> <td>EXP</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>6000-450-200</td> <td>Furnishing+Needham+Item</td> <td>EXP</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>6100-199-000</td> <td>Production Training+Administration+General</td> <td>EXP</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>6100-200-000</td> <td>Environ+Admin+General</td> <td>EXP</td> <td><input checked="" type="checkbox"/></td> </tr> </tbody> </table> </div>	GL Account	Description	Type	Active?	6000-350-400	Circulation Fan+Needham+Tool	EXP	<input checked="" type="checkbox"/>	6000-350-450	Circulation Fan+Needham+Leased Tool	EXP	<input checked="" type="checkbox"/>	6000-350-SAF	Circulation Fan+Needham+Safety	EXP	<input checked="" type="checkbox"/>	6000-350-SUP	Circulation Fan+Needham+Supervisor	EXP	<input checked="" type="checkbox"/>	6000-400-000	Supplies+Needham+General	EXP	<input checked="" type="checkbox"/>	6000-400-200	Supplies+Needham+Item	EXP	<input checked="" type="checkbox"/>	6000-450-000	Furnishing+Needham+General	EXP	<input checked="" type="checkbox"/>	6000-450-200	Furnishing+Needham+Item	EXP	<input checked="" type="checkbox"/>	6100-199-000	Production Training+Administration+General	EXP	<input checked="" type="checkbox"/>	6100-200-000	Environ+Admin+General	EXP	<input checked="" type="checkbox"/>
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6000-350-SAF	Circulation Fan+Needham+Safety	EXP	<input checked="" type="checkbox"/>																																										
6000-350-SUP	Circulation Fan+Needham+Supervisor	EXP	<input checked="" type="checkbox"/>																																										
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6100-200-000	Environ+Admin+General	EXP	<input checked="" type="checkbox"/>																																										

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GL Account Maintenance continued

Create and Apply a GL Clearing Account

Using the following information and what you have learned so far, create a GL clearing account for your new PAPER organization, then apply it.

Step	Action									
1	Access the GL Component Maintenance dialog box from the Select Action menu in the Chart of Accounts application. <u>Hint:</u> Ensure that your PAPER organization is selected.									
2	Create the following individual components for your PAPER organization, and save your record: <table border="1"> <thead> <tr> <th><u>Cost Center</u></th> <th><u>Activity</u></th> <th><u>Resource</u></th> </tr> </thead> <tbody> <tr> <td>6000</td> <td>100</td> <td>000</td> </tr> <tr> <td>Overhead</td> <td>General</td> <td>Clearing</td> </tr> </tbody> </table>	<u>Cost Center</u>	<u>Activity</u>	<u>Resource</u>	6000	100	000	Overhead	General	Clearing
<u>Cost Center</u>	<u>Activity</u>	<u>Resource</u>								
6000	100	000								
Overhead	General	Clearing								
3	In the GL Accounts for PAPER section, click the New Row button, create the following GL account, and save your record: 6000-100-000 Overhead+General+Clearing									
4	From the Organizations application, select your PAPER organization.									
5	In the Clearing Account field, click the Select Value button and select your new clearing account (6000-100-000).									
6	Activate your PAPER organization and save your record. <u>Result:</u> Your PAPER organization should look similar to this. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">  <p>The screenshot shows the 'Organizations' application window. The 'Organization' field is set to 'PAPER'. The 'Base Currency 1' is 'USD' (United States of America Dollar) and 'Base Currency 2' is 'CAD' (Canadian Dollar). The 'Item Set' is 'SET3' (item set for PAPER) and the 'Company Set' is 'COMPSET2' (Company Set 2 for PAPER). The 'Clearing Account' field is set to '6000-100-000'. The 'Active?' checkbox is checked.</p> </div>									

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GL Account Maintenance continued

Merging GL Accounts

There are instances when a GL account field might not be uniquely specified. For example, there might be a GL account for a location and a GL account for a piece of equipment. Generating work orders and other kinds of transactions often requires choosing from among account component values, and Maximo invokes a set of rules on how to handle them.

When GL accounts are merged, they are merged component by component, and a defined component always supersedes an undefined component. For example, if the first component of one account code is 6000 and the other is ??? (a placeholder), the resulting merged first component will be 6000.

For many transactions, the merge must choose between defined components. Refer to the *Finance Manager's Guide* for detailed information on how GL accounts merge during transactions.

Chart of Accounts Dialog Boxes

The Chart of Accounts application includes dialog boxes for setting up default GL accounts and resource codes for a number of standard accounting functions. You typically set up these accounts and resource codes within Maximo to correspond with accounts that you already use in your external accounting system.

Refer to the General Ledger Accounts chapter in the *Finance Manager's Guide* for more information on using these accounts.

Listed below are the dialog boxes you use to define financial periods, set up default GL accounts, and define resource codes. When you update the database, the account codes defined with these dialog boxes are also updated, depending on which of the three update choices you select.

- Financial Periods
- Organization Default Accounts
- Company Related Accounts
- External Labor Control Accounts
- Resource Codes

Note: We will be covering these dialog boxes in the following sections.



Financial Periods

Purpose

The administrator or person responsible for maintaining financial accounting must define financial accounting periods in the database.

Operating Principle

All Maximo transactions can be set up to have a financial period stamp when they are generated. This means they must occur during an open, valid financial period. Maximo allows you to define these periods.

The format of the financial period is determined by the requirements of the accounting system used with Maximo.

Note: You can turn off financial period validation by using the Validation Options dialog box.



Financial Period Setup and Maintenance

Use the Financial Periods dialog box in the Chart of Accounts application to define and maintain financial periods. If you set up Maximo to use financial periods, then Maximo adds a financial period stamp to all transactions when they are generated, and the transactions must occur during an open, valid financial period. You must define at least one financial period.

Note 1: If you want Maximo to validate the data against financial periods, make sure the **Validate Financial Periods** box is selected in the Validation Options dialog box.

Note 2: The requirements of the accounting system you use with Maximo will determine the format of the financial period.

Note 3: Maximo ensures that you insert rows sequentially and does not allow time gaps or overlaps between periods.



Period	From	To	Accounting Close Date	Actual Close Date	Closed By
200612	11/30/06	12/31/06			
200611	10/31/06	11/30/06			
200610	9/30/06	10/31/06			
200609	8/31/06	9/30/06			
200608	7/31/06	8/31/06			
200607	6/30/06	7/31/06			
200606	5/31/06	6/30/06			
200605	4/30/06	5/31/06			

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Financial Periods continued

Notes



Note 1: By default, the time is set to 12:00 a.m. for each date.


Note 2: Maximo prevents time gaps and overlaps between contiguous periods. If you change the date of an existing period, Maximo resets surrounding dates. You can, however, enter a new financial period that starts later than the **To** date field of the most recent period.

Note 3: In the **Accounting Close Date** field, you can, but do not have to, enter a closing date. This is the date after which no further transactions can be charged to the accounting period.

Example: An accounting period *X* is from 2/1/05 to 3/1/05, with an **Accounting Close Date** of 3/15/05. A transaction can be charged to the period *X* even though the transaction is reported as late as 3/14/05. After that date, no further transactions can be charged to this period.

Creating a New Financial Period



Use the following steps to create a new financial period.

Step	Action
1	Open the Chart of Accounts application and choose EAGLENA in the Organizations section.
2	From the Select Action menu, choose Financial Periods . <u>Result</u> : The Financial Periods dialog box displays all the financial periods for the selected organization: EAGLENA.  <u>Note</u> : Financial periods are ordered sequentially by date, with the most recent period at the top.
3	Click the New Row button. <u>Result</u> : A new row opens for data entry.

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Financial Periods continued

Creating a New Financial Period continued

Step	Action								
4	Enter the following information: <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Period</td> <td>200701</td> </tr> <tr> <td>From</td> <td>1/1/07</td> </tr> <tr> <td>To</td> <td>1/31/07</td> </tr> </tbody> </table>  <p><u>Note:</u> Make sure you use the next period based on your data. Please check with your instructor, as the data entry values in this exercise might be different from those in your training environment.</p>	<u>Field</u>	<u>Value</u>	Period	200701	From	1/1/07	To	1/31/07
<u>Field</u>	<u>Value</u>								
Period	200701								
From	1/1/07								
To	1/31/07								
5	Click OK . <u>Result:</u> Your new financial period is added to the database and the Financial Periods dialog box closes.								
6	To view your new Financial period, again, from the Select Action menu, choose Financial Periods .  <p><u>Note:</u> You might have to click on the Period heading (twice) to reorder the financial periods to view your new period.</p>								

GL Component Maintenance

Introduction

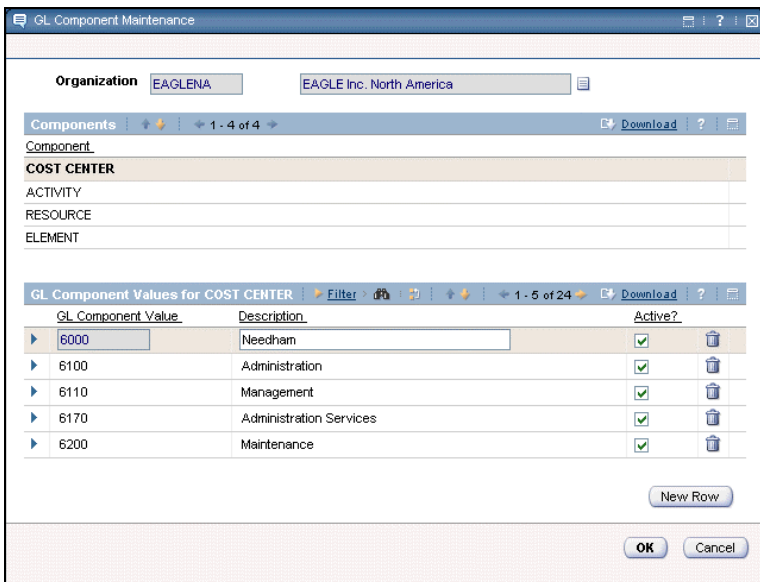
Use the **GL Component Maintenance** dialog box in the Chart of Accounts application to define valid component values for GL account codes. These values are the ones you choose from when you use the Select GL Account dialog box.

Example: The GL account code 6000-200-300 consists of three components:

- 6000 Cost Center
- 200 Activity
- 300 Resource

Creating a GL Component

Use the following steps to create a GL component.


Step	Action																																													
1	Open the Chart of Accounts application and choose EAGLENA in the Organizations section.																																													
2	<p>From the Select Action menu, choose GL Component Maintenance.</p> <p><u>Result:</u> The GL Component Maintenance dialog box displays the GL Components for EAGLENA.</p>  <table border="1"> <thead> <tr> <th colspan="3">GL Component Maintenance</th> </tr> <tr> <td colspan="3">Organization: EAGLENA (EAGLE Inc. North America)</td> </tr> <tr> <th colspan="3">Components (1 - 4 of 4)</th> </tr> <tr> <th colspan="3">Component</th> </tr> <tr> <td colspan="3">COST CENTER</td> </tr> <tr> <td colspan="3">ACTIVITY</td> </tr> <tr> <td colspan="3">RESOURCE</td> </tr> <tr> <td colspan="3">ELEMENT</td> </tr> <tr> <th colspan="3">GL Component Values for COST CENTER (1 - 5 of 24)</th> </tr> <tr> <th>GL Component Value</th> <th>Description</th> <th>Active?</th> </tr> <tr> <td>6000</td> <td>Needham</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>6100</td> <td>Administration</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>6110</td> <td>Management</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>6170</td> <td>Administration Services</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>6200</td> <td>Maintenance</td> <td><input checked="" type="checkbox"/></td> </tr> </thead></table>	GL Component Maintenance			Organization: EAGLENA (EAGLE Inc. North America)			Components (1 - 4 of 4)			Component			COST CENTER			ACTIVITY			RESOURCE			ELEMENT			GL Component Values for COST CENTER (1 - 5 of 24)			GL Component Value	Description	Active?	6000	Needham	<input checked="" type="checkbox"/>	6100	Administration	<input checked="" type="checkbox"/>	6110	Management	<input checked="" type="checkbox"/>	6170	Administration Services	<input checked="" type="checkbox"/>	6200	Maintenance	<input checked="" type="checkbox"/>
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6170	Administration Services	<input checked="" type="checkbox"/>																																												
6200	Maintenance	<input checked="" type="checkbox"/>																																												

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GL Component Maintenance continued

Creating a GL Component

continued

Step	Action								
3	<p>In the Components section, click to select RESOURCE.</p> <p><u>Result:</u> The “GL Component Values...” section becomes “GL Component Values for RESOURCE.”</p>								
4	<p>In the GL Component Values for RESOURCE section, click the New Row button.</p> <p><u>Result:</u> A new row opens for data entry.</p>								
5	<table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>GL Component Value</td> <td>500</td> </tr> <tr> <td>Description</td> <td>Administration</td> </tr> <tr> <td>Active</td> <td>[Leave Checked]</td> </tr> </tbody> </table> <p> <u>Note:</u> You specify the format of GL account codes using the GL Account Configuration action in Database Configuration. If the value you enter here does not fit the format, Maximo displays an error message.</p> <p><u>Example:</u> In Database Configuration you might define a Cost Center component to require integers and have a maximum length of 4. In the GL Component Value field, you could then enter 123, or 1223, but not A223 or 12345.</p>	<u>Field</u>	<u>Value</u>	GL Component Value	500	Description	Administration	Active	[Leave Checked]
<u>Field</u>	<u>Value</u>								
GL Component Value	500								
Description	Administration								
Active	[Leave Checked]								
6	<p>Click OK.</p> <p><u>Result:</u> Your new component is saved to the database and the GL Component Maintenance dialog box closes.</p>								

Application-Specific Accounts and Resource Controls

Introduction

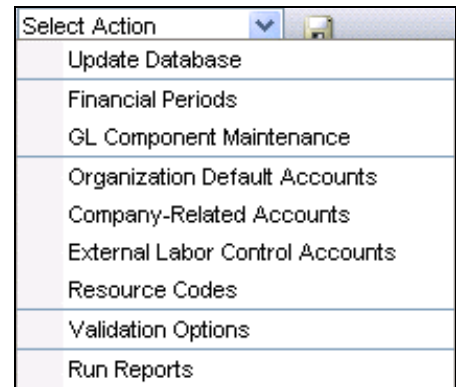
By entering data in a series of dialog boxes in the Chart of Accounts application, you can set application-specific or default resource accounts for transactions.

Setting Default Accounts

You set application-specific or default resource accounts by entering the data in dialog boxes that you access from the Select Action menu in the Chart of Accounts application.

This section discusses the following selections from the Select Action menu:

- Organization Default Accounts
- Company-Related Accounts
- External Labor Control Accounts
- Resource Codes



Note: These accounts are not downloaded from the accounting system. They are used only internally and only as a convenience for users.

continued on next page

Application-Specific Accounts and Resource Controls continued

Organization Default Accounts

Use the Organization Default Accounts dialog box to create three global GL accounts:

- **Global Rotating Suspense Account:** You typically use rotating suspense accounts to hold the accumulated cost of repairs for rotating equipment.
- **Global Ticket Account:** You typically use this as the default account when a ticket for a service request is created and no other account is available.
- **Tool Control Account:** You typically use this as the default account when a transaction involves a tool and no other account is available.

Organization Default Accounts

Click the Select Value button in the GL Account fields to define account codes.

Organization	EAGLENA	EAGLE Inc. North America
Global Rotating Suspense Account	6600-869-800	
Global Ticket Account	6820-400-000	
Tool Control Account		

OK Cancel

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Application-Specific Accounts and Resource Controls continued

Company-Related Accounts

Use the Company-Related Accounts dialog box to set up default company GL accounts. The accounts are based on Company Type as specified in the Companies application. You can define the following three accounts:

- RBNI (Received But Not Invoiced) Account
- AP (Accounts Payable) Suspense Account
- AP Control Account

Company Type	Description	RBNI Account	AP Suspense Account	AP Control Account
C	Courier	6800-930-620	6800-920-620	6800-910-620
M	Manufacturer	6800-930-610	6800-920-610	6800-910-610
V	Vendor	6800-930-600	6800-920-600	6800-910-600

Notes



Note 1: Company Type is a domain (value list). In the Domains application, you can add new values by adding rows to the COMPTYPE domain.

Note 2: We will cover Domains in a later chapter.

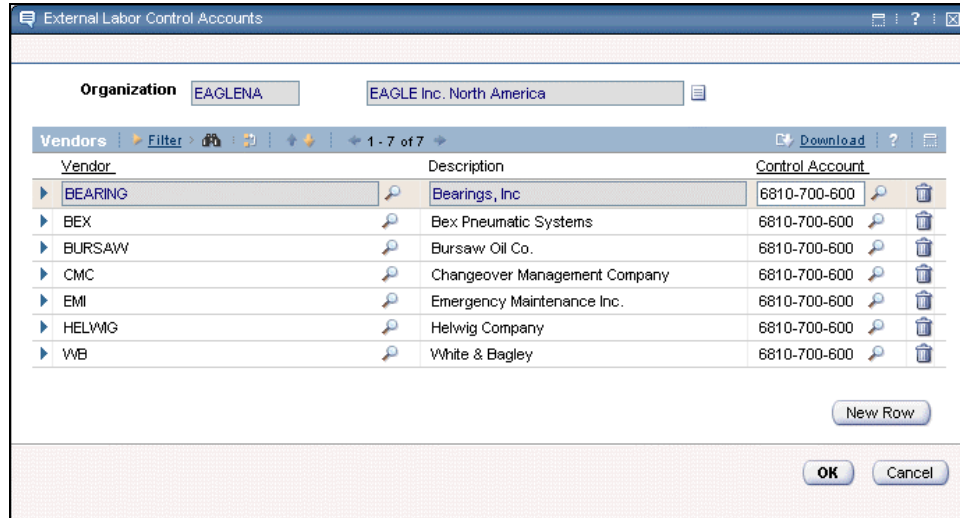
Note 3: Refer to the General Ledger Accounts chapter in the *Finance Manager's Guide* for more information on company-related accounts.

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Application-Specific Accounts and Resource Controls continued

External Labor Control Accounts

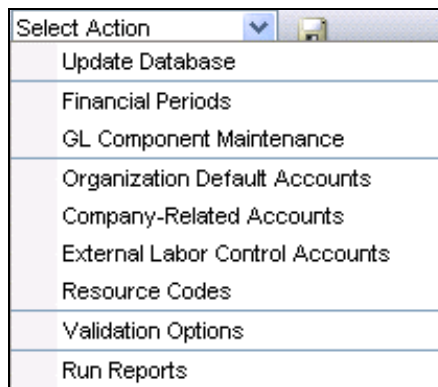
Use the External Labor Control Accounts dialog box to set up default account codes for work performed by outside vendors.



Resource Codes Component

Resource codes are the third component of our GL account codes in the Maximo database. Maximo has defaults set for the resource codes for this third component. You can set the default resource code for any of your components.

Resource codes are set from the **Resource Codes** option on the Select Action menu.



continued on next page

Application-Specific Accounts and Resource Controls continued

Resource Codes Dialog Box

Use the Resource Codes dialog box to define three kinds of resource codes:

- **Labor Resource Codes:** Use these to define GL account code components to track whether labor used in a transaction is inside labor (internal) or outside labor (external).
- **Tool Resource Codes:** Use these to define GL account code components to track whether a tool used in a transaction belongs to the company (internal) or to an outside vendor (external).
- **Inventory Resource Codes:** Use these to define GL account components to attach to inventory items used in transactions.

A resource code typically consists of just one component of the account code. When you use the Select GL Account dialog box to define a code, you leave the other components filled with placeholder characters.

Updating the Database

Introduction

Use the Update Database dialog box to update your database after you change a default GL account or resource code in Chart of Accounts.

You update the database for one organization at a time. As described below, you have a choice of three ways to handle existing accounts when you update.

Update Database Options

When you update your database, you will choose one of the following three options:

Option	Description	Example
Overwrite Blank Accounts Only?	Choose this option if you want the updated Chart of Accounts data to overwrite only those affected GL account fields that are currently blank.	If you created a new account code for an existing item type's GL account field, choosing this option would overwrite only the item's GL account field where it is blank, but not where a GL account has already been entered.
Overwrite Accounts with Old Defaults?	Choose this option if you want the current Chart of Accounts data to overwrite GL account fields that have the previous GL account.	Suppose an item type had a GL account code associated with it in Chart of Accounts. This account code was inserted on item records where the item type was involved. On some records, the account code was subsequently changed to another one. Choosing the Overwrite Accounts with Old Defaults? option will not update those records in which the account code was subsequently changed.
Overwrite All Accounts	Choose this option if you want the modified Chart of Accounts data to overwrite all relevant GL account fields in Maximo records.	If an item type has a GL account code associated with it in Chart of Accounts, choosing this option will fill in blank GL account fields for that item type and overwrite all existing GL account fields for items of that type, including ones that were subsequently changed.

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Updating the Database continued

Update Your Database

Earlier in this chapter we changed some of the GL account configuration. Use the following steps to update your database.



Caution: Make sure that no one is using Maximo when you update the database.



Note: Historical records will not be updated.

Step	Action
1	Open the Chart of Accounts application, and in the Organizations section, select EAGLENA.
2	From the Select Action menu, select Update Database . <u>Result:</u> The Update Database dialog box opens. <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> </div>
3	In the Update Database section, click to select Overwrite All Accounts .
4	Click OK . <u>Result:</u> Your specified GL account types are updated and the Update Database dialog box closes.

Chapter Summary

Managing Currency Codes

Use the Currency Codes application to define currency codes and to specify which codes can be used in Maximo. A currency code is a short, user-defined value that you create to represent a currency, for example, CND for the Canadian dollar.

The Currency Codes application contains all the currency codes used by Maximo.

Maximo stores currency codes at the system level. All organizations can view and use the defined currency codes and add new ones as needed.

Managing Exchange Rates

Use the Exchange Rates application to enter, view, and modify exchange rates used for converting currencies.

When a user enters an amount in a foreign currency—for example, on a purchase requisition, purchase order, or invoice—Maximo finds the active exchange rate for that currency to calculate the cost in the organization's base currency. If Maximo does not find the exchange rate between two currencies explicitly defined, it will use specific rules and logic to calculate the exchange rate from other exchange rates, if they exist.

Maximo stores exchange rates at the organization level. Therefore, each organization defines and maintains its own exchange rates. Currency codes are stored at the system level and are available to all organizations.

Though you use Exchange Rates to define exchange rates between currencies, you use the following applications to perform other aspects of currency administration:

- *Currency Codes* to define the currency codes
 - *Organizations* to specify the base currency for an organization
-

Managing GL Account Codes

The objective of GL accounts is to collect financial data that corresponds in scope and format with an outside accounting system.

Before using GL account codes in Maximo, you will need to configure the format of your codes in the Database Configuration application.

After formatting codes, you can use the Chart of Accounts application to set up and manage specific account codes.

continued on next page

Chapter Summary continued

Financial Periods

All Maximo transactions can be set up to have a financial period stamp when they are generated. This means they must occur during an open, valid financial period. Maximo allows you to define these periods.

The format of the financial period is determined by the requirements of the accounting system used with Maximo.

GL Component Maintenance

Use the GL Component Maintenance dialog box in the Chart of Accounts application to define valid component values for GL account codes. These values are the ones you choose from when you use the Select GL Account dialog box.

Example: The GL account code 6000-200-300 consists of three components:

6000	Cost Center
200	Activity
300	Resource

Application-Specific Accounts and Resource Controls

You can set application-specific or default resource accounts for transactions by entering data in these dialog boxes in the Chart of Accounts application:

- Organizational Default Accounts
 - Company-Related Accounts
 - External Labor Control Accounts
 - Resource Codes
-

Updating the Database

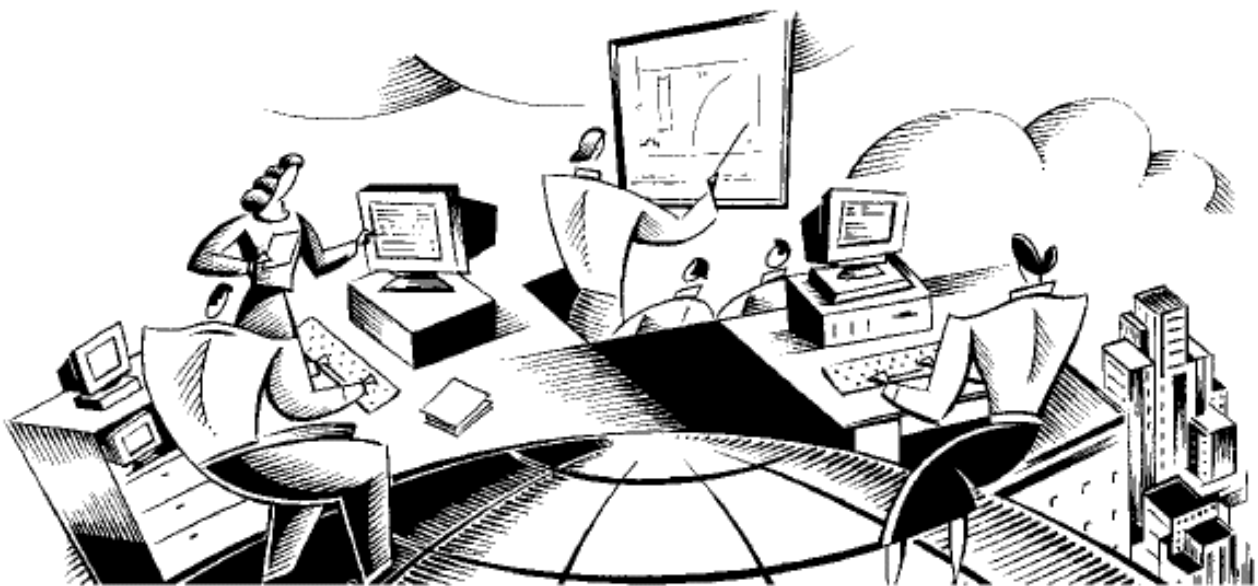
Use the Update Database dialog box to update your database after you change a default GL account or resource code in Chart of Accounts.

You update the database for one organization at a time. As we discussed, you have a choice of three ways to handle existing accounts when you update:

- Overwrite Blank Accounts Only
 - Overwrite Accounts with Old Defaults
 - Overwrite All Accounts
-

System Administration for MXES

Chapter 6: Administrative Applications



In This Chapter

This chapter contains the following topics:

Topic	See Page
Chapter Overview	6-1
Managing Calendars	6-2
Report Administration	6-13
Request Pages for Reports	6-14
Configuring Cron Tasks	6-23
Chapter Summary	6-34

Chapter Overview

Introduction

This chapter covers several applications that set up different types of data for use in other applications that depend on the data set up in this chapter.

Chapter Focus

The intent of this chapter is to provide a high-level overview of key application elements and functionality.

You will obtain maximum benefit if you:

- work actively with your instructor during demonstrations and exercises, and
 - ask many questions that relate to your additional informational needs.
-

Learning Objectives

When you have completed this chapter, you should be able to:

- create a new calendar,
 - apply non-working time to a calendar,
 - create a cron task instance,
 - set parameters for a cron task instance,
 - duplicate a cron task instance, and
 - schedule a cron task to run.
-

Managing Calendars

Introduction

Use the Calendars application to indicate working time for equipment, craft, and labor records for the displayed organization and its associated sites. A start date, an end date, and the shift to be worked all define a calendar record. You can apply one or more shifts to a calendar. You can also designate non-working time such as weekends, holidays, and vacations.

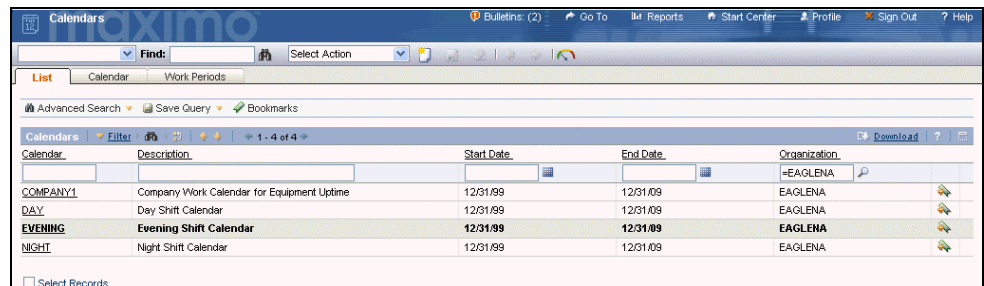
The Calendars Application

You define calendars by site. An organization, for example, can have different calendars at each of its sites.

Calendars you create and view are for the current organization. The sites for the organization are listed in the table on the Calendars tab. You have the option of applying calendar attributes, such as holidays and shifts, to a selected site or to all of the organization's sites.

You are likely to need more than one calendar definition. For example, you might use these calendars:

- DayShift calendar: for the first shift
- EveShift calendar: for the second shift
- Equip calendar: working time calendar for equipment uptime
- Jones calendar: working time calendar for an individual worker



The screenshot shows the 'Calendars' application window. It features a search bar, a 'Select Action' dropdown, and a 'List' tab. Below the navigation, there are options for 'Advanced Search', 'Save Query', and 'Bookmarks'. The main content is a table with the following data:

Calendar	Description	Start Date	End Date	Organization
COMPANY1	Company Work Calendar for Equipment Uptime	12/31/99	12/31/09	EAGLENA
DAY	Day Shift Calendar	12/31/99	12/31/09	EAGLENA
EVENING	Evening Shift Calendar	12/31/99	12/31/09	EAGLENA
NIGHT	Night Shift Calendar	12/31/99	12/31/09	EAGLENA

At the bottom of the table, there is a checkbox labeled 'Select Records'.

You can also define shifts with complex repeating patterns in the Define Shift Pattern dialog box.

In calculating downtime for a piece of equipment, the Calendars application checks the equipment's calendar to see when the equipment is supposed to be operational.

continued on next page

Managing Calendars continued

Shift Patterns

A *shift* is a general definition of working time—it is not specific to any dates. You choose the days of the week to be considered working days, then designate the start and end times for work. For example, you can create a shift called First with these properties:

- Workdays are Monday through Friday.
- Work starts at 7:00 a.m.
- Work ends at 3:00 p.m.
- Work hours for the day total 8.

You can schedule explicit breaks by entering multiple start and end times for each working day. You can also create shift definitions that do not reflect the usual working time at your company but would be useful to have in case a special work situation comes up. For example, you can define a Saturday shift.

Typically most shift patterns that you create in the Define Shift Patterns dialog box would use a 7-day pattern with a Sunday start day, or a pattern that uses multiples of 7s, such as a 14 or 21 days, with a Monday start day. In some companies, there are unique circumstances where a 5-day or other pattern might be used.

The number of days in the pattern specifies the block of days that will repeat. If you are using a number that is not a multiple of 7, the pattern will not repeat on the same days of the week. For example, with a 15-day pattern of 10 days on and 5 days off, the second instance of the shift will start on a different day than the first.

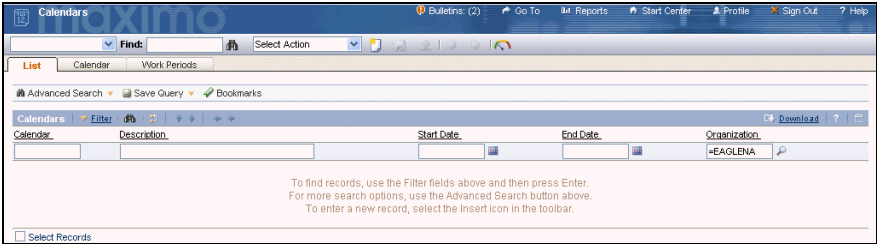

For all of these cases, you would use the same procedure in the Define Shift Patterns dialog box. After you define a shift, you can apply it to a calendar. Then, after you have created a calendar, you can use it on labor, craft, locations, and/or equipment records to specify working time.

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Managing Calendars continued

Creating a Calendar

Use the following steps to create a new calendar.

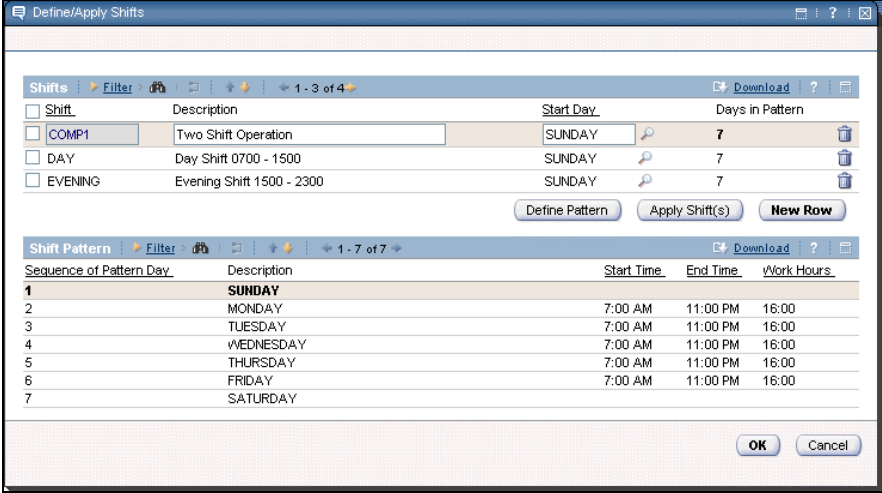

Step	Action
1	<p>Open the Calendars application. <u>Hint:</u> It is in the Administration module. <u>Result:</u> The Calendars application opens to its List tab.</p> 
2	<p>Click the New Calendar icon .</p> <p><u>Result:</u> A new calendar record opens, ready for editing.</p> <p><u>Note:</u> In a standard MRO Software training environment using the MAXDEMO database, the Organization field of the List tab defaults to a value of =EAGLENA. Therefore, your new calendar pre-populates the Organization field with a READ ONLY value of EAGLENA.</p> <p>If you were to create a new calendar record for a different organization, then you would clear the Organization field of the List tab before you create a new calendar.</p>

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Managing Calendars continued

Creating a Calendar

continued

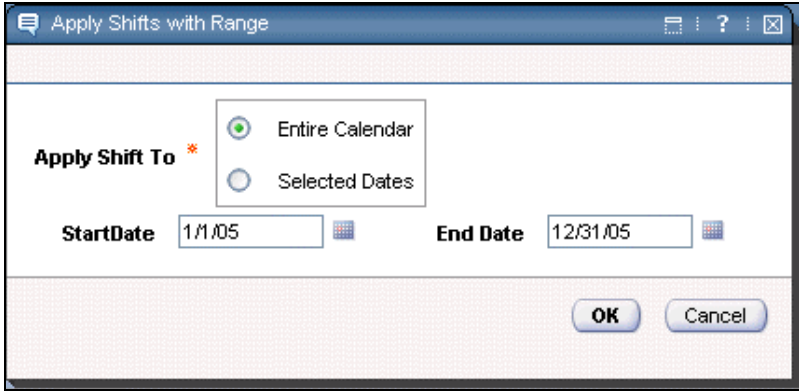
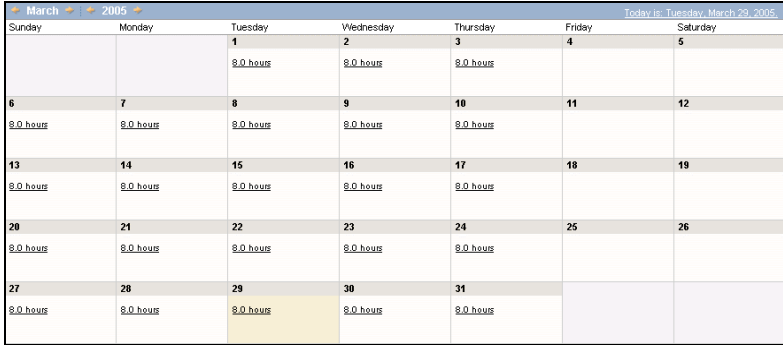
Step	Action										
3	<p>Enter the following information, then save your record.</p> <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Calendar</td> <td>[Your Last Name]</td> </tr> <tr> <td>Description</td> <td>Calendar for [Your Last Name]</td> </tr> <tr> <td>Start Date</td> <td>[01 Jan, this year]</td> </tr> <tr> <td>End Date</td> <td>[31 Dec, this year]</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	Calendar	[Your Last Name]	Description	Calendar for [Your Last Name]	Start Date	[01 Jan, this year]	End Date	[31 Dec, this year]
<u>Field</u>	<u>Value</u>										
Calendar	[Your Last Name]										
Description	Calendar for [Your Last Name]										
Start Date	[01 Jan, this year]										
End Date	[31 Dec, this year]										
4	<p>From the Select Action menu, choose Define/Apply Shifts. <u>Result:</u> The Define/Apply Shifts dialog box opens.</p>  <p> Note: Use the Define/Apply Shifts dialog box to define and/or apply shifts.</p>										

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Managing Calendars continued

Creating a Calendar

continued

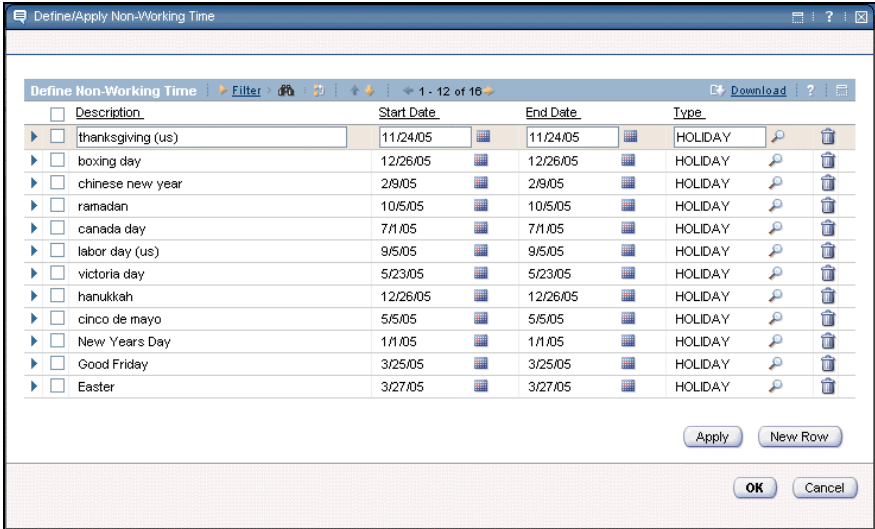

Step	Action
5	<p>Click to select the DAY shift, then click the Apply Shift(s) button.</p>  <p><u>Result:</u> The Apply Shifts with Range dialog box opens.</p>
6	<p>Click OK to accept the default values.</p> <p><u>Result:</u> The Apply Shifts with Range dialog box closes and you are returned to the Define/Apply Shifts dialog box.</p>
7	<p>Click OK (in the Define/Apply Shifts dialog box).</p> <p><u>Result:</u> The Define/Apply Shifts dialog box closes and Maximo displays the current month with the selected shift(s) applied to your calendar.</p> 

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Managing Calendars continued

Creating a Calendar

continued




Step	Action
8	<p>From the Select Action menu, choose Define/Apply Non-Working Time.</p> <p><u>Result:</u> The Define/Apply Non-Working Time dialog box opens.</p>  <p> <u>Note:</u> Use the Define/Apply Non-Working Time dialog box to define and/or apply non-working time.</p>
9	<p>Click the New Row button.</p> <p><u>Result:</u> A new row opens, ready for data entry.</p>

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Managing Calendars continued

Creating a Calendar

continued

Step	Action										
10	Enter the following information, then click Apply . <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Description</td> <td>President's Day (USA)</td> </tr> <tr> <td>Start Date</td> <td>2/21/05</td> </tr> <tr> <td>End Date</td> <td>2/21/05</td> </tr> <tr> <td>Type</td> <td>Holiday</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	Description	President's Day (USA)	Start Date	2/21/05	End Date	2/21/05	Type	Holiday
<u>Field</u>	<u>Value</u>										
Description	President's Day (USA)										
Start Date	2/21/05										
End Date	2/21/05										
Type	Holiday										
11	Click to select your new entry, President's Day (USA). Click Apply , and then click OK .  <p><u>Note:</u> Maximo might display a dialog box informing you that the Non-Working Time has been applied. If so, click OK.</p> <p><u>Result:</u> The Define/Apply Non-Working Time dialog box closes, and Maximo again redisplay the current month.</p>										
12	If necessary, use the Month navigation arrows to display the month of February to display the new Holiday you just created.  <p><u>Result:</u> Your newly defined non-working time displays on your new calendar.</p> 										

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Managing Calendars continued

Personal Calendars

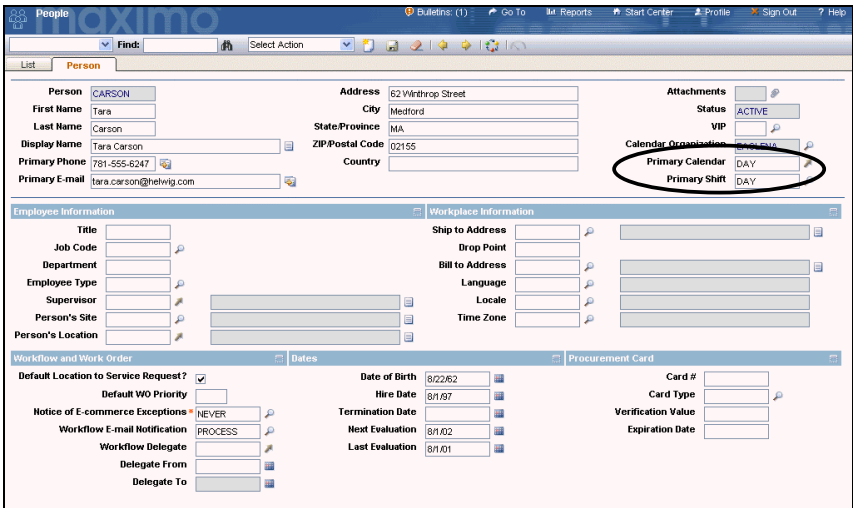


To create a personal calendar, create the base calendar in the Calendars application, apply it to a person record, and then modify it for the person. If the person is also a labor, the calendar is also applied to the corresponding labor record.

Note: Although you can add a calendar to a labor record, the calendar value is actually stored in the associated person record. The base calendar indicates the availability of the labor to perform work.

Creating a Personal Calendar

Use the following steps to create a personal calendar.

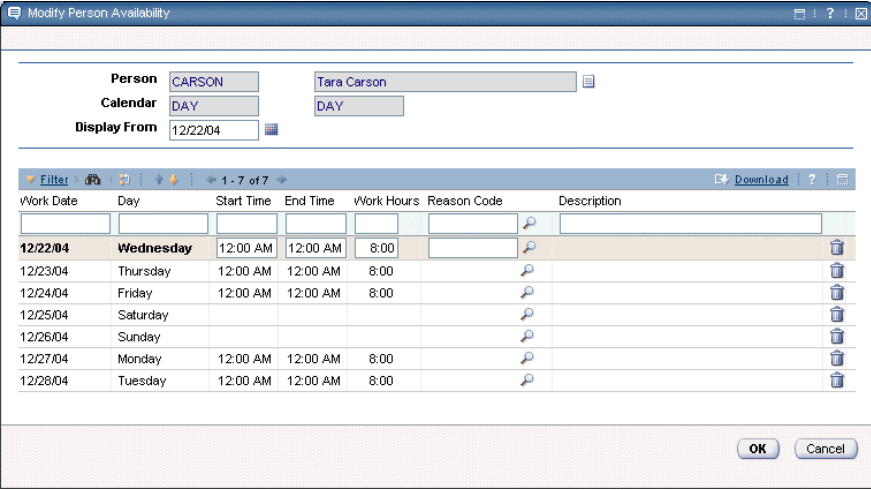
Step	Action
1	Open the People application from the Resources module.
2	<p>Find the person record for Tara Carson.</p> <p><u>Hint:</u> Use the filter field for Name.</p> <p><u>Result:</u> The Primary Calendar field for Tara Carson's person record shows that she is on the DAY calendar.</p> 

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Managing Calendars continued

Creating a Personal Calendar

continued

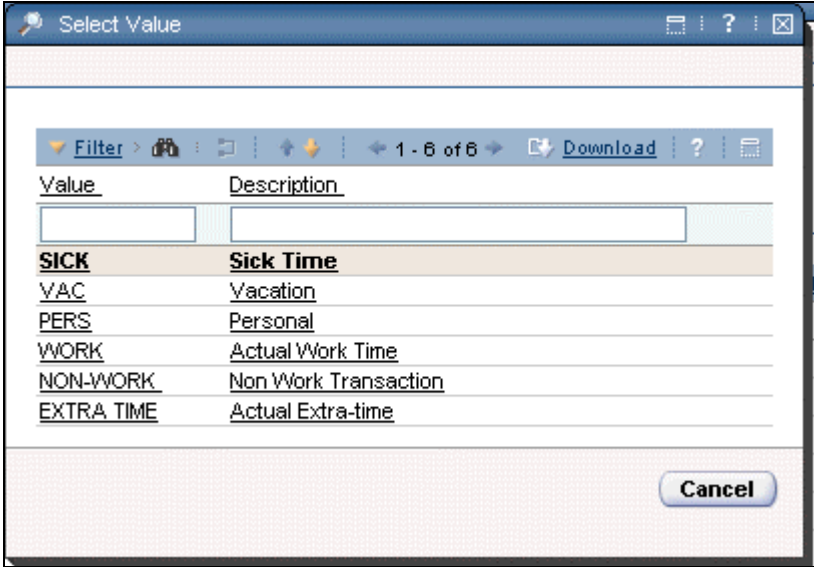

Step	Action
3	<p>Choose Modify Person Availability from the Select Action menu. <u>Result:</u> The Modify Person Availability dialog box shows the next seven days of Tara Carson’s schedule, starting from today.</p> 
4	<p>Change the Display From field to a date five days from today. <u>Note:</u> You can change this date directly in the field or by using the Select Date button. <u>Result:</u> The displayed seven-day period now starts at the new date.</p>
5	<p>Set the Work Hours field for MONDAY day to 0. <u>Note:</u> Leave the Start Time and End Time fields as they are.</p>

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Managing Calendars continued

Creating a Personal Calendar

continued

Step	Action
6	<p>Click the Select Value button on the Reason Code field for that same day.</p> <p><u>Result:</u> The Select Value dialog box displays a list of reason codes.</p>  <p> <u>Note:</u> You can also enter the reason code manually.</p>
7	<p>Select VAC (Vacation) as the reason that Tara Carson will not be available on the selected date.</p> <p><u>Result:</u> The Select Value dialog box closes and the Reason Code field reflects VAC.</p>

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Managing Calendars continued

Creating a Personal Calendar

continued

Step	Action
8	Click OK . <u>Results:</u> <ul style="list-style-type: none">• Tara Carson’s individual calendar now reflects differences from the Primary DAY calendar.• If Tara Carson is also a labor record in Maximo, then she cannot be assigned to work during the time and has been removed from the schedule.

Report Administration

Introduction

Use the Report Administration application to “register” Maximo reports created with Actuate e.Report Designer Professional and to create request pages for those reports.

The Report Administration Application

You also use the Report Administration application to manage a report’s request page, as follows:

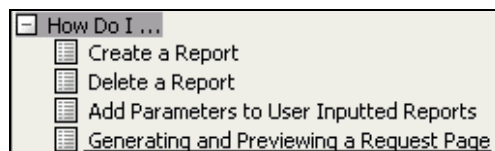
- To generate and preview a request page
- To add parameters to a report
- To display the report as a toolbar icon
- To e-mail as well as specify a schedule for running a report

Parameter Name	Attribute Name	Sequence	Override Label	Required?	Hidden?
assetnum	ASSETNUM	1	Asset	<input checked="" type="checkbox"/>	<input type="checkbox"/>
mrosite	SITEID	2	Current Site	<input checked="" type="checkbox"/>	<input type="checkbox"/>
fromsite	ASSETTRANSID.SITEID	3	From Site	<input type="checkbox"/>	<input type="checkbox"/>
fromlocation	ASSETTRANSID.FROMLOC	4	From Location	<input type="checkbox"/>	<input type="checkbox"/>
tosite	ASSETTRANS.TOSITEID	5	To Site	<input type="checkbox"/>	<input type="checkbox"/>

For More Information

For more information, please refer to the following resources:

- Maximo Help



- *The Report Administration and Development Guide*
- *The Developing MXES Reports with Actuate* course

Request Pages for Reports

Overview

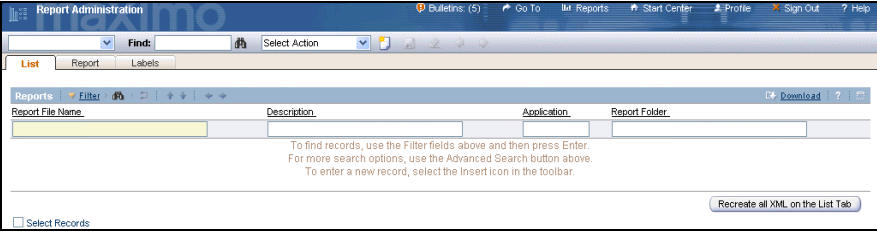
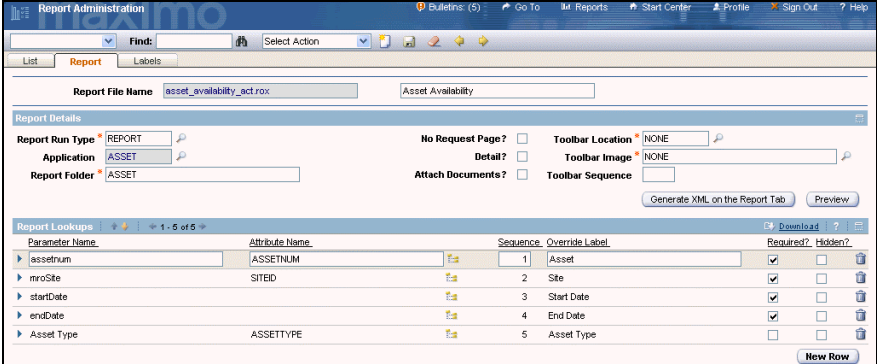


Use the Report Administration application to create request pages for newly registered reports or to modify (create new) request pages for existing reports.

Note: When you modify an existing request page, you are actually creating a new request page for the report.

Report Administration Overview

Before using the Report Administration application to create a new request page for an existing report, we will take a brief look at the Report Administration application itself.

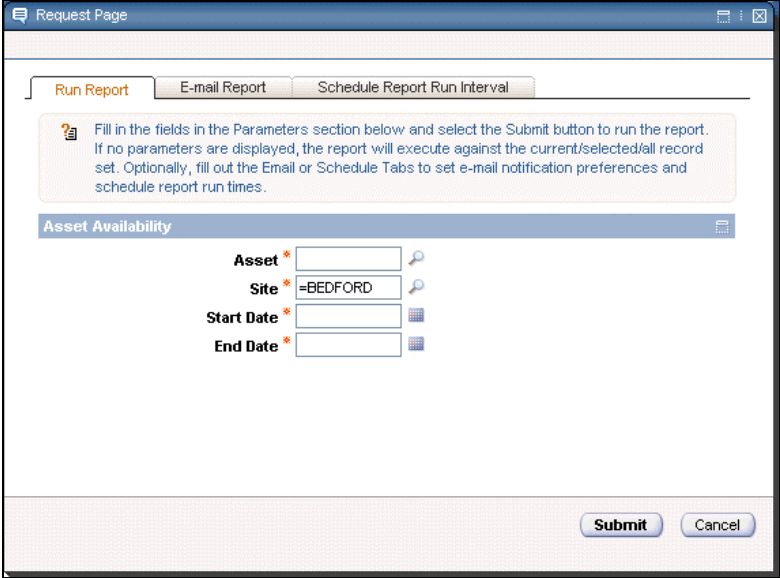
Step	Action
1	<p>Open the Report Administration application from the Reporting module.</p> <p>Result: Maximo displays the List tab for this application.</p> 
2	<p>Find and select the Asset Availability report (asset_availability_act.rox).</p> <p>Result: The Report tab opens for the Asset Availability report.</p> 

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Request Pages for Reports continued

Report Administration Overview

continued


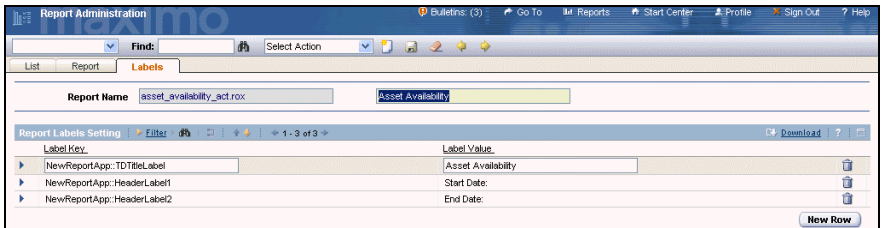
Step	Action
3	<p>Click the Preview button.</p> <p><u>Result:</u> Maximo displays a preview of the generated request page.</p>  <p><u>Note:</u> You can repeatedly modify and preview the request page until it looks the way you want it to.</p>
4	Click Cancel to close the Request Page dialog box.

continued on next page

Request Pages for Reports continued

Report Administration Overview

continued

Step	Action
<p>5</p> 	<p>Open the Labels tab for this record. <u>Result:</u> Maximo displays the Labels tab.</p>  <p><u>Note:</u> Use the Labels tab in the Report Administration application to change report titles and field labels in your report. After you (or your report developer) publish a report through the Management Console, you can use the Labels tab to customize titles and field labels.</p>

continued on next page

Request Pages for Reports continued

Report Tab

The following table provides an overview of the functions performed by each section of the **Report** tab.

Section	Description
Report Details pane	<ul style="list-style-type: none">• This indicates the report for which the request page is being generated.• The Generate XML on the Report Tab button generates the actual request page (XML) as a functioning page in Maximo.• The Preview button allows a preview of the generated request page to determine if the setup is correct.
Report Lookups pane	<ul style="list-style-type: none">• This indicates report parameters to be included on the request page.• You can indicate parameters as Required on the request page for report generation.• You can indicate labels and display sequences for parameters on the request page.• When adding a parameter in a new row, the Attribute Name field in Details provides a list of parameters for the indicated report. This prevents accidental indication of an incorrect parameter.


continued on next page

Request Pages for Reports continued

Modify an Existing Request Page

In the following exercise you will see how simple it is to modify the request page for an existing report.

We will modify an existing request page because we want to add a new parameter for the generation of the respective report.

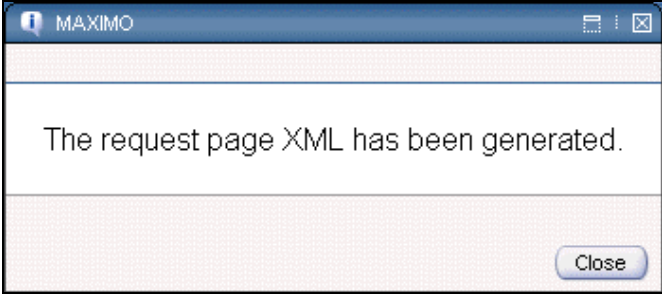
Step	Action																				
1	Open the labor_act.rox report in the Report Administration application.																				
2	<p>In the Report Details pane, verify the following existing information, changing the Description field:</p> <table> <tr> <td>Report File Name</td> <td>labor_act.rox</td> </tr> <tr> <td>Description</td> <td>Test Report [<i>your initials</i>]</td> </tr> <tr> <td>Report Run Type</td> <td>REPORT</td> </tr> <tr> <td>Application</td> <td>LABOR</td> </tr> <tr> <td>Report Folder</td> <td>LABOR</td> </tr> <tr> <td>No Request Page?</td> <td>[<i>unchecked</i>]</td> </tr> <tr> <td>Detail?</td> <td>[<i>unchecked</i>]</td> </tr> <tr> <td>Attach Documents?</td> <td>[<i>unchecked</i>]</td> </tr> <tr> <td>Toolbar Location</td> <td>NONE</td> </tr> <tr> <td>Toolbar Image</td> <td>NONE</td> </tr> </table>	Report File Name	labor_act.rox	Description	Test Report [<i>your initials</i>]	Report Run Type	REPORT	Application	LABOR	Report Folder	LABOR	No Request Page?	[<i>unchecked</i>]	Detail?	[<i>unchecked</i>]	Attach Documents?	[<i>unchecked</i>]	Toolbar Location	NONE	Toolbar Image	NONE
Report File Name	labor_act.rox																				
Description	Test Report [<i>your initials</i>]																				
Report Run Type	REPORT																				
Application	LABOR																				
Report Folder	LABOR																				
No Request Page?	[<i>unchecked</i>]																				
Detail?	[<i>unchecked</i>]																				
Attach Documents?	[<i>unchecked</i>]																				
Toolbar Location	NONE																				
Toolbar Image	NONE																				
3	<p>In the Report Lookups pane, click on View Details for the status parameter, and verify the following existing information.</p> <p> <u>Note</u>: You might need to update the Display Sequence field.</p> <table> <tr> <td>Parameter Name</td> <td>Status</td> </tr> <tr> <td>Attribute Name</td> <td>STATUS</td> </tr> <tr> <td>Lookup Name</td> <td>valuelist</td> </tr> <tr> <td>Display Sequence</td> <td>1</td> </tr> <tr> <td>Override Label</td> <td>Labor Status</td> </tr> <tr> <td>Default Value</td> <td>ACTIVE</td> </tr> <tr> <td>Required?</td> <td>[<i>checked</i>]</td> </tr> <tr> <td>Hidden?</td> <td>[<i>unchecked</i>]</td> </tr> </table>	Parameter Name	Status	Attribute Name	STATUS	Lookup Name	valuelist	Display Sequence	1	Override Label	Labor Status	Default Value	ACTIVE	Required?	[<i>checked</i>]	Hidden?	[<i>unchecked</i>]				
Parameter Name	Status																				
Attribute Name	STATUS																				
Lookup Name	valuelist																				
Display Sequence	1																				
Override Label	Labor Status																				
Default Value	ACTIVE																				
Required?	[<i>checked</i>]																				
Hidden?	[<i>unchecked</i>]																				

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Request Pages for Reports continued

Modify an Existing Request Page

continued

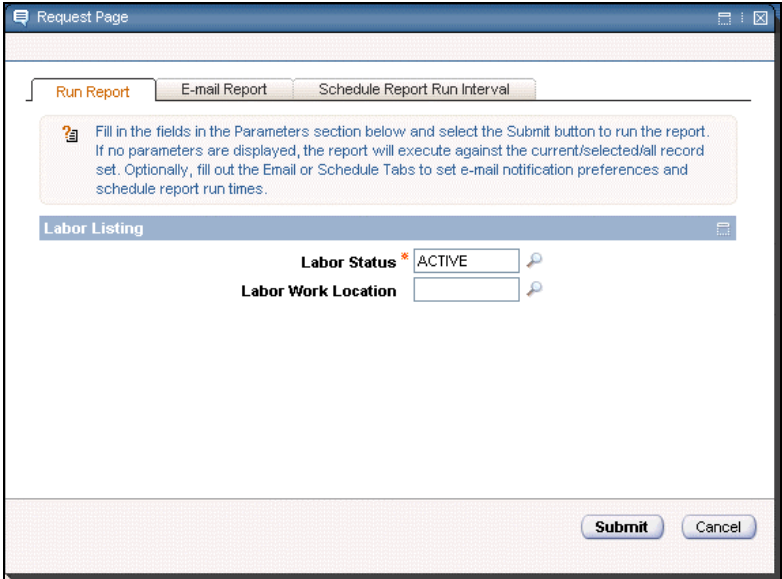
Step	Action																		
4	<p>In the Report Lookups pane, click the New Row button and add a new parameter with the following information:</p> <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Parameter Name</td> <td>Work Location</td> </tr> <tr> <td>Attribute Name</td> <td>WORKLOCATION</td> </tr> <tr> <td>Lookup Name</td> <td>LOCATIONS</td> </tr> <tr> <td>Display Sequence</td> <td>2</td> </tr> <tr> <td>Override Label</td> <td>Labor Work Location</td> </tr> <tr> <td>Default Value</td> <td>[blank]</td> </tr> <tr> <td>Required?</td> <td>[unchecked]</td> </tr> <tr> <td>Hidden?</td> <td>[unchecked]</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	Parameter Name	Work Location	Attribute Name	WORKLOCATION	Lookup Name	LOCATIONS	Display Sequence	2	Override Label	Labor Work Location	Default Value	[blank]	Required?	[unchecked]	Hidden?	[unchecked]
<u>Field</u>	<u>Value</u>																		
Parameter Name	Work Location																		
Attribute Name	WORKLOCATION																		
Lookup Name	LOCATIONS																		
Display Sequence	2																		
Override Label	Labor Work Location																		
Default Value	[blank]																		
Required?	[unchecked]																		
Hidden?	[unchecked]																		
5	Save your record.																		
6	<p>Click the Generate XML on the Report Tab button.</p> <p><u>Result:</u> Maximo generates the request page.</p> 																		

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Request Pages for Reports continued

Modify an Existing Request Page

continued

Step	Action
7	Click Close .
8	<p>Click the Preview button.</p> <p><u>Result:</u> Maximo displays a new preview of the request page. Notice that your new parameter displays on the new request page.</p>  <p>The screenshot shows a browser window titled 'Request Page'. At the top, there are three tabs: 'Run Report' (selected), 'E-mail Report', and 'Schedule Report Run Interval'. Below the tabs is a text box with instructions: 'Fill in the fields in the Parameters section below and select the Submit button to run the report. If no parameters are displayed, the report will execute against the current/selected/all record set. Optionally, fill out the Email or Schedule Tabs to set e-mail notification preferences and schedule report run times.' Below this is a section titled 'Labor Listing' with two input fields: 'Labor Status *' with the value 'ACTIVE' and 'Labor Work Location' which is empty. At the bottom right of the window are 'Submit' and 'Cancel' buttons.</p>
9	Click Cancel when you are done previewing the new request page.

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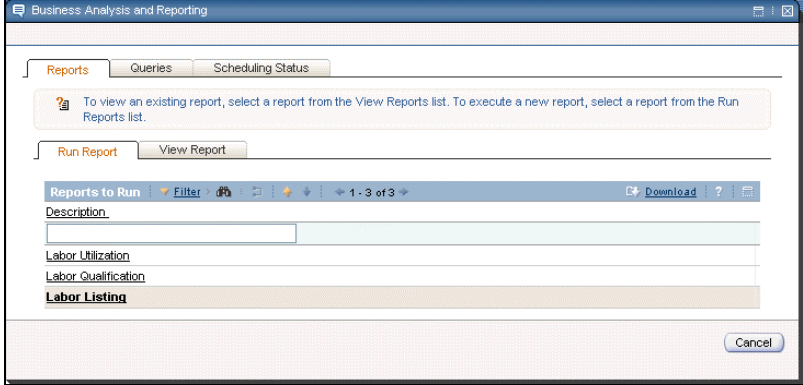
Request Pages for Reports continued

Check Your Work



We will now check our work through the Labor application.

Note: We are using the Labor application because it owns the report (Labor Listing) against which you modified the request page.

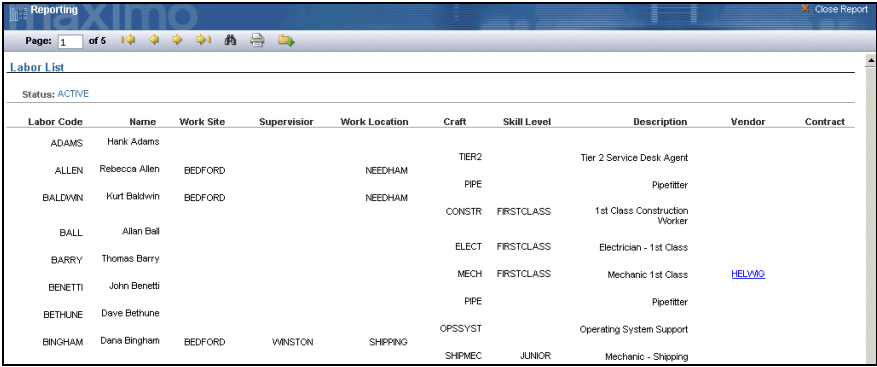
Step	Action
1	Open the Labor application from the Resources module.
2	<p>Select Run Reports from the Select Action menu.</p> <p><u>Result</u>: The Business Analysis and Reporting dialog box displays a list of the available request pages for the available reports.</p> 
3	<p>From the Run Report subtab, click to select and run your request page for the Labor Listing report.</p> <p><u>Result</u>: Your previously generated request page displays with your chosen parameters.</p>

continued on next page

Request Pages for Reports continued

Check Your Work

continued

Step	Action																																																																																										
4	<p>Enter the following information, then click Run Report:</p> <p>Status ACTIVE</p> <p>Result: Maximo runs and creates your report.</p>  <p>The screenshot shows a web browser window titled 'Reporting' with a 'Close Report' button in the top right. Below the title bar is a navigation bar with 'Page: 1 of 6' and several icons. The main content area is titled 'Labor List' and shows 'Status: ACTIVE'. Below this is a table with the following data:</p> <table border="1"> <thead> <tr> <th>Labor Code</th> <th>Name</th> <th>Work Site</th> <th>Supervisor</th> <th>Work Location</th> <th>Craft</th> <th>Skill Level</th> <th>Description</th> <th>Vendor</th> <th>Contract</th> </tr> </thead> <tbody> <tr> <td>ADAMS</td> <td>Hank Adams</td> <td></td> <td></td> <td></td> <td></td> <td>TIER2</td> <td>Tier 2 Service Desk Agent</td> <td></td> <td></td> </tr> <tr> <td>ALLEN</td> <td>Rebecca Allen</td> <td>BEDFORD</td> <td></td> <td>NEEDHAM</td> <td>PIPE</td> <td></td> <td>Pipefitter</td> <td></td> <td></td> </tr> <tr> <td>BALDWIN</td> <td>Kurt Baldwin</td> <td>BEDFORD</td> <td></td> <td>NEEDHAM</td> <td>CONSTR</td> <td>FIRSTCLASS</td> <td>1st Class Construction Worker</td> <td></td> <td></td> </tr> <tr> <td>BALL</td> <td>Allan Ball</td> <td></td> <td></td> <td></td> <td>ELECT</td> <td>FIRSTCLASS</td> <td>Electrician - 1st Class</td> <td></td> <td></td> </tr> <tr> <td>BARRY</td> <td>Thomas Barry</td> <td></td> <td></td> <td></td> <td>MECH</td> <td>FIRSTCLASS</td> <td>Mechanic 1st Class</td> <td>HELIX</td> <td></td> </tr> <tr> <td>BENETTI</td> <td>John Benetti</td> <td></td> <td></td> <td></td> <td>PIPE</td> <td></td> <td>Pipefitter</td> <td></td> <td></td> </tr> <tr> <td>BETHUNE</td> <td>Dave Bethune</td> <td></td> <td></td> <td></td> <td>OPSSYST</td> <td></td> <td>Operating System Support</td> <td></td> <td></td> </tr> <tr> <td>BINGHAM</td> <td>Dana Bingham</td> <td>BEDFORD</td> <td>WINSTON</td> <td>SHIPPING</td> <td>SHPMEC</td> <td>JUNIOR</td> <td>Mechanic - Shipping</td> <td></td> <td></td> </tr> </tbody> </table>	Labor Code	Name	Work Site	Supervisor	Work Location	Craft	Skill Level	Description	Vendor	Contract	ADAMS	Hank Adams					TIER2	Tier 2 Service Desk Agent			ALLEN	Rebecca Allen	BEDFORD		NEEDHAM	PIPE		Pipefitter			BALDWIN	Kurt Baldwin	BEDFORD		NEEDHAM	CONSTR	FIRSTCLASS	1st Class Construction Worker			BALL	Allan Ball				ELECT	FIRSTCLASS	Electrician - 1st Class			BARRY	Thomas Barry				MECH	FIRSTCLASS	Mechanic 1st Class	HELIX		BENETTI	John Benetti				PIPE		Pipefitter			BETHUNE	Dave Bethune				OPSSYST		Operating System Support			BINGHAM	Dana Bingham	BEDFORD	WINSTON	SHIPPING	SHPMEC	JUNIOR	Mechanic - Shipping		
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5	<p>When you are finished viewing your report, click Close Report (upper right-hand corner).</p>																																																																																										

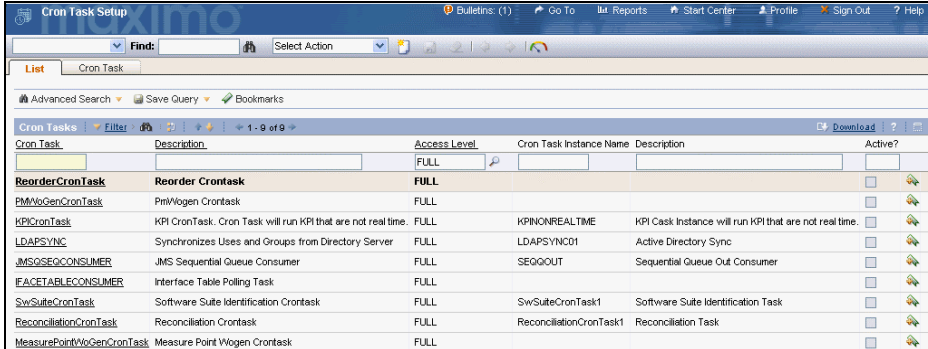
Configuring Cron Tasks

Introduction

A *cron task* is a scheduled job that runs as part of the Maximo server. The cron task runs according to a predefined schedule and carries out certain business logic automatically, without user interaction.

Purpose of the Cron Task Setup Application

Use the Cron Task Setup application to add cron tasks or cron task instances, to remove cron tasks or their instances, and to modify cron task parameters. You can also change the **Active?** status or adjust the schedule of a cron task. You can reschedule cron tasks and change parameter values without stopping and restarting the Maximo application server.



Cron Task	Description	Access Level	Cron Task Instance Name	Description	Active?
ReorderCronTask	Reorder Crontask	FULL			<input type="checkbox"/>
PMWoGenCronTask	PMWoGen Crontask	FULL			<input type="checkbox"/>
KPICronTask	KPI CronTask. Cron Task will run KPI that are not real time.	FULL	KPINONREALTIME	KPI Cask Instance will run KPI that are not real time.	<input type="checkbox"/>
LDAPSYNC	Synchronizes Uses and Groups from Directory Server	FULL	LDAPSYNC01	Active Directory Sync	<input type="checkbox"/>
JMSSEQCONSUMER	JMS Sequential Queue Consumer	FULL	SEQGOUT	Sequential Queue Out Consumer	<input type="checkbox"/>
IFACETABLECONSUMER	Interface Table Polling Task	FULL			<input type="checkbox"/>
SwSuiteCronTask	Software Suite Identification Crontask	FULL	SwSuiteCronTask1	Software Suite Identification Task	<input type="checkbox"/>
ReconciliationCronTask	Reconciliation Crontask	FULL	ReconciliationCronTask1	Reconciliation Task	<input type="checkbox"/>
MeasurePointWoGenCronTask	Measure Point WoGen Crontask	FULL			<input type="checkbox"/>

Cron Task Definitions and Instances

Every Maximo cron task has a definition, which includes the:

- cron task name,
- class name,
- access level, and
- description.

You can create multiple cron task instances for each cron task definition, and each instance will have an entry in the CRONTASKINSTANCE table. The attributes of an instance include:

- a set schedule string that defines the schedule of this cron task instance;
- a description;
- a flag indicating whether the cron task instance is active;
- a date/time field indicating the date and time when the load/reload of the cron task is requested (this field will not be displayed to the user); and
- a Run as User ID.

continued on next page

Configuring Cron Tasks continued

Cron Task Definitions and Instances

continued

Cron task instances share the same set of parameters but each can have its own set of values and its own schedule. For example, the reorder cron task definition contains the parameter **storeroom** and you can change the frequency in the following instances:

- “ReorderBedford” runs daily for the central storeroom.
- “ReorderLondon” run weekly for a remote storeroom.

Supplied Cron Tasks

Maximo offers several out-of-the-box cron tasks. You can also create new cron tasks, but this requires programming resources to create custom class files, which is beyond the scope of this course. The out-of-the-box Maximo cron tasks are listed in the following table. Items with an asterisk (*) are hidden system cron tasks.

For more information, please refer to the *System Administrator’s Guide*.

Cron Task Name	Description
ReorderCronTask	The reorder cron task determines rules or parameters for scheduled reordering of direct issue and inventory items.
PMWoGenCronTask	The preventive maintenance work order generation cron task runs and generates scheduled work orders for the generation of planned maintenance.
KPICronTask	The KPI cron task generates Key Performance Indicators.
LDAPSYNC	The LDAP (Lightweight Directory Access Protocol) sync cron task uses application server authentication to synchronize information stored in external directory servers.
*ESCALATIONS	The escalations cron task determines when to send an action or notification or assign ownership of these critical tasks. Escalations ensure that people complete critical tasks on time.
*LSNCRON	The e-mail listener cron task executes continuously on the Maximo application server and processes inbound e-mail through a staging table.

continued on next page

Configuring Cron Tasks continued

Supplied Cron Tasks

continued

Cron Task Name	Description
JMSQSEQCONSUMER	This Enterprise Adapter uses this cron task for polling the queue.
IFACETABLECONSUMER	This Enterprise Adapter uses this cron task for polling the interface tables.
SwSuiteCronTask	The SwSuite cron task inspects the software titles collected in Deployed Asset and determines if the set of titles defined in the Deployed Asset Software Suite Admin are present. If they are, then that Suite is displayed when inspecting that node for software discovered.
ReconciliationCronTask	The reconciliation cron task runs reconciliation tasks (consisting of Link and Comparison rules) to determine how assets are performing relative to the discovered data in Deployed Asset. The two results from this task are a RECONLINK table that links assets to their counterpart assets, and a ReconciliationResults table that lists the differences between the compared asset and deployed asset.
MeasurePointWoGen CronTask	This cron task generates work orders when meter readings or measurements reach a condition defined in the Condition Monitoring application.

continued on next page

Configuring Cron Tasks continued

Access Levels

The following access levels are available when creating new cron task definitions:

- FULL: User can rename, modify, or delete the cron task.
- MODIFYONLY: User can only modify the cron task.
- READONLY: User can only view the cron task.



Note: All cron tasks supplied with Maximo are initially set to FULL access level, with the exception of ESCALATIONS and LSNRCRON, which are set to READONLY.

Use Case

The ReorderCronTask definition determines the rules or parameters for reordering direct issue and inventory items. You might want reorders to occur every Friday for the CENTRAL storeroom, and require workers to use agreements and send e-mail notifications to purchasing@company.com.

You might also determine that reorders for other storerooms should occur once a month on the first Sunday. They are not required to use agreements and the e-mails for notification should go to the supervisors in charge of each storeroom.

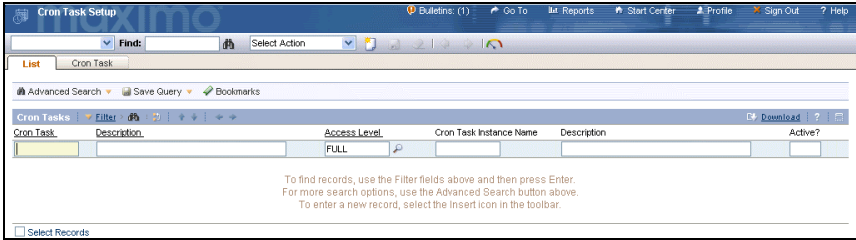
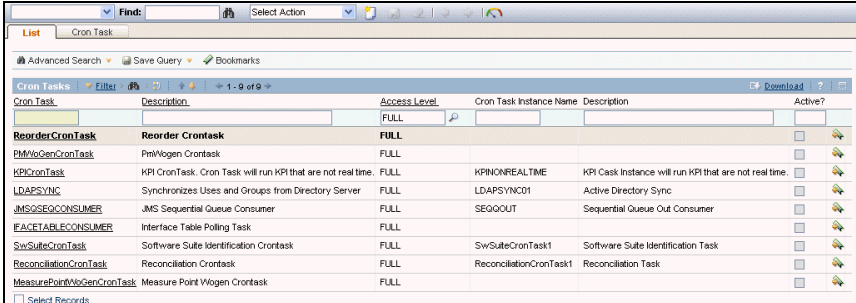
You can copy the rules for the CENTRAL storeroom and make the necessary modifications to the schedule to create additional ReorderCronTask instances for the other storerooms.

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Configuring Cron Tasks continued

Creating a Cron Task Instance


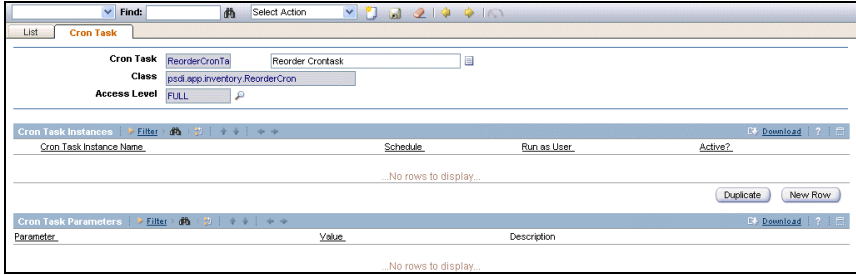
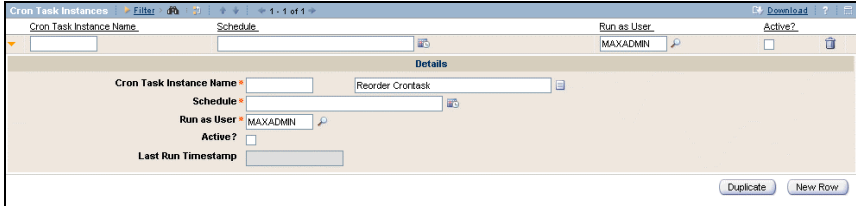
Use the following steps to create a cron task instance for the ReorderCronTask definition.

Step	Action
1	<p>Open the Cron Task Setup application from the Configuration module.</p> <p><u>Result:</u> The Cron Task Setup application opens to the List tab.</p> 
2	<p>Press Enter to view a list of all available cron tasks.</p> <p><u>Result:</u> Your results should look similar to this.</p> 

continued on next page

Configuring Cron Tasks continued

Creating a Cron Task Instance continued

Step	Action										
<p>3</p> 	<p>Click to select ReorderCronTask.</p> <p><u>Result:</u> The Cron Task tab opens and displays the definition and the available instances (if any) for the selected cron task.</p> <p><u>Note:</u> In a standard MRO Software training environment using the MAXDEMO database, there are no instances for the ReorderCronTask cron task.</p> 										
<p>4</p>	<p>Click the New Row button.</p> <p><u>Result:</u> A new row opens in the Cron Task Instances section for data entry.</p> 										
<p>5</p>	<p>Enter the following information:</p> <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Cron Task</td> <td></td> </tr> <tr> <td>Instance Name</td> <td>BedfordCentral</td> </tr> <tr> <td>Description</td> <td>Reorder Bedford Central, every Friday</td> </tr> <tr> <td>Active?</td> <td>[Checked]</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	Cron Task		Instance Name	BedfordCentral	Description	Reorder Bedford Central, every Friday	Active?	[Checked]
<u>Field</u>	<u>Value</u>										
Cron Task											
Instance Name	BedfordCentral										
Description	Reorder Bedford Central, every Friday										
Active?	[Checked]										

continued on next page

Configuring Cron Tasks continued

Creating a Cron Task Instance continued

Step	Action
6	In the Schedule field, click the Set Schedule button. <u>Result:</u> The Select Schedule or Time Interval dialog box opens.
7	Set the schedule for: Every 1 week(s), on day Friday , at time 1:00 AM
8	Click the Preview button and verify your settings. <u>Result:</u> Your settings should look <i>similar</i> to these. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> </div>
9	Click OK . <u>Result:</u> Your display should look similar to this one. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> </div>

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Configuring Cron Tasks continued

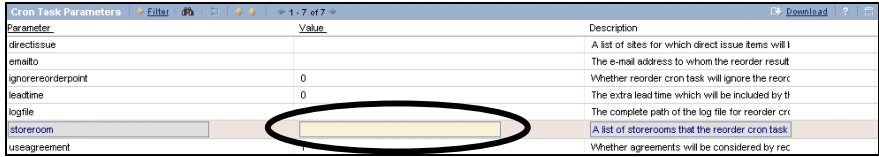

Creating a Cron Task Instance

continued

Step	Action
10	Save your record. Do not close the application. We will continue the next exercise from this point.

Setting the Parameters of an Instance

We will now set the parameter values for your new instance.
With Maximo open to the ReorderCronTask instance (BedfordCentral) that you just created, follow these steps:

Step	Action
1	With your (BedfordCentral) Reorder cron task instance selected, go to the Cron Task Parameters section.
2	Click in the Value column of the storeroom parameter. 
3	Type: BEDFORD,CENTRAL  <u>Note</u> : There are no spaces after the comma.
4	Save your record. <u>Result</u> : Your new cron task instance is created and saved. Do not close the application. We will continue the next exercise from this point.


continued on next page

Configuring Cron Tasks continued

Duplicating a Cron Task Instance

Now we will create a new, duplicate instance for the Nashua CENTRAL storeroom to run every month on Monday at 1:00 a.m.

Use the following steps to duplicate your ReorderCronTask instance (**BedfordCentral**).

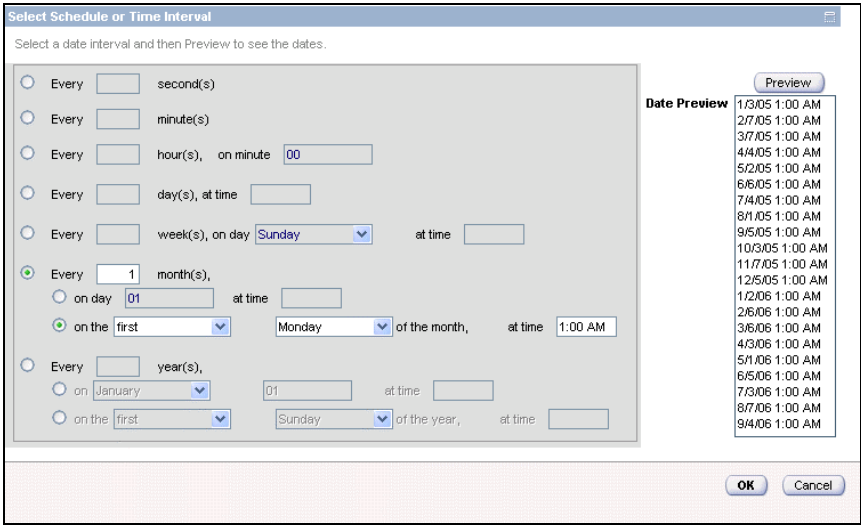
Step	Action								
1	With your (BedfordCentral) Reorder cron task instance selected, click the Duplicate button. <u>Result:</u> Your instance is duplicated, ready for data entry.								
2	Enter the following information: <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Cron Task Instance Name</td> <td>NashuaPkg</td> </tr> <tr> <td>Description</td> <td>Reorder Nashua – Pkg, every Mo on Monday</td> </tr> <tr> <td>Active</td> <td>[<i>Checked</i>]</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	Cron Task Instance Name	NashuaPkg	Description	Reorder Nashua – Pkg, every Mo on Monday	Active	[<i>Checked</i>]
<u>Field</u>	<u>Value</u>								
Cron Task Instance Name	NashuaPkg								
Description	Reorder Nashua – Pkg, every Mo on Monday								
Active	[<i>Checked</i>]								
3	Change the Value column of the storeroom parameter by entering:  NASHUA,PKG <u>Note:</u> There are no spaces after the comma.								
4	In the Schedule field, click the Set Schedule button. <u>Result:</u> The Select Schedule or Time Interval dialog box opens.								
5	Set the schedule for every month, on the first Monday, at 1:00 a.m.								

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Configuring Cron Tasks continued

Duplicating a Cron Task Instance

continued

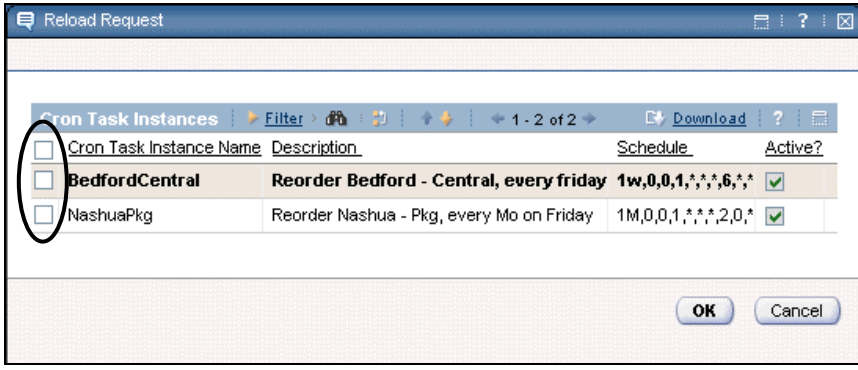

Step	Action
6	<p>Click the Preview button and verify your settings. Result: Your settings should look <i>similar</i> to these.</p> 
7	<p>Click OK and save your record. Do not close the application. We will continue the next exercise from this point.</p>

continued on next page

Configuring Cron Tasks continued

Setting a New Instance to Run

After creating a new instance, you must set it to run by selecting **Reload Request** from the Select Action menu.

Step	Action
1	<p>With Maximo open to the ReorderCronTask cron task, choose Reload Request from the Select Action menu.</p> <p><u>Result:</u> The Reload Request dialog box opens.</p> 
2	<p>Click the check boxes to select both of the new instances that you created: BedfordCentral and NashuaPkg.</p>
3	<p>Click OK.</p> <p><u>Result:</u> Both of your new instances are now reloaded and ready to run at their scheduled times.</p> 

Chapter Summary

Managing Calendars

Use the Calendars application to indicate working time for equipment, craft, and labor records for the displayed organization and its associated sites. A start date, an end date, and the shift to be worked all define a calendar record. You can apply one or more shifts to a calendar. You can also designate non-working time such as weekends, holidays, and vacations.

Report Administration

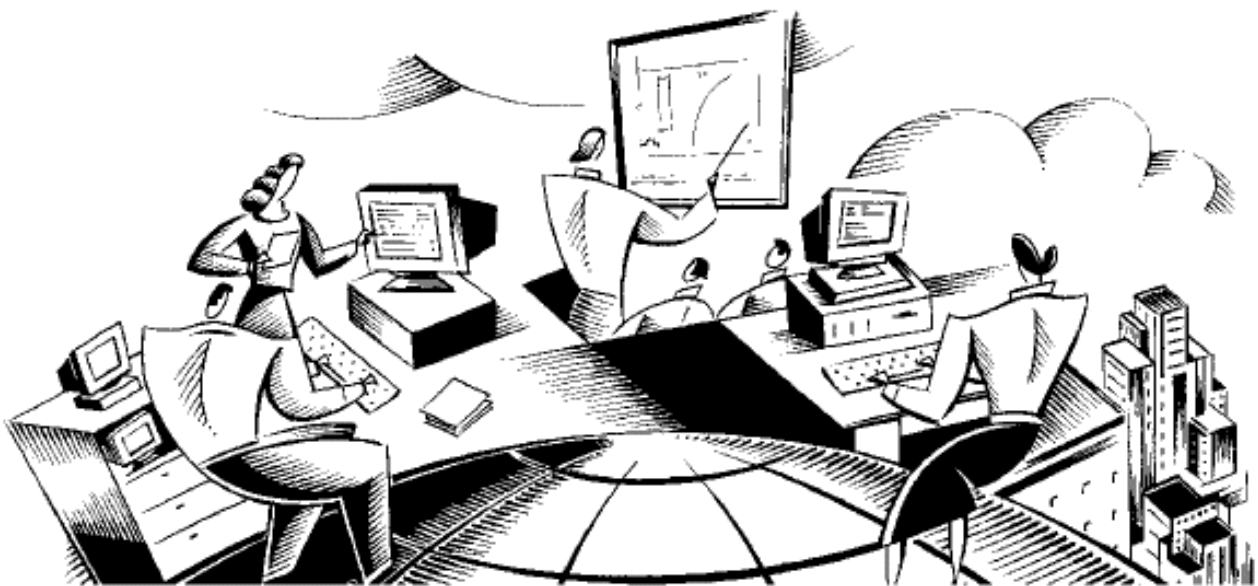
Use the Report Administration application to “register” Maximo reports created with Actuate e.Report Designer Professional. You can also use the Report Administration application to create request pages for newly registered reports or to create new request pages for existing reports.

Configuring Cron Tasks

A *cron task* is a scheduled job that runs as part of the Maximo server. The cron task runs according to a predefined schedule and carries out certain business logic automatically, without user interaction. Use the Cron Task Setup application to add cron tasks or cron task instances, to remove cron tasks or their instances, and to modify cron task parameters.

System Administration for MXES

Chapter 7: Application Setup



In This Chapter

This chapter contains the following topics:

Topic	See Page
Chapter Overview	7-1
The Bulletin Board	7-2
Communication Templates	7-8
The E-mail Listener	7-12
Managing Actions	7-24
Managing Escalations	7-27
Chapter Summary	7-34

Chapter Overview

Introduction

This chapter covers several applications that you use to set up system processes. We will look at each application and set up related data/processes.

Chapter Focus

The intent of this chapter is to provide a high-level overview of key application elements and functionality.

You will obtain maximum benefit if you:

- work actively with your instructor during demonstrations and exercises, and
 - ask many questions that relate to your additional informational needs.
-

Learning Objectives

When you have completed this chapter, you should be able to:

- create a general Bulletin Board message
 - create a specific Bulletin Board message
 - describe communication templates
 - describe an E-mail Listener configuration
 - create an E-mail Listener
 - describe actions
 - describe escalations
 - create an action
 - create an escalation
 - associate actions with an escalation
-

The Bulletin Board

Introduction

Use the Bulletin Board application to create and view messages regarding critical problems or incidents, or to broadcast information throughout the enterprise.

Bulletin Board messages can be viewed from the Start Center and from any Maximo application.


Creating and posting messages on the Bulletin Board minimizes the creation and duplication of tickets. Only users granted access to the Bulletin Board application can create and post messages.

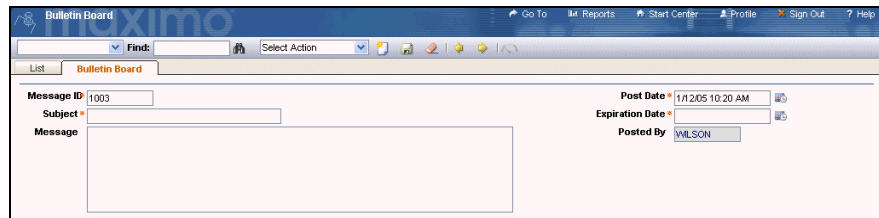
Bulletin Board messages can be targeted at a specific audience (based on organization, site, or person group). If an audience is not specified, then any user who signs in to Maximo can view the Bulletin Board messages.

You can specify the date and time you want the message to appear on the Bulletin Board. You can also define a date and time when you want the message to be automatically removed from the Bulletin Board.

Inserting a New Bulletin

Use the following steps to insert a new bulletin.

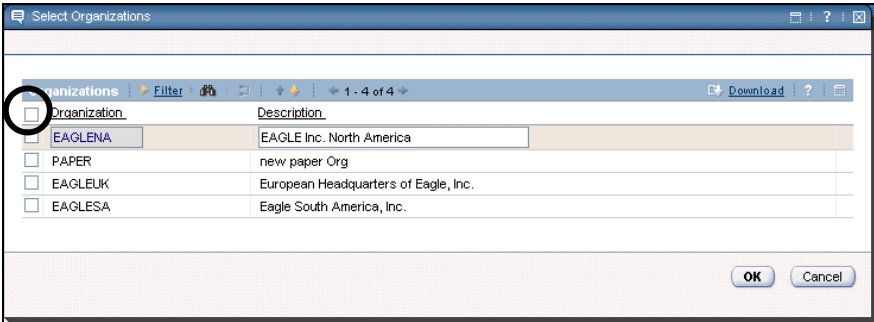
Step	Action
1	Sign in to Maximo and open the Bulletin Board application. <u>Hint:</u> The Bulletin Board application is in the Administration module. <u>Result:</u> The Bulletin Board application opens.
2	Click the New Message icon  to insert a new Bulletin Board record. <u>Result:</u> The Bulletin Board application displays a blank record, ready for editing.



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The Bulletin Board continued

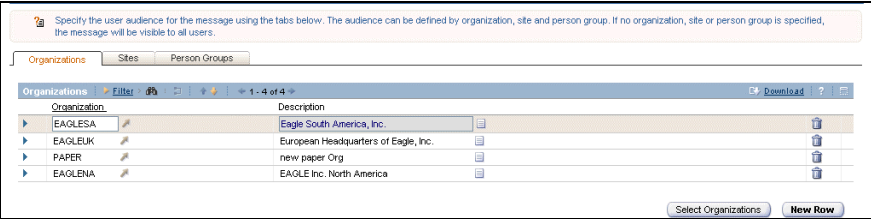
Inserting a New Bulletin continued

Step	Action								
3	Enter the following information: <table border="0"> <tr> <td><u>Field</u></td> <td><u>Value</u></td> </tr> <tr> <td>Subject</td> <td>Maximo Shut-down</td> </tr> <tr> <td>Message</td> <td>An update to Maximo is necessary. Maximo will be unavailable tomorrow (<i>insert day/date</i>) from 12 noon until 1 pm. Please schedule accordingly.</td> </tr> <tr> <td>Expiration Date</td> <td><i>(Two days from today)</i></td> </tr> </table>	<u>Field</u>	<u>Value</u>	Subject	Maximo Shut-down	Message	An update to Maximo is necessary. Maximo will be unavailable tomorrow (<i>insert day/date</i>) from 12 noon until 1 pm. Please schedule accordingly.	Expiration Date	<i>(Two days from today)</i>
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Subject	Maximo Shut-down								
Message	An update to Maximo is necessary. Maximo will be unavailable tomorrow (<i>insert day/date</i>) from 12 noon until 1 pm. Please schedule accordingly.								
Expiration Date	<i>(Two days from today)</i>								
4	Click the Select Organizations button. <u>Result:</u> The Select Organizations dialog box opens. 								

continued on next page


The Bulletin Board continued

Inserting a New Bulletin continued

Step	Action
5	<p>Click the Select All Records check box (circled in step 4) to select all organizations, and then click OK.</p> <p><u>Result:</u> All organizations are now selected to receive this bulletin.</p> 
6	Save your new record.

Inserting a Bulletin for a Specific Recipient

Use the following steps to insert a new bulletin for a specific recipient.

Step	Action
1	<p>Sign in to Maximo and open the Bulletin Board application.</p> <p><u>Result:</u> The Bulletin Board application opens.</p>
2	<p>Click the New Message icon  to insert a new Bulletin Board record.</p> <p><u>Result:</u> The Bulletin Board application displays a blank record, ready for editing.</p>

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The Bulletin Board continued

Inserting a Bulletin for a Specific Recipient

continued


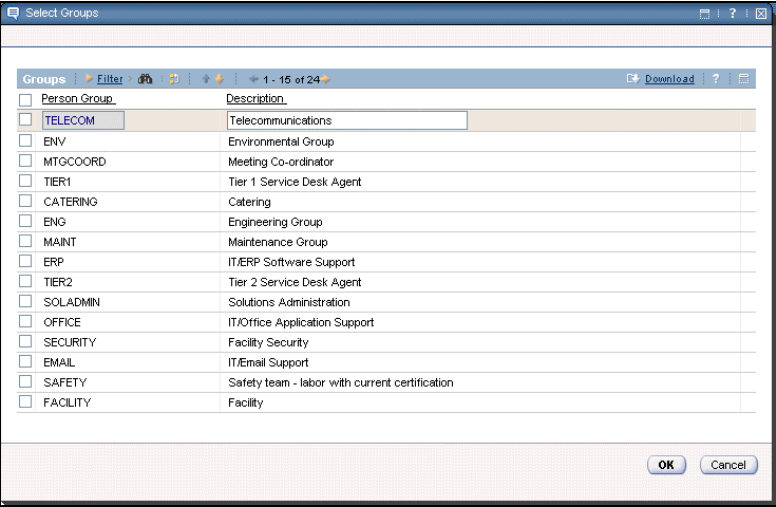
Step	Action								
3	<p>Enter the following information:</p> <table><thead><tr><th><u>Field</u></th><th><u>Value</u></th></tr></thead><tbody><tr><td>Subject</td><td>New MSDS</td></tr><tr><td>Message</td><td>Please note that there are new Material Safety Data Sheets available in the Maximo Attached Document Library.</td></tr><tr><td>Expiration Date</td><td><i>(One year from today)</i></td></tr></tbody></table>	<u>Field</u>	<u>Value</u>	Subject	New MSDS	Message	Please note that there are new Material Safety Data Sheets available in the Maximo Attached Document Library.	Expiration Date	<i>(One year from today)</i>
<u>Field</u>	<u>Value</u>								
Subject	New MSDS								
Message	Please note that there are new Material Safety Data Sheets available in the Maximo Attached Document Library.								
Expiration Date	<i>(One year from today)</i>								
4	Save your new record.								

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The Bulletin Board continued

Inserting a Bulletin for a Specific Recipient

continued

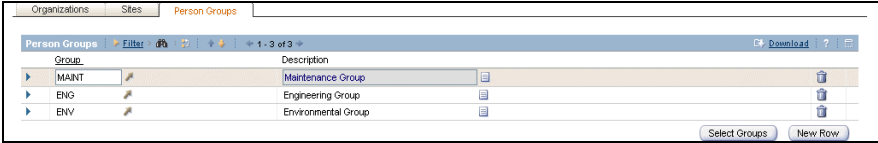
Step	Action
5	<p>Click on the Person Groups subtab, and then click Select Groups.</p> <p style="text-align: center;"></p> <p><u>Result:</u> The Select Groups dialog box opens.</p>  <p>The screenshot shows a window titled "Select Groups" with a table of groups. The table has two columns: "Person Group" and "Description". The "TELECOM" group is selected. The groups listed are: TELECOM (Telecommunications), ENV (Environmental Group), MTG-COORD (Meeting Co-ordinator), TIER1 (Tier 1 Service Desk Agent), CATERING (Catering), ENG (Engineering Group), MAINT (Maintenance Group), ERP (IT/ERP Software Support), TIER2 (Tier 2 Service Desk Agent), SOLADMIN (Solutions Administration), OFFICE (IT/Office Application Support), SECURITY (Facility Security), EMAIL (IT/Email Support), SAFETY (Safety team - labor with current certification), and FACILITY (Facility). There are "OK" and "Cancel" buttons at the bottom right of the dialog box.</p>

continued on next page

The Bulletin Board continued

Inserting a Bulletin for a Specific Recipient

continued

Step	Action
6	<p>Click to select the Environmental Group (ENV), the Engineering Group (ENG), and the Maintenance Group (MAINT), and then click OK.</p> <p><u>Result:</u> These groups are selected.</p> 
7	<p>Save your record.</p> <p><u>Result:</u> Maximo users in the selected groups will see this new Bulletin Board message.</p>
8	<p>Return to the Start Center.</p> <p><u>Result:</u> Because we assigned this user (wilson) to the Maintenance group earlier in this course, Wilson can see both new Bulletin Board messages.</p>

Communication Templates

Introduction

Use the Communication Templates application to create and manage generic communication templates that Maximo users can leverage to standardize frequently used e-mail communications (also known as *notifications*). Typically, this functionality is used in the service desk industry.

In Maximo, service desk agents can manually create and send e-mail communications from the Ticket applications (Service Requests, Incidents, and Problems) using standardized information from predefined communication templates. The recipients of these communications can respond, and agents can view the two-way dialog from the Communication Log in the Ticket applications. You can also use communication templates to create e-mail notifications for use with the automated workflow and escalation processes.

You can associate specific file attachments with a communication template, and you can associate document folders with the template, which Maximo will search when a service desk user applies the template to a ticket. When a communication is actually sent, Maximo attaches to the communication any files that exist in the associated document folders, along with those hard-coded in the template itself.

continued on next page

Communication Templates continued

Using Communication Templates with Workflow

You can use communication templates as the basis for e-mail notifications in a workflow process. When the workflow administrator designs a workflow process that includes e-mail notifications, he or she can create the notification from scratch or apply standardized information from a communication template and then modify or complete the notification as needed. Typically, you create templates with role-based recipients for use with workflow processes. Maximo resolves the role, such as purchasing manager, to a single individual.

Example: You have created a workflow process for purchase requisitions. When a Maximo user submits a request for a laptop, the purchase request (PR) enters workflow and waits for approval from an immediate supervisor. From there, if the supervisor approves the PR, Maximo routes the PR to the next level for approval, Finance. When approved, Maximo sets the status to Approved and sends an e-mail notification of the Approved status to the user who submitted the request. You can create a communication template for PR approvals or rejections, which Maximo can send automatically as the request goes through the workflow process.

A notification includes a template ID, the role or recipient name, the subject of the notification, and the message. If you have information that is sent out repeatedly, you can create a communication template for it and attach it as a notification on a node in a workflow process.

continued on next page

Communication Templates continued

Using Communication Templates with Escalations

You can use communication templates as the basis for e-mail notifications in an escalation process. When you create an escalation from the Escalations application, you can add one or more e-mail notifications that you want Maximo to send when it finds records that meet the condition(s) defined by an escalation point. For example, if a service desk agent does not complete assignments within six hours, you can configure Maximo to escalate the assignment to that person's supervisor (by changing the owner via an action) and send an e-mail notification to the supervisor.

A notification includes a template ID, the role or recipient name, the subject of the notification, and the message. If you have information that is sent out repeatedly, you can create a communication template for it and attach it as a notification on an escalation.

You can create two types of notifications in the Escalations application:

- Notifications that you create in the Escalations application without using a communication template are called *free-form* notifications. These free-form notifications contain only a subset of the features available in a communication template. If you create a free-form notification, Maximo generates a template ID for it but does not save the notification for reuse in the Communication Templates application.
- Notifications that you create in the Escalations application by applying a communication template are called *template-based* notifications. These notifications leverage all the features of a communication template, including the ability to attach files. If you select an existing communication template, Maximo defaults the values in the **Role/Recipient**, **Subject**, and **Message** fields from the communication template you chose. You cannot change these read-only values from within the Escalations application.

Note: For more information about using communication templates as notifications in an escalation process, see the Escalations online help system.



continued on next page

Communication Templates continued

Substitution Variables

When you create a communication template in the Communication Template application, you can leverage substitution variables in the **Subject** and **Message** fields in the e-mail notification. Maximo filters these substitution variables based on the Maximo business object that you select in the **Applies To** field.

If the communication template applies to the object ASSET, the list of variables that Maximo displays for you to choose from are the field and column names from the database tables associated with the ASSET object.

When a Maximo user applies the communication template and creates a notification, Maximo replaces the substitution variables from the template with the corresponding values from the record that is generating the notification.

For example, if the Subject line of the communication template reads:

Your Incident ID# is :TICKETID

then *:TICKETID* is replaced by the actual ticket number obtained from the incident record.

Example: The following example illustrates the use of substitution variables in the **Message** field:

Your Incident #:TICKETID was opened on :REPORTDATE. The person assigned to work on your issue is :OWNER. You will be contacted on or before :TARGETSTART.

Take a minute to review the following details. If any of the information is incorrect, please contact us immediately.

Phone: :AFFECTEDPHONE

Problem Description: :DESCRIPTION

The E-mail Listener

Introduction

Use the E-mail Listener Configuration application to receive and process incoming service desk e-mail messages. You can configure the E-mail Listener to monitor multiple e-mail accounts and retrieve e-mail messages from each. An example of an e-mail account used for this purpose might be `customer_service@company.com`.

The E-mail Listener supports:

- Multiple attachments for each message, either:
 - inline attachments (for example, a screen capture within the body of the message), or
 - standard attachments.
- Three mail protocols: POP3, IMAP, and MAPI. (A client program uses these standard mail access protocols when it retrieves e-mail messages from a mail server.)

The E-mail Listener checks each account at periodic intervals that you establish. Based on the subject line of the e-mail message, the E-mail Listener can determine whether the e-mail is a new service request (SR) for help or is a follow-up to an SR record.

An SR record is a type of ticket. You create an SR record as a way to track communications from an end user, capture information from the sender, and determine what, if any, further action is needed.

The E-mail Listener submits the contents of the e-mail message to a predefined Maximo workflow process. This workflow process creates and updates service requests. You can customize this workflow process or create new ones to suit your needs. Maximo captures all communications from the originators of the e-mail messages in the service desk Communication Log. For more information about communication logs, see the online help for Service Requests.

Warning: The E-mail Listener cannot process encrypted or digitally signed e-mail messages.



continued on next page

The E-mail Listener continued

Terminology

Before proceeding, you might want to review the following terms and definitions.

Term	Definition
Attached Docs	You can use the Attached Documents application in Maximo to attach Word documents, PDF files, Web page URLs, diagrams, pictures, and other types of documents to individual Maximo records.
Communication Log	If an incoming e-mail generates an SR, e-mail details are also stored as the initial entry in the SR's Communication Log. Additional dialog is also stored, based on the SR ID. Graphics, whether embedded within the e-mail or attached, are also visible from within the Communication Log.
Delimiters	A <i>delimiter</i> is one or more characters chosen for use in an incoming e-mail subject line. E-mail Listener uses delimiters to distinguish new requests from existing requests. The default delimiter is ##. You can change the default by editing the value in the Object Key Delimiter field. The delimiter must be placed before and after the Service Request ID.
Error Handling	Processing errors are written into a log file. You must specify the Maximo log file on the server and adjust settings in the logging.properties file. If the administrator has specified a valid administrator e-mail address, then errors are written to the log file and error notification is sent to that e-mail address.

continued on next page

The E-mail Listener continued

Terminology

continued

Term	Definition
IMAP	IMAP (Internet Message Access Protocol) is a standard protocol for accessing e-mail from your local server. IMAP is a client/server protocol in which e-mail is received and held for you by your Internet server. You (or your e-mail client) can view just the heading and the sender of the letter and then decide whether to download the mail.
MAPI	MAPI (Messaging Application Program Interface) is a Microsoft Windows program interface that lets you send e-mail from within a Windows application and attach the document you are working on to the e-mail note.
POP3	With POP3 (Post Office Protocol 3), your e-mail is saved for you in a single mailbox on the server. When you read your mail, all of it is immediately downloaded to your computer and, except when previously arranged, no longer maintained on the server.
Staging Table	Maximo uses the staging table to store the attributes of an incoming e-mail message, including Subject and Message.

continued on next page

The E-mail Listener continued

E-mail Attachments



Incoming e-mail can contain attachments, which are stored on the hard disk of the Maximo server. You can view attachments via the Communication Log tab, which is a sub-tab of the Log tab of the Service Request application.

There are two types of attachments:

- *Normal* attachments are those that include any file extensions you set up the mail server to allow.

Example: .bmp, .jpg, .pdf, .txt, .dat

- *Embedded* or *inline* attachments are files that are copied and pasted directly into the body portion of an e-mail.

Example: A screen capture of an error message dialog box

Note: You can set up the mail server to prohibit certain file types from being used in attachments.

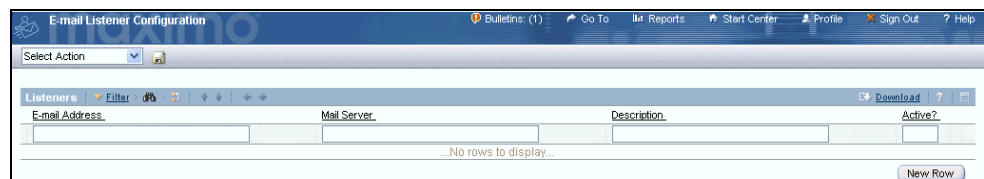
The size of a single attachment and the size of all attachments in a single e-mail can be controlled in the mail server. Before implementing E-mail Listener, contact your mail server administrator for information on how to set these controls.



Warning: You should communicate limitations on file types and sizes to people who use E-mail Listener to send in service requests.

Purpose of the E-mail Listener Configuration Application

Use the E-mail Listener Configuration application to create a configuration for an e-mail account. This application contains a single table window that displays a list of configurations. Use the table window to add, view, modify, activate, deactivate, or delete the E-mail Listener configurations. Actions from the Select Action menu let you duplicate configurations or purge e-mail records in the staging table.



For detailed information about the three main E-mail Listener components (the configuration, the cron task, and the predefined workflow process), as well as related system administrative tasks that are performed outside of this application, see the *System Administrator's Guide*.

continued on next page

The E-mail Listener continued

E-mail Listener Configuration Process

In the Listeners (Listener Configuration) section, you specify the e-mail address, password, mail server, and other parameters associated with the e-mail account. You also set the schedule to use for polling the mail server for incoming messages.

When you activate an E-mail Listener configuration, the following sequence of events occurs:

1. The mail server polls for incoming e-mails to the e-mail account at the frequency you specify.
2. A preprocessor determines whether the e-mails are new or updates to existing communications.
3. Maximo stages the e-mails received on the account, which includes:
 - extracting e-mail content, including attachments;
 - storing content in staging tables and attached documents tables; and
 - launching workflow.
4. Maximo uses a predefined workflow process to process and parse the e-mail.



Note: By default, neither the E-mail Listener nor the predefined workflow process for this application generates any response e-mails to new requests for help or updates to existing service requests. If you want to automate a response to incoming e-mails, you can revise the provided workflow process or define a new workflow process and customize it to trigger an e-mail response when Maximo creates a new service request or updates an existing one.

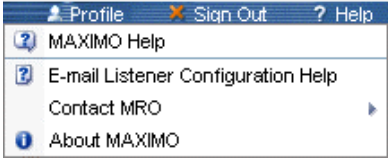
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The E-mail Listener continued

Help Topics

In addition to the *System Administrator's Guide*, please refer to the following help topics:

- E-mail Listener Process Overview
- How Maximo Processes Incoming E-mails
- Mail Server Polling
- How Maximo Stages E-mail Records
- Predefined Workflow Process
- About Deleting E-mails

Step	Action
1	<p>From the E-mail Listener Configuration application, click Help and choose E-mail Listener Configuration Help.</p>  <p><u>Result:</u> The E-mail Listener Configuration Help opens.</p>
2	Scroll down to the “See Also” section.
3	<p>Click to select and review each of the following topics:</p> <ul style="list-style-type: none"> • How Maximo Processes Incoming E-mails • Mail Server Polling • How Maximo Stages E-mail Records • Predefined Workflow Process • About Deleting E-mails
4	When you are done reviewing each of the topics, close the E-mail Listener Configuration Help browser window.

continued on next page

The E-mail Listener continued

Using the E-mail Listener Configuration Application

Use the E-mail Listener Configuration application to add a new e-mail account configuration. The E-mail Listener will poll for incoming service desk e-mails to the account and process them, either creating a new service request (SR) or logging updates to an existing SR.



Note: Some mail servers are case sensitive. Maximo will preserve the case of the address you specify in the **E-mail Address** field. If you try to create a new E-mail Listener configuration using an e-mail address that is identical in name and case to one that already exists on the same mail server, Maximo prevents you from saving the configuration. However, you can use the same e-mail address in a different case on the same mail server.

Use Case Example

Every time Sally attempts to print a file, she receives an indecipherable error message from the print server. As a result, she sends an e-mail describing the problem, with an attached screenshot of the error message, to help@support.com, the company site for handling service desk e-mail requests. The E-mail Listener Configuration application retrieves the message Sally sent and creates an SR with identifier 123.

Frank, a service desk agent, is assigned SR #123. From within the SR, he sees Sally's problem description as well as the attached screenshot. Frank searches the knowledge base and finds a solution. He opens the Communication Log, which contains Sally's initial e-mail submission, then creates a new communication with the solution and sends it to Sally. All details of the interaction between Frank and Sally are stored in the Communication Log for SR #123.

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The E-mail Listener continued

Creating an E-mail Listener Configuration

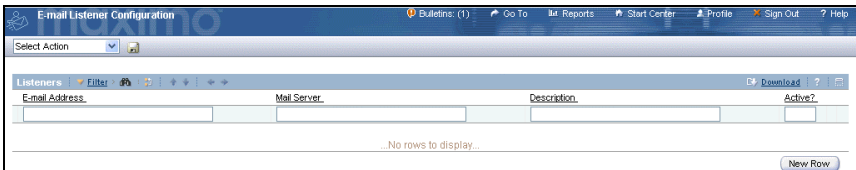
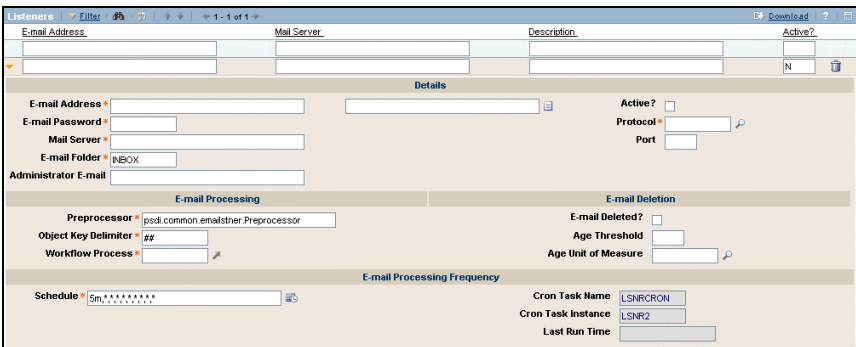


Use the following steps to create an E-mail Listener configuration.

Note: The data for this exercise might not be valid in all training environments. This exercise depends on:

- an available e-mail server with an account set up specifically for this exercise, and
- Internet access with port(s) configured open to access a POP3 mail server.

The data in this exercise is valid (at the time this course was developed) for a standard MRO Software open school training environment with Internet access.

Step	Action
1	<p>Open the E-mail Listener Configuration application from the Configuration module.</p> <p><u>Result:</u> The E-mail Listener Configuration application opens.</p> 
2	<p>Click the New Row button.</p> <p><u>Result:</u> A new row opens for data entry.</p> 

continued on next page

The E-mail Listener continued

Creating an E-mail Listener Configuration

continued

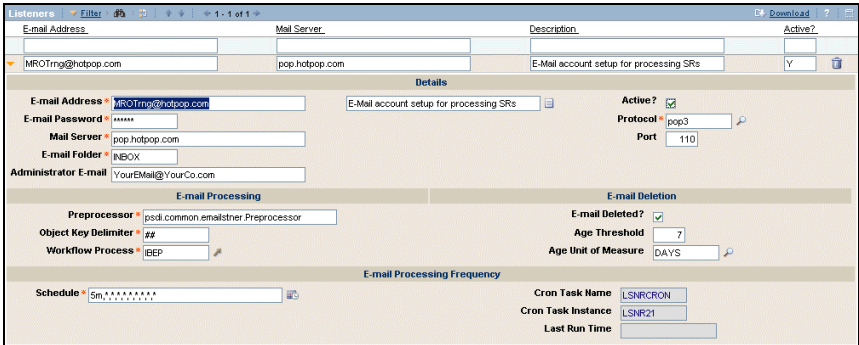
Step	Action																										
3	Enter the following data: <table border="1"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>E-mail Address</td> <td>MROTraining@hotmail.com</td> </tr> <tr> <td>Description</td> <td>E-Mail account setup for processing SRs</td> </tr> <tr> <td>E-mail password</td> <td>mr0mr0</td> </tr> <tr> <td>Mail Server</td> <td>pop.hotpop.com</td> </tr> <tr> <td>Administrator E-mail</td> <td>[YourEMail@YourCO.com]</td> </tr> <tr> <td>Active?</td> <td>[checked]</td> </tr> <tr> <td>Protocol</td> <td>pop3</td> </tr> <tr> <td>Port</td> <td>110 [default]</td> </tr> <tr> <td>Workflow Process</td> <td>IBEP [default]</td> </tr> <tr> <td>E-mail Deleted?</td> <td>[checked]</td> </tr> <tr> <td>Age Threshold</td> <td>7 [default]</td> </tr> <tr> <td>Age Unit of Measure</td> <td>DAYS [default]</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	E-mail Address	MROTraining@hotmail.com	Description	E-Mail account setup for processing SRs	E-mail password	mr0mr0	Mail Server	pop.hotpop.com	Administrator E-mail	[YourEMail@YourCO.com]	Active?	[checked]	Protocol	pop3	Port	110 [default]	Workflow Process	IBEP [default]	E-mail Deleted?	[checked]	Age Threshold	7 [default]	Age Unit of Measure	DAYS [default]
<u>Field</u>	<u>Value</u>																										
E-mail Address	MROTraining@hotmail.com																										
Description	E-Mail account setup for processing SRs																										
E-mail password	mr0mr0																										
Mail Server	pop.hotpop.com																										
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Protocol	pop3																										
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Age Threshold	7 [default]																										
Age Unit of Measure	DAYS [default]																										

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The E-mail Listener continued

Creating an E-mail Listener Configuration

continued

Step	Action
4	<p>Save your record.</p> <p><u>Result:</u> Your display should look similar to this.</p> 

[Optional] Checking Your Work



Your organization might have Maximo set up to receive service requests (SRs) via e-mail.

Warning: The following e-mail dependent exercises rely on three environmental conditions:

- The exercises require external Internet access to a specific external mail server (*pop.hotpop.com*, *port 110*).
- The exercises require an installed e-mail client.
- The exercises require access to a mail server for the e-mail client.

Given these conditions, the following e-mail dependent exercises will work in an MRO Open School environment with appropriate Internet access. They might not work in any other training environment.

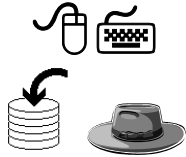


Note: The data entered through these e-mail dependent exercises is not required. You can skip the following Optional exercises if your environment does not support them.

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The E-mail Listener continued

[Optional] Check Your Work: Submit an SR via E-mail



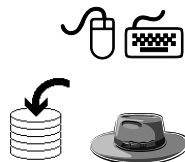
Scenario: A user, Henry Lowe, is remote and cannot access the Maximo Self-Service functionality. He has access to e-mail and can use the special Service Desk e-mail account that your organization has set up as a viable alternative. He will send an e-mail because his hard drive is making a funny noise.

Use the following steps to submit an SR via e-mail.

Step	Action								
1	As user Henry Lowe, open your e-mail client. <u>Note:</u> Your specific actions will vary, depending on the available e-mail client and your training environment.								
2	Enter the following information into your e-mail. <u>Note:</u> The actual field names might vary, depending on your e-mail client. <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>To</td> <td>mrotng@hotmail.com</td> </tr> <tr> <td>Subject</td> <td>My hard drive xx is making a noise.</td> </tr> <tr> <td>Text/Message</td> <td>I turned on my laptop xx and my hard drive started making an atypical noise.</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	To	mrotng@hotmail.com	Subject	My hard drive xx is making a noise.	Text/Message	I turned on my laptop xx and my hard drive started making an atypical noise.
<u>Field</u>	<u>Value</u>								
To	mrotng@hotmail.com								
Subject	My hard drive xx is making a noise.								
Text/Message	I turned on my laptop xx and my hard drive started making an atypical noise.								
3	Send your e-mail.								
4	Close your e-mail client program.								

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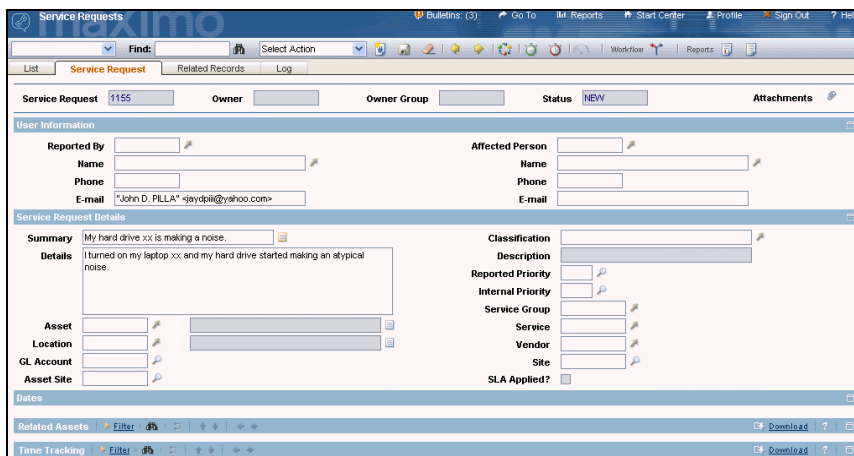
[Optional] Check Your Work: View an SR Submitted via E-mail



Scenario: As Tier 1 Service Desk Agent Bill Sinclair, your responsibility is to check for incoming SRs submitted via e-mail.

Use the following steps to check for the SR submitted via e-mail.

Step	Action
1	Sign in to Maximo as Tier 1 Service Desk Agent Bill Sinclair. Login ID: sinclair Password: sinclair <u>Result:</u> The Maximo Start Center assigned to Bill Sinclair displays.
2	Open the Service Requests application.
3	Search for and select the SR that you submitted via e-mail from the previous exercise. <u>Hint:</u> Filter by typing hard drive in the Summary field and new in the Status field. <u>Result:</u> The Service Request tab opens with your selected SR ready for editing.
4	You have checked your work. Your E-mail Listener is working properly. Return to the Start Center.



Managing Actions

Introduction

Use the Actions application to manage the administrative functions of creating actions and action groups within Workflow, Escalations, and Service Level Agreements (SLA) processes. You manage actions in a central administrative application because they are used in multiple applications.

Actions are scheduled events that occur from within Workflow or as a result of an escalation. An action can cause a Maximo status change, execute a defined program, set a field value, or execute a custom class action. Use the Actions application to build individual actions or action groups.

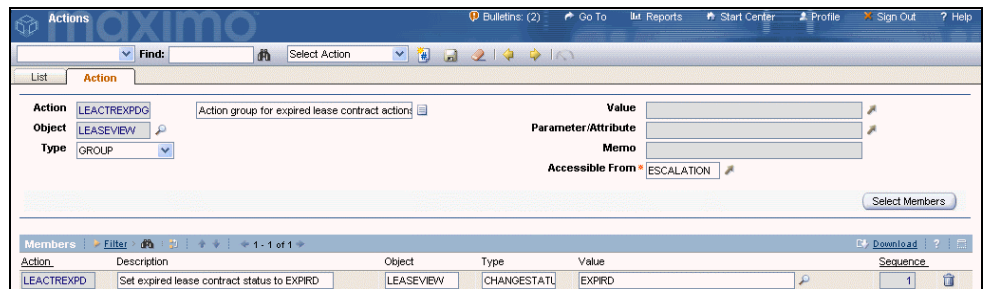


Note: In an exercise in the next section (“Managing Escalations”), you will use the Actions application to create and use new actions.

The Actions Application

Maximo stores the built action or action group in the List tab when used in Workflow, Escalations, or Service Level Agreements. The Actions tab defines the action taken when the condition is evaluated as:

- True or False
- Accepted or Rejected



continued on next page

Managing Actions continued

Available Actions

Six categories of actions are available:

- CUSTOM
- EXECUTABLE
- SETVALUE
- CHANGESTATUS
- GROUP
- APPACTION

The subcategories of appaction are:

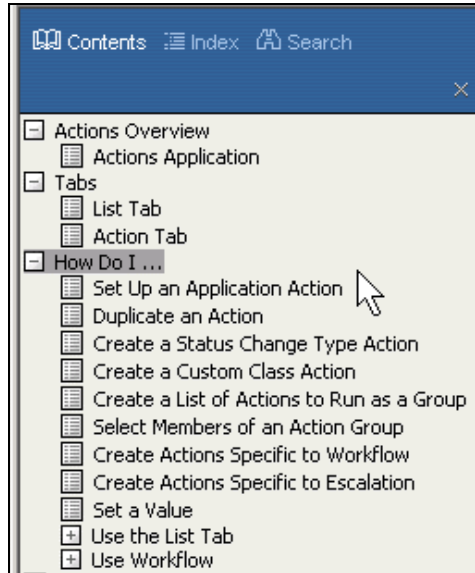
- ApplySLA
 - CreateChange
 - CreateIncident
 - CreateProblem
 - CreateRelease
 - CreateSR
 - CreateWO
 - WFACCEPT
 - WFESCALATE
 - WFINITIAE
 - WFREJECT
-

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Managing Actions continued

How Do I ...

Please refer to the Application Help for information on how to accomplish the following tasks:



Note: In an exercise in the next section (“Managing Escalations”), you will use the Actions application to create and use new actions.

Managing Escalations

Introduction

The primary goal of escalation management is to ensure that critical tasks are completed on time, such as those defined in Service Level Agreements. You can also use escalations for events such as notifying you before contracts expire, changing the status of a Maximo object (such as for invoices or contracts), or changing the owner of a Maximo object (such as for service requests, incidents, or problems).

You can use escalations with any Maximo application. However, you are most likely to use them with the Service Desk applications, IT Asset Management applications, and workflow processes. For example:

- **Service Desk Management:** Service level agreements (SLAs) are contracts defined between a service provider and the recipient of the services. You can use escalations to determine how incidents, problems, and service requests are handled, and work to ensure that you remain compliant with any SLAs by solving problems in a timely manner.
- **IT Asset Management:** You can use escalations to monitor IT contracts, procurement, and inventory. By defining an escalation to alert managers 30 days in advance of a lease contract expiration, the managers can effectively manage leases and avoid penalties or costly lease extensions.
- **Workflow Processes:** You can use escalations to escalate assignments before they time out in a recipient's Inbox. When you assign specific steps in a workflow process to employees, those assignments display in their Inbox. If the assignments are not completed promptly, they time out in the recipients' Inboxes. When this happens, you can use escalations to assign the tasks to other people. This helps ensure that tasks are completed on time and helps to prevent work backlogs.



Note: For more detailed information about how escalations work, see the *System Administrator's Guide*.

continued on next page

Managing Escalations continued

Escalation Levels

You can create escalations at the site, organization, or system level. If you specify an organization or site, the escalation is restricted to that site or organization. If you leave both the **Organization** and **Site** fields empty, the escalation is available to all sites and organizations (systemwide).

When you select an object for a new escalation, the Escalations application automatically determines, if it can, whether that object is system level, organization level, or site level, and enables or defines those fields.

Predefined Escalations

The Maximo product ships with numerous predefined escalations. You must activate the predefined escalations before they will work. You can tailor them to suit your business needs, or create new ones. You can also build and validate escalations incrementally while they are inactive, and activate them after validation.

These predefined escalations fall into two categories:

- Escalations for the Maximo database, which you can modify to suit your business needs. You must not delete the predefined Maximo escalations; they are required for the escalations functionality to work.
- Escalations for the MAXDEMO database, which you can modify or delete as needed. You can use the MAXDEMO escalations in your test environment to gain practical experience with adding and managing escalations.

To review a full list and detailed descriptions of all predefined Maximo and MAXDEMO escalations, consult the *System Administrator's Guide*.

continued on next page

Managing Escalations continued

The Escalations Application

Use the Escalations application to automatically monitor critical processes across your enterprise.

You can use escalations with any Maximo application. However, you are most likely to use them with the Service Desk applications, IT Asset Management applications, and workflow processes.

Ideally, before you use the Escalations application you should be familiar with Maximo objects, SQL, and the object attributes that can be included in SQL statements. You should also understand both the Actions and the Communication Templates applications.

When you create an escalation, you define:

- Header attributes, which identify the set of records that the escalation targets (the global search criteria).
- Escalation points, which define thresholds that must be met before Maximo triggers an escalation.
 - Thresholds are most often based on time—time that has already elapsed or time that is going to elapse sometime in the future. From one angle, escalations are nothing but periodic time measurements.
 - However, we do not restrict escalation points to time only. You can define their own thresholds based on expressions they create.
- Actions, which are events you want triggered when the escalation point(s) are reached.
- Notifications, which are e-mails you want sent when the escalation points are reached.



Note: You must define at least one escalation point and at least one action/notification to associate with the escalation point before you can activate the escalation. You can define multiple escalation points, and each can be associated with one or more actions and/or notifications.

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Managing Escalations continued

The Online Help's Sample Escalation


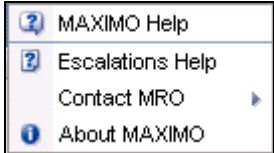
There is an example escalation in the online help that provides you with step-by-step instructions for completing a sample Service Desk escalation. You can follow this example to gain hands-on experience with the Escalations application.

Online Help Example Escalation Scenario: A service provider has a service level agreement (SLA) stating that all network-related incidents with a low or medium priority are to be assigned within 1 hour of ticket creation and resolved within 4 hours. In this case, incidents set to a priority of 8–10 are low, 5–7 are medium, 3–4 are high, and 1–2 are very high.

By default, the network support group is responsible for resolving these incidents. However, if the problem has not been resolved within 3 hours, the priority is escalated to “very high” and the ticket’s ownership is passed to a supervisor. At the same time, an e-mail notification is sent to various people within the organization, informing them that there is a risk of becoming non-compliant with the SLA.

Creating the Maximo Help Sample Escalation

Follow these steps to use the online help to create two escalation points, with actions and notifications for each. You will apply the escalation to the object INCIDENT.

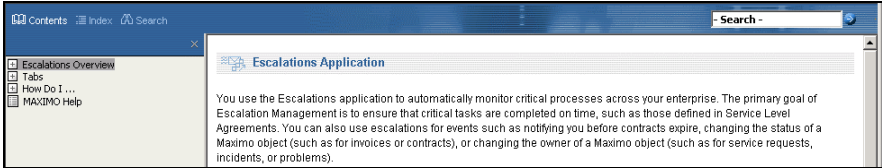
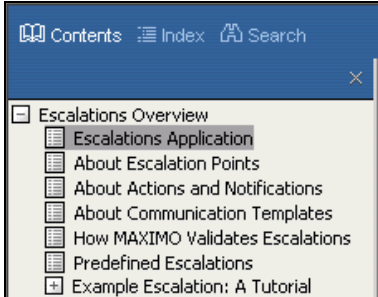
Step	Action
1	Open the Escalations application from the Configuration module. <u>Result:</u> The Escalations application opens.
2	Click to open the Maximo Help menu from the Maximo menu bar, as shown here.  <u>Result:</u> Maximo displays the Help menu for the Escalations application. 

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Managing Escalations continued

Creating the Maximo Help Sample Escalation

continued

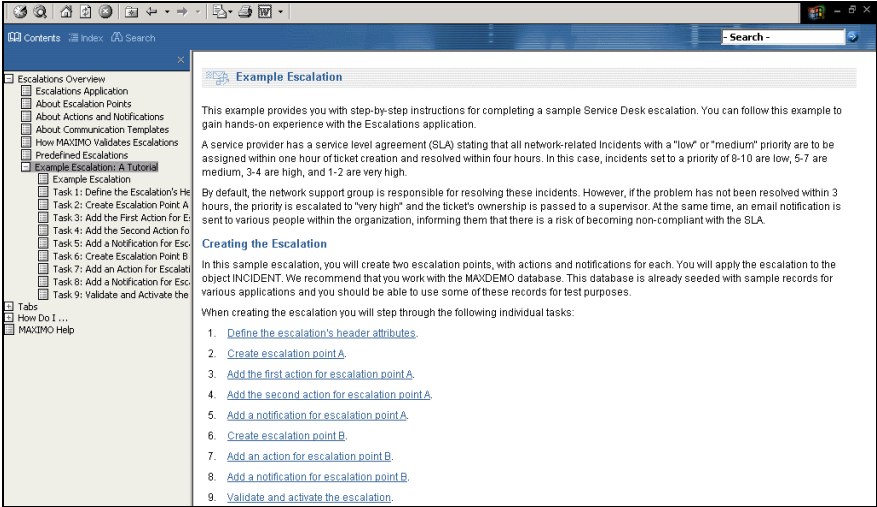
Step	Action
3	<p>Click to select Escalations Help.</p> <p><u>Result</u>: Maximo Help for the Escalations application opens.</p> 
4	<p>In the left pane, click the plus sign for Escalations Overview.</p> <p><u>Result</u>: The Escalations Overview topic expands.</p> 

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Managing Escalations continued

Creating the Maximo Help Sample Escalation

continued


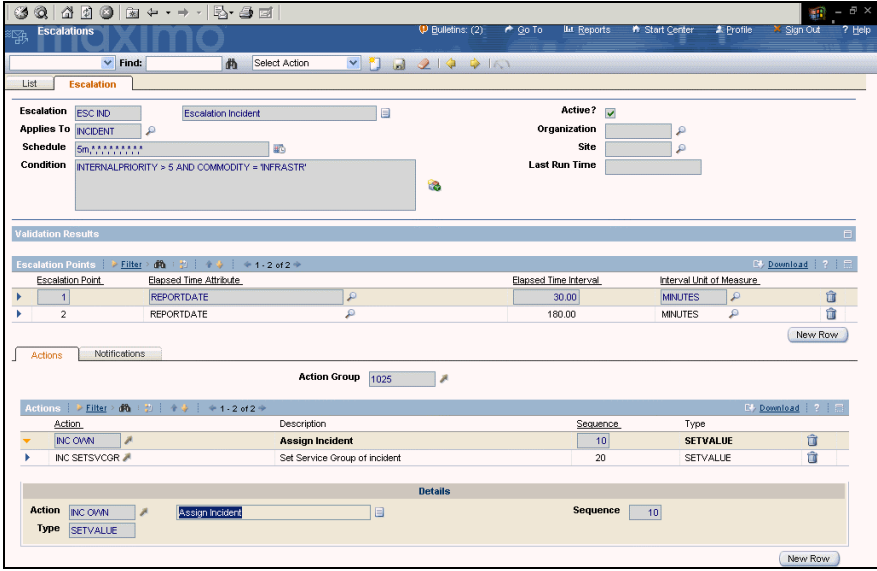
Step	Action
5	<p>Click to select “Example Escalation.” Result: Maximo displays the Example Escalation tutorial.</p> 

continued on next page

Managing Escalations continued

Creating the Maximo Help Sample Escalation

continued

Step	Action
<p>6</p> 	<p>Follow all the steps from the Escalations Help example to create a sample escalation.</p> <p>Warning: At the time of this writing, two mistakes are in the Maximo Help steps.</p> <p>In both Tasks 5 and 8, you must change the status of the Communication Template to ACTIVE before you Return with Value.</p> <p>Hint: An updated copy of the Maximo Help example is included as Appendix A to this course.</p> <p>Result: When you complete all of the steps, your sample escalation should look similar to this one.</p> 
<p>7</p>	<p>Save your record.</p>

Chapter Summary

The Bulletin Board

Use the Bulletin Board application to create and view messages regarding critical problems or incidents, or to broadcast information throughout the enterprise.

Bulletin Board messages can be viewed from the Start Center and from any Maximo application.

Creating and posting messages on the Bulletin Board minimizes the creation and duplication of tickets. Only users granted access to the Bulletin Board application can create and post messages.

Bulletin Board messages can be targeted at a specific audience (based on organization, site, or person group). If an audience is not specified, then any user who signs in to Maximo can view the Bulletin Board messages.

You can specify the date and time you want the message to appear on the Bulletin Board. You can also define a date and time when you want the message to be automatically removed from the Bulletin Board.

Communication Templates

Use the Communication Templates application to create and manage generic communication templates that Maximo users can leverage to standardize frequently used e-mail communications (also known as *notifications*).

Typically, this functionality is used in the service desk industry.

In Maximo, service desk agents can manually create and send e-mail communications from the Ticket applications (Service Requests, Incidents, and Problems) using standardized information from predefined communication templates. The recipients of these communications can respond, and agents can view the two-way dialog from the Communication Log in the Ticket applications. You can also use communication templates to create e-mail notifications for use with the automated workflow and escalation processes.

You can associate specific file attachments with a communication template, and you can associate document folders with the template, which Maximo will search when a service desk user applies the template to a ticket. When a communication is actually sent, Maximo attaches to the communication any files that exist in the associated document folders, along with those hard-coded in the template itself.

continued on next page

Chapter Summary continued

The E-mail Listener

Use the E-mail Listener Configuration application to receive and process incoming service desk e-mail messages. You can configure the E-mail Listener to monitor multiple e-mail accounts and retrieve e-mail messages from each. An example of an e-mail account used for this purpose might be `customer_service@company.com`.

The E-mail Listener application supports:

- Multiple attachments for each message, either:
 - inline attachments (for example, a screen capture within the body of the message), or
 - standard attachments.
- Three mail protocols: POP3, IMAP, and MAPI. (A client program uses these standard mail access protocols when it retrieves e-mail messages from a mail server.)

The E-mail Listener checks each account at periodic intervals that you establish. Based on the subject line of the e-mail message, the listener can determine whether the e-mail is a new service request (SR) for help or is a follow-up to an SR record.

Managing Actions

Use the Actions application to manage the administrative functions of creating actions and action groups within Workflow, Escalations, and Service Level Agreements (SLA) processes. You manage actions in a central administrative application because they are used in multiple applications.

Actions are scheduled events that occur from within Workflow or as a result of an escalation. An action can cause a Maximo status change, execute a defined program, set a field value, or execute a custom class action. Use the Actions application to build individual actions or action groups.

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Chapter Summary continued

Managing Escalations

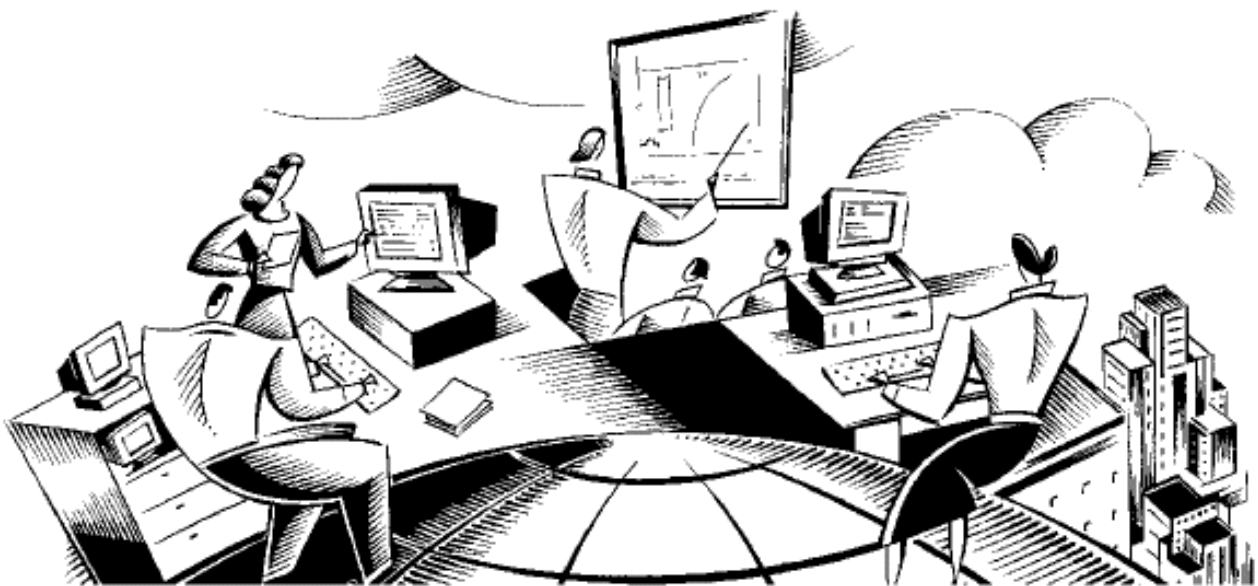
The primary goal of escalation management is to ensure that critical tasks are completed on time, such as those defined in Service Level Agreements. You can also use escalations for events such as notifying you before contracts expire, changing the status of a Maximo object (such as for invoices or contracts), or changing the owner of a Maximo object (such as for service requests, incidents, or problems).

You can use escalations with any Maximo application. However, you are most likely to use them with the Service Desk applications, IT Asset Management applications, and workflow processes.

You can create escalations at the site, organization, or system level. If you specify an organization or site, the escalation is restricted to that site or organization. If you leave both the **Organization** and **Site** fields empty, the escalation is available to all sites and organizations (systemwide).

System Administration for MXES

Chapter 8: Database Configuration



In This Chapter

This chapter contains the following topics:

Topic	See Page
Chapter Overview	8-1
Database Configuration Overview	8-2
Data Types	8-3
Database Configuration Application	8-7
Managing Maximo Objects	8-10
Managing Maximo Attributes	8-13
Managing Database Indexes	8-18
Configuring the Database	8-25
Additional Database Configuration	8-34
Overview of E-signature and E-audit	8-38
Managing E-signature	8-40
Managing E-audit	8-45
Chapter Summary	8-48

Chapter Overview

Introduction

This chapter will show you some of the system administration and configuration uses of the Database Configuration application.

You use Database Configuration to customize the database and perform related functions.

Chapter Focus

The intent of this chapter is to provide a high-level overview of key application elements and functionality.

You will obtain maximum benefit if you:

- work actively with your instructor during demonstrations and exercises, and
 - ask many questions that relate to your additional informational needs.
-

Learning Objectives

When you have completed this chapter, you should be able to:

- describe objects,
 - describe attributes,
 - change an attribute definition,
 - add and delete attributes on an existing object,
 - create and drop an index,
 - configure the database after changes have been made to it,
 - enable e-signature, and
 - enable e-audit.
-

Database Configuration Overview

Introduction

The Maximo database is extensive and flexible. As the administrator, you often have the responsibility of adapting the database to your company's specific needs.

The Database Configuration application provides a wide range of capabilities and options to make configuration changes to the Maximo database.

Notes



Warning: You can make changes to the database using the Database Configuration application. However, you should use extreme caution when making any changes to the database to avoid losing data.



Note: Certain database objects are part of the Maximo data dictionary and therefore they should not be changed. By default, these objects are not accessible through the Database Configuration application.



Best Practice: It is a best practice to back up the database before making any changes!

Backing Up and Restoring Table Data

When you reconfigure a database object, the requisite database table is renamed as a backup table and a new database table is automatically created with the new table configuration.

After the database reconfiguration is completed, the data in the backed-up database table is copied to the newly reconfigured table.

The backup database table remains and you can retain the backup table or delete it.

However, if you perform another configuration on the same database object, the current table becomes the new backup table and the old backup table is dropped.

Before You Begin



Many database attribute changes you make to database objects will cause the data to be dropped from the tables, as described above.

Warning: Before proceeding with any database changes, you should create a backup of your entire database.

Data Types

Introduction

One of the changes you can make to the database is the modification of the data type of some (but not all) database attributes.

Example



The issue of data types becomes especially important when adding attributes to objects. Give thought to how the data will be used in the new attributes and, based on this, what the data type should be.

Note: It is advisable that you do not change data types after data is included in the attributes and begins to be used.

After a new attribute is loaded with data and used by Maximo, changing the data type becomes a major issue.

Data Types

The *data type* is the form of data that an attribute can accept. Some of the allowed data types are listed in the following table:

Type	Description
ALN	Alphanumeric (uppercase and lowercase)
AMOUNT	A numeric format established with the Field Length and Format option (this option discussed later in this chapter)
DATE	<p>A date in one of these formats (format derived from Windows):</p> <ul style="list-style-type: none"> • dd-mm-yyyy (default) • dd-mm-yy (the one DATE format that Oracle will accept) • dd/mm/yyyy • dd/mm/yy • mm-dd-yy • mm/dd/yy • mm-dd-yyyy • yyyy-mm-dd <p><u>Note:</u> Date field lengths are in <i>bytes</i>, not character lengths.</p>

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Data Types continued**Data Types** continued

Type	Description
DATETIME	A combination date and time format
DECIMAL	A decimal number
DURATION	Duration in hours format
FLOAT	A decimal number with no preset scale or length
INTEGER	A whole number within the range of -2,147,483,648 to +2,147,483,647
LOWER	Lowercase alphanumeric characters
SMALLINT	A whole number from -32768 to +32767
TIME	A time value in one of these formats: <ul style="list-style-type: none"> • hh.mm.ss • hh:mm • hh:mm:ss (default) • hh:mm:ss:999999
UPPER	Uppercase alphanumeric characters
YORN	Y/N (Yes or No) only (writes as 1/0 in the database)

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Data Types continued

The MAXATTRIBUTE Object

The database object MAXATTRIBUTE lists all objects and attributes and their characteristics. Here is a sample and partial view:

The screenshot shows the 'Database Configuration' application interface. The 'Attributes' tab is selected, displaying a table of attributes for the 'MAXATTRIBUTE' object. The table has columns for Status, Attribute, Description, Type, Length, Scale, and Required?. The attribute 'ATTRIBUTENAME' is highlighted.

Status	Attribute	Description	Type	Length	Scale	Required?
	ALIAS	Alias	ALN	50	0	<input type="checkbox"/>
	ATTRIBUTENAME	Attribute name	UPPER	50	0	<input checked="" type="checkbox"/>
	ATTRIBUTENO	Attribute number	INTEGER	12	0	<input checked="" type="checkbox"/>
	AUTOKEYNAME	Autokey name	UPPER	40	0	<input checked="" type="checkbox"/>
	CANAUTONUM	Indicates whether this attribute is able to supp	YORN	1	0	<input checked="" type="checkbox"/>
	CLASSNAME	Field validation class name	ALN	80	0	<input type="checkbox"/>
	COLUMNNAME	If this is a persistent attribute for a table or vie	UPPER	18	0	<input type="checkbox"/>
	DEFAULTVALUE	Default value	ALN	50	0	<input type="checkbox"/>
	DOMAINID	Name of the validation domain for this attribute	UPPER	18	0	<input type="checkbox"/>
	EAUDITENABLED	Indicates whether Electronic Auditing (EAUDIT)	YORN	1	0	<input checked="" type="checkbox"/>

The MAXTYPE attribute of the MAXATTRIBUTE object shows all of the various available data types:

Some of the MAXTYPES that might not be self-explanatory are:

- **BLOB:** Binary Large Object, for large objects/data
- **CLOB:** Character Large Object, for large objects/data
- **CRYPTO, CRYPTOX:** for (password) encryption

<p>MAXTYPE</p> <p>-----</p> <p>ALN AMOUNT BLOB CLOB CRYPTO CRYPTOX DATE DATETIME DECIMAL DURATION FLOAT GL INTEGER LONGALN LOWER SMALLINT TIME UPPER YORN</p>
--

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Data Types continued

The MUSTBE Attribute



One of the MAXATTRIBUTE object's attributes is MUSTBE. Some of the data rows in MAXATTRIBUTE have a value of Y for the MUSTBE attribute. When the MUSTBE attribute has a value of Y, the configuration of the attribute's data type, length, or scale *must remain as is*, and cannot be changed.

Note: This is not limited to attributes defined by MRO Software, Inc., but also applies to user-defined attributes if they must be set.

Details	
Attribute: MAXTYPE	Title: Data Type
Description: Maximo data type	Class:
Type: UPPER	Domain: MAXTYPE
Length: 8	Default Value:
Scale: 0	Alias: MAXTYPE
Required? <input checked="" type="checkbox"/>	Status:

Advanced		
Entity: MAXATTRIBUTE	Persistent? <input checked="" type="checkbox"/>	Audit Enabled? <input type="checkbox"/>
Column: MAXTYPE	Must Be? <input checked="" type="checkbox"/>	Multilanguage Supported? <input type="checkbox"/>
Same as Object:	Positive? <input type="checkbox"/>	Multilanguage in Use? <input type="checkbox"/>
Same as Attribute:	User Defined? <input type="checkbox"/>	E-signature Enabled? <input type="checkbox"/>
Autonumber:	Can Autonumber? <input type="checkbox"/>	Primary Column: <input type="text"/>
Search Type: WILDCARD	Long Description Owner? <input type="checkbox"/>	Attribute #: 17
	Sequence: <input type="text"/>	Next Sequence Number: <input type="text"/>

Database Configuration Application

Introduction

You use the Database Configuration application to make any of several modifications to the database objects and their attributes and indexes. With it, you can:

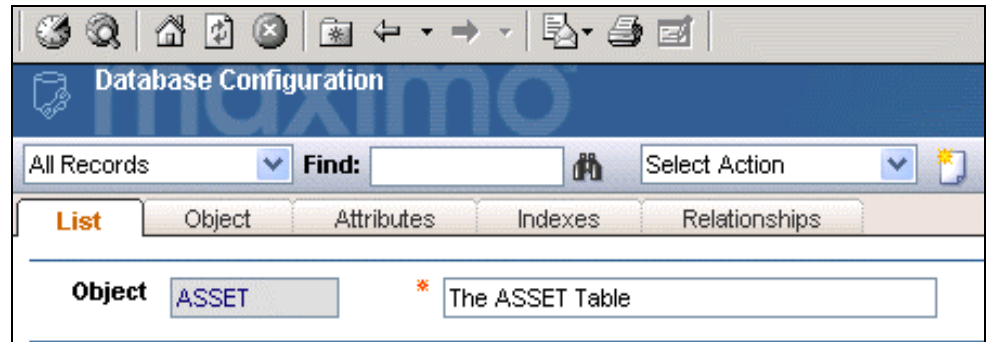
- change attribute definitions,
 - attach domains to attributes,
 - create new user-defined objects,
 - add new attributes to existing objects,
 - create and drop indexes,
 - create views,
 - specify GL account formats,
 - set the field format for integers, amounts,
 - update statistics on indexes to improve database performance,
 - configure Maximo with multiple languages, and
 - set up electronic signatures and electronic audit records.
-

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Database Configuration Application continued

Tabs

The Database Configuration application consists of the following five tabs:



Use This Tab...	To...
List	Search for database objects.
Object	Create or modify objects by selecting details and table values. You can also create views and enable electronic audit records.
Attributes	Display, create, or modify attributes. You can also define attribute aliases.
Indexes	Display or create indexes.
Relationships	Establish object parent-child relationships.

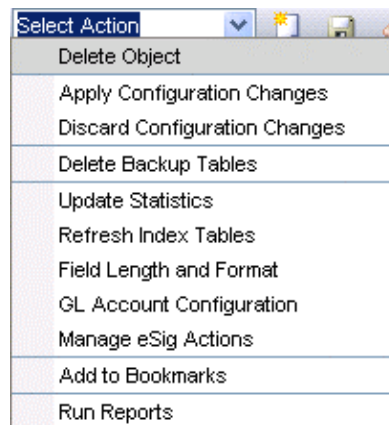
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Database Configuration Application continued

The Select Action Menu

In addition to the tasks you can accomplish using the tabs, you can use the Select Action menu to:

- delete objects
(Note: You can delete only user-defined objects.)
- apply and discard configuration changes
- delete backup tables
- update statistics
- refresh index statistics
- adjust field lengths and formats
- configure GL accounts
- manage E-signature actions



Managing Maximo Objects

Introduction

Maximo database configuration is based on business objects. There is a 1:1 correlation between each object and each existing table. Behind the scenes, the business object fetches the columns of the corresponding table and presents it to the user as attributes of the business object.

Use the Objects tab to create or modify objects by selecting details and table values. You can also create views and enable electronic signatures and electronic audit records.

You can add a new object from any tab of the Database Configuration application; however, creating database objects is beyond the scope of this course. Please refer to the *System Administrator's Guide* for more information.

Internal Objects

Certain objects are internal—part of the Maximo data dictionary. Internal objects cannot be modified or deleted. You can, however, view internal objects by using a filter in the **Advanced Search** functionality.

Viewing Internal Objects

Use the following steps to view internal objects.


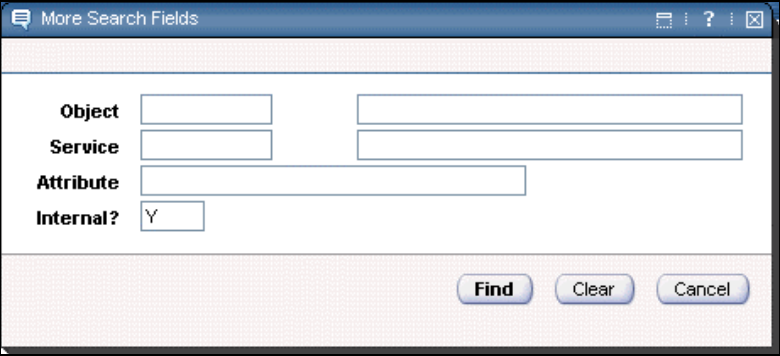



Step	Action
1	Open the Database Configuration application. <u>Hint:</u> It is in the Configuration module. <u>Result:</u> The Database Configuration application opens to the List tab.

continued on next page

Managing Maximo Objects continued

Viewing Internal Objects continued

Step	Action
2	<p>Click on the Advanced Search button </p> <p><u>Result:</u> The More Search Fields dialog box opens.</p> 
3	<p>In the Internal field, replace the N with a Y.</p>
4	<p>Click the Find button.</p> <p><u>Result:</u> The More Search Fields dialog box closes and the List tab displays all of the Internal objects.</p>
5	<p>When you are done reviewing the Internal objects, repeat steps 2 through 4, this time replacing the Y with an N.</p> <p><u>Warning:</u> Do not forget this step, or you will not be able to continue with these exercises.</p> 

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Managing Maximo Objects continued

Challenge Question

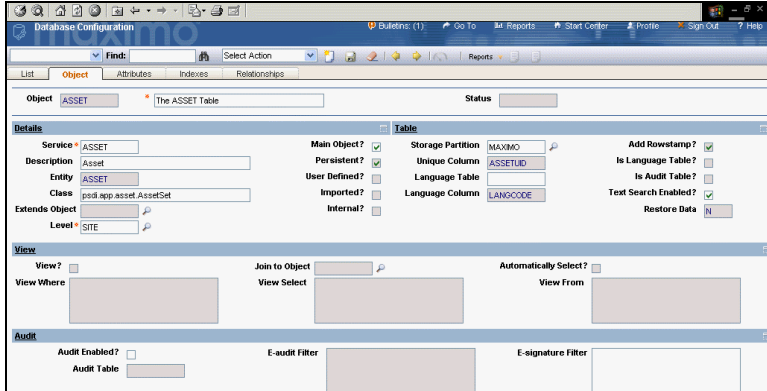


How would you view *both* normal objects and internal objects?

Displaying an Object



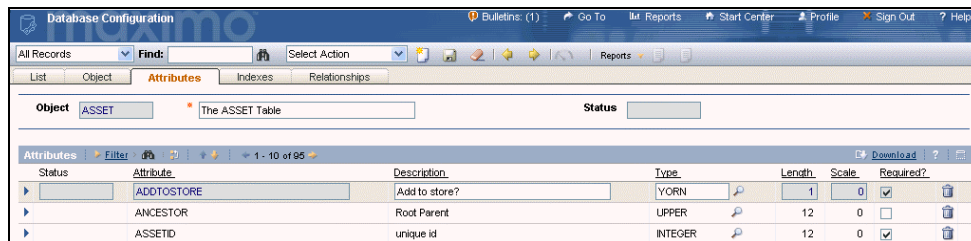
Follow these steps as we look at the Object tab for the ASSET object.

Step	Action
1	Open the Database Configuration application.
2	<p>Find and select the ASSET object. <u>Result:</u> The ASSET object displays on the Object tab.</p> 
3	With your instructor, spend some time reviewing the Maximo Help for the Database Configuration application.
4	With your instructor, review the fields of the Object tab.

Managing Maximo Attributes

The Attributes Tab

Use the Attributes tab to display, create, or modify attributes, and to define attribute aliases.



The Attributes tab displays the following columns:

- Status
- Attribute (all the attributes for the object)
- Description
- Type
- Length
- Scale
- Required?

The Attributes tab is divided into two sections. The Details section contains common characteristics that apply to most users. The Advanced section (not shown) contains characteristics less commonly used, and only in special cases will users have a need to view or modify these values.

You can edit some fields in a selected object or click **New Row** to add a new attribute.

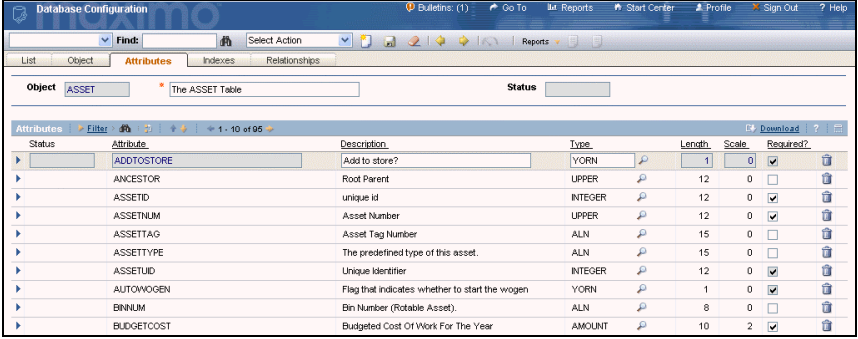
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Managing Maximo Attributes continued

Displaying an Object's Attributes



Use the following steps to display an object's attributes.

Step	Action
1	If you have not already done so, open the Database Configuration application, and then find and select the ASSET object.
2	<p>Click on the Attributes tab.</p> <p>Result: Maximo displays the Attributes tab for the ASSET object.</p> 
3	Review the fields of the Attributes tab with your instructor.

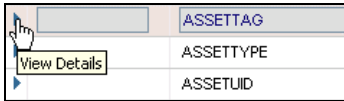
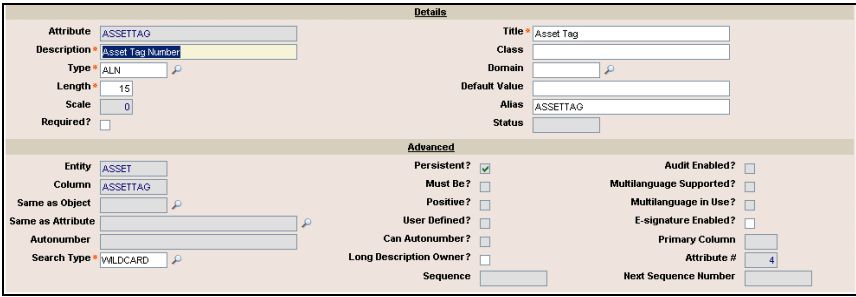
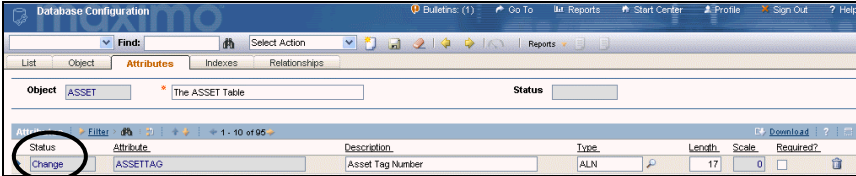

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Managing Maximo Attributes continued

Modifying an Attribute



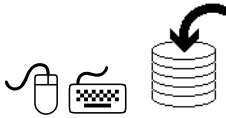
Use the following steps to modify an attribute for the ASSET object.

Step	Action
1	Find the ASSETTAG attribute.
2	<p>Click the View Details icon.</p>  <p><u>Result:</u> The Details section opens for editing.</p> 
3	<p>Change the value of the Length field to 17, then save your record.</p> <p><u>Result:</u> The Status changes to Change.</p>  <p> <u>Note:</u> We will apply the changes to the database (configure the database) later in this chapter.</p>

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Managing Maximo Attributes continued

Creating a New Attribute



Use the following steps to create a new attribute, COUNTRY OF ORIGIN, for the ASSET object.

Step	Action								
1	If the Database Configuration application is not already open, open it now, then find and select the ASSET object.								
2	Click on the Attributes tab.								
3	Open the Database Configuration Help and review the “How Do I ... Add Attributes” topic.								
4	When you are done reviewing the Maximo Help, close it.								
5	<p>Click the New Row button.</p> <p><u>Result:</u> A new row opens for data entry.</p> <div> </div>								
6	<p>Enter the following information and save your record:</p> <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Attribute</td> <td>CNTRYORIGIN</td> </tr> <tr> <td>Description</td> <td>Country of Origin</td> </tr> <tr> <td>Title</td> <td>Country of Origin</td> </tr> </tbody> </table> <p><u>Note:</u> Some of the fields on this form are beyond the scope of this course. Other field information, like Domains, is discussed later in this course.</p>	<u>Field</u>	<u>Value</u>	Attribute	CNTRYORIGIN	Description	Country of Origin	Title	Country of Origin
<u>Field</u>	<u>Value</u>								
Attribute	CNTRYORIGIN								
Description	Country of Origin								
Title	Country of Origin								

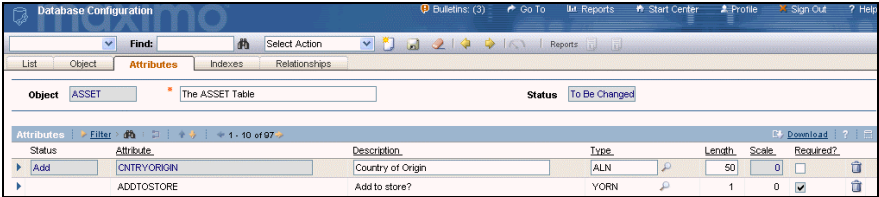
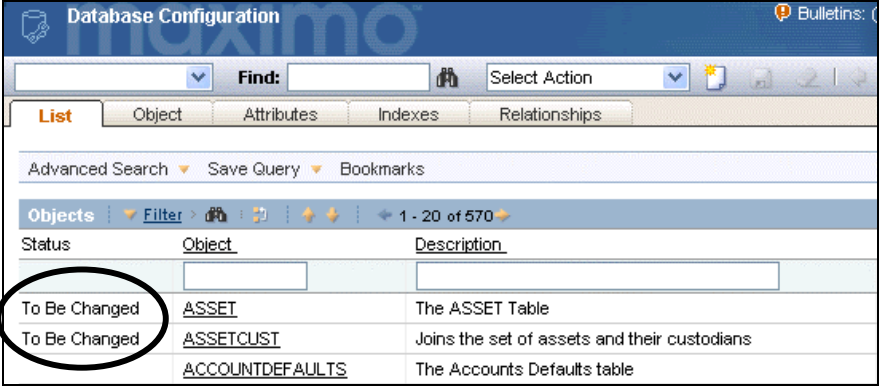


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Managing Maximo Attributes continued

Creating a New Attribute

continued

Step	Action
7	Save your record.
8	<p>Click the Close Details button.</p> <p><u>Result:</u> Notice that your new attribute is now listed with a status of Add.</p> 
9	<p>Return to the List tab.</p> <p><u>Result:</u> Notice that the changes you made to the ASSET object are waiting to be configured.</p>  <p>Note: We will configure the database later in this chapter.</p>

Managing Database Indexes

Definition

An *index* is a database object used internally by the system to speed up queries on a table. It consists of an ordered set of pointers stored separately from the table, and it points to frequently used columns.

Purpose

An index improves system performance by speeding access to data.

- In large databases, an index will speed up retrieval of data on-screen.
 - Reports drawn from large databases will compile faster if an index has been created on the column(s) they reference.
-

Maximo Indexes

Maximo comes with several predefined indexes. These indexes were created to reflect the most common transactions.

Most of these predefined indexes define the unique identifier for records in each table.

Note: Modifying Indexes

You cannot modify indexes—you can only create or delete them. To “modify” an index you must delete and then re-create it.



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Managing Database Indexes continued

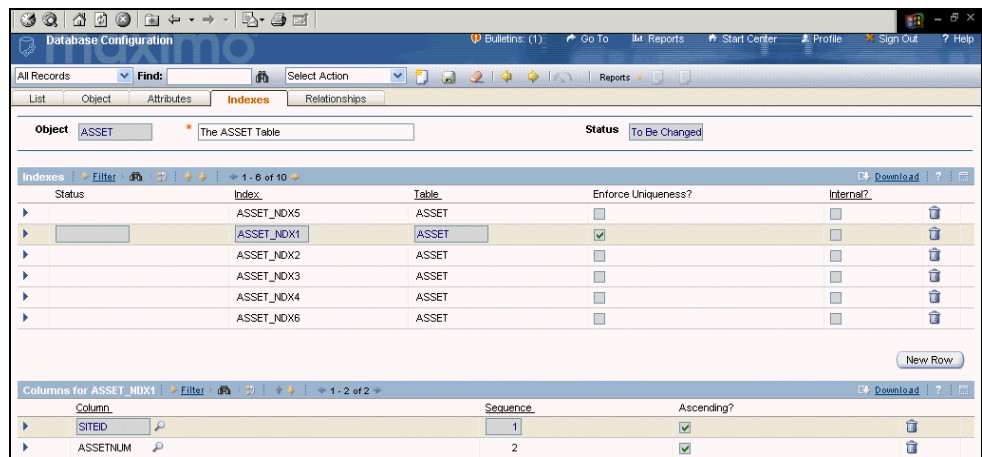
Example

ASSET_NDX1 is a predefined index on the ASSET object.

- It creates pointers to the SITEID and the ASSET attributes in ascending order.
- It enforces uniqueness of both columns for each record.

The Indexes Tab

You set up and modify database indexes using the Indexes tab.



Index Details



Using the following steps, review various aspects of the Indexes tab with your instructor.

Step	Action
1	If the Database Configuration application is not already open, open it now, then find and select the ASSET object.
2	Click to select the Indexes tab. <u>Result</u> : Maximo displays the Indexes tab.

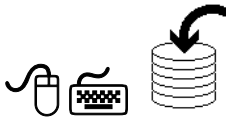
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Managing Database Indexes continued

Index Details continued

Step	Action																
3	<p>Click the View Details button for the ASSET_NDX1 index.</p> <p><u>Result:</u> You will see the following details:</p> <ul style="list-style-type: none"> • Uniqueness is enforced for this index. • Notice the Internal field for Maximo Data Dictionary indexes, and that it is read-only. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center; font-size: small;">Details</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Index</td> <td style="width: 30%;">ASSET_NDX1</td> <td style="width: 20%;">Clustered Index?</td> <td style="width: 20%;"><input checked="" type="checkbox"/></td> </tr> <tr> <td>Table</td> <td>ASSET</td> <td>Text Search Index?</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Enforce Uniqueness?</td> <td><input checked="" type="checkbox"/></td> <td>Storage Partition</td> <td>MAXIMO</td> </tr> <tr> <td>Internal?</td> <td><input type="checkbox"/></td> <td>Status</td> <td></td> </tr> </table> </div>	Index	ASSET_NDX1	Clustered Index?	<input checked="" type="checkbox"/>	Table	ASSET	Text Search Index?	<input type="checkbox"/>	Enforce Uniqueness?	<input checked="" type="checkbox"/>	Storage Partition	MAXIMO	Internal?	<input type="checkbox"/>	Status	
Index	ASSET_NDX1	Clustered Index?	<input checked="" type="checkbox"/>														
Table	ASSET	Text Search Index?	<input type="checkbox"/>														
Enforce Uniqueness?	<input checked="" type="checkbox"/>	Storage Partition	MAXIMO														
Internal?	<input type="checkbox"/>	Status															

Creating an Index



Note the currently existing indexes for the ASSET object:

Index Name	Unique	Column	Position
ASSET_INDX7	NONUNIQUE	ASSETID	1
ASSET_NDX	UNIQUE	ASSETUID	1
ASSET_NDX1	UNIQUE	SITEID	1
ASSET_NDX1	UNIQUE	ASSETNUM	2
ASSET_NDX2	NONUNIQUE	SITEID	1
ASSET_NDX2	NONUNIQUE	PARENT	2
ASSET_NDX3	NONUNIQUE	SITEID	1
ASSET_NDX3	NONUNIQUE	VENDOR	2
ASSET_NDX4	NONUNIQUE	SITEID	1
ASSET_NDX4	NONUNIQUE	CALNUM	2
ASSET_NDX5	NONUNIQUE	ITEMNUM	1
ASSET_NDX5	NONUNIQUE	SITEID	2
ASSET_NDX5	NONUNIQUE	ITEMSETID	3
ASSET_NDX6	NONUNIQUE	SITEID	1
ASSET_NDX6	NONUNIQUE	LOCATION	2
ASSET_NDX7	NONUNIQUE	SITEID	1
ASSET_NDX7	NONUNIQUE	ANCESTOR	2
ASSETDES_TIDX	NONUNIQUE	DESCRIPTION	1

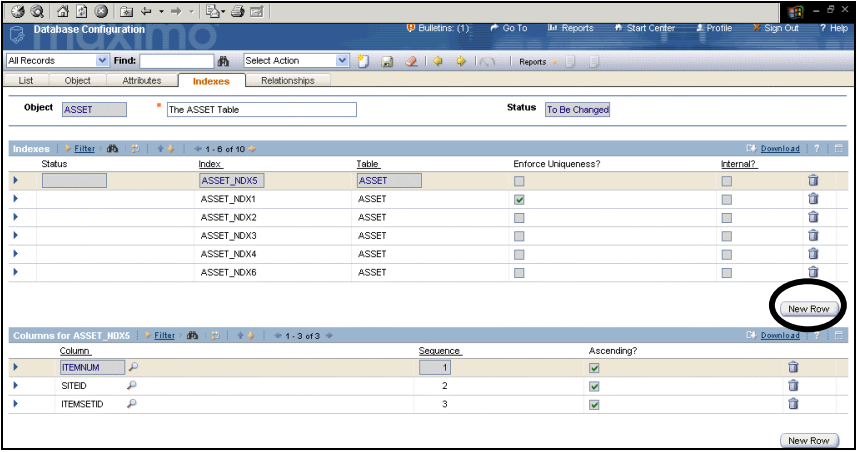
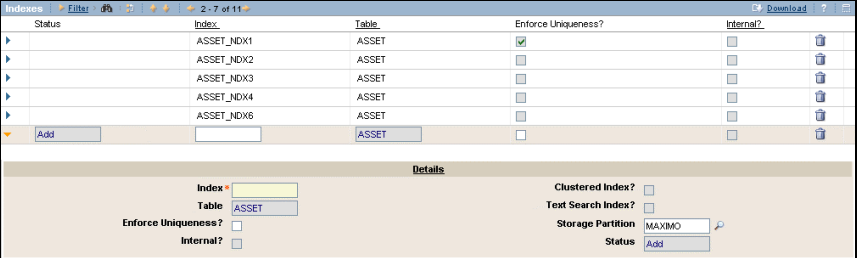
Assume that users at your company will create a grouped report and frequently query the ASSET object on its ORGID, SITEID, and TOTALCOST attributes. Use the following steps to create an index on these attributes.

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Managing Database Indexes continued

Creating an Index

continued


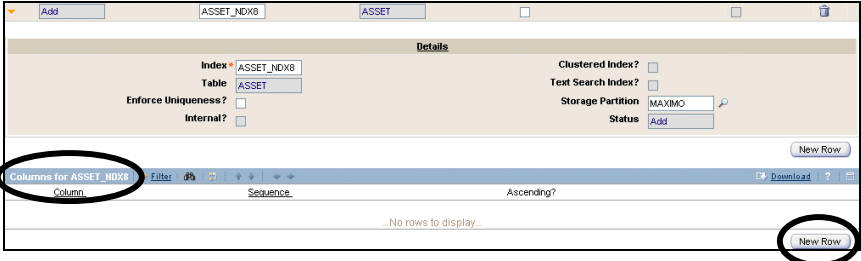
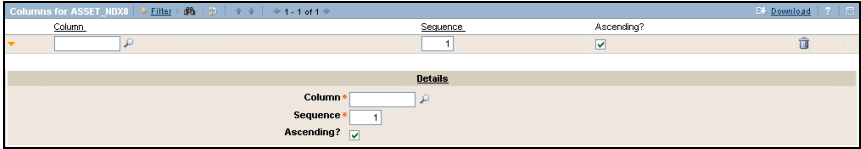
Step	Action
1	Open the Database Configuration application from the Configuration module menu, if it is not already open, and select the ASSET object.
2	Click on the Indexes tab.
3	 <p>Click the New Row button of the Indexes section, as shown here.</p> <p><u>Result:</u> A new row opens for data entry.</p> 

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Managing Database Indexes continued

Creating an Index

continued

Step	Action				
<p>4</p> 	<p>Enter the following information:</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Index</td> <td>ASSET_NDX8</td> </tr> </tbody> </table> <p><u>Note:</u> Leave the Enforce Uniqueness check box <i>unchecked</i>.</p> <p><u>Result:</u> Notice that the Columns section heading changes to:</p> <p style="text-align: center;">Columns for ASSET_NDX8</p> 	Field	Value	Index	ASSET_NDX8
Field	Value				
Index	ASSET_NDX8				
<p>5</p>	<p>Click the New Row button of the Columns for ASSET_NDX8 section.</p> <p><u>Result:</u> A new row opens for data entry.</p> 				
<p>6</p>	<p>Click the Select Value button of the Column field.</p> <p><u>Result:</u> The Select Value dialog box opens.</p>				
<p>7</p>	<p>Find and select the SITEID column.</p>				
<p>8</p>	<p>Repeat steps 5 and 6, creating a second new row.</p>				
<p>9</p>	<p>Find and select the TOTALCOST column.</p>				

continued on next page

Managing Database Indexes continued

Creating an Index

continued

Step	Action
10	Save your record. <u>Result:</u> Your new index ASSET_NDX8 is ready to be configured.
11	In the Indexes section, navigate to view your new index. <u>Result:</u> You can see that your new index ASSET_NDX8 is ready to be configured.

The screenshot shows the 'Indexes' section of the 'ASSET' table. A table lists several indexes, with 'ASSET_NDX8' highlighted by a red circle. Below this, the 'Details' for 'ASSET_NDX8' are shown, including the table 'ASSET', 'Enforce Uniqueness?' checked, 'Internal?' unchecked, 'Clustered Index?' unchecked, 'Text Search Index?' unchecked, and 'Storage Partition' set to 'MAXIMO'. At the bottom, a table shows the columns for 'ASSET_NDX8': ORGID (Sequence 1, Ascending), SITEID (Sequence 2, Ascending), and TOTALCOST (Sequence 3, Ascending).

Note: For the index to take effect, you will need to reconfigure the database. We will reconfigure the database later in this chapter.

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Managing Database Indexes continued

Challenge Question



Notice that at least one attribute of each index is on a required field.

Why do you think this is done?

Best Practice: It is a best practice and highly recommended that indexes contain at least one required field.

Dropping Indexes

You can drop an index by simply removing the data row the same way you remove any data row throughout Maximo: by clicking the **Trash** icon.

Result: The pending index to be dropped receives a status of Delete, as shown here.

Status	Index	Table	Enforce Uniqueness?	Internal?
	ASSETDES_TID	ASSET	<input type="checkbox"/>	<input type="checkbox"/>
Delete	ASSET_DUMMY	ASSET	<input type="checkbox"/>	<input type="checkbox"/>



Note: The change will be identified and take effect pending reconfiguration of the database. You will learn how to reconfigure the database in the next section.

Refreshing Indexes

The **Refresh Index Tables** Select Action menu option looks at the indexes as defined on the native database, and loads the Maximo metadata to reflect the actual native indexes found.

To test for improved performance before defining indexes as Maximo metadata, database administrators may define indexes via the back end, rather than going the other way and defining Maximo metadata first (using the UI).

In addition, SQL Server can automatically add indexes to a table depending on usage or other factors. After those have been built, you might want to update the Maximo metadata accordingly.

To refresh your database indexes that might have been added via the back end, simply select **Refresh Index Tables** from the Select Action menu.

Note: Please refer to the Maximo Help or the *System Administrator's Guide* for more information.



Configuring the Database

Introduction

After you complete changes to objects by modifying their attributes and adding indexes, you will need to institute those changes by configuring the database.

In this section you will learn how to configure the database. We will also discuss the implications of configuring the database.

WARNING



Changes to data (type, length, scale, and so forth) can cause data to be dropped from the database tables when they are configured.

Although data is automatically backed up from individual tables that have been reconfigured, as a safety measure you should *always* have a full backup of your database *before* you make any changes to it.

Saving Records and Configuring Notes



When you make changes using the Database Configuration application, remember the following points:

- Saving a change in the Database Configuration application does not implement the change in the database.
- When you save changes, they are stored in a **cfg** table.
- You can discard configuration changes before running the ConfigDB batch file.

Note: Discarding your changes might take some time and it is irreversible.

- Apply the configuration changes to the database using the ConfigDB batch file, which must be executed from the command line with the application server down.
- Review the documentation before running this process.
- When you run the ConfigDB batch file from the command line, you apply the pending changes to the database.



Note: When you run **configdb**, it configures and restores the data in one step.

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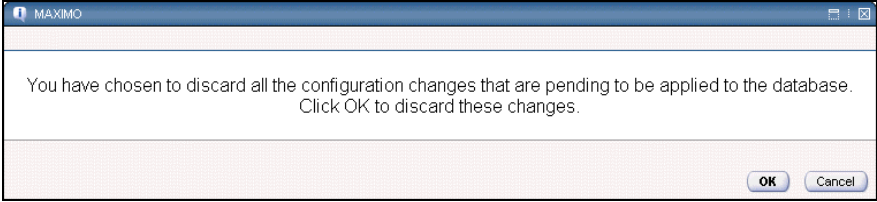
Configuring the Database continued

Discarding Changes



Follow the steps below to see how you would discard your pending changes to the database.

Warning: We will be looking at discarding your pending changes, but we will not be actually discarding them. If you do not proceed with caution, you may actually discard them, in which case you would lose all of your work thus far in this chapter. Please proceed with caution.

Step	Action
1	Open the Database Configuration application from the Configuration module, if it is not already open.
2	<p>From the Select Action menu, choose Discard Configuration Changes.</p> <p><u>Result:</u> Maximo displays a dialog box.</p>  <p><u>Warning:</u> Do <i>not</i> click the OK button!</p>
3	<p><i>Do</i> click the Cancel button.</p> <p><u>Result:</u> The dialog box closes.</p> <p><u>Note:</u> If you were to click OK, all of your pending changes would have been discarded.</p>

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Configuring the Database continued

Applying Configuration Changes



Use the following steps to configure any changes you have made to the database.

Be sure to save any changes you want made to the database by saving your records before you configure them.



Step	Action
1	<p>In the Database Configuration application, choose Apply Configuration Changes from the Select Actions menu.</p> <p><u>Result:</u> Maximo displays a reminder to apply configuration changes to the database using the ConfigDB batch file from the command line.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>MAXIMO</p> <p>Applying the configuration changes to the database (ConfigDB) must be executed from the command line with the application server down. Review the documentation before running this process.</p> <p style="text-align: right;">OK</p> </div> <p> <u>Note:</u> The ConfigDB file <i>must</i> be run from the command line, and the application server must be shut down.</p>
2	<p>Click OK.</p> <p><u>Result:</u> The MAXIMO dialog box closes.</p>
3	<p>With your instructor, review the “How Do I ... Configure the Database” section of Maximo Help.</p> <p> <u>Note:</u> You can print any of the Maximo Help topics by following the “How Do I ... Print a Help Topic” instructions in the Maximo Help Overview section.</p>
4	<p>Sign out of Maximo and close your Internet browser session.</p>

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Configuring the Database continued

Applying Configuration Changes

continued


Step	Action
5  	Shut down your Maximo Application Server as follows: <ul style="list-style-type: none"> • If you started your Maximo Application Server from a command line, use the Ctrl+C key combination to stop it. • If you started your Maximo Application Server as a service, use your Windows Services Administration to stop it. <p><u>Note:</u> In a standard MRO Software training environment, the Maximo Application Server is started via command line.</p> <p><u>Warning:</u> Make sure that the Actuate server and all third-party tools that might be in use to access the database are also disconnected from the database before you attempt to reconfigure the database. Otherwise, the database configuration may be impeded or even fail.</p> <p><u>Examples:</u> Some examples include, but are not limited to, SQL*Plus, Microsoft Excel, and Microsoft Access.</p>
6	Wait 60 seconds to make sure that all user sessions are actually terminated.
7	Open a new (Windows OS) Command Prompt window.
8	Change the directory to: <code>\\..\<Maximo Root>\tools\maximo</code> <u>Example</u> (Windows 2000): <code>cd c:\maximo\tools\maximo</code>

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Configuring the Database continued

Applying Configuration Changes

continued

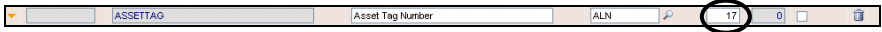
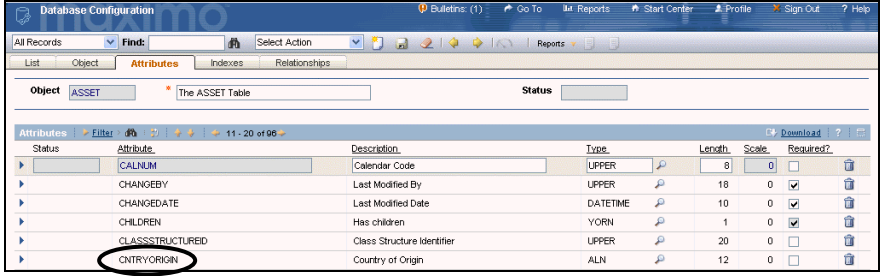

Step	Action
<p>9</p> 	<p>Type configdb to configure the database and automatically restore backup tables.</p> <p><u>Result:</u> The batch file ConfigDB.bat runs.</p> <p><u>Note:</u> We will look at various options for configuring the database in the next section.</p> <pre> C:\>cd c:\max60\maximo6\tools\maximo C:\Max60\MAXIMO6\tools\maximo>configdb Tue Dec 14 10:16:00 EST 2004 --- Starting --- Reading properties file : maximo.properties RestoreFromBackup started Tue Dec 14 10:16:02 EST 2004 for schema MAXIMO RestoreFromBackup connected to database jdbc:oracle:thin:@4DML41:1521:MAX6 ConfigDB started Tue Dec 14 10:16:02 EST 2004 for schema MAXIMO ConfigDB connected to database jdbc:oracle:thin:@4DML41:1521:MAX6 Getting metadata Configuring tables Altering table ASSET Configuring views Refreshing attribute metadata Refreshing object metadata Rebuilding native indexes Refreshing index metadata Updating table storage partitions Nothing to be restored. ConfigDB completed Tue Dec 14 10:17:08 EST 2004 RestoreFromBackup completed Tue Dec 14 10:17:08 EST 2004 C:\Max60\MAXIMO6\tools\maximo>_ </pre>
<p>10</p>	<p>When you get the command prompt back, you will see this message:</p> <p style="text-align: center;">RestoreFromBackup completed [<i>Date/time Stamp</i>]</p> <p>Type exit at the command prompt.</p> <p><u>Result:</u> Your database is reconfigured, and the Command Prompt window closes.</p>
<p>11</p>	<p>Navigate to your \\...\<Maximo Root>\tools\maximo\log directory, and open and review the log file for the database reconfiguration.</p>

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Configuring the Database continued

Applying Configuration Changes

continued

Step	Action
12	<p>Close the log file, restart your application server, sign back in to Maximo, and verify that your database changes are now in effect.</p> <p><u>Hint</u>: You performed the following:</p> <ul style="list-style-type: none"> Modified the ASSETTAG attribute for the ASSET object  <ul style="list-style-type: none"> Created the CNTRYORIGIN attribute for the ASSET object  <ul style="list-style-type: none"> Created the ASSET_NDX8 index for the ASSET object 

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Configuring the Database continued

Challenge Exercise



At your instructor’s discretion: Drop the ASSET_NDX8 index from the ASSET object and reconfigure your database.

The ConfigDB Batch File Parameters

Notes about the ConfigDB.bat command file:

- The default database is defined in the maximo.properties file, as defined by the **-k** parameter.
- The following table shows the parameters available for the **configdb.bat** file:

Parameter	Default?	Description
-a (db alias)	No	Database alias. If not specified, uses mx.e.db.url property.
-d (logfile dir)	No	If using the -l parameter, this will output logfile to the specified directory. If not specified, outputs to the MXServer log directory, which is normally tools\maximo\log. <u>Note:</u> exception is drop backup tables . If done through action in UI, log file is put in a bea directory. If run from command, line then the above applies.
-e	Yes	Causes SQL to be executed. (The default command line includes the -e parameter.)
-f (filename)	No	Filename for the properties file. If not specified, uses maximo.properties. (Also see the -k parameter for propfile directory.)
-k (propfile dir)	Yes	Directory for properties file. (Also see the -f parameter for propfile filename.) (The default command line includes the -k parameter.)
-l	Yes	Outputs to a detailed log file. (The default command line includes the -l parameter.) <u>Note:</u> If you don’t use -l, a log file is still generated, but it does not contain the sql statements of the configure process.

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Configuring the Database continued

The ConfigDB Batch File Parameters

continued

Parameter	Default?	Description
-o (filename)	No	If using the -l parameter, the filename for the logfile. If not specified, logfile is "ConfigDB" + timestamp + ".log". (Also see the -d parameter for logfile directory.)
-p (password)	No	Password for database connection. If not specified, uses mxe.db.password property, or "maximo". <u>Note:</u> The specified user must be the owner of the tables.
-r	Yes	Call RestoreFromBackup immediately after ConfigDB ends without error. Take care when using this parameter, as there are occasions when the data in the temp tables (XX+tablename) must be modified before attempting the Restore. (The default command line includes the -r parameter.)
-u (username)	No	Username for database connection. If not specified, uses mxe.db.user property, or "maximo". <u>Note:</u> The specified user must be the owner of the tables.

The ConfigDB Batch File Commands

call commonEnv.bat

```
@..\java\jre\bin\java -classpath %MAXIMO_CLASSPATH%
psdi.configure.ConfigDB -l -e -r -k..\applications\maximo\properties
%1 %2 %3 %4 %5 %6
```



Note: Please refer to the Maximo Help or the *System Administrator's Guide* for more information.

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Configuring the Database continued

Backup Table Restoration

If you do not want to automatically restore the backup tables during database configuration:

1. Open the ConfigDB.bat file and remove the `-r` parameter.
2. Return to the Command Prompt and type `configdb`.

This will configure the database without restoring the data (from the backup tables).



Note: You use the **restorefrombackup.bat** batch file to then restore the data from the backup tables.

Errors

You can check for errors by consulting the log files. You can also use the log files to help you troubleshoot any problems. They are located at:

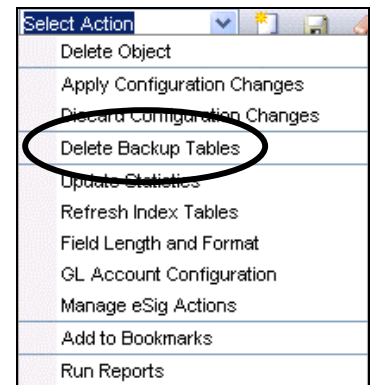
\\...\<Maximo Root>\tools\maximo\log



Note: If the database reconfiguration causes such errors that the application server cannot restart, then consult the log files as well.

Deleting the Backup Tables

As stated earlier, one of the default parameters set for configuring the database is the `-r` parameter, for restoring data from the backup tables. However, the backup tables are not dropped as part of the database configuration. If you want to remove them, you can do so by selecting **Delete Backup Tables** from the Select Action menu of the Database Configuration application (or from the command prompt).

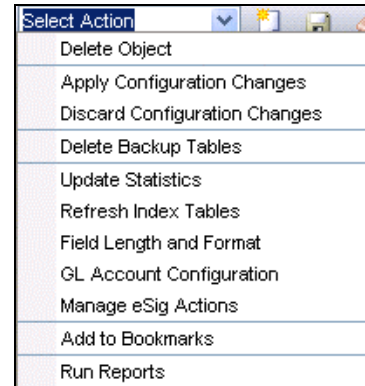


Additional Database Configuration

Introduction

In this section you will learn about four additional database configuration options:

- Update Statistics
- Field Length and Format
- GL Account Configuration
- Manage eSig Actions



Update Statistics



Updating statistics improves database performance by reorganizing the database indexes based on current data. It is useful to do this after entering or deleting a large number of records. It does no harm to update statistics daily.

You can use any tab of the Database Configuration application to update statistics.



Warning: The updating of statistics can take an unusually long time to complete. During this time there should be *no* users adding or modifying records in the database.

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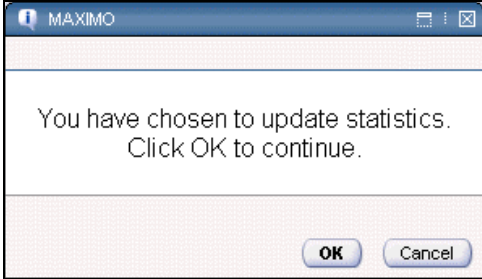

Additional Database Configuration continued

**[Optional]
Update Database
Statistics**



Use the following steps to update statistics in your training environment.

Note: Perform the following steps *only* upon the direction of your instructor, especially if you are not in a standard MRO Software training environment.

Step	Action
1	<p>From the Select Action menu, choose Update Statistics.</p> <p><u>Result:</u> Maximo displays the following dialog box.</p> 
2	<p>Click OK.</p> <p><u>Result:</u> The update proceeds automatically.</p> 

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Additional Database Configuration continued

Field Length and Format

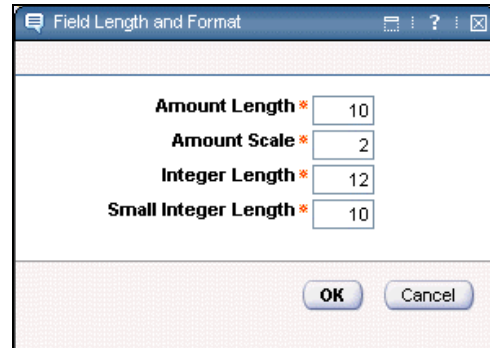




Use the Field Length and Format dialog box to specify how you want currency amounts to appear in Maximo fields.

Note: This is not limited to currency amounts.

You can use any tab of the Database Configuration application to specify the field length and format.

You would use the following steps to specify the currency amount field format.



1	From the Select Action menu, choose Field Length and Format .
2	Specify the maximum length in the Amount Length field. The default value is 10.  <u>Note:</u> You cannot shorten a field if Maximo has data in that field longer than the length you are specifying.
3	Specify the number of decimal places in the Amount Scale field. The default is 2.  <u>Note:</u> If you only want to increase the scale by 1, you also have to increase the length by 1.
4	Specify the total number of integers in the Integer Length field. The default is 12.
5	Specify the number of small integers in the Small Integer Length field. The default is 10.

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Additional Database Configuration continued

Field Length and Format

continued



Note 1: Changing the amount field format changes the definition for all columns of the AMOUNT data type. SQL Server implements the changes directly; you do not have to configure the database. Oracle alters the tables; you must configure the database for the changes to take effect.



Note 2: Use the Windows Control Panel's Regional Settings application to specify some aspects of amount fields, such as currency symbols.

See the *System Administrator's Guide* for more information.

GL Account Configuration

For information on the **GL Account Configuration** option, please refer to Chapter 5 of this course ("Financial System Configuration").

Manage eSig Actions

This is covered in the next section of this chapter.

Overview of E-signature and E-audit

Introduction

Electronic signatures and electronic audit records (e-signature and e-audit) provide an additional level of security control and auditing.

Using this capability, the system administrator can:

- require a user to provide a specific *signature* when saving or changing a record or accessing a specific menu item, and
- record and *audit* changes to records and keep copies of those changes to produce an audit trail.

You can enable electronic signature and electronic audit records independently of each other. Typically, however, they are used together.

- You can enable E-signature for Maximo menu items.
 - You can enable both E-signature and E-audit for Maximo objects.
-

Electronic Signatures

An *electronic signature* consists of a user ID and a password known only to the user. It confirms that the person changing a record is the person who signed in to the system.

Electronic Audit Records

An *electronic audit record* is a copy of a change to a database record, which is made when the user saves the record to the database.

If someone subsequently deletes the database record, you still have a copy of the change in the electronic audit record.

Required Components

The administration of E-signature and E-audit requires the following three components:

- Login Tracking
- Electronic Signature
- Electronic Audit

Login Tracking is available through the Users application. Electronic Signature and Electronic Audit are available through the Database Configuration application. The remainder of this section will show you how these components work together to increase application security and provide an audit trail of selected actions and field changes.

continued on next page

Overview of E-signature and E-audit continued

Login Tracking



Note: For E-signature to function, *Login Tracking must be enabled*. Login tracking is set through the Users application.

E-signature Independent of E-audit

Although E-signature and E-audit are typically used together, they can be implemented independently.

The following sections of this chapter demonstrate this fact.

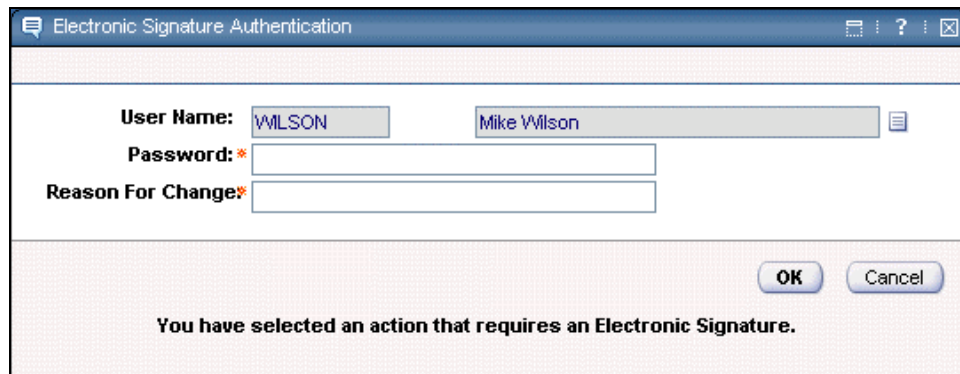
Managing E-signature

Introduction


The E-signature option causes Maximo to request the user to enter a password when changing particular field values or carrying out designated actions in specified applications.

The Electronic Signature Authentication Dialog Box

When a user performs a specified action or changes a particular field requiring an electronic signature, Maximo displays the Electronic Signature Authentication dialog box, similar to the following graphic:



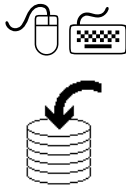
The following table describes the fields in the Electronic Signature Authentication dialog box.

Field Name	Use
User Name	This field autofills with the name of the current Maximo user.
Password	The user must enter his or her password into the field.
Reason For Change 	The user must enter the reason for the change. <u>Note:</u> In standard Maximo, this is a mandatory field.

continued on next page

Managing E-signature continued

E-signature for Menu Items



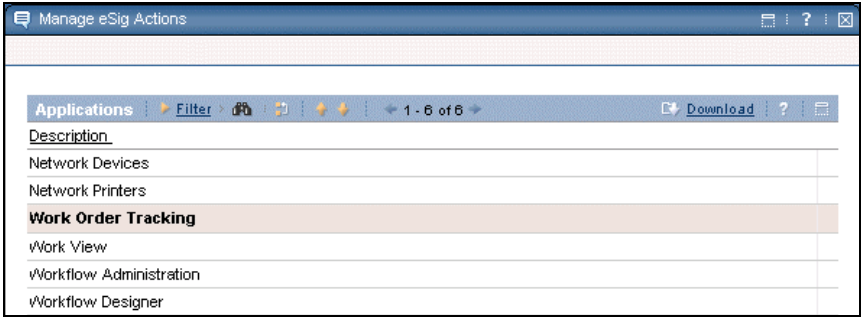
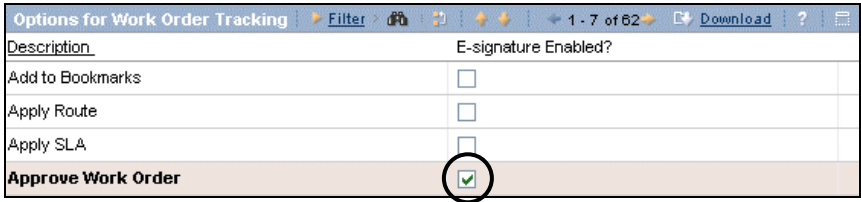
Use the following steps to enable E-signature for menu items.

Step	Action
1	Ensure that Login Tracking is enabled. If it is not, enable it. <u>Hint:</u> Use Security Controls from the Select Action menu in the Users application or the Security Groups application. (See Chapter 4 of this course for more information.)
2	In the Database Configuration application, select Manage eSig Actions from the Select Action menu. <u>Result:</u> The Manage eSig Actions dialog box opens. <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> </div>

continued on next page

Managing E-signature continued

E-signature for Menu Items continued

Step	Action
3	<p>In the Applications section, find and select the Work Order Tracking application.</p> <p><u>Result:</u> Your display should look similar to this one.</p> 
4	<p>In the Options for Work Order Tracking section, find and select the Approve Work Order description.</p> <p><u>Hint:</u> Use the filter.</p>
5	<p>For Approve Work Order, click to place a checkmark in the E-signature Enabled? column.</p> <p><u>Result:</u> Your display should look similar to this one.</p> 
6	<p>In the Options for Work Order Tracking section, find and select the Change Status description.</p> <p><u>Hint:</u> You can use the navigation arrows.</p>
7	<p>For Change Status, click to place a checkmark in the E-signature Enabled? column.</p>

continued on next page

Managing E-signature continued

E-signature for Menu Items continued

Step	Action
8	Click OK . <u>Result:</u> The Manage eSig Actions dialog box closes.
9	Save your record. <u>Result:</u> E-signature is now enabled for these menu items.

Checking E-signature



Use the following steps to view the results for enabling E-signature from the previous exercise.

Step	Action
1	Open the Work Order Tracking application.
2	Find and select Work Order 1000.
3	Change the status to APPR (Approved). <u>Result:</u> After you click OK in the Change Status dialog box, the Electronic Signature Authentication dialog box opens.

Electronic Signature Authentication

User Name:

Password: *

Reason For Change: *

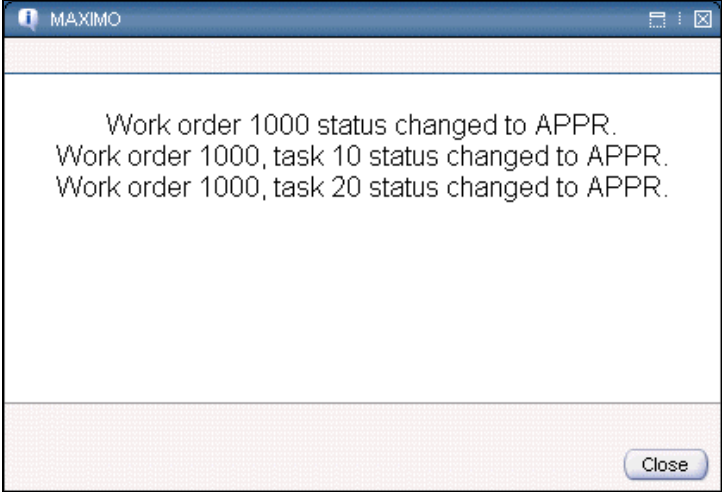
You have selected an action that requires an Electronic Signature.

continued on next page

Managing E-signature continued

Checking E-signature

continued

Step	Action
4	Enter the password for the identified user. In a standard MRO Software training environment with User Name wilson, the Password is wilson.
5	Enter a Reason For Change . You can use: Testing e-Signature authentication or something similar.
6	Click OK . <u>Results:</u> <ul style="list-style-type: none"> • The Electronic Signature Authentication dialog box closes. • The Change Status dialog box closes. • A Maximo information box might open. 
7	If a Maximo information box opens, click Close .
8	Return to the Start Center.

continued on next page

Managing E-audit

Introduction

Electronic Audit Record functionality (E-audit) enables you to maintain a history of changes made to records in Maximo applications.

This history is maintained in separate database audit record tables.

When you enable E-audit for an object, Maximo creates an audit table for that object. The **Audit Table** field contains the name of the audit table and defaults to the name of the selected database table preceded by "A_".

Example: A_ASSET

You can specify a different name.

E-audit Process Overview

After E-audit is enabled on a Maximo object, Maximo writes an audit record to the corresponding audit table when the indicated attribute is modified.

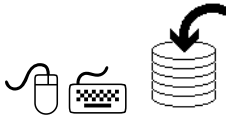
The audit record includes the following data:

- A copy of the changed data
 - The Maximo user name of the user who made the change
 - An identifier indicating whether the change was an insert, update, or delete
 - The current date and time of the transaction
 - A rowstamp
 - A unique E-audit transaction ID
 - A unique eSig transaction ID (if E-signature has also been enabled)
 - The key value columns for the record, even if those attributes (or columns) are not E-audit enabled (for example, the key value *work order number* is recorded in the record even when another attribute in the WORKORDER object triggers the electronic audit)
-


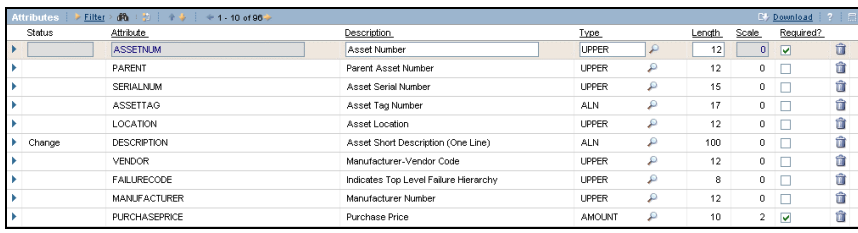
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Managing E-audit continued

E-audit for Maximo Objects



Use the following steps to enable E-audit for the ASSET object.

Step	Action
1	Open Maximo to the Database Configuration application, then find and select the ASSET object.
2	From the Object tab, open the Audit section. <u>Result:</u> Your display should look similar to the following: 
3	Click to select the Audit Enabled? field's check box if it is not already checked. <u>Result:</u> E-audit will be enabled for this object when the database is reconfigured, but you must specify for which attribute(s).
4	Save your record, and then select the Attributes tab. <u>Result:</u> The object's status changes to: To Be Changed . <u>Hint:</u> You might have to re-sort and/or navigate to view the status.
5	Click the View Details button for the Description attribute. <u>Note:</u> When you enable the Description field for e-audit, the long description field is also audited.
6	In the Advanced section, click to select the Audit Enabled? field.
7	Save your record. <u>Result:</u> E-audit will be enabled for this attribute when the database is reconfigured. 

continued on next page

Managing E-audit continued

E-audit for Maximo Objects

continued

Step	Action
8	Reconfigure your database as follows: <ol style="list-style-type: none"> a. Sign out of Maximo. b. Shut down the application server. c. Wait 60 seconds. d. Run ConfigDB.bat from the command prompt. e. Check the log files for errors. f. Restart the application server.
9	Verify E-audit by opening the Asset application and changing the description of a record.

Optional Exercise

Open SQL*Plus and query for your new E-audit table (A_ASSET) that should have been created for the ASSET object during database reconfiguration.

Look at the columns on your new A_ASSET table.

Hint: Use the Oracle SQL*Plus DESC command.

Additional Information

Though it is beyond the scope of this course, you could create an SQL Query (or an Actuate report) with a table join between the E-audit table and the Login Tracking table. Thus, you would have a detailed report for auditing of who changed what and why.

Chapter Summary

Database Configuration Overview

The Maximo database is extensive and flexible. As the administrator, you often have the responsibility of adapting the database to your company's specific needs.

The Database Configuration application provides a wide range of capabilities and options to make configuration changes to the Maximo database.

Configuring the Database

After you complete changes to objects by modifying their attributes and adding indexes, you need to institute those changes by configuring the database.

In this section you learned how to configure the database. You also discussed the implications of configuring the database.

Additional Database Configuration

In this section you learned about four additional database configuration options:

- Update Statistics
 - Field Length and Format
 - GL Account Configuration
 - Manage eSig Actions
-

Overview of E-signature and E-audit

Electronic signatures and electronic audit records (E-signature and E-audit) provide an additional level of security control and auditing capability in Maximo applications.

Using this capability, the system administrator can:

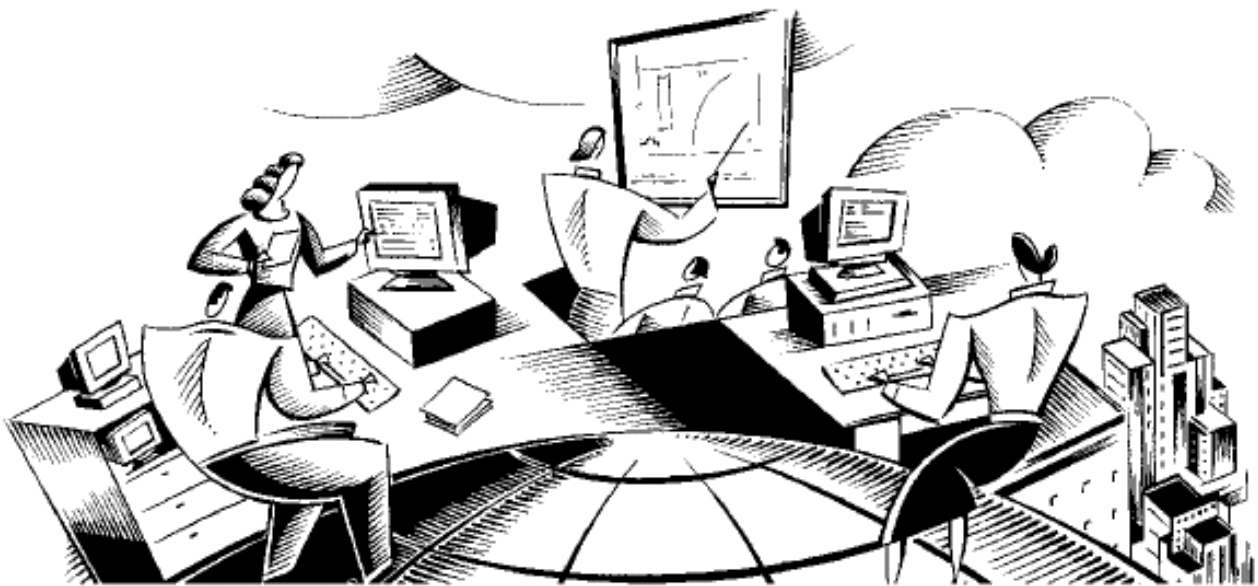
- require a user to provide a specific *signature* when saving or changing a record or accessing a specific menu item, and
- record and *audit* changes to records and keep copies of those changes to produce an audit trail.

You can enable electronic signature and electronic audit records independently of each other. Typically, however, they are used together.

- You can enable E-signature for Maximo menu items.
 - You can enable both E-signature and E-audit for Maximo objects.
-

System Administration for MXES

Chapter 9: Managing Domains and Multi-Language



In This Chapter

This chapter contains the following topics:

Topic	See Page
Chapter Overview	9-1
Managing Domains	9-2
Modifying Domains	9-4
Creating Domains	9-13
Chapter Summary	9-22

Chapter Overview

Introduction

This chapter covers Domains, some of which were previously known as Value Lists.

Chapter Focus

The intent of this chapter is to provide a high-level overview of key application elements and functionality.

You will obtain maximum benefit if you:

- work actively with your instructor during demonstrations and exercises, and
 - ask many questions that relate to your additional informational needs.
-

Learning Objectives

When you have completed this chapter, you should be able to:

- Describe a domain
 - Modify a domain
 - Create a domain
 - Associate a domain with an attribute
-

Managing Domains

Introduction

Some fields in Maximo have drop-down lists from which users choose an appropriate value. These lists of defined values are known as *domains* (sometimes referred to as *value lists*). Maximo uses many domains in its applications.

As an administrator, you will use the Domains application to add new domains or modify existing ones to fit with your business practices.

Types

Maximo uses the following kinds of domains, each of which is explained in more detail in its associated “How Do I...” topics in the online help:

Type	Description
SYNONYM	Special, reserved domains in Maximo. You cannot add new SYNONYM domains or delete existing ones. You can add new synonym values.
ALN	A simple list of values using one of the alphanumeric data types.
NUMERIC	A simple list of values using one of the numeric data types.
NUMRANGE	A list of values you define by specifying a range.
TABLE	A dynamic set of values derived by specifying an object attribute in the database.
CROSSOVER	A value you program Maximo to retrieve from one field to insert into another. Unlike the other domains, this one does not involve a list of values, but rather a particular value, if it exists, from another record.

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Managing Domains continued

The Domains Application

The Domains application contains a single table window to add, view, modify, or delete domains.

- To modify existing domains, you can edit a domain in the table window, or click **Edit Details** to edit in a Domain dialog box.

Note: You can edit only the **Description** and **Length** fields in the table window. If you click **Edit Detail**, you can edit **description**, **length** (depending on type), and **add/modify values**.

- To add a domain, you click **Add New Domain** at the bottom of the table window.

The screenshot shows the Maximo Domains application window. The table displays the following data:

Domain	Description	Domain Type	Data Type	Length	Scale
PCARDTYPE	PCardType	SYNONYM	ALN	20	0
TRANSEMAIL	Transaction Email Notification	SYNONYM	ALN	15	0
WFROLETYPE	WFROLETYPE	SYNONYM	UPPER	12	0
MRSTATUS	MR Status	SYNONYM	UPPER	8	0
MRTYPE	MR Type	SYNONYM	UPPER	10	0
WFASGNSTATI	WF Assignment Status	SYNONYM	UPPER	10	0
YFMALELECT	WF Mail Election	SYNONYM	UPPER	15	0
WFNODETYPE	WF Node Type	SYNONYM	UPPER	18	0
WFNSTAT	WFN Status	SYNONYM	ALN	25	0
WFTRANSTYPE	WF Transaction Type	SYNONYM	ALN	25	0
LOOKUPPREPI	Lookup Operators	ALN	ALN	10	0
POECOMTRAN	PO ECOM TRANSACTION STATUS	SYNONYM	ALN	12	0
FCSTATUS	FCSTATUS	SYNONYM	UPPER	8	0
FCTYPE	FCTYPE	SYNONYM	ALN	8	0
ASSETSTATUS	ASSETSTATUS	SYNONYM	UPPER	8	0
METERTYPE	METERTYPE	SYNONYM	UPPER	25	0
READINGTYPE	READINGTYPE	SYNONYM	UPPER	10	0
ARTICLETYPES	ARTICLETYPES	SYNONYM	UPPER	8	0
AVERAGEMETH	AVERAGEMETHOD	SYNONYM	UPPER	25	0
ROLLODOWNISO	ROLLODOWNSOURCE	SYNONYM	UPPER	10	0

Beyond Domains

Adding a domain in the Domains application is only part of the process of adding a working domain to Maximo. After you add a domain, you still have several tasks to perform, depending on the domain and how you want to display it in Maximo:

- Associate the new domain with an attribute. You perform this task in the Database Configuration application.
- Configure the database.
- Use the Screen Designer to modify the UI as needed. For example, if you added an ALN domain, you add the drop-down list button using the Screen Designer. New crossover fields might require new fields in the receiving application.

Modifying Domains

Synonym Domains

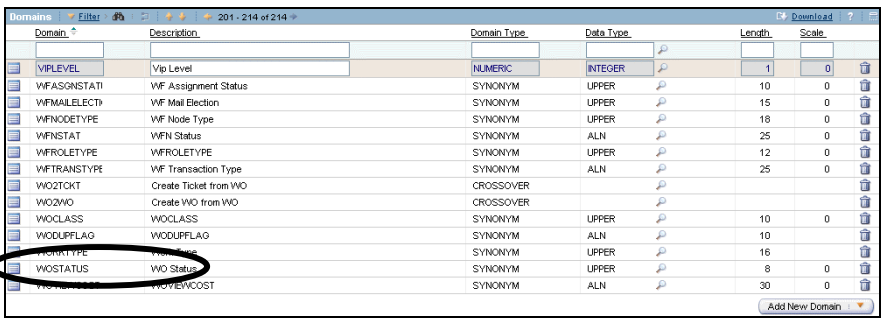
SYNONYM domains are restricted. You cannot add new SYNONYM domains. You can add new synonym values.

An example of a SYNONYM domain is work order status (WOSTATUS). Maximo has several values to reflect status: APPR (Approved), CAN (Canceled), CLOSE (Closed), COMP (Completed), WAPPR (Waiting on Approval), and others.

Each work order status has an internal value, used by Maximo in its business rules, and a value that users see and choose from. You cannot add a new internal value. You can add a synonym, the value presented to the user. For example, suppose your company procedures require two people to approve a work order. You could add synonym values for the internal WAPPR value. You could then present two different values to the user—for example, WAPPRMAN and WAPPRVP—to represent approvals at the manager and vice-president level.

Adding a Synonym Value

Use the following exercise to create a new synonym value (PENDING) for the internal work order status value of WAPPR.

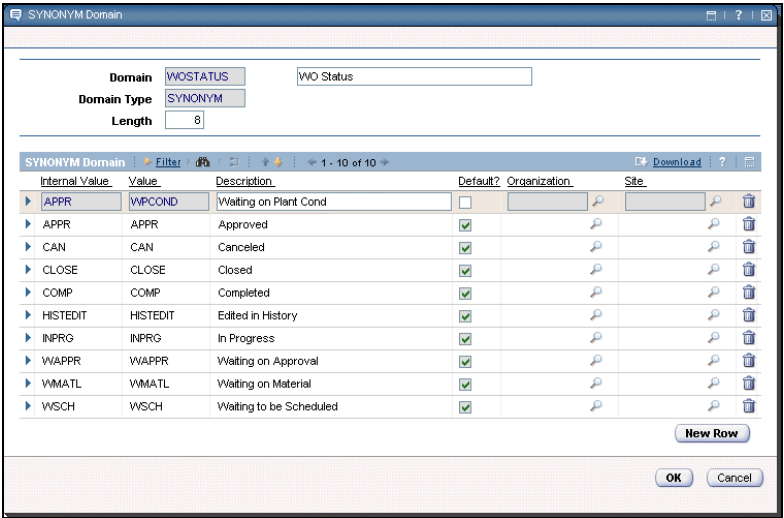
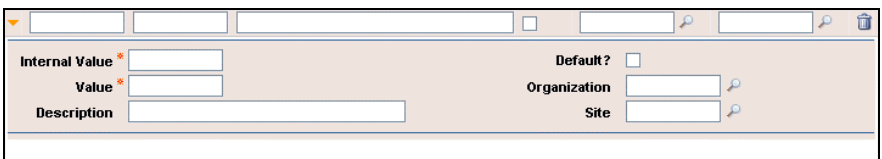
Step	Action
1	Sign in to Maximo as user wilson (or as otherwise directed by your instructor).
2	Open the Domains application (Configuration module) and search for the WOSTATUS domain: 

continued on next page

Modifying Domains continued

Adding a Synonym Value

continued

Step	Action
3	<p>Click on the Edit Detail button to open this domain for editing. Result: The SYNONYM Domain dialog box opens.</p>  <p>In the Synonym Domain table window, you see the set of current values. The Internal Value is used by Maximo and must be unique. The Value and its Description are what users see.</p>
4	<p>Click New Row. Result: A new row opens for data entry.</p> 

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Modifying Domains continued

Adding a Synonym Value

continued

Step	Action								
5	Enter the following information: <table border="0"> <tr> <td><u>Field</u></td> <td><u>Value</u></td> </tr> <tr> <td>Internal Value</td> <td>WAPPR</td> </tr> <tr> <td>Value</td> <td>PENDING</td> </tr> <tr> <td>Description</td> <td>Pending Approval</td> </tr> </table>	<u>Field</u>	<u>Value</u>	Internal Value	WAPPR	Value	PENDING	Description	Pending Approval
<u>Field</u>	<u>Value</u>								
Internal Value	WAPPR								
Value	PENDING								
Description	Pending Approval								
6	Click OK . <u>Result:</u> Your new synonym value is saved.								

Notes

Default? check box: Select this check box if you want Maximo to use the new synonym value by default. Each internal value can have only one default synonym value.

Example: Maximo inserts WAPPR as the status when you create a new work order. You add a synonym value, PENDING. If you want Maximo to insert PENDING instead of WAPPR, then make PENDING the default.

Organization or **Site:** Maximo by default applies domains at the system level. If you want a domain value to apply to a specific organization or site, enter the relevant values in the **Organization** and **Site** fields.



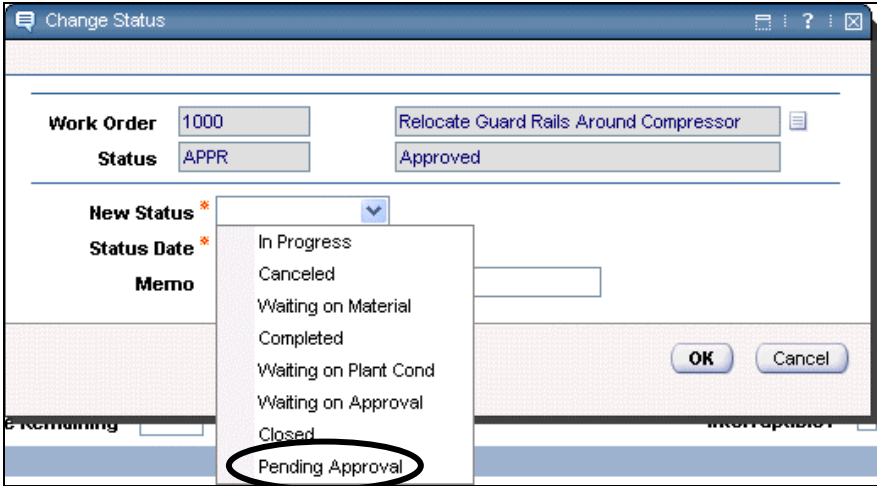
Warning: After you have implemented Maximo and inserted records, you should not add a synonym value with a site or organization specified. This can invalidate existing data.

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Modifying Domains continued

Checking Your Work

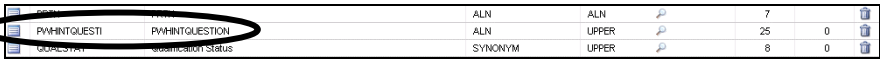
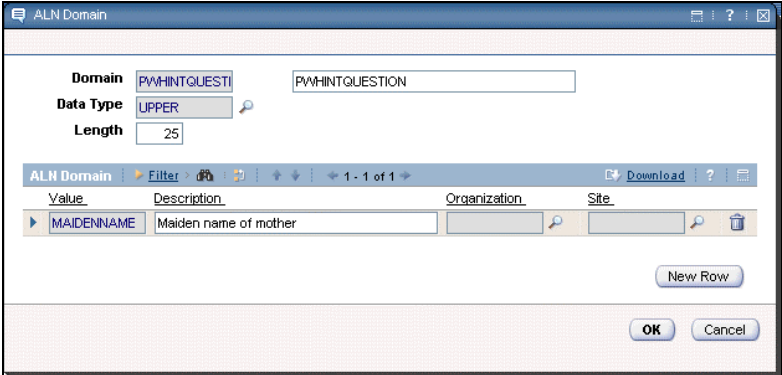
Use the following steps to verify your new SYNONYM domain value.

Step	Action
1	Sign in to Maximo as user wilson (or as otherwise directed by your instructor).
2	Open the Work Order Tracking application, then search for and select work order 1000.
3	Open the Change Status dialog box.
4	<p>Open the drop-down list for the New Status field.</p> <p><u>Result:</u> Your new synonym displays as part of the Value List for Work Order Status.</p> 
5	<p>Click Cancel, and return to the Start Center.</p> <p>[Optional]: Choose Pending Approval.</p>

Modifying Domains continued

Modifying an ALN Domain

In this exercise you will modify an ALN domain. Recall that earlier in this course we looked at the Password Hint Question. There is only one value in this domain. Use the following steps to add additional values.

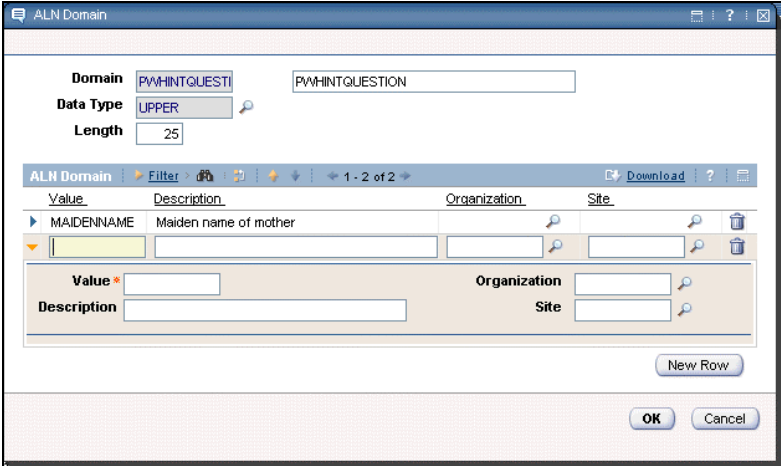
Step	Action
1	Sign in to Maximo as user wilson (or as otherwise directed by your instructor).
2	Open the Domains application (Configuration module) and search for the PWHINTQUESTION domain: 
3	Click on the Edit Detail button to open this domain for editing. <u>Result:</u> The ALN Domain dialog box opens. 

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Modifying Domains continued

Modifying an ALN Domain

continued

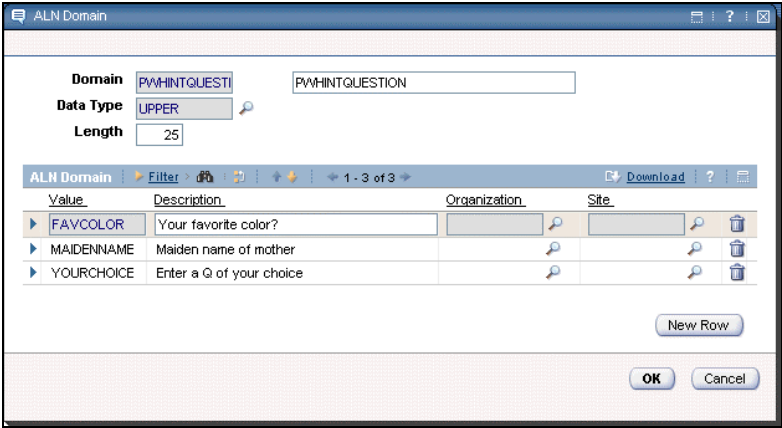
Step	Action										
4	<p>Click the New Row button.</p> <p><u>Result:</u> A new row opens for data entry.</p> 										
5	<p>Enter the following information:</p> <table border="0"> <tr> <td><u>Field</u></td> <td><u>Value</u></td> </tr> <tr> <td>Value</td> <td>FAVCOLOR</td> </tr> <tr> <td>Description</td> <td>Your favorite color?</td> </tr> <tr> <td>Organization</td> <td>[Leave blank]</td> </tr> <tr> <td>Site</td> <td>[Leave blank]</td> </tr> </table>	<u>Field</u>	<u>Value</u>	Value	FAVCOLOR	Description	Your favorite color?	Organization	[Leave blank]	Site	[Leave blank]
<u>Field</u>	<u>Value</u>										
Value	FAVCOLOR										
Description	Your favorite color?										
Organization	[Leave blank]										
Site	[Leave blank]										
6	<p>Click the New Row button to add another new row.</p> <table border="0"> <tr> <td><u>Field</u></td> <td><u>Value</u></td> </tr> <tr> <td>Value</td> <td>[Your choice]</td> </tr> <tr> <td>Description</td> <td>[Your choice]</td> </tr> <tr> <td>Organization</td> <td>[Leave blank]</td> </tr> <tr> <td>Site</td> <td>[Leave blank]</td> </tr> </table>	<u>Field</u>	<u>Value</u>	Value	[Your choice]	Description	[Your choice]	Organization	[Leave blank]	Site	[Leave blank]
<u>Field</u>	<u>Value</u>										
Value	[Your choice]										
Description	[Your choice]										
Organization	[Leave blank]										
Site	[Leave blank]										

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Modifying Domains continued

Modifying an ALN Domain

continued

Step	Action
7	Click OK . <u>Result:</u> The ALN Domain dialog box closes, saving your new domain values.
8	To view your results, click the Edit Detail button for the PWHINTQUESTION domain. <u>Result:</u> Your Domain values should look similar to this. 
9	Close the ALN Domain dialog box, and return to the Start Center.

Checking Your Work

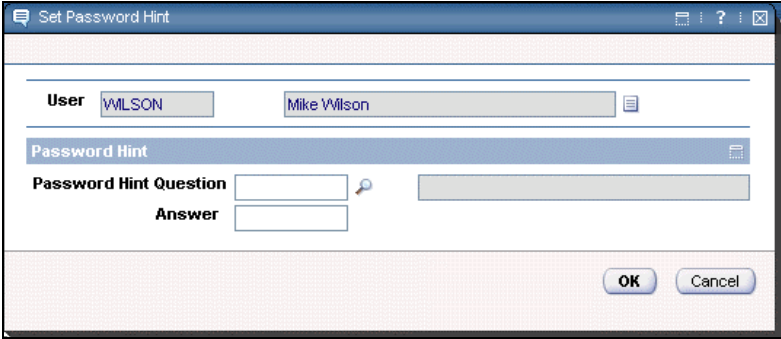
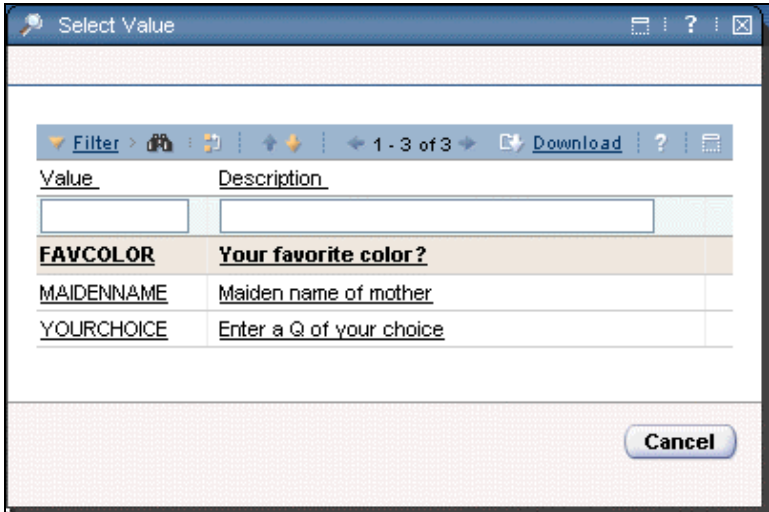
Use the following steps to verify your new ALN domain values.

Step	Action
1	Sign in to Maximo as user wilson (or as otherwise directed by your instructor).
2	Open the Users application, then search for and select user WILSON .

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Modifying Domains continued

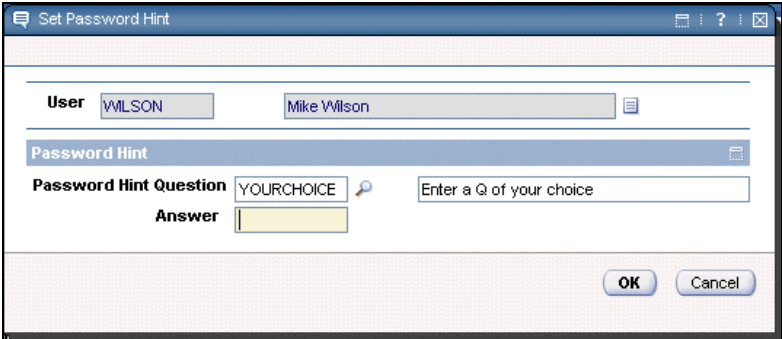
Checking Your Work continued

Step	Action
3	<p>From the Select Action menu, choose Set Password Hint.</p> <p><u>Result:</u> The Set Password Hint dialog box opens.</p> 
4	<p>Click the Select Value button of the Password Hint Question field.</p> <p><u>Result:</u> The Select Value dialog box opens, displaying your newly created domain values.</p> 

continued on next page

Modifying Domains continued

Checking Your Work continued

Step	Action
5	<p>Click to select any one of your newly created domain values. <u>Result:</u> The Select Value dialog box closes and your choice is displayed in the Set Password Hint dialog box.</p> 
6	<p>Enter a value in the Answer field, and then click OK. <u>Result:</u> The Set Password Hint dialog box closes, saving your values.</p>

Creating Domains

Introduction

In the last section we modified an existing ALN domain. In this section we will create a new domain. And remember, once you create a new domain, there are some additional required actions:

- Associate the new domain with an attribute. You perform this task in the Database Configuration application.
 - Configure the database.
 - Use the Screen Designer to modify the UI as needed. For example, if you added an ALN domain, you add the drop-down list button using the Screen Designer. New crossover fields might require new fields in the receiving application.
-

Creating a New NUMERIC Domain

In this exercise we will create a Work Priority domain (Numeric) that we will later associate with the Work Priority attribute of the Work Order object, which is currently a free-form field.

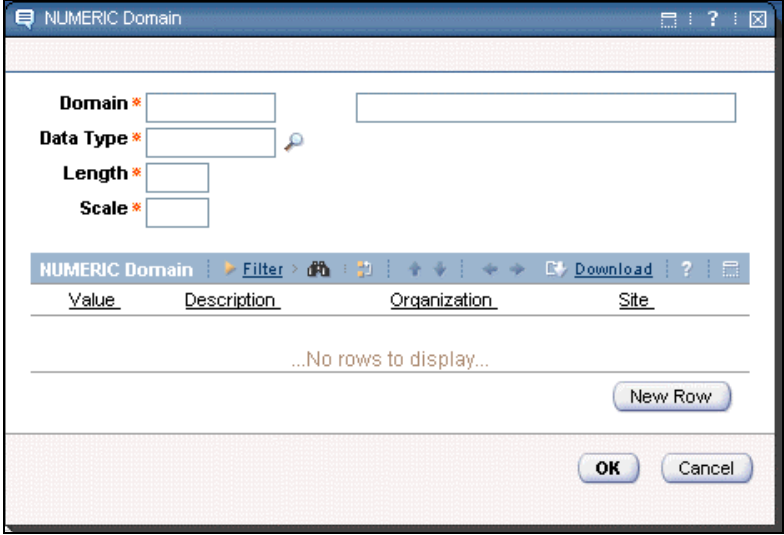
Follow these steps:

Step	Action
1	<p>Open the Domains application and click the Add New Domain button.</p> <p><u>Result:</u> The Add New Domain button displays a menu.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <ul style="list-style-type: none"> Add New ALN Domain Add New NUMERIC Domain Add New NUMERIC RANGE Domain Add New TABLE Domain Add New CROSSOVER Domain </div>

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Creating Domains continued

Creating a New NUMERIC Domain continued

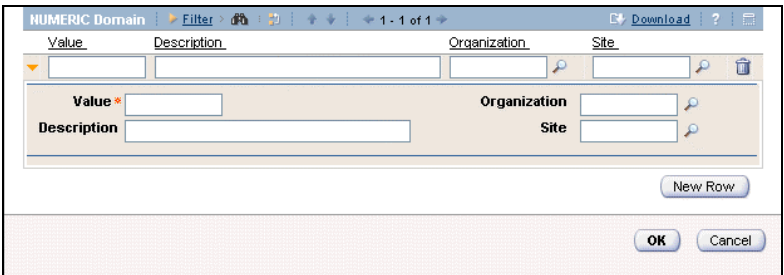
Step	Action								
2	<p>Click to select Add New NUMERIC Domain. Result: The NUMERIC Domain dialog box opens.</p> 								
3	<p>Enter the following values:</p> <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Domain</td> <td>WORKPRIORITY</td> </tr> <tr> <td>Description</td> <td>Work Order Priority</td> </tr> <tr> <td>Data Type</td> <td>INTEGER (Use Select Value button.)</td> </tr> </tbody> </table> <p><u>Note</u>: The Length and Scale fields default to 12 and 0, respectively.</p>	<u>Field</u>	<u>Value</u>	Domain	WORKPRIORITY	Description	Work Order Priority	Data Type	INTEGER (Use Select Value button.)
<u>Field</u>	<u>Value</u>								
Domain	WORKPRIORITY								
Description	Work Order Priority								
Data Type	INTEGER (Use Select Value button.)								

continued on next page

Creating Domains continued

Creating a New NUMERIC Domain

continued

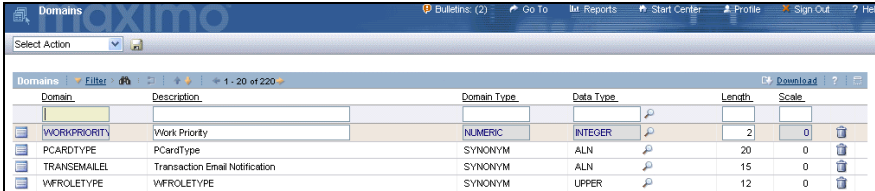
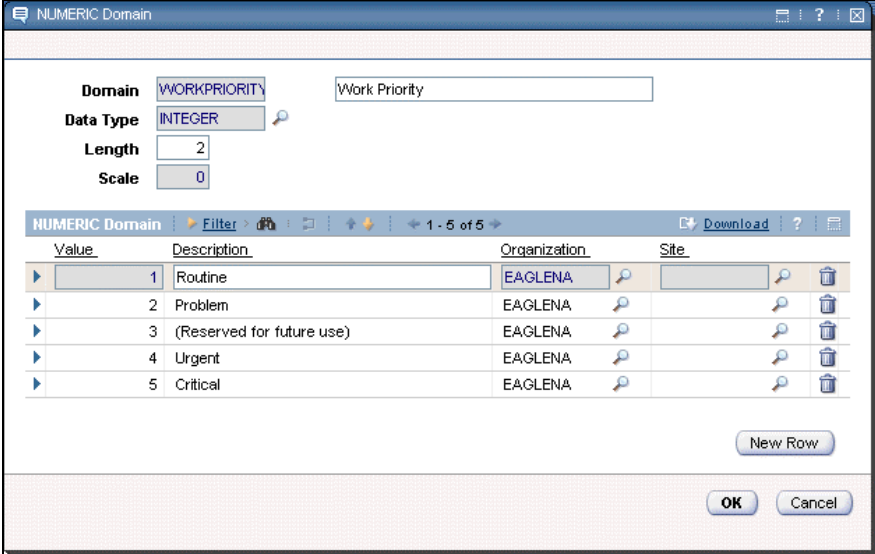
Step	Action															
4	<p>Click New Row.</p> <p><u>Result</u>: A new row opens, ready for data entry.</p> 															
5	<p>Enter the following information:</p> <table border="0"> <thead> <tr> <th><u>Field</u></th> <th><u>Value</u></th> </tr> </thead> <tbody> <tr> <td>Value</td> <td>01 <i>Note: This will display as 1.00</i></td> </tr> <tr> <td>Description</td> <td>Routine</td> </tr> <tr> <td>Organization</td> <td>EAGLENA (or use the Select Value button)</td> </tr> <tr> <td>Site</td> <td>[<i>Leave blank</i>]</td> </tr> </tbody> </table>	<u>Field</u>	<u>Value</u>	Value	01 <i>Note: This will display as 1.00</i>	Description	Routine	Organization	EAGLENA (or use the Select Value button)	Site	[<i>Leave blank</i>]					
<u>Field</u>	<u>Value</u>															
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Description	Routine															
Organization	EAGLENA (or use the Select Value button)															
Site	[<i>Leave blank</i>]															
6	<p>Repeat steps 4 and 5, entering all of the following data:</p> <table border="0"> <thead> <tr> <th><u>Value</u></th> <th><u>Description</u></th> <th><u>Organization</u></th> </tr> </thead> <tbody> <tr> <td>02</td> <td>Problem</td> <td>EAGLENA</td> </tr> <tr> <td>03</td> <td>(Reserved for future use)</td> <td>EAGLENA</td> </tr> <tr> <td>04</td> <td>Urgent</td> <td>EAGLENA</td> </tr> <tr> <td>05</td> <td>Critical</td> <td>EAGLENA</td> </tr> </tbody> </table>	<u>Value</u>	<u>Description</u>	<u>Organization</u>	02	Problem	EAGLENA	03	(Reserved for future use)	EAGLENA	04	Urgent	EAGLENA	05	Critical	EAGLENA
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05	Critical	EAGLENA														

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Creating Domains continued

Creating a New NUMERIC Domain

continued


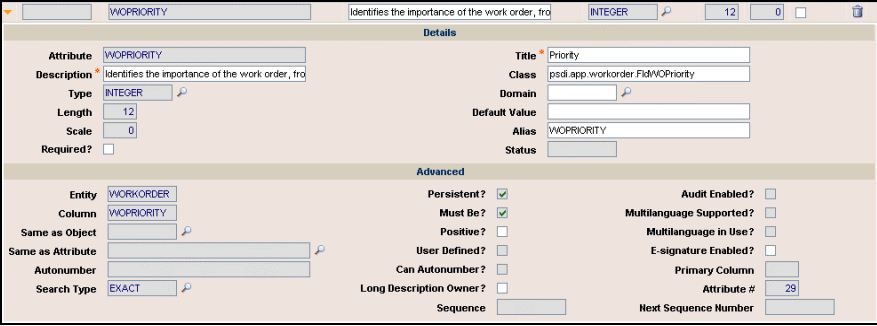
Step	Action
7	<p>After you enter the last new row, click OK.</p> <p><u>Result:</u> The NUMERIC Domain dialog box closes, saving your values.</p>  <p><u>Note:</u> You cannot change the Length field. It defaults to the length of its type, in this case as type INTEGER.</p>
8	<p>To view your results, click the Edit Detail button for the WORKPRIORITY Domain.</p> <p><u>Result:</u> Your Domain values should look similar to this.</p> 
9	<p>Close the NUMERIC Domain dialog box.</p>

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Creating Domains continued

Associating a New Domain with an Attribute

Now that you have created the new domain, the next step is to associate the new domain with an attribute.


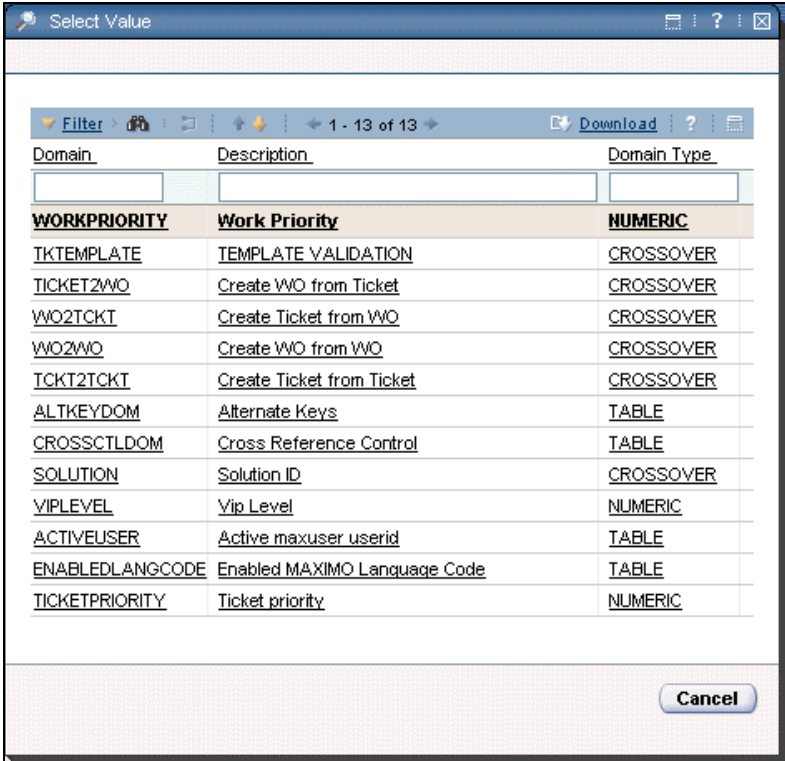
Step	Action
1	<p>Open the Database Configuration application and select the WORKORDER object.</p> <p><u>Result:</u> Maximo displays the WORKORDER object.</p>  <p>The screenshot shows the 'Database Configuration' window with the 'Object' tab selected. The 'Object' field contains 'WORKORDER' and the description 'The WORKORDER Table' is displayed next to it.</p>
2	<p>From the Attributes tab, open the details for the WOPRIORITY attribute.</p> <p><u>Result:</u> Maximo displays the details for the WOPRIORITY attribute.</p>  <p>The screenshot shows the 'Details' view for the 'WOPRIORITY' attribute. It includes fields for 'Attribute', 'Description', 'Type' (INTEGER), 'Length' (12), 'Scale' (0), 'Required?' (checkbox), 'Entity' (WORKORDER), 'Column' (WOPRIORITY), 'Search Type' (EXACT), 'Title' (Priority), 'Class' (psdl.app.workorder.FldWOPriority), 'Domain', 'Default Value', 'Alias' (WOPRIORITY), 'Status', and an 'Advanced' section with various checkboxes like 'Persistent?', 'Must Be?', 'Positive?', 'User Defined?', 'Can Autonumber?', 'Long Description Owner?', 'Sequence', 'Audit Enabled?', 'Multilanguage Supported?', 'Multilanguage in Use?', 'E-signature Enabled?', 'Primary Column', and 'Attribute #' (29).</p>

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Creating Domains continued

Associating a New Domain with an Attribute

continued


Step	Action																																										
<p>3</p> 	<p>Click the Select Value button for the Domain field.</p> <p><u>Result:</u> The Select Value dialog box for the Domain field opens.</p> <p><u>Note:</u> The Select Value dialog box will only show the domains where the data type matches, but does include crossover and/or table domains.</p>  <table border="1"> <thead> <tr> <th>Domain</th> <th>Description</th> <th>Domain Type</th> </tr> </thead> <tbody> <tr> <td>WORKPRIORITY</td> <td>Work Priority</td> <td>NUMERIC</td> </tr> <tr> <td>TKTEMPLATE</td> <td>TEMPLATE VALIDATION</td> <td>CROSSOVER</td> </tr> <tr> <td>TICKET2WO</td> <td>Create WO from Ticket</td> <td>CROSSOVER</td> </tr> <tr> <td>WO2TCKT</td> <td>Create Ticket from WO</td> <td>CROSSOVER</td> </tr> <tr> <td>WO2WO</td> <td>Create WO from WO</td> <td>CROSSOVER</td> </tr> <tr> <td>TCKT2TCKT</td> <td>Create Ticket from Ticket</td> <td>CROSSOVER</td> </tr> <tr> <td>ALTKEYDOM</td> <td>Alternate Keys</td> <td>TABLE</td> </tr> <tr> <td>CROSSCTLDOM</td> <td>Cross Reference Control</td> <td>TABLE</td> </tr> <tr> <td>SOLUTION</td> <td>Solution ID</td> <td>CROSSOVER</td> </tr> <tr> <td>VIPLEVEL</td> <td>Vip Level</td> <td>NUMERIC</td> </tr> <tr> <td>ACTIVEUSER</td> <td>Active maxuser userid</td> <td>TABLE</td> </tr> <tr> <td>ENABLEDLANGCODE</td> <td>Enabled MAXIMO Language Code</td> <td>TABLE</td> </tr> <tr> <td>TICKETPRIORITY</td> <td>Ticket priority</td> <td>NUMERIC</td> </tr> </tbody> </table>	Domain	Description	Domain Type	WORKPRIORITY	Work Priority	NUMERIC	TKTEMPLATE	TEMPLATE VALIDATION	CROSSOVER	TICKET2WO	Create WO from Ticket	CROSSOVER	WO2TCKT	Create Ticket from WO	CROSSOVER	WO2WO	Create WO from WO	CROSSOVER	TCKT2TCKT	Create Ticket from Ticket	CROSSOVER	ALTKEYDOM	Alternate Keys	TABLE	CROSSCTLDOM	Cross Reference Control	TABLE	SOLUTION	Solution ID	CROSSOVER	VIPLEVEL	Vip Level	NUMERIC	ACTIVEUSER	Active maxuser userid	TABLE	ENABLEDLANGCODE	Enabled MAXIMO Language Code	TABLE	TICKETPRIORITY	Ticket priority	NUMERIC
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<p>4</p>	<p>Click to select your new WORKPRIORITY domain.</p> <p><u>Result:</u> The Select Value dialog box closes, saving your values.</p>																																										
<p>5</p>	<p>Save your record and close the Database Configuration application.</p>																																										

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Creating Domains continued

[Optional] Checking Your Work

Use the following steps to check your work.

Step	Action
1	Sign out of Maximo and stop your Maximo Application Server.
2	Configure the database. (See Chapter 8, "Database Configuration.")
3	Restart your Maximo Application Server.
	<p><u>Note</u>: You can make changes, such as in step 4, using one of the following methods:</p> <ol style="list-style-type: none">Using the Application Designer application (when released and available), bring up the application WOTRACK. For the attribute WOPRIORITY, bring up the control palette. Set menutype = normal and set lookup = valuelist.Use the following steps to make the changes by manually editing the files.

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Creating Domains continued

[Optional]
Checking Your
Work

continued

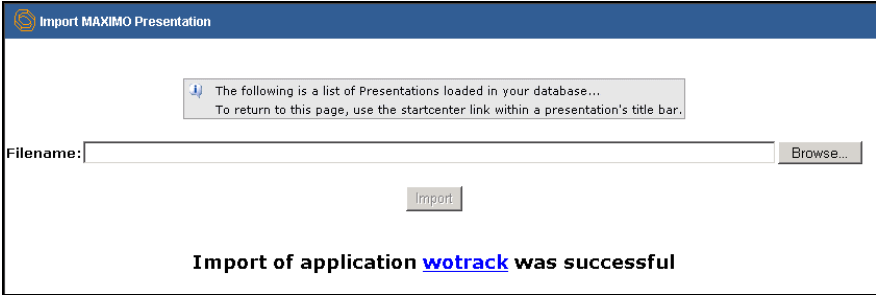

Step	Action																
4	<p>Use the following steps to set up a lookup for your new domain:</p> <table border="1"> <thead> <tr> <th>Step</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>In Windows Explorer, go to the \\{maximo-root}\resources/presentation directory.</td> </tr> <tr> <td>b</td> <td>Locate and edit the wotrack.xml file. <u>Note:</u> You might have to remove the read-only property.</td> </tr> <tr> <td>c</td> <td> <p>Find:</p> <pre><textbox id="main_grid3_6" dataattribute="wopriority" /></pre> <p>Change this to read:</p> <pre><textbox id="main_grid3_6" dataattribute="wopriority" lookup="valuelist" /></pre> </td> </tr> <tr> <td>d</td> <td>Save the file.</td> </tr> <tr> <td>e</td> <td> <p>Restart your Maximo server, open to the Maximo sign-in screen, and then change the Internet Explorer browser path as follows:</p> <p style="text-align: center;"><i>Your server path</i> /maximo/ui/maximo.jsp?event=importapp</p> <p>Sign in as user wilson.</p> </td> </tr> <tr> <td>f</td> <td>Click the Browse button, then go to wotrack.xml and select it.</td> </tr> <tr> <td>g</td> <td>Click Import.</td> </tr> </tbody> </table>	Step	Action	a	In Windows Explorer, go to the \\{maximo-root}\resources/presentation directory.	b	Locate and edit the wotrack.xml file. <u>Note:</u> You might have to remove the read-only property.	c	<p>Find:</p> <pre><textbox id="main_grid3_6" dataattribute="wopriority" /></pre> <p>Change this to read:</p> <pre><textbox id="main_grid3_6" dataattribute="wopriority" lookup="valuelist" /></pre>	d	Save the file.	e	<p>Restart your Maximo server, open to the Maximo sign-in screen, and then change the Internet Explorer browser path as follows:</p> <p style="text-align: center;"><i>Your server path</i> /maximo/ui/maximo.jsp?event=importapp</p> <p>Sign in as user wilson.</p>	f	Click the Browse button, then go to wotrack.xml and select it.	g	Click Import .
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g	Click Import .																

continued on next page

Creating Domains continued

**[Optional]
Checking Your
Work**

continued

Step	Action
5	<p>When the import is finished, your display should look similar to this.</p>  <p>Close your Internet Explorer browser.</p>
6	<p>Sign in to Maximo, go to the Work Order Tracking application, and insert a new record.</p> <p>Record your new record number here: _____.</p>
7	<p>Tab to the Priority field, and use the Select Value button to choose a value from your new domain.</p> <p> <u>Note:</u> If you were to change your default insert site (My Profile) to CHILEHDQ, insert a new work order, and try to use the lookup, there would be no values listed because the domain values that you entered are specific to EAGLENA and the record for CHILEHDQ is in EAGLESA.</p>
8	<p>You have verified your new domain. Return to the Start Center.</p> <p>Click No in the Do you want to save your changes...? dialog box.</p>

Chapter Summary

Managing Domains

Some fields in Maximo have drop-down lists from which users choose an appropriate value. These lists of defined values are known as *domains* (sometimes referred to as *value lists*). Maximo uses many domains in its applications.

As an administrator, you will use the Domains application to add new domains or modify existing ones to fit with your business practices.

Modifying Domains

In this section you learned how to modify an ALN domain.

Creating Domains

In this section you created a new numeric domain. Whenever you create a new domain, you must also perform some additional required actions:

- Associate the new domain with an attribute. You perform this task in the Database Configuration application.
- Configure the database.

You could use the Maximo Screen Designer (beyond the scope of this course) to modify the UI as needed.

For example, if you added an ALN domain, you could add the drop-down list button using the Screen Designer.

New crossover fields (for crossover domains) may require new fields in the receiving application.

For More Information

For more information, please refer to the Maximo Help and the *System Administrator's Guide*. Maximo Help provides the following "How Do I..." topics:

- Add a New ALN Domain
 - Add a New NUMERIC Domain
 - Add a New NUMRANGE Domain
 - Add a New TABLE Domain
 - Add a New CROSSOVER Domain
 - Add a New SYNONYM Domain
-

System Administration for MXES

Appendix A: Escalation— Online Help Example



In This Appendix This appendix contains the following topics:

Topic	See Page
Online Help—Example Escalation	A-1
Task 1: Define the Escalation	A-3
Task 2: Create the First Escalation Point A	A-5
Task 3: Add the First Action to Escalation Point A	A-7
Task 4: Add the Second Action to Escalation Point A	A-9
Task 5: Add a Notification for Escalation Point A	A-11
Task 6: Create the Second Escalation Point B	A-14
Task 7: Add an Action for Escalation Point B	A-16
Task 8: Add a Notification for Escalation Point B	A-18
Task 9: Validate and Activate Escalation	A-21

Online Help—Example Escalation

Introduction

This appendix is an extract of the example escalation from the online help in Maximo. It was accurate at the time of publication.

This example provides you with systematic instructions for completing a sample service desk escalation. You can follow this example to gain hands-on experience with the Escalations application.

Scenario

A service provider has a service level agreement (SLA) stating that all network-related incidents with a “low” or “medium” priority are to be assigned within 1 hour of ticket creation and resolved within 4 hours. In this case, incidents set to a priority of 8–10 are low, 5–7 are medium, 3–4 are high, and 1–2 are very high.

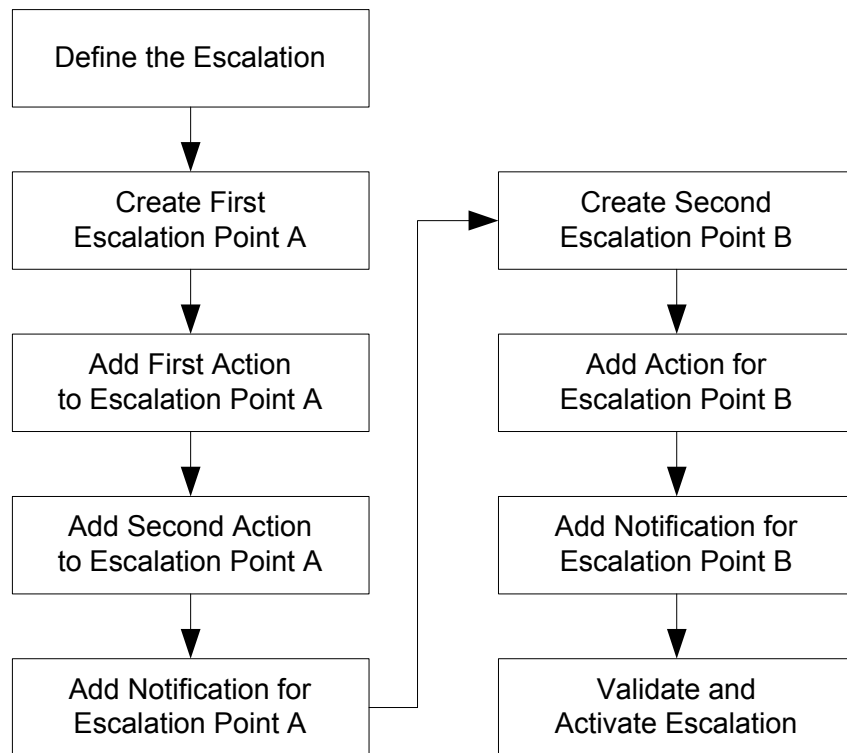
By default, the network support group is responsible for resolving these incidents. However, if the problem has not been resolved within 3 hours, the priority is escalated to “very high” and the ticket’s ownership is passed to a supervisor. At the same time, an e-mail notification is sent to various people within the organization to inform them that there is a risk of becoming non-compliant with the SLA.

continued on next page

Online Help—Example Escalation continued

Creating the Escalation

In this sample escalation you will create two escalation points, with actions and notifications for each. You will apply the escalation to the object INCIDENT. We recommend that you work with the MAXDEMO database. This database is already seeded with sample records for various applications and you should be able to use some of these records for test purposes. The following Maximo example escalation is a series of nine separate tasks, as shown in the following flow chart.

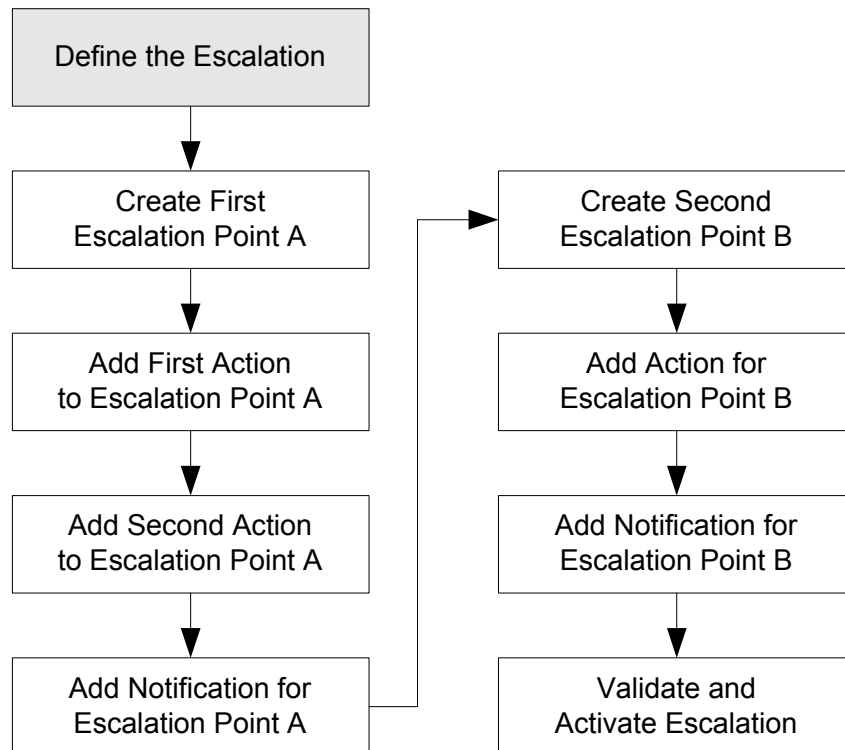


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Online Help—Example Escalation continued

Task 1: Define the Escalation

Use the following steps to define the escalation.



Step	Action
1	From the Escalations application, click New Escalation on the Maximo toolbar. <u>Result:</u> The Escalation tab opens.
2	In the Escalation field, clear the default value and enter ESC IND. <u>Result:</u> This indicates that the escalation applies to incidents.
3	In the Description field, enter: Escalate incidents related to the network.

continued on next page

Online Help—Example Escalation continued

Task 1: Define the Escalation

continued

Step	Action
4	<p>In the Applies To field, enter INCIDENT.</p> <p><u>Result:</u> This indicates that the escalation targets records belonging to the Incidents application, as well as the Incident objects in the database.</p>
5	<p>In the Schedule field, click Set Schedule and set to poll every 5 minutes for records that meet the criteria defined by the escalation points.</p> <p><u>Note:</u> To stop the polling at this interval, you must change the scheduling interval or deactivate the escalation.</p>
6	<p>In the Condition field, enter:</p> <p style="text-align: center;">INTERNALPRIORITY > 5 AND COMMODITY='INFRASTR'</p> <p><u>Result:</u> The escalation engine applies this SQL statement to INCIDENT records to obtain a subset of records. This condition filters out records that are not “low” or “medium” priority, and records that are not related to network records. Because this escalation targets service desk agents and/or administrators, the internal priority associated with an incident is important.</p>
7	<p>Leave the Organization and Site fields blank.</p> <p><u>Result:</u> This is a system-level escalation, and will target incidents reported at any site or organization.</p>

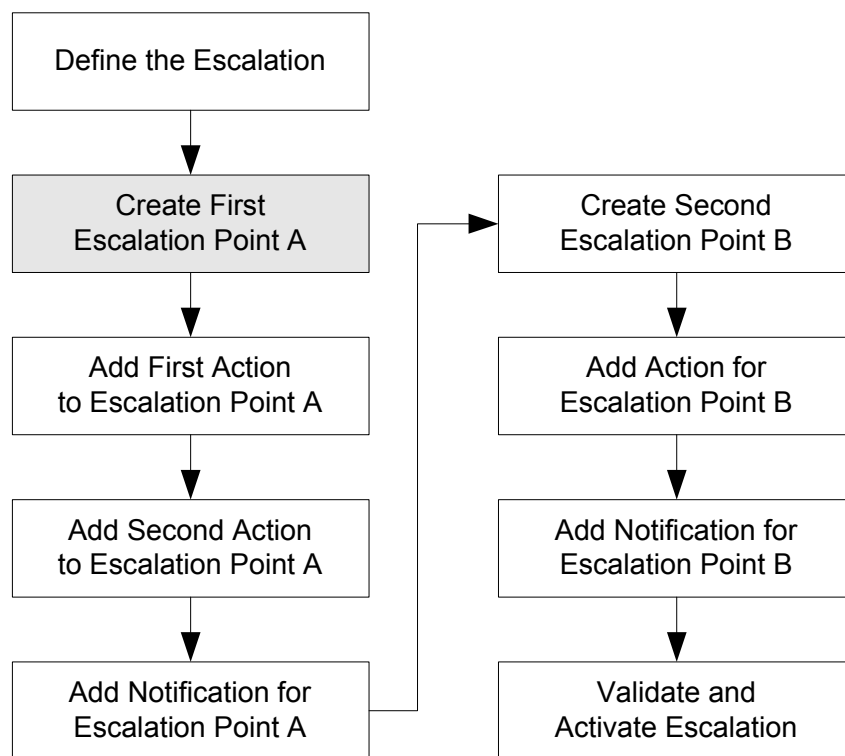
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Online Help—Example Escalation continued

Task 2: Create the First Escalation Point A

Use the following steps to create the first escalation point A.

The first escalation point tests whether more than 30 minutes have elapsed since the incident was first reported. By setting an elapsed time interval of 30 minutes, service desk staff will have an opportunity to initiate action within the one-hour time limit specified in the SLA. If this condition is met, then the escalation engine will trigger the associated actions and notifications.



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Online Help—Example Escalation continued

Task 2: Create the First Escalation Point A continued

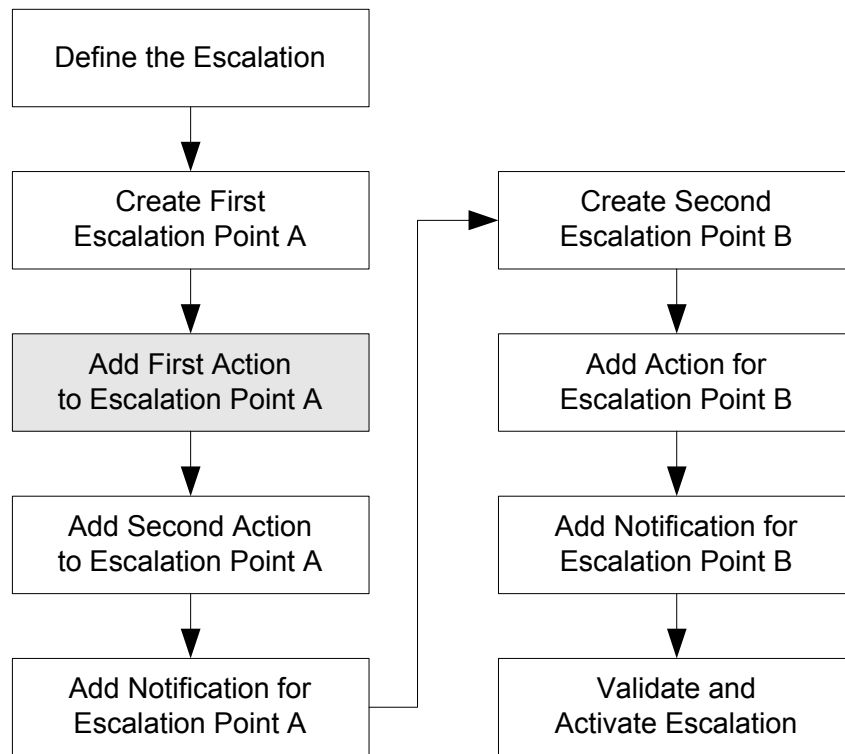
Step	Action
1	In the Escalation Points table window, click New Row .
2	In the Elapsed Time Attribute field, click Select Value and choose REPORTDATE.
3	In the Elapsed Time Interval field, enter 30.
4	In the Interval Unit of Measure field, click Select Value and choose MINUTES.
5	In the Escalation Point Condition field, enter STATUS='NEW'.
6	In the Repeat? field, leave the check box clear. <u>Result:</u> This means that the escalation actions and notifications will be triggered once for the escalation point. If you had selected this field, actions and notifications would be triggered repeatedly for this escalation point.
7	Click Save Escalation .

continued on next page

Online Help—Example Escalation continued

Task 3: Add the First Action to Escalation Point A


You will create two actions for the escalation point. In this step, the first action will assign ownership of the ticket to the Maintenance group.



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Online Help—Example Escalation continued

Task 3: Add the First Action to Escalation Point A continued

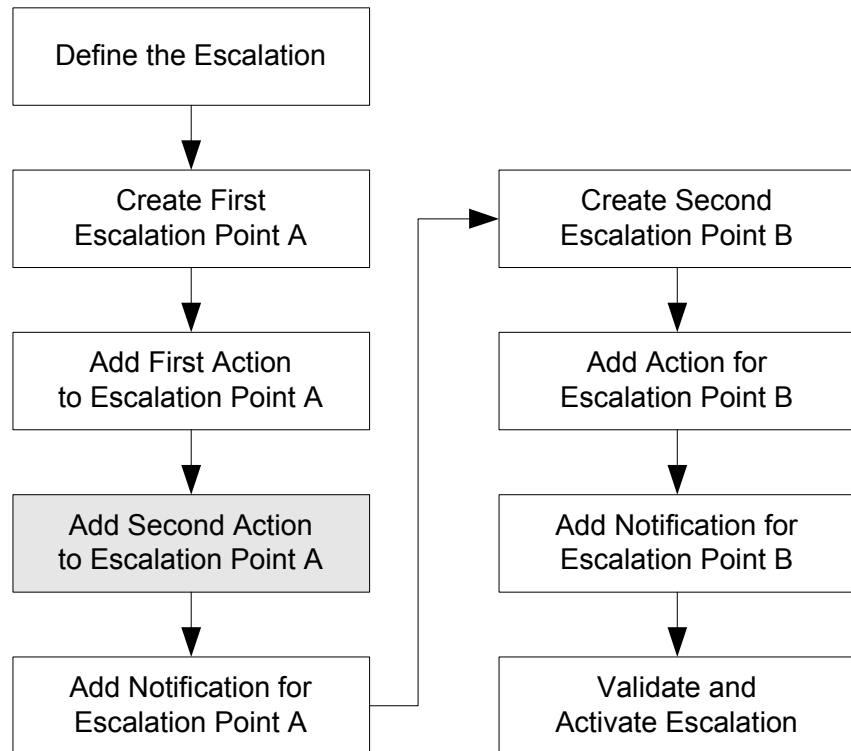
Step	Action
1	On the Actions subtab, click New Row .
2	In the Action field, click Detail Menu and select Go To Actions . <u>Result</u> : This takes you to the Actions application.
3	In the Actions application, click New Action from the Maximo toolbar.
4	In the Action field, clear the default value and enter INC OWN.
5	In the Description field, enter: Assign incident to an owner group.
6	In the Object field, enter INCIDENT.
7	In the Type field, enter SETVALUE.
8	In the Value field, enter 'MAINT'.  <u>Note</u> : Be sure to include the single quotes.
9	In the Parameter/Attribute field, enter OWNERGROUP.
10	Click Save Action .
11	In the top-right corner of the Actions application, click Return with Value . <u>Result</u> : Maximo returns you to the Escalations application and populates the second row on the Actions subtab with the INC OWN action.

continued on next page

Online Help—Example Escalation continued

Task 4: Add the Second Action to Escalation Point A

The second action sets the service group on the incident record to IT (information technology).



continued on next page

Online Help—Example Escalation continued

Task 4: Add the Second Action to Escalation Point A

continued

Step	Action
1	On the Actions subtab, click New Row .
2	In the Action field, click Detail Menu and select Go To Actions . <u>Result</u> : This takes you to the Actions application.
3	In the Actions application, click New Action from the Maximo toolbar.
4	In the Action field, enter INC SETSVCGRP.
5	In the Description field, enter: Set service group of incident.
6	In the Object field, enter INCIDENT.
7	In the Type field, enter SETVALUE.
8	In the Value field, enter 'IT'. <u>Note</u> : Be sure to include the single quotes.
9	In the Parameter/Attribute field, enter COMMODITYGROUP.
10	Click Save Action .
11	In the top-right corner of the Actions application, click Return with Value . <u>Result</u> : Maximo returns you to the Escalations application and populates the second row on the Actions subtab with the INC SETSVCGRP action.
12	Click Save Escalation .

Tasks 3 and 4 Summary

You have now created two actions:

- INC OWN executes first,
- followed by INC SETSVCGRP.

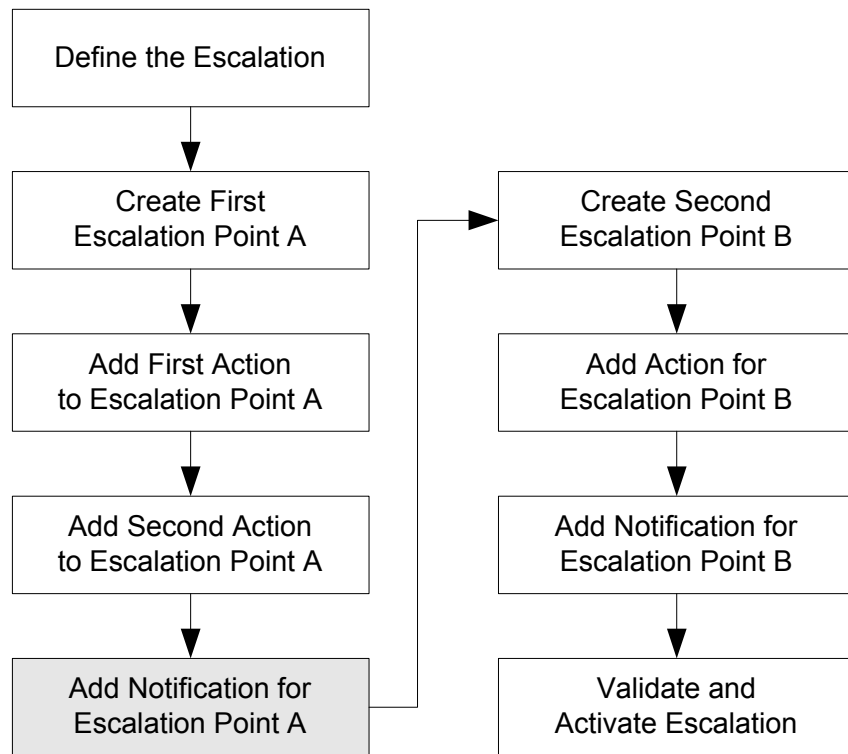
The numbers in the **Sequence** column of the Actions tab indicate the order in which Maximo runs the actions.

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Online Help—Example Escalation continued

Task 5: Add a Notification for Escalation Point A

Use the following steps to add a notification for Escalation Point A.



continued on next page

Online Help—Example Escalation continued

Task 5: Add a Notification for Escalation Point A

continued

Step	Action
1	On the Notifications subtab, click New Row .
2	In the Template field, click the Detail Menu and select Go To Communication Templates . <u>Result</u> : This takes you to the Communication Templates application.
3	In the Communication Templates application, click New Communication Template on the Maximo toolbar.
4	In the Template field, enter INC OWNGRP.
5	In the Description field, enter: Notification to owner group of incident.
6	In the Applies To field, enter INCIDENT.
7	In the Accessible From field, accept the default value of ALL.
8	In the Template Details table window, in the Send From field, enter maxadmin@mro.com.
9	In the Subject field, enter: Incident has been queued.
10	In the Message field, enter: Incident :ticketid has been queued. Its internal priority is :internalpriority .
11	Click the Recipients tab.
12	Click Show Table to open the Person Group(s) for Communication Template table window.

continued on next page

Online Help—Example Escalation continued

Task 5: Add a Notification for Escalation Point A continued

Step	Action
13	Click Select Groups . <u>Result</u> : The Select Person Groups dialog box opens. You will be sending a notification to the Maintenance group.
14	Choose MAINT and click OK . <u>Result</u> : The Select Person Groups dialog box closes.
15	In the Person Group(s) for Communication Template table window, select the To? check box.
16	Click Save Communication Template .
17	Change the status of the Communication Template to ACTIVE .
18	In the top-right corner of the Communication Templates application, click Return with Value . <u>Result</u> : Maximo returns you to the Escalations application and populates a row on the Notifications subtab. You have completed the first escalation point.
19	Click Save Escalation .

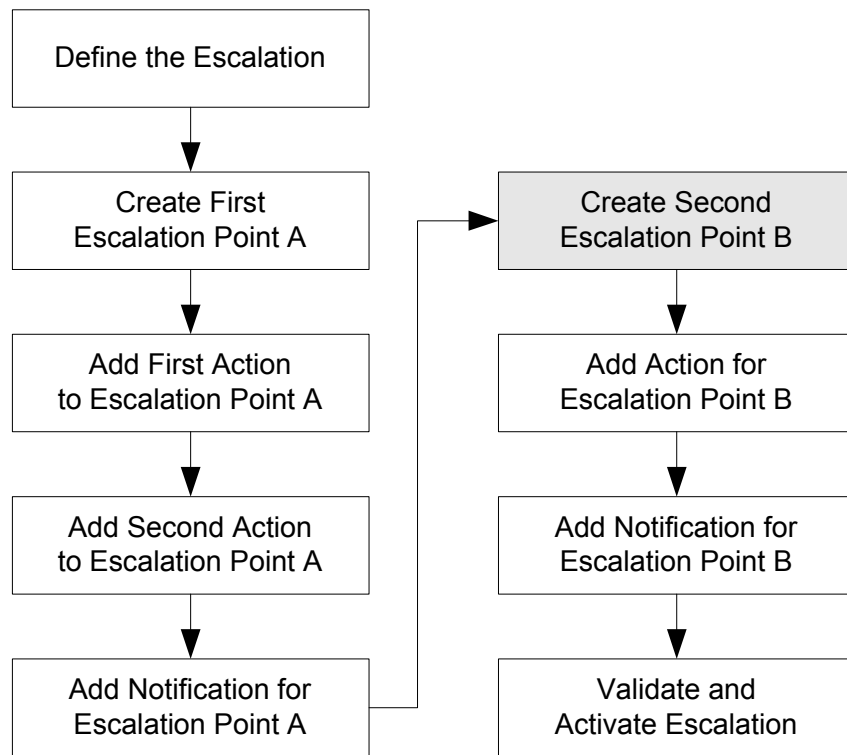
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Online Help—Example Escalation continued

Task 6: Create the Second Escalation Point B

In the second escalation point, for the set of incident records that meet the criteria you defined in the escalation's header attributes, you will identify those that were entered and assigned more than three hours ago but still remain unresolved.

This condition tests whether any incidents remain In Progress, Queued, or Pending three hours after being reported. If so, these incidents will be escalated.



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Online Help—Example Escalation continued

Task 6: Create the Second Escalation Point B continued

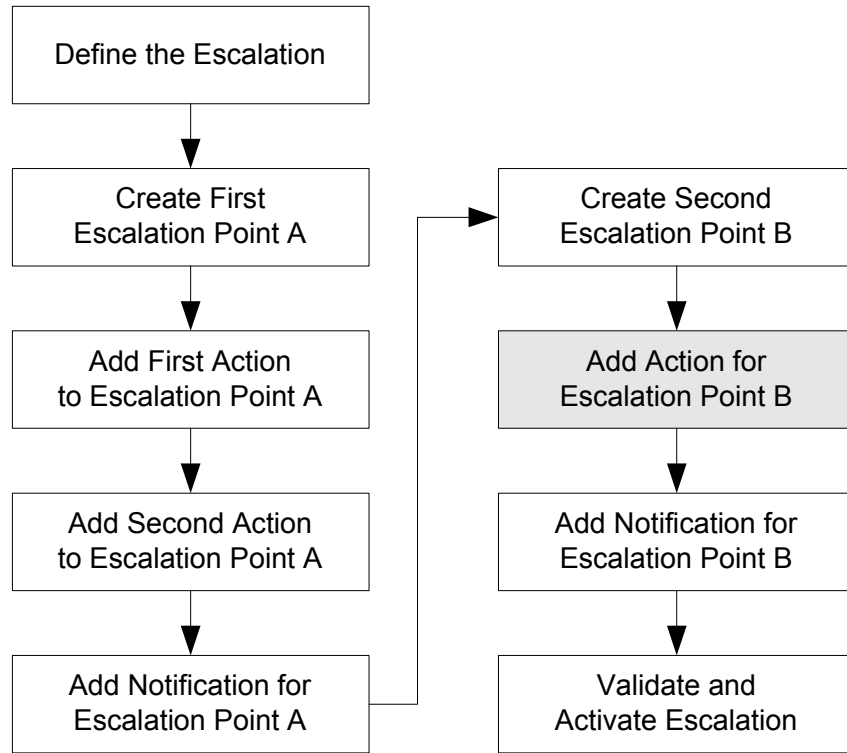
Step	Action
1	In the Escalation Points table window, click New Row .
2	In the Elapsed Time Attribute field, click Select Value and choose REPORTDATE.
3	In the Elapsed Time Interval field, enter 180.
4	In the Interval Unit of Measure field, click Select Value and choose MINUTES.
5	In the Escalation Point Condition field, enter: STATUS='INPROG' OR STATUS='QUEUED' OR STATUS='PENDING'
6	In the Repeat field, leave the check box clear.
7	Click Save Escalation .

continued on next page

Online Help—Example Escalation continued

Task 7: Add an Action for Escalation Point B

Use the following steps to add a single action for this second escalation point.



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Online Help—Example Escalation continued

Task 7: Add an Action for Escalation Point B continued

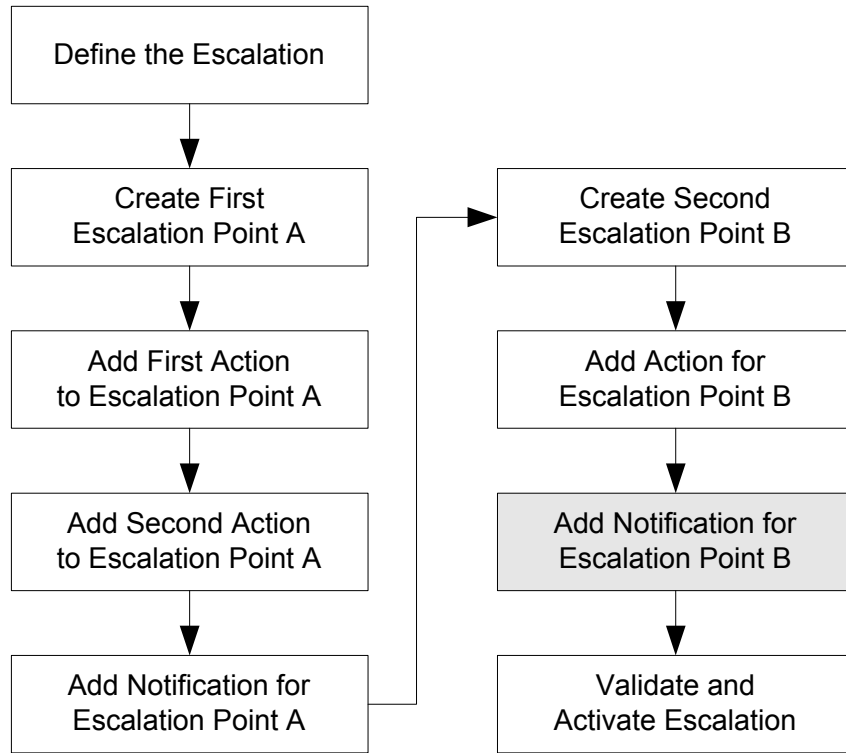
Step	Action
1	Ensure that Escalation Point 2 is selected. Then, on the Actions subtab, click New Row .
2	In the Action field, click the Detail Menu and select Go To Actions . <u>Result</u> : This takes you to the Actions application.
3	In the Actions application, click New Action on the Maximo toolbar.
4	In the Action field, enter INC CHGPRT.
5	In the Description field, enter: Change priority to high.
6	In the Object field, enter INCIDENT.
7	In the Type field, enter SETVALUE.
8	In the Value field, enter 1.
9	In the Parameter/Attribute field, enter INTERNALPRIORITY.
10	Click Save Action .
11	In the top-right corner of the Actions application, click Return with Value . <u>Result</u> : Maximo returns you to the Escalations application and the first row in the Actions subtab is populated with the INC CHGPRT action.
12	Click Save Escalation .

continued on next page

Online Help—Example Escalation continued

Task 8: Add a Notification for Escalation Point B

Use the following steps to create notifications for the second escalation point.



continued on next page

Online Help—Example Escalation continued

Task 8: Add a Notification for Escalation Point B continued

Step	Action
1	Ensure that Escalation Point 2 is selected. Then, on the Notifications subtab, click New Row .
2	In the Template field, click Detail Menu and select Go To Communication Templates . <u>Result</u> : This takes you to the Communication Templates application.
3	In the Communication Templates application, click New Communication Template on the Maximo toolbar.
4	In the Template field, enter INC RES.
5	In the Description field, enter: Notification to resolve incident.
6	In the Applies To field, enter INCIDENT.
7	In the Accessible From field, accept the default value of ALL.
8	In the Send From field in the Template Details section, enter: maxadmin@mro.com
9	In the Subject field, enter: Incident :ticketid requires immediate attention.
10	In the Message field, enter: Incident :ticketid has remained in status :status for the last 3 hours. It requires immediate attention. Its internal priority has been increased to :internalpriority .
11	Click the Recipients tab.
12	Click Show Table to open the Person(s) for Communication Template table window.

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Online Help—Example Escalation continued

Task 8: Add a Notification for Escalation Point B

continued

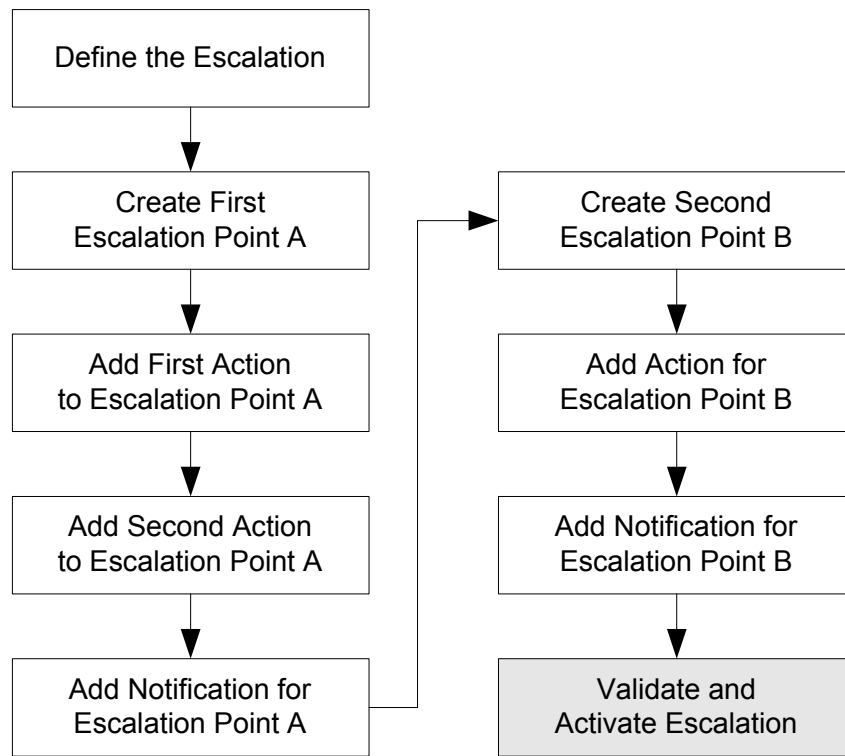
Step	Action
13	Click Select People . <u>Result</u> : The Select People dialog box opens. You will be sending a notification to John Hunter, who is the service desk supervisor.
14	Choose HUNTER and click OK . <u>Result</u> : The Select People dialog box closes.
15	In the Person(s) for Communication Template table window, select the To? check box.
16	Change the status of the Communication Template to ACTIVE .
17	Click Save Communication Template .
18	In the top-right corner of the Communication Templates application, click Return with Value . <u>Result</u> : You return to the Escalations application and the Notifications tab lists the notification you just created.
19	Click Save Escalation .

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Online Help—Example Escalation continued

Task 9: Validate and Activate Escalation


You have finished creating the escalation points, actions, and notifications for the escalation. Now you will validate the escalation to ensure that there are no SQL errors in the condition fields, and then you will activate the escalation.



continued on next page

Online Help—Example Escalation continued

Task 9: Validate and Activate Escalation continued

Step	Action
1	<p>From the Select Action menu, select Validate.</p> <p><u>Result:</u> Maximo should inform you that the validation was successful.</p> <p> <u>Note:</u> If Maximo informs you that the validation failed, you must click Maximize to expand the Validation Results table window to view the error(s). The error(s) can be either against the SQL you entered in the header Condition field or in an escalation point's Escalation Point Condition field. If appropriate, correct the SQL statement(s) and revalidate the escalation.</p>
2	Click Save Escalation .
3	<p>From the Select Action menu, select Activate/Deactivate Escalation.</p> <p><u>Result:</u> Maximo displays a message stating that escalation ESC INC has been activated.</p>

Summary: Online Help Example Escalation

You have completed the example escalation from the online help in Maximo. For this example, the following conditions apply:

- Maximo triggers an escalation only when the escalation engine finds records that match the conditions defined in the escalation's header attributes.
- To test the escalation, you must use the Incidents application and create incident records that can be used to meet the conditions identified in this escalation.
- To receive notifications based on the escalation you created, you should change the e-mail addresses specified for one or more members of the MAINT group and supervisor John Hunter to valid e-mail addresses at your site.

Name: _____
Class: _____

Instructor: _____
Date: _____

	Excel- lent	Very Good	Good	Fair	Poor	Very Poor
1. The course structure and style was:						
2. The course content was:						
3. The workshops as a whole were:						
4. The length of the course was :						
5. Course organization was:						
6. Relevance and usefulness of course content was:						
7. Opportunity for practicing what was learned was:						
8. Amount you learned in the class was:						
9. The instructor's effectiveness in teaching the subject matter was:						
10. Use of class time was:						
11. Instructor's use of examples and illustrations was:						
12. Instructor's ability to answer student questions was:						
13. Instructor's ability to present alternative explanations when needed was:						
14. Tailoring of instruction to varying student skill levels was:						
15. Instructor demonstrations were:						
16. Instructor's ability to solve unexpected problems was:						

17. Which aspects of this course were most effective? _____

18. Which aspects of this course detracted from your learning? _____

19. What suggestions do you have for improving this course? _____