MXES for EAM - New Features

maximo®

MXES for EAM New Features

Rel. 6.0 *04/2005*

Part Number MED0136

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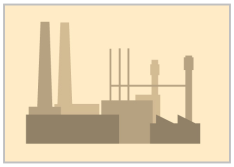

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MXES Curriculum for EAM

Key

Instructor-Led Training

Virtual Classroom Training

For Training Info, Course Descriptions, and Availability, go to:

Web: http://www.mro.com/corporate/mroservices/training/
E-mail: TrainSVC@mro.com
Fax: 781.280.2201

Foundation

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

Upgrade

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

Implementation

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

End-User / Functional

Course #	Course Name	Length	Delivery Options	Prerequisites
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

Flip for Curriculum Path by Role

Suggested Curriculum Path by Job Role

MXES for EAM

Course Name	Manager Track	Implementation Track		Developer Track			Administrator Track			End-User Track				
	Managers, Supervisors, & Directors	Maximo Implementation Team Members	Maximo Upgrade Team (from MX 5)	Maximo Developer / Maximo App Support	Report Writer	Workflow Developer	Maximo Admin	Database Admin	Report Admin	Maintenance Personnel	Inventory Personnel	Contracts Manager	Accounts Payable / Receiving Personnel	Procurement Personnel
MED0138 MXES Nav & Query (1/2 day)		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MED0136 MXES for EAM - New Features (3 days)			✓											
MED0137 System Admin for MXES (3 days)		✓		✓		✓	✓	✓						
MED0139 Inventory Mgmt Using MXES (3 days)											✓			
MED0143 Work Mgmt Using MXES (3 days)										✓				
MED0146 MXES Immersion Training for EAM (5 days)		✓	✓	✓		✓	✓	✓						
MED0147 Using SQL with MXES (1 day)					✓			✓	✓					
MED0148 Workflow Mgmt Using MXES (5 days)						✓								
MED0150 Purchasing with MXES (3 days)													✓	✓
MED0151 Dev. MXES Reports w/ Actuate					✓				✓					
MED0152 Contract Mgmt Using MXES												✓		
MED0153 Using MXES App Designer		✓	✓	✓										
MED0154 The MXES KPI Manager (3 hours)					✓				✓					
MED0155 Maintenance Best Practices Using MXES (2 days)	✓	✓	✓											

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MXES Curriculum for ITSM / ITAM

For Training Info, Course Descriptions, and Availability, go to:

Web: http://www.mro.com/corporate/mroservices/training/
E-mail: TrainSVC@mro.com
Fax: 781.280.2201

Key

Instructor-Led Training

Virtual Classroom Training

Foundation

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

Implementation

Course #	Course Name	Length	Delivery Options	Prerequisites
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

Course #	Course Name	Length	Delivery Options	Prerequisites
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 (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

Flip for Curriculum Path by Role

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Suggested Curriculum Path by Job Role

MXES for ITSM / ITAM

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
MED0138 MXES Nav & Query (1/2 day)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MED0137 System Admin for MXES (3 days)				✓	✓			✓	✓			✓		
MED0140 Intro to ITIL (VCT) (3 hours)	✓													
MED0141 IT Service Mgmt Using MXES (3 days)		✓									✓			
MED0142 IT Asset Config & Mgmt in MXES (3 days)												✓		
MED0145 Implement ITIL w/ MXES (2 days)	✓	✓	✓											
MED0147 Using SQL with MXES (1 day)						✓			✓	✓				
MED0148 Workflow Mgmt Using MXES (5 days)				✓			✓							
MED0149 MXES Immersion Training for IT (5 days)			✓	✓	✓			✓						
MED0150 Purchasing with MXES (3 days)														✓
MED0151 Dev. MXES Reports w/ Actuate						✓				✓				
MED0152 Contract Mgmt Using MXES													✓	
MED0153 Using MXES App Designer			✓		✓									
MED0154 The MXES KPI Manager (3 hours)						✓				✓				

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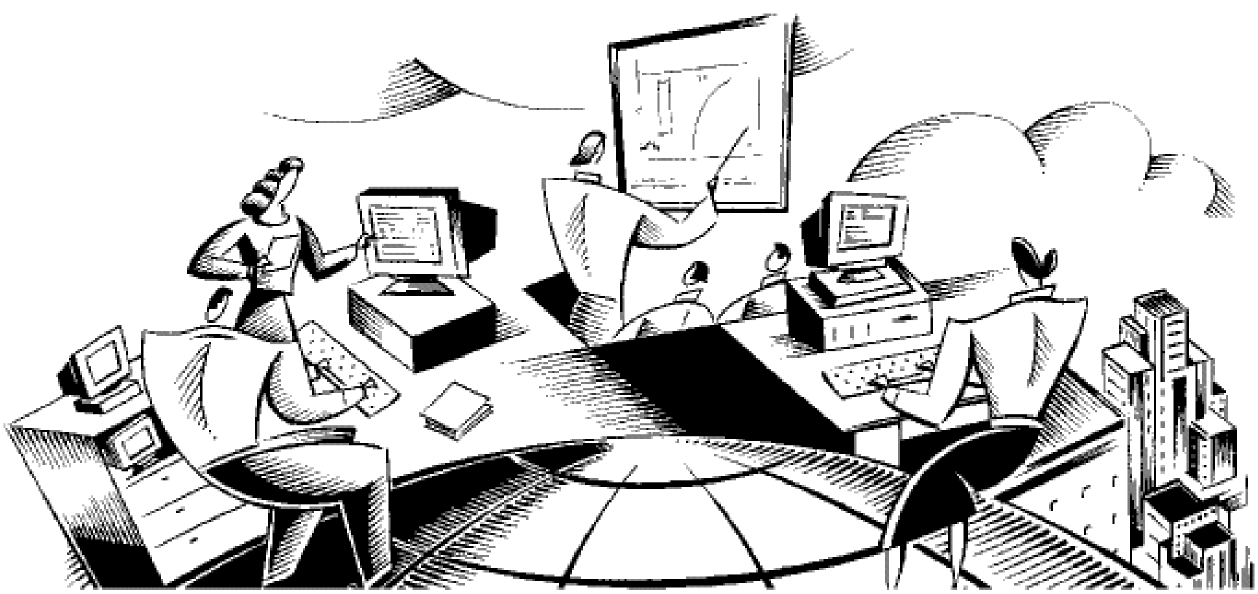
Chapter 13: Other EAM Administration

Chapter 14: Financial

Chapter 1: Course Introduction



In This Chapter

This chapter contains the following topics:

Course Introduction

Welcome

Welcome to the *MXES for EAM – New Features* training course.

By the end of this course, you will be exposed to the basic changes between MAXIMO 5.x and the Maximo Enterprise Suite (MXES) as they relate to standard Enterprise Asset Management (EAM).

* The accepted acronym for Maximo Enterprise Suite is *MXES*. This acronym will be used throughout the course.

Audience

This course is intended for the following audience members:

- Professional services personnel
    - Consultants, trainers, partners, and third-party consultants familiar with MAXIMO 5.x who are beginning work with MXES
- Clients
    - Current MAXIMO 5.x clients who want to evaluate the new features provided by MXES before upgrading
    - Clients with a single-site installation of MAXIMO 5.x who are considering the benefits of a multisite setup using MXES
- Individual users who are moving from MAXIMO 5.x to MXES, including:
    - Maintenance managers/supervisors
    - Operations managers/supervisors
    - Inventory personnel
    - Planners
    - Accounting personnel

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Course Introduction continued

MXES Themes

As you move through this course, you will see that Maximo has been enhanced to support a number of themes, including:

- Proactive asset management
- Fast and accurate data entry and application use
- Fast and accurate communication between:
  - Customers
  - Users
  - Management
- Rapid and intelligent response to changing business conditions

Chapter Purpose

The purpose of this chapter is to acquaint you with the features of this course and to establish the goals and objectives for the course.

Accessing Maximo During the Course

MXES is a Web-architected product that you access through the Internet Explorer browser on your computer.

Your instructor will provide you with the Web address and sign-in information for accessing Maximo during this course.

You can write this information here:

Web Address: ______________________________

Username: ______________________________

Password: ______________________________

Course Goals and Objectives

Course Overview

This course introduces participants to the following topics, as they relate to EAM:

- The basic new features in Maximo applications
- The new applications in Maximo
- The improved capabilities of Maximo to provide integration between organizations and sites

Course Prerequisites

The following prerequisites apply to course participants:

- Students must be familiar with the basic functionalities of MAXIMO 5.x applications.

  Note: This course covers only *new* features. It is not designed to provide comprehensive training on MXES applications. For more detailed training, please contact MRO Software Educational Services.
- Students should be comfortable using:
  - A personal computer
  - Microsoft Windows operating systems
  - Internet Explorer browser

Course Goal

By the end of this course you should be able to identify the major differences between MAXIMO 5.x and MXES as they relate to EAM.

Note: This course does not provide exhaustive or in-depth training on all changes. It provides some detail and some overview of major changes identified by MRO Software Product Managers as being worthy of note.

Course Objectives

By the end of this course you will have been introduced to the key changes between MAXIMO 5.x and MXES as they relate to Enterprise Asset Management (EAM), including:

- Improved navigation
- Enhancements to existing applications
- Capabilities of new applications

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Course Goals and Objectives continued

Your Learning Objectives

We have already mentioned the basic objectives for the course; however, most important are the learning objectives *you* bring to the course. We want to be 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.

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Course Organization

Chapters

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

Each chapter contains some or all of these components:

- A subject-matter overview and objectives
- Hands-on practice
- Demonstrations by the instructor
- Question-and-answer periods after many major features

Chapter Organization

This table contains a list of chapters in this student guide:

Chapter	Title
1	Course Introduction
2	Interface and Navigation
3	Multisite / Multiorganization Enhancements
4	Asset Management
5	Contract Management
6	Configuration
7	Inventory
8	Administration of Human Resources
9	Meters, PMs, and Condition Monitoring
10	Reporting
11	Security
12	Work Management
13	Other EAM Administration
14	Financial

continued on next page

Course Organization continued

Class Activities

As you go through this course, you might participate in any one of four methods of instruction, usually in this order:

- The instructor will give a brief overview of the objectives and content of each chapter.
- The instructor will introduce and demonstrate procedures and concepts.
- You and the instructor will work through a procedure together, or you will work through a procedure on your own.
- You and the instructor will briefly discuss how the procedure or concept might affect your business process.

Note: In the case of hosted classes, when all students are working from the same database, there may be some exercises in which only one person can do the exercise while demonstrating to the others. These exercises are noted in the course materials.

Typographical Conventions

Introduction

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

Conventions Used in the Course Materials

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

Convention	Usage	Example
Italics	Introduces or emphasizes a term	A *system* 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.`

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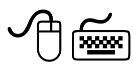
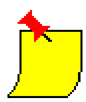
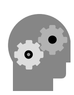
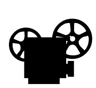
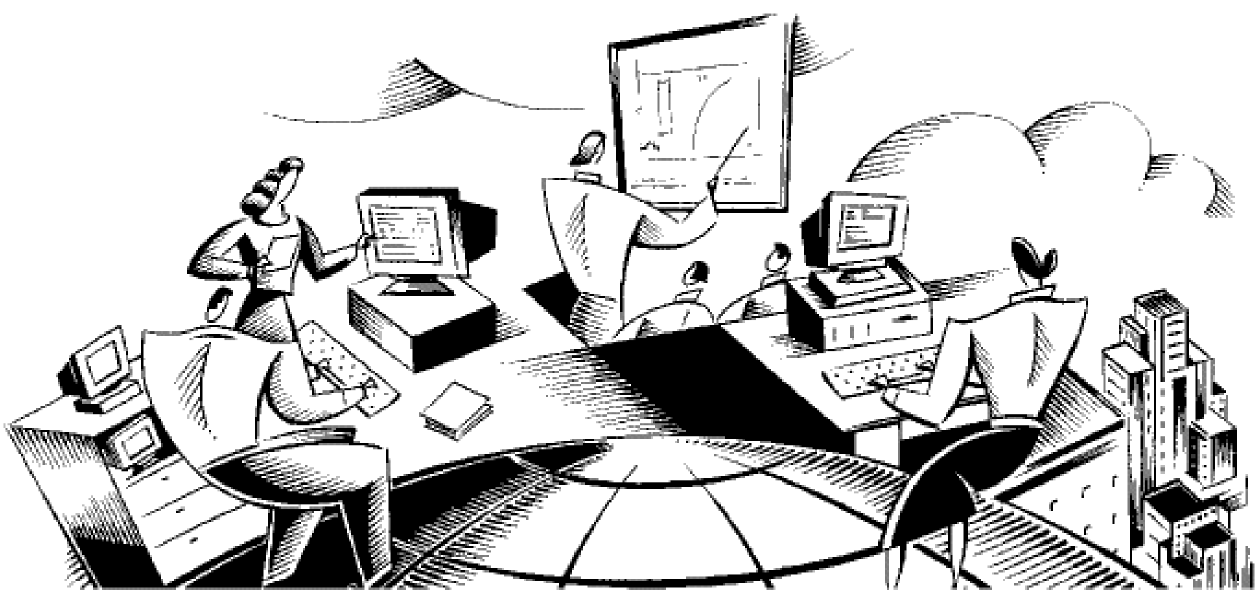
Typographical Conventions continued

Icons

You will see a number of 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

Chapter 2: Interface and Navigation



In This Chapter This chapter contains the following topics:

Chapter Overview

Introduction

This chapter provides an overview of the new interface, module structure, and basic navigation included in Maximo.

Chapter Focus

This chapter will quickly familiarize you with general changes to get you going in Maximo.

This chapter also will show you some enhancements to help you personalize Maximo.

Learning Objectives

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

- Describe the changes to the module structure
- Navigate between and within applications
- Quickly and readily locate needed data
- Use some basic personalization functions

Module and Application Changes

Overview

A number of applications and modules have been added to Maximo to enhance the experience of, and benefits to, traditional EAM users. However, enhancements also have been made to include many functions that IT Asset Management (ITAM) organizations need.

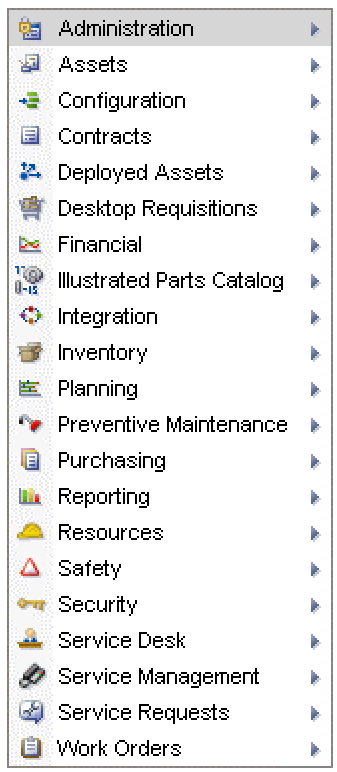
Please note that this course focuses on the traditional EAM functionality, and that some of the modules and applications mentioned in this section relating to IT will not be discussed in any detail.

Maximo Modules

Maximo now has 21 modules. You will recognize some of them from MAXIMO 5.x.

All administrative functions have been moved from the MAXIMO 5.2 Control Center to Web-architected applications in the MXES modules.

The following graphic shows the new modules as they are accessed from the Go To menu on the Start Center and in applications.



Note: In practice, you will see only the modules for which you have been given access by your system administrator.

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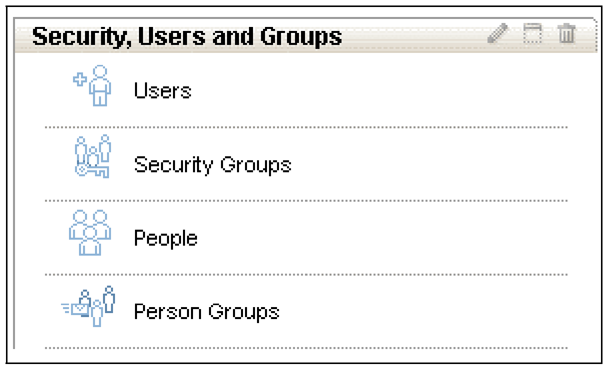
Module and Application Changes continued

Accessing Applications from the Start Center

Depending on how you have set up your Maximo Start Center, you might also be able to access individual applications directly by clicking on their names or icons.

The following graphic shows an example section of a Start Center that provides direct access to four applications.



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Module and Application Changes continued

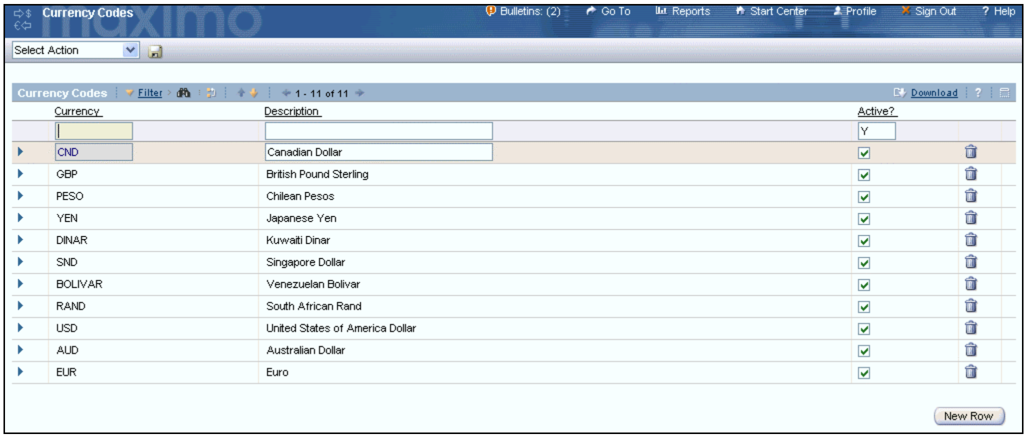
Single-Page Applications

Most Maximo applications contain a number of tabs and subtabs, similar to those in MAXIMO 5.x applications. However, you will encounter some simpler applications that contain only a single page.

Examples of these single-page applications are:

- Currency Codes (Financial module)
- Exchange Rates (Financial module)
- Terms and Conditions (Contracts and Purchasing modules)

The following graphic shows the single-page Currency Codes application.



Bulletin Board

Overview

Maximo enables you to create and share messages, or *bulletins*, with other users on the system.

These bulletins can be shared by:

- Organization
- Site
- Person group (these will be discussed later)

This section shows you how to view these bulletins. In Chapter 13, "Other EAM Administration," you will learn how to create the bulletins.

Note: You can generally access bulletins from any page in any application, including the Start Center.

Viewing Bulletins

You can view bulletins in the following ways:

- By clicking the Bulletins link on your Start Center or accessed application
- By clicking a bulletin header on your Start Center, if bulletins have been added there

For this course, we will focus on accessing bulletins via the Bulletins link on the Start Center.

Follow these steps to view bulletins:

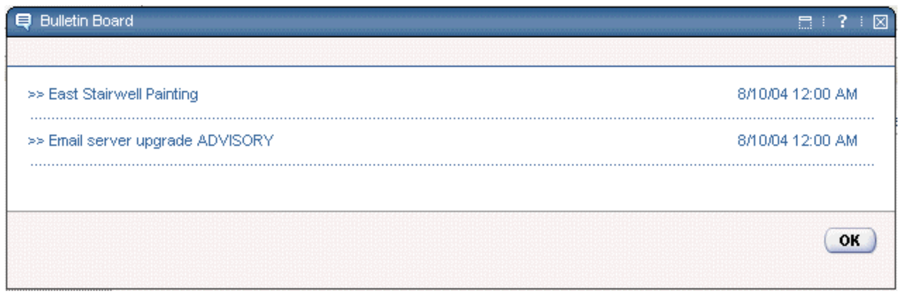
Step	Action
1	Sign in to Maximo with the user name and password provided by your instructor to view the Start Center.

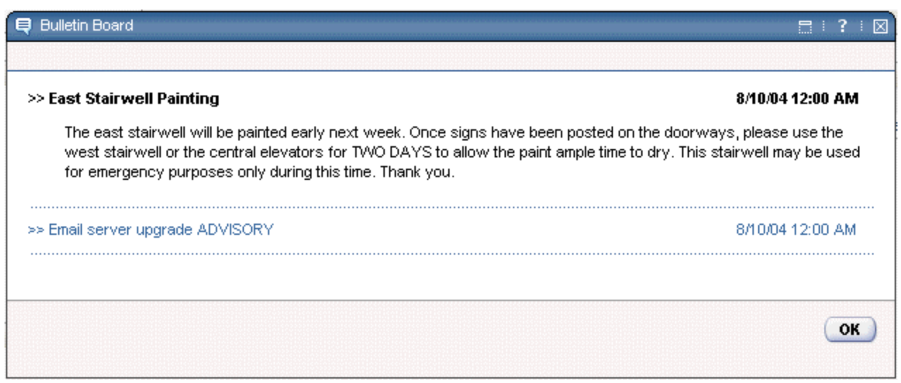
continued on next page

Bulletin Board continued

Viewing Bulletins

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>2</td><td>Click the Bulletins link at the top of the Start Center.
Result: The Bulletin Board pop-up window opens.


Note: The number of available bulletins is displayed to the right of the Bulletins link.</td></tr>
<tr><td>3</td><td>Click the header of one of the bulletins.
Result: Maximo displays the details for the bulletin.

</td></tr>
<tr><td>4</td><td>Click OK to close the Bulletin Board window.</td></tr>
</table>

Note: If bulletins are displayed directly on your Start Center, you can click the header of any message to see its details without having to bring up the entire pop-up window, as shown in the preceding exercise.

User Profiles

Overview

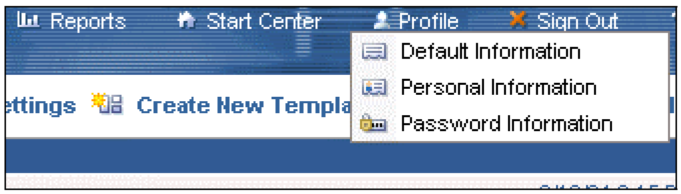
Maximo enables users to change many of their own profile parameters, with no system administrator intervention needed.

These profile parameters fall into three categories:

- Default Information
- Personal Information
- Password Information

All profile changes begin with a click of the **Profile** link found in most Maximo applications and on the Start Center.

You can access specific profile information by selecting one of the items from the Profile drop-down menu, as shown here.



This section provides an overview of the parameters that users can change and describes how to change them.

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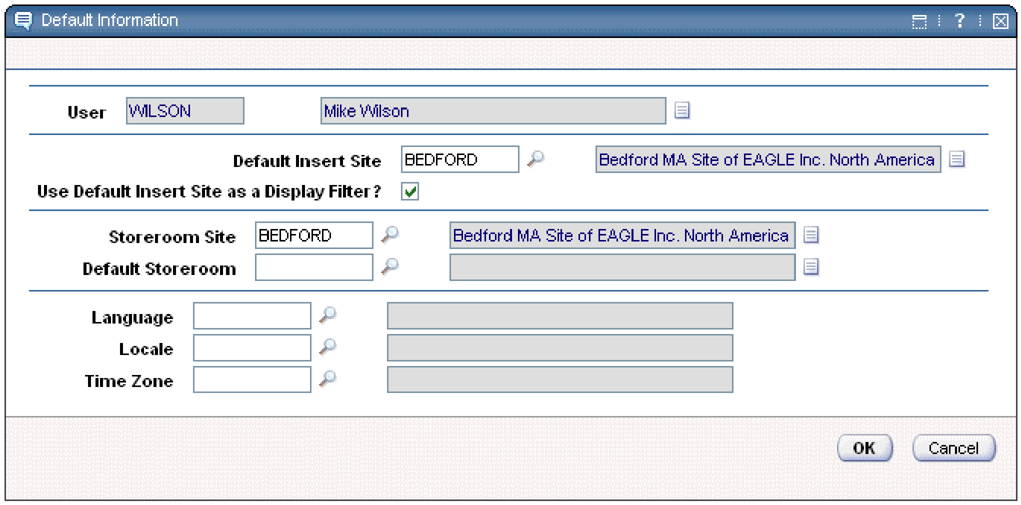
User Profiles continued

Default Information

To change default profile parameters, click the **Profile** link, then select **Default Information**. The Default Information dialog box opens.



The following table describes the purpose of each field in this dialog box.

continued on next page

User Profiles continued

Default Information

continued

Field Name	Purpose
Default Insert Site	The default site for filtering of records in applications upon entering. This site also is assumed to be the site into which all records the user creates will be inserted.
Use Default Insert Site as a Display Filter?	When this check box is selected, the system assumes that queries are on the site listed in the **Default Insert Site** field.
Storeroom Site	The site of the storeroom the user generally accesses. Lets planners know where to plan for such things as materials.
Default Storeroom	The storeroom the user generally accesses. Lets planners know where to plan for such things as materials.
Language	The user's base language. Lets Maximo know which language to display at sign-in.
Locale	More accurately pinpoints the part of the world in which the user speaks his or her base language. Can be used to provide more precise Maximo localization, if available.
Time Zone	Identifies the time zone in which the user generally works.

The Default Insert Site and Inserting Records

When you use an organization- or site-level application to add a record or other data to Maximo, Maximo automatically uses the data of the organization or site associated with the default insert site.

To add records for a different organization or site, you must change the default insert site to a site within the organization for which the data is to be added.

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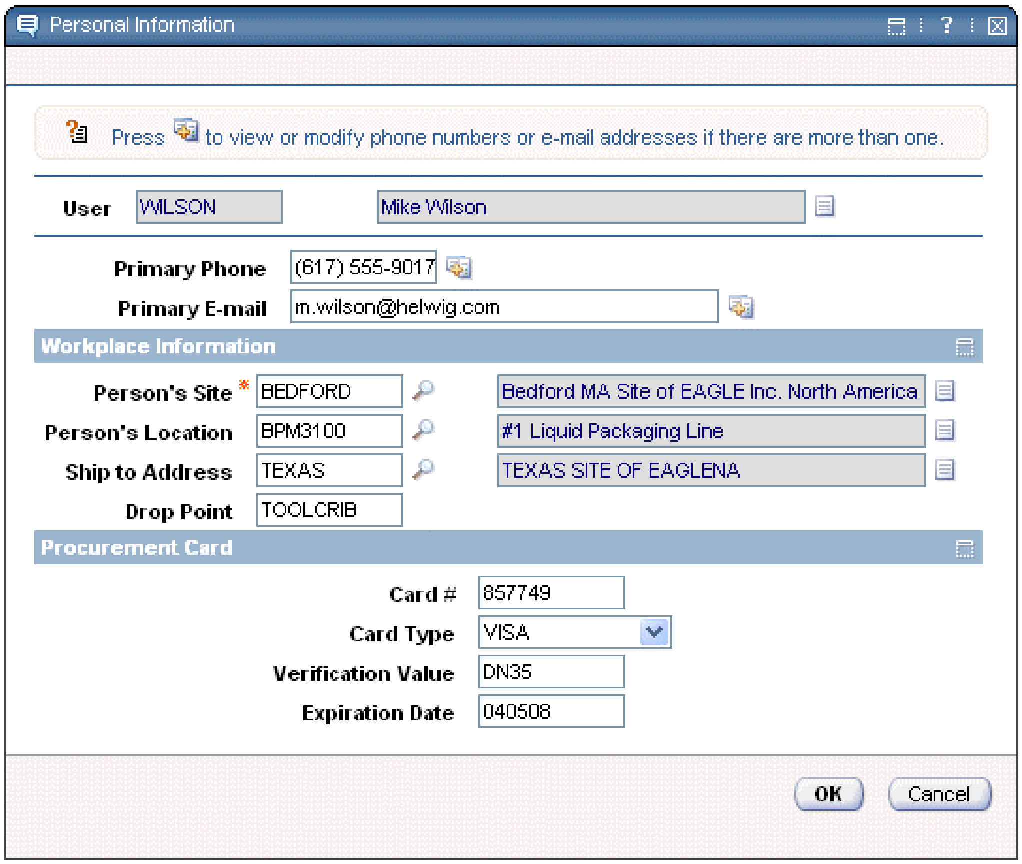
User Profiles continued

Personal Information

To change personal profile parameters, click the **Profile** link, then select **Personal Information** from the Profile drop-down list.

The Personal Information dialog box opens.



The following table describes the purpose of each field in this dialog box.

continued on next page

User Profiles continued

Personal Information

continued

Field Name	Purpose
Primary Phone	The primary phone number listed for the person
Primary E-mail	The primary e-mail address listed for the person
Person’s Site	The designated site at which the person works
Person’s Location	The specific location of the site at which the person works
Ship to Address	The address to which items should be delivered to the person
Drop Point	The specific drop point at the shipping address to which items should be delivered to the person
Card #	The number of the procurement card used by the person to charge for goods and services
Card Type	The type of procurement card used by the person to charge for goods and services
Verification Value	Additional value that can be used to validate the procurement card in financial transactions
Expiration Date	The expiration date of the procurement card used by the person to charge for goods and services

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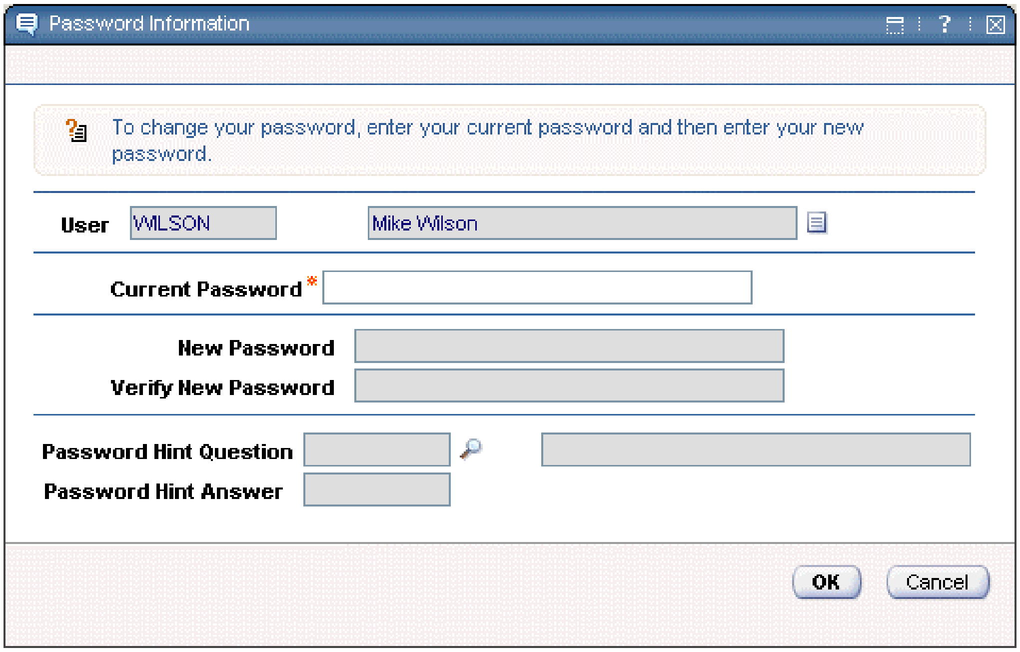
User Profiles continued

Password Information

To change password-related parameters, click the **Profile** link, then select **Password Information** from the Profile drop-down list.

The Password Information dialog box opens.



Note: Password Information fields become editable when you enter the correct **Current Password**.

The following table describes the purpose of each field in this dialog box.

continued on next page

User Profiles continued

Password Information

continued

Field Name	Purpose
Current Password	Enter the current password here to verify legitimate change of the password. Other fields are read-only until this value is correctly entered.
New Password	Enter the new password in this field. This field cannot be changed until the **Current Password** field contains the correct value.
Verify New Password	Verify the new password here to ensure that you have accurately entered the new password.
Password Hint Question	Select from a list of typical password hint types (for example, mother's maiden name).
Password Hint Answer	Enter the answer to the hint type into this field.

Help Enhancements

Overview

Maximo Help has two useful enhancements:

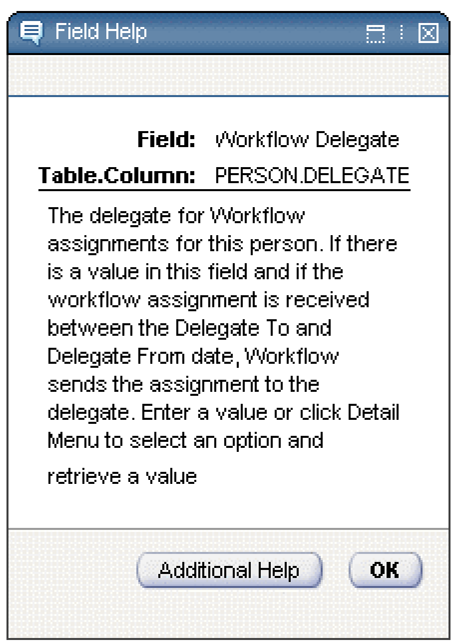
- Field help
- Online *Maximo User's Guide*

Field Help

Try the following exercise to see how field help works.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Access the People application from the Resources module.</td></tr>
<tr><td>2</td><td>Access the record for KELLY.</td></tr>
<tr><td>3</td><td>Click in the Workflow Delegate field, then press the ALT key and the F1 key at the same time.
<u>Result</u>: A Field Help pop-up window opens, displaying:

A description of the field (Workflow Delegate in this example)
The location of the field's data in the database, that is, Table.Column (PERSON.DELEGATE in this example)
The definition of the field



</td></tr>
</table>

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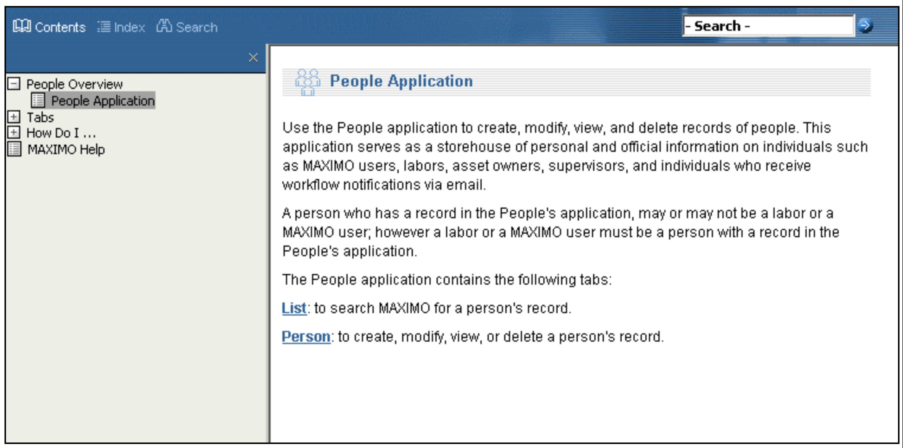
Help Enhancements continued

Field Help

continued

Step	Action
4	Click the **Additional Help** button in the Field Help pop-up window. Result: The Field Help window closes and help for the People application is displayed in a separate browser window.  Note: The Additional Help window that opens will depend on the application or other location from which you have requested field help.
5	Close the People Application Help window.

Hint

To access field help in Maximo, put the cursor into the field, then press **ALT** + **F1**.

Help Enhancements continued

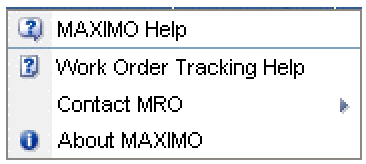
Online *Maximo User's Guide*

The complete *Maximo User's Guide* is included with online application help. To access the *Maximo User's Guide*, follow these steps:

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>

Click the **Help** link in the upper right corner of the application or Start Center.

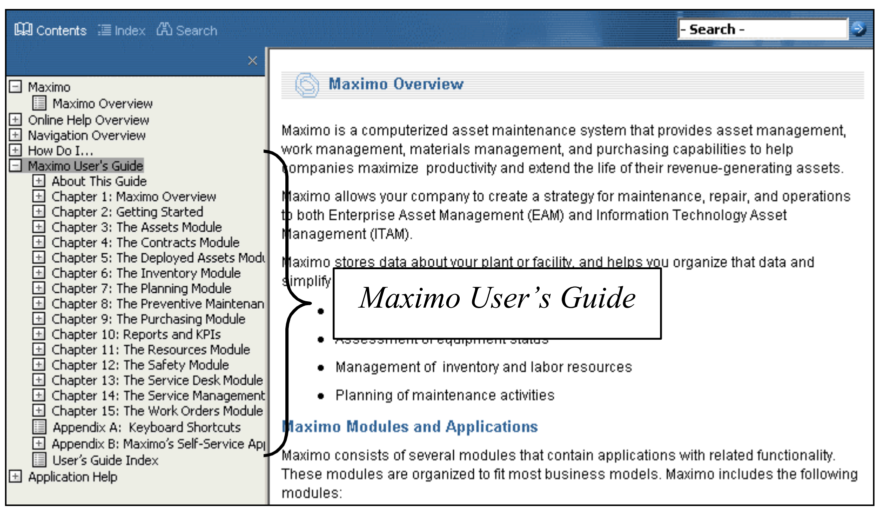
Result: A drop-down menu similar to the following example opens.



</td></tr>
<tr><td>2</td><td>

Click **MAXIMO Help**.

Result: A separate browser window displays the contents of Maximo Help.



</td></tr>
<tr><td>3</td><td>

You can access the *Maximo User's Guide* by using the Contents pane on the left side of the Maximo Help window.

Drill down in the *Maximo User's Guide* list to view its contents, as shown in the preceding graphic.

</td></tr>
</table>

Finding Records

Overview

Maximo has improved the process of finding records in applications. The main improvements are:

- Filtering in applications and dialog boxes
- Advanced searches using the More Search Fields dialog box
- Advanced searches using SQL

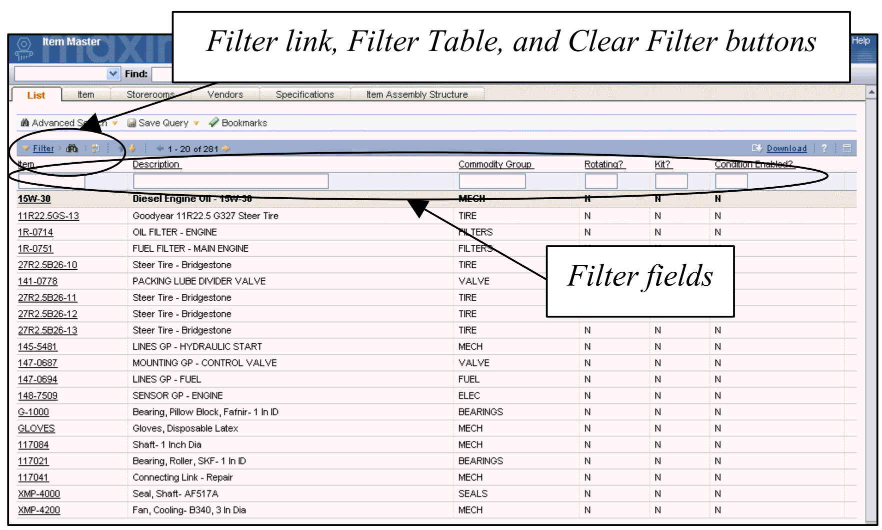
This section provides an overview of these improvements.

Filtering in Applications

Filtering in MXES is similar to filtering in MAXIMO 5.x applications, but because there are a few differences, we will cover the process briefly.

Note: Many dialog boxes also provide filtering capability, but it works similarly to the filtering in applications.

Follow these steps to get an overview of Maximo filtering capabilities:

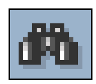
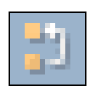
Step	Action
1	Access the **Item Master** application from the **Inventory** module and press the **Enter** key to display a list of records. Result: Your screen should look similar to the following example:  Note: Most Maximo applications will open to a List tab that contains no records. Press the **Enter** key to display the records.

continued on next page

Finding Records continued

Filtering in Applications

continued

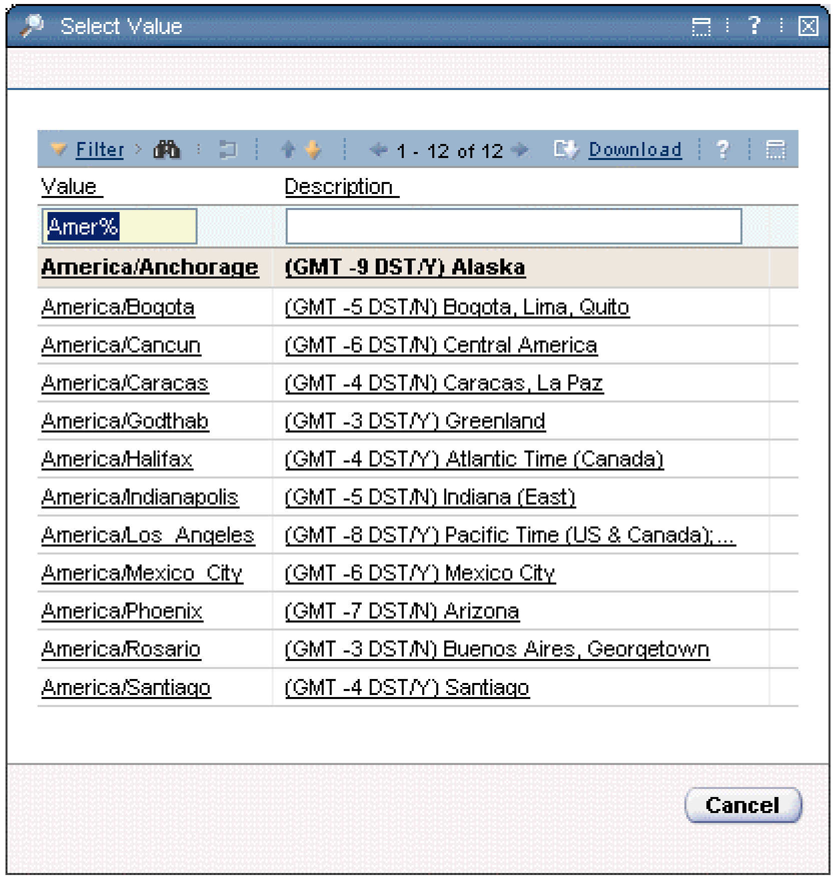
Step	Action
2	On the List tab, click on the **Filter** link to hide the filter fields.
3	On the List tab, click on the **Filter** link to display the filter fields. Note: If an application or dialog box opens with filter fields hidden, you can display them by clicking the **Filter** link.
4	We want to filter on two values, so enter the following values in the filter fields indicated here and then click the **Filter Table** button (the binoculars) shown below. Commodity Group: MECH Rotating?: Y  Result: The Item Master records on the List tab are filtered on the two criteria.
5	Click the **Clear Filter** button:  Result: The filter fields are cleared and the records are restored to their unfiltered number. Note: In applications that filter on a default site, clicking this button will restore the default site as a filter.

continued on next page

Finding Records continued

Filtering in Dialog Boxes

Many Maximo fields display a searchable dialog box if the entered value is partial or incorrect, as shown in the following example.



These searchable dialog boxes work like the searches from the List tab in applications.

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continued on next page

Finding Records continued

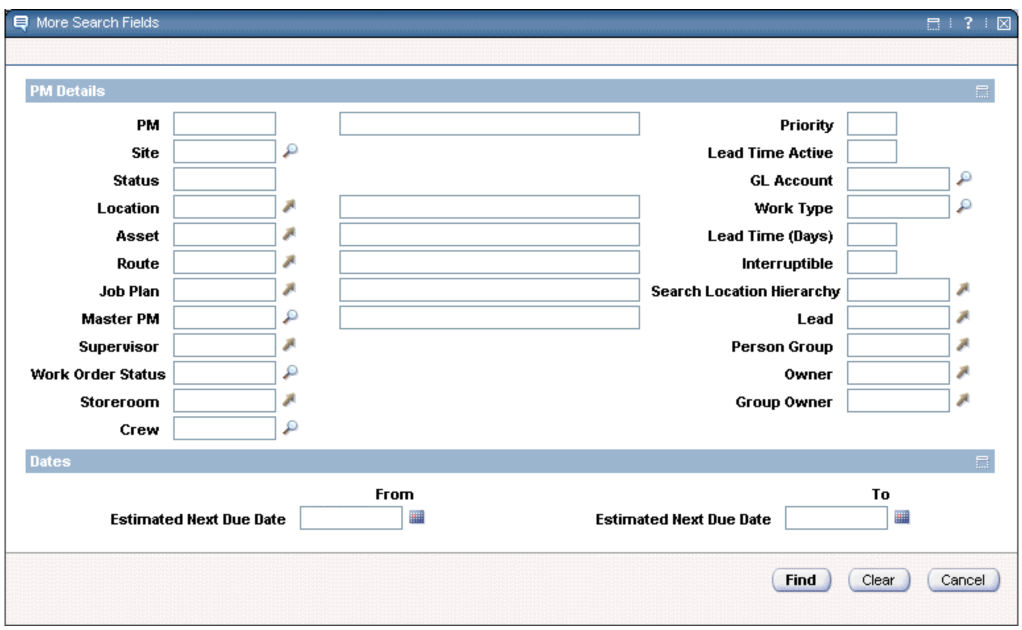
Advanced Search: More Search Fields

Search fields not displayed directly on an application can be displayed with the More Search Fields dialog box.

You can access the dialog box by selecting **More Search Fields** from the **Advanced Search** link in applications.

A sample of this dialog box from the Preventive Maintenance application is shown below.

Note: Each application that provides advanced search capability has a More Search Fields dialog box containing its own unique values.



Best Practice: To ensure that you are searching on correct criteria, be sure to click the **Clear** button in the More Search Fields dialog box before performing an advanced search! This will delete spaces and other easy-to-miss false criteria.

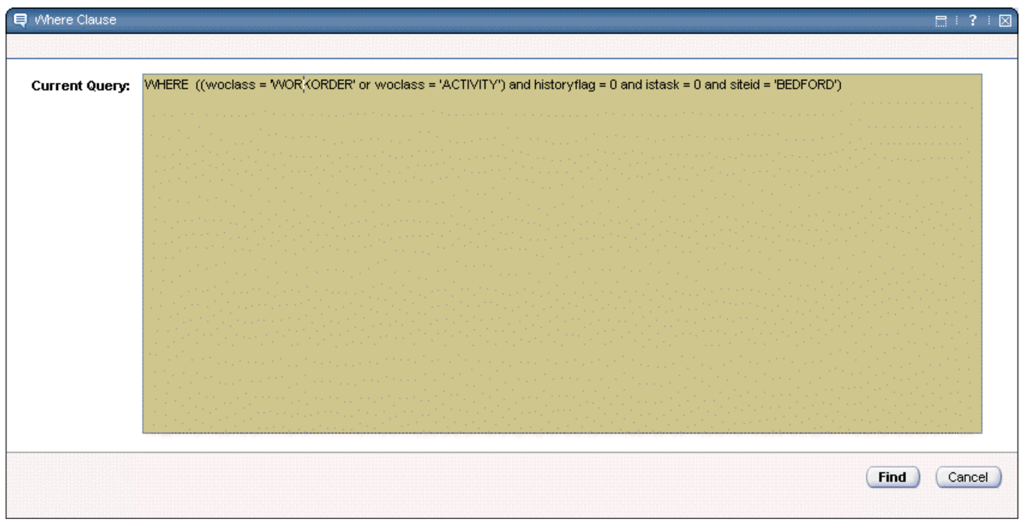
continued on next page

Finding Records continued

Advanced Search: Where Clause

You can also perform advanced searches with SQL statements.

To do an SQL-based search, select **Where Clause** from the **Advanced Search** link in applications.



Note: If there are some values in the other searches, there will be SQL in the Where Clause dialog box when it opens.

Additional Features

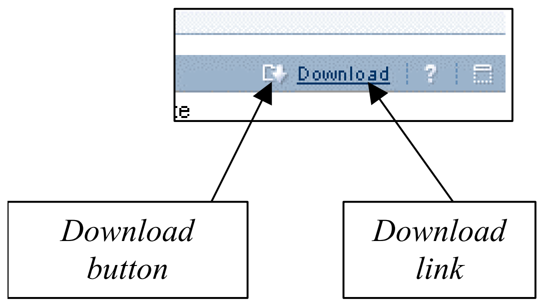
Overview

This section describes the following new MXES interface/navigation features:

- Downloading lists
- Showing table help
- Hiding a table window

Downloading Lists

On the List tab in most applications and in a number of other areas in Maximo that contain record lists, you will see a **Download** link and button.



This Download link downloads the listed records into an Excel spreadsheet displayed in a separate browser window.

Follow these steps to see an example of this functionality:

Step	Action
1	Access the **Assets** application, which is in the **Assets** module. Result: The List tab displays with no records listed.
2	Click the **Filter Table** button (the binoculars). Result: Maximo displays a list of Assets records filtered by default insert site.
3	Filter on BR* in the **Location** filter field. Result: Maximo displays a list of assets whose locations start with the letters *BR*.

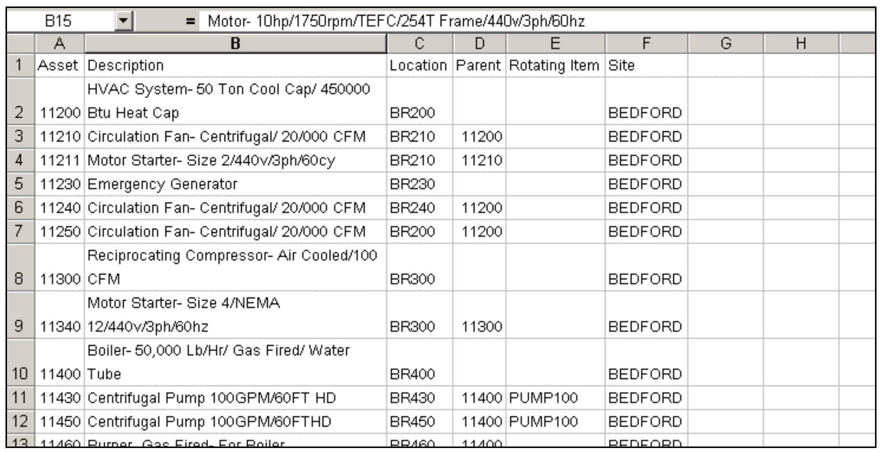
continued on next page

Additional Features continued

Downloading Lists

continued

Step	Action
4	Click the **Download** link on the List tab. Result: A separate browser window displays a spreadsheet, similar to the following example, with the items on the List tab.



B15 = Motor- 10hp/1750rpm/TEFC/254T Frame/440v/3ph/60hz

	A	B	C	D	E	F	G	H
1	Asset	Description	Location	Parent	Rotating Item	Site		
2	11200	HVAC System- 50 Ton Cool Cap/ 450000 Btu Heat Cap	BR200			BEDFORD		
3	11210	Circulation Fan- Centrifugal/ 20/000 CFM	BR210	11200		BEDFORD		
4	11211	Motor Starter- Size 2/440v/3ph/60cy	BR210	11210		BEDFORD		
5	11230	Emergency Generator	BR230			BEDFORD		
6	11240	Circulation Fan- Centrifugal/ 20/000 CFM	BR240	11200		BEDFORD		
7	11250	Circulation Fan- Centrifugal/ 20/000 CFM	BR200	11200		BEDFORD		
8	11300	Reciprocating Compressor- Air Cooled/100 CFM	BR300			BEDFORD		
9	11340	Motor Starter- Size 4/NEMA 12/440v/3ph/60hz	BR300	11300		BEDFORD		
10	11400	Boiler- 50,000 Lb/Hr/ Gas Fired/ Water Tube	BR400			BEDFORD		
11	11430	Centrifugal Pump 100GPM/60FT HD	BR430	11400	PUMP100	BEDFORD		
12	11450	Centrifugal Pump 100GPM/60FTHD	BR450	11400	PUMP100	BEDFORD		
13	11460	Burner- Gas Fired- For Boiler	BR460	11400		BEDFORD		

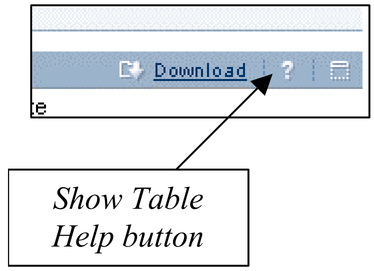
Note: Use the browser's **File** drop-down menu to save or print this spreadsheet.

continued on next page

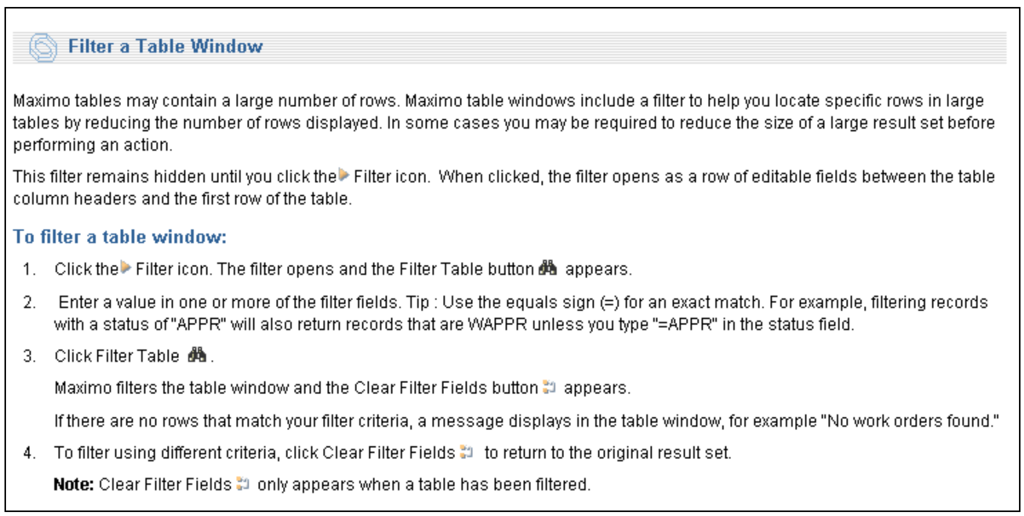
Additional Features continued

Showing Table Help

In many tables throughout Maximo you will see a **Show Table Help** button, as shown in the following graphic.



Click the **Show Table Help** button to open a separate browser window containing some helpful information about the use of the table.



Filter a Table Window

Maximo tables may contain a large number of rows. Maximo table windows include a filter to help you locate specific rows in large tables by reducing the number of rows displayed. In some cases you may be required to reduce the size of a large result set before performing an action.

This filter remains hidden until you click the Filter icon. When clicked, the filter opens as a row of editable fields between the table column headers and the first row of the table.

To filter a table window:

1. Click the Filter icon. The filter opens and the Filter Table button appears.
2. Enter a value in one or more of the filter fields. Tip : Use the equals sign (=) for an exact match. For example, filtering records with a status of "APPR" will also return records that are WAPPR unless you type "=APPR" in the status field.
3. Click Filter Table .

   Maximo filters the table window and the Clear Filter Fields button appears.

   If there are no rows that match your filter criteria, a message displays in the table window, for example "No work orders found."
4. To filter using different criteria, click Clear Filter Fields to return to the original result set.

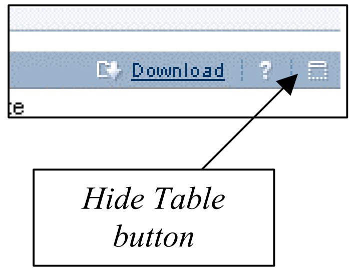
   Note: Clear Filter Fields only appears when a table has been filtered.

continued on next page

Additional Features continued

Hiding a Table Window

In many tables throughout Maximo you will see a **Hide Table** button, as shown in the following graphic.



Click the **Hide Table** button to close the table whose button you have clicked. You can use this feature to close windows in which you are not currently working to allow fields farther down on the screen to display.

Click the button again to redisplay the table.

Chapter Summary

Module and Application Changes

A number of modules and applications have been added to Maximo. You can access modules and applications from the Start Center and from applications by clicking the **Go To** link.

Note: You can access applications directly from the Start Center if it has been configured for this purpose.

There are a number of simple, single-page applications that have no tabs or subtabs.

Bulletin Board

Maximo enables you to send messages to users in various organizations, sites, and person groups within the system. You can also give messages an expiration date.

Access messages by clicking the **Bulletins** link on the Start Center and in applications.

Note: You can also access messages from the Start Center if it has been configured for this purpose.

These messages are created in the Bulletin Board application in the Administration module.

User Profiles

Users can now change some of their own profile information. The three types of profiles that can be changed are:

- Default Information
- Personal Information
- Password Information

The starting point for changing profile information is the **Profile** link on the Start Center and in applications.

continued on next page

Chapter Summary continued

Help Enhancements

Maximo Help has added two enhancements:

- Field help
- An online *Maximo User's Guide*

Finding Records

Maximo has improved functionality for finding records. The two main ways to find records within applications are:

- Filtering
- Advanced searches

Additional Features

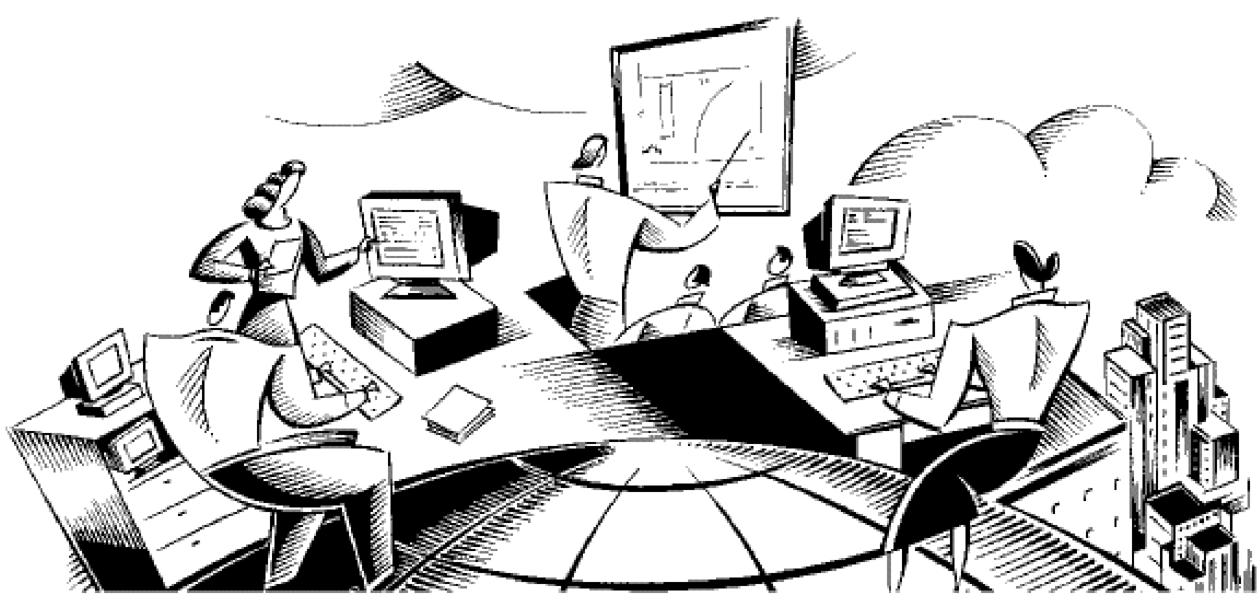
Maximo now enables you to:

- Download lists
- Show table help
- Hide a table window

NOTES:

MXES for EAM – New Features

Chapter 3: Multisite / Multiorganization Enhancements



In This Chapter This chapter contains the following topics:

Chapter Overview

Introduction

MXES offers many new enhancements that use the robust multisite/ multiorganizational capabilities found in MAXIMO 5.x applications.

This section highlights some of these enhancements.

Chapter Focus

This chapter provides an overview of the key multisite/multiorganizational enhancements. You will also have a chance to work with Maximo to see for yourself how powerful these enhancements can be.

Learning Objectives

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

- Describe the key multisite/multiorganizational enhancements in MXES
- View data from multiple sites
- Share data across organizations
- Move assets between organizations

Key Enhancements

Overview

In this section we will briefly cover some multisite/multiorganizational enhancements to MXES.

Single Sign-in Access to All Your Data

When you sign in to Maximo, you are given much more than data for a single site. You now are given access to the entire range of data for which you have been given privileges—without having to change sites.

For example, if you have access to the ABC site and the XYZ site, you sign in to Maximo once and can view or work with the data for both sites, depending on your privileges.

Sharing Data Across Organizations

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

Data that can now be shared across sites includes:

- Items
- Companies
- Job plans
- Master PMs

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

Transactions Across Sites

MXES 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.

Transactions Across Organizations

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

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

We will talk more about this later in the course.

Sign In and View Site Data

Overview

The exercise in this section demonstrates how MXES provides access to all your privileged data with a single sign-in.

Follow these steps:

Step	Action
1	Ensure that you are signed in to Maximo with the user name and password provided by your instructor.
2	Access the **List** tab of the **Assets** application from the **Assets** module, then click the **Clear Filter Fields** button. Result: A list of records that is filtered on the default insert site will be displayed. Note: The records are automatically filtered by the default insert site.
3	Take a look at the total number of records indicated on the List tab. On the line below, write the total number of records indicated. Record Total: ______________
4	On the line below, write the default site indicated in the filter field for the Site parameter. Default Filter Site: ______________ Note: When you enter Maximo applications, your records are automatically filtered by the value in the **Default Insert Site** field of your Default Information.
5	Clear the **Site** filter field, then click the **Filter Table** button to refresh the record list. Result: Your filter fields are cleared and the List tab displays all site records for which you have privileges.

continued on next page

Sign In and View Site Data continued

Overview

continued

Step	Action
6	On the line below, write the total number of records now indicated on the List tab. Record Total: ______________ Result: The number is larger this time because now your List tab contains *all* site records to which you have access, not just records from your default site.
7	Optional: Sort on the Site column to verify that records from additional sites are now on the List tab. Note: You can sort by clicking the title of the column that contains the data on which you want to sort. You can sort in ascending and descending order by clicking the column title multiple times.

A Few Notes on Filtering

Keep the following things in mind when filtering records:

- When **Use Default Insert Site as a Display Filter?** is checked in a user's default profile information, all applications will use the site indicated in the **Default Insert Site** field as the initial filter when the user enters the application.
- Clicking the **Clear Filter Fields** button clears all filter fields on the List tab and restores the default insert site as a filter in the **Site** field.
- The default filter site comes from the **Default Insert Site** field of the user's Default Information.
- Users can change the **Default Insert Site** field without intervention from the system administrator.
- If the **Default Insert Site** field is left blank, then applications return no data upon entry.

Sharing Data Across Organizations

Overview

MXES uses the concept of sets. *Sets* are groupings of information that a number of organizations can mutually see and access, thereby allowing these organizations to share their data.

This section will explain this sets concept, which affects many aspects of MXES.

Two Types of Sets

There are two types of sets used in MXES:

- *Item* sets for assets
- *Company* sets for vendors and other external business entities with which organizations do business

Both types of sets are defined in the Sets application of the Administration module.

Although there are two set *types* used, there can be multiple sets of each type, thereby allowing various organizations to share these sets.

Note: Each organization can use only one item set and company set. Therefore, only organizations that share these same sets can share data.

Sets 101

If two or more organizations share a set of items or companies, they can use the same data in their internal transactions and can share this same data among all the organizations that use that item set.

Note: Organizations do not have to share *both* items and companies. However, only the item and company sets that are *mutually* employed can be shared between organizations.

The following diagram might help you to better understand the sets concept.

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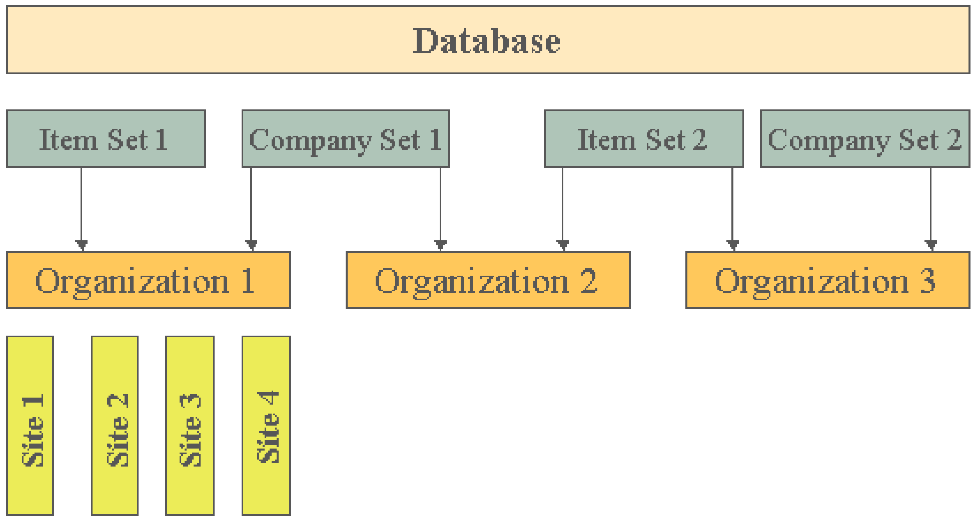
Sharing Data Across Organizations continued

Graphical Overview

The following diagram shows the interrelationships between the database, sets, organizations, and sites.



Follow these bullets to interpret the diagram:

- Item sets are created at the system (database) level with the Sets application.
- As items are added to inventory or vendors are added in Maximo, they are associated with a set.
- As organizations are created, they must be associated with an item and company set.
- Organizations that share sets of items and vendors can share assets and vendor-related transactions with each other.
- Sites within these mutual organizations can, as a result, share information in the sets.

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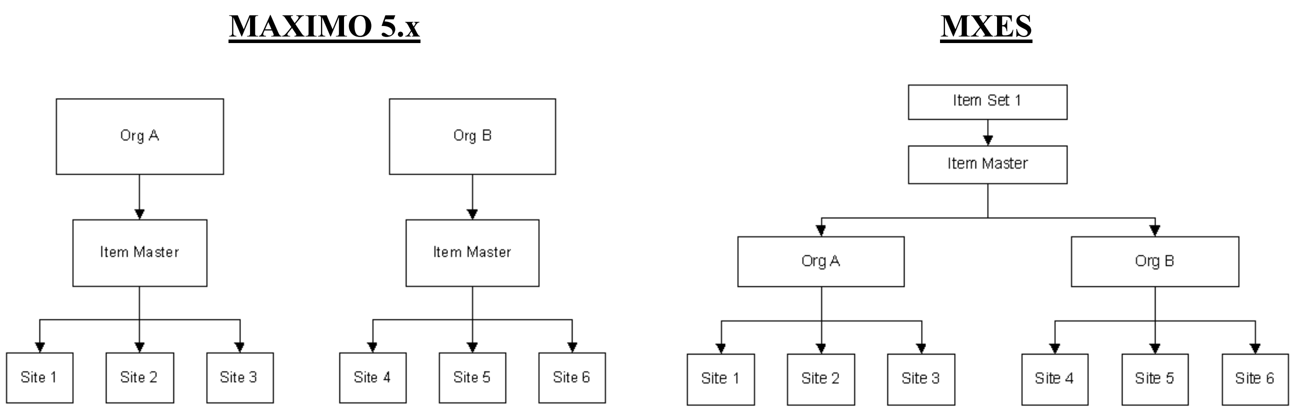
Sharing Data Across Organizations continued

Comparison

The following diagram shows the differences between how items were handled in MAXIMO 5.x and how they are now handled in MXES.



The item master now works within a single item set. Organizations that use the same item set also use the *same* item master. Therefore, they can share items across organizations and the sites within them.

continued on next page

Sharing Data Across Organizations continued

Applications That Use Sets

The following 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.

Walking Through Some Applications

Walking through a few applications will provide yet another way to show you how sets work. We will start with the Sets application.

continued on next page

Sharing Data Across Organizations continued

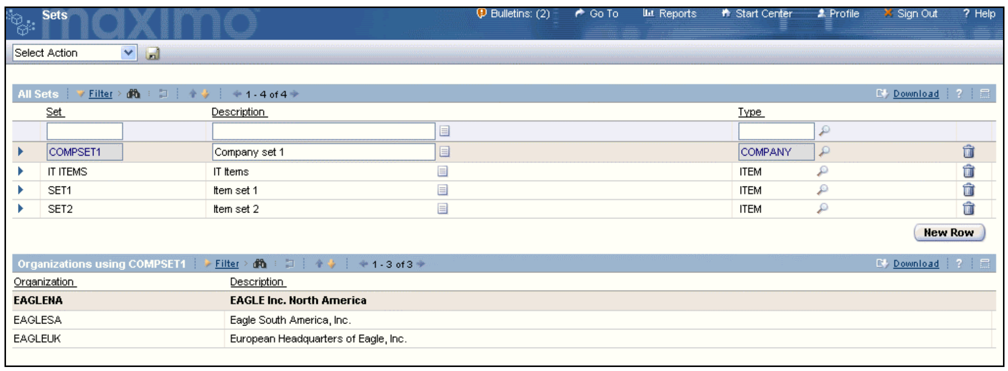
The Sets Application

Access the Sets application from the Administration module.

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

Click through the sets listed on the screen to see which organizations are associated with them.

Note: Organizations are associated with sets in the Organizations application (formerly called Multisite Setup in MAXIMO 5.x).



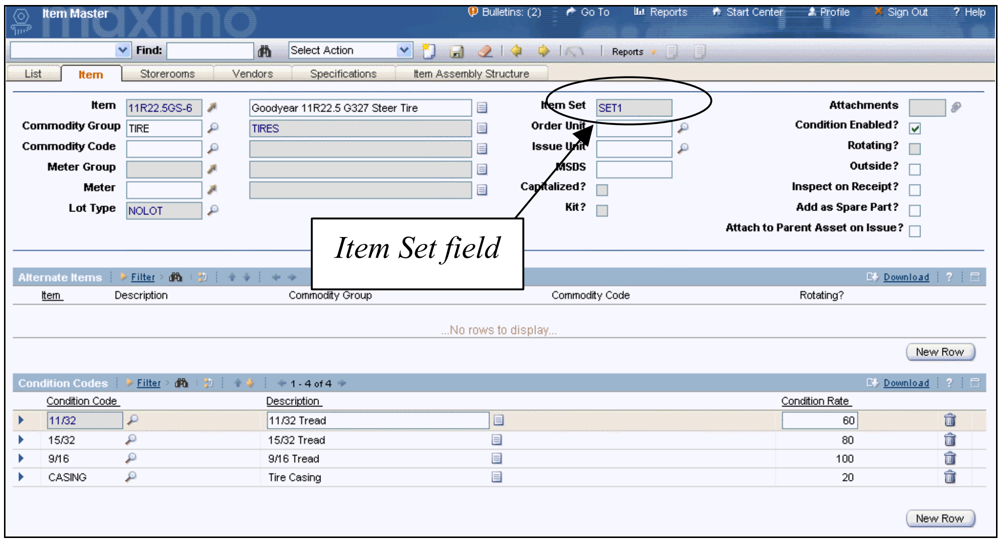
The sets do not inherently contain any items or vendors; they are just indicators. You create the sets in this application and use other applications to put items and vendors into the sets.

continued on next page

Sharing Data Across Organizations continued

Item Sets and the Item Master Application

Access the Item Master application from the Inventory module. You'll see that this application is similar to Item Master in MAXIMO 5.x. There are some differences, which we will discuss later. But for now, look at a record and note the new Item Set field.



When you add an item to the Item Master application, it is associated with a set using the Item Set field.

Other organizations can have items associated with the same set. Any organizations that use items associated with this set can transfer them among themselves.

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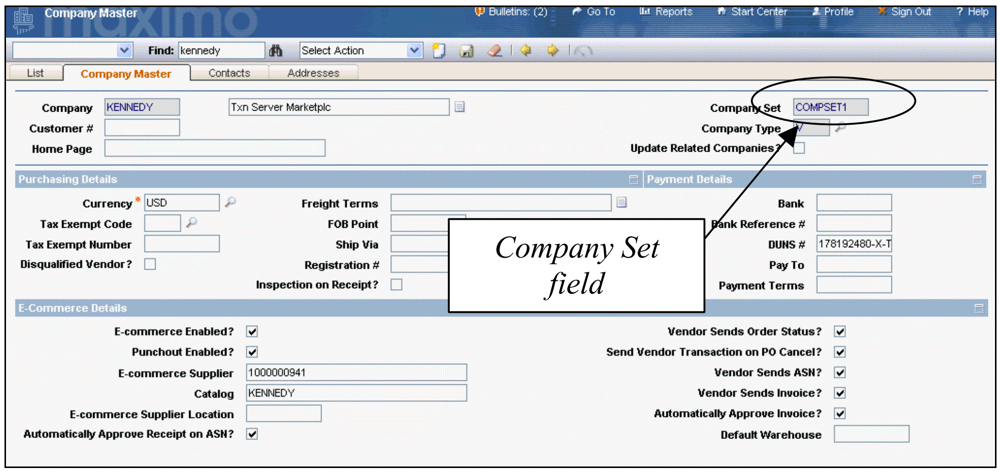
Sharing Data Across Organizations continued

Company Sets and the Company Master Application

Go to the new Company Master application in the Purchasing module. Select a company master record and view the Company Master tab.

You use the Company Master application to create company master records that belong to a particular company set. This company set is indicated in the Company Set field.



Company master records contain information pertaining to companies, such as the default contact person, purchasing, e-commerce, and payment details of a company.

All company master records in Maximo belong to a company set. Company sets enable you to share information about companies among multiple organizations. Each organization is associated with a company set.

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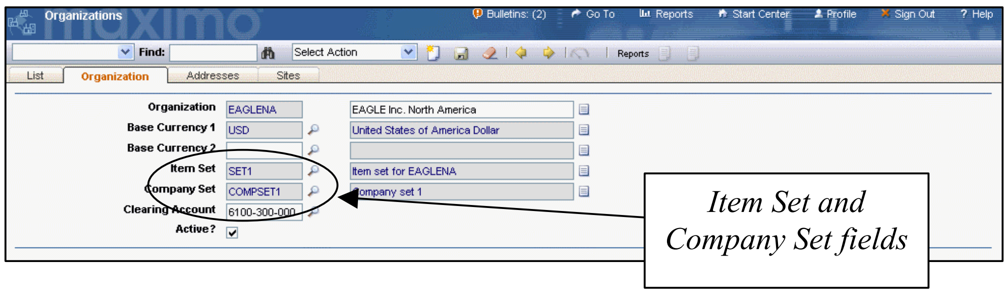
Sharing Data Across Organizations continued

Sets and the Organizations Application

Access the Organizations application from the Administration module. Select an organization from the list and view the Organization tab.



Notice that there are two new fields:

- Item Set
- Company Set

Using these fields, organizations are associated with sets of items and companies. If you check out the Sets application, you will see a list of associated organizations for each set.

Organizations that use the same set of items or companies can share these resources.

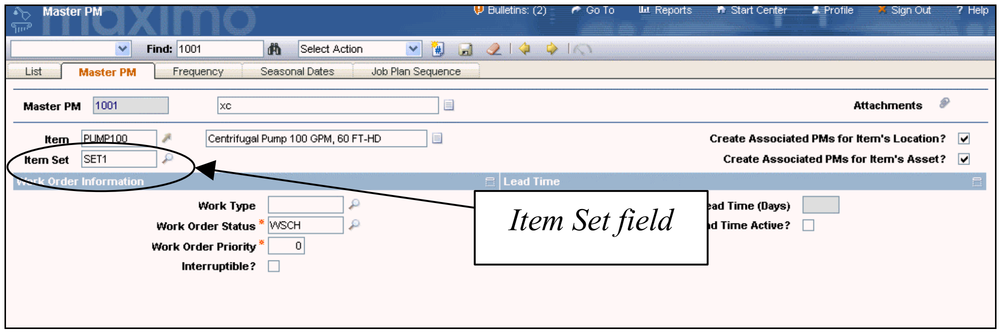
continued on next page

Sharing Data Across Organizations continued

Item Sets and the Master PM Application

Access the Master PM application from the Preventive Maintenance module. Access any record to view the Master PM tab.

The Master PM application replaces the Master PM tab from the Preventive Maintenance application in MAXIMO 5.x.



If an item and item set are indicated when a master PM is created, this master PM and resulting PMs can be used for any organization that also uses this item set.

Work-Related Enhancements

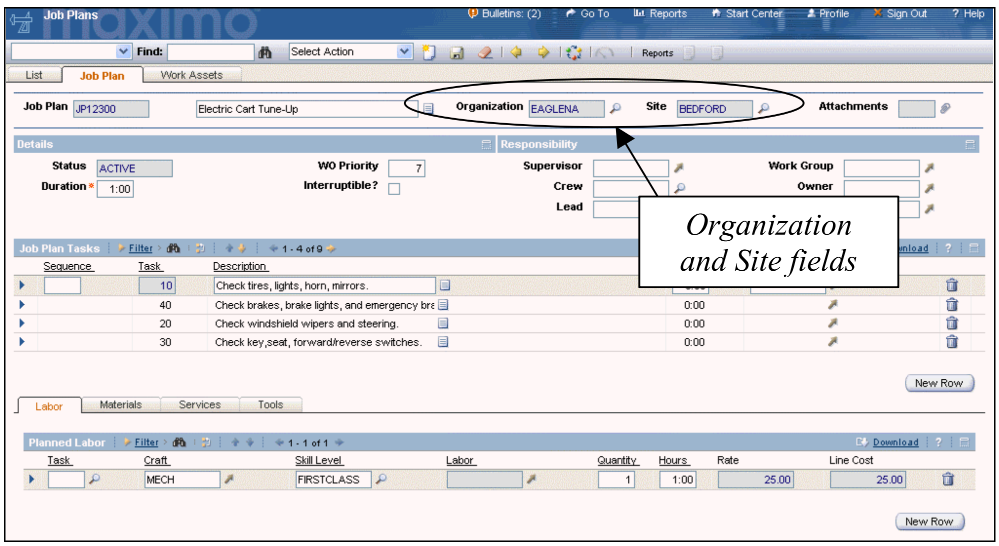
Overview

The enhanced ability for organizations and sites to work together in MXES improves some work-related procedures as well.

In Chapter 12, "Work Management," we will go into more depth on this topic. But while we are discussing multisite/multiorganizational enhancements, we will look at a few new work management features.

Job Plans and Organizations

Access the Job Plans application from the Planning module. Select any record to view the Job Plan tab.



Notice how there are now both an **Organization** and a **Site** field in this application. These fields provide the following capabilities:

- If no organization or site is indicated, then the job plan is at the database level and can be used by all organizations.
- If a job plan has only an organization indicated, then the job plan can be used by the designated organization and any sites within the organization.
- If job plan record has both an organization and a site indicated, then the job plan can be used only by the designated site.

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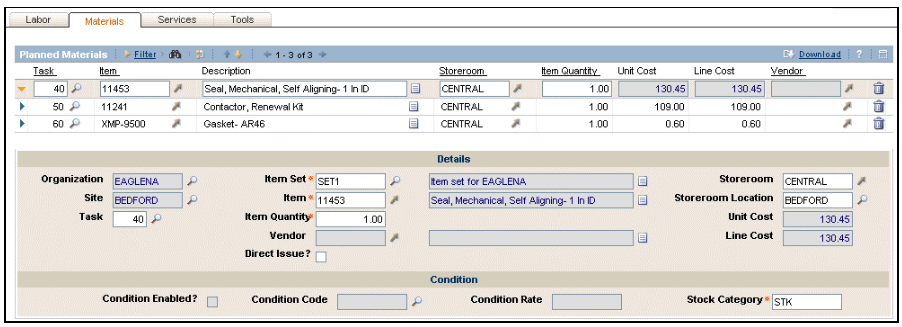
Work-Related Enhancements continued

Planned Resources and Organizations

Another work management enhancement is the ability to specify an organization or site on some planned resources.

Follow these steps:

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>From the Job Plans application, access the Job Plans tab for record JP11430.</td></tr>
<tr><td>2</td><td>Locate the Materials subtab from the Job Plan tab.</td></tr>
<tr><td>3</td><td>Show the details for Item 11453.

</td></tr>
</table>

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Work-Related Enhancements continued

Planned Resources and Organizations

continued

Notice that the details section for the item contains some new fields:

- Organization
- Site
- Item Set
- Storeroom Location

These new fields provide the following enhancements:

- If an organization or site other than the specified organization or site is using the job plan, Maximo will display only job plan data that is relevant for the site using the job plan.

  Note: This enables you to put a variety of materials on the job plan, which can be organization- or site-dependent. Therefore, one job plan can be used for a number of organizations; job plans no longer have to be set up specifically for a single organization.
- If the indicated item is from the same item set as another organization, the organization that uses the job plan can specify materials from another organization.
- The Storeroom Location field now allows you to specify the site of the storeroom.

  Note: This enables you to have duplicate storeroom names across sites. In addition, you can plan that materials should be used from a storeroom on another site, if that is best for the work being done.

continued on next page

Work-Related Enhancements continued

Other Resources

Check out the other subtabs as well:

- Labor
- Services
- Tools

If there are no resources listed on these subtabs for this record, just add a line to these tabs.

You will see that various combinations of organization/site/item sets can be specified, depending on the type of resource.

Demonstration

Later in this course we will do an exercise that shows how only related resources come across in Job Plans on Work Orders.

Moving Assets Between Organizations and Sites

Overview

The enhanced multisite and multiorganization functionality in MXES can improve how you manage your assets.

We will talk about this in more depth later on, but we want to mention a few things at this point.

Enhancements

- Issues/transfers/moves can be made across organizations.

  Note: This will be discussed in more detail later in the course.
- PMs will get moved over to the new site when an asset is moved.

  Note: The Master PM must be associated with an asset if the PM is to be moved with the asset.
- Work orders can specify assets from other sites.
- You can issue assets to a work order from another site.
- Transfers between organizations and sites can also be done using internal PO/PR records.
  - This creates a more formalized and better-documented process.
  - Because assets can be moved across organizations and sites, centralized purchasing can be done through Maximo.
    - When a PR or PO is indicated as Internal, you can designate the destination storeroom and storeroom site as other than the org/site on the PR/PO.

Chapter Summary

Key Enhancements

A number of key enhancements were covered in this chapter:

- Single sign-in access to all your data
- Sharing data across organizations
- Transactions across organizations and sites

Sign In and View Site Data

You now sign in to Maximo, not to a specific site. When you sign in, you have access to all the data allowed by your system administrator.

You have a default site filter, which might be your main site of interest. But this filter can be removed so that you can see all your data.

Sharing Data Across Organizations

The key new feature in MXES that allows you to share data across organizations is the functionality of sets.

There are two types of sets:

- Item set
- Company set

You create sets at the system level and use the Organizations application to associate them with organizations.

Organizations and sites within organizations that share sets can share the data in these sets.

The following applications use set-related data:

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

continued on next page

Chapter Summary continued

Work-Related Enhancements

Job plans are now organization/site enabled.

Depending on the values in the Organization and Site fields in the Job Plans application, various groups can use them.

For resources on job plans, various combinations of organization/site/item sets can be specified, depending on the type of resource.

Moving Assets Between Organizations and Sites

Many enhancements relating to the movement of assets have been added:

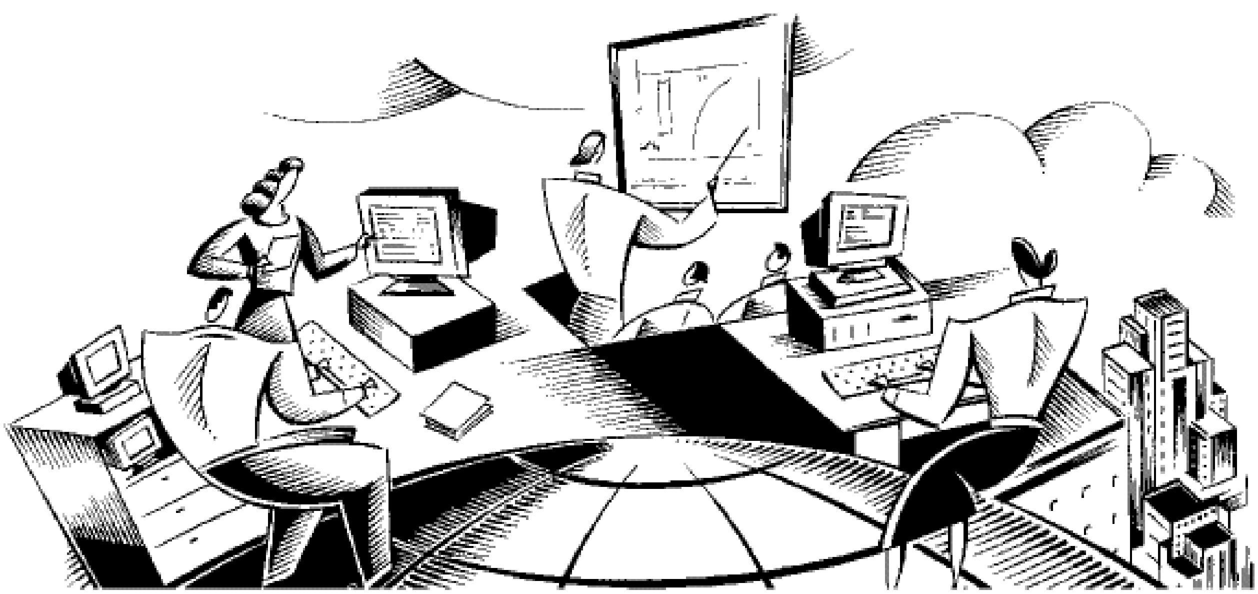
- Issues/transfers/moves can be made across organizations.
- PMs will get moved over to the new site when an asset is moved.
- Work orders can specify assets from other sites.
- Assets can be issued to a work order from another site.
- Transfers between organizations and sites can also be done using internal PO/PR records.

NOTES:

NOTES:

MXES for EAM – New Features

Chapter 4: Asset Management



In This Chapter This chapter contains the following topics:

Chapter Overview

Introduction

MXES provides many new enhancements to the way that assets are managed. In this chapter you will learn about these enhancements.

Chapter Focus

This chapter provides an overview of the key asset management enhancements. It also contains some exercises that will enable you to experience the enhancements first-hand.

Learning Objectives

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

- describe the key asset management enhancements in MXES,
- use the key new fields relating to asset management functionality,
- create and bundle hierarchical asset records,
- perform an asset hierarchy search,
- identify users and custodians of assets,
- move/modify single assets and groups of assets, and
- directly swap one asset with another asset between locations.

Key Enhancements

Overview

In this section we will list the key enhancements as they relate to the management of assets.

You will become more familiar with these enhancements while working through exercises in this chapter and later in the course.

Application Name Change: Assets

The Equipment application in MAXIMO 5.x and previous versions has been renamed in MXES—it is now called the Assets application.

The Assets application includes improved functionality and data types needed to work with an EAM strategy and with IT assets.

Added Data Elements

Many data elements have been added to the Assets application to provide the functionality and data needed to work with IT assets.

After working with Maximo for awhile, you will see that these fields and functions will provide benefits to your organization, even when used for traditional EAM work.

These new data elements include:

- Type
- Status
- Maintain Hierarchy? check box
- Primary
- Users
- Custodians

Working with Multiple Records

MXES enhances your ability to work with multiple records for a single function.

For example, you can now perform the following functions on several records at once by selecting the group of records and carrying out the function:

- Moves
- Swaps
- Attribute changes

continued on next page

Key Enhancements continued

Bundling Assets

MXES lets you bundle assets to disallow removal of children from the asset hierarchy of a parent.

Asset Hierarchy Searches

Using the advanced search capability of MXES, you can now perform a single asset hierarchy search for a parent asset and retrieve all its child asset records in the same list.

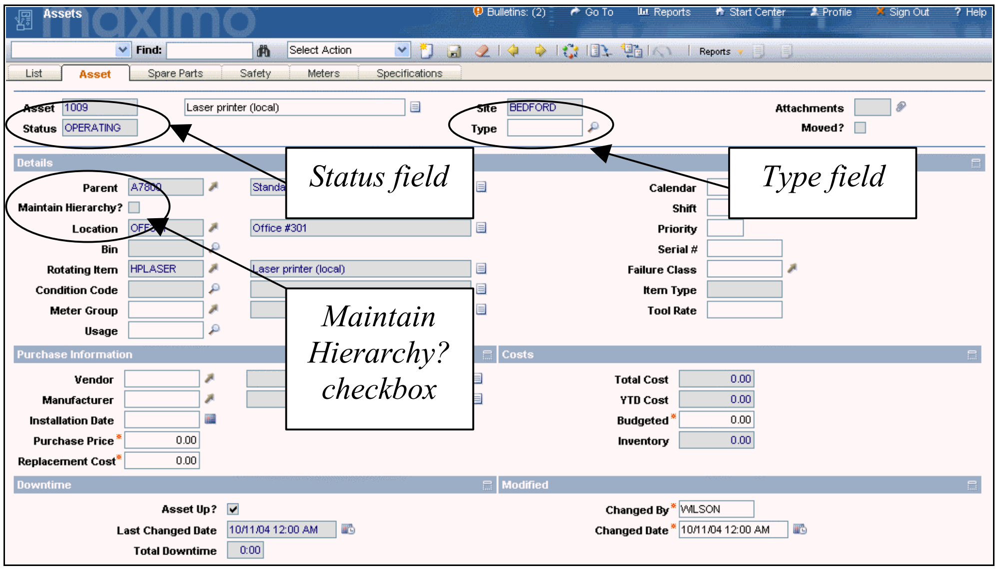
You will perform an exercise later that clearly shows the benefit of this enhancement.

Important New Fields

Overview

We will now take a look at some of the new fields in the Assets application.

To start, access the Assets application from the Assets module and view the Assets tab for record 1009: *Laser printer (local)*.



The fields we will talk about in this section are indicated in this graphic.

The Type Field

The **Type** field is used to distinguish various types of assets. The options are:

- Facilities
- Fleet
- IT
- Production

Note: You can create and use synonyms for these types. The values in this field enable searches on specific types of assets. More types can be added for further clarification and searching for assets.

continued on next page

Important New Fields continued

The Status Field

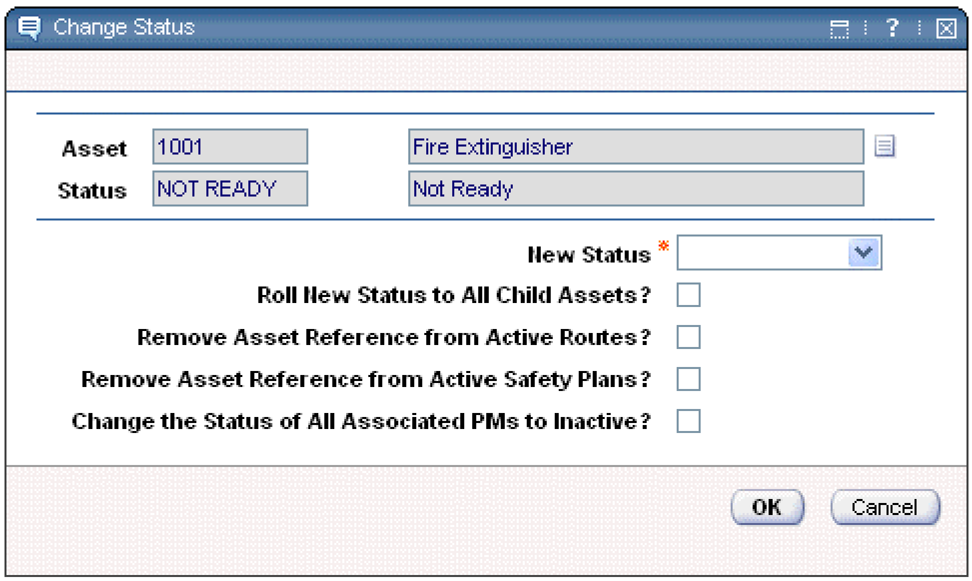
Use the **Status** field to indicate whether an asset is:

- Not ready
- Decommissioned
- Operating

Note: You can create synonyms for these statuses if necessary.

When an asset has a status of Decommissioned, the asset cannot be seen from other applications but can still be seen in the Assets applications.

Click the **Change Status** icon in the toolbar to open the Change Status dialog box.



There are several check boxes in the Change Status dialog box that you should know about. The following list indicates the purpose of each check box.

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Important New Fields continued

The Status Field

continued

Check Box	Purpose
Roll New Status to All Child Assets?	Select this check box to specify that all children of the asset whose status you are changing also will have their status changed to the same new status. You can select this option for any status change.
Remove Asset Reference from Active Routes?	Select this check box to specify that the asset should no longer be referenced on active routes while the asset is in the new status. For example, if you set an asset's status to Decommissioned, you might want the asset removed from inspection routes. You can select this option only when changing the status to Decommissioned.
Remove Asset Reference from Active Safety Plans?	Select this check box to specify that the asset should no longer be referenced on active safety plans while the asset is in the new status. You can select this option only when changing the status to Decommissioned.
Change the Status of All Associated PMs to Inactive?	Select this check box to specify that any PMs associated with the asset should be set to Inactive while the asset is in the new status. You can select this option only when changing the status to Decommissioned.

Maintain Hierarchy? Check Box

Use the **Maintain Hierarchy?** check box on the Asset tab to *bundle* assets to indicate that parent and children assets should always be kept together.

This enhancement is especially useful during moves and swaps. But it is also useful for searching, because you can perform a single advanced search on a parent asset and also get all child records.

The next section talks more about bundling of assets.

Bundling Assets

Overview

Bundling of assets is a new feature provided by MXES. In essence, *bundling* means that the system knows that all bundled assets need to stay together when moved from one location to another.

Create a Hierarchy and Bundle Assets

The following exercise shows you how create an asset hierarchy and bundle the assets within the hierarchy. First you will create some new assets, then you will bundle them.

Note: To make your records unique and easier to search for, add your initials to the records where indicated.

Step	Action
1	Access the **Assets** application from the **Assets** module. Note: In the next three steps, you will create three assets in a hierarchy.
2	Insert and save a new asset record with the following information: **Asset:** LAPTOP[*your initials*] **Description:** Consultant Laptop-[*your initials*] **Type:** IT **Parent:** [*blank*] **Location:** HWSTOCK (IT Hardware Cage)
3	Insert and save a second record with the following information: **Asset:** BOARD[*your initials*] **Description:** Motherboard for Consultant Laptop-[your initials] **Type:** IT **Parent:** LAPTOP[*your initials*] **Location:** HWSTOCK (IT Hardware Cage) Note: Because this asset "belongs" to another asset, it automatically inherits the location of the parent asset.

continued on next page

Bundling Assets continued

Create a Hierarchy and Bundle Assets

continued

Step	Action
4	Insert and save a third record with the following information: **Asset:** LAPTRAM[*your initials*] **Description:** RAM for Consultant Laptop-[*your initials*] **Type:** IT **Parent:** BOARD[*your initials*] **Location:** HWSTOCK (IT Hardware Cage)
5	Bundle these related assets together by accessing the first record, LAPTOP[*your initials*], and selecting the **Maintain Hierarchy?** check box. Then save the record. Result: The **Maintain Hierarchy?** check box is selected for the parent and all children assets in the hierarchy. All the assets in this hierarchy are now bundled. Note: Maximo will move or swap all assets in this hierarchy when one of them is moved or swapped.

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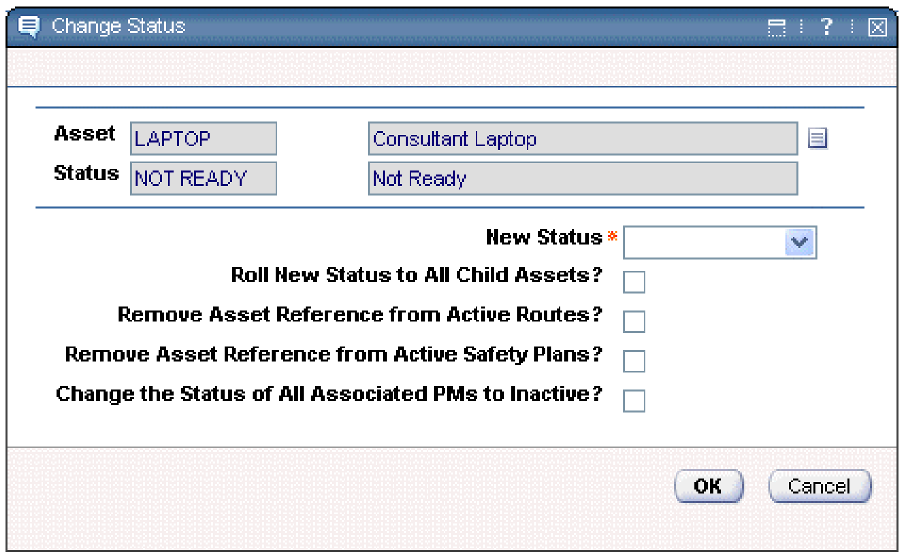
Bundling Assets continued

Create a Hierarchy and Bundle Assets

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>6</td><td>While on the LAPTOP[your initials] record, click the Change Status icon.

<u>Result</u>: The Change Status dialog box opens.


</td></tr>
<tr><td>7</td><td>Toggle the status to OPERATING.</td></tr>
<tr><td>8</td><td>Select the Roll New Status to All Child Assets? check box.</td></tr>
<tr><td>9</td><td>Click OK.

<u>Result</u>: The Change Status dialog box closes and your status changes are registered in Maximo. The parent and all child assets in the hierarchy are set to OPERATING.</td></tr>
</table>

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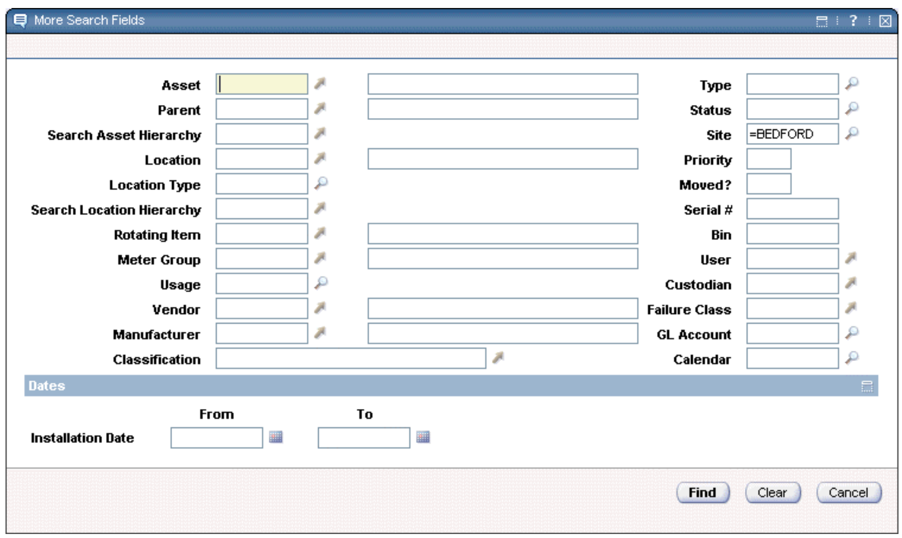
Bundling Assets continued

Asset Hierarchy Search

Another great enhancement in MXES is the ability to search for a parent of a hierarchy and get the entire hierarchy in just one search process.

Now that we have created our own hierarchy, we will check out the asset hierarchy search.

Follow these steps:

Step	Action
1	Access the **List** tab of the **Assets** application.
2	Ensure that all filter fields are clear and click the **Filter Table** button.
3	Click the **Advanced Search** link. Result: The More Search Fields dialog box opens. 

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Bundling Assets continued

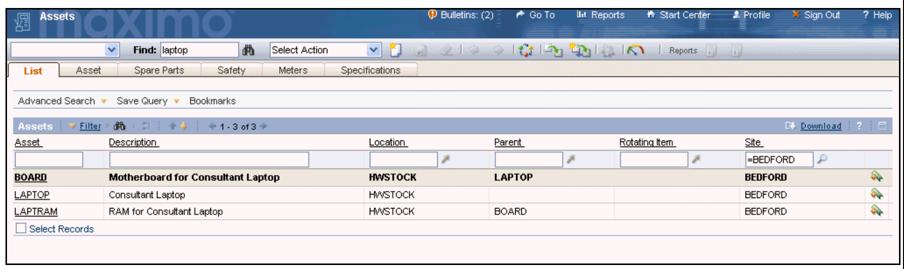
Asset Hierarchy Search

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>4</td><td>Click Clear to ensure that the advanced search fields are clear.

<u>Note</u>: The Site field will be populated with your default insert site. You must manually delete it if you do not want it in the search.</td></tr>
<tr><td>5</td><td>Enter LAPTOP[your initials] (the top parent asset) into the Search Asset Hierarchy field and click Find.

<u>Result</u>: The More Search Fields dialog box closes and the List tab displays the parent and all its children.


</td></tr>
</table>

Associations Between Assets and People

Overview

MXES enables you to identify one or more people who are associated with an asset in some way.

This capability is essential to managing and tracking IT assets. However, it easily could provide some benefit to those using MXES for traditional enterprise asset management as well.

This section shows you how to set up these associations with assets.

Asset Associations

The following table describes the three types of associations between people and assets.

Asset Association	Description
Primary	This person has ultimate responsibility for the asset. The first person associated with an asset must be the primary owner. If other people are associated with the asset, primary ownership can be moved to someone other than the first person.
Custodian	This person has the next level of responsibility for an asset. The custodian may work directly with the user of the asset, but does not directly access the asset.
User	This person has direct access to and usage of the asset. If someone were to search for a mobile asset, they would probably want to find out where the user was located.

Notes:

- There can be only one primary, but there can be multiple custodians and users.
- One person can have all three relationships with the asset.

Benefits of Associations

Associations provide many benefits. For example, they could help to determine:

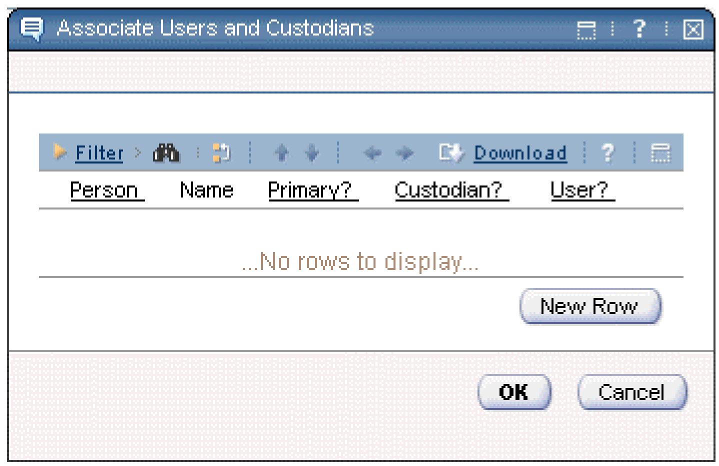
- where a mobile asset might be located (find the user);
- whose authorization is needed to service an asset (perhaps the primary owner); or
- how to locate or contact the user (maybe contact the custodian).

continued on next page

Associations Between Assets and People continued

Creating Associations

The following exercise shows you how to create associations between people and assets.

Step	Action
1	In the **Assets** application, find the LAPTOP[*your initials*] record created in a previous exercise.
2	Choose **Associate Users and Custodians** from the Select Action menu. Result: The Associate Users and Custodians dialog box opens. 

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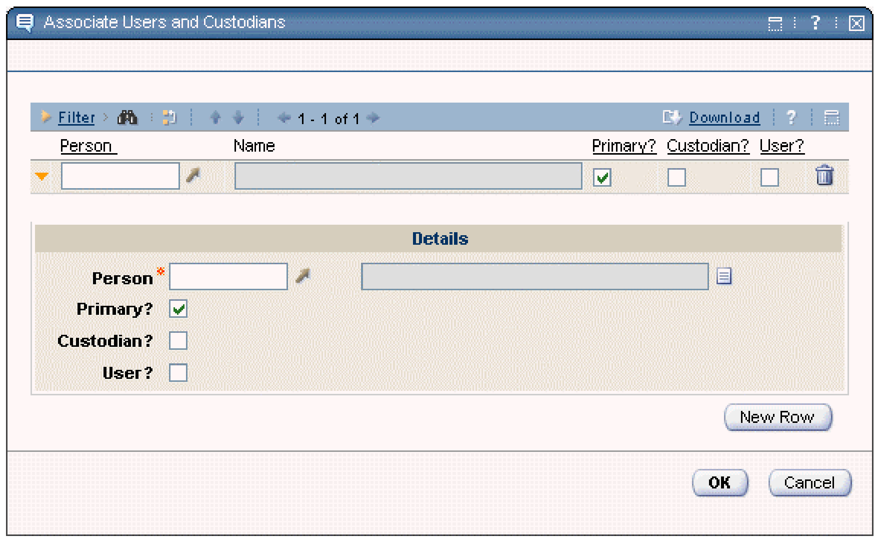
Associations Between Assets and People continued

Creating Associations

continued

Step	Action
3	Click the **New Row** button. Result: Maximo redisplays the Associate Users and Custodians dialog box with the Details section.  Note: The first association must always be Primary. Because you are creating the first association with this asset, the **Primary?** check box is selected by default.
4	Enter SHYLA in the **Person** field and select the **Custodian?** check box.
5	Add a new row with WINTERS as a Custodian.
6	Add BIRD as a User.
7	Add FOUCH as both User and Custodian. Note: People can have more than one relationship with an asset.
8	Click **OK**. Result: The Associate Users and Custodians dialog box closes and the associations are registered between these people and the asset.

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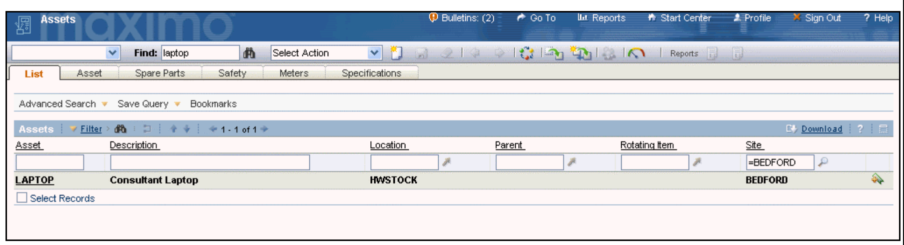
Associations Between Assets and People continued

Search Using Associations

Now that we have created associations between a person and an asset, what next? Well, with an advanced search you could use the associations to find assets, use assets to find people, and so forth.

To get you thinking about the possibilities, in the next exercise we will find the assets used by a specific person.

Follow these steps:

Step	Action
1	Access the **List** tab from the **Assets** application.
2	Ensure that the filter fields are cleared. Note: Although it is not required, clearing the fields is a suggested best practice to follow when doing searches.
3	Click the **Advanced Search** link to open the More Search Fields dialog box.
4	Click **Clear** to clear the advanced search fields.
5	In the **User** field, enter FOUCH and click **Find**. Result: The List tab displays the asset for which FOUCH is a user: the LAPTOP. 

Working with Groups of Assets

Overview

MXES enables you to perform some changes to groups of assets in one procedure. These group changes include:

- Moves
- Swaps
- Modifying attributes

Move functionality already exists in the MAXIMO 5.x release, but now you can select multiple assets and move them all at once.

This section provides an overview of this enhancement.

Move/Modify Multiple Assets

This exercise will show you how to select a group of assets on which to perform an action.

Note: If the class is working on a single database, only one person in the class should demonstrate the final actions indicated in this exercise. If everybody is on a separate database, feel free to try any of the actions.

Step	Action
1	Access the **Assets** application from the **Assets** module.
2	Access the **More Search Fields** dialog box and clear it.
3	On the **List** tab, filter on Location =BPM3100. Result: The List tab shows only assets at the #1 Liquid Packaging Line. Note: Initial filtering must be done in this case, because the Select Records function in the next step can be done only with sets of fewer than 200 records.
4	Select the **Select Records** check box. Result: You can now select individual records by checking them on the list.
5	Check the following assets: • 13180: Lubrication System • 13130: Stripper System • 13120: Bottom Sealing System

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Working with Groups of Assets continued

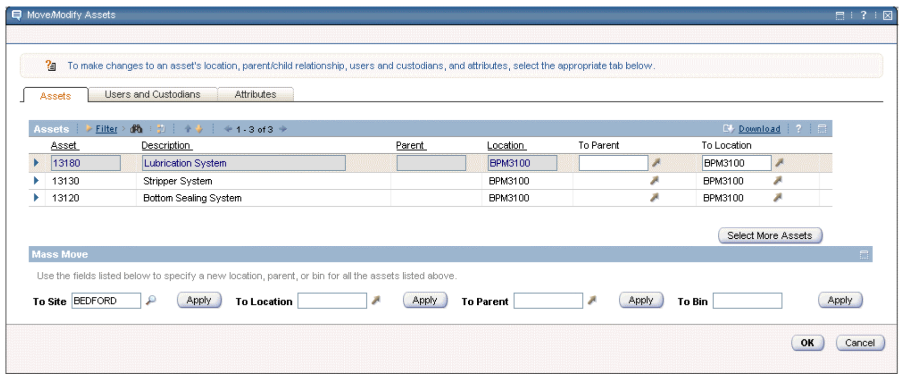
Move/Modify Multiple Assets

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>6</td><td>

Select **Move/Modify Assets** from the **Select Action** menu.

Result: The Move/Modify Assets dialog box displays the selected set of assets.



Note: At this point you could perform a variety of actions on this group of assets. See the following table for an overview of these actions and the Move/Modify Assets dialog box tabs on which they are performed.

</td></tr>
<tr><td>7</td><td>After reviewing the dialog box tabs in the following table, click Cancel to close the Move/Modify Assets dialog box.</td></tr>
</table>

Dialog Box Tab	Actions
Assets	• You can select individual lines to move, if desired. • You can use the **Mass Move** section to move all listed assets in one action.
Users and Custodians	• You can use the **Modify Selected** subtab to modify users and custodians for a single asset. • You can use the **Modify All** subtab to modify users and custodians for all listed assets.
Attributes	• You can use the **Modify Selected** subtab to modify attributes for a single asset. • You can use the **Modify All** subtab to modify attributes for all listed assets.

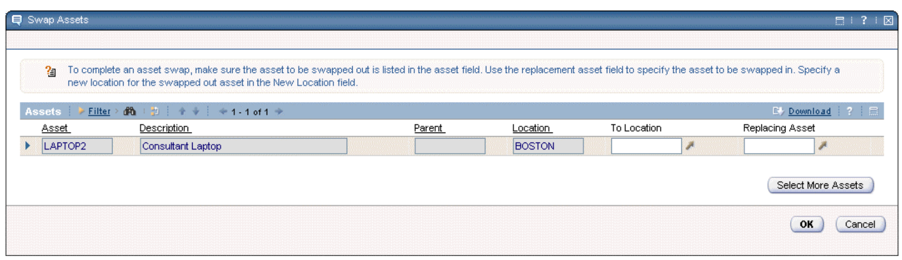
Asset Swaps

Asset Swaps

The following exercise shows you how Maximo allows you to swap assets with a single procedure.

In this exercise a piece of computer equipment in the field is swapped with one in a hardware cage.

Follow these steps:

Step	Action
1	Access your LAPTOP[*your initials*] record from the **Assets** application.
2	Duplicate this record. Note: This step only creates a duplicate to swap for this exercise. In practice, there would be another, similar asset in the system to swap.
3	Change the information on the duplicate record as follows: **Asset:** LAPTOP2[*your initials*] **Location:** BOSTON
4	Save the record.
5	Select **Swap Assets** from Select Action. Result: The Swap Assets dialog box opens. 
6	Use the **Filter** link to display the filter fields in this dialog box.
7	Use the **Asset** filter field to search on =LAPTOP[*your initials*]. Note: Be sure to include the equals sign (=). Result: Your original LAPTOP record will be displayed. Note: You could just do the swap without finding the original LAPTOP record, but we wanted to show you the filter capability in dialog boxes.

continued on next page

Asset Swaps continued

Asset Swaps

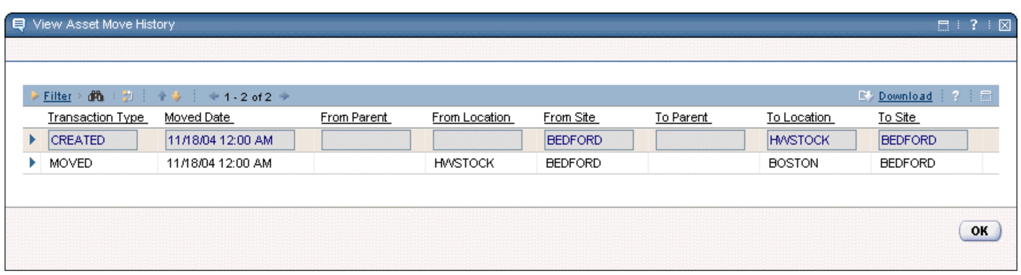
continued

Step	Action
8	Now you want to swap the LAPTOP record in the field with its replacement in IT Hardware Stock. Enter the following information and click **OK**: **To Location:** BOSTON **Replacing Asset:** LAPTOP2[*your initials*] Result: The Swap Assets dialog box closes and Maximo swaps the assets in one procedure. Note: The LAPTOP2[*your initials*] record on the screen might reflect pre-swap data until the screen has been refreshed.
9	Verify the swap, if you want, using one of the following suggested methods.

Verify the Swap

There are at least three easy ways to verify that a swap actually occurred:

- Take a look at the locations of the two asset records *after* the swap.
- Go to the **List** tab and filter on your assets to see what is listed in the **Location** field.
- Go to either record and select **View Asset Move History** from the Select Action menu. An example of the View Asset Move History dialog box is shown here:



Chapter Summary

Key Enhancements

Many key enhancements have been made to asset-related functions:

- Application name change from *Equipment* application to *Assets* application
- Additional data elements
- Better ability to work with multiple assets
- Ability to swap assets with a single function
- Bundling of assets
- Asset hierarchy searches

New Fields

Some important new fields have been added to the Assets application:

- Type
- Status
- Maintain Hierarchy? check box

Associations

MXES enables you to create associations between people and assets. The three types of relationships are:

- Primary
- Custodian
- User

Groups of Assets

The key functions that benefit from the improved ability to work with multiple assets are:

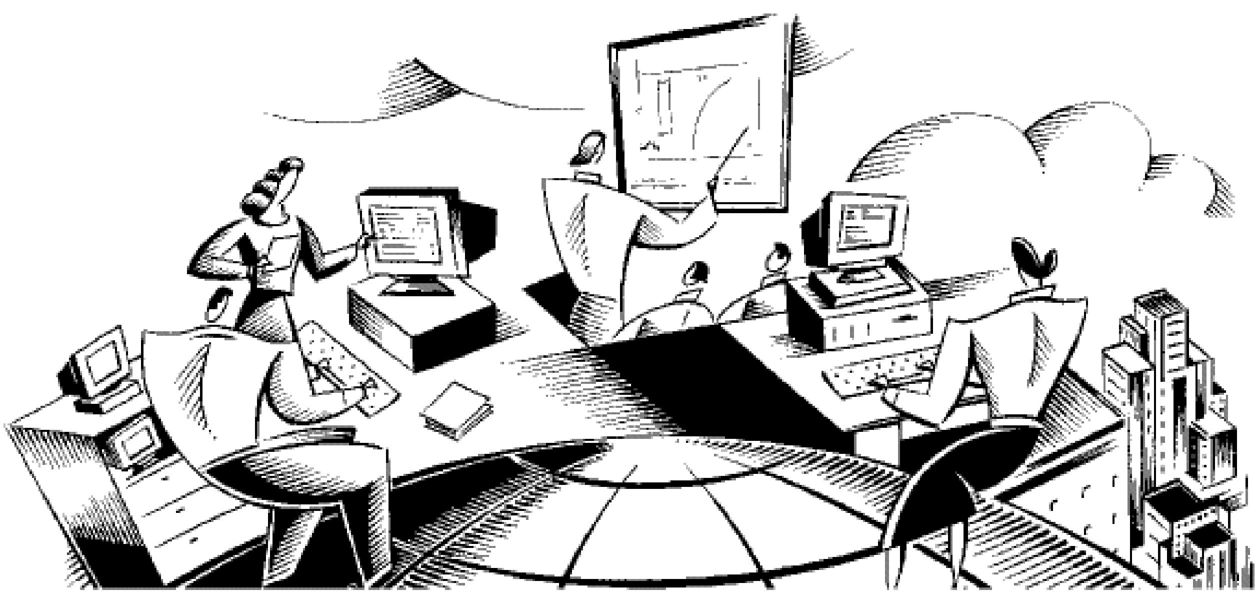
- moves,
- swaps, and
- modifying attributes

NOTES:

NOTES:

MXES for EAM – New Features

Chapter 5: Contract Management



In This Chapter

This chapter contains the following topics:

Chapter Overview

Introduction

MXES includes many changes that help in the management of contracts.

This chapter provides an overview of these changes. It also provides exercises that will strengthen your understanding of the new functionality.

Chapter Focus

This chapter focuses on the functionality of the many new contract-related applications in MXES. While demonstrating the functionality, we will discuss the various concepts behind it.

MXES provides a wide variety of enhancements related to contracts and purchasing. In this course we have identified the major new features.

For more detailed training on MXES contracts and purchasing functionality, we suggest that you contact MRO Software Educational Services.

Learning Objectives

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

- describe the key enhancements to contract management in MXES,
- modify contract options,
- set up and administer basic contracts, and
- create a payment schedule.

Key Enhancements

Overview

This section provides an overview of the key MXES enhancements as they relate to contract management.

After this overview, we will work through some exercises to familiarize you with the new functionality and some of the concepts behind it.

New Contracts Module

Many new applications in MXES have been designed to help manage contracts and other related functions.

To accommodate these new applications, a new Contracts module has been created.

New Applications

Six new contract management-related applications have been included in MXES:

- Purchase Contracts
- Lease/Rental Contracts
- Labor Rate Contracts
- Master Contracts
- Warranty Contracts
- Terms and Conditions

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Key Enhancements continued

Miscellaneous Enhancements

The following enhancements of contract-related functionality have been added to MXES:

- Users create “new” contract templates by specifying property defaults, edit rules, and terms and conditions.
- Users can associate terms and conditions with a type, and optionally add Terms and Conditions manually to an individual contract.

  Note: Terms and conditions are created in the Terms and Conditions application.
- The Terms and Conditions application is accessible from *both* the Contracts and the Purchasing modules.
- Commodity identification allows greater granularity for reporting and otherwise working with data.
- Users can specify percentage or dollar amounts in Maximum Volume.

Contract Options

Overview

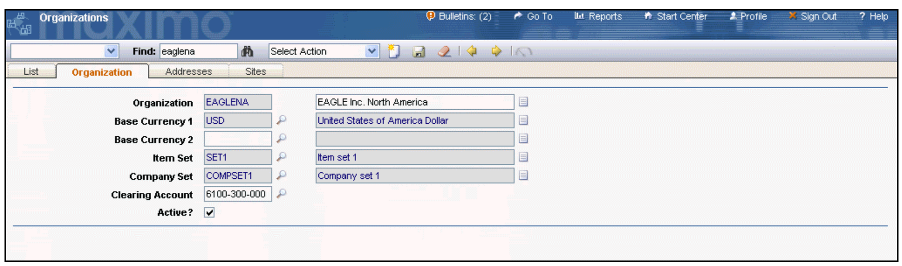
You use the Organizations application in the Administration module to modify contract options.

This section provides an overview of how to get to and modify the options.

Accessing the Options

Follow the steps below to access the options.

Note: If the class is working on a single database, only one person in the class should change options, if desired. However, the entire class can access and view the available options.

Step	Action
1	Access the **Organizations** application from the Administration module.
2	View the **Organization** tab for the EAGLENA organization. 

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Contract Options continued

Accessing the Options

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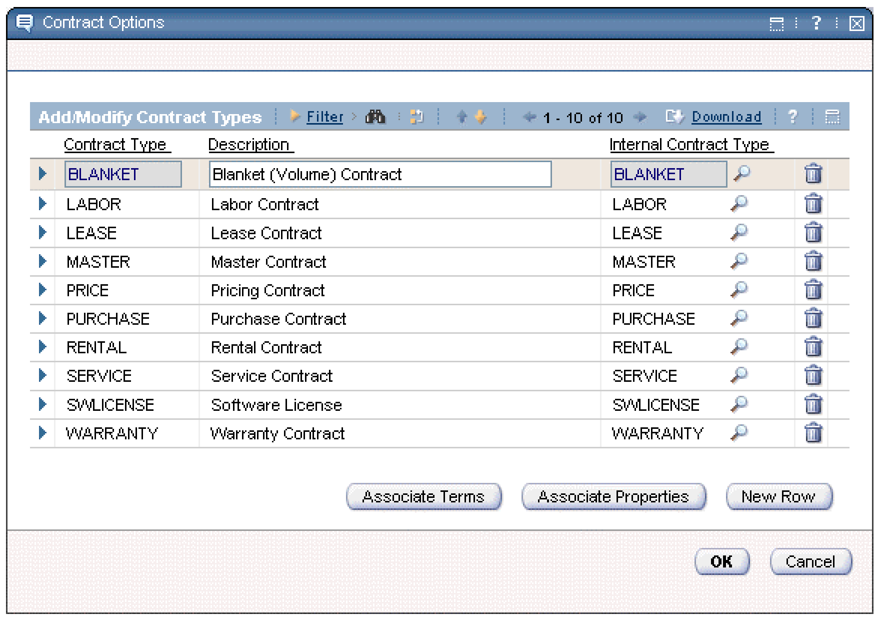
<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>3</td><td>

From the **Select Action** menu, choose the following series of nested actions:

Purchasing Options >> Contract Options

Result: The Contract Options dialog box opens.



Note: Depending on the application, the Select Action menu might contain nested actions.

</td></tr>
<tr><td>4</td><td>Click on the Warranty Contract line to select it.</td></tr>
</table>

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Contract Options continued

Accessing the Options

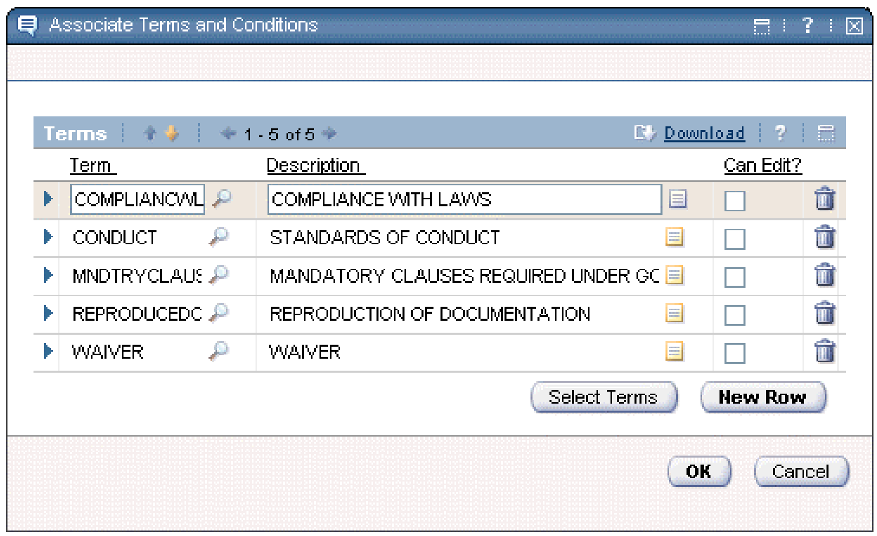
continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>5</td><td>

Click the **Associate Terms** button.

Result: The Associate Terms and Conditions dialog box opens.

Note: *Terms and conditions* are clauses that can be added to your contracts to specify certain terms. These clauses are created in the Terms and Conditions application, which you can access from both the Contracts and the Purchasing modules.



Note: The terms and conditions listed on your screen might differ from this graphic, depending on your setup.

</td></tr>
<tr><td>6</td><td>

Click **Cancel** to close the Associate Terms and Conditions dialog box.

Result: You return to the Contract Options dialog box.

</td></tr>
</table>

continued on next page

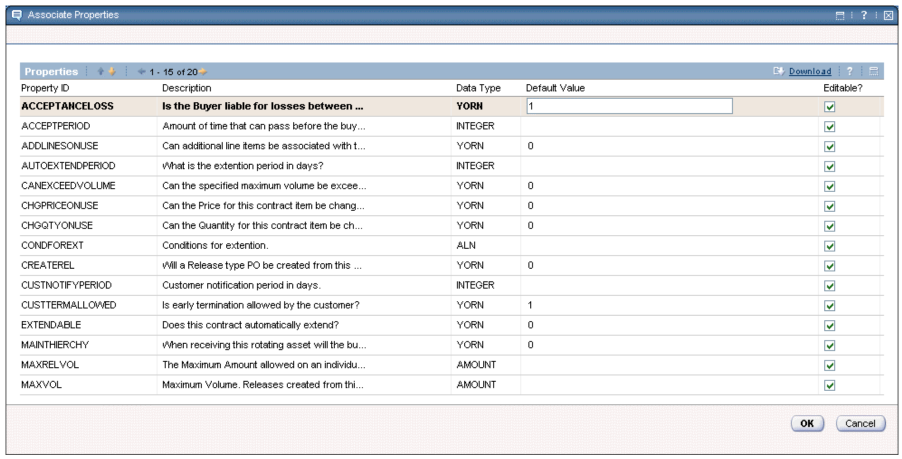
Contract Options continued

Accessing the Options

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>7</td><td>
Ensure that the Purchase Contract line is selected, then click the Associate Properties button.

<u>Result</u>: The Associate Properties dialog box opens.



This dialog box allows you to select specific default properties for the contract type whose line was selected when you clicked the Associate Properties button.

<u>Notes</u>:

The list of properties varies, depending on the type of contract whose properties are being modified.
Options will now allow some settings to be changed when they are inconsistent with the type of contract whose options are being modified.
<u>Examples</u>:

Price agreement options will not allow the creation of releases.
Blanket agreement options must always be set to create releases.

</td></tr>
</table>

continued on next page

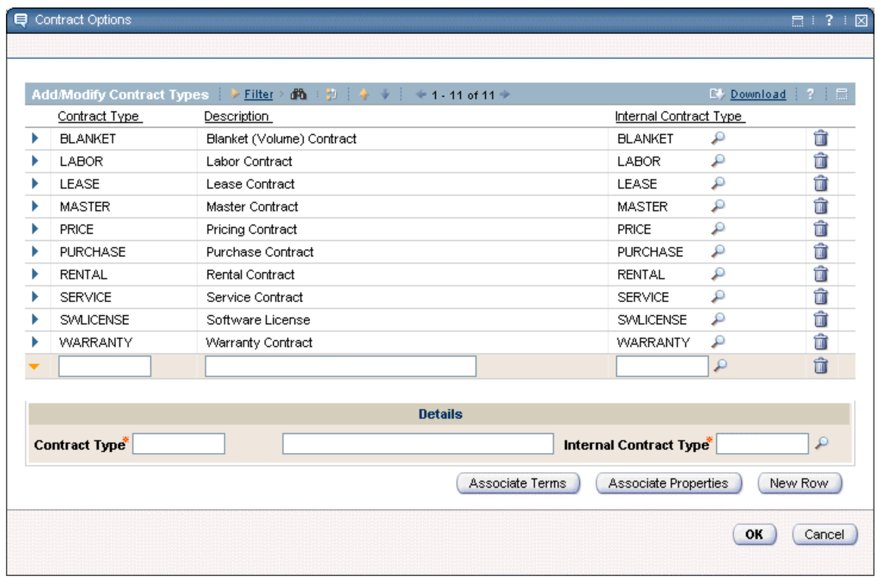
Contract Options continued

Accessing the Options

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>8</td><td>Click Cancel to close the Associate Properties dialog box.</td></tr>
<tr><td>9</td><td>Click the New Row button.

<u>Result</u>: Fields will be made available, similar to the following example, to allow you to add a new contract type.



<u>Note</u>: A new contract type is always initially based on a contract type that currently exists (Internal Contract Type field). Then it is modified.</td></tr>
<tr><td>10</td><td>Click Cancel to close the Contract Options dialog box.</td></tr>
</table>

Terms and Conditions

Overview

You use the Terms and Conditions application to enter and maintain a library of clauses, called *terms and conditions*, that can be added to a purchasing document or contract.

These terms can contain information such as liability concerns, shipping and handling details, or delivery time expectations.

This section briefly introduces you to the Terms and Conditions application.

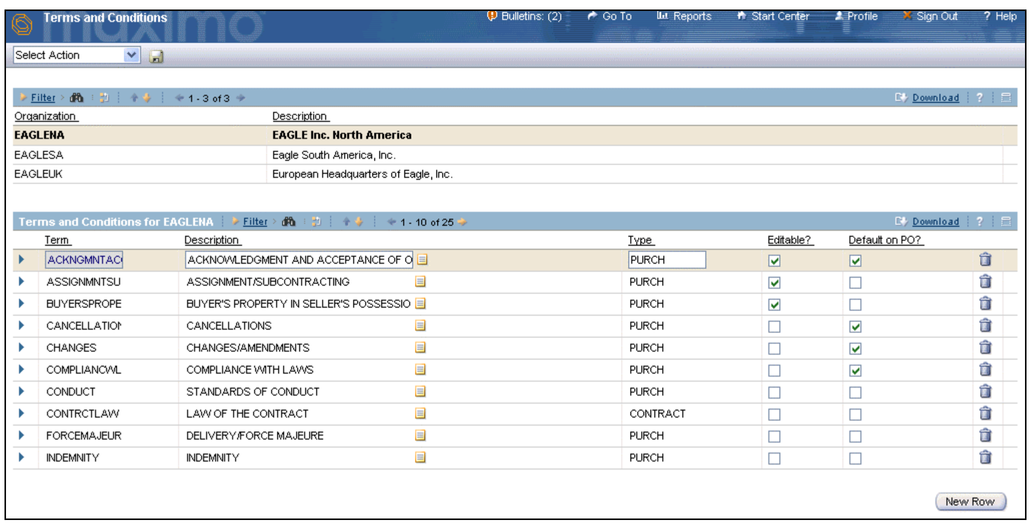
For more information, consult the *Maximo User's Guide* or online help.

In the Application

You can access the Terms and Conditions application from the Contracts module.

Note: You can also access this application from the Purchasing module.

Result: The single-page Terms and Conditions application opens.



continued on next page

Terms and Conditions continued

Application Sections

The following table describes the sections of the Terms and Conditions application.

Section	Description
Organization	• Terms and conditions are set at the system level by organization. • You can see which terms and conditions are associated with an organization by clicking on the desired organization line and viewing the list in the Terms and Conditions section below this section.
Terms and Conditions	In this section, you can indicate whether the term or condition is: • Editable • Used as a default on purchase orders

Using Terms and Conditions

The terms and conditions in the library can be added to a purchasing document or a contract from the Terms and Conditions tab of individual Purchasing or Contract applications.

Additional terms applicable to only that purchasing or contract record can also be added on the Terms and Conditions tab, which will be saved to that record but not to the library.

Master Contracts

Overview

You use the Master Contracts application to associate many contract types for a particular vendor.

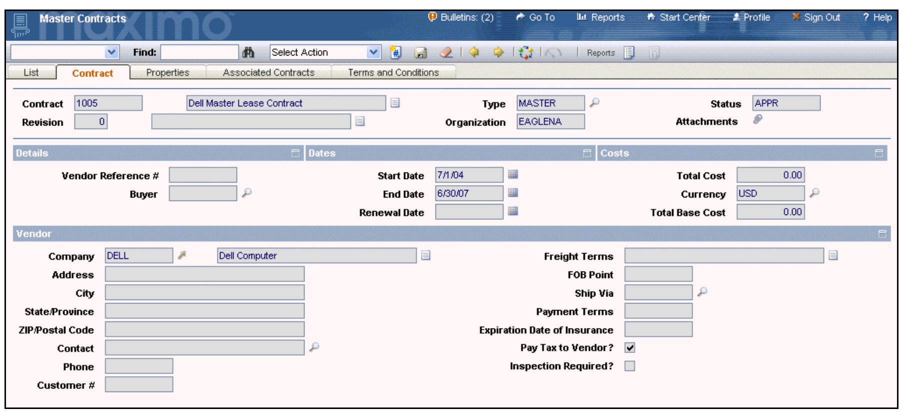
A master contract defines the relationship with a vendor and contains terms and conditions that apply to the contracts created and listed under it.

You can provide detailed information about a contract's terms, contact information, and calendar of events.

Creating an Associated Contract

In the following exercise we will access an existing master contract and associate a new contract with it.

Follow these steps:

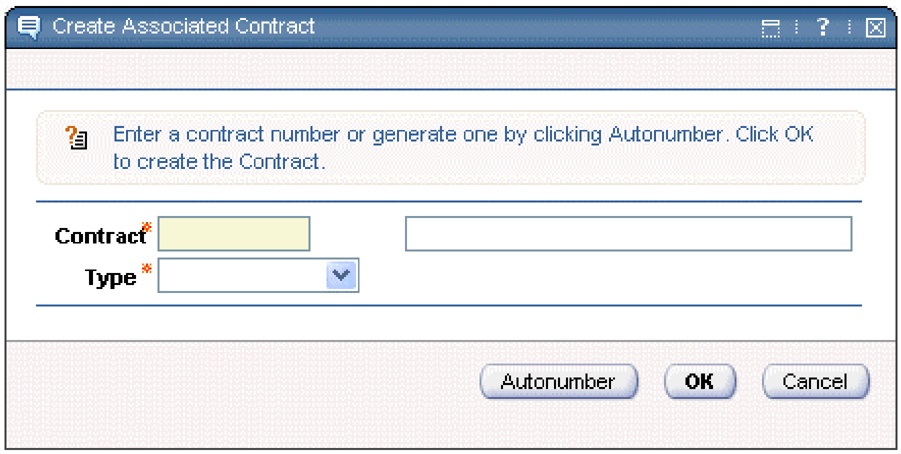
<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Access the Master Contracts application from the Contracts module.</td></tr>
<tr><td>2</td><td>View the Contract tab for contract 1005: Dell Master Lease Contract.

</td></tr>
</table>

continued on next page

Master Contracts continued

Creating an Associated Contract

continued

Step	Action
3	Choose **Create Associated Contract** from the Select Action menu. Result: The Create Associated Contract dialog box opens. 
4	Click the **Autonumber** button. Result: Maximo generates a value in the **Contract** field. Note: You can enter this value manually if you prefer.
5	In the **Type** field, enter RENTAL.
6	In the **Description** field, enter New Rental Contract [*your initials*].
7	Click **OK**. Result: The new contract is created and associated with the master contract.

continued on next page

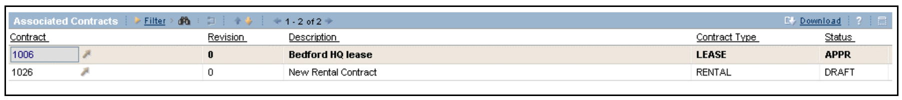
Master Contracts continued

Creating an Associated Contract

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>8</td><td>Access the Associated Contracts tab.

<u>Result</u>: A new associated contract is displayed in the Associate Contracts list.


<table>
<tr><th colspan="5">Associated Contracts | Filter | 1 - 2 of 2 | Download</th></tr>
<tr><th>Contract</th><th>Revision</th><th>Description</th><th>Contract Type</th><th>Status</th></tr>
<tr><td>1006</td><td>0</td><td>Bedford HQ lease</td><td>LEASE</td><td>APPR</td></tr>
<tr><td>1026</td><td>0</td><td>New Rental Contract</td><td>RENTAL</td><td>DRAFT</td></tr>
</table>

<u>Note</u>: The associated child contracts will be similar to but not exactly the same as a master contract. Maximo copies vendor information from the master contract, as well as the properties extendable, extension period, and conditions for extension. You can edit the properties extendable, extension period, and conditions for extension for use in the new associated contract.

For more details, see “Create Associated Contracts” in the Master Contract application help.</td></tr>
</table>

continued on next page

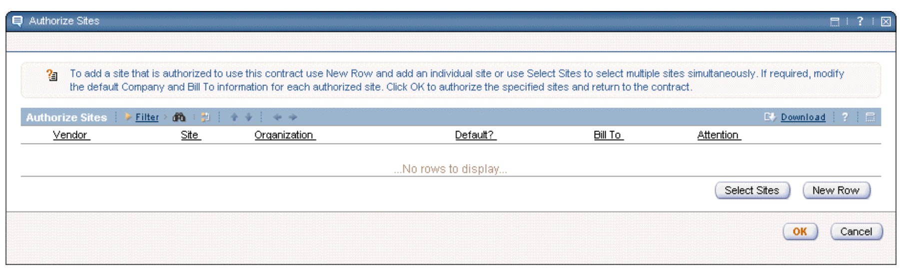
Master Contracts continued

Authorize Sites for a Contract

To approve a contract—whether it is a master contract or directly created in another contract application—*you must authorize at least one site to use the contract*.

The following exercise will show you how to authorize sites for a contract.

Note: The procedure works the same way for all Contracts applications.

Step	Action
1	Access the **Master Contracts** application from the **Contracts** module.
2	Insert a new contract record with the following information: **Description:** New Master Contract[*your initials*] **Start Date:** [*today*] **End Date:** [*one year from today*] **Renewal Date:** [*one year and one day from today*] **Total Cost:** 10,000 **Company:** GARDNER
3	Save the record.
4	Choose **Authorize Sites** from the Select Action menu. Result: The Authorize Sites dialog box opens.  Note: A contract must have a status of Draft or Waiting on Approval to authorize sites.

continued on next page

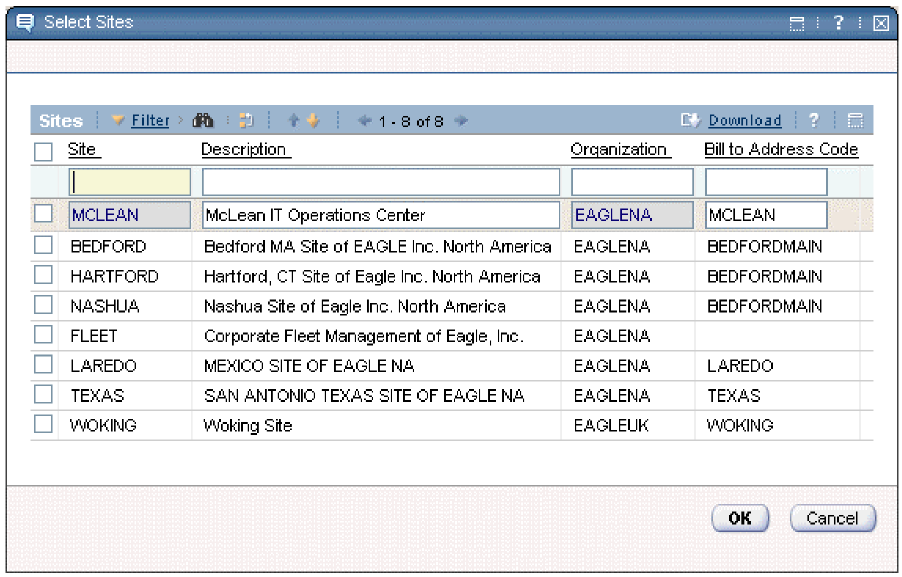
Master Contracts continued

Authorize Sites for a Contract

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>5</td><td>Click the Select Sites button.

Result: The Select Sites dialog box opens.

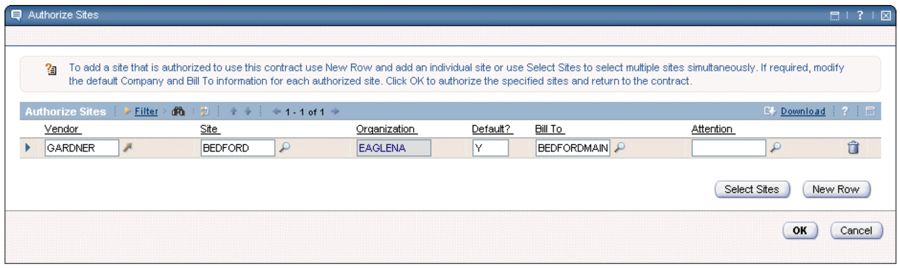

</td></tr>
<tr><td></td><td>Note: You could also use the New Row button to add a row and enter a site code.</td></tr>
</table>

continued on next page

Master Contracts continued

Authorize Sites for a Contract

continued

Step	Action
6	Select the check box next to BEDFORD, then click **OK**. Result: The new site line is added to the Authorize Sites dialog box.  Note: The vendor listed on the Contract tab is automatically populated in the new line.
7	Click **OK**. Result: The Authorize Sites dialog box closes and the site is authorized for use with the master contract record.

Add Terms and Conditions to a Contract

You can add terms and conditions to a contract to indicate specific agreements with the vendor regarding such things as terms of payment and delivery.

You use the Terms and Conditions application to define these terms and conditions.

This next exercise will show you how to add terms and conditions to a contract.

Note: Although the exercise is using a master contract record, note that *terms and conditions are added to all contracts in a similar way.*

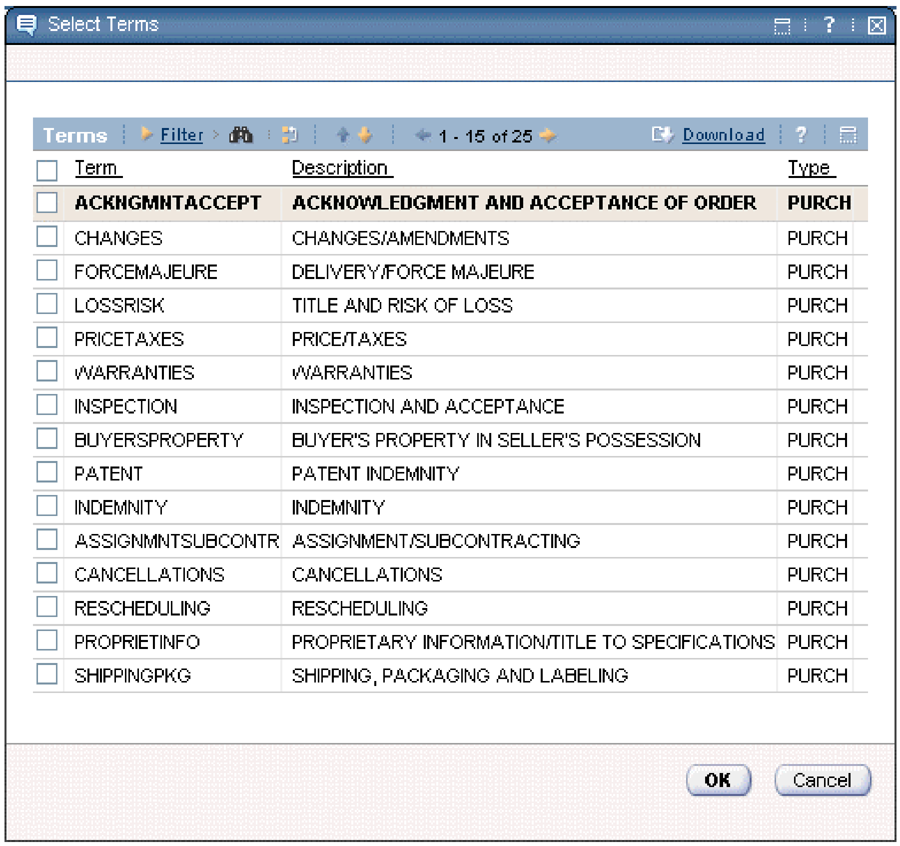
Step	Action
1	Access the master contract from the previous exercise.
2	Display the **Terms and Conditions** tab.

continued on next page

Master Contracts continued

Add Terms and Conditions to a Contract

continued

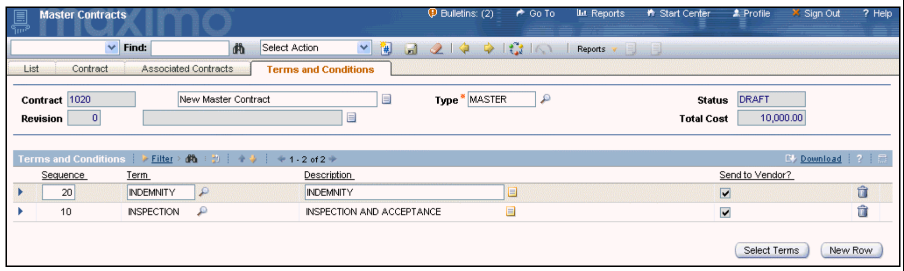
Step	Action
3	Click the **Select Terms** button. Result: The Select Terms dialog box opens. 

continued on next page

Master Contracts continued

Add Terms and Conditions to a Contract

continued

Step	Action
4	Select the check boxes next to **INSPECTION** and **INDEMNITY**, then click **OK**. Result: These terms are added to the Terms and Conditions tab. 
5	Save the record.

Purchase Contracts

Overview

The Purchase Contracts application is new in MXES. This section covers some of the functionality provided by the application and provides exercises to show you how it works.

Purpose

The Purchase Contracts application:

- includes some existing agreement functionality from the MAXIMO 5.x Purchase Orders application (similar to MAXIMO 5.x price agreements);
- holds a list of items or services provided by a vendor for a specified period of time;
- indicates an agreement to spend an overall amount of money with a vendor during a time period, possibly for specific items or services (similar to blankets in MAXIMO 5.2); and
- allows users to specify items or services.

Key Capabilities

The key capabilities of the Purchase Contracts application are:

- Revisioning, which is available on all Contracts applications
- Site authorization
  - Authorization can carry down from the master contract or overridden for a child contract

    Note: Authorization can be given only to sites that all use the same item set.
- Percentage price adjustments to lines:
  - All lines or selected lines
  - Increase or decrease
- Payment schedules
- Create docs between applications:
  - PR, RFQ, PO creates contract
  - Contract creates RFQ, release

continued on next page

Purchase Contracts continued

Create a Contract Revision

MXES allows you to revise contracts while keeping a history of the previous revisions for future reference.

All revisions keep the same record number but have a separate revision number, making it simpler to retrieve all revisions for a contract.

Revisioning is available for all Contracts applications.

The following exercises will show you how to create a revision to adjust prices on the contract.

Note: If all students are using the same database, then only one person in the class should carry out this exercise while demonstrating to the rest of the class.

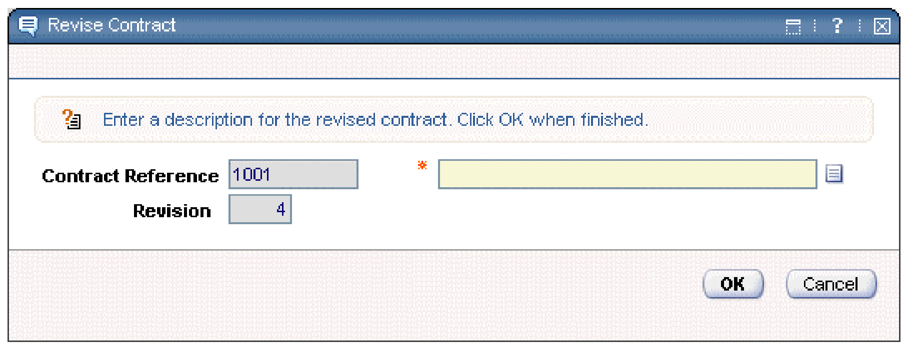
Step	Action
1	Access the **Purchase Contracts** application from the Contracts module.
2	Select the **Contracts** tab for revision 3 of contract 1001: Electrical Supplies – 2 year agreement. Note: Notice the revision number in the **Revision** field on the Contract tab.
3	Approve the contract. Note: Contracts must be approved to be revised.

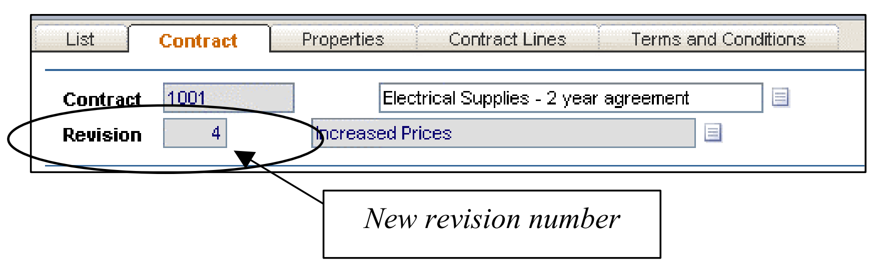
continued on next page

Purchase Contracts continued

Create a Contract Revision

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>4</td><td>Choose Revise Contract from the Select Action menu.
Result: The Revise Contract dialog box opens.


Note: The Revision field in this dialog box has been incremented to 4 because we are revising number 3.</td></tr>
<tr><td>5</td><td>Enter Increased Prices in the notation field.
Note: The notation is required. It serves as a historical record of the reason for the revision.</td></tr>
<tr><td>6</td><td>Click OK.
Result: The new record is created with the new revision number.

</td></tr>
</table>

continued on next page

Purchase Contracts continued

Adjusting Prices

MXES allows you to access a revised contract to adjust prices on contract lines.

You can generate a global increase or decrease of prices for all lines. Or, you can adjust prices on specific lines.

We will now adjust all line prices upward by two percent on the revised contract from the previous exercise. Follow the steps below.

Note: If all students are using the same database, then only one person in the class should carry out this exercise while demonstrating to the rest of the class.

Step	Action
1	From the **Purchase Contracts** application, access the revised contract from the previous exercise.
2	Access the **Contract Lines** tab of the contract record.
3	On the lines below, note the prices on two of the line items for comparison after adjusting the prices. Item #: ___________ Price: __________ Item #: ___________ Price: __________

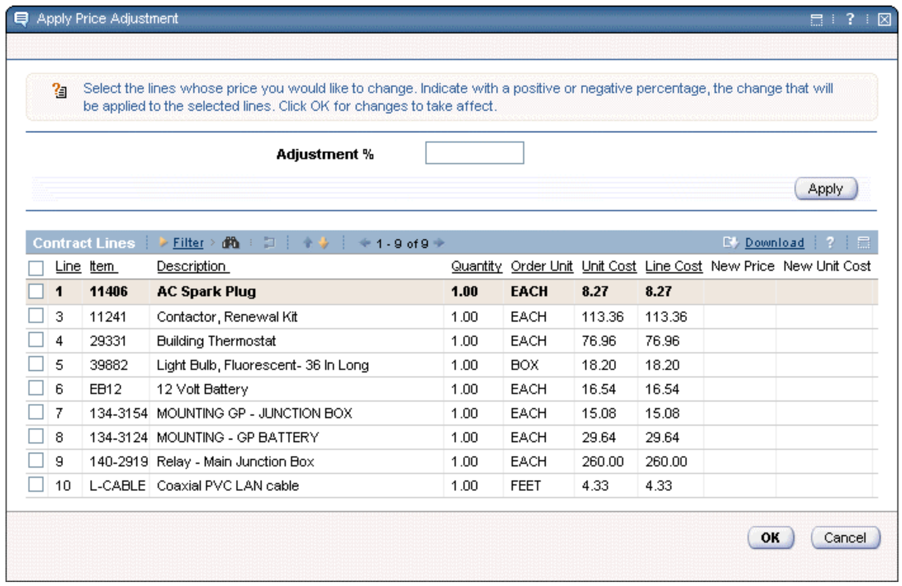
continued on next page

Purchase Contracts continued

Adjusting Prices continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>4</td><td>Choose Apply Price Adjustment from the Select Action menu.

Result: The Apply Price Adjustment dialog box displays all lines of the contract.



Note: From this dialog box you can select one or more individual lines or the entire set of prices to adjust.</td></tr>
<tr><td>5</td><td>We want to adjust all prices, so check the Select All Records check box (the one at the top of the row of check boxes) to select all the lines.

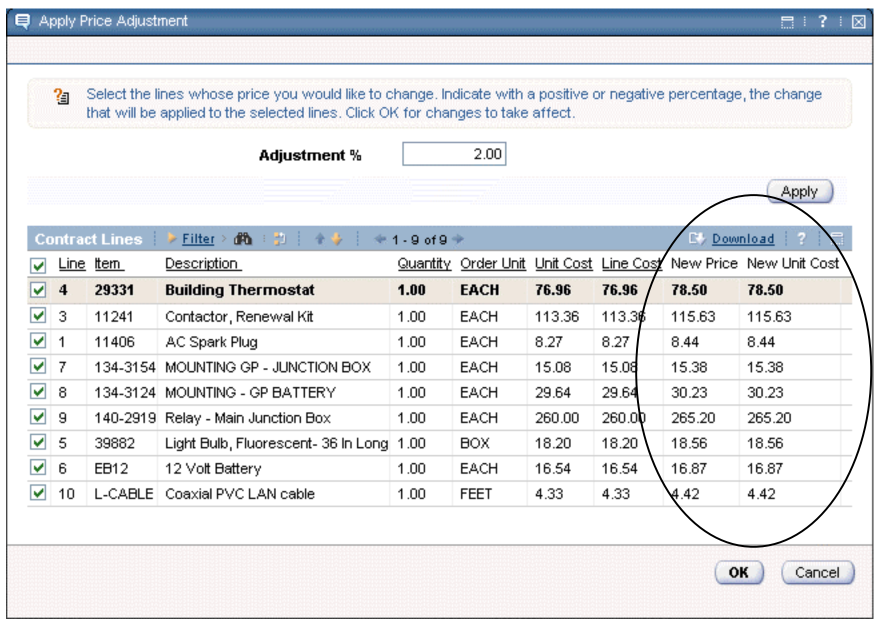
Result: The check box for each line is automatically selected.</td></tr>
</table>

continued on next page

Purchase Contracts continued

Adjusting Prices continued

Step	Action
6	We want to adjust the prices for all lines up by two percent, so enter a 2 in the **Adjustment %** field and then click **Apply**. <u>Result</u>: The New Price and New Unit Cost columns for all lines in the Apply Price Adjustment dialog box are updated with the adjusted information, as shown here:



Apply Price Adjustment

Select the lines whose price you would like to change. Indicate with a positive or negative percentage, the change that will be applied to the selected lines. Click OK for changes to take affect.

Adjustment % 2.00

Apply

Contract Lines | Filter | 1 - 9 of 9 | Download

Line	Item	Description	Quantity	Order Unit	Unit Cost	Line Cost	New Price	New Unit Cost
4	29331	Building Thermostat	1.00	EACH	76.96	76.96	78.50	78.50
3	11241	Contactor, Renewal Kit	1.00	EACH	113.36	113.36	115.63	115.63
1	11406	AC Spark Plug	1.00	EACH	8.27	8.27	8.44	8.44
7	134-3154	MOUNTING GP - JUNCTION BOX	1.00	EACH	15.08	15.08	15.38	15.38
8	134-3124	MOUNTING - GP BATTERY	1.00	EACH	29.64	29.64	30.23	30.23
9	140-2919	Relay - Main Junction Box	1.00	EACH	260.00	260.00	265.20	265.20
5	39882	Light Bulb, Fluorescent- 36 In Long	1.00	BOX	18.20	18.20	18.56	18.56
6	EB12	12 Volt Battery	1.00	EACH	16.54	16.54	16.87	16.87
10	L-CABLE	Coaxial PVC LAN cable	1.00	FEET	4.33	4.33	4.42	4.42

OK Cancel

<u>Notes</u>:

- You can adjust the price downward by putting a *negative* number in the Adjustment % field.
- You can adjust one or several individual lines by selecting them, then adjusting by the desired percentage.

continued on next page

Purchase Contracts continued

Adjusting Prices

continued

Step	Action
7	Click **OK**. Result: The Apply Price Adjustment dialog box closes and the adjusted prices are reflected on the contract lines.
8	Optional: Check the adjusted prices against those you wrote down previously in this exercise to ensure that they are correct.

Blanket Agreements

You now create blanket agreements in the Purchase Contracts application.

The following exercise shows you how to create a blanket agreement in Maximo.

Step	Action
1	Access the **Purchase Contracts** application.
2	Insert a new record with the following information: **Description:** Sample Blanket[*your initials*] **Type:** Blanket **Company:** FSC **Maximum Amount:** 20,000 **Maximum Release Amount:** 1,000 (Note: This field is not mandatory.) **Start Date:** [*today*] **End Date:** [*one year from today*]
3	Authorize the BEDFORD site for this contract.

continued on next page

Purchase Contracts continued

Blanket Agreements

continued

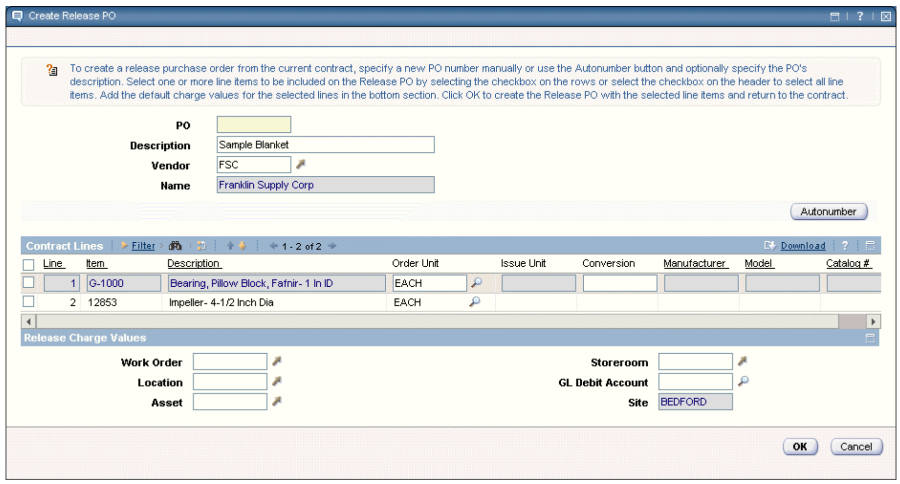
Step	Action
4	Add the following contract lines: Line 1 **Line Type:** ITEM **Item:** G-1000 **Quantity:** 1 **Change Quantity on Use?:** [checked] **Change Price on Use?:** [checked] **Order Unit:** EACH **Unit Cost:** 5.00 **Delivery Time:** 4 Line 2 **Line Type:** ITEM **Item:** 12853 **Quantity:** 1 **Change Quantity on Use?:** [checked] **Change Price on Use?:** [checked] **Order Unit:** EACH **Unit Cost:** 8.35 **Delivery Time:** 4 Note: Some of these fields are new to MXES. They are described in a table on page 5-29.
5	Approve the contract.

continued on next page

Purchase Contracts continued

Blanket Agreements

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>6</td><td>Choose Create Release PO from the Select Action menu.
Result: The Create Release PO dialog box opens.


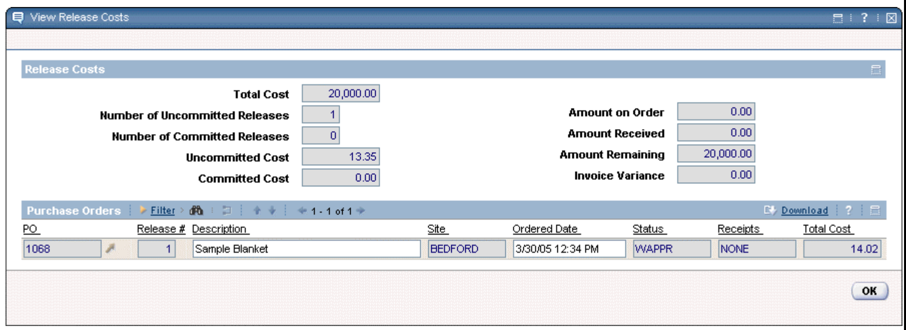
Note: You can release items in this dialog box by selecting their checkboxes.</td></tr>
<tr><td>7</td><td>Click the Autonumber button.
Result: The release PO is automatically numbered by the system.
Note: You could manually number the PO instead.</td></tr>
<tr><td>8</td><td>Select all items on the list.</td></tr>
<tr><td>9</td><td>In the Release Charge Values pane, enter the following charge information:
Location: BR400
Asset: 11400
GL Debit Account: 6210-325-000
Site: BEDFORD</td></tr>
</table>

continued on next page

Purchase Contracts continued

Blanket Agreements

continued

Step	Action
10	Click **OK**. Result: A release PO is created with the same description as the contract.
11	Select **View Release Costs** from the Select Action menu. Result: The View Release Costs dialog box displays the release PO number and related information. 
12	Click **OK** to close the View Release Costs dialog box.

continued on next page

Purchase Contracts continued

Blanket Agreement Exercise – Field Descriptions

Some of the fields used in the preceding blanket agreement exercise are described in the following table.

Field	Description
Change Quantity on Use?	Allows the contract to determine whether a variety of quantities can be used on the PO or whether the PO must always purchase a contractually designated quantity of the item or service. You can set this property to be checked as a default in Contract Options.
Change Price on Use?	Allows the contract to determine whether a variety of prices can be used on the PO or whether the PO must always purchase at the contractually designated price of the item or service. You can set this property to be checked as a default in Contract Options.
Delivery Time	If the delivery time specified on the PO is less than this time, Maximo will send a message that the desired time is less than the contractual time. However, Maximo will allow the time change on the PO. This field has a unit of days.

continued on next page

Purchase Contracts continued

Creating a Payment Schedule

You can use the Purchase Contracts application to create a payment schedule. The following exercise shows you how.

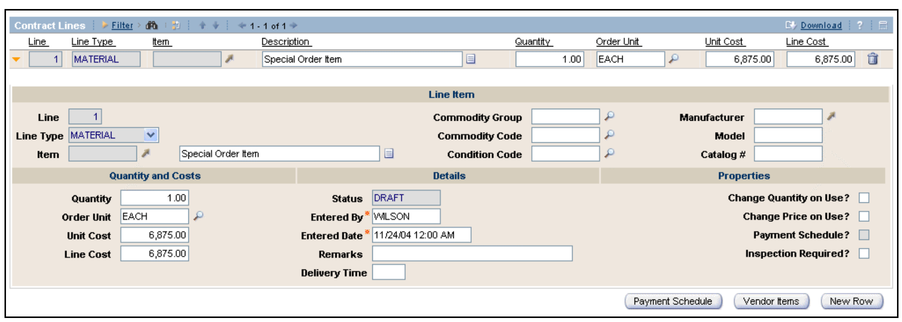
Step	Action
1	Access the **Purchase Contracts** application.
2	Insert a new contract record.
3	On the **Contract** tab, enter the following information: **Description:** Payment Schedule Example [*your initials*] **Type:** Purchase **Start Date:** [*today*] **End Date:** [*one year from today*] **Company:** HELWIG **Requires PO:** [checked] (Hint: Check the Properties tab) Note: The ability to automatically require a PO for this type of contract is determined by setting associated properties of Contract options in the Organizations application.
4	Access the **Properties** tab and select the **Payment Schedule?** check box. Note: Selecting this property allows the payment schedule to be calculated for this contract. If you always want this check box to be selected, you can set the property for Purchase Contracts in the Organization application.

continued on next page

Purchase Contracts continued

Creating a Payment Schedule

continued

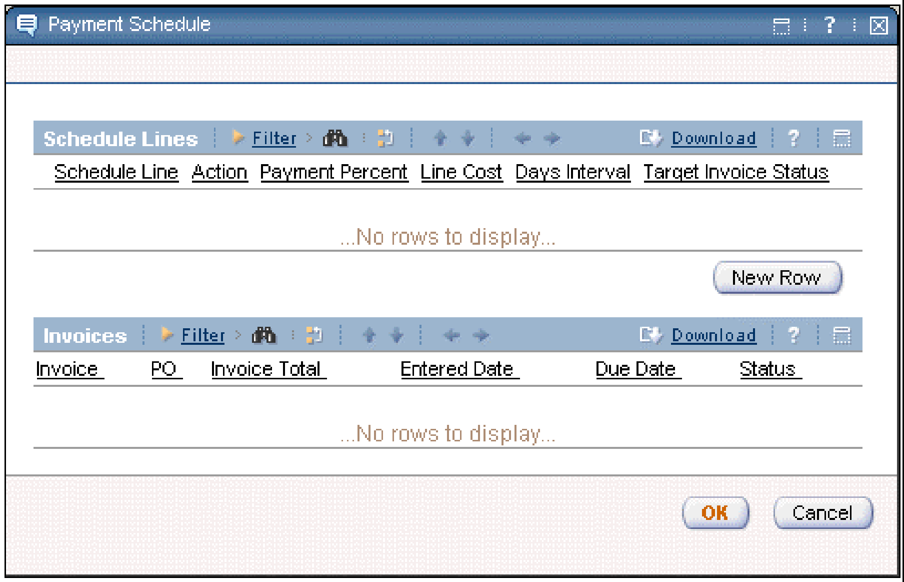
Step	Action
5	On the **Contract Lines** tab, enter one line with the following information: **Line Type:** MATERIAL **Description:** Special order item **Quantity:** 1 **Order Unit:** EACH **Line Cost:** 6,875.00 Note: The **Unit Cost** field defaults to **Line Cost**.
6	Authorize the contract for use with the BEDFORD site.
7	Save the record.
8	Ensure that the detail for the new contract line is visible, similar to the following example. 

continued on next page

Purchase Contracts continued

Creating a Payment Schedule

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>9</td><td>Click the Payment Schedule button.
<u>Result</u>: The Payment Schedule dialog box opens.

</td></tr>
</table>

continued on next page

Purchase Contracts continued

Creating a Payment Schedule

continued

Step	Action
10	We want to schedule two payments for this contract: • 20% when the PO is approved • 80% when the purchased item has been received To set up this payment schedule, in the Schedule Lines pane enter two lines with the following information: <u>Line 1</u> **Action:** POAPPR **Payment Percent:** 20 <u>Note</u>: Line Cost will change to 1,375.00, which is 20% of total. **Days Interval:** 0 **Target Invoice Status:** WAPPR <u>Line 2</u> **Action:** RECEIPT **Days Interval:** 0 **Payment Percent:** 80 <u>Note</u>: Line Cost will change to 5,500.00. **Target Invoice Status:** WAPPR
11	Approve the contract.
12	Click **OK**. <u>Result</u>: The Payment Schedule dialog box closes. Now, when purchases are made against this contract, the indicated payment schedule will automatically apply.

continued on next page

Purchase Contracts continued

Additional Purchase Contracts Functionality

The Purchase Contracts application includes the following additional functionality:

- You can use the Purchase Contracts application to associate commodities with a contract.
  - Commodity Codes and Commodity Groups are added to MXES to provide an additional level of granularity and categorization for reporting purposes.
  - An action for maintenance of Commodity Codes and Commodity Groups is available in the following applications:
    - Item Master
    - Company
    - Purchase Orders
- You can use the Purchase Contracts application to associate service level agreements.

  This helps to monitor vendor performance on a contract.
- Line Type now includes service type.

  This used to be a check box in MAXIMO 5.x.

Lease/Rental Contracts

Overview

The way the Lease/Rental Contracts application works is similar to the way other contracts applications work. This section provides a brief overview of the application and includes an exercise to show you how it works.

Contact MRO Software Educational Services to get more detailed training on this topic.

Key Capabilities

The Lease/Rental Contracts application enables you to identify rotating items that will be rented or leased when requisitioned.

When received, the serialized assets will be associated with the contract and you should generate a payment schedule.

Maximo will prevent these orders/receipts from being invoiced.

A payment schedule will create invoices in a status of SCHED with due dates based on the setup.

Managing Payments

One of the key capabilities of the Lease/Rental Contracts application is the ability to create a schedule of payments over time.

In the following exercise you will take a look at the application while learning how to set up managed payments on a contract.

Follow the steps below.

Note: If all students are using the same database, then only one person in the class should carry out this exercise while demonstrating to the rest of the class.

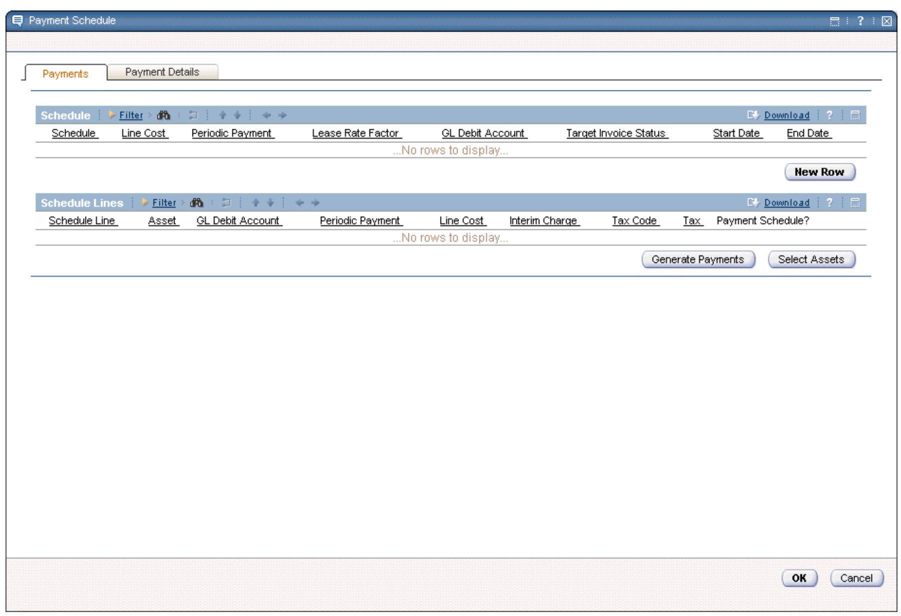
Step	Action
1	Access the **Lease/Rental Contracts** application from the **Contracts** module.
2	Access contract record 1002: Laptop Rental Agreement.
3	On the Contract tab, ensure that the **Number of Payments** field contains the value 24.

continued on next page

Lease/Rental Contracts continued

Managing Payments

continued

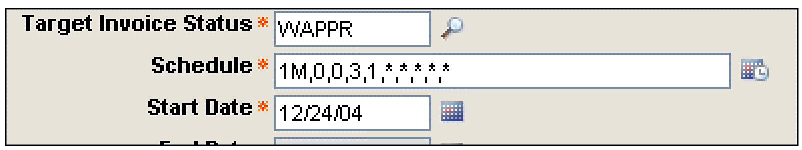
Step	Action
4	View the **Contract Lines** tab. Note that there is a single line for a Dell Latitude Notebook. Note: You use the Contract Lines tab to associate one or more rotating assets or locations to the contract. You can list a rotating asset only once on the Contract Lines page. If you have more than one similar asset, list them individually on the Associated Assets tab.
5	Approve the contract.
6	Access the **Associated Assets** tab. Note: You use the Associated Assets tab to retrieve a list of all locations or assets that are associated with a contract. In addition to listing the location and assets associated with the contract, you can also list the current location, user, custodian, and status of an asset.
7	Add an associated asset line: D912
8	Save the record.
9	Choose **Manage Payments** from the Select Action menu. Result: The Payment Schedule dialog box opens. 

continued on next page

Lease/Rental Contracts continued

Managing Payments

continued

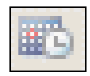
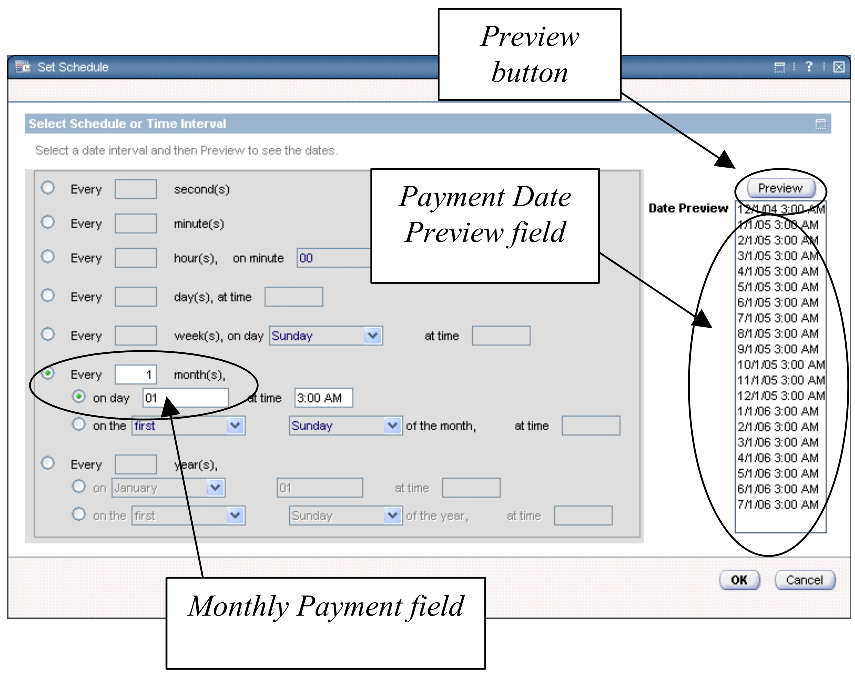
Step	Action
10	In the Schedule section, add a line with the following information: **Single Payment Line?:** [checked] **Start Date:** [one month from today] **GL Debit Account:** 6800-900-000
11	The payment schedule is determined by values in the **Schedule** field. Notice how this field contains code-type information, as shown in this example:  Note: You are not expected to know how to change this code directly. Go to the next step to see how to change the scheduling information using the interface.

continued on next page

Lease/Rental Contracts continued

Managing Payments

continued

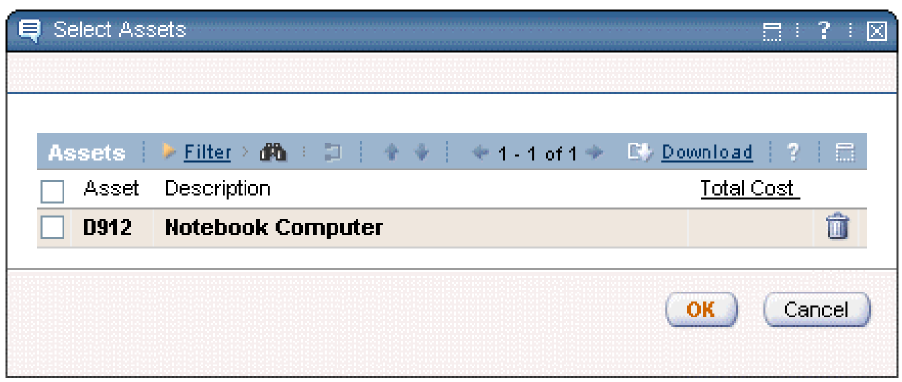
Step	Action
12	Click the **Set Schedule** icon in the **Schedule** field.  Result: The Set Schedule dialog box opens.  Note: You can use this new interface to change scheduling information in many applications, not just in Contracts applications.
13	Change the selected **Every** line to 2 month(s), then click the **Preview** button. Result: The list of expected payment dates changes to every two months.

continued on next page

Lease/Rental Contracts continued

Managing Payments

continued

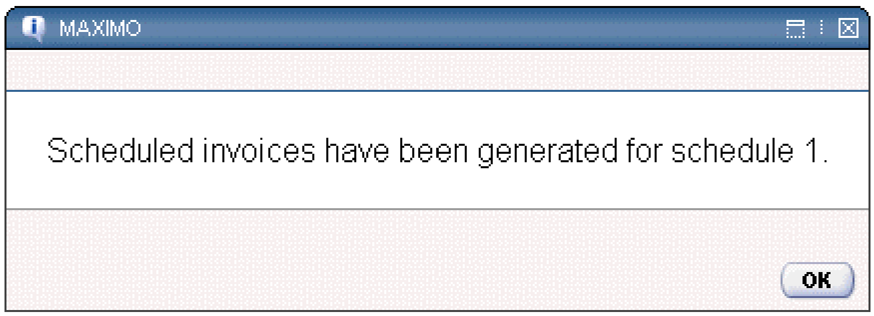
Step	Action
14	Click **OK** to accept the two-month schedule. Result: The Set Schedule dialog box closes and the values in the Schedule field represent the new schedule. Note: You can manually change the **Schedule** field, but we do not recommend it!
15	Now we can indicate assets for which we want to schedule payments. Click the **Select Assets** button in the Schedule Lines section. Result: The Select Assets dialog box displays the associated assets that we added to the contract. In this case it is only the D912 notebook. 
16	Select the D912 asset and click **OK**. Result: The asset is added to the Schedule Lines section of the Payment Schedule dialog box.
17	In the Schedule Lines pane, enter a periodic payment of 1,000 for the selected asset.

continued on next page

Lease/Rental Contracts continued

Managing Payments

continued

Step	Action
18	Click the **Generate Payments** button. Result: A pop-up message indicates that the payments have been generated. 
19	Click **OK** to close the pop-up window.

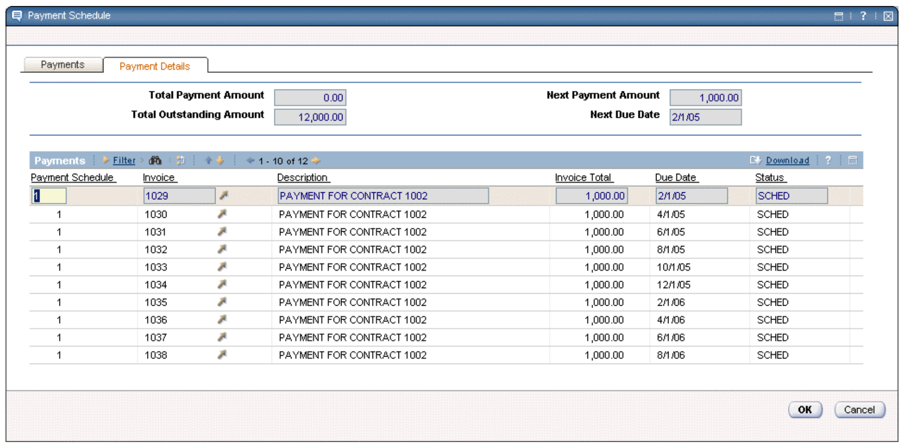
continued on next page

Lease/Rental Contracts continued

Managing Payments

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>20</td><td>Click the Payment Details tab in the Payment Schedule dialog box.
Result: The list of generated scheduled payments is displayed.



Note: The corresponding invoice, date, and amount for each scheduled payment is indicated.</td></tr>
<tr><td>21</td><td>Click OK to close the Payment Schedule dialog box.</td></tr>
</table>

Warranty Contracts

Overview

You use the Warranty Contracts application to create *service* or *warranty* contracts for the maintenance of one or more assets for an outside service provider for a fixed fee, or for regularly scheduled payment over a specified time period.

You can also use this application to track warranty information for multiple assets or locations by time or meter.

This section provides an overview of the key capabilities of the Warranty Contracts application and gives you a brief look inside the application.

We suggest that you contact MRO Software Educational Services for more detailed training on this topic.

Key Capabilities

The Warranty Contracts application provides the following key capabilities:

- It defines coverage by time and/or multiple meters.
- It associates assets and indicates individual coverage dates and/or meter readings.
- Warranty contracts are automatically associated with work orders when the asset is under warranty.
- Service contracts can be associated manually with work orders.
- Either type can have a payment schedule created for it.

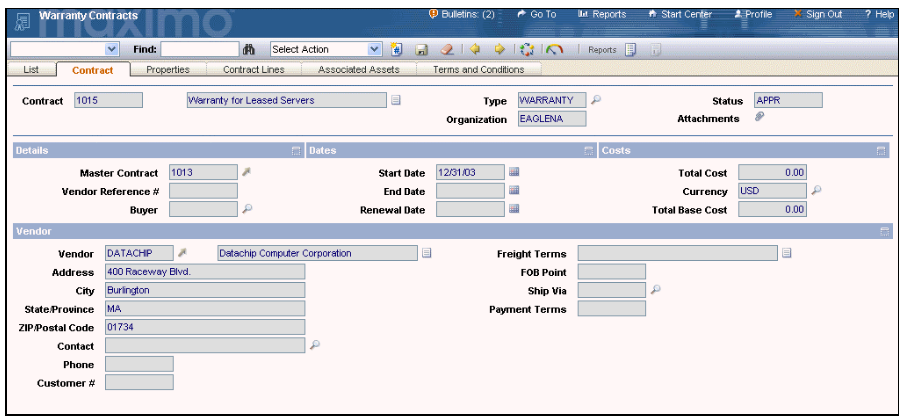
continued on next page

Warranty Contracts continued

Check Out the Application

The following exercise shows you the Warranty Contracts application and describes the tabs.

Step	Action
1	Access the **Warranty Contracts** application from the **Contracts** module.
2	Access the **Contract** tab for contract 1015: Warranty for Leased Servers.



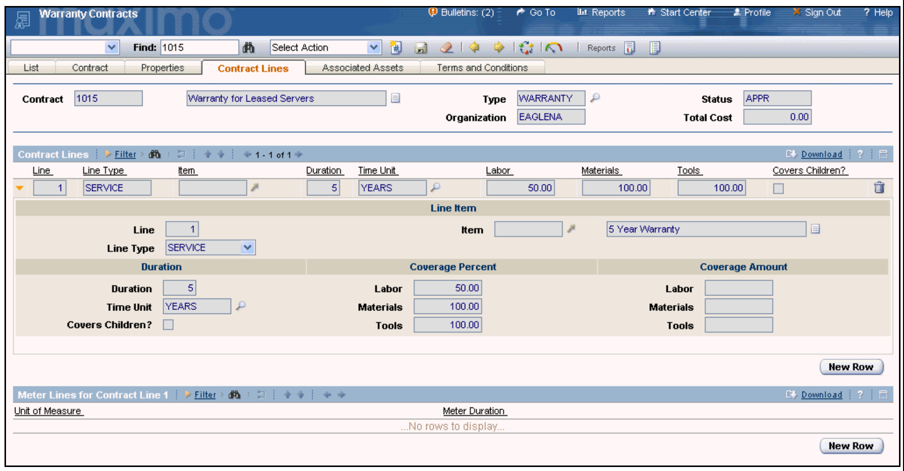
Note: As with the other Contracts applications, this tab provides general information about the contract.

continued on next page

Warranty Contracts continued

Check Out the Application

continued

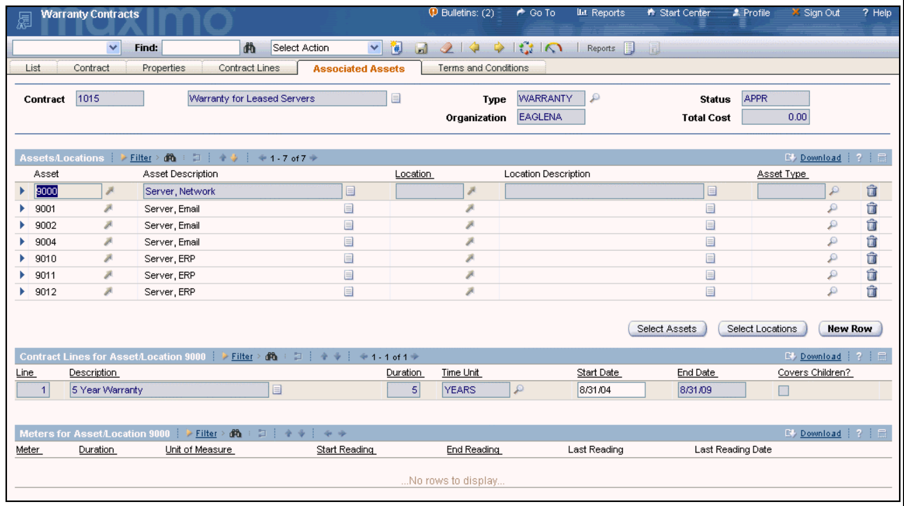
Step	Action
3	Access the **Contract Lines** tab for the same record and display the details for the single contract line.  Note: This tab shows details for the types of warranties provided by the vendor listed on the Contract tab. It specifies such things as the duration of the warranty and which items the line covers.

continued on next page

Warranty Contracts continued

Check Out the Application

continued

Step	Action
4	Access the **Associated Assets** tab for the same record.  Note: This tab displays the specific associated assets and locations that are covered by warranty. It also displays the meters associated with listed assets and locations.
5	The Terms and Conditions tab works the same way as all other contract applications do, so we won't access it.

Labor Rate Contracts

Overview

Use the Labor Rate Contracts application to define multiple labor rates for specific crafts and skills and, optionally, labor records.

In the Labor Rate Contracts application you can manage outside labor and the corresponding rates.

This section provides an overview of the key capabilities of the Labor Rate Contracts application and gives you a brief look inside the application.

We suggest that you contact MRO Software Educational Services for more detailed training on this topic.

Key Capabilities

The Labor Rate Contracts application provides the following key capabilities:

- The ability to define for a specific time period a schedule of rates for craft/skill levels or, optionally, for individual labor records
- Rates that are used when planning or reporting actual labor (work orders, quick reporting, labor reporting)

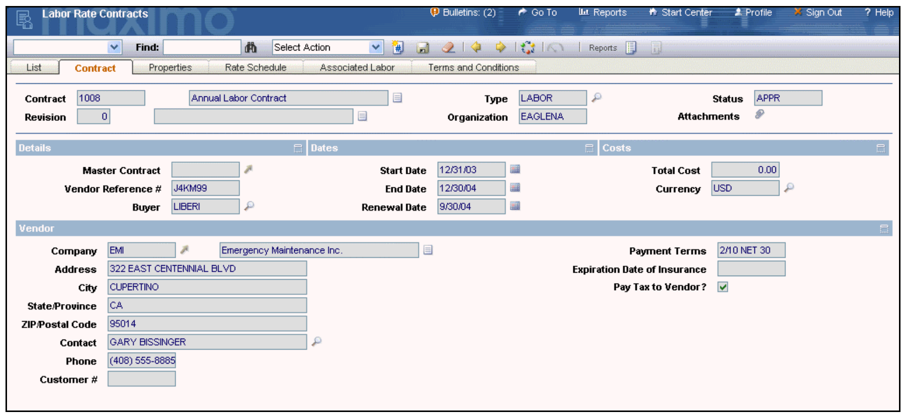
continued on next page

Labor Rate Contracts continued

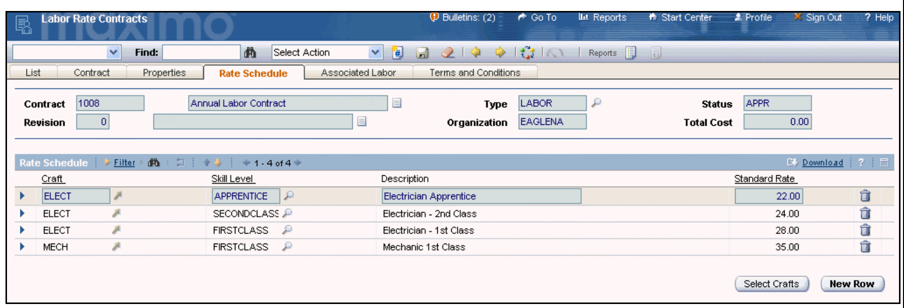
Check Out the Application

The following exercise shows you the Labor Rate Contracts application and describes the tabs.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Access the Labor Rate Contracts application from the Contracts module.</td></tr>
<tr><td>2</td><td>Access the Contract tab for record 1008: Annual Labor Contract.



<u>Note</u>: This tab provides general header information about the contract.</td></tr>
<tr><td>3</td><td>Access the Rate Schedule tab for the same record.



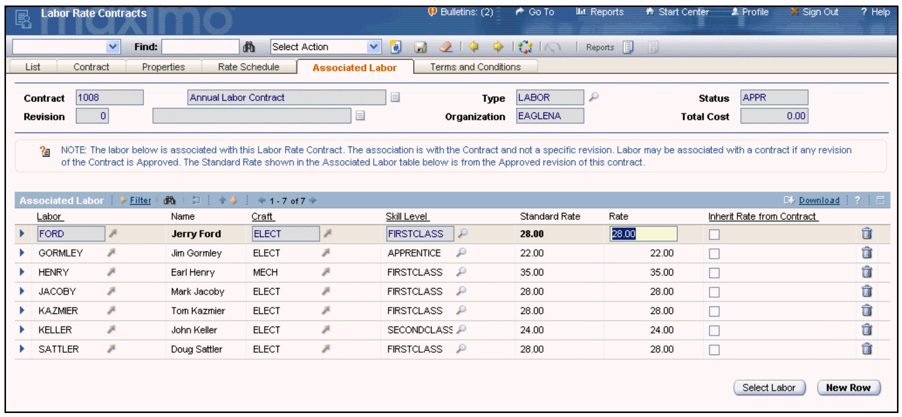
<u>Note</u>: This tab shows all the labor, levels, and rates for all skill levels that have been included in the contract.</td></tr>
</table>

continued on next page

Labor Rate Contracts continued

Check Out the Application

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>4</td><td>Access the Associated Labor tab.


Notes:

This tab shows the specific external labor personnel who fall under this contract, along with their craft and level.
Selecting the Inherit Rate from Contract field indicates that the labor rate cannot be modified on records where this labor is called for. The contract rate must be used.
The Terms and Conditions tab works the same way all other contract applications work, so we won’t access it here.
</td></tr>
</table>

Chapter Summary

Key Enhancements

MXES has many contract-related enhancements, including:

- the new Contracts module,
- six new applications,
- the ability to create contract templates,
- the ability to create and associate terms and conditions with contracts, and
- commodity identification.

Contract Options

Contract options are set up at the organization level with the Organizations application.

You can access options by choosing **Purchasing Options** from the Select Action menu.

In Contract Options you can set:

- associated properties of various contract types,
- associated terms and conditions with various contract types, and
- new contract types using existing types as templates.

Terms and Conditions

Terms and conditions are a library of clauses that can be added to purchasing documents or contracts.

You use the Terms and Conditions application to maintain and add these clauses.

You can access the Terms and Conditions application from both the Contracts module and the Purchasing module.

continued on next page

Chapter Summary continued

Site Association

All contracts must be associated with a site before they can be approved for use.

Master Contracts

A master contract defines the relationship with a vendor and contains terms and conditions that apply to the contracts created and listed under it.

You use the Master Contracts application to associate many contract types for a particular vendor.

Purchase Contracts

The Purchase Contracts application:

- includes some existing agreement functionality from the MAXIMO 5.x Purchase Orders application (similar to MAXIMO 5.x price agreements);
- holds a list of items or services provided by a vendor for a specified period of time;
- indicates an agreement to spend an overall amount of money with a vendor during a time period, possibly for specific items or services (similar to blankets in MAXIMO 5.2); and
- allows users to specify items or services.

Contract Revisions

MXES allows you to revise contracts while keeping a history of the previous revisions for future reference.

All revisions keep the same record number but have a separate revision number, making it simpler to retrieve all revisions for a contract.

continued on next page

Chapter Summary continued

Lease/Rental Contracts

The Lease/Rental Contracts application enables you to identify rotating items that will be rented or leased when requisitioned.

When received, the serialized assets will be associated with the contract and you should generate a payment schedule.

Maximo will prevent these orders/receipts from being invoiced.

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Warranty Contracts

You use the Warranty Contracts application to create *service* or *warranty* contracts for the maintenance of one or more assets for an outside service provider for a fixed fee, or for regularly scheduled payment over a specified time period.

You can also use this application to track warranty information for multiple assets or locations by time or meter.

Labor Rate Contracts

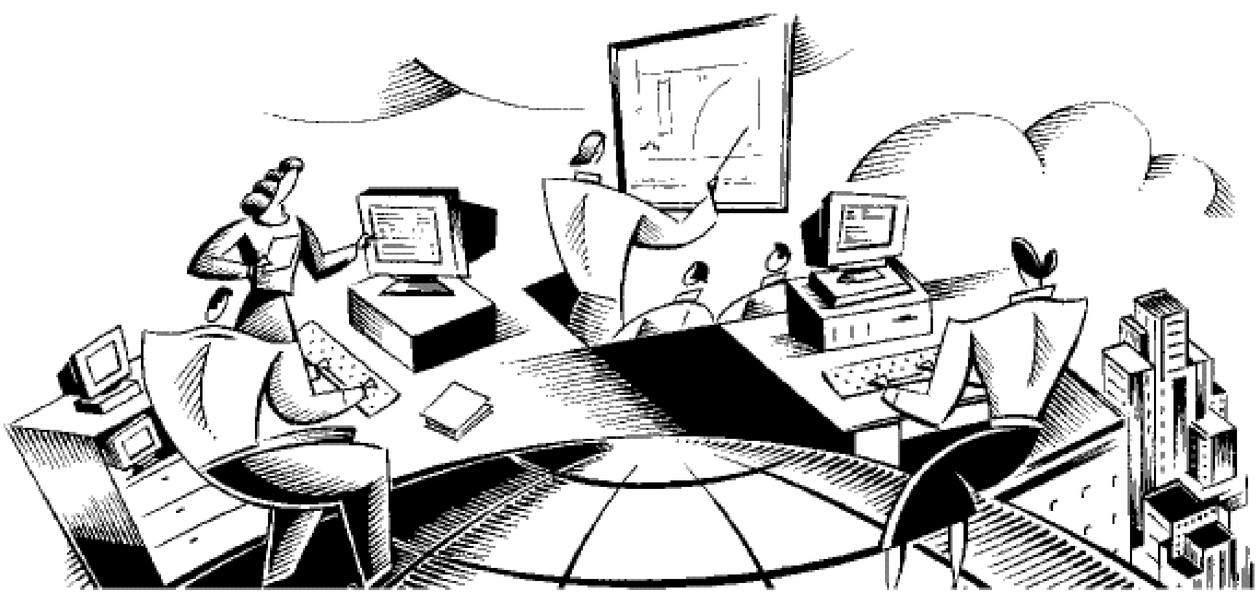
You use the Labor Rate Contracts application to define multiple labor rates for specific crafts and skills and, optionally, labor records.

In the Labor Rate Contract application you can manage outside labor and the corresponding rates.

NOTES:

MXES for EAM – New Features

Chapter 6: Configuration



In This Chapter

This chapter contains the following topics:

Chapter Overview

Introduction

This chapter introduces you to the many new configuration features in MXES.

Chapter Focus

Because there are so many configuration changes, this chapter will provide just an overview of them. In some cases we may go into specific applications, but the view will be high-level.

Please contact MRO Software Educational Services for more detailed training on configuration-related functionality in MXES.

Learning Objectives

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

- describe the basic use of the Database Configuration application;
- locate and run files needed to configure the database;
- modify e-Signature functionality;
- access the Workflow Designer application and start an existing workflow process; and
- access and describe the purpose of the other new configuration-related applications.

Key Enhancements

Overview

This section provides an overview of the many new configuration-related enhancements included in MXES.

New Configuration Module

All administrative and configuration applications are now Web architected and can be directly accessed from within Maximo. A new Configuration module has been created to hold the configuration-related applications.

Database Configuration Is Web Architected

The Database Configuration application is now completely Web architected and usable through a browser.

The next section of this chapter will provide more information about this application.

Workflow Designer Is Web Architected

The Workflow Designer application is now Web architected. In addition to being usable in a browser, many new features have been added in MXES.

Several new applications have been created to work in tandem with Workflow Designer.

You will learn more about this application and related applications later in this chapter.

New Applications

A number of new configuration-related applications have been added in the Configuration module, including:

- Escalations
- Cron Task Setup
- E-Mail Listener Configuration
- Domains

Later in this chapter we will provide an overview of the functionality of these applications and give you a chance to access them.

For further training on these applications, please contact MRO Software Educational Services.

Database Configuration

Overview

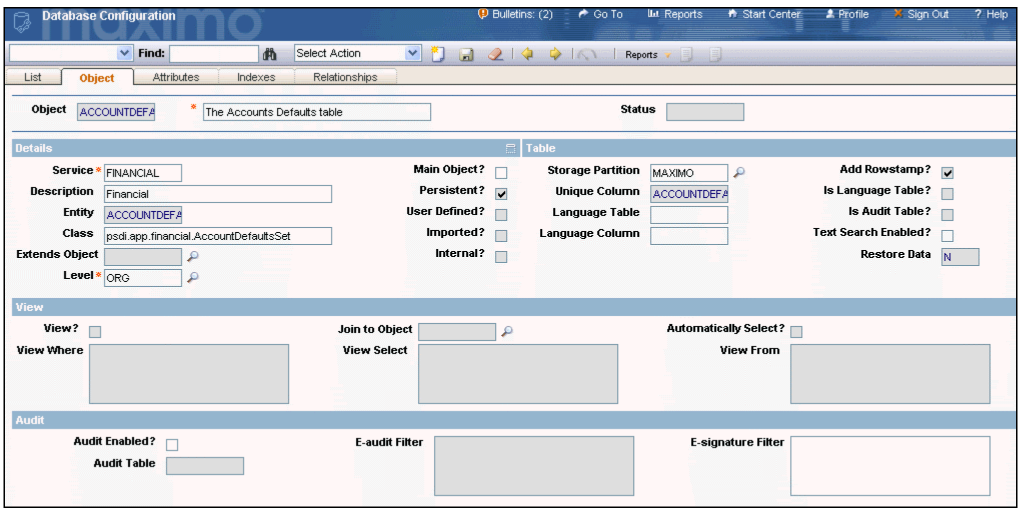
The Database Configuration application is now Web architected and can be used through a browser. This section provides an overview of enhancements made to this application, in addition to its user interface changes.

You can access the Database Configuration application from the Configuration module.

Access the application now so that we can review its tabs.

Object Tab

Use the Object tab to view the general characteristics and values of a selected object.



The Object tab has three sections:

- Details
- View
- Audit

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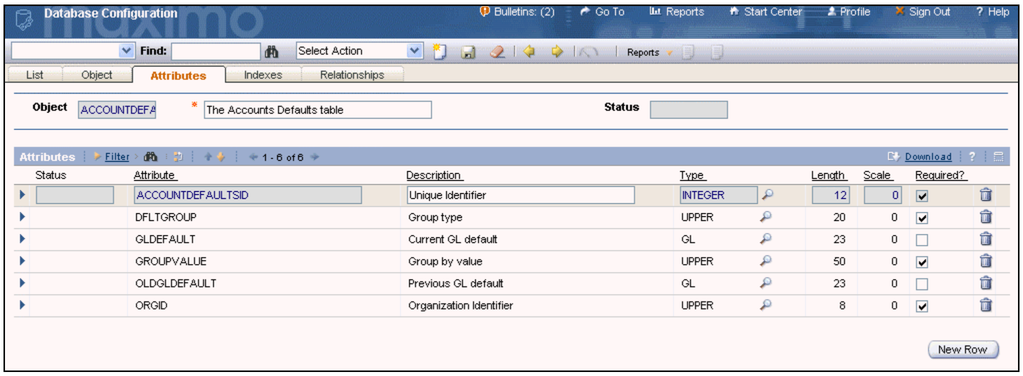
Database Configuration continued

Attributes Tab

Use the Attributes tab to view existing attributes for a selected object or to add new attributes to a selected object.



The Attributes tab displays the following columns:

- Status
- Attribute (all the attributes for the object)
- Description
- Type
- Length
- Scale
- Required?

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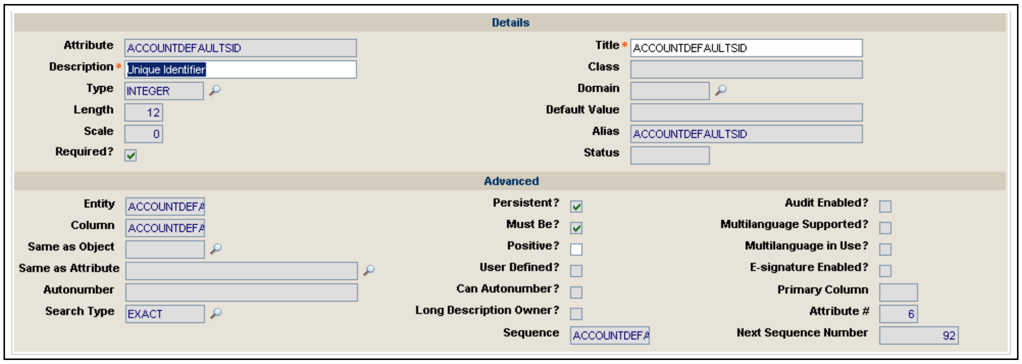
Database Configuration continued

Details for Attributes

Details for attributes on the Attributes tab look similar to those shown in the following graphic:



The Attributes details screen has two sections:

- The Details section is used to create domain associations.

  Note: Domains are created in the new Domains application.

- The Advanced section allows you to set a variety of additional parameters, including the enabling of e-signature.

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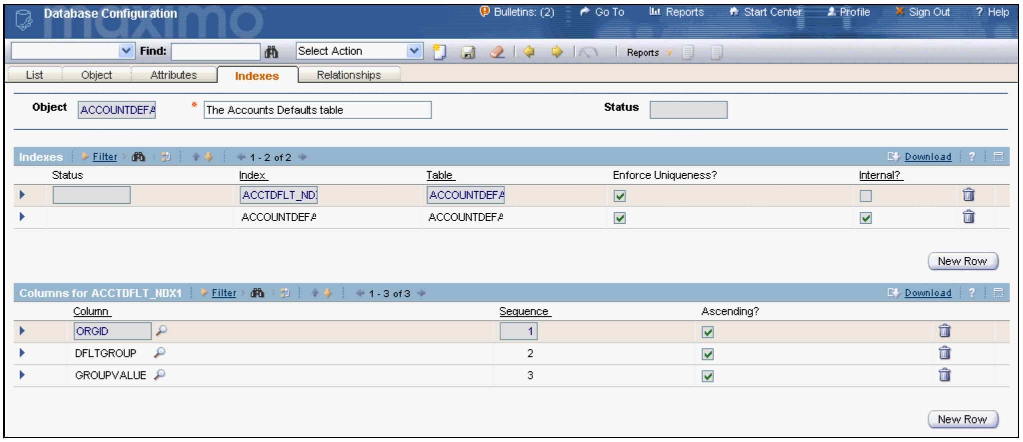
Database Configuration continued

Indexes Tab

Use the Indexes tab to view existing indexes for a selected object or to add new indexes to a selected object.



The Indexes table indicates the existing indexes and basic index parameters for the object. Beneath the Indexes table is the Columns table, which indicates the columns used in the index highlighted in the Indexes table.

<u>Notes</u>:

- Existing indexes cannot be redefined. Indexes must be dropped and re-created with a new definition.
- Indexes will automatically be created for attributes flagged as primary key columns.

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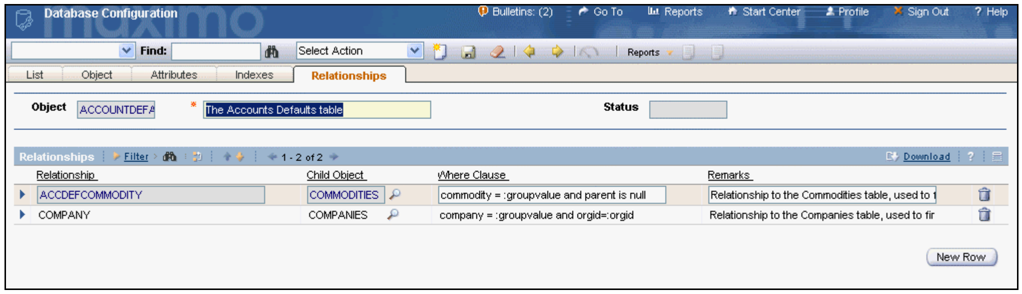
Database Configuration continued

Relationships Tab

The Relationships tab provides a user interface for the creation of joins.



Concept of Business Objects

The Database Configuration application now works on the concept of *business objects*. Although many objects work directly with a specific table, some objects perform functions that relate to a number of tables or no table.

<u>Example</u>: A view might now be an object. This view could represent the relationship between a number of tables.

Therefore, there is *no longer a one-to-one relationship between tables and records* in Database Configuration.

Objects have *attributes*, some of which can be changed with Database Configuration.

Accessing "Inaccessible" Objects

Objects that should not be changed are not accessible through the Database Configuration application by default. However, you can actually see these unchangeable objects by doing the following:

1. Access **Advanced Search** options.
2. Search on **Internal** field = 1.

<u>Note</u>: You can find these objects to look at details, but they cannot be changed.

Objects can be made accessible at a variety of database levels.

<u>Examples</u>: SYSTEM, ORG, SITE, ORGSITE

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Database Configuration continued

DB Configured from Command Line

After attribute changes are made to business objects using the Database Configuration application, a file called *configdb.bat* is run from the command line to configure the changes.

Configdb.bat is located on the following path:

[MXES Root Directory] >> tools >> maximo

The system checks a switch inside configdb.bat (the *r* switch) to determine whether table data should be restored during the configuration.

Note: The Maximo application server must be brought down to run configuration. This ensures that no users are still signed in to Maximo, thereby eliminating the possibility of their entering data during configuration and losing that data after tables are restored.

Tip: You could use the Bulletin Board to announce impending system shutdown.

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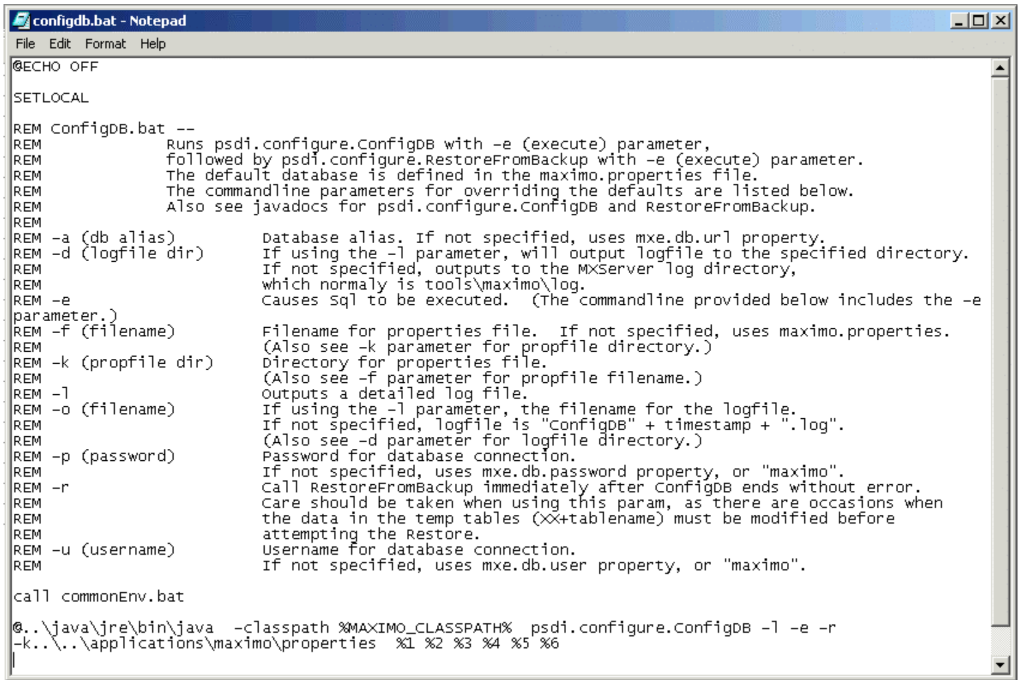
Database Configuration continued

Switches in the configdb.bat File

The configdb.bat file contains definitions of the available switches and their purposes.

This new feature allows system administrators to automatically restore data, if desired, and to perform other tasks during the configuration process.

Note: To view and change the switches in configdb.bat, right-click the file and select **Edit** from the drop-down menu. The contents of the file should look similar to the following graphic.


configdb.bat - Notepad
File Edit Format Help

```
@ECHO OFF

SETLOCAL

REM ConfigDB.bat --
REM             Runs psdi.configure.ConfigDB with -e (execute) parameter,
REM             followed by psdi.configure.RestoreFromBackup with -e (execute) parameter.
REM             The default database is defined in the maximo.properties file.
REM             The commandline parameters for overriding the defaults are listed below.
REM             Also see javadocs for psdi.configure.ConfigDB and RestoreFromBackup.
REM
REM -a (db alias)          Database alias. If not specified, uses mxe.db.url property.
REM -d (logfile dir)       If using the -l parameter, will output logfile to the specified directory.
REM                        If not specified, outputs to the MXServer log directory,
REM                        which normaly is tools\maximo\log.
REM -e                     Causes Sql to be executed.  (The commandline provided below includes the -e
parameter.)
REM -f (filename)          Filename for properties file.  If not specified, uses maximo.properties.
REM                        (Also see -k parameter for propfile directory.)
REM -k (propfile dir)      Directory for properties file.
REM                        (Also see -f parameter for propfile filename.)
REM -l                     Outputs a detailed log file.
REM -o (filename)          If using the -l parameter, the filename for the logfile.
REM                        If not specified, logfile is "ConfigDB" + timestamp + ".log".
REM                        (Also see -d parameter for logfile directory.)
REM -p (password)          Password for database connection.
REM                        If not specified, uses mxe.db.password property, or "maximo".
REM -r                     Call RestoreFromBackup immediately after ConfigDB ends without error.
REM                        Care should be taken when using this param, as there are occasions when
REM                        the data in the temp tables (XX+tablename) must be modified before
REM                        attempting the Restore.
REM -u (username)          Username for database connection.
REM                        If not specified, uses mxe.db.user property, or "maximo".

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
```

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Database Configuration continued

Manually Restoring Backup Tables

If configdb.bat is set to not automatically restore data, you can run a file called **restorefrombackup.bat** later to restore the table data.

This file is in the following location:

[MXES Root Directory] >> tools >> maximo

Manually Dropping Backup Tables

After you configure the database and restore backed-up data, you must manually drop backup tables. This is done with the **dropbackup.bat** file.

This file is in the following location:

[MXES Root Directory] >> tools >> maximo

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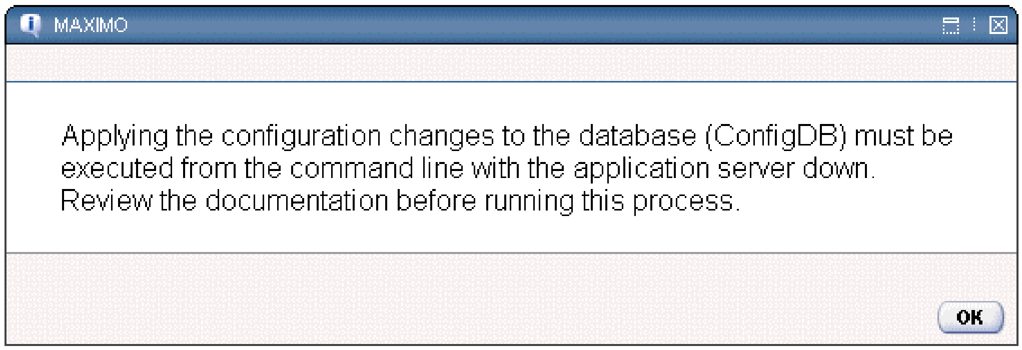
Database Configuration continued

Apply Configuration Changes Action

There is an action in the Database Configuration application called **Apply Configuration Changes**. However, when you select it you will see the following message, which tells you that you need to follow the steps outlined previously.



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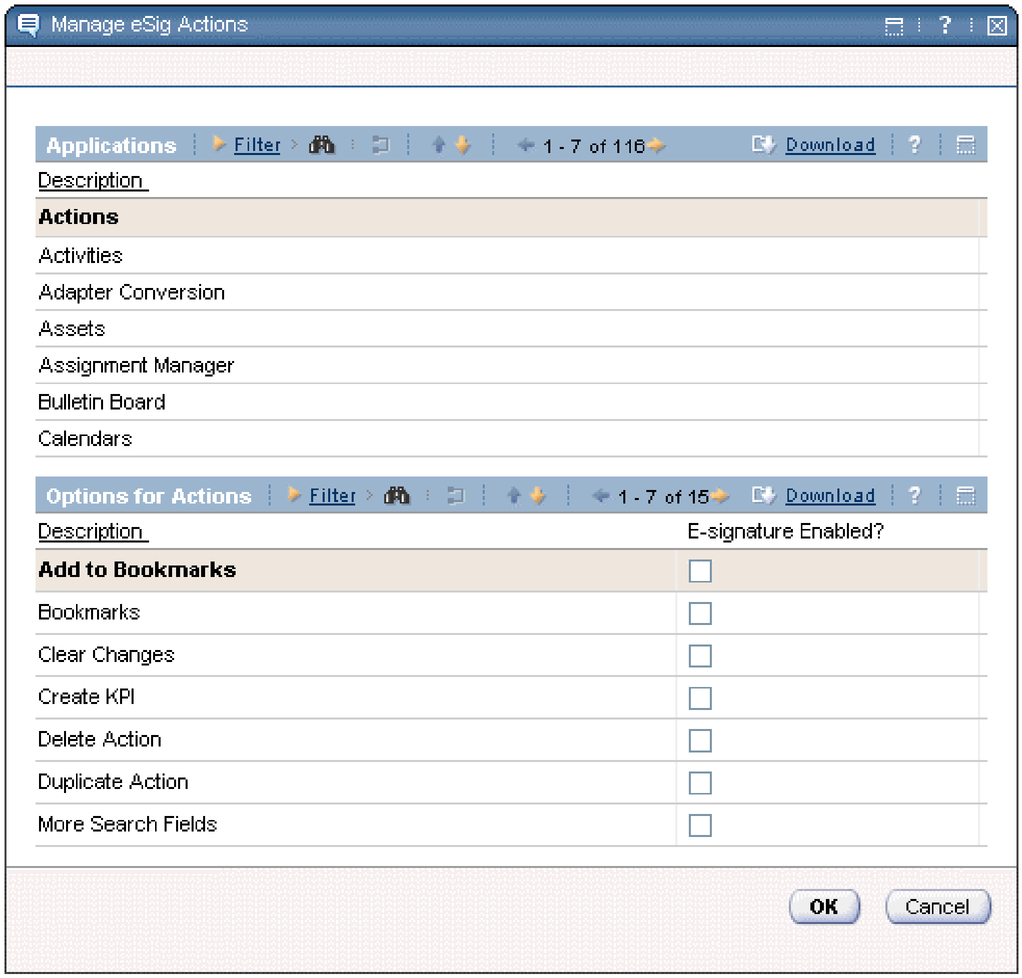
Database Configuration continued

Managing Electronic Signature Actions

You maintain Electronic Signature functionality by using **Manage eSig Actions** on the Select Action menu. Selecting this action opens the Manage eSig Actions dialog box.



From this dialog box you can select the desired application from the Applications pane and the desired option to require electronic signature from the Options for Actions pane.

Workflow

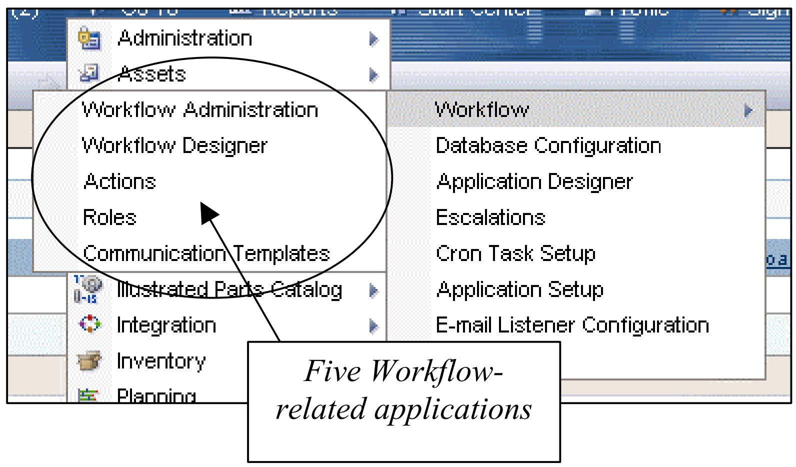
Overview

Workflow functionality has been available for the past two major releases of MAXIMO. However, it is now a formal part of MXES and no longer considered an add-on, so we will provide an overview for this "new" feature.

The many changes to Workflow functionality will require more in-depth training on this product. Please contact MRO Software Educational Services for further training.

Accessing Workflow Applications

You access the Workflow applications from the Configuration module.



There are now five applications related to workflow management:

- Workflow Administration
- Workflow Designer
- Actions
- Roles
- Communication Templates

These applications are described in the following sections.

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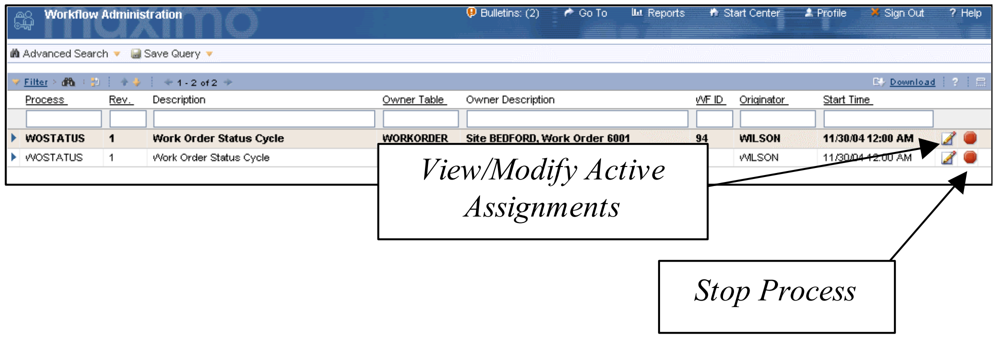
Workflow continued

Workflow Administration Application

The Workflow Administration application allows you to stop or reassign existing records in a workflow process.



There are two key buttons on this screen:

- View/Modify Active Assignments
- Stop Process

We will work with this application a bit more later on.

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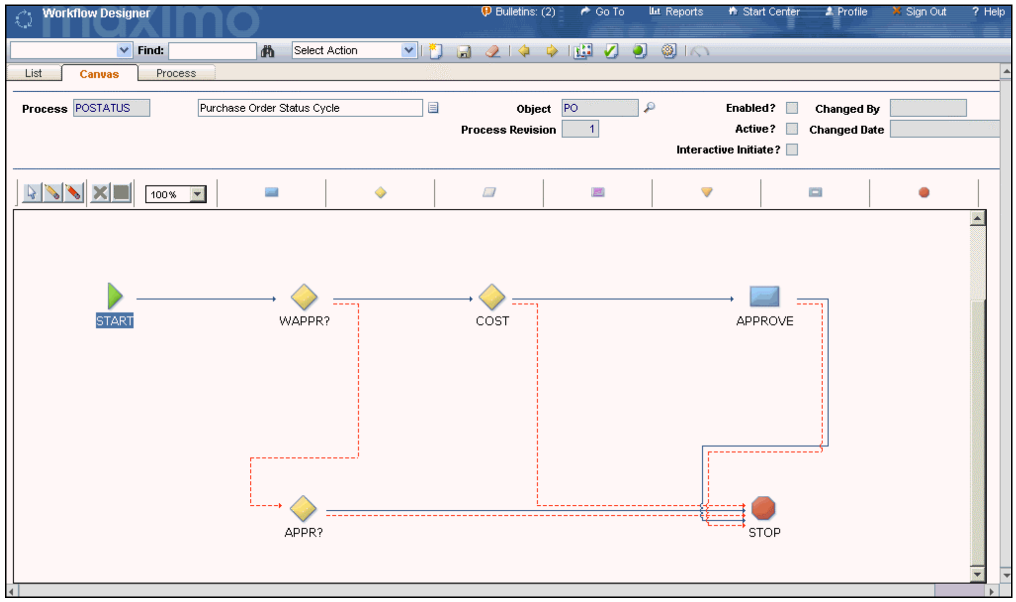
Workflow continued

Workflow Designer Application

You use the Workflow Designer application to create a series of paths for records to flow through, called a *process*.

A workflow process can be thought of as a map that guides a record through a set of steps.



The graphical interface of the Workflow Designer illustrates the possible paths the record can follow. An example of the graphical interface for a workflow process is shown here.

continued on next page

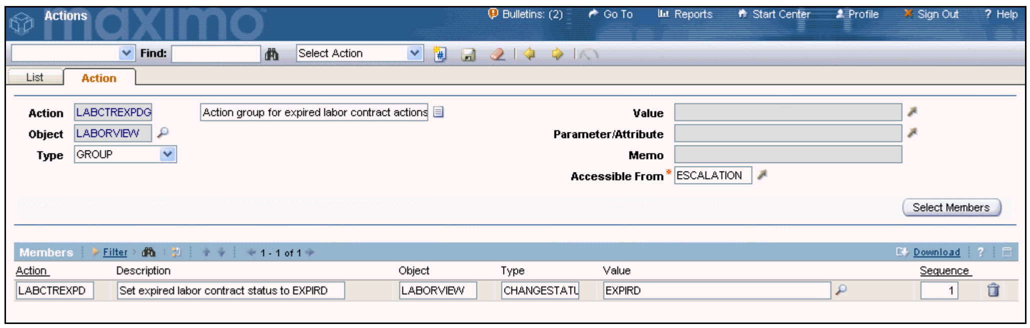
Workflow continued

Actions Application

Use the Actions application to manage the administrative functions of creating actions and action groups within Workflow, Escalation, and Service Level Agreements (SLAs) processes.

Actions are scheduled events that occur when a record leaves a node.

An action can cause a status change, execute a defined program, set a field value, or execute a custom class.



Use the Actions application to build individual actions or action groups.

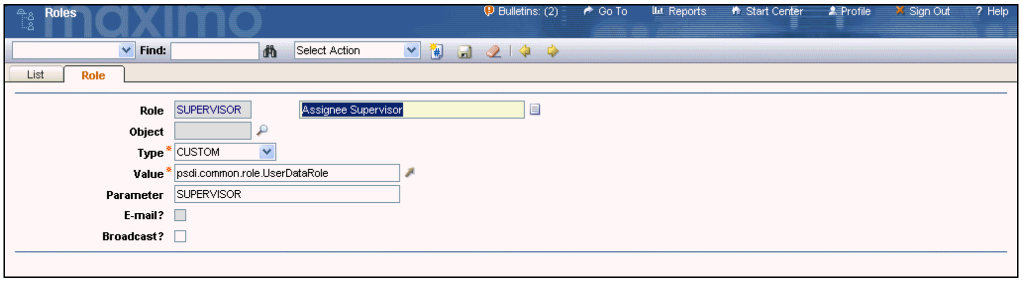
Actions are managed in a central administrative application because they are used in multiple applications.

continued on next page

Workflow continued

Roles Application

The Roles application is used to create hyperlinks between a process design and the supporting roles.



There are five distinct types of roles:

- PERSONID resolves to a person record.
- PERSONGROUPID resolves to an available person from a person group, or all the people in a person group if the broadcast flag is set.
- DATASET is a relationship that resolves to one or more people.
- CLASSNAME is a custom class that resolves to one or more people.
- EMAILADDRESS is one or more literal strings of e-mail addresses that can be used on notifications but not on assignments.

continued on next page

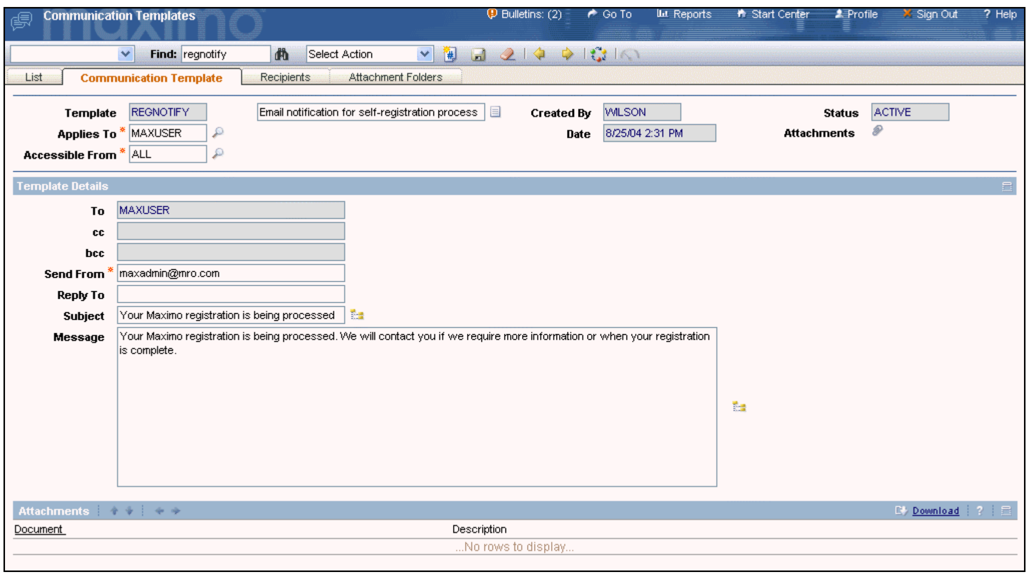
Workflow continued

Communication Templates Application

The Communication Templates application is a centralized place in Maximo where a user with appropriate permissions can define generic Communication Templates to be used in:

- Workflow process notifications
- Escalation Management notifications
- Creating communications from other Maximo applications (for example, Tickets and Work Orders)

Example: A workflow process has been designed to send a message to new self-registered Maximo users. The process calls out the REGNOTIFY template to send a predetermined response to self-registered users.



Note: You could add an attachment to the template that sends a document containing basic navigational instructions for Maximo.

continued on next page

Workflow continued

Architectural Enhancements

If you are familiar with the use of Workflow Manager in MAXIMO 5.x, the following enhancements will be extremely noteworthy.

- A workflow process can be built against any Maximo business object.

  Workflow can use criteria from any Maximo business object to determine processes.

- Maximo allows flexible starting of processes:
  - by the general **Start/Route** action button in applications,
  - by a specific action button,
  - by another workflow's action, or
  - by an autostart when a record is saved.
- Context-based interactions are available.

  Characteristics of a record or transaction can cause Workflow to make adjustments.

- There are multiple active process instances.

  Now multiple processes can be running on a business object; previously only one could be run against an object.

continued on next page

Workflow continued

Process Design Enhancements

Many enhancements have been made in the use of roles as they relate to workflow processes:

- The Roles application was added to create hyperlinks between a process design and the supporting roles.
- There are some new Workflow Designer nodes:

  Wait node

  - You can use the Wait node to create a certain reaction to an action.
  - You can define any action to trigger a specified reaction in a Wait node.
  - When Workflow encounters a Wait node in an active process, the process pauses at that node indefinitely until any of the specified events occur.
  - When a specified event does occur, it informs the node that the task is complete and the process resumes by exiting the node at the single exit point.

  Interaction node

  - You can use the Interaction node to help lead an end user down particular problem resolution paths by offering well-defined choices. This guides the user through a scripted path and manages the relationship with the record in any given session.
  - An Interaction node can help users navigate to screens, applications, and tabs appropriate to the task at hand.
- An improved Expression Builder has been added to Designer.

  An interface has been added to make the development of SQL statements a bit easier and more intuitive.
- Maximo now can import or export XML-based workflow processes by using the MEA.

continued on next page

Workflow continued

Functional Enhancements

The following functional enhancements have been made to Workflow functionality:

- Customizable Inbox columns
- Broadcast to any dataset
- Action groups
- Memo and message enhancements
- Calendar-based assignment due dates
- Custom set value calculations using new Expression Builder
- Notifications with communication templates
- Assignment escalations with new Escalations application

continued on next page

Workflow continued

Several Types of Workflows Possible

With Workflow enhancements, several types of workflows are now possible:

- **Process workflow** (traditional, assignment-oriented)

  Where a structured process manages a record's lifecycle—conditionally pushing assignments to people, running actions, and sending notifications along the routing paths.

  > Example: Route a corrective work order for cost approval, safety approval, scheduling, labor assignments, and supervisory sign-off at completion.

- **Context-based interactions** (new, assignment-less)

  Where a menu of action choices is presented to the user based on the current record's data properties, "scripting" the user's interaction with the application.

  > Example: When a help desk technician enters an SR and presses **Route**, properties such as ticket type and status conditionally present the available next steps—for example, close or create incident. Close could go to the Start Center; Incident could take the user to the newly inserted incident in its application.

- **Hybrids**

  Where there is a mix of structured routings along with interactive, conditional page, and dialog box navigation.

  > Example: Detect at the time of a work order's completion that a failure report should have been entered, and take the user to the Failure Reporting tab with instructions to that effect.

continued on next page

Workflow continued

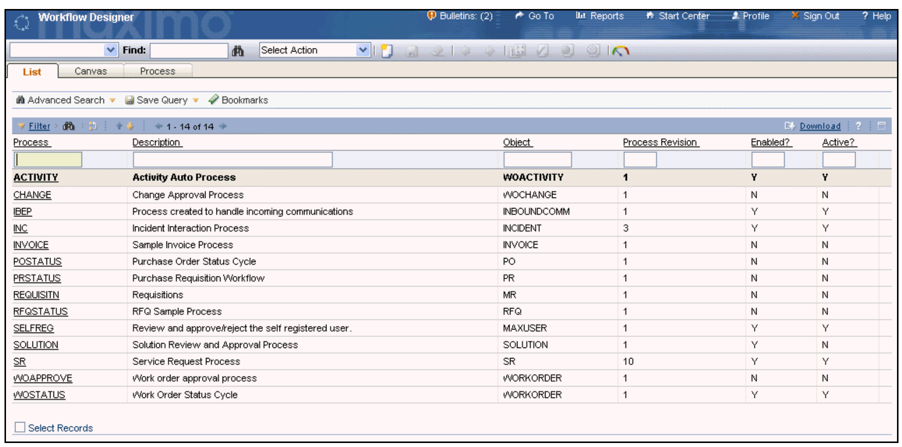
Workflow Designer Overview

In the following exercises you will access and work with a couple of the workflow-related applications.

There is quite a bit to know about workflow process and related applications, so we going to give you just a sample.

Please contact MRO Software Educational Services for more detailed training on workflow applications and functionality.

<u>Note</u>: If the entire class is working from a single database, only one person should carry out these steps while demonstrating to the rest of the class.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>
Access the Workflow Designer application using the following sequence, then press Enter:
Configuration >> Workflow >> Workflow Designer
<u>Result</u>: The List tab for the Workflow Designer application is displayed, similar to the following example:


</td></tr>
</table>

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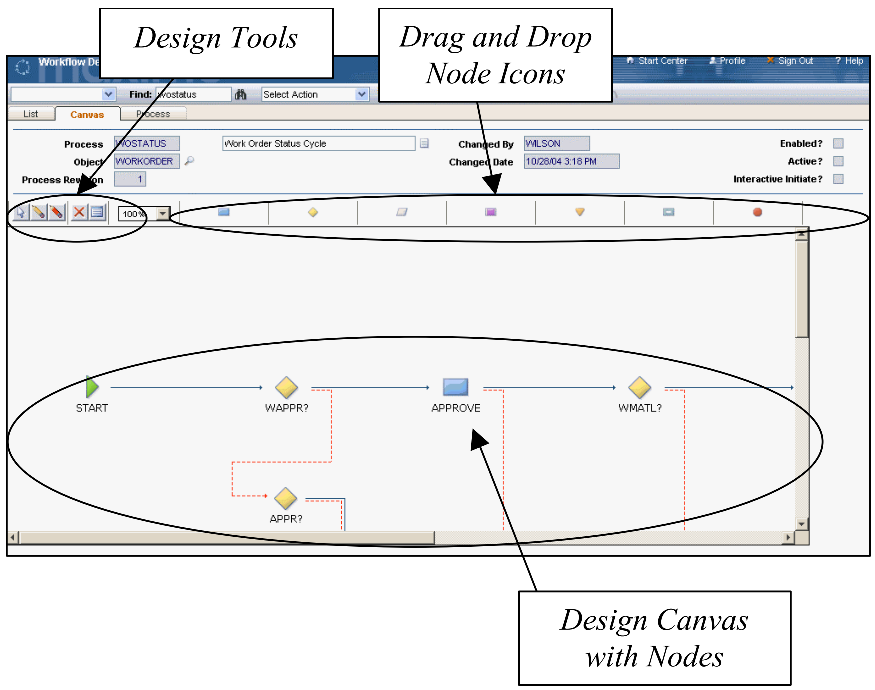
Workflow continued

Workflow Designer Overview

continued

Step	Action
2	Select the **WOSTATUS** process from the List tab. Result: The Canvas tab for the WOSTATUS process is displayed. 

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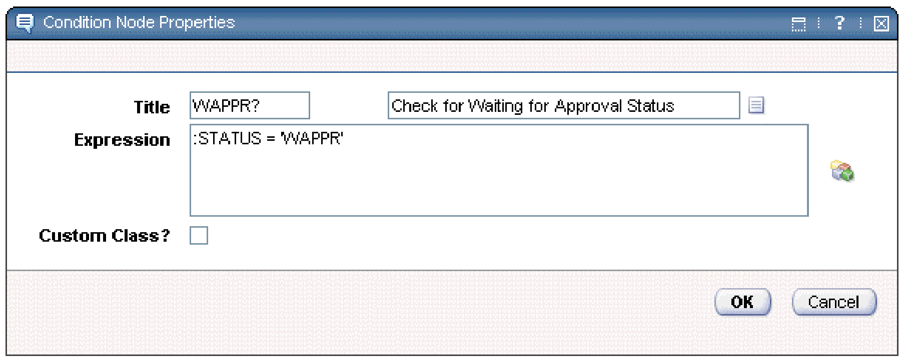
Workflow continued

Workflow Designer Overview

continued

Step	Action
3	Right-click on the **WAPPR?** node and select **Properties** from the resulting menu. Result: The Condition Node Properties dialog box opens.  Note: Each type of node has its own properties dialog box containing properties relevant to it.

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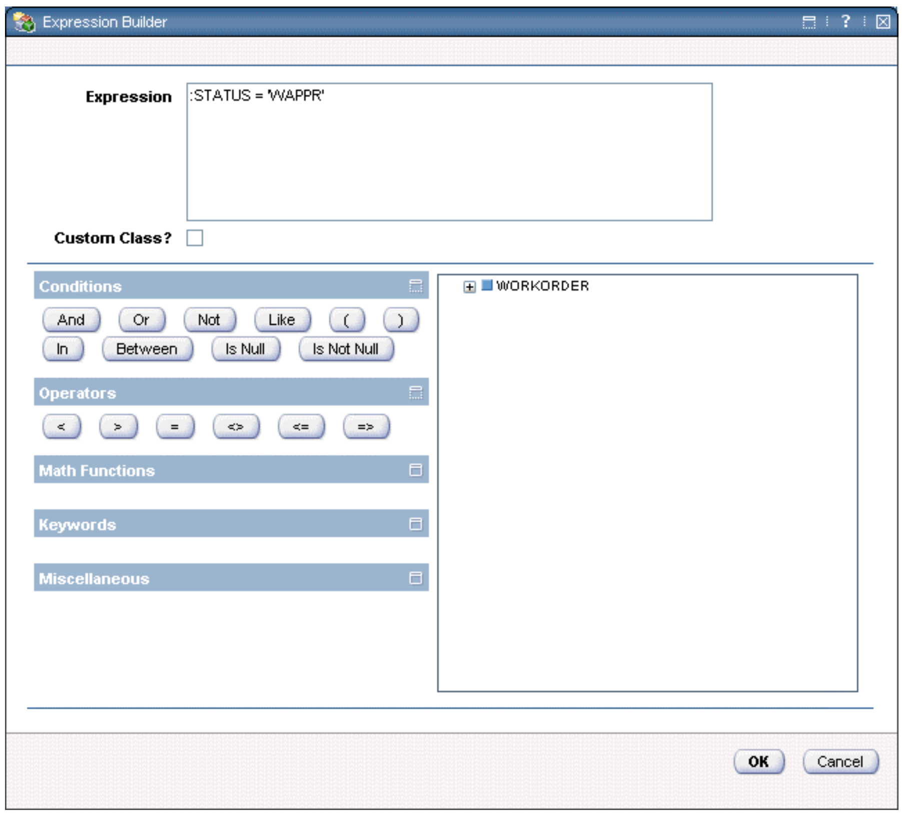
Workflow continued

Workflow Designer Overview

continued

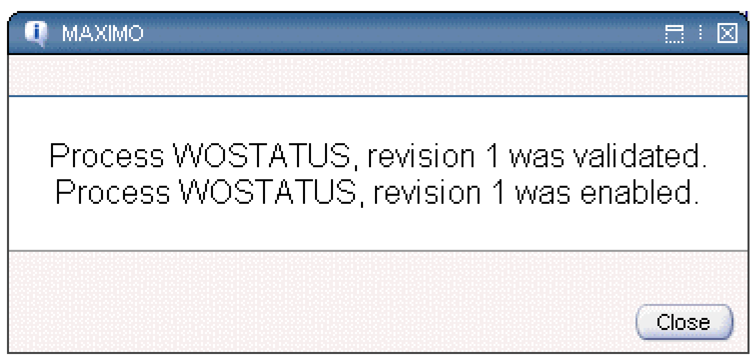
Step	Action
4	Click the **Condition Expression Builder** button, which looks like the following graphic:  Result: The Expression Builder dialog box opens.  This dialog box is a new feature that will help to develop SQL scripts for creating various criteria for the nodes.

continued on next page

Workflow continued

Workflow Designer Overview

continued

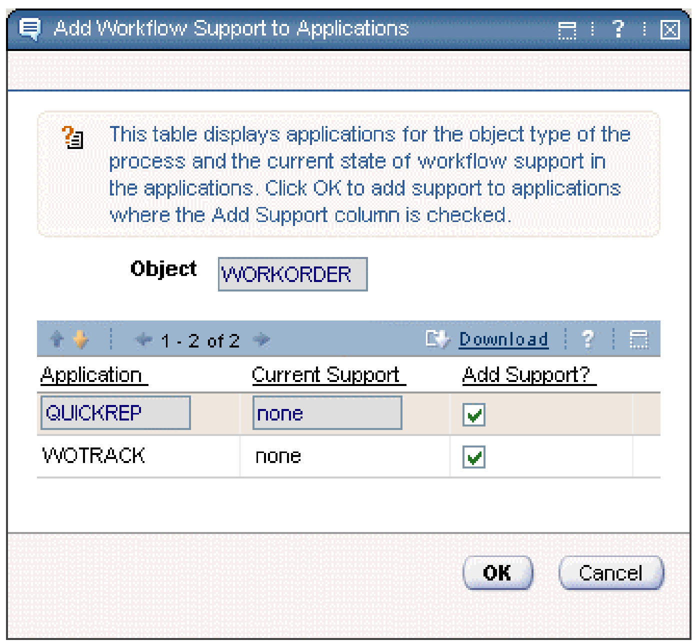
Step	Action
5 	Click **Cancel** to close the Expression Builder dialog box, then click **Cancel** to close the Condition Node Properties dialog box. Note: In this course, we just want you to see some of these new features. If you attend a full workflow course, you will get more detailed training on these features.
6	Now you will learn how to activate a workflow process. After that, you will use that process to put a work order into the workflow. Start by clicking the **Enable Process** button, which looks like the following graphic:  Result: Maximo validates the process and provides a confirmation. In addition, the **Enabled?** check box is selected.  Note: This action is also available through the Select Action menu.
7	Click **Close** to close the confirmation.

continued on next page

Workflow continued

Workflow Designer Overview

continued

Step	Action
8	Now click the **Activate Process** button, which looks like the following graphic:  Note: This action is also available through the Select Action menu. Result: The Add Workflow Support to Applications dialog box displays a list of applications to which this workflow process is related. 
9	Click **OK** to accept the default applications on the list. Result: The **Active?** check box is selected. The workflow process is now activated in Maximo.

continued on next page

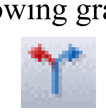
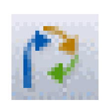
Workflow continued

Run and Reassign a Workflow Process

Now that a workflow process has been activated, you can put a record into the workflow. Because we have activated a process related to work order records, we will use Work Order Tracking to create a new record, then put it into the workflow.

Note: All students in the class can follow this exercise, even if all are on the same database.

Follow these steps:

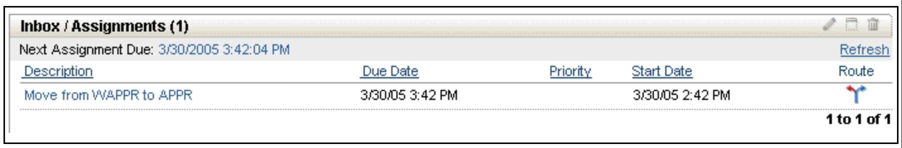
Step	Action
1	Access the **Work Order Tracking** application from the **Work Orders** module.
2	Insert a new work order record with the following information: **Description:** Test Workflow [*your initials*] **Site:** BEDFORD **Location:** NEEDHAM
3	Save the work order and write down its number here: Work Order Number: ____________
4	Click the **Route Workflow** button to start the work order process. The button looks like the following graphic:  Result: The workflow process is started. The Route Workflow button changes to reflect this.  Note: Your user—Mike Wilson—has been assigned the next step in the workflow, which is to approve the work order.

continued on next page

Workflow continued

Run and Reassign a Workflow Process

continued

Step	Action
5	Because the next step has been assigned to your user, it will be visible from the Workflow Inbox on your Start Center. Access the **Start Center** now. Result: Your inbox shows the items that have been assigned to you.  Note: Depending on the setup of your class, your inbox might contain other items.
6	Now you decide to delegate review and approval of the work order to Fred Stanley instead of to yourself. To start the process, access the **Workflow Administration** application: **Configuration** >> **Workflow** >> **Workflow Administration** Note: See page 6-14 for information about the interface of this application.

continued on next page

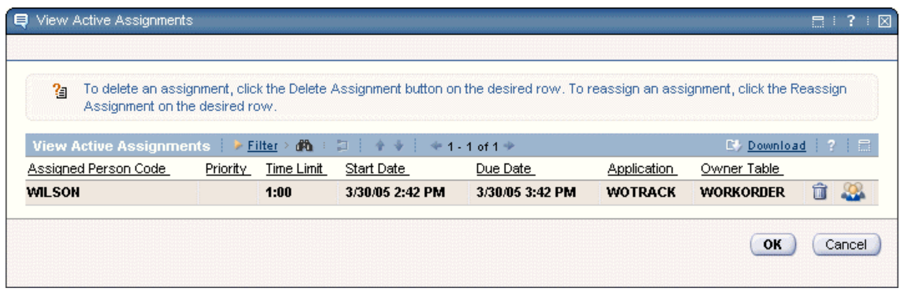
Workflow continued

Run and Reassign a Workflow Process

continued

7 Find your work order in the list and click the **View/Modify Active Assignments** button for that item.

Result: The View Active Assignments dialog box displays a variety of information about the selected process—in particular, with which user the processed record currently resides.



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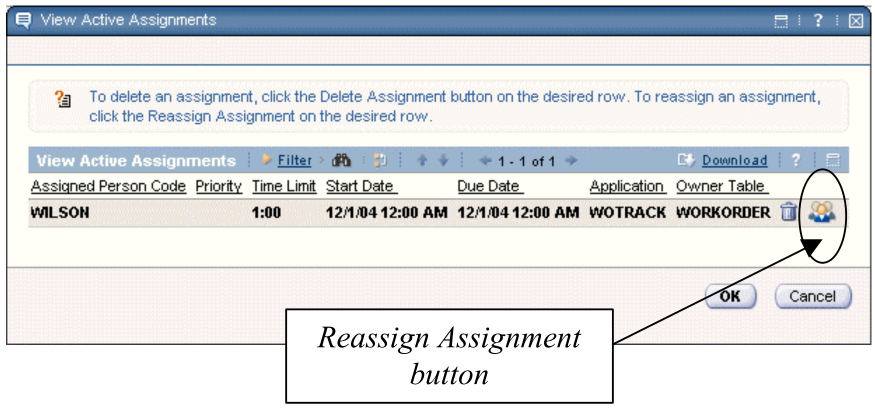
Workflow continued

Run and Reassign a Workflow Process

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>8</td><td>Click the Reassign Assignment button.


Result: The Reassign dialog box opens.

</td></tr>
</table>

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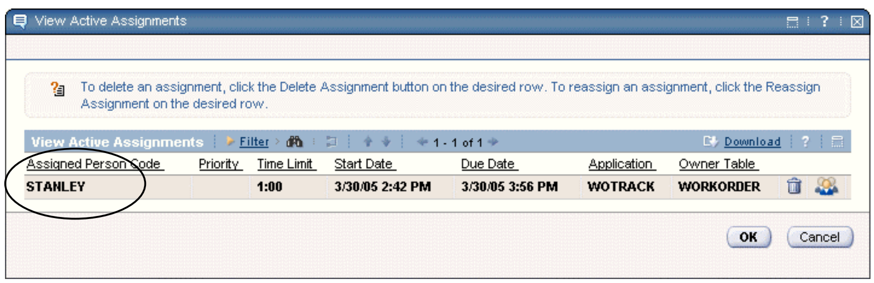
Workflow continued

Run and Reassign a Workflow Process

continued

Step	Action
9	Enter STANLEY in the **Person** field, then tab out of the field. Result: The description for the person indicates that Fred Stanley will be the person to whom we delegate the process.
10	In the **Memo** field, type Fred handles this type of work.
11	Click **OK**. Result: The Reassign dialog box closes and the View Active Assignments dialog box opens. Fred Stanley has been delegated responsibility for reviewing and approving the work order. 
12	Click **OK**. Result: The View Active Assignments dialog box closes. Fred Stanley has been delegated responsibility for reviewing and approving the work order. Note: This work order assignment will now be in his inbox.

continued on next page

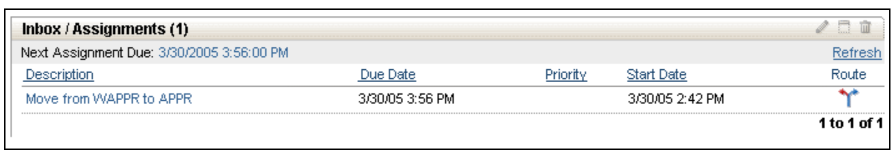
Workflow continued

Check Your Reassignment

To verify that STANLEY has been assigned the record in the process, you can take a look at the View Active Assignments dialog box.

But, to point out a feature of MXES, let's make the verification by signing in to Maximo as STANLEY and checking his inbox to see if the assignment is there.

Follow these steps:

Step	Action
1	Click the **Sign Out** link. Result: You are taken to the Maximo sign-in screen.
2	Sign in as STANLEY using the following information: **User:** stanley **Password:** stanley Result: You are now in Fred Stanley's Start Center.
3	Fred Stanley's inbox now contains the record in the process that you reassigned in the previous exercise.  Note: If the class has reassigned their work orders as well, you might see a number of items in Stanley's inbox.
4	Sign out and sign back in as Mike Wilson with the following information: **User:** wilson **Password:** wilson Result: You can now resume work as WILSON, who has the rights to carry out the functions needed for this course.

New Configuration Applications

Overview

There are a number of additional applications in the Configurations module that you should be aware of.

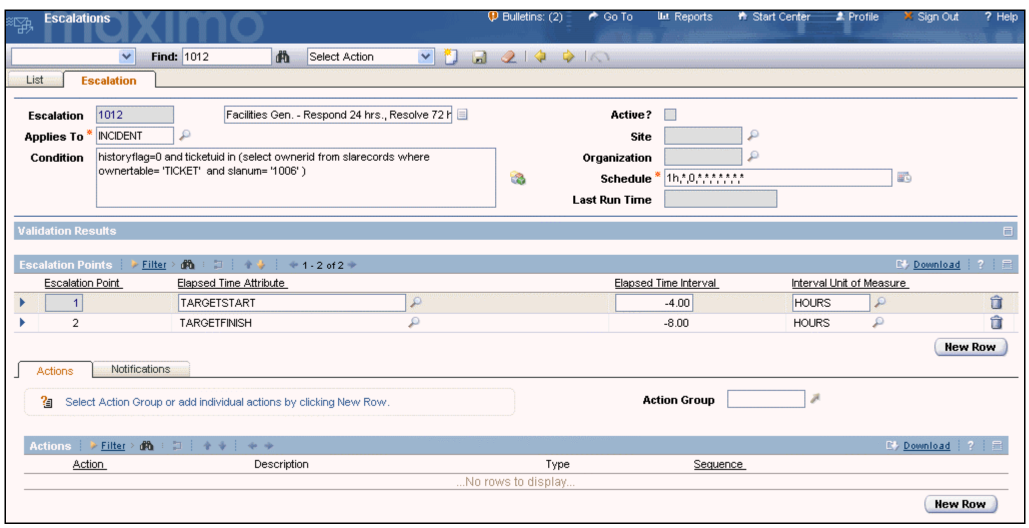
This section provides an overview of these applications so that you can see basically what their functions are.

As with many other MXES new features, the use of these applications requires detailed training. Contact MRO Software Education Services for further details.

Escalations Application

You use the Escalations application to automatically monitor critical processes across your enterprise.

The primary goal of Escalation Management is to ensure that critical tasks are completed on time, such as those defined in Service Level Agreements.



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New Configuration Applications continued

Escalations Application

continued

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); and
- 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:

- Service Desk applications,
- IT Asset Management applications, and
- Workflow processes.

continued on next page

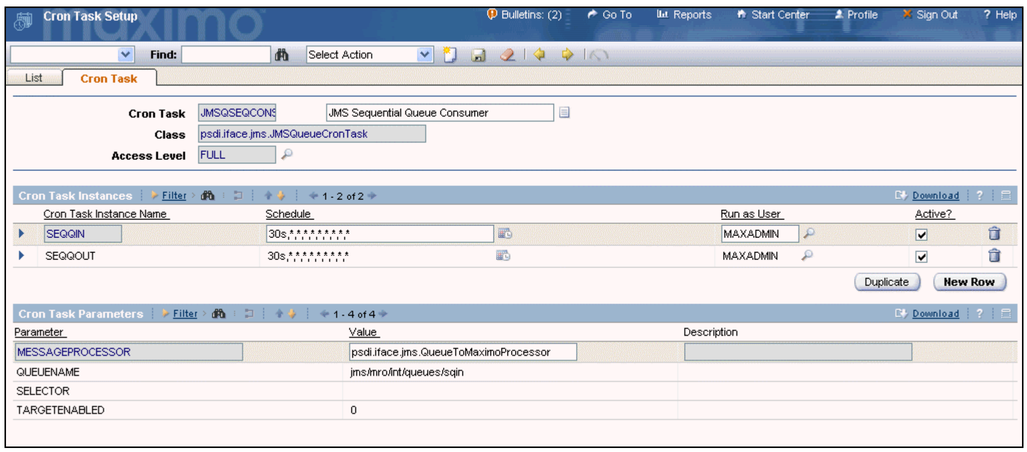
New Configuration Applications continued

Cron Task Setup Application

The Cron Task Setup application provides a graphical interface for creating and setting parameters for cron tasks.

Cron tasks are behind-the-scene jobs set to run automatically and on a fixed schedule. MXES contains a set of default cron tasks, but you can also create custom cron tasks to fit your business needs.

Cron tasks include activities like preventive maintenance work orders and reordering inventory items on a schedule.



Multiple instances of cron tasks can be added, each with its own schedule and parameters. Cron tasks can be activated or deactivated, as your business needs require.

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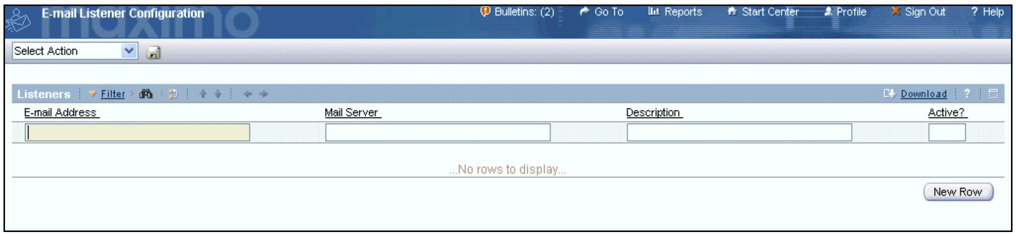
New Configuration Applications continued

E-Mail Listener Configuration Application

You use the E-mail Listener Configuration (Listener) application to receive and process incoming service desk e-mail messages.



You can configure the 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 application supports multiple attachments for each message, either inline attachments (for example, a screen capture within the body of the message) or standard attachments.

The application supports the POP3, IMAP, and MAPI e-mail protocols. These are the standard mail access protocols that a client program uses when it retrieves e-mail messages from a mail server.

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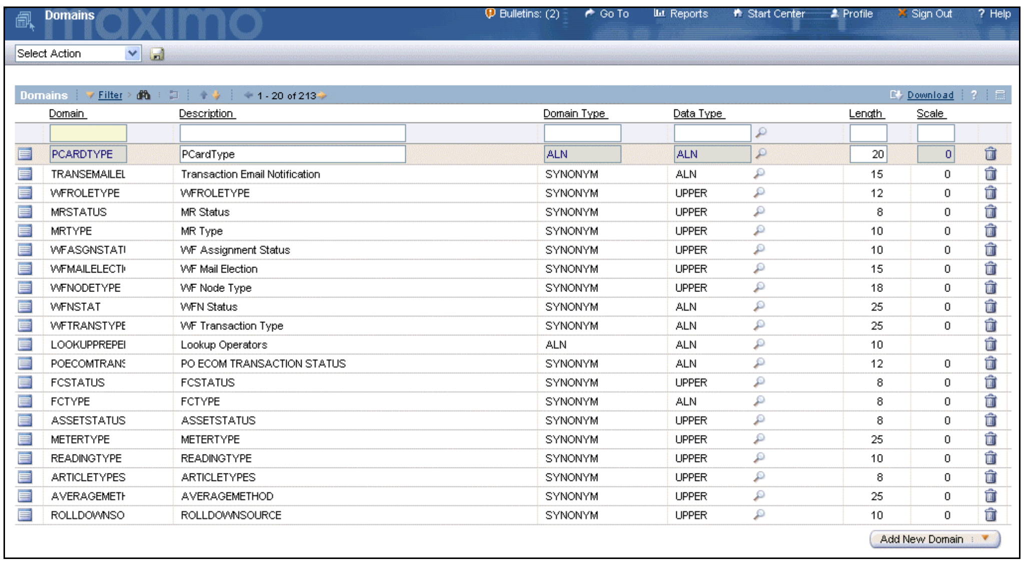
New Configuration Applications continued

Domains Application

The Domains application is a new single-page application that provides a unified user interface for the maintenance of value lists, domains, and synonyms.

In essence, the application brings together in one place the ability to use an interface for the creation of:

- Value lists
- Classification domains
- Crossover domains



Domains are at the system level. You use the Database Configuration application to associate domains with object attributes.

However, attributes can be made available only to specific organizations and/or sites.

The dialog boxes used to manage various domains are optimized to include such things as fields for the domain being managed.

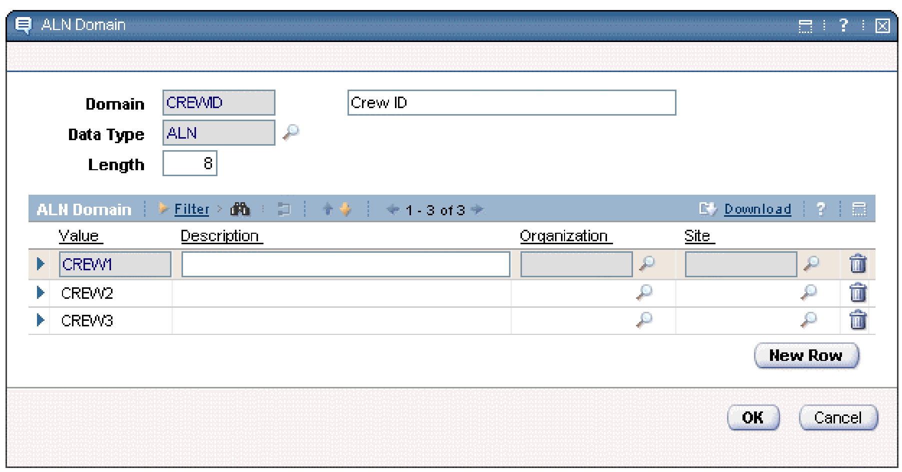
continued on next page

New Configuration Applications continued

A Quick Look

Let's take a quick look at the Domains application and use it to modify a value list. Follow the steps below.

Note: If all students are using the same database, then only one person should perform these steps while demonstrating to the others.

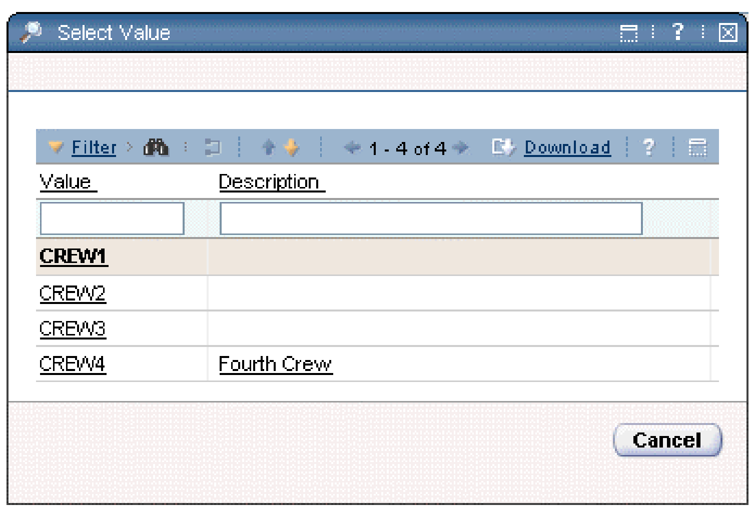
Step	Action
1	Access the **Domains** application from the **Configuration** module. Note: The **Add New Domain** button on the lower right of the screen is used to add various types of domains.
2	Filter on the CREWID domain.
3	Click the **Edit Detail** button to the left of the CREWID line. The button looks like the following graphic:  Result: The ALN Domain dialog box opens. 

continued on next page

New Configuration Applications continued

A Quick Look

continued

Step	Action
4	Using the following information, add a new row to the domain list and then click **OK**. **Value:** CREW4 **Description:** Fourth Crew Result: The CREWID value list now includes a fourth item. Note: At this point we could have specified an organization and/or site for the new row (or any of the existing ones as well). However, we will not specify an organization or site, thereby making the change at the system level.
5	To test the change that we just made, access the **Labor** application from the **Resources** module.
6	Select any Labor record.
7	Display the values in the **Crew** field for the selected record. Result: The CREW4 item and its description are now in the value list. 
8	Optional: If you want to see how this domain is associated with the Crew field in the Labor application, access the Attributes tab of the Database Configuration application for the LABOR object.

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New Configuration Applications continued

Further Training

Due to the many changes in MXES and limited time to show them to you, we have only touched on these new configuration applications.

We strongly suggest that you attend the *System Administration for MXES* course for more detailed training.

Chapter Summary

Database Configuration

The key changes to the Database Configuration application are as follows:

- The Database Configuration is now Web architected in the Configuration module.
- This application works on the concept of business objects, so there is no longer a one-to-one relationship between each record and a table.
- Configuration is completed using the Configdb.bat file, which contains switches to allow control of the process.

Workflow Designer

The Workflow Designer application is now Web architected and located in the Configuration module.

This application works in conjunction with four other applications:

- Workflow Administrator
- Actions
- Roles
- Communication Templates

New Applications

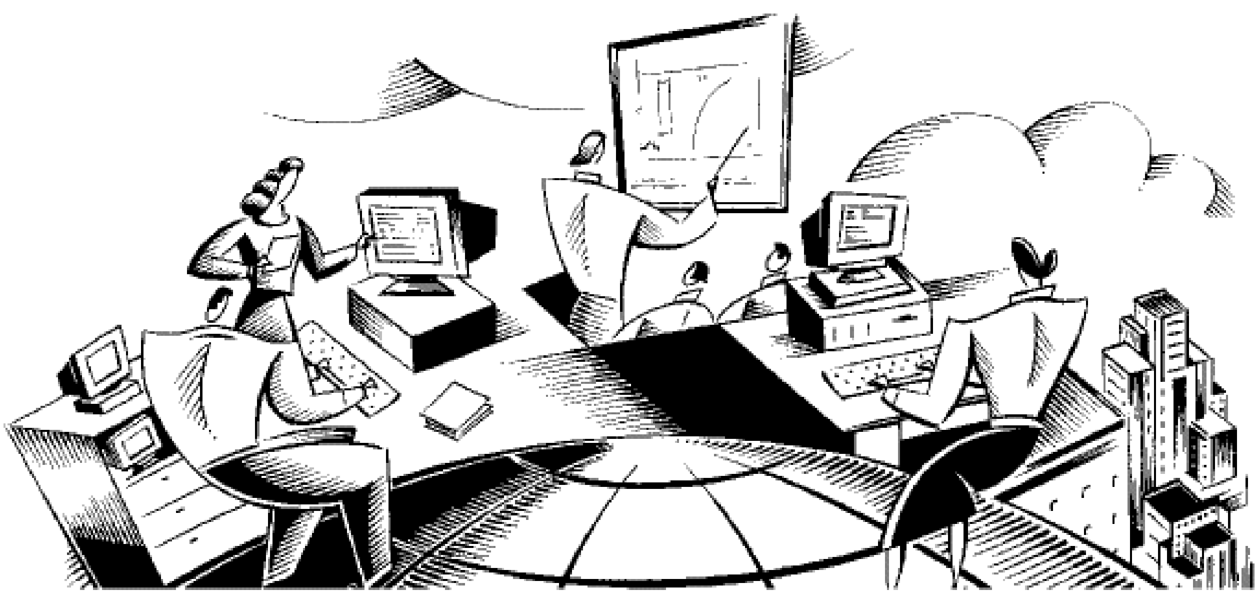
There are a number of new configuration-related applications:

- Escalations
- Cron Task Setup
- E-Mail Listener Configuration
- Domains

NOTES:

MXES for EAM – New Features

Chapter 7: Inventory



In This Chapter

This chapter contains the following topics:

Chapter Overview

Introduction

MXES provides a wide variety of enhancements related to inventory management. This chapter provides the highlights of these many changes.

Chapter Focus

We will focus on key areas of MXES inventory management changes. Some overview information will be provided and you will have a chance to use some applications to see these new features.

Learning Objectives

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

- Describe key enhancements to MXES inventory management functionality
- Modify conversion units
- Maintain new condition codes functionality
- Create kits of items from other items
- Work with new tools functionality
- Use service items enhancements

Key Enhancements

Overview

In this section we will briefly overview the key inventory enhancements in MXES. In later sections we will go into more detail and provide exercises to enhance your understanding of the changes.

Summary of Enhancements

Below is a summary of the inventory management enhancements made to MXES. Later in this chapter, we will cover the details regarding these enhancements.

- Use of item sets to allow items to be shared between organizations and sites
- Improved maintenance of measure units on items
- Addition of condition codes to show an item as existing in multiple conditions with corresponding values
- The ability to create kits as items with the kits themselves being made up of other items
- Improved tools functionality, in which tools are handled more like assets
- Service item enhancements that affect usage of services with work orders and job plans

Item Sets

Overview

The concept of item sets was described in detail in Chapter 3, "Multisite/ Multiorganization Enhancements."

But we'll provide a brief overview of this key concept, because it plays a major role in inventory management new features.

Types of Item Sets

There are two types of sets used in Maximo:

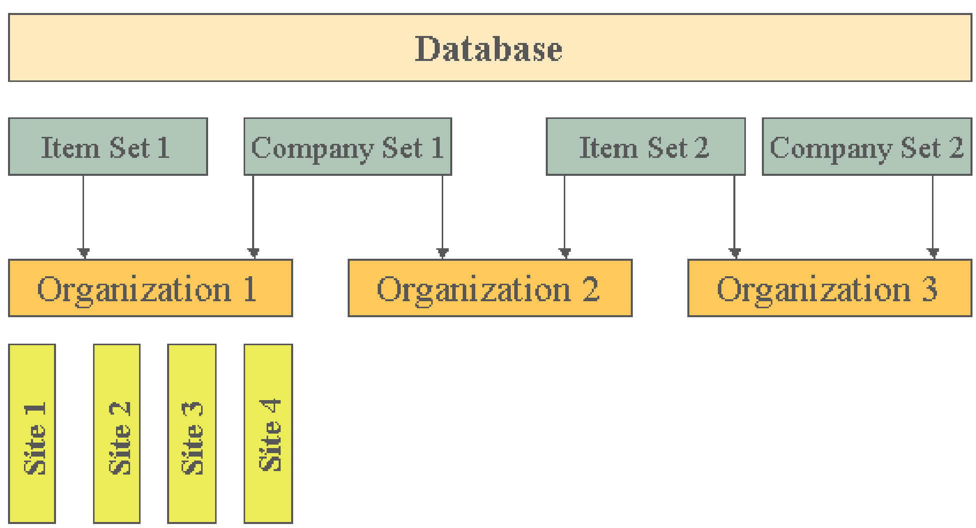
- *Item* sets for assets
- *Company* sets for vendors and other external business entities with which organizations do business

Note: Both types of sets are defined in the Sets application of the Administration module.

Sharing of Items

If two or more organizations share a set of items or companies, they can use the same data in their internal transactions and can share this same data among all the organizations that use that item set.

The following diagram shows the interrelationships between the database, sets, organizations, and sites.



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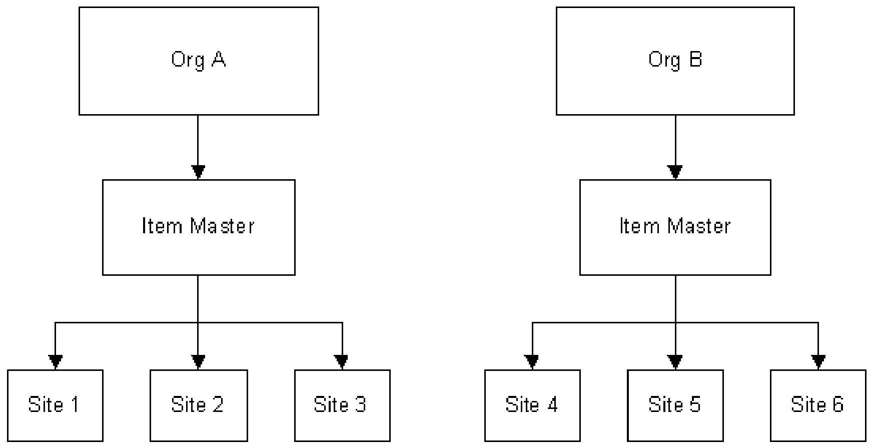
Item Sets continued

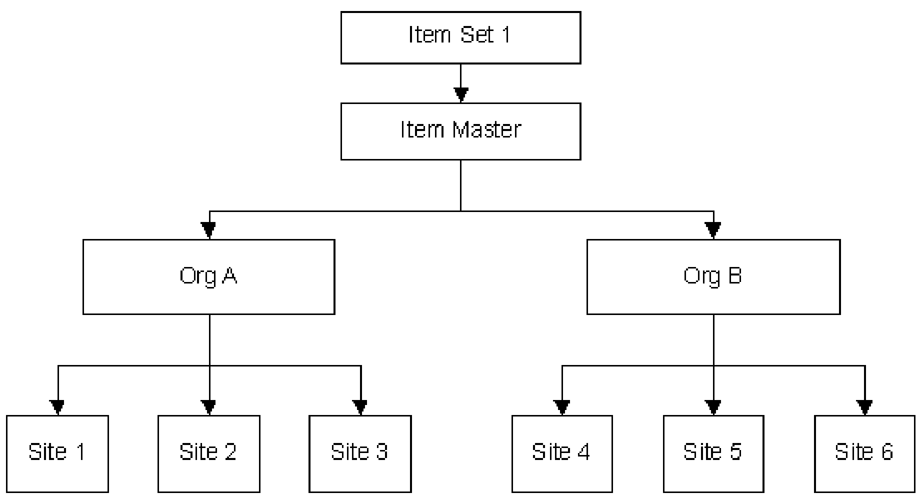
Comparison

The following graphics show the differences between how items were handled in MAXIMO 5.x and how they are now handled in MXES.

MAXIMO 5.x



MXES



Note how the Item Master *now* works within a single item set. Organizations that use the same item set also use the same item master. Therefore, they can share items across organizations and sites.

Measure Unit Conversion

Overview

The **Add/Modify Order Unit** action has been removed from all MXES applications. It has been replaced with a new action called **Unit of Measure and Conversion**, which is more robust.

Used in Multiple Applications

The new Unit of Measure and Conversion action has been added to a number of applications to which the action is relevant:

- Item Master
- Inventory
- Tools
- Stocked Tools
- Standard Services
- Purchase Requests
- Request for Quotations
- Purchase Orders
- Purchase Contracts
- Receiving

Sub-Actions

The Unit of Measure and Conversion action has two sub-actions:

- Add/Modify Units of Measure
- Add/Modify Conversions

The following exercise will demonstrate these sub-actions from the Purchase Orders application.

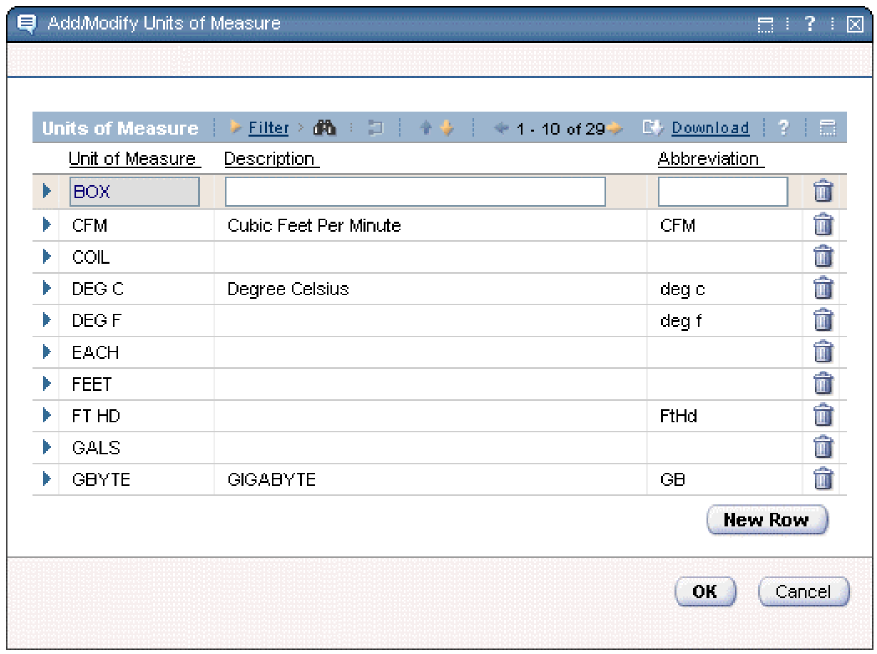
Note: Keep in mind that these sub-actions are also available in all the applications listed above.

Step	Action
1	Access the **Purchase Orders** application from the **Purchasing** module. Note: The **Unit of Measure and Conversion** action is available from the List tab. There is no need to access a record.

continued on next page

Measure Unit Conversion continued

Sub-Actions continued

Step	Action
2	Select the **Add/Modify Units of Measure** sub-action from the **Unit of Measure and Conversion** action. Result: The Add/Modify Units of Measure dialog box opens.  Note: This dialog box is used to add units of measure to MXES.
3	Click **Cancel** to close the dialog box.

continued on next page

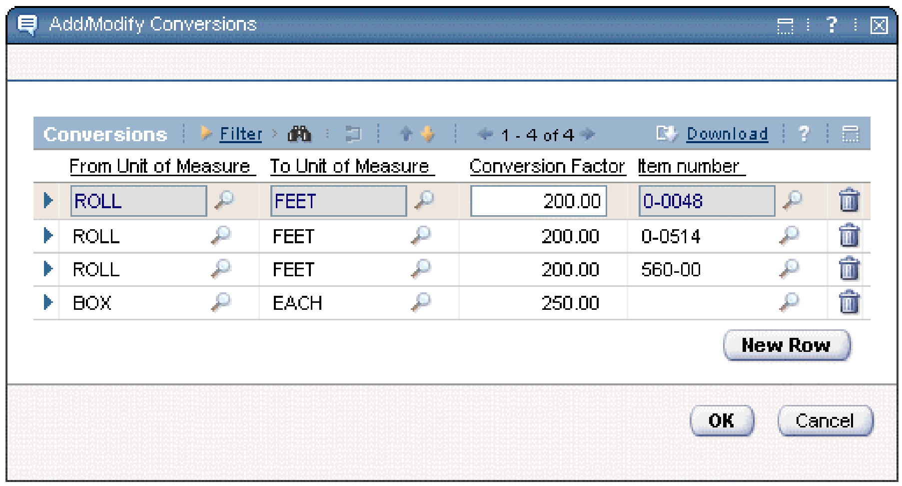
Measure Unit Conversion continued

Sub-Actions

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>4</td><td>Select the Add/Modify Conversions sub-action from the Unit of Measure and Conversion action.

<u>Result</u>: The Add/Modify Conversions dialog box opens.



<u>Notes</u>:
This dialog box is used to indicate conversions for specific items or generic conversions for other items with specified order/issue units.
Generic conversions are created by adding a conversion with units and without an item.</td></tr>
<tr><td>5</td><td>Click Cancel to close the dialog box.</td></tr>
</table>

Condition Codes

Overview

Maximo uses condition codes to provide a way to represent a single item as existing in multiple conditions with corresponding condition values. For example:

- New
- Used
- Rebuilt

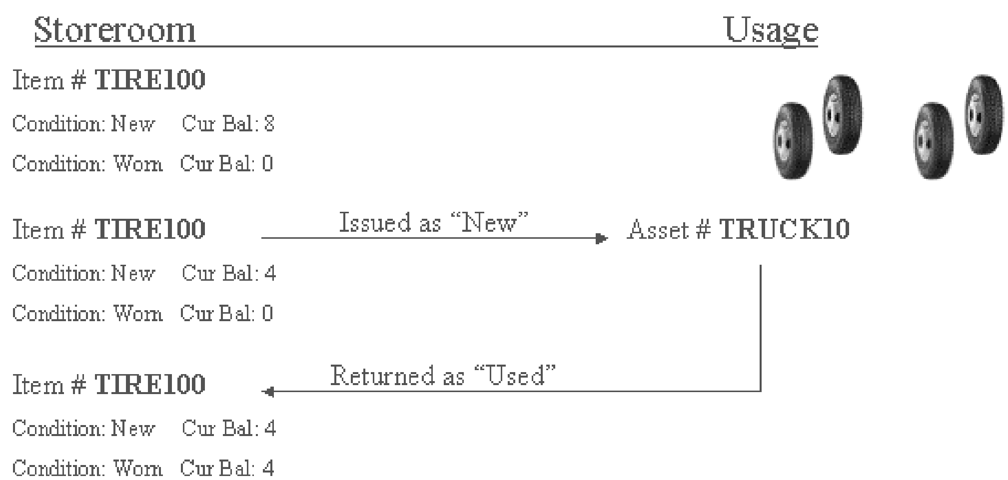
A new application, **Condition Codes**, allows you to set up the codes and values. After they are set up, the codes can be used in MXES.

This section provides an exercise that will help you understand how condition codes work.

Graphical Example

The following example should help clarify things:

- A trucking company issues 4 *new* tires from inventory to a truck for usage.
- After 75,000 miles these tires are returned to the storeroom as *used* tires.



- The used tires might actually still have some value. Maybe they could be put on a vehicle with fewer safety restrictions, for example. So, they are given a condition code of *used* but they might still be kept in inventory.

continued on next page

Condition Codes continued

Process Flow

The following diagram provides an overview of the process flow, from creating a condition code to getting it into an inventory item.

Create Condition Codes in Condition Codes Application → Add Codes to Items Using the Item Master Application → Add Items to Storerooms Using the Item Master Application → Make Inventory Adjustments as Needed

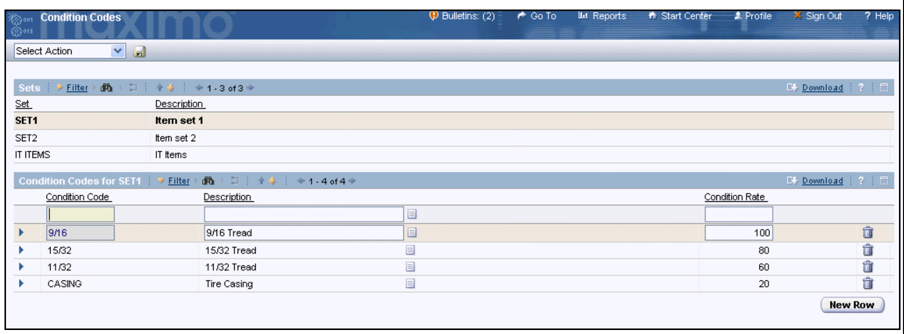
Create Condition Codes

Now that you know what condition codes are, we will do some exercises that will set up and use the codes described in the graphic above.

Follow these steps to create new condition codes:

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Access the Condition Codes application from the Inventory module.

<u>Result</u>: The single-page Condition Codes application displays.



<u>Note</u>: Condition codes are specified by item sets. Therefore, the lower table indicates codes for the set selected in the top table.</td></tr>
<tr><td>2

</td><td>For SET1, create a new code using the following information:

Condition Code: NEW[your initials]
Description: New Condition [your initials]
Condition Rate: 100

<u>Note</u>: For each item with a condition there must be one condition with 100% value, which is the full rate for the item</td></tr>
</table>

continued on next page

Condition Codes continued

Create Condition Codes

continued

Step	Action
3	For SET1, create a *second* new code using the following information: **Condition Code:** USED[*your initials*] **Description:** Used Condition [*your initials*] **Condition Rate:** 75 <u>Note</u>: For this example, assume that a used tire is retired early due to regulatory reasons, but actually has quite a bit useful life left. Because it can be used on other vehicles that can accept the "used" tires, we are specifying a rate of 75% of the new value.
4	We need to add a *third* code to indicate the relative value of a tire when it has been retreaded. Add one more code for SET1 using the following information: **Condition Code:** RETREAD[*your initials*] **Description:** Retreaded Condition [*your initials*] **Condition Rate:** 60 <u>Note</u>: We will assume that a retreaded tire has a renewed life, but because it is not worth as much as a brand new one, we are specifying a rate of 60% of the new value.
5	Save your changes. <u>Result</u>: The new codes are in Maximo and can be applied to items.

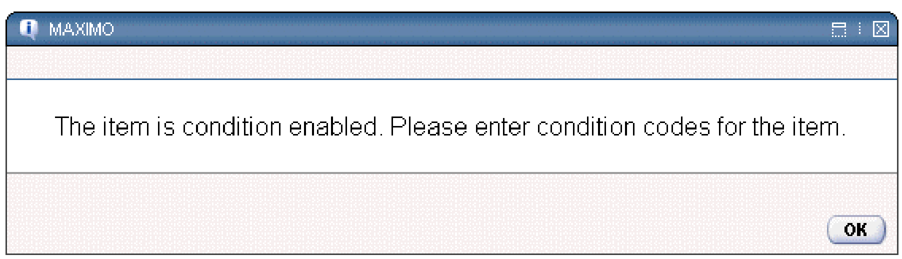
continued on next page

Condition Codes continued

Add Codes to an Item

Now that we have created our condition codes, we can create a new item and apply the codes to it.

Follow these steps to add a tire to inventory and apply the codes:

Step	Action
1	Access the **Item Master** application from the **Inventory** module.
2	Insert a new item using the following information: **Item:** TIRE100[*your initials*] **Description:** Tire 100 [*your initials*] **Commodity Group:** TIRE Note: **Commodity Group** is not a mandatory field, but entering a value in this field is a suggested best practice to allow for better granularity for reporting purposes. **Order Unit:** EACH **Issue Unit:** EACH
3	Enter the following information, then save the record. **Condition Enabled?:** [*checked*] Result: Maximo notifies you that it will not let you save the record with this check box selected, because you have not yet added any conditions to the item. 

continued on next page

Condition Codes continued

Add Codes to an Item

continued

Step	Action
4	Click **OK** to close the pop-up message window. Note: Keep the **Condition Enabled** check box selected and go on to the next step.
5	In the Condition Codes pane, use the **New Row** button to assign all three new conditions to this item: NEW[*your initials*] USED[*your initials*] RETREAD[*your initials*] Note: These condition codes use the percentage indicated when the codes were created, but the percentage can be manually changed.
6	Change the rate of RETREAD[*your initials*] to 40. Note: This change to the default rate could be required, for instance, due to the cost and complexity of retreading this particular item.
7	Save the record. Result: This time the record can be saved because you have indicated that the item is condition enabled *and* you have added conditions.

continued on next page

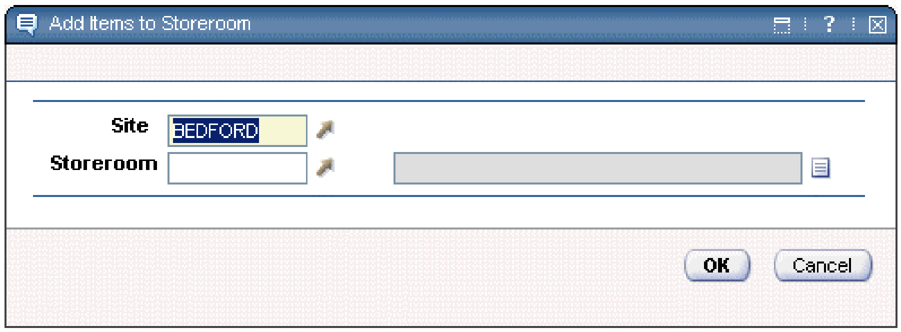
Condition Codes continued

Add Item to Inventory

We have created our condition codes, created a new item, and applied the codes. Now we need to add the item to a storeroom.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Ensure that you are on your TIRE 100 record in the Item Master application.</td></tr>
<tr><td>2</td><td>Choose Add Items to Storeroom from the Select Action menu.

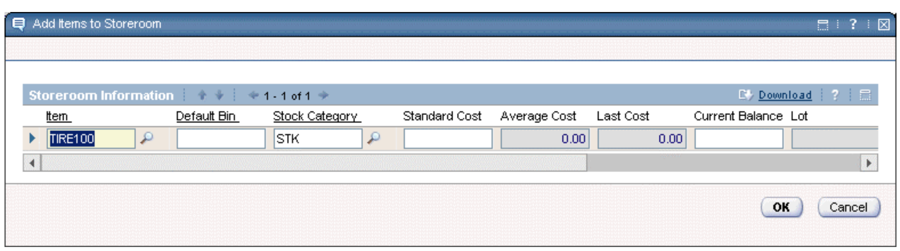
<u>Result</u>: The Add Items to Storeroom dialog box opens.



<u>Note</u>: In this dialog box you can choose to add the item to any storeroom in any site. This uses the power of the multiorganizational capability that runs throughout Maximo.</td></tr>
<tr><td>3</td><td>Enter the following information into the dialog box, then click OK:

Site: BEDFORD
Storeroom: CENTRAL

<u>Result</u>: Now the Add Items to Storeroom dialog box asks for balance and cost information.

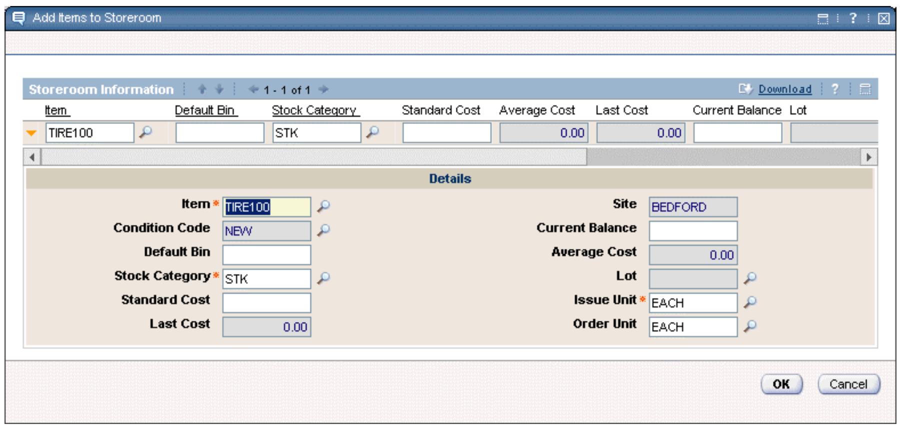

</td></tr>
</table>

continued on next page

Condition Codes continued

Add Item to Inventory

continued

Step	Action
4	View the details for the line. Result: The Add Items to Storeroom dialog box should look similar to the following graphic. 
5	Enter the following information into the dialog box: **Current Balance:** 12 **Issue Unit:** EACH **Order Unit:** EACH Notes: • The **Condition Code** field defaults to NEW because Maximo will not allow you to add a new coded item unless there is a full value code on it. • Maximo needs to know the full value benchmark for the item. • There is no need to add a balance for the condition code if there are no applicable items in the storeroom. However, Maximo does require that you use the code initially to create the item. • Balances can be added later for other conditions.
6	Click **OK**. Result: The item is added to the storeroom with its base condition code.

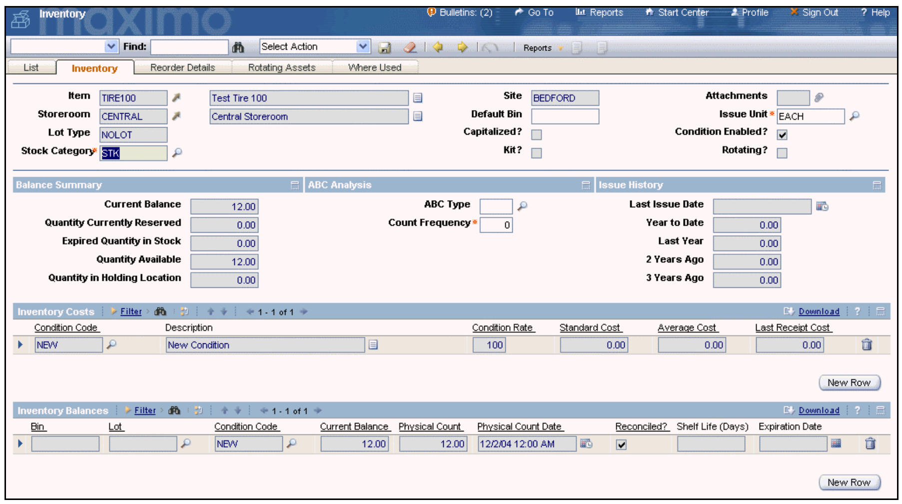
continued on next page

Condition Codes continued

Making Adjustments

Now that your new item is in a storeroom, let's find it in inventory and make adjustments to some costs.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Access the Inventory application from the Inventory module.</td></tr>
<tr><td>2</td><td>Find the record for TIRE100[your initials].



<u>Notes</u>:

Because we left the Condition Enabled? field checked from the previous exercise, the condition is carried through onto the Inventory tab.
This is similar to MAXIMO 5.x, but Inventory Costs is a new pane in MXES that allows you to show multiple costs based on condition.
The Inventory Costs pane contains the condition-coded cost that you added when adding the item to the storeroom.

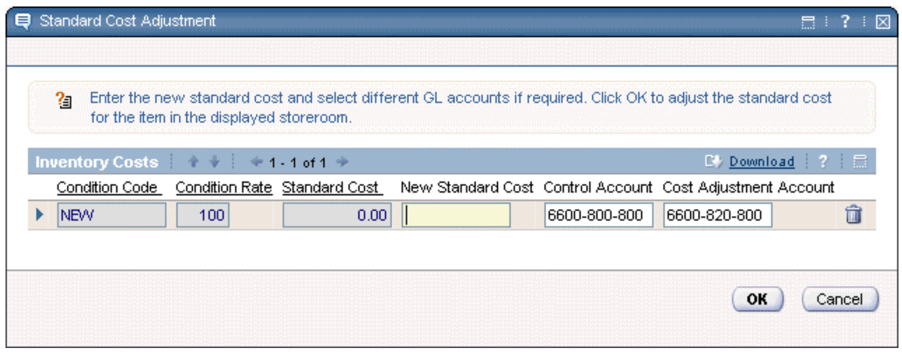
</td></tr>
</table>

continued on next page

Condition Codes continued

Making Adjustments

continued

Step	Action
3	From the **Select Action** menu, choose: **Inventory Adjustments >> Standard Cost** <u>Result</u>: The Standard Cost Adjustment dialog box opens. 
4	In the **New Standard Cost** field, enter 15. <u>Note</u>: We could have added standard cost when adding the item to the storeroom, but these last steps point out how these actions have now been added to the Inventory application in MXES.
5	Click **OK**. <u>Result</u>: The Standard Cost Adjustment dialog box closes and the new standard cost for NEW condition is added to the Inventory Costs section.
6	In the **Inventory Costs** section of the **Inventory** tab, insert a new line for the USED[*your initials*] code. <u>Note</u>: The Standard Cost for the USED value defaults to 75% of the NEW value because we set it up that way in the Condition Codes application.
7	Save the record.

continued on next page

Condition Codes continued

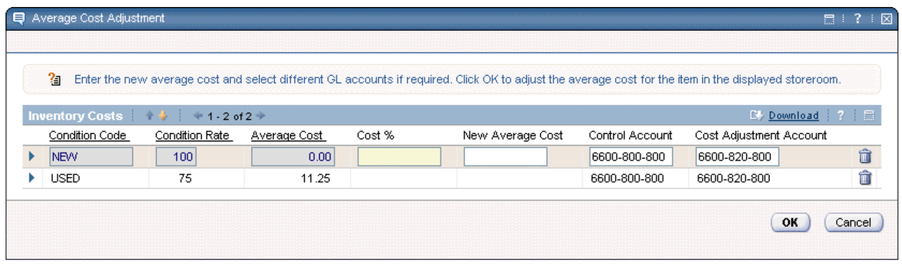
Making Adjustments

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>8</td><td>Let's also modify the Average Cost. From the Select Action menu, choose:

Inventory Adjustments >> Average Cost

<u>Result</u>: The Average Cost Adjustment dialog box displays the average cost for the two condition codes on the record.



<u>Note</u>: Maximo would have automatically calculated the average cost if a standard cost had been added when adding the item to the storeroom.</td></tr>
<tr><td>9</td><td>Change the New Average Cost for the USED condition to 13, then click OK.

<u>Result</u>: The Average Cost Adjustment dialog box closes and the new average cost for the USED condition is recorded.

<u>Note</u>: If a message displays on your screen, click OK. The New Average Cost value will be accepted.</td></tr>
<tr><td>10</td><td>Save the record.</td></tr>
</table>

continued on next page

Condition Codes continued

Modify Inventory Balances and Issue the Item

MXES also allows you to modify inventory balances and issue the item by condition code.

Follow these steps to see how:

Step	Action
1	Ensure that you are on the **Inventory** tab for the record used in the previous exercise.
2	Insert a new line in the **Inventory Balances** pane with the following information: **Bin:** A1 **Condition Code:** USED **Current Balance:** 5 **Physical Count:** 5 (defaults to value in Current Balance field) Notes: • The Inventory Balances pane allows Inventory to show balances by condition code and bin. • Notice how the balances for the NEW condition are already there. • There can be multiple conditions per bin, which will provide multiple balances per bin.
3	Save the record.

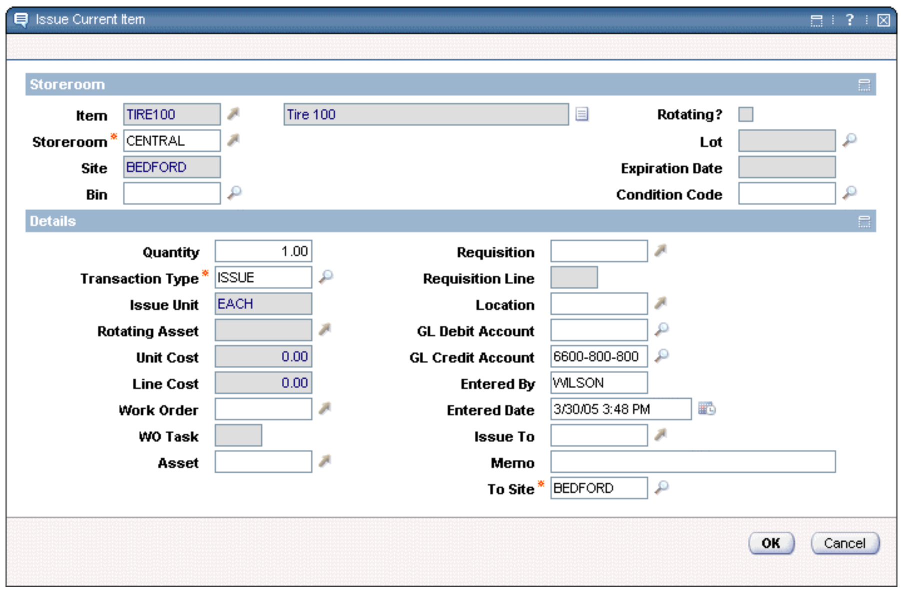
continued on next page

Condition Codes continued

Modify Inventory Balances and Issue the Item

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>4</td><td>
Now that we have the balances and costs set for the inventory item, we will issue four of the NEW tires to a work order.
From the Select Action menu, choose Issue Current Item.
<u>Result</u>: The Issue Current Item dialog box opens.



</td></tr>
</table>

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Condition Codes continued

Modify Inventory Balances and Issue the Item continued

Step	Action
5	Enter the following information: **Quantity:** 4 **Condition Code:** NEW[*your initials*] **Work Order:** 1005 **GL Debit Account:** 6500-300-000 Note: Changes on condition-enabled items that affect balances will require a condition to indicate which balance is being affected.
6	Click **OK**. Result: The four new tires are issued to the work order. The current balance changes to reflect the issue. Note: As on issues, returns and receipts of condition-enabled items must stipulate the condition code.

Item Kits

Overview

MXES enables you to create *item kits*, which are individual Maximo items that contain other Maximo items.

This functionality makes it simple to track the preassembly and availability of kits. In addition, Maximo can now "assemble" kits and let you know if there are enough items on hand to do so.

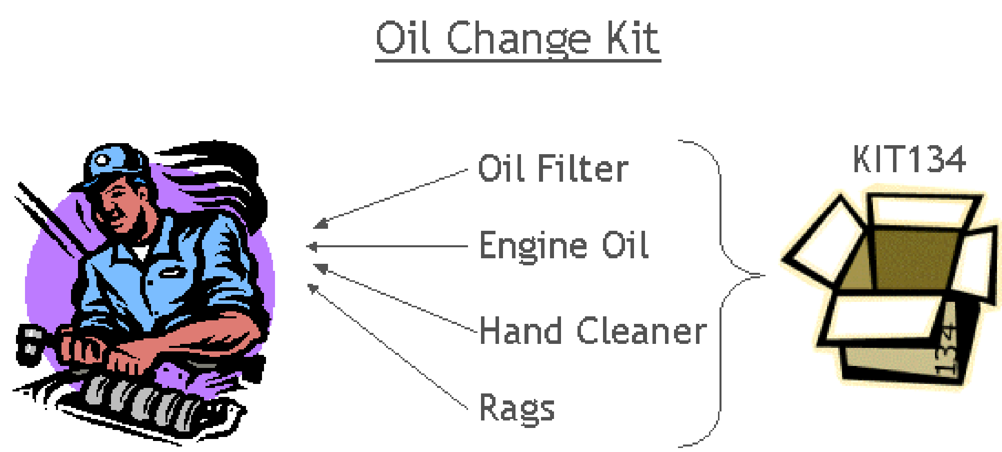
You no longer have to list all the needed items on a job or work plan. You can create kits with many of the generally needed components, then simply add the kit to the plan, knowing that all these items will be ready.

This section provides a use case and shows you how to create a kit.

Use Case

Let's say that you want to create a kit with the items needed to change the oil in a vehicle. This kit can even include clean-up items. The kit can be added to work or job plans as a single item.

The following graphic shows the items that might be in this kit.



The maintenance tech can pick up the pre-made kit, knowing that all the needed items will be there. When availability of kits gets low, Maximo can indicate that more need to be made, just as with other items in stock.

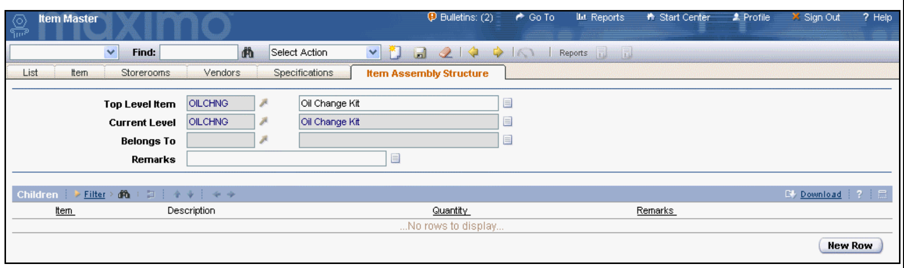
continued on next page

Item Kits continued

Creating a Kit

This exercise shows you how to create a kit item for an oil change and assemble it within Maximo.

Follow these steps:

Step	Action
1	Access the **Item Master** application from the **Inventory** module.
2	Insert a new record with the following information: **Item:** OILCHNG[*your initials*] **Description:** Oil Change Kit [*your initials*] **Kit?:** [*checked*] **Order Unit:** EACH **Issue Unit:** EACH
3	Save the record.
4	Access the **Item Assembly Structure** tab for your new record. 

continued on next page

Item Kits continued

Creating a Kit continued

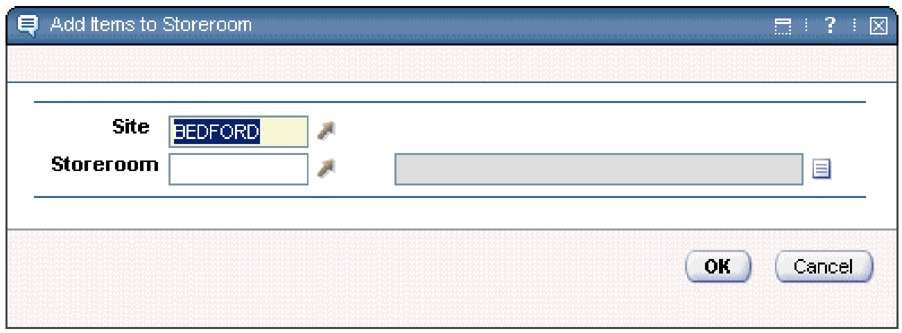
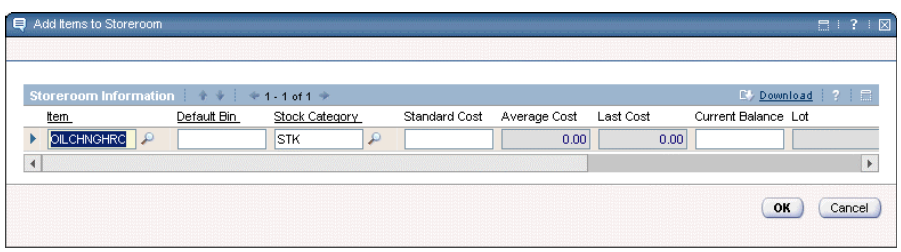
Step	Action
5	Add the following kit components in the **Children** section: Line 1 **Item:** 1R-0714 (Oil Filter – Engine) **Quantity:** 1 Line 2 **Item:** 15W-30 (Diesel Engine Oil – 15W-30) **Quantity:** 8 Line 3 **Item:** IKLEEN (Hand Cleaner) **Quantity:** 1 Line 4 **Item:** Z-RAGS (Rags, Cloth) **Quantity:** 3

continued on next page

Item Kits continued

Creating a Kit

continued

Step	Action
6	Save the record.
7	Now we want to add the kit item to the Atlanta storeroom of the Fleet site. Choose **Add Items to Storeroom** from the Select Action menu. Result: The Add Items to Storeroom dialog box opens. 
8	Enter the following information, then click **OK**: **Site:** FLEET **Storeroom:** ATLANTA Result: The Add Items to Storeroom dialog box is now looking for balance and cost information. 

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Item Kits continued

Creating a Kit

continued

Step	Action
9	View the details for the line.
10	Enter the following information, then click **OK**: **Standard Cost:** 40.00 **Current Balance:** 1 **Issue Unit:** EACH <u>Result</u>: The item is now added to the Atlanta storeroom in the Fleet site.

Assemble a Kit

Now that we have the oil change kit record in a storeroom, we can use the new kitting functionality of Maximo to assemble individual components into the kit.

Follow these steps to see how this is done:

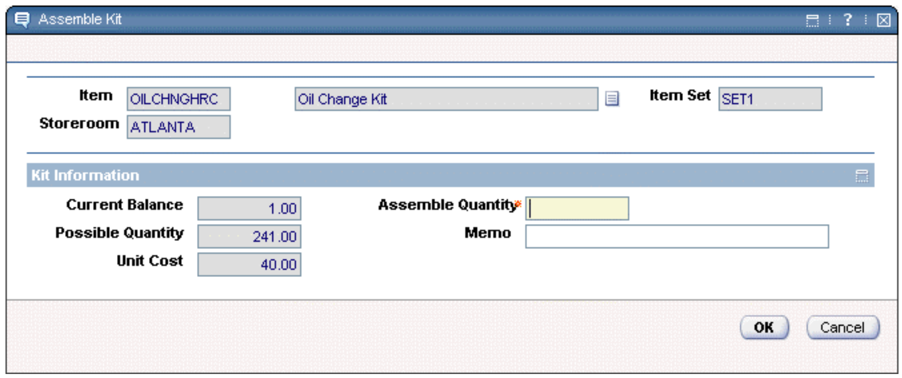
Step	Action
1	Access the **Inventory** application from the **Inventory** module.
2	Access the **Inventory** tab for the kit record that you created in the previous section. <u>Hints</u>: • It should have a description of **Oil Change Kit [*your initials*]**. • Also keep in mind that it's in the Fleet site.

continued on next page

Item Kits continued

Assemble a Kit

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>3</td><td>Choose **Assemble Kit** from the Select Action menu.
Result: The Assemble Kit dialog box opens.


Note: The **Possible Quantity** field shows how many kits can be assembled from the available components in inventory.</td></tr>
<tr><td>4</td><td>Indicate that you want to assemble 3 kits, then click **OK**.
Result: The dialog box closes and Maximo does the math, logic, and accounting to decrease balances of components and increase the number of kits.</td></tr>
</table>

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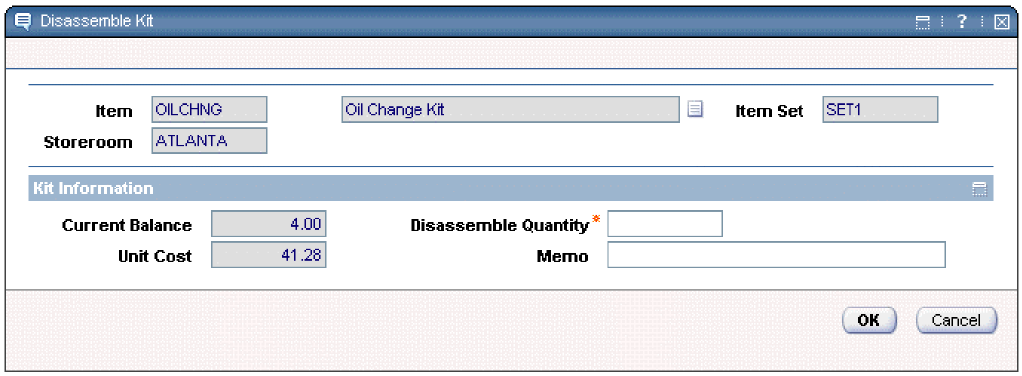
Item Kits continued

Disassembling Kits

Maximo also allows you to disassemble kits to restore availability of individual components. You can do this by choosing **Disassemble Kit** from the Select Action menu.

Use the resulting Disassemble Kit dialog box to break down a specified number of kits.



The Disassemble Kit feature works like the Assemble Kit feature, but in reverse.

Tools Functionality

Overview

MXES provides additional tools functionality to enhance the usage of tools in other records and to help track them better.

This section provides an overview of key tools-related enhancements and provides some exercises to show you how they work.

Key New Features

The key new tools features are as follows:

- Tool balances are stored and tracked.
- Tools can be handled as assets.
- The tools functionality strongly relies on Inventory concepts and application functionality.
- The Tools application is now in the Inventory module.
- The tools functionality allows sites and organizations that use the same item set to share tools.
- Qualifications can be required for tool usage.

Types of Tools

Tools can now be handled as assets in Maximo. Due to this change in the concept of handling tools, several types of tools are now available.

The following table provides a list of those types and a description of each.

Tool Type	Description
Tool	• Information-only records • Not handled as assets
Stocked Tools	• Exist within a storeroom or tool crib • Have balances • Can be issued
Rotating Tool Asset	• Might or might not have a storeroom tool location • Is a serialized asset

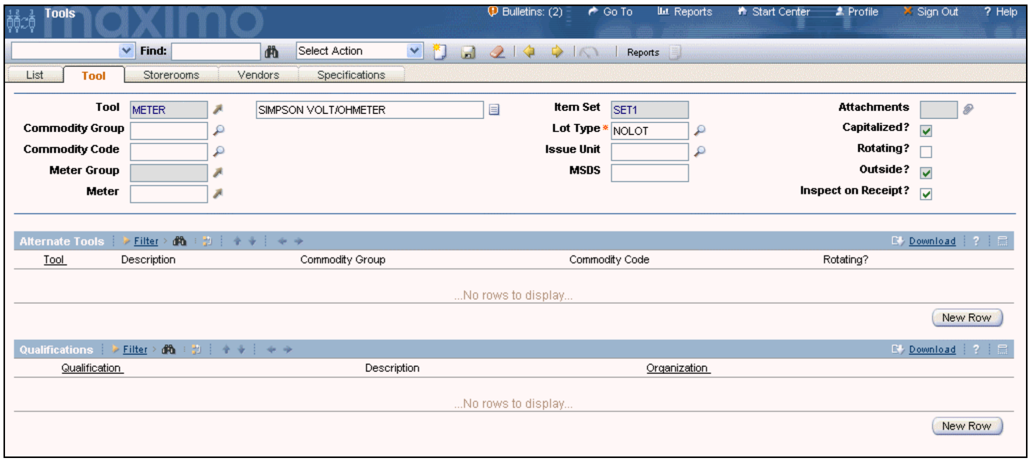
continued on next page

Tools Functionality continued

Tools Application Overview

Many changes have been made to the Tools application to accommodate the new ways in which tools are handled in Maximo.

Access the Tools application from the Inventory module, then access any record. When we are in the Tools application, we will talk about some of the key changes listed below.



- Tools are now placed into item sets so that they can be used by any organization that uses this same item set.
- Commodity codes and commodity groups can be used with tools to improve granularity of reporting and for ease in filtering data when searching.
- Meters and meter groups can be applied to tools and used just as with assets, when the tool has been added to a storeroom.
- Qualifications can be required in the Qualifications table on the Tool tab.
- Tools can be added to storerooms and handled as assets.
- The Storerooms tab indicates the storerooms for a tool when the tool has been placed in one to be handled as an asset.
- The Vendors tab allows multiple vendors to be indicated for a tool.

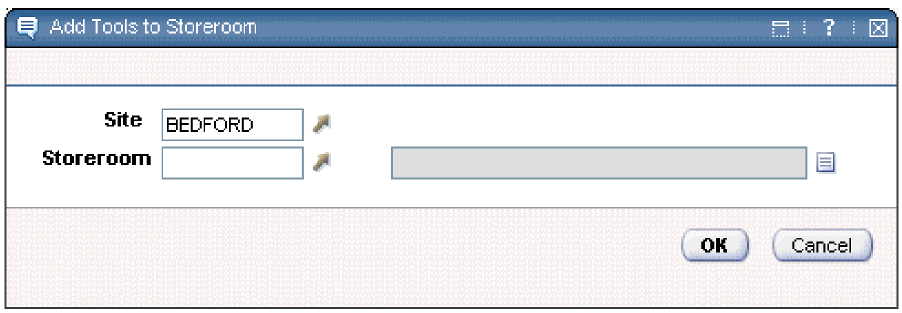
continued on next page

Tools Functionality continued

Adding a Tool to a Storeroom

Because tools can be handled as assets in Maximo, they can be added to storerooms with the same functionality and capabilities as assets.

The following exercise shows you how to add a tool to a storeroom.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Access the Tools application from the Inventory module.</td></tr>
<tr><td>2</td><td>Insert a new tool record with the following information:
Tool: PLIERS[your initials]
Description: Needle-Nose Pliers [your initials]
Issue Unit: EACH</td></tr>
<tr><td>3</td><td>Save the record.</td></tr>
<tr><td>4</td><td>Select Add Tools to Storeroom from the Select Action menu.
<u>Result</u>: The Add Tools to Storeroom dialog box opens.

</td></tr>
</table>

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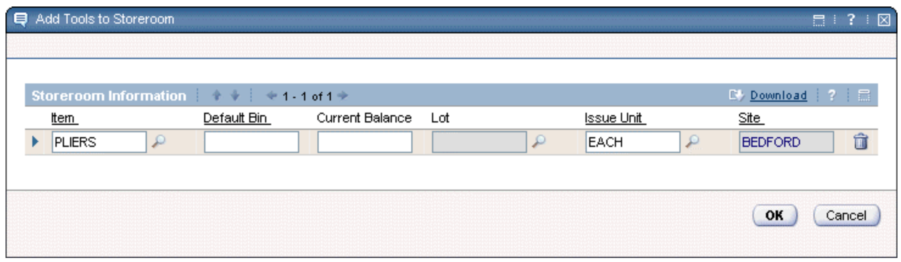
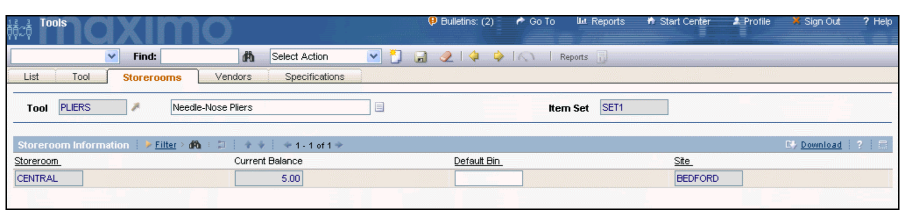
Tools Functionality continued

Adding a Tool to a Storeroom

continued

Step	Action
5	Add the following information, then click **OK**: **Site:** BEDFORD **Storeroom:** CENTRAL Result: The Add Tools to Storeroom dialog box asks for balance information.  Note how much this is like the functionality for adding assets to storerooms!
6	Enter the following information, then click **OK**: **Current Balance:** 5 **Issue Unit:** EACH (Note: This value automatically comes from the header of the tool record that we previously entered.) Result: The tool has been added to the CENTRAL storeroom of the BEDFORD site.
7	Access the **Storerooms** tab for the current record. Result: The CENTRAL storeroom is now listed with the balance that you indicated when adding it there. 

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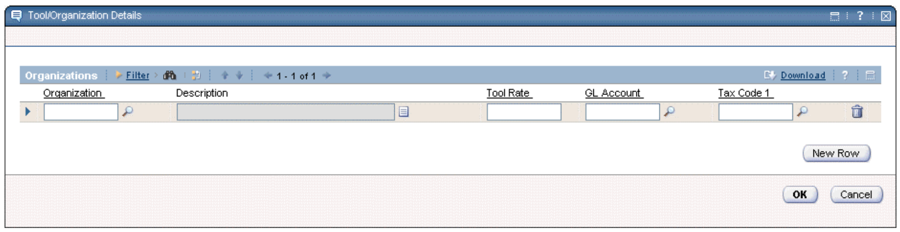
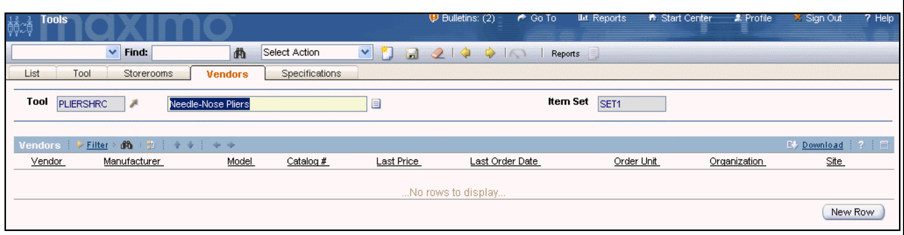
Tools Functionality continued

Assign a Usage Rate and Vendor

Now we will assign a usage rate and a vendor to the tool. Follow these steps:

Step	Action
1	Ensure that you are in the **Tools** application for the record from the previous exercise.
2	Choose **Tool/Organization Details** from the Select Action menu. Result: The Tool/Organization Details dialog box opens. 
3	Enter the following information into a new row: **Organization:** EAGLENA **Tool Rate:** 5 (Note: Tool Rate is in units of hours.) **Tax Code:** NJ **GL Account:** 6200-300-000
4	Click **OK**. Result: The dialog box closes and Maximo accepts the information.
5	Access the **Vendors** tab for the record. 

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Tools Functionality continued

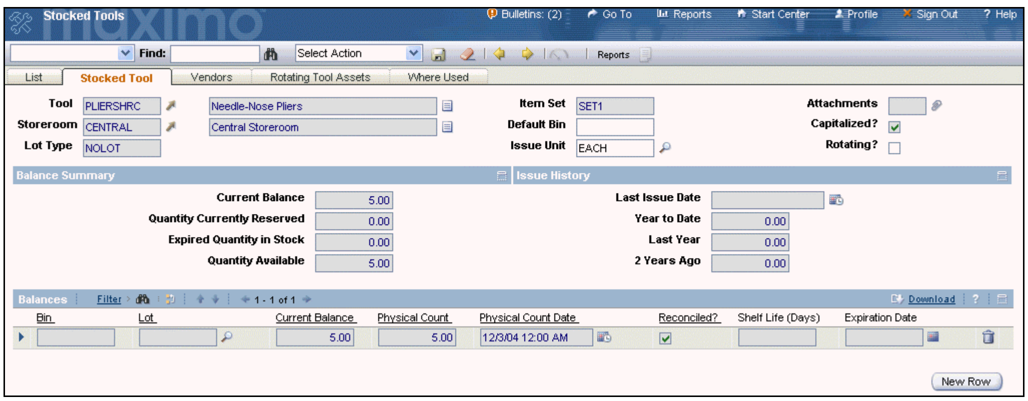
Assign a Usage Rate and Vendor

continued

Step	Action
6	Add the vendor ATI to the **Vendors** tab.
7	Save the record. Result: You now have your tool in a storeroom with balance and charge information. The vendor has also been indicated. This is very much like an asset!

Stocked Tools Application

The Stocked Tools application is used to manage existing tools in storerooms.



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Tools Functionality continued

Stocked Tools Capabilities

In the Stocked Tools application you can:

- View information about a stocked tool, including balance summaries, balance details, and issue history
- Add new bin location and balance information for a stocked tool
- Associate vendors with a tool and analyze vendor data
- View a list of all assets associated with a rotating tool
- Add or modify where a rotating tool is used as a spare part (child tool) on a parent asset
- View a tool's availability by location, lot, PR, and PO (including its alternates and reserved quantities)
- Issue, return, or transfer a stocked tool
- View a tool's inventory transactions
- Zero year-to-date issue quantities for a tool
- Adjust a tool's physical count and current balance
- Reconcile balances

continued on next page

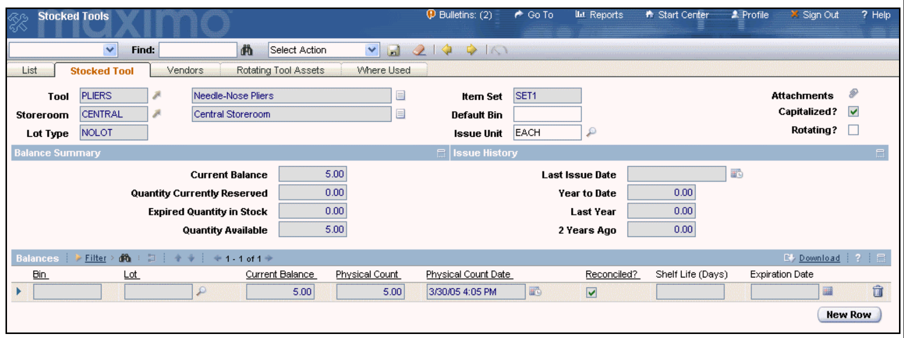
Tools Functionality continued

Overview of Stocked Tools Application

We will now go into the new Stocked Tools application to see its tabs and to get an idea of what the application can do.

Follow these steps:

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Access the Stocked Tools application from the Inventory module.</td></tr>
<tr><td>2</td><td>Access the Stocked Tool tab for your PLIERS[your initials] record created in previous exercises.



<u>Notes</u>:

You use the Stocked Tool tab to view information about a stocked tool, such as balance information and issue history.
For the tool and storeroom you select, you can either add a new bin with a current balance and physical count, or manage existing bins for this tool by adjusting balances, performing physical counts, and reconciling balance data.
</td></tr>
</table>

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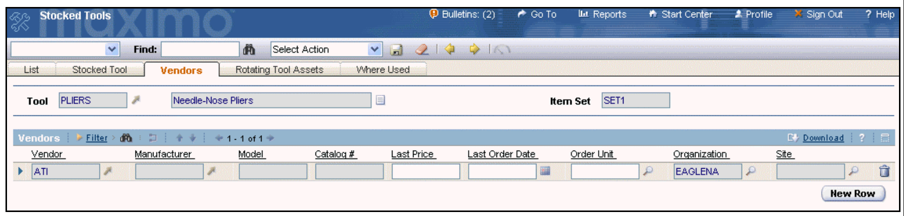
Tools Functionality continued

Overview of Stocked Tools Application

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>3</td><td>

Access the **Vendors** tab for your PLIERS[*your initials*] record.

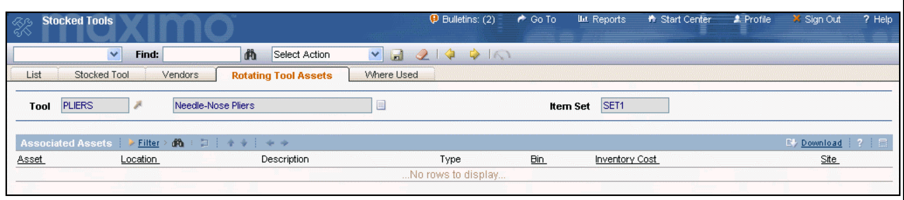


<u>Notes</u>:

- You use the Vendors tab to manage a list of vendors that supply the tool.
- The list can include vendors from which you have already ordered, as well as those you have not used.
- You can use the historical vendor data to compare vendor prices and delivery information.

</td></tr>
<tr><td>4</td><td>

Access the **Rotating Tool Assets** tab for your PLIERS[*your initials*] record.



Notes:

- You use the Rotating Tool Assets tab to view all instances of the rotating tool.
- An *instance* is a unique asset that is associated with the rotating tool.
- After you create a tool and mark it as rotating, you must add it to a storeroom and create at least one asset record before you can view its information on the Rotating Tool Assets tab.

</td></tr>
</table>

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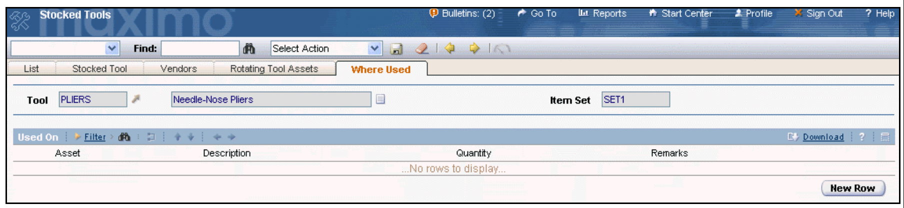
Tools Functionality continued

Overview of Stocked Tools Application

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>5</td><td>Access the Where Used tab for your PLIERS[your initials] record.



<u>Notes</u>:

You use the Where Used tab to indicate the assets on which a tool is used as a spare part (or child tool).
If within the Assets application you use the Spare Parts tab to associate tools to the asset, you can view them on this tab in the Stocked Tools application.
For non-rotating tools, you can enter an asset on which the tool is used, and Maximo lists the tool on the Spare Parts tab for that asset.
When you enter an asset number, Maximo displays the asset's description and allows you to edit the quantity or add remarks, if needed.
You cannot use a rotating tool as a subassembly on an asset.
</td></tr>
</table>

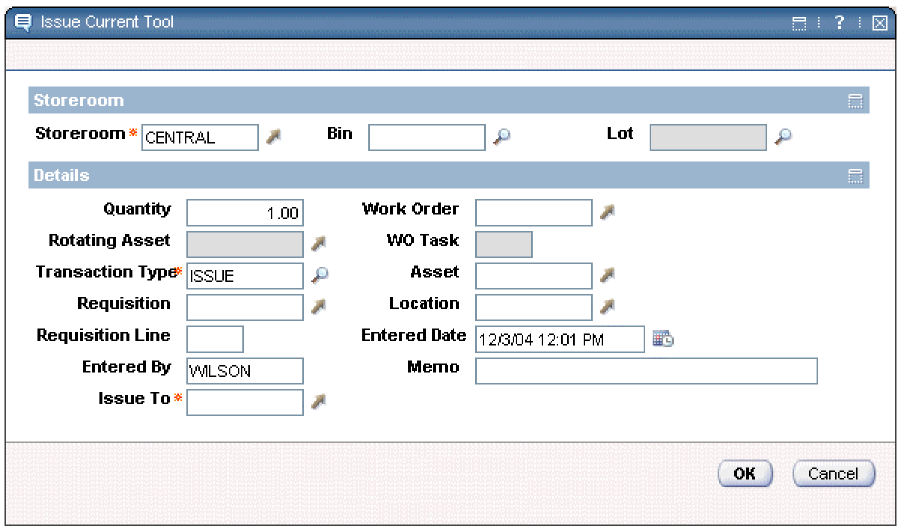
continued on next page

Tools Functionality continued

Issuing a Tool

Just as with other assets, tools that have been put into a storeroom can now be issued.

The following exercise shows you how.

Step	Action
1	Ensure that you have accessed the **Stocked Tools** application from the **Inventory** module.
2	Access your PLIERS[*your initials*] record created in previous exercises.
3	Choose **Issue Current Tool** from the Select Action menu. Result: The Issue Current Tool dialog box opens. 

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Tools Functionality continued

Issuing a Tool

continued

Step	Action
4	Enter the following information: **Quantity:** 1 **Work Order:** 3838 (Note: We are not indicating that that WO will be charged, we are just tracking why it was issued. The same applies for the Asset and Location fields.) **Issue To:** LIBERI (Note: This tracks who has the tool for later tracing, if not returned.) Note: This process employs the standard item functionality for reservations against work orders, etc.)
5	Click **OK** to accept the values and close the dialog box. Result: The tool has been issued as indicated.

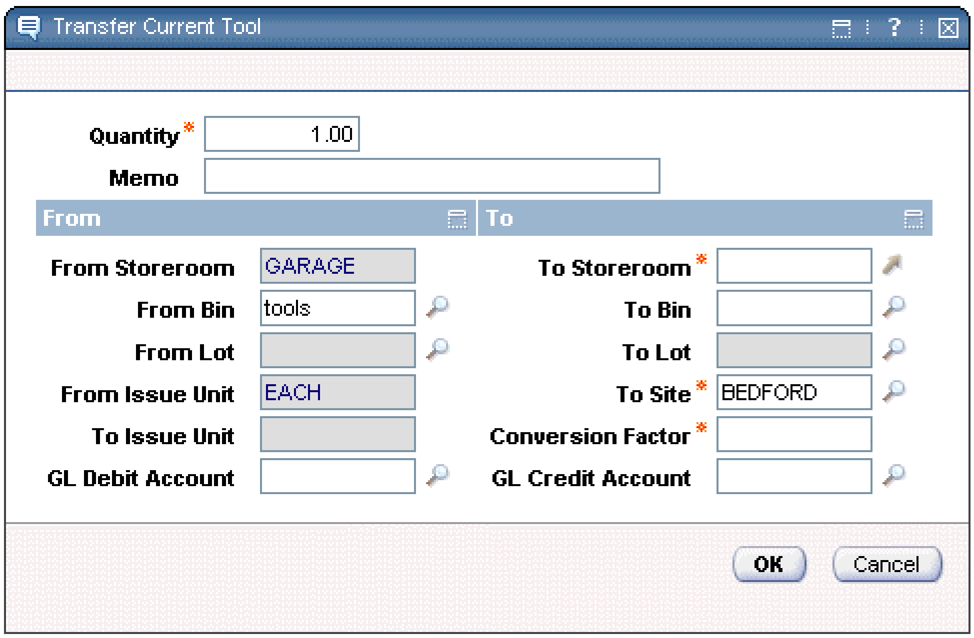
continued on next page

Tools Functionality continued

Transferring Tools

Transferring tools works very similarly to issuing tools.

To transfer a tool, select Transfer Current Tool from the Select Action menu, then specify your values in the Transfer Current Tool dialog box as shown here:



Service Enhancements

Overview

This section provides an overview of the MXES enhancements that relate to the use of services.

Service Item Enhancements

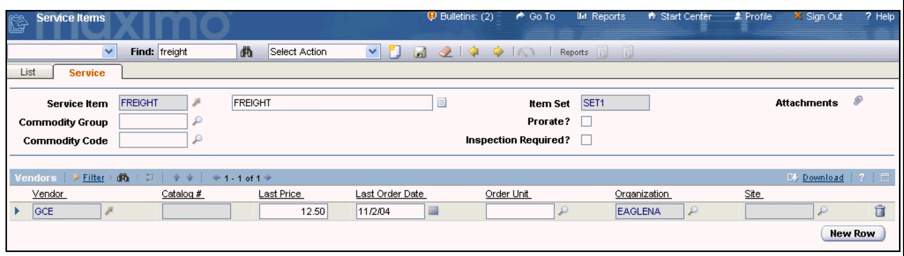
Maximo allows services to be entered directly onto a Services tab in work plans and job plans.

In addition, there is a new Service Items application designed to help manage your services.

The following exercise will highlight some of the changes relating to service items.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Access the Service Items application from the Inventory module.

Note: This application provides functionality that is closely modeled after the items functionality.</td></tr>
<tr><td>2</td><td>Open the Service tab for the FREIGHT record.



Notes:

Use this tab to provide key information on each service used in Maximo.
An important field on this screen is the Prorate? check box, which allows portions of a designated service to be invoiced on purchasing documents.</td></tr>
</table>

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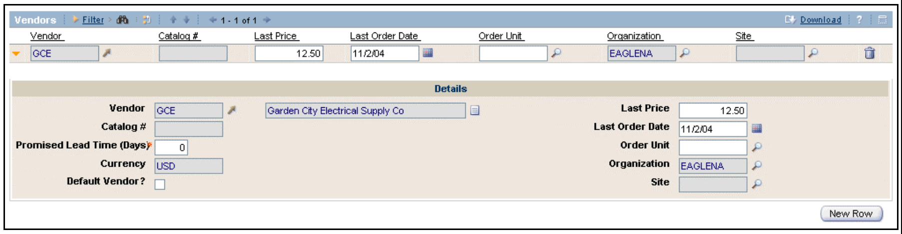
Service Enhancements continued

Service Item Enhancements

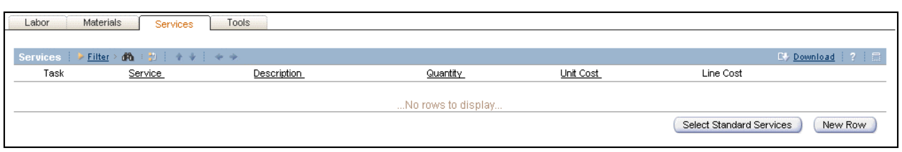
continued

Step	Action
3	View the details for the existing vendor.  Note: What is a bit different from items is that there is no manufacturer or model number indicated for a tool vendor because this information is not applicable.

Add a Service to a Work Order

Now that services can also be handled similarly to items, they can be put directly onto work orders and job plans.

The following exercise gives you a chance to see this change up close.

Step	Action
1	Access the **Work Order Tracking** application from the **Work Orders** module.
2	Insert a new work order record with the following information: **Description:** General Cleanup of Office [*your initials*] **Location:** Office
3	Go to the **Services** subtab of the **Plans** tab.  Note: This is a new tab in Maximo that is used to add services directly to plans. There is a similar tab on job plan records as well.

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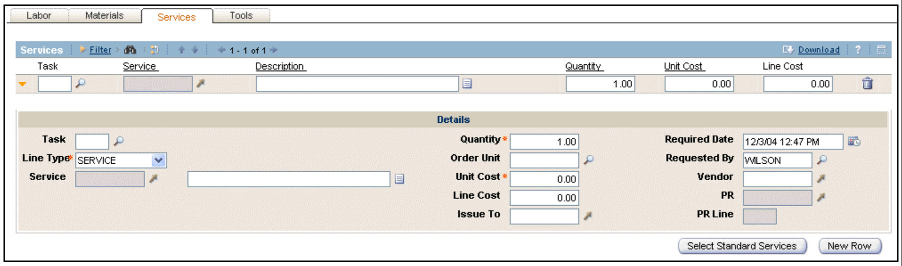
Service Enhancements continued

Add a Service to a Work Order

continued

Step	Action
4	Insert a new row in the **Services** subtab. Result: A new services line displays its details, waiting for you to enter data. 
5	Show the drop-down menu on the **Line Type** field, then select **Standard Service**.  Notes: • The drop-down menu displays two options: Standard Service and Service. • If you select Service, the Service field becomes read-only because it is considered to be a spot service, not one that is preplanned in the system.

continued on next page

Service Enhancements continued

Add a Service to a Work Order

continued

Step	Action
6	Enter the following additional information: **Service:** Janitorial **Quantity:** 5 **Vendor:** EMI **Unit Cost:** 25.00 Note: We could have added this standard service by clicking the **Standard Service** button after step 4, but we wanted to point out the options now available in the **Line Type** field.
7	Save the record. Result: The service is indicated on the work plan. Notes: • This process not only plans the service, but also will procure it as a direct issue item according to how the reorder items process was specified on a PR. • The process works similarly for job plans.

Chapter Summary

Item Sets

The concept of sets allows organizations and sites within those organizations to share data and resources.

There are two types of sets:

- Item sets
- Company sets

Measure Unit Conversion

The Add/Modify Order Unit action has been removed from all MXES applications. It has been replaced with a new action called Unit of Measure and Conversion, which is more robust.

The new Unit of Measure and Conversion action has been added to a number of applications to which the action is relevant:

- Item Master
- Inventory
- Tools
- Stocked Tools
- Standard Services
- Purchase Requests
- Request for Quotations
- Purchase Orders
- Purchase Contracts
- Receiving
- Asset Catalog Setup

continued on next page

Chapter Summary continued

Condition Codes

Maximo uses condition codes to provide a way to represent a single item as existing in multiple conditions with corresponding condition values. For example:

- New
- Used
- Rebuilt

A new application, Condition Codes, allows you to set up the codes and values. After they are set up, the codes can be used in Maximo.

Item Kits

MXES enables you to create *item kits*, which are individual Maximo items that contain other Maximo items.

This functionality makes it simple to track the preassembly and availability of kits. In addition, Maximo can now "assemble" kits and let you know if there are enough items on hand to do so.

You no longer have to list all the needed items on a job or work plan. You can create kits with many of the generally needed components, then simply add the kit to the plan, knowing that all these items will be ready.

Tools Functionality

The key new features related to tools are as follows:

- Tool balances are stored and tracked.
- Tools can be handled as assets.
- Strongly relies on Inventory concepts and application functionality.
- The Tools application is now in the Inventory module.
- Allows usage of tools between sites and organizations that use the same item set.
- Qualifications can be required for tool usage.

Service Enhancements

Two enhancements to MXES relate to the use of services:

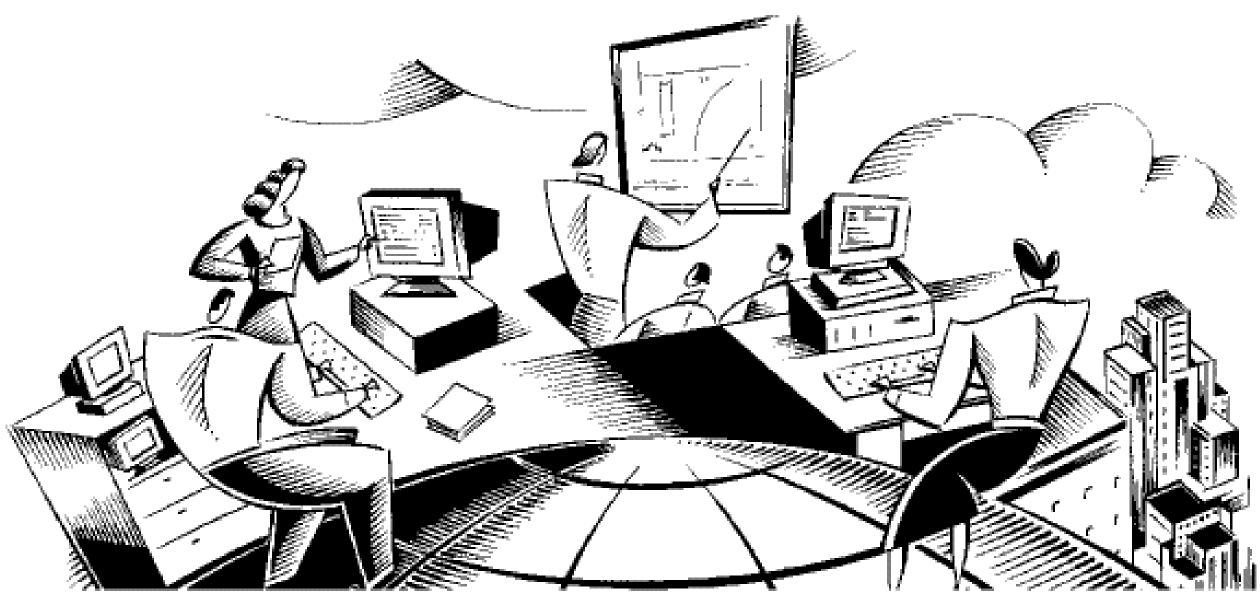
- A Services tab has been added to work and job plans.
- Services can be handled similarly to items in work and job plans.

NOTES:

NOTES:

MXES for EAM – New Features

Chapter 8: Administration of Human Resources



In This Chapter This chapter contains the following topics:

Chapter Overview

Introduction

MXES handles the administration of human resources such as users, labor, and crafts very differently than previous versions of Maximo did.

These changes provide a much wider range of flexibility and precision in the way people are presented in the system.

This chapter covers the major changes in this area.

Chapter Focus

The changes in regard to the administration of human resources in MXES require a whole new way of thinking. They employ concepts that are different and more robust than in previous versions of Maximo.

It is important that you understand these concepts before getting into the MXES functionality, so we will start with an overview of these new concepts, then do some exercises that will help to reinforce the concepts.

Learning Objectives

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

- describe the new overall concepts behind the handling of human resources in MXES;
- work with labor and crafts to determine skill and pay levels, then apply these records to other records; and
- use the new concepts of qualifications and certifications with labor and craft records.

New Concepts

Overview

This section provides an overview of the new concepts behind the management of human resources in MXES.

You will see that these new concepts and the new functionality created to support them advance MXES to a whole new level of flexibility and productivity.

People Are the Core

Every person who has a relationship with Maximo is entered as a person record using the new People application. These relationships include:

- Labor Personnel
- Users of Maximo
- Primary Owners of Assets
- Custodians of Assets
- Users of Assets (as opposed to Maximo users)
- Vendor Contacts

A person might have one or more of these relationships with Maximo.

The bottom line is that they are person records first, no matter what their relationship with Maximo.

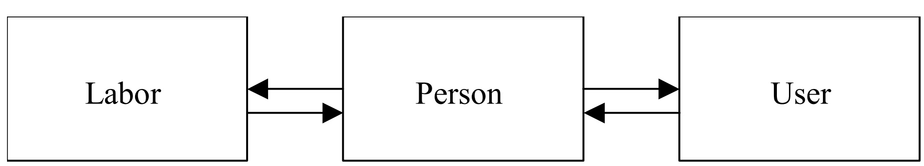
Labor and Users Are People

All Labor and Maximo Users must be associated with a person record.

Because a person can have more than one relationship with Maximo, that person could be a user *and* a labor.

Whether you create a user with the Users application or a labor record with the Labor application, Maximo will enforce that there is a person record associated with these records.

The following graphic presents this concept visually.



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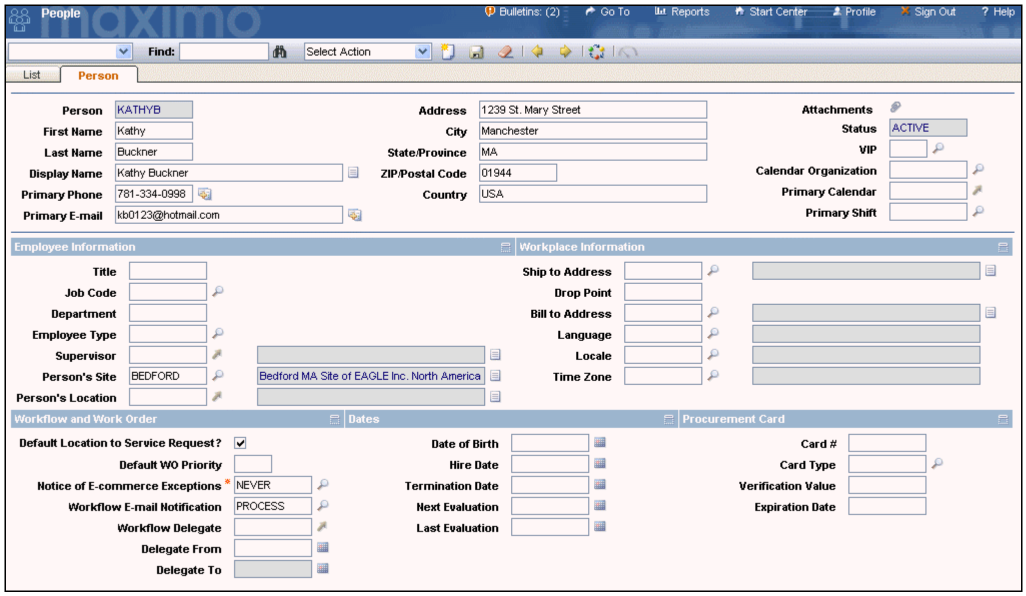
New Concepts continued

People Application

Person records are maintained using the People application in the Resources module.

This chapter does not deal specifically with person records, but we will take a brief look at them.



Although the People application is fairly intuitive, the following table provides some further information.

Section/Field	Description
VIP field	This field allows you to enter a priority code for this person. The code comes in handy when providing service, because it allows Maximo to prioritize work in the queue by the individual who needs something done.
Status field	Person records are statusable. A status simplifies the process of deactivating the person and thereby deactivating any labor or user records associated with the person.
Workflow and Work Order section	This section of the Person tab helps to clarify some default information that is considered when this person is involved with a workflow process in Maximo.

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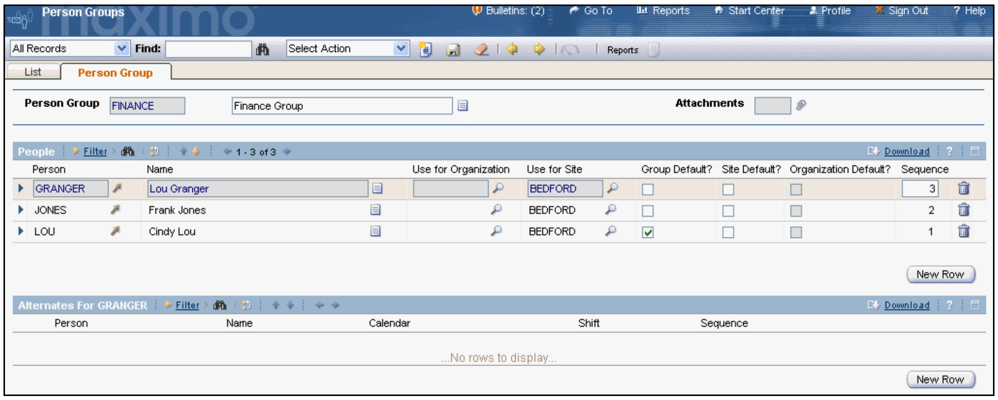
New Concepts continued

People Can Be in Groups

Maximo allows you to create groups of people with the Person Groups application, which you can access from the Resources module.



The people in a person group would generally have a similar type of relationship with Maximo, so they could be handled together by some applications.

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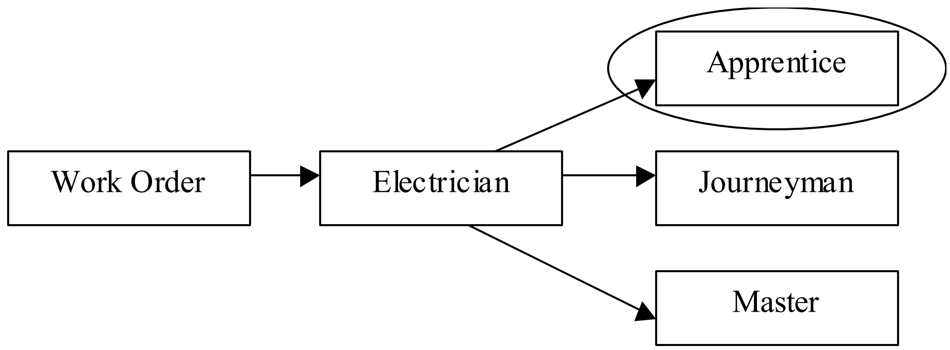
New Concepts continued

Multiple Skill Levels for Crafts

MXES now allows a more granular approach to using crafts. Levels can be defined and these levels can be applied to crafts.

Example: You need an electrician for a work order, but you don't need the top person—you just want someone to do some basic work. So, you could call out an apprentice.



The benefits of this approach are as follows:

- This new functionality allows work orders and other types of records to call for more specific skills.
- It also allows Maximo to track the various costs of crafts at different levels.
- With an accurately designed implementation, there would be no need to adjust rates when recording actuals.
- The right craft could be requested for the job and the appropriate pay rate would automatically be in the cost structure.
- With the ability to ask for specific levels of crafts, you can avoid having the master electrician show up to do a simple job, thus more accurately controlling costs.

continued on next page

New Concepts continued

Labor Rate Contracts

The new Labor Rate Contracts application can help you to more efficiently track who is on the contract at which rate.

Note: You might recall that we overviewed this new application in Chapter 5, "Contract Management."

The Labor Rate Contract application allows you to:

- associate crafts and skill levels with vendor/contract,
- specify rates for each craft and skill level,
- associate specific labor with contract,
- better control negotiated rates, and
- simplify the management of price changes.

You will have a chance to work with the Labor Rate Contracts application in this chapter.

Qualifications and Certifications

The new Qualifications application allows you to add qualifications and certifications into Maximo, then associate them with labor records.

This new functionality provides the following benefits:

- Offers a more complete picture of the labor, including:
  - Craft and skill level
  - Qualifications and certifications
- Uses Escalation Manager to automatically notify labor and training manager of certificate expiration dates
  - Can schedule appropriate training to remain certified
- Tools can now require that labor have the qualifications before being assigned to a specific labor record

continued on next page

New Concepts continued

Qualifications: A Definition

For Maximo purposes, the following items are part of a qualification:

- Skill level (Note: The operative word is *level*)
- Years of experience
- Amount of general training
- Seniority within craft
- Level of pay

<u>Examples</u>

- First Class
- Second Class
- Third Class
- Apprentice
- Journeyman
- Master

continued on next page

New Concepts continued

Certifications: A Definition

Granted, there is a certain amount of gray area between qualifications and certifications. But for Maximo purposes, the following items are considered as part of certifications:

- Specific area of knowledge or training
- Often required independent evaluation or testing
- Usually associated with a certificate or license

Examples

- Senior Reactor Operator License
- Cisco Certified Network Engineer
- Airman Certificate – Power Endorsement

People and Users at System Level

People and user records are at the system level. This means that more than one labor can be associated with a person or user record, as long as each labor record is in a different organization.

Note: No more than one labor and/or user from each organization can be associated with a person record.

Crafts Application

Overview

The Crafts application, which you can access from the Resources module, has been modified to include functionality related to:

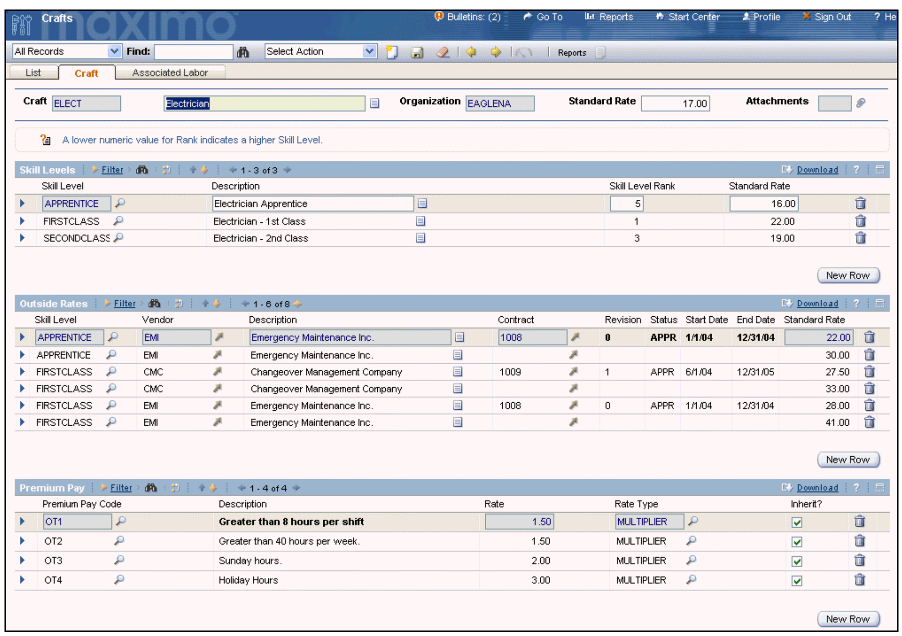
- Skill levels
- Outside rates
- Premium pay

The exercises in this section are designed to let you work with these changes.

Crafts Application Overview

Let's access the Crafts application to see the interface changes.

Follow these steps:

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Access the Crafts application from the Resources module.</td></tr>
<tr><td>2</td><td>Find the Craft tab for the ELECT record.


<u>Note</u>: See the table on page 8-11 for descriptions of the sections on this tab.</td></tr>
</table>

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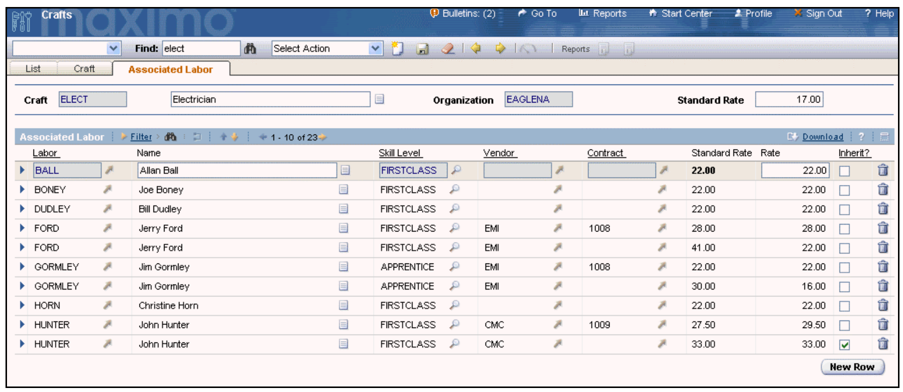
Crafts Application continued

Crafts Application Overview

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>3</td><td>

Access the Associated Labor tab.



This tab lists all the internal and external labor associated with the selected craft.

Labor can be disabled if not currently available. It is not necessary to remove the labor from the list.

</td></tr>
</table>

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Crafts Application continued

Crafts Application Overview

continued

Craft Tab/Section	Description
Craft/Skill Levels section	Defines the skill levels available for this craft, along with associated costs. Note: The **Skill Level Rank** field is especially important because it allows the Assignment Manager application to choose skill levels at the desired rank and higher when finding labor for work.
Craft/Outside Rates	Describes the outside vendors who may also provide labor for this craft. It shows the vendors, craft levels, and contract numbers, where applicable.
Craft/Premium Pay	Shows the premium pay categories available for this craft. You can add existing premium categories by clicking **New Row**. You also can add new categories by choosing **Manage Premium Pay Codes** from the Select Action menu, then adding the new code to the craft record.

continued on next page

Crafts Application continued

Add a Craft with Skill Levels Premium Pay Codes

The Crafts application now allows you to manage premium pay codes. It also allows you to indicate skill levels for crafts, which can be used to more specifically indicate the skills needed when applying crafts to work and job plans.

The following exercise shows you how.

Step	Action
1	Access the **Crafts** application from the **Resources** module.
2	Insert a new craft record, using the following information: **Craft:** LINE[*your initials*] **Description:** Lineman [*your initials*] **Standard Rate:** 19.00 Note: In the Premium Pay pane there are a number of premium pay codes automatically applied to the new craft record. We'll see why this happens later on in this exercise.
3	In the **Skill Levels** pane, add two skill levels with the following information: JUNIOR **Description:** Lineman – Junior **Skill Level Rank:** 4 **Standard Rate:** 14.50 SENIOR **Description:** Lineman – Senior **Skill Level Rank:** 1 **Standard Rate:** 26.00 Note: The **Skill Level Rank** of the more skilled level is lower than for the less skilled level. Assignment Manager uses these values to ensure that you get a person of the requested skill level or above when searching for labor.

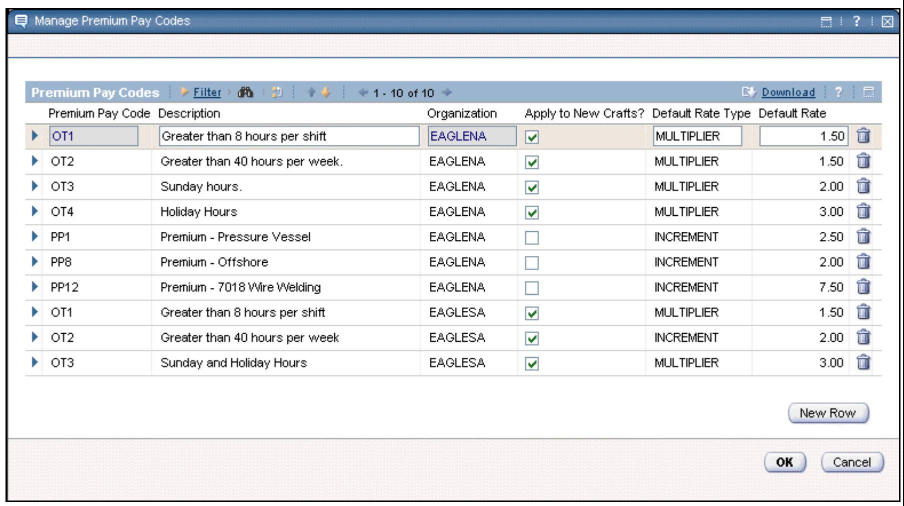
continued on next page

Crafts Application continued

Add a Craft with Skill Levels Premium Pay Codes

continued

Step	Action
4	Save the record.
5	We want to add a new **Premium Pay** line to this craft for *high-voltage work*, but this code does not exist in the system and we have to create it. Start by choosing **Manage Premium Pay Codes** from the Select Action menu. Result: The Manage Premium Pay Codes dialog box opens.



Premium Pay Code	Description	Organization	Apply to New Crafts?	Default Rate Type	Default Rate
OT1	Greater than 8 hours per shift	EAGLENA	☑	MULTIPLIER	1.50
OT2	Greater than 40 hours per week.	EAGLENA	☑	MULTIPLIER	1.50
OT3	Sunday hours.	EAGLENA	☑	MULTIPLIER	2.00
OT4	Holiday Hours	EAGLENA	☑	MULTIPLIER	3.00
PP1	Premium - Pressure Vessel	EAGLENA	☐	INCREMENT	2.50
PP8	Premium - Offshore	EAGLENA	☐	INCREMENT	2.00
PP12	Premium - 7018 Wire Welding	EAGLENA	☐	INCREMENT	7.50
OT1	Greater than 8 hours per shift	EAGLESA	☑	MULTIPLIER	1.50
OT2	Greater than 40 hours per week	EAGLESA	☑	INCREMENT	2.00
OT3	Sunday and Holiday Hours	EAGLESA	☑	MULTIPLIER	3.00

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Crafts Application continued

Add a Craft with Skill Levels Premium Pay Codes

continued

Step	Action
6	We want our new high-voltage code to be an *increment* of $5.00 per hour *over* the regular rate for all selected skill levels. Add a row with the following information: **Premium Pay Code:** HD12[*your initials*] **Description:** High Voltage **Default Rate:** 5.00 **Default Rate Type:** INCREMENT Note: The three types of premium pay available are HOURLY, INCREMENT, and MULTIPIER. **Apply To New Crafts?:** [*unchecked*] Note: In this case we want the new premium pay code to apply only to *this* craft. But if we checked the **Apply To New Crafts?** box, the premium pay code would be added to the default list when any new crafts were created.
7	Click **OK**. Result: The Manage Premium Pay Codes dialog box closes and the new premium pay information is saved into Maximo.
8	Now that we have added the code into Maximo, we need to add the new premium pay code line to our craft record. In the **Premium Pay** section, add a new row containing the new code. Leave the **Inherit Rate From Craft?** field unselected. Note: We will talk a bit about inheritance on page 8-15.
9	Save the record. Result: You now have a new craft with two skill levels and five premium pay codes added—including a new one that you added to Maximo.

continued on next page

Crafts Application continued

Inheritance in Pay Codes

Inheritance will use values for a selected premium pay code, which will move through the system.

Unchecking **Inherit Rate from Craft?** will apply the premium pay code rate to only that craft.

So, if **Inherit Rate from Craft?** is unchecked and the rate is changed, the rate applies only to the selected craft, not to all crafts using this premium pay code.

To change the inherited rate for all crafts that use this premium pay code, you need to change it in the Manage Premium Pays Codes dialog box and keep **Inherit Rate from Craft?** checked.

Qualifications and Crafts

It is now possible to stipulate qualifications for the use of tools and for labor. These qualifications might include:

- Required certificate
- Duration of work history or experience
- Required length of use of tool

The qualifications are defined in the Qualifications application in the Resources module.

The brief exercise below will show you the Qualifications application and the information that it provides.

Note: Later you will get a chance to see how the data from this application is applied to a labor record.

Step	Action
1	Access the **Qualifications** application from the **Resources** module.

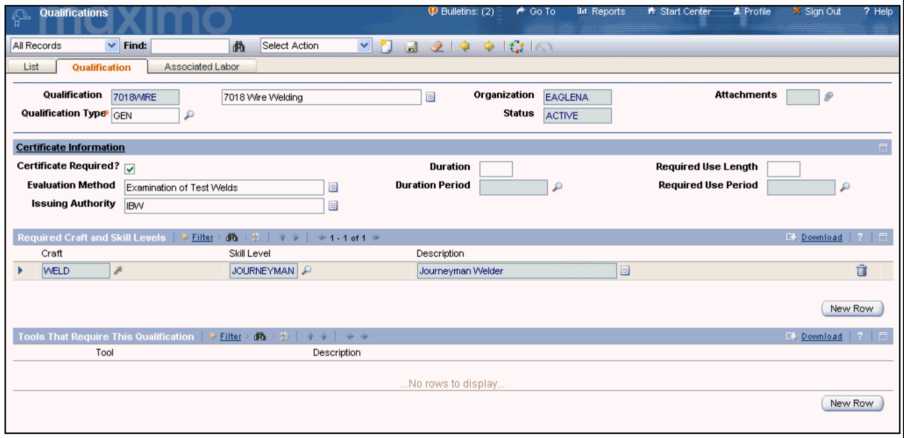
continued on next page

Crafts Application continued

Qualifications and Crafts

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>2</td><td>
Access the Qualification tab for the record 7018WIRE, which is the 7018 Wire Welding qualification.



<u>Certificate Information section</u>

Certificate Required? – If checked, the certificate number must be entered when applying this qualification to a labor record.
Duration – Indicates required duration for holding the certificate.
Required Use Length – Indicates actual length of time that skills in certification have been used (as opposed to the length of time the certificate has been held).
The system will check for compliance with the maximum time between uses of qualification.

<u>Required Craft and Skill Levels section</u>

Indicates crafts and skill levels only to which this qualification can be applied.
Not “and”—they are “or”—so multiple crafts and skill levels can have this qualification.

<u>Tools That Require This Qualification section</u>

Tools requiring a specific qualification to use them can be added.

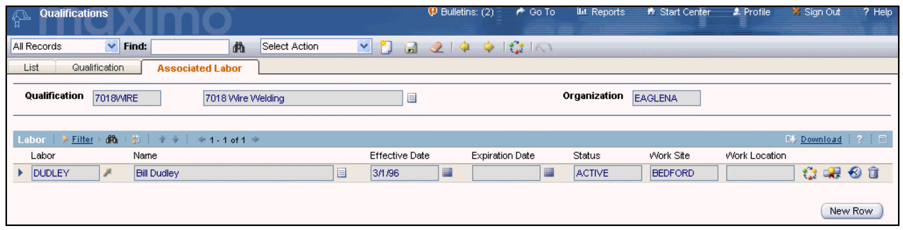
</td></tr>
</table>

continued on next page

Crafts Application continued

Qualifications and Crafts

continued

Step	Action
3	Access the **Associated Labor** tab.  You can indicate which labor has this qualification. Note: You can also do this in the Labor application.

Labor and Crafts

You've seen a bit of the Qualifications application and the Crafts application.

Now we will go into the Labor application and see how the changes to these applications affect how Labor is used in Maximo.

Note: If all students are using the same database, then only one person in the class should perform this exercise while demonstrating to the others.

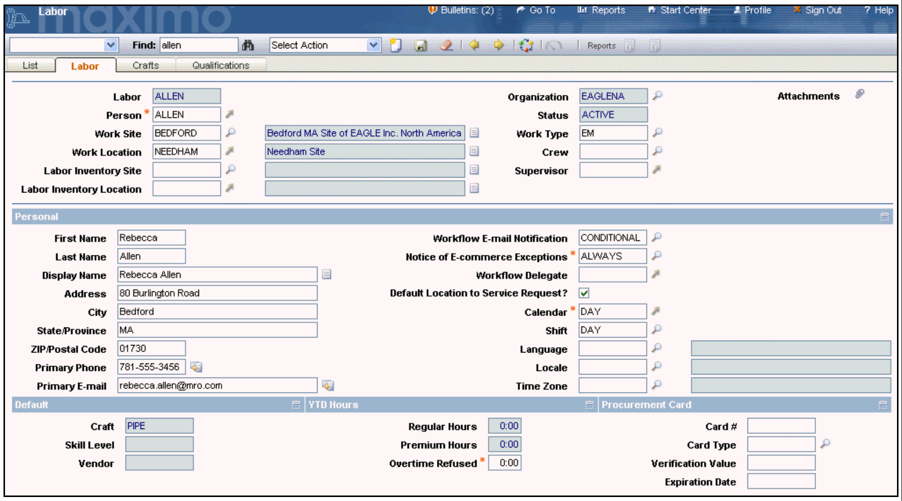
Step	Action
1	Access the **Labor** application from the **Resources** module.

continued on next page

Crafts Application continued

Labor and Crafts continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>2</td><td>
Access the Labor tab for the ALLEN record.



Personal information comes from the Person record.
When a new labor record is created, a new Person record will be created if the labor code does not match to a person code.

Notes on data levels:

The Labor record is at the organization level.
The Person record is at the system level.
One Person record can be associated with multiple Labor records if Labor records are in different organizations. This is done because, for example, one labor might work for different organizations at different rates.

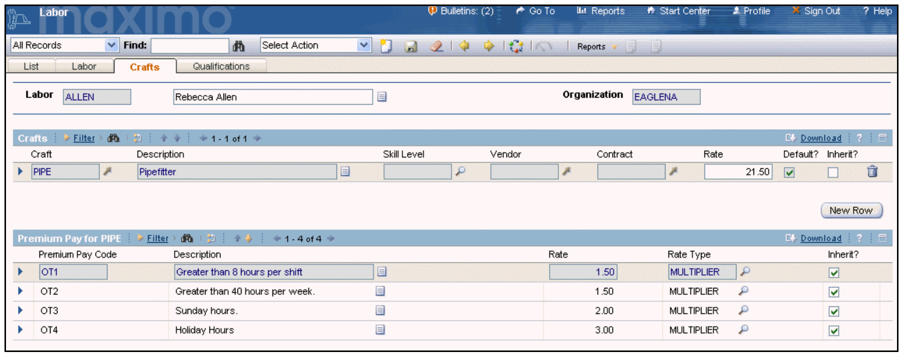
Displayed Personal information can be changed on a Labor record. Changes are reflected on the Person record.
Display name is separate from First Name/Last Name and can be changed independently.
Updates made directly to a Person record will be reflected on the Labor record.

</td></tr>
</table>

continued on next page

Crafts Application continued

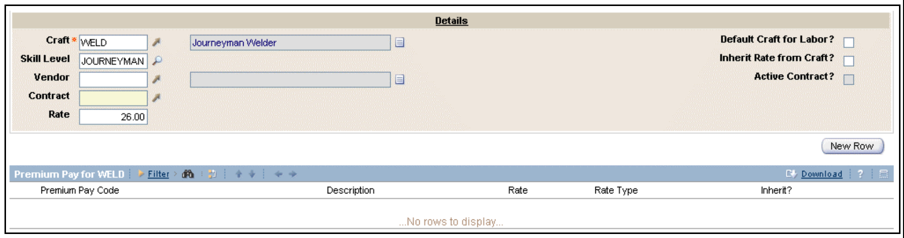
Labor and Crafts continued

Step	Action
3	Access the **Crafts** tab for the ALLEN record.  The Crafts tab displays the crafts that the selected labor can perform. Each craft lists its premium pay codes.

continued on next page

Crafts Application continued

Labor and Crafts continued

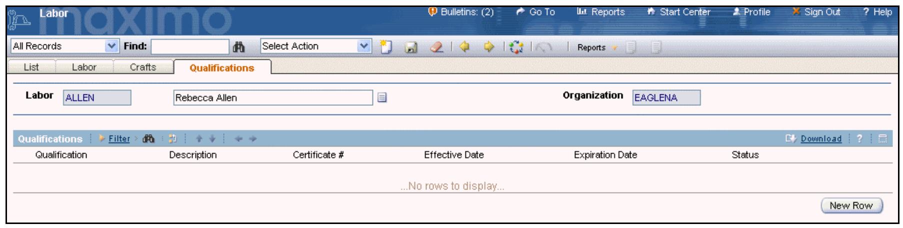
<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>4</td><td>Rebecca Allen can also work as a journeyman welder, so add this to her list of crafts. See if you can figure it out on your own!


Notes:
The rate for the journeyman welder skill level (as defined in the Crafts application) carries over into the Labor application.
If Allen were an outside contractor, then the Vendor would be entered and the contracted rate (from Labor Rate Contract) for the craft and skill level would also be carried over into the Labor application.
Allen could be listed as internal for one craft and external for another, if this situation existed.
All labor must have one default craft. For Allen, the default craft is Pipefitter. (The Default? field for this craft is checked.)
If Inherit Rate From Craft? is not checked, then default rates can be overridden. We will leave this field unchecked for this example.
The default premium pay code(s), if any, for the journeyman welder skill level is carried over.</td></tr>
<tr><td>5</td><td>Save the record.</td></tr>
</table>

continued on next page

Crafts Application continued

Labor and Crafts continued

Step	Action
6	Access the **Qualifications** tab for the ALLEN record.  This tab indicates the Rebecca Allen's qualifications. Note: There are no qualifications listed, but we will now add one.

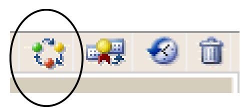
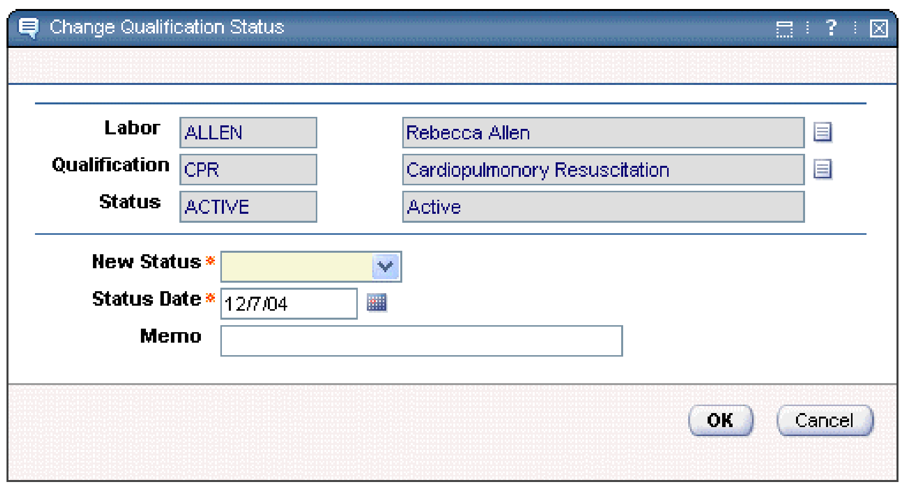
7	Rebecca has the ability to perform CPR. This may be an important capability on some work situations, so we want to add this to her list of qualifications.
	Add a qualification line with the following information:
	• **Qualification:** CPR
	• A certificate is required on this qualification, so the **Certificate #** field becomes editable. Enter **Certificate #:** 1234
	   • Note: When the Certificate # is added, other related fields become editable.
	• **Validation Date:** [*three months prior to today*]
	• **Effective Date:** [*two months prior to today*]
	   • Note: When you enter the effective date, Expiration Date becomes populated. This is because the Qualification record for CPR indicates a one-year expiration.
	• **Validated By:** [*your initials*]

8	Save the record.

continued on next page

Crafts Application continued

Labor and Crafts continued

Step	Action
9	Let's assume that Rebecca has decided she does not want to perform CPR on the job. Now we need to inactivate this qualification. Click the **Change Qualification Status** button on the Qualification line:  Result: The Change Qualification Status dialog box opens. 
10	Toggle the **New Status** field to Inactive.
11	In the **Memo** field, enter Did not wish to perform CPR at work.
12	Click **OK**. Result: The qualification is now listed as INACTIVE on the list. Maximo will not consider it when determining the adequacy of Rebecca Allen for work that requires it.

continued on next page

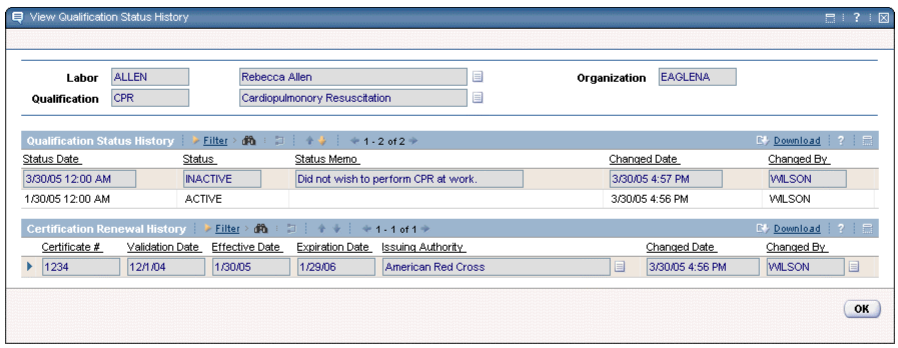
Crafts Application continued

Labor and Crafts continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>13</td><td>Let’s take a look at the history of the CPR qualification for Rebecca.

Click the View Qualification Status History button on the CPR qualification line. The button looks like the following graphic.

<u>Result</u>: The View Qualification Status History dialog box displays the history.


</td></tr>
<tr><td>14</td><td>Click OK to close the dialog box.</td></tr>
</table>

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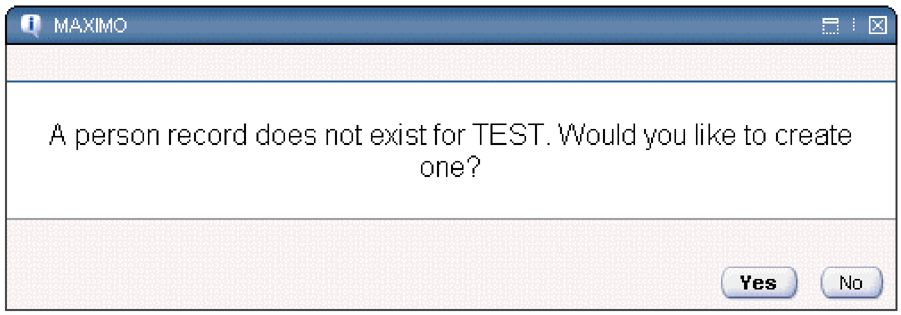
Crafts Application continued

Create a New Labor Record

In the following exercise you will create a new labor record and add information to it.

The exercise will show you some additional new features for labor records.

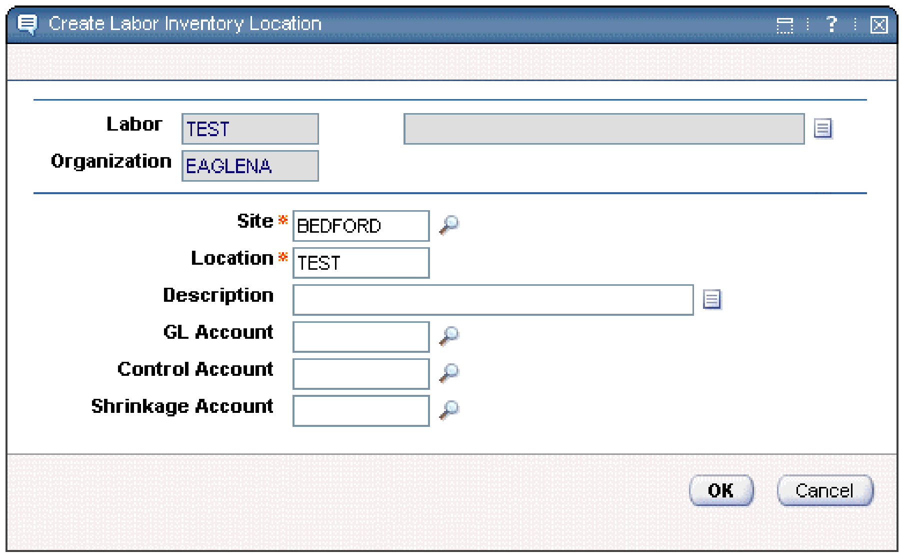
Step	Action
1	Ensure that you are in the **Labor** application.
2	Insert a new record and call it TEST[*your initials*]. Result: Maximo asks if you want to create the person record.  Note: Your options at this point are: • click **Yes** to allow Maximo to create a person record with the same code and assign the person to the new labor record, or • click **No** and assign a person already in the database.
3	Click **Yes** to create the new person record.
4	Enter the following information: **Work Site:** BEDFORD **Work Location:** BOILER **Labor Inventory Site:** BEDFORD

continued on next page

Crafts Application continued

Create a New Labor Record

continued

Step	Action
5	We want to create a new Labor Inventory Location for our new record. Start by choosing **Create Labor Inventory Location** from the Select Action menu. Result: The Create Labor Inventory Location dialog box opens.  Note: This used to be done automatically when creating a Labor record. Now it must be done manually.
6	Enter the **GL Account:** 6000-200-000, then click **OK**. Result: The dialog box closes. The labor record is populated with the new Labor Inventory Site and Location.

continued on next page

Crafts Application continued

Create a New Labor Record

continued

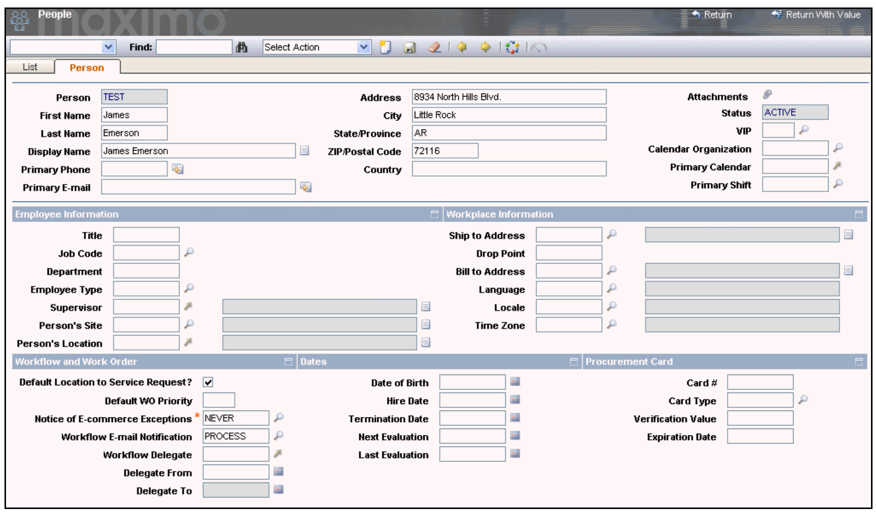
Step	Action
7	Enter the following information: **First Name:** [*your first name*] **Last Name:** [*your last name*] Result: Display Name defaults to First Name + Last Name. Notes: • You can manually override the display name sequence at this point. • You can use System Settings action in the Organizations application to modify the default name sequence of the display name for an Organization. • We will accept the default display name for this exercise.
8	Enter the following information: **Address:** 8934 North Hills Blvd. **City:** Little Rock **State/Province:** AR **ZIP/Postal Code:** 72116
9	Save the record. Result: The new labor record is added to Maximo.

continued on next page

Crafts Application continued

Check the Person Record

This step is not needed to create a labor record. However, we do want to emphasize the relationship between the new labor record and the new person record. Follow these steps to do so:

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>From the Person field of the new labor record, hyperlink to the People application.
<u>Hint</u>: Detail Menu button >> Go To People


<u>Notes</u>:

The basic personal information provided in the labor record is in the people record.
You could enter the additional person information at this point.
For our example, we will just return to the Labor application.
</td></tr>
<tr><td>2</td><td>Click the Return link to go back to the originating labor record without making any changes.
<u>Result</u>: You are returned to the new labor record.</td></tr>
</table>

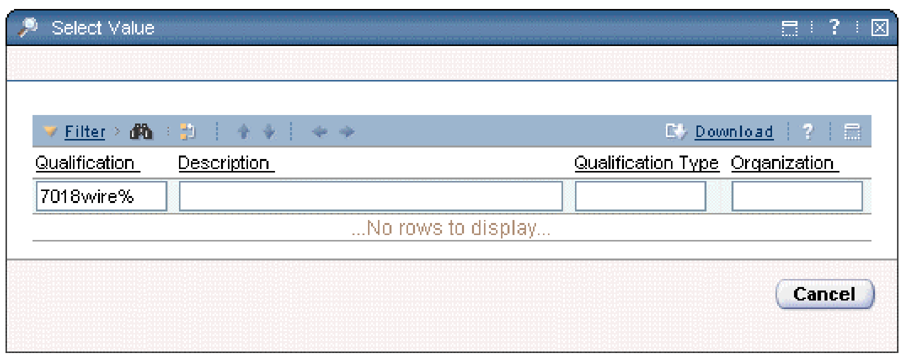
continued on next page

Crafts Application continued

Add a Craft and Qualification

We have added the new labor record and checked to see if the personal information came across to the new person record.

In the following exercise we will indicate which craft the labor has. We will also add a qualification.

Step	Action
1	Ensure that you are viewing the labor record from the previous exercises.
2	Go to the **Crafts** tab and add the craft of SUPR. Result: Now we know that the new labor is a *Supervisor*.
3	Go to the **Qualifications** tab and add a line for 7018WIRE. Result: When you tab out of the Qualification field, Maximo displays a Select Value list with no items in it. There are no items listed because this qualification requires the labor to have the craft of welder. Maximo will not allow you to add this qualification.  Note: At this time, you can verify 7018WIRE in the Qualifications application if you want.
4	Delete the qualification line. Note: The qualification line was added only to demonstrate that Maximo will check for crafts on qualifications.
5	Save the record.

Labor Rate Contracts

Overview

One final piece that we should cover in this section is the use of labor rate contracts and how they affect labor and craft records.

You may recall that we briefly discussed the Labor Rate Contracts application in Chapter 5, "Contract Management."

Crafts and Labor Rate Contracts

In a previous chapter you got an overview of the Labor Rate Contracts application. This time around, let's access the application to create a labor rate contract and apply it to a craft and a labor record to see its effect in Maximo.

In this scenario, the labor that you created in previous exercises also works for an outside vendor as a journeyman welder. We'll add that person to a contract.

Follow these steps:

Step	Action
1	Access the **Labor Rate Contracts** application from the **Contracts** module.
2	Insert a new record with the following information on the **Contract** tab: **Description:** New Features Labor Rate Contract [*your initials*] **Company:** CMC
3	Access the **Rate Schedule** tab and add a Journeyman Welder working at a standard rate of 30.00 per hour.
4	Change the status of the contract to Approved.
5	Access the **Associated Labor** tab and add the labor record that you created in the previous exercises as a journeyman welder. Notes: • Only labor with crafts defined for this contract can be added as associated labor. • In this example, only journeyman welders are listed on the contract, so Skill Level defaults to JOURNEYMAN. • Any number of laborers with the contracted crafts could be associated with this contract.

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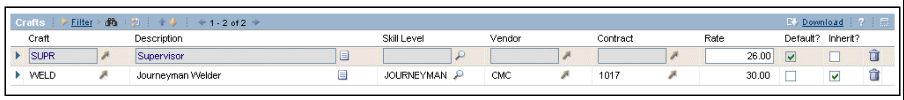
Labor Rate Contracts continued

Crafts and Labor Rate Contracts

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>6</td><td>Select the Inherit Rate from Contract check box so that the rate from the contract is enforced when using this labor for work.</td></tr>
<tr><td>7</td><td>Save the record.</td></tr>
<tr><td>8</td><td>In the Labor application, access your labor record and check the Crafts tab.

<u>Result</u>: The Crafts pane shows that your labor is an internal supervisor as well as being an outside welder.



<u>Notes</u>:
Labor can be both internal and external. <u>Example</u>: Maybe your labor works as a supervisor but also comes in on weekends and works for a contractor as a welder.
The rate for the journeyman welder cannot be changed because the contract has Inherit Rate From Contract? checked.</td></tr>
<tr><td>9</td><td>In the Crafts application, find the WELD record.

<u>Result</u>: The Outside Rates pane shows that there is an outside craft available from the vendor that you designated in your Labor Rate Contract.

<u>Note</u>: Outside rates are not updatable on the craft record because they are coming from a contract with the status of APPR.</td></tr>
</table>

Chapter Summary

New Concepts

A variety of new concepts are introduced in this chapter, including:

- People are at the core of the administration of human resources in Maximo.
- Labor and users are people.
- The People application is used to administer people who have a relationship with Maximo.
- People can be in groups. Groups are administered with the Person Groups application.
- Multiple skill levels can be allowed and specified for crafts. These levels are specified in the Crafts application.
- People and users are at the system level.

Crafts Application

The Crafts application contains a number of enhancements that make the use of crafts more robust. These include:

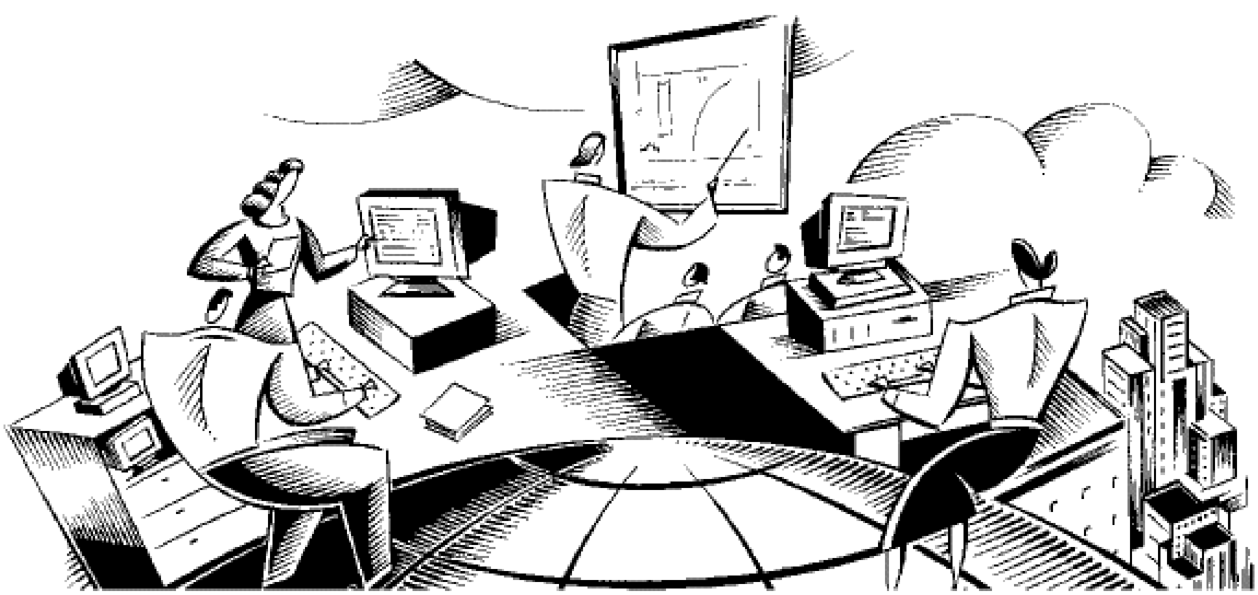
- Skill levels
- Outside rates
- Premium pay code management
- Control of inheritance of rates
- Qualifications

Labor Rate Contracts

The new Labor Rate Contracts application plays a major role in the administration of human resources in MXES.

NOTES:

Chapter 9: Meters, PMs, and Condition Monitoring



In This Chapter

This chapter contains the following topics:

Chapter Overview

Introduction

MXES provides a number of new features regarding meters, PMs, and condition monitoring.

Some of these new features are somewhat related, so we are handling all three new features in one chapter.

Chapter Focus

In this chapter we will cover some new concepts and list the new features of the three areas being covered.

We will then go through a number of exercises designed to reinforce the knowledge of these concepts and new features.

Note: This chapter provides an overview of these new features. For more detailed training, please contact MRO Software Educational Services.

Learning Objectives

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

- describe the three types of meters used in Maximo;
- work with the new multiple meters features, including meter groups;
- use the new features in the Preventive Maintenance application; and
- interact with the changes in the Condition Monitoring application.

Key Meter New Features

Overview

This section will highlight the key new meter-related features available in MXES.

After an overview of the new features, you will have the opportunity to work with some of these new features.

Meters at System Level

Meters are available at the system level, so they can be applied to assets of all organizations.

Meters Application

The Meters application is used to create meters in Maximo. This application is accessed through the Assets module.

Multiple Meters

Multiple meters can be created and applied to assets. An unlimited number of meters can be created.

The three types of meters that can be created are as follows:

- *Continuous* meters are cumulative and tend to measure consumption or accumulation.

  Examples: Miles, Flight Hours
- *Gauge* meters show a range of values.

  Examples: Fuel Level, Temperature, Pressure, Noise Level, Oil Level
- *Characteristic* meters are observational and have a list of possible values.

  Examples: Oil Color, Flame Color

Notes:

- These meter types are available for assets and locations.
- Any number of meters can be associated with an asset.

continued on next page

Key Meter New Features continued

Meter Groups

You can create groups of meters with the Meter Groups application.

This new feature reduces the need to add a number of individual meters to an asset, item, or location.

Listed meters in a group can be made inactive if not applicable to the asset or location to which the group is applied.

These meter groups can be applied to:

- Assets
- Locations
- Rotating items in the Item Master

The Meter Groups application allows you to create meter groups that group sets of commonly used meters for similar records.

Best Practice: When we work with Meter Groups later in this chapter, consider the ramifications of working with individual meters as opposed to meter groups. You might be better off, in some cases, creating a meter group of one meter and applying it to an asset or a location. This way, if you set up the meter group correctly, you can automatically add new meters to all assets and locations that use the meter group, instead of manually updating many assets, when processes and business practices change.

Meter History

A meter history is now available. This history can be:

- Read
- Updated
- Deleted

This functionality is available in the Assets and the Locations applications. The functionality is similar for both assets and locations.

Inheritance

Control of inheritance of meter data in a hierarchy is now available. Assets can inherit meter readings from locations or from a parent asset.

This capability is available in the Assets and the Locations applications.

Meter Readings on Work Orders

Meter readings can be stored with a work order reference.

Working with Meters

Overview

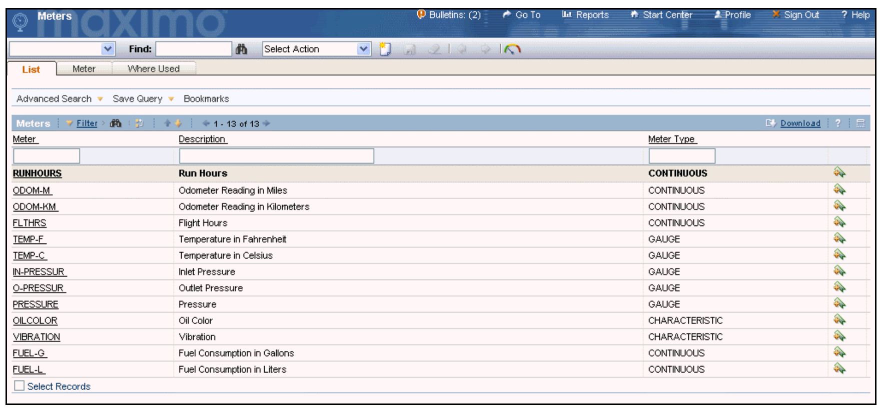
In this section we will do some exercises that will highlight some of the key new features mentioned in the previous section.

Meters Application

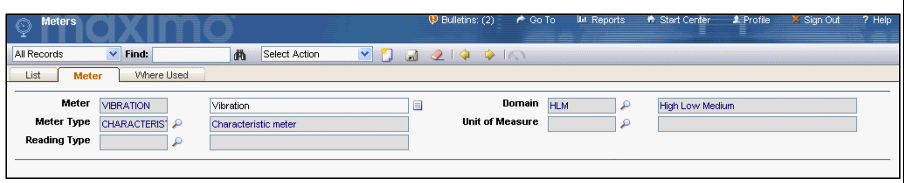
The Meters application is very simple and easy to work with. We will now take you into the application to let you see for yourself.

Note: *Meter groups* are groups of individual meters created in the Meters application.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Go to the Meters application from the Assets module.</td></tr>
<tr><td>2</td><td>Access the full list of the existing meters.



This list provides an indication of the typical meters that you might use in your organization.</td></tr>
<tr><td>3</td><td>Access the Meter tab for the VIBRATION record.



Note: This is a Characteristic meter. A domain is used for this type of meter to provide a list of possible values. Domains are created and maintained in the Domains application in the Configuration module.</td></tr>
</table>

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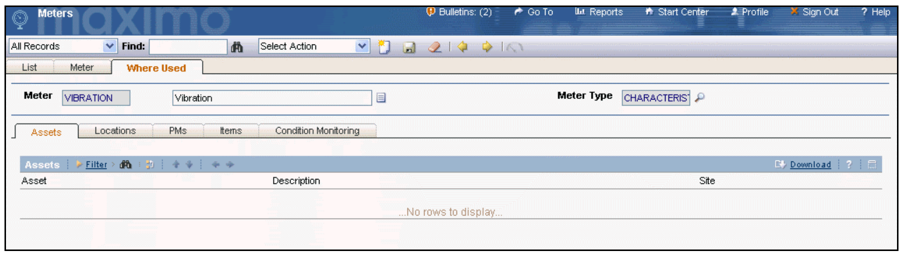
Working with Meters continued

Meters Application

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>4</td><td>Access the Where Used tab.


Use this tab to see where a meter is attached. This is helpful when you want to delete a meter but are unable to because it is attached to a record. This tab is read-only.
The Where Used tab has the following subtabs:
Assets
Locations
PMs
Items
Condition Monitoring</td></tr>
</table>

continued on next page

Working with Meters continued

Create a Meter Group

Now that you've seen a bit of the Meters application, we will access the Meter Groups application and create our own group containing meters that might be used with a pump.

Follow these steps:

Step	Action
1	Access the **Meter Groups** application from the **Assets** module.
2	Insert a new record using the following information: **Record:** PUMPGRP[*your initials*] **Description:** Pump Meter Group [*your initials*] **Apply New Meters to Existing Assets?:** [*unchecked*] Notes: • Selecting the **Apply New Meters to Existing Assets?** check box will cause Maximo to apply any new meters later added to this group to all assets and locations using the group. • This could be a very powerful feature to be used instead of adding individual meters to assets and locations. • Any new meters that were added to existing assets could be disabled on the assets to which they do not apply.
3	Add the following meters to the **Meters in Group** pane: • IN-PRESSUR • O-PRESSUR • RUNHOURS (Note: **Average Calculation Method:** All) • TEMP-C • VIBRATION Note: As you add these meters into the meter group, be sure to select the **Apply This Meter to Assets?** check box so that the meters will get applied to associated assets.
4	Save the record. Result: Your new meter group is now created and can be applied to assets, locations, and items.

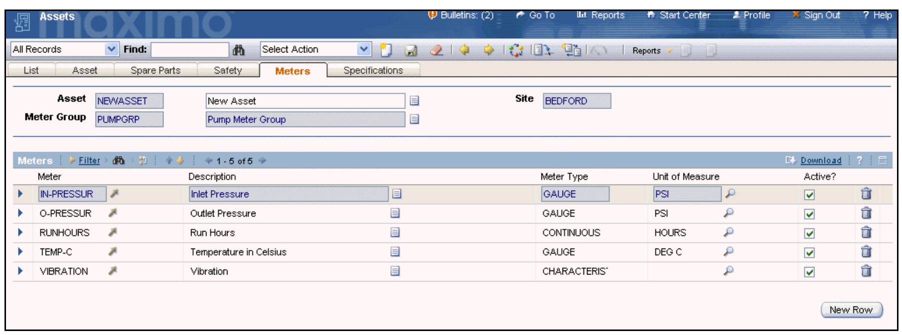
continued on next page

Working with Meters continued

Add Meter Group to Asset

In the following exercise, we will create a new *non-rotating* asset and apply your new meter group to it.

Note: This process works similarly for locations, so we will not cover adding meter groups to locations.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Access the Assets application from the Assets module.</td></tr>
<tr><td>2</td><td>Insert a new asset with the following information:
Asset: NEWASSET[your initials]
Description: New Asset [your initials]
Meter Group: PUMPGRP[your initials]</td></tr>
<tr><td>3</td><td>Save the record.</td></tr>
<tr><td>4</td><td>Go to the Meters tab for your new asset record.
Result: All the meters from the PUMPGRP[your initials] group are listed.


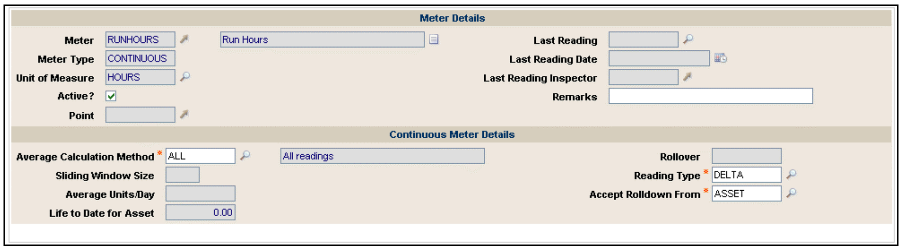
Note: Individual meters can be added on this tab as well. An unlimited number of meters can be added.</td></tr>
</table>

continued on next page

Working with Meters continued

Add Meter Group to Asset

continued

Step	Action
5	Display the details for the RUNHOURS meter. Result: Maximo displays the details containing all the related fields, as shown here:  The table on page 9-9 provides an overview of some of the key fields of the meter details. Please refer to Maximo Help for more details.

continued on next page

Working with Meters continued

Key Meter Details

The following table provides some additional details from the previous exercise.

Details Field	Overview
Active? check box	• If the meter is no longer needed or used for this asset, you do not want to delete this meter because you will lose historical info. • You can deactivate the meter by unchecking this checkbox. • The meter will no longer show when you enter meter readings. Note: If the meter is deactivated but not deleted, the history will be maintained. Also, the meter can be activated if processes that require the meter on the asset should change.
Average Calculation Method field	There are four ways to calculate the average: • ALL • SLIDING-DAYS • SLIDING-READINGS • STATIC
Accept Rolldown From field	This field lets you determine whether the meter reading should come from a parent asset or location of the asset. There are three options: • Asset – Child assets inherit meter readings from parent asset. • Location – All designated assets at location inherit given meter reading from location. • None – Meter readings must be entered directly into this asset.

continued on next page

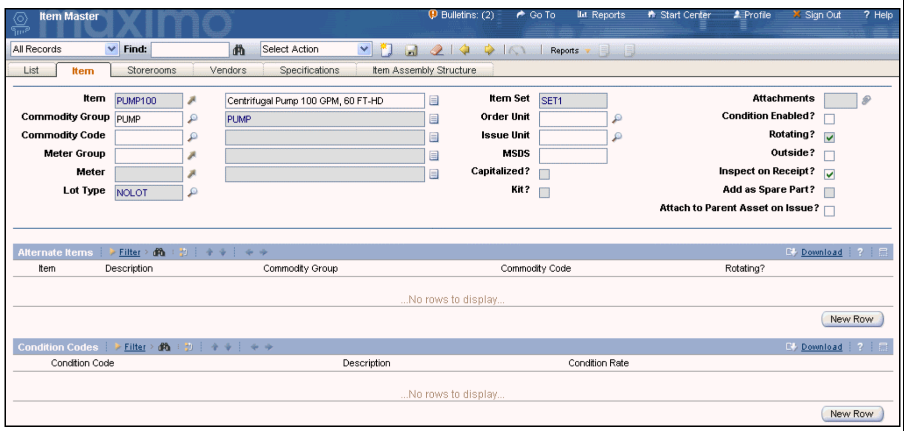
Working with Meters continued

Add Meter Group to Rotating Asset

In the following exercise we will create a new *rotating* asset and apply your new meter group to it.

This activity requires the use of the Item Master application and the Assets application.

Note: If all students are using one database, only one person in the class should perform this exercise while demonstrating to the others.

Step	Action
1	Access the **Item Master** application from the **Inventory** module.
2	Find the record for PUMP100. 
3	Add the meter group PUMPGRP[*your initials*] to the record.
4	Save the record. Result: Now, when a rotating asset is created from this item master, it will contain the meters from the designated pump group.
5	Access the **Assets** application from the **Assets** module.

continued on next page

Working with Meters continued

Add Meter Group to Rotating Asset

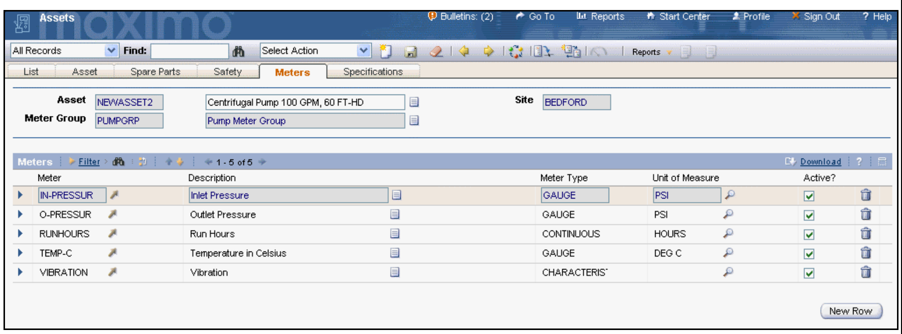
continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>6</td><td>Insert a new record with the following information:

Asset: NEWASSET2[your initials]
Description: New Asset 2 [your initials]
Rotating Item: PUMP100

<u>Note</u>: The Meter Group field is automatically populated with PUMPGRP[your initials] because it has been associated with the indicating rotating asset in the Item Master application.</td></tr>
<tr><td>7</td><td>Save the record.</td></tr>
<tr><td>8</td><td>Access the Meters tab.

<u>Result</u>: Meters from the indicated meter group on the associated item are automatically added.



<u>Note</u>: You can manually add meters as well, but consider using the power of meter groups!</td></tr>
</table>

continued on next page

Working with Meters continued

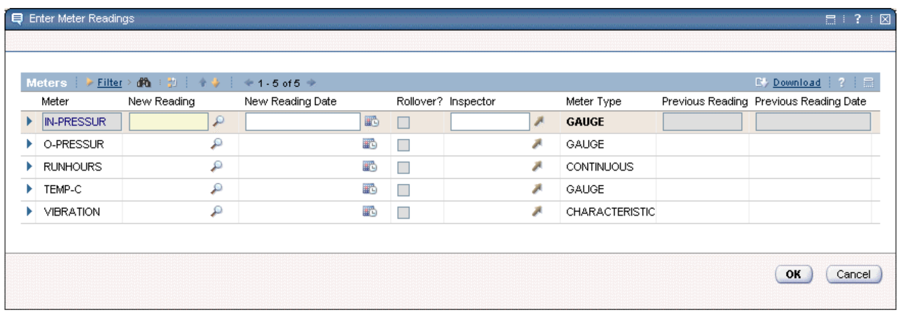
Modifying Meter Reading Data

MXES provides some new features that enhance the modification of meter readings.

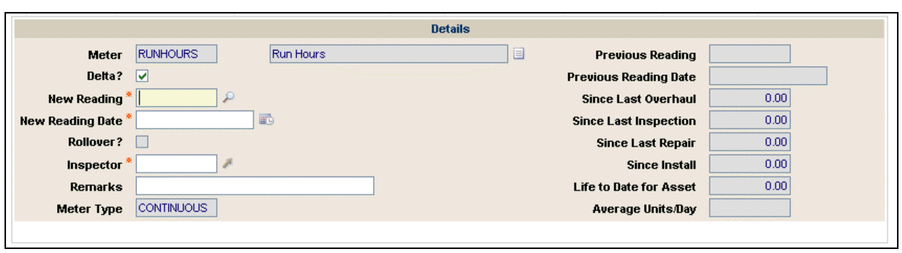
The following overview exercise shows you a few examples of this improved capability.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Access your NEWASSET[your initials] record from the Assets application.</td></tr>
<tr><td>2</td><td>We now want to enter a meter reading for the RUNHOURS meter. Start by choosing Enter Meter Readings from the Select Action menu.

<u>Result</u>: The Enter Meter Readings dialog box displays all the meters listed on the asset.


</td></tr>
<tr><td>3</td><td>Display the details for the RUNHOURS meter.

<u>Result</u>: The details for the meter should look similar to the following graphic:



<u>Note</u>: You can enter the new readings without showing the details, but we wanted you to see the details that contain previous meter readings and other related information.</td></tr>
</table>

continued on next page

Working with Meters continued

Modifying Meter Reading Data

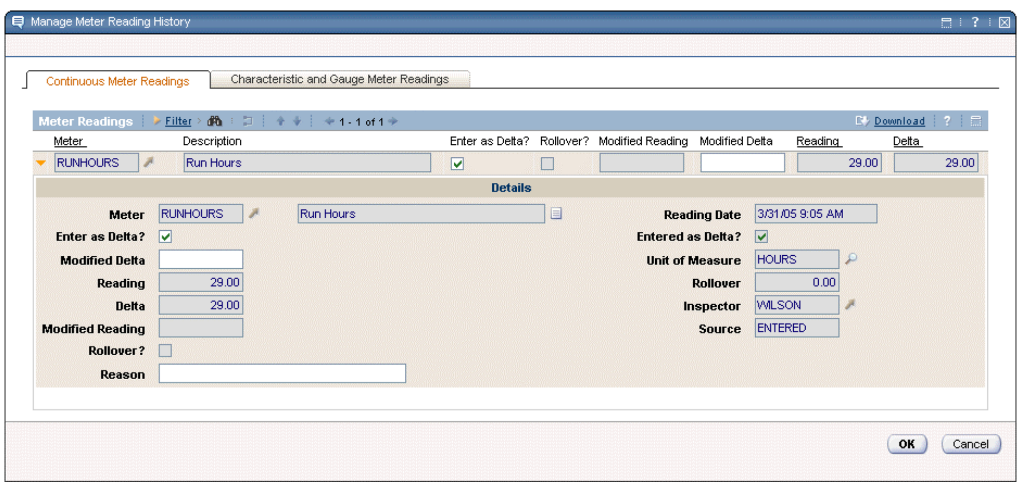
continued

Step	Action
4	In the **New Reading** field, enter 29, then tab out of the field. Result: Today's date automatically populates the **New Reading Date** field. The **Inspector** field is populated by the name of the user who is entering the new reading. Note: You can change the auto-populated fields manually if you want.
5	Click **OK**. Result: The Enter Meter Readings dialog box closes and the meter reading is recorded.

Managing Meter Reading History

If a meter reading was incorrectly recorded, you can use the **Manage Meter Reading History** action to made the update.

The Manage Meter Reading History dialog box displays a list of meters whose readings have previously been changed. The dialog box provides an intuitive interface for making the change.



Note: In this dialog box you can modify the delta or the meter reading itself.

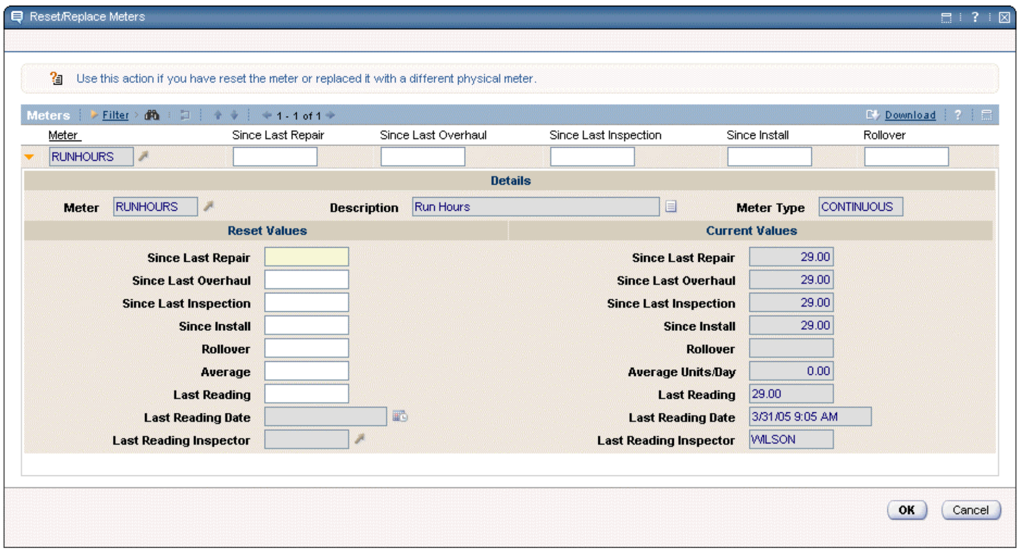
continued on next page

Working with Meters continued

Resetting or Replacing a Meter

When a meter has been changed out or an existing meter has been reset, Maximo needs to know the new reading and other details to account for the change. You can do this with the **Reset/Replace Meters** action.

The Reset/Replace Meters dialog box displays a list of all the meters on the asset.



Note: This example shows the details for a meter. When the dialog box initially opens, the details are not displayed.

Store Meter Readings with Work Order Reference

Maximo provides enhanced capability for recording meters against work orders.

Follow these steps to get an overview of this functionality:

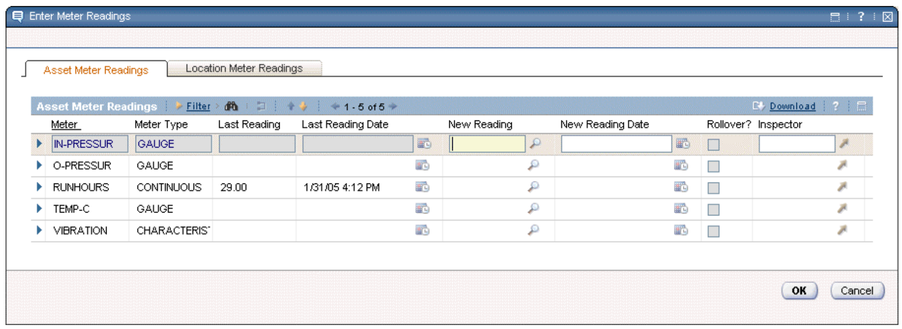
Step	Action
1	Access the **Work Order Tracking** application from the **Work Orders** module.
2	Insert a new work order with the following information: **Description:** Work On Pump [*your initials*] **Asset:** NEWASSET[*your initials*]

continued on next page

Working with Meters continued

Store Meter Readings with Work Order Reference

continued

Step	Action
3	Approve the work order.
4	Choose **Enter Meter Readings** from the Select Action menu. Result: The Enter Meter Readings dialog box displays a list of the active meters for the asset. 
5	Change the **New Reading** field for the RUNHOURS meter to 40, then click **OK**. Result: The meter reading is recorded with a reference to the work order. Note: Multiple readings can be taken on a work order to get a snapshot of meter readings as the work is done.

Special Note: Meters Tab Removed from Quick Reporting

There is no longer a Meters tab in the Quick Reporting application.

The **Enter Meter Reading** action replaces the tab, similar to the action used in Work Order Tracking in the preceding exercise.

Preventive Maintenance

Overview

This section provides an overview of the key enhancements to the Preventive Maintenance application.

We will access the application to take a brief look at some new fields and changes to tabs.

Please contact MRO Software Educational Services if you want more detailed training on this topic.

Key Enhancements

The key enhancements to the Preventive Maintenance application are as follows:

- The Master PM tab is now a separate Master PM application.
- Multiple meters can be associated with PMs.
- PM work orders can now be based on actual meter readings, not just on frequency or estimated due dates.
- Work orders can be auto-generated when meter readings reach specified criteria.

  Note: You no longer need to run a cron task or manually generate work orders to check meter criteria.
- Alert messages can now be generated/
- PMs can be performed on assets in storerooms.
- PMs are statusable.
- Multiple seasons are now available and are more easily defined.
- You can choose to generate a work order a specified period of time ahead of the expected generation.

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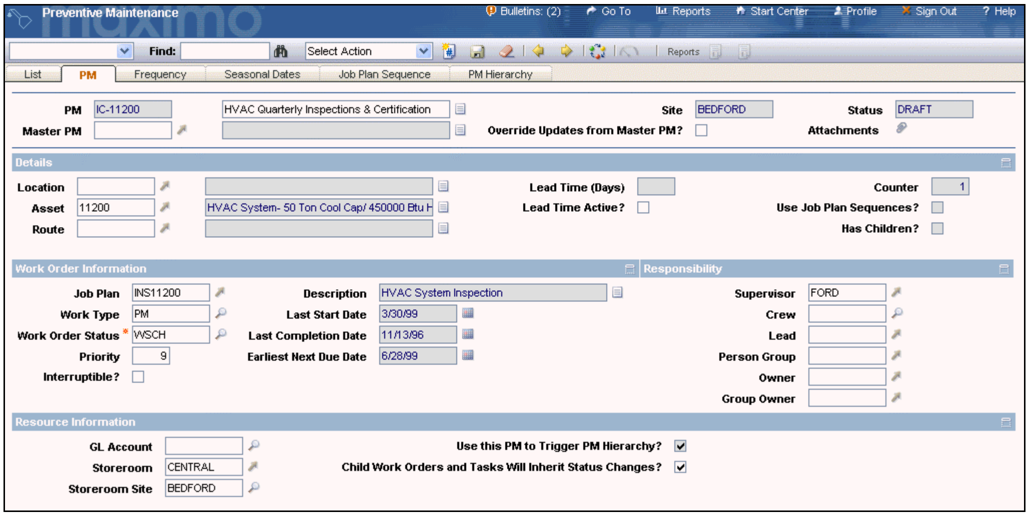
Preventive Maintenance continued

A Look at Preventive Maintenance: PM Tab

Let's take a brief look at some of the changes to the Preventive Maintenance application tabs.

We will start with the PM tab.



The notable new features on this tab are indicated in the following table.

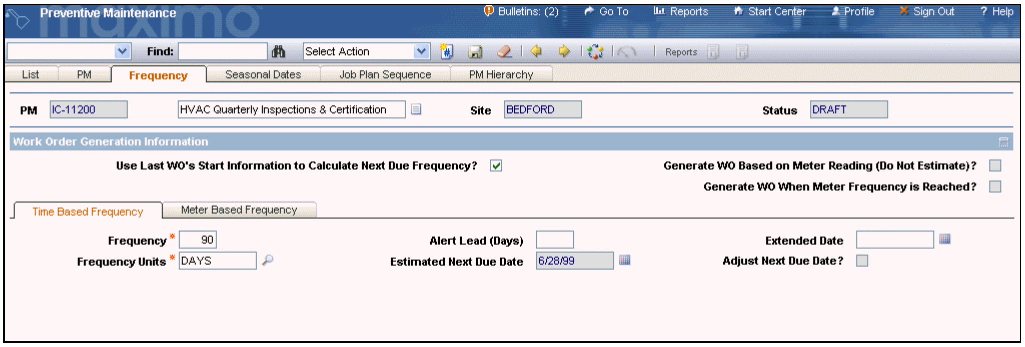
Feature	Description
Site field	Allows PM usage to be restricted at site level.
Status field	Allows status of PM to be determined. Note: PM status can serve as a criterion in workflow processes.

continued on next page

Preventive Maintenance continued

A Look at Preventive Maintenance: Frequency Tab

Access the Frequency tab.



The notable new features on this tab are described on the next page.

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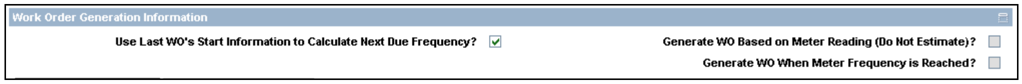
Preventive Maintenance continued

Work Order Generation Information Section

The table below provides a description of key new fields in the new Work Order Generation Information section of the Frequency tab.



Feature	Description
Use Last WO’s Start Information to Calculate Next Due Frequency?	Next Due Frequency can be calculated in two ways: One way is to calculate based on the last work order’s start date and the other way is based on the last work order’s completion date. Selecting this check box indicates that the next due frequency should be calculated on the start date of the last work order, rather than on the completion date of the last work order.
Generate WO Based on Meter Reading (Do Not Estimate)?	Work orders can be created either when the meter reading reaches the actual next due date or by estimating the date when the meter would reach the next due reading, based on meter average. Selecting this check box indicates that the meter reading should be used instead of the estimate.
Generate WO When Meter Frequency Is Reached?	This field becomes editable when the **Generate WO Based on Meter Reading (Do Not Estimate)?** field is checked. When this check box is selected, two things happen: • A WO is automatically generated when the frequency is reached. • E-mail to supervisor is generated.

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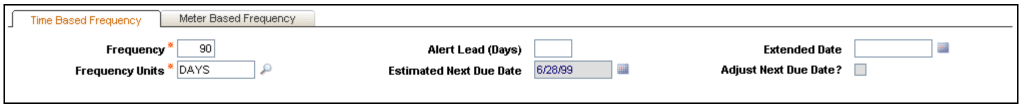
Preventive Maintenance continued

Time Based Frequency Subtab

The new Time Based Frequency subtab on the Frequency tab contains a new field called **Alert Lead (Days)**.



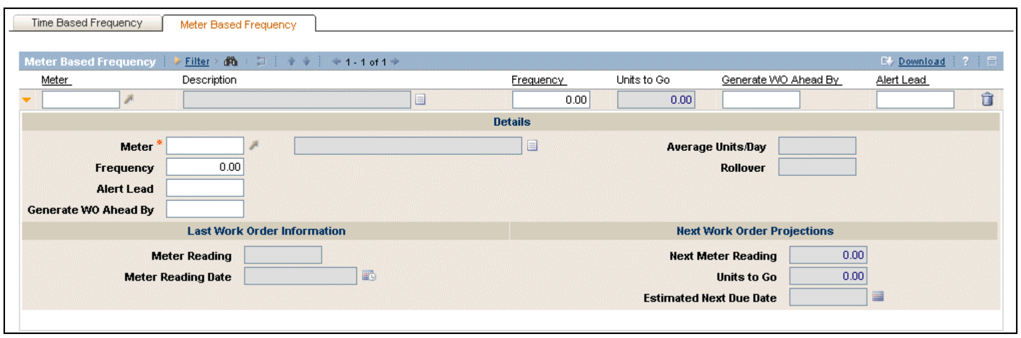
This field will cause Maximo to check a certain number of days *prior* to when the indicated time-based frequency will be reached and create a work order.

This new feature can help an organization get a head start on PMs.

<u>Note</u>: This field is displayed in *day units*, not in the time-based frequency of the PM.

Meter Based Frequency Subtab

The new Meter Based Frequency subtab of the Frequency tab provides additional functionality.



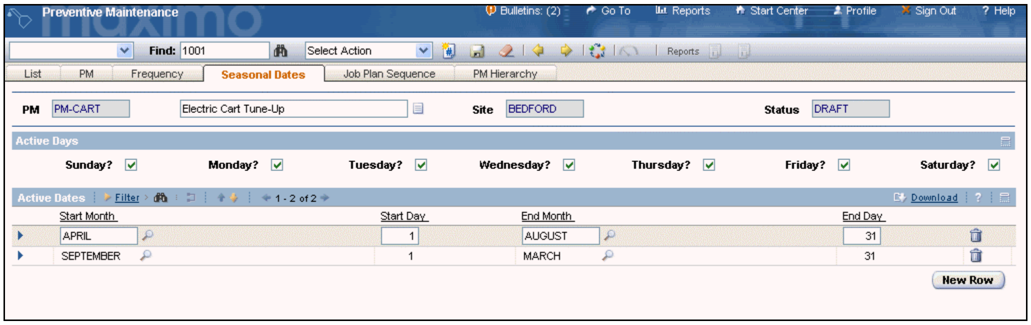
- The **Alert Lead** field (in units of frequency) allows advance checking of PMs for potential creation of WOs before the anticipated frequency.
- The **Generate WO Ahead By** field (in units of frequency) allows advance generation of WOs based on meter readings.
- Multiple meters can be added to this subtab.

continued on next page

Preventive Maintenance continued

A Look at Preventive Maintenance: Seasonal Dates Tab

Access the Seasonal Dates tab.

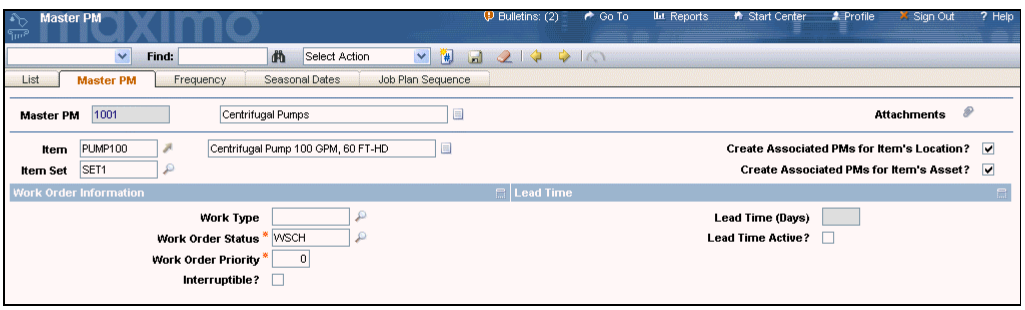


- The Active Days section allows you to select the days of the week on which work orders can be generated.
- The Active Dates section allows numerous time periods (seasons) of various durations to be added.

Master PM Application

The Master PM application contains the functionality formerly provided by the Master PM tab in the Preventive Maintenance application.

This application was created to provide a higher degree of control over the creation and maintenance of Master PMs.



Note: The **Item Set** field is a key new field for Master PMs. This field indicates the item set in which the item resides. As noted in previous chapters, all organizations that use this item set can use the Master PM.

Condition Monitoring

Overview

MXES provides some great new features in the Condition Monitoring application. Those who use this application frequently will really appreciate the enhancements.

This section provides an overview of the enhancements, then brings you into the application to take a brief look.

Key Enhancements

The key enhancements to the Condition Monitoring application are as follows:

- You can specify upper/lower limit PMs.
- You can directly specify an upper/lower limit job plan.
- You do not have to create a designated upper/lower PM just to designate a job plan.
- Cron task can be used to check conditions:
  - MeasurePointWoGenCronTask
  - Maintained in Cron Task Setup application
- Maximo will automatically generate a work order when cron task time-based criteria and condition criteria are met.

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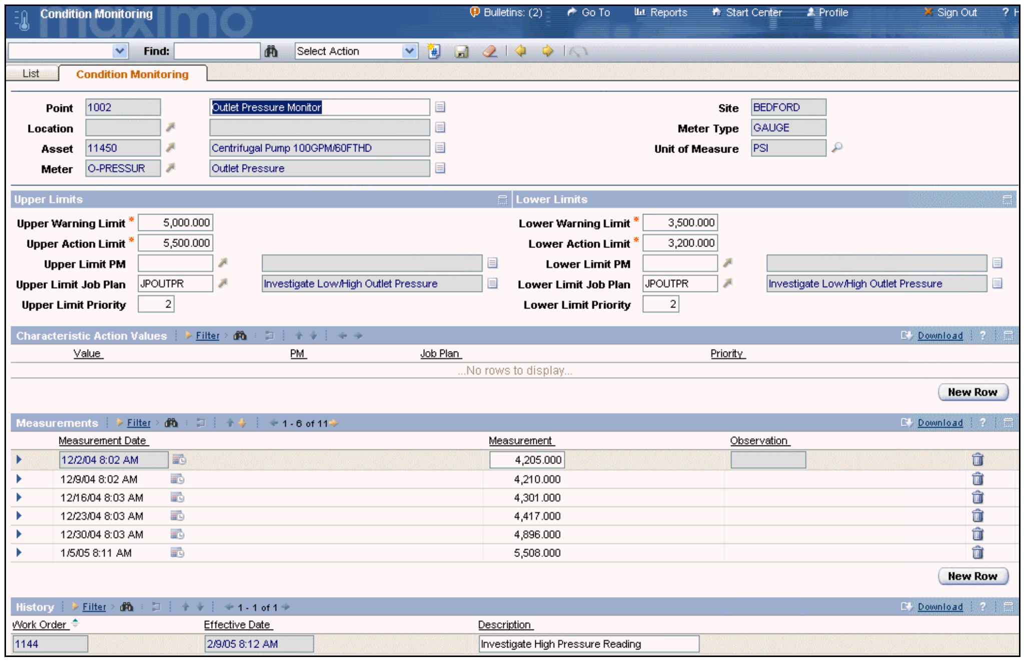
Condition Monitoring continued

A Look at Condition Monitoring

We will now take a brief look at some of the changes in the Condition Monitoring application. The application is accessed from the Assets module.



The table on the next page provides a description of some of the key new fields.

Note: CM points will show up in the details for designated meters listed on the asset record.

continued on next page

Condition Monitoring continued

A Look at Condition Monitoring

continued

Key Field	Description
Upper Limit PM	Can choose a PM to be used when the upper limit is exceeded
Upper Limit Job Plan	Can choose a job plan to be used instead of a PM when the upper limit is exceeded
Upper Limit Priority	Will override the priority of PM or job plan when the upper limit is exceeded
Lower Limit PM	Can choose a PM to be used when the lower limit is exceeded
Lower Limit Job Plan	Can choose a job plan to be used instead of a PM when the lower limit is exceeded
Lower Limit Priority	Will override the priority of PM or job plan when the lower limit is exceeded

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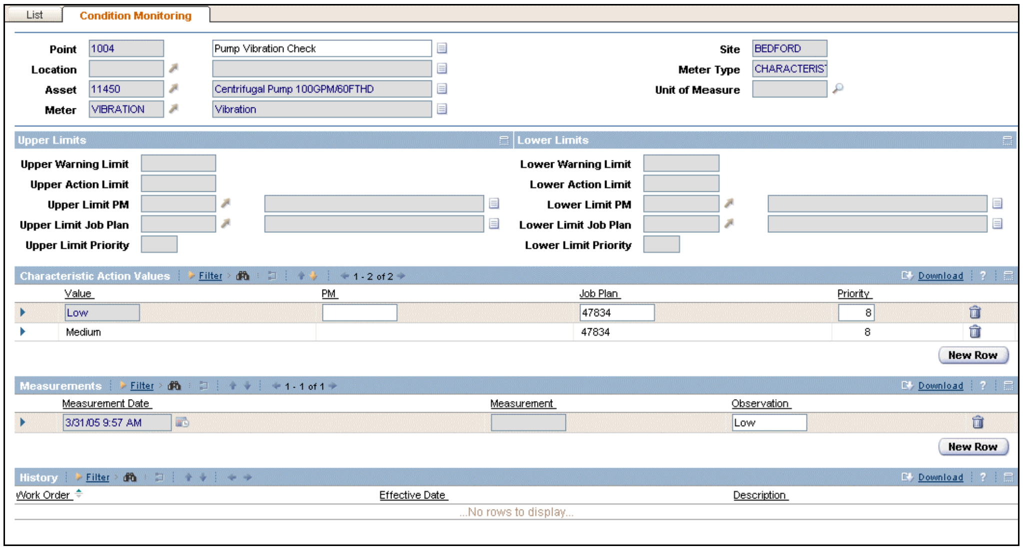
Condition Monitoring continued

Characteristic Meters

Because characteristic meters use a domain list for its values and do not have ranges, they are handled a bit differently than range-type meters.



As shown here, when a characteristic meter is associated with a CM point, the Upper Limits and Lower Limits sections become read-only.

In addition, the Characteristic Action Values section is enabled so that actions (i.e., Job Plan or PM) can be specified for the possible meter characteristics.

Chapter Summary

Meters

Some of the many new features related to meters are as follows:

- Meters are at the system level.
- A new Meters application has been created.
- Multiple meters can be created and added to assets and locations.
- Meter groups can be created and applied to assets and locations.
- Meter history is available.
- Inheritance of meter data can be controlled.
- Meter readings can be associated with work orders.

Preventive Maintenance

The key enhancements to the Preventive Maintenance application are as follows:

- The Master PM tab is now a separate Master PM application.
- Multiple meters can be associated with PMs.
- PM work orders can now be based on actual meter readings, not just on frequency or estimated due dates.
- Auto Generation of work orders on meeting meter criteria.

  Note: You no longer need to run a cron task or manually generate WOs to check meter criteria.
- PM Alerts.
- PMs can be performed on assets in storerooms.
- PMs are statusable.
- Multiple seasons are now available and are more easily defined.
- You can choose to generate a work order a specified period of time ahead of the expected generation.

continued on next page

Chapter Summary continued

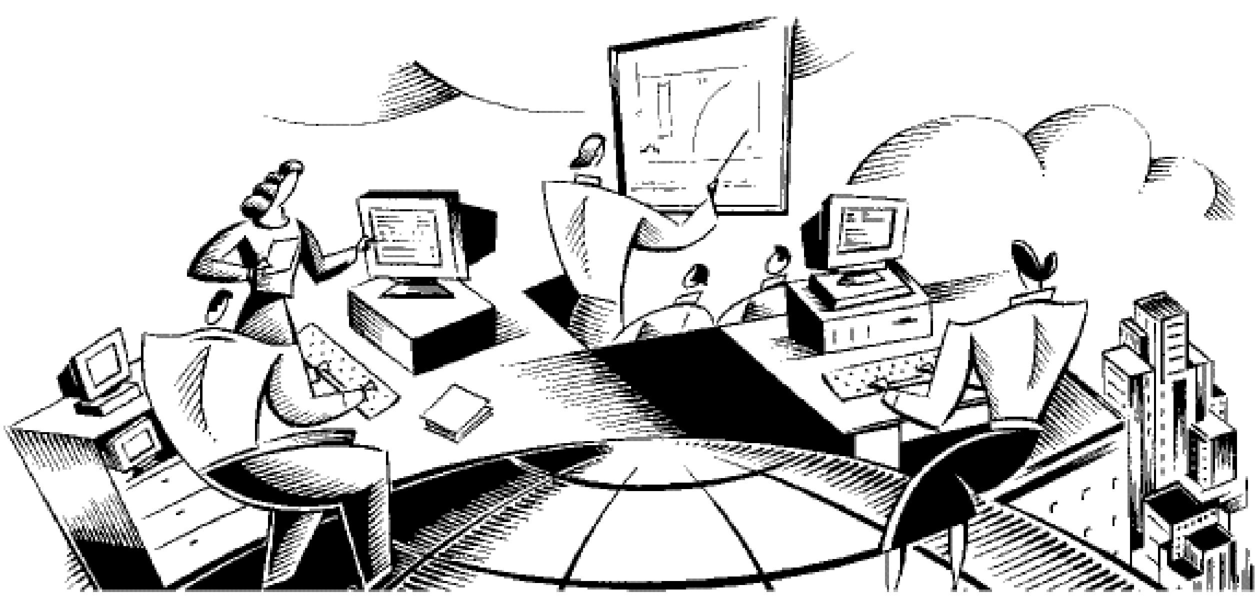
Condition Monitoring

The key enhancements to the Condition Monitoring application are as follows:

- You can specify upper/lower limit PMs.
- You can directly specify an upper/lower limit job plan.
- You do not have to create a designated upper/lower PM just to designate a job plan.
- Cron task can be used to check conditions:
  - MeasurePointWoGenCronTask
  - Maintained in Cron Task Setup application
- Maximo will automatically generate a work order when cron task time-based criteria and condition criteria are met.

NOTES:

Chapter 10: Reporting



In This Chapter This chapter contains the following topics:

Chapter Overview

Introduction

This chapter previews the changes made to Actuate reporting features as they relate to MXES.

Much customer feedback has been used to make these changes.

Chapter Focus

This chapter assumes that you are familiar with Actuate reporting from MAXIMO 5.x applications, so we will cover the key changes in features and functionality.

First we provide an overview of the changes. Then we will do some exercises designed to enhance your understanding of the changes.

For more detailed training on Actuate, please contact MRO Software Educational Services.

Learning Objectives

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

- run reports in Maximo,
- describe the new types of reports, and
- change report labels with the new Report Administration application.

Key Enhancements

Overview

In this section we describe the key changes made in MXES regarding Actuate reports.

There is also an exercise that will give you a chance to see the changes and ask questions.

List of Enhancements

The report-related enhancements made to MXES are as follows:

- More integration with the Maximo interface
- Improved standard report content and report types
- Improved ease of content creation
- Easier creation of request pages and parameters using the new Report Administration application
- Improved report translation capability
- Moving of KPIs to the KPI Manager application

In the following sections we will take a closer look at some of these enhancements.

Improved Integration

Overview

Because clients have requested it, MXES now offers a more seamless integration between Maximo and Actuate.

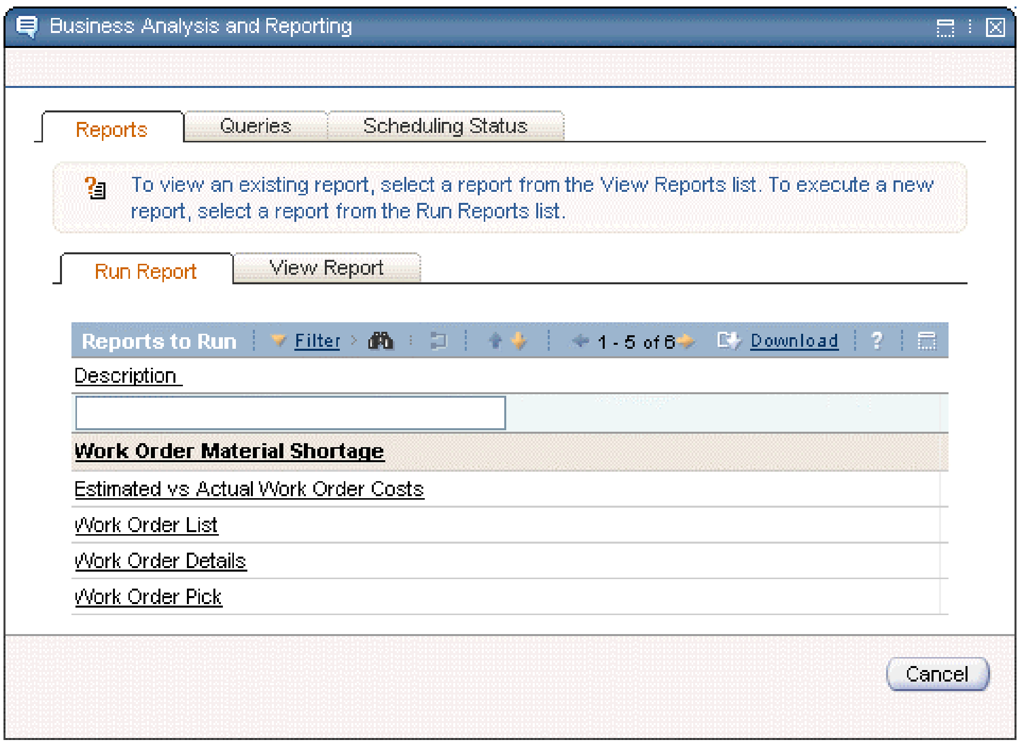
Some of the improvements are covered in this section.

Improved Report Action

In all applications that have reports, you can select the **Report** action to obtain and run a list of reports.

This was also the case in MAXIMO 5.x, but now the list shows up in the Business Analysis and Reporting dialog box, not in a separate browser window.

An example is shown here.



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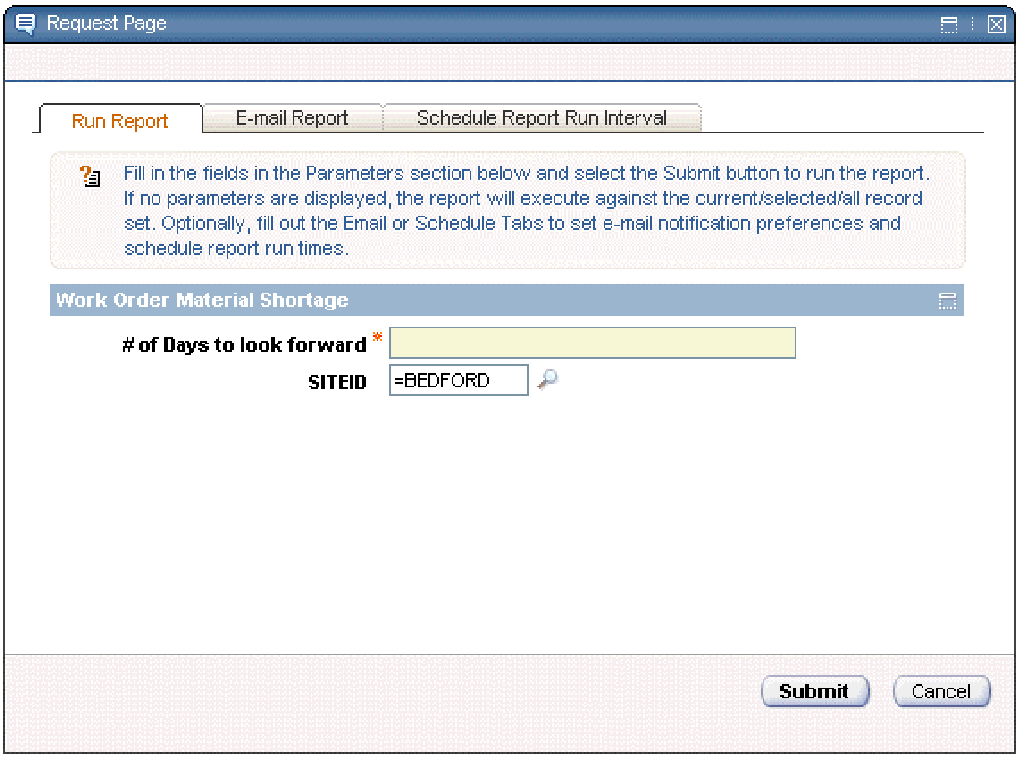
Improved Integration continued

Request Pages in Dialog Boxes

From the Business Analysis and Reporting dialog box you can click a report name to select a report that you want to run.

The resulting request page is now in a dialog box, not in a separate browser window.

An example is shown here.



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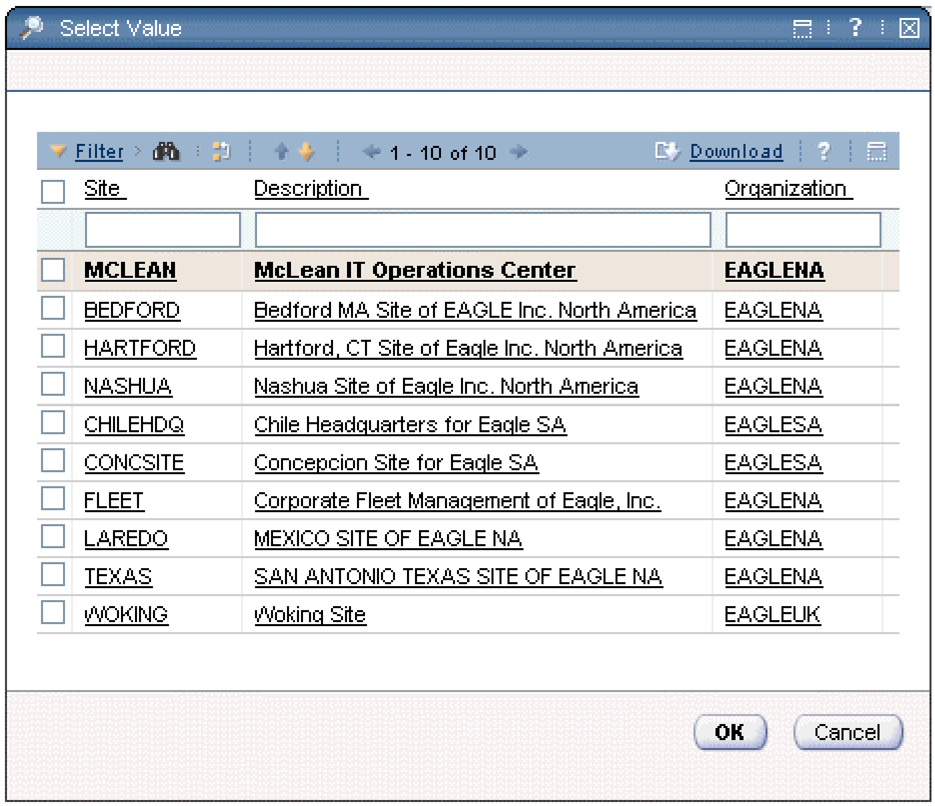
Improved Integration continued

Standard Maximo Interface Functionality

Many of the reporting-related dialog boxes and other features use MXES interface and navigation features as much as possible.

In request pages, for example, standard Maximo value lists become available directly within a dialog box, similar to the example below.

Note: Standard Maximo filtering, tabbing, and so forth are available in the Business Analysis and Reporting dialog box.



While using various reporting functionality, you will see additional Maximo features included.

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Improved Integration continued

Report Templates

All “out of the box” Maximo reports have been created using report templates.

These report templates are provided to report developers to provide a consistent look and feel and a consistent interface.

Report templates are used with the e.Report Designer Professional application to develop the reports.

For detailed training on report templates and Actuate report development, please contact MRO Software Educational Services.

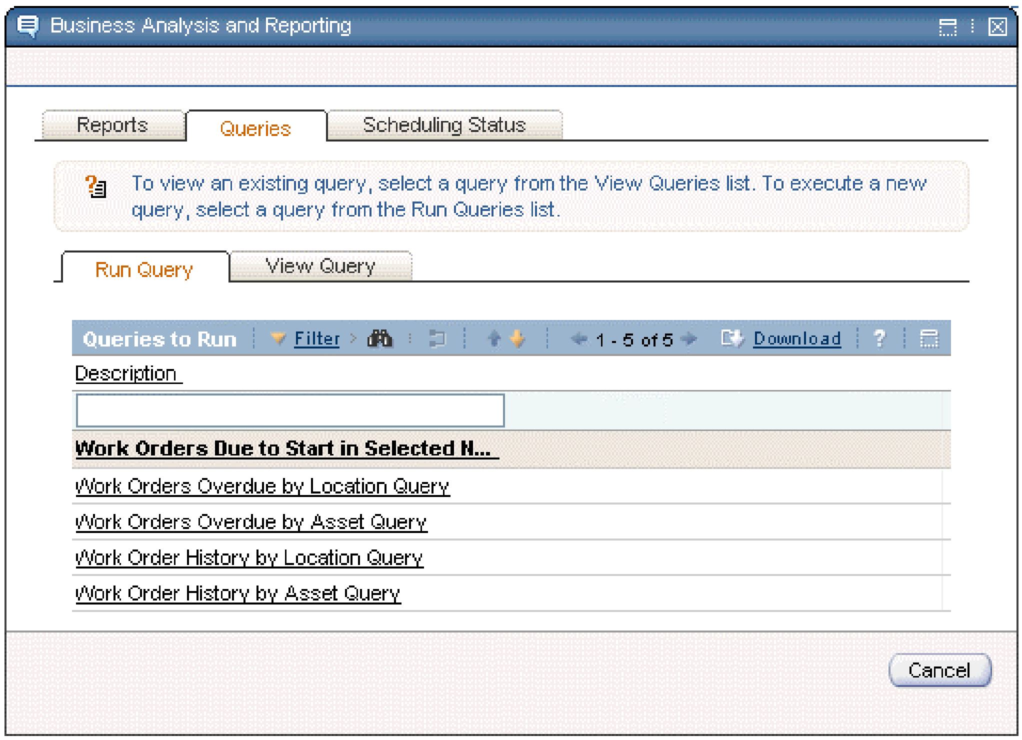
continued on next page

Improved Integration continued

Query Product Part of MXES

Query-type reports can be accessed and run from the Queries tab of the Business Analysis and Reporting dialog box.

This dialog box is a standard Maximo dialog box that contains functionality common to other Maximo dialog boxes.



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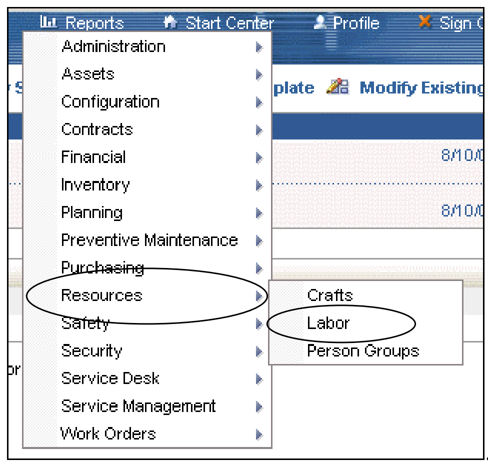
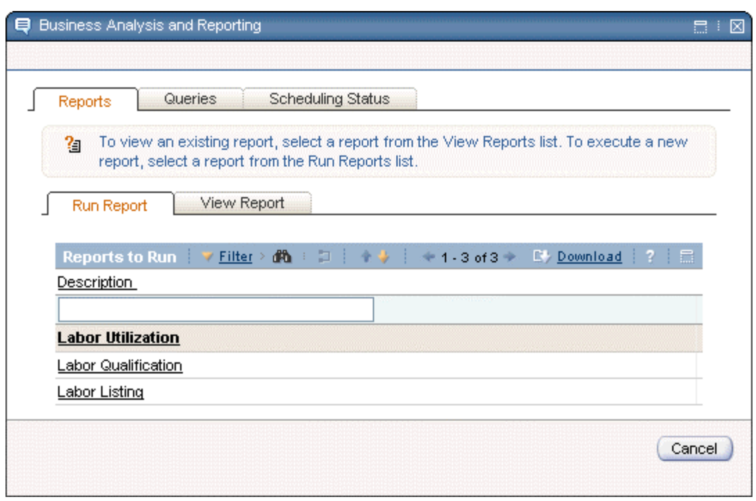
Improved Integration continued

Run a Report from the Toolbar

Reports can be accessed from the Reports link located on the toolbar of Maximo screens, as well as from within applications.

Follow the steps below to see how you can run reports from the toolbar.

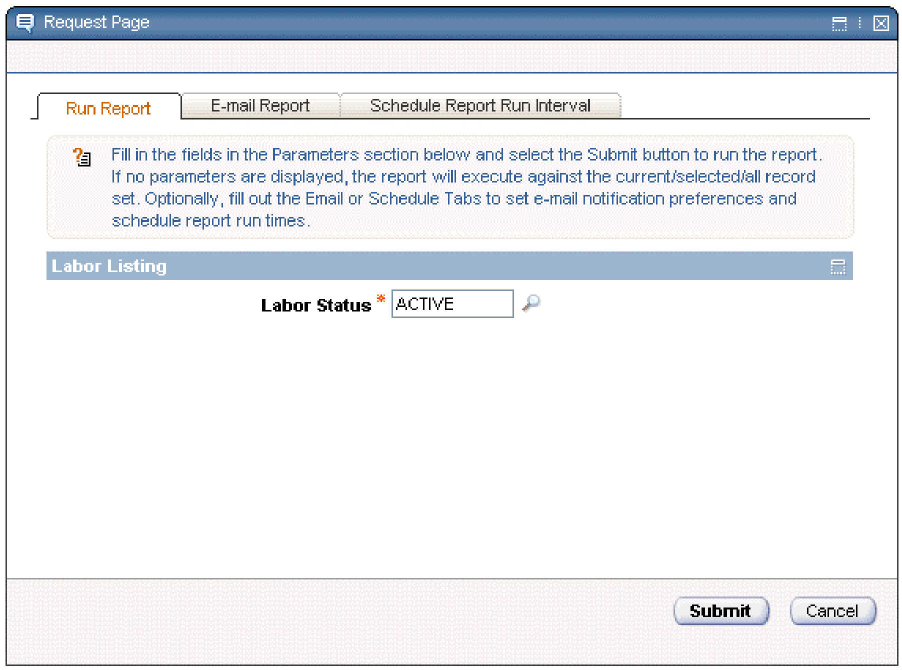
Step	Action
1	From the **Reports** link at the top of the screen, select **Labor** from the **Resources** module.  Result: The Business Analysis and Reporting dialog box for the Labor application opens. 

continued on next page

Improved Integration continued

Run a Report from the Toolbar

continued

Step	Action
2	On the **Run Report** subtab, click on the **Labor Listing** report. Result: The Request Page for the Labor Listing report opens. 
	Note: Because the Request Page is now in Maximo, it is no longer necessary to create a separate .rod file for the request page when creating the report.

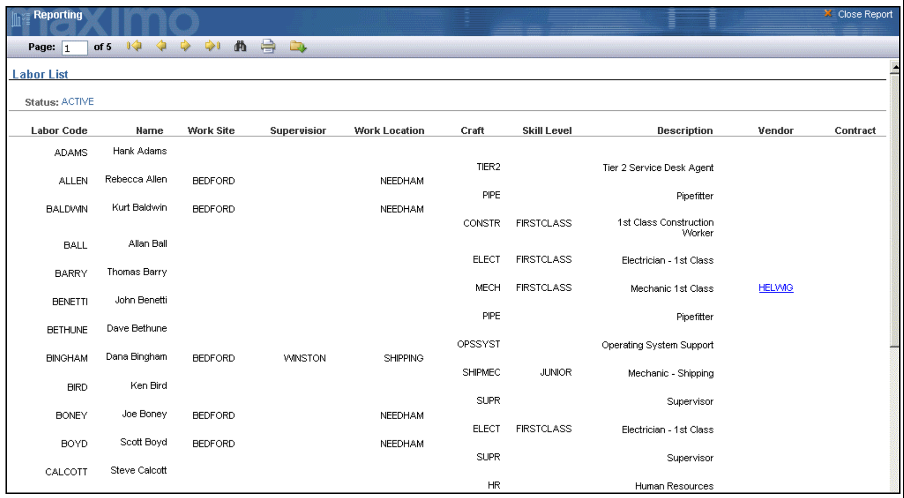
continued on next page

Improved Integration continued

Run a Report from the Toolbar

continued

Step	Action
3	Ensure that the **Labor Status** field contains the value ACTIVE, then click **Submit**. Result: Maximo displays the Labor List report in a separate browser window, as shown here.


Reporting Close Report

Page: 1 of 5

Labor List

Status: ACTIVE

Labor Code	Name	Work Site	Supervisior	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	HELWIG	
BENETTI	John Benetti				PIPE		Pipefitter		
BETHUNE	Dave Bethune				OPSSYST		Operating System Support		
BINGHAM	Dana Bingham	BEDFORD	WINSTON	SHIPPING	SHIPMEC	JUNIOR	Mechanic - Shipping		
BIRD	Ken Bird				SUPR		Supervisor		
BONEY	Joe Boney	BEDFORD		NEEDHAM	ELECT	FIRSTCLASS	Electrician - 1st Class		
BOYD	Scott Boyd	BEDFORD		NEEDHAM	SUPR		Supervisor		
CALCOTT	Steve Calcott				HR		Human Resources		

Improved Report Content

Overview

In MXES there is an increased emphasis on the availability of value-added reports. Correspondingly, many useful reports have been added, while many of the non-value-added reports, such as some list reports, have been eliminated.

This section provides some details on these changes.

Reduction in Number of List Reports

It was determined that many list reports did not provide a real value-add. So, in MXES, there has been a reduction of list reports by nearly half.

Most list reports that serve as hyperlinks to more value-added detail reports have been maintained in MXES.

continued on next page

Improved Report Content continued

Increased Value-Added Reports

We had mentioned that there is a trend toward value-added reports.

Here are some examples of value-added reports in MXES:

- Asset Measurement History report (Assets application)
- Job Plan Details report (Job Plans application)
- Open Work Orders and PM report (Work Order Tracking application)

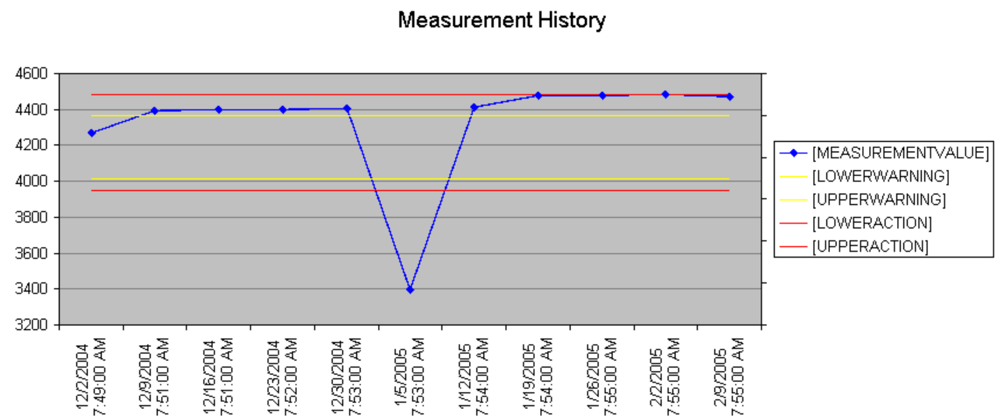
Note: Feel free to ask your instructor to look at these reports from the applications.

Increased Graphics in Reports

Graphics provide enhanced "quick analysis" of data, so more graphics have been provided in reports.

Example:

Asset Measurement History report (Assets application)



Notes:

- The graphics are generally on the last page of reports.
- Feel free to ask your instructor to look at this report. Use the following data:

  * Asset = 11430, 11450 (use either asset – not both)

  * Site = BEDFORD

continued on next page

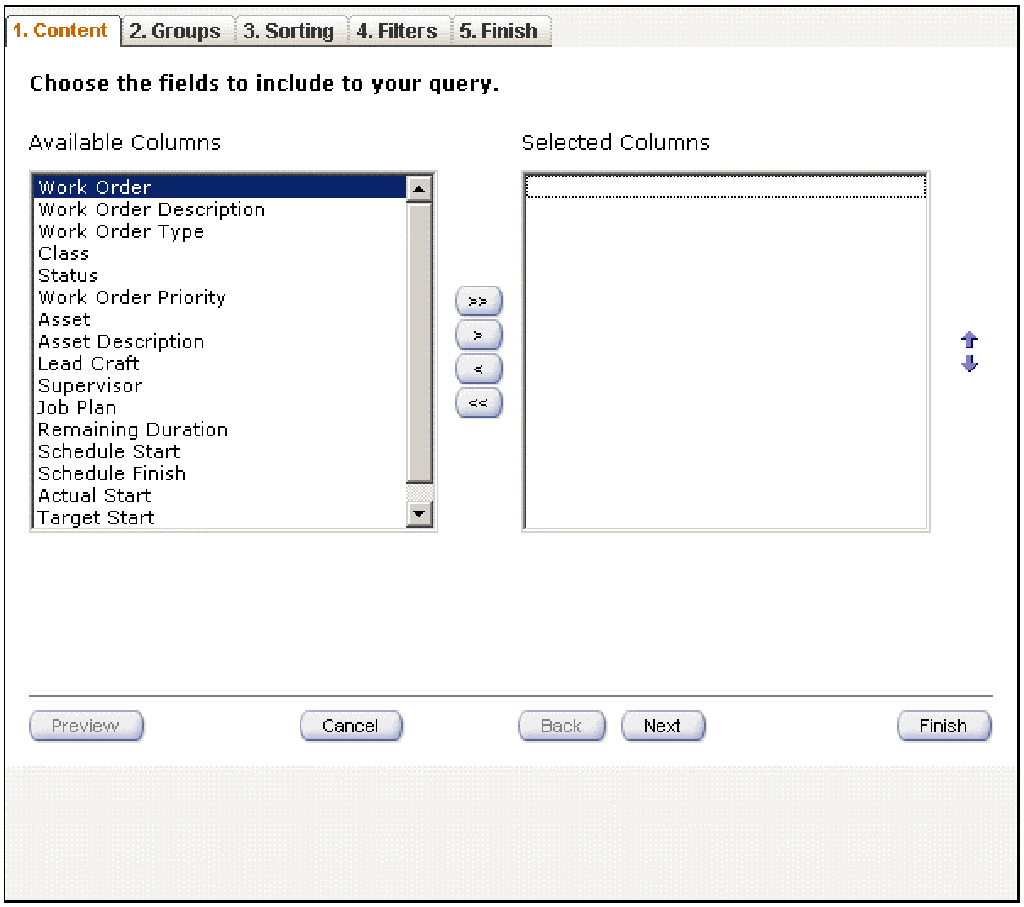
Improved Report Content continued

Query Reports

MXES offers flexibility in reporting by including at least 20 query reports "out of the box."

You can access query reports from the Queries tab of the Business Analysis and Reporting dialog box.

When you click on a query report in the list, a separate browser opens with an interface (similar to the example below) that enables you to format the query report.



Note: You will have a chance to run a query later in the chapter.

Report Types

Overview

To enhance the reporting capability of MXES, several new report types have been added. The previous report types have been maintained.

This section identifies the new and previous report types and provides an overview of each.

Previous Report Types

MXES includes three previous report types:

- List
- Analysis
- Detail

Note: Although these report types previously existed in MAXIMO 5.x, we will provide an example of each to ensure that you are aware of them.

New Report Types

MXES includes three new report types:

- Query
- Cross tab
- Hierarchy

Note: Later in this section we will provide an example of each type.

continued on next page

Report Types continued

List Reports (Previous)

Although it was determined that some list reports were low value, not all of them were eliminated, because many list reports provide links to value-added detail reports.

Example:

Job Plan List report (Job Plans application)

Reporting | Close Report

Page: 1 of 2

Job Plan List

Job Plan	Description	Duration	WO Priority	Organization	Site
APPLREQ	Application Request	0.00	3		
AUTOTRANS	Automatic Transmission Service	3.00	2	EAGLENA	FLEET
ENGSERV	ENGINE SERVICE - SPF343 DECK	3.00	1	EAGLENA	FLEET
INS-PC	PC Inspection	1.00	3	EAGLENA	BEDFORD
INS-SUBSYS	General Inspection of Major Subsystems	3.00	9	EAGLENA	BEDFORD
INS1002	Fire Extinguisher Inspection	0.00	0	EAGLENA	BEDFORD
INS11200	HVAC System Inspection	2.50	9	EAGLENA	BEDFORD
INS11300	Reciprocating Compressor Inspection	3.00	9	EAGLENA	BEDFORD
INS11460	Burner Gas Fired Inspection	3.00	9	EAGLENA	BEDFORD
INS12100	Electric Cart/Forklift Inspection	1.00	7	EAGLENA	BEDFORD
INS12200	Overhead Crane Inspection	1.00	7	EAGLENA	BEDFORD
INS13141	PKG Machine, Elevator & Drainpan Inspection	3.00	9	EAGLENA	BEDFORD
INS15210	Inspect and Adjust Westinghouse Overcurrent Relay	1.00	8	EAGLENA	BEDFORD
IT-ACC-DIS	Disable IT Accounts	0.00	1		
IT-ACC-NEW	Create IT Accounts	0.00	2		
IT-ISSUE	New Employee Asset Issue	0.00	2	EAGLENA	
JP1		0.00		EAGLENA	NASHUA

Note: There is a new interface to these reports. The hyperlink in the far left column on the screen provides further details, thereby making this a value-added report.

Analysis Reports (Previous)

Analysis reports make up the majority of reports in Maximo.

Example:

Summary of Asset Failures by Location report (Assets application)

Reporting | Close Repor

Page: 1 of 1

Summary of Asset Failures

Location: BR430
Description: Condensate Return Pump- Centrifugal/100GPM/60FTHD
Site: BEDFORD
Start Date: 1/1/1995
End Date: 1/1/2005

Asset	Description	Mfr	Install Date	Warranty Date	Failure Class	# of Failures	MTBF (Days)	Avg Downtime During Failures(Hrs)	Avg Downtime All (Hrs)
11430	Centrifugal Pump 100GPM/60FT HD	IR	4/7/1995	1/29/2011	PUMPS	20	95.20	2.03	2.03

Note: If you want to run this report, use the following data:
* Location = BR430
* Site = BEDFORD
* Start Date = 1/1/95
* End Date = 1/1/05

continued on next page

Report Types continued

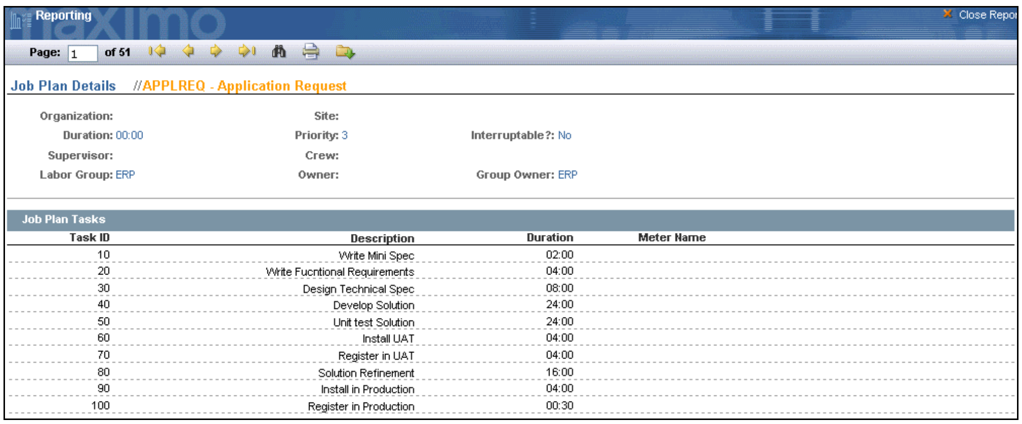
Detail Reports (Previous)

Detail reports are value-added because they provide a more in-depth look at a specific record.

Many detail reports are also available from a corresponding list report from which a link to a specific record can be selected.

Example:

Job Plan Details report (Job Plans application)


Reporting
Close Report
Page: 1 of 51

Job Plan Details //APPLREQ - Application Request

Organization:
Site:
Duration: 00:00
Priority: 3
Interruptable?: No
Supervisor:
Crew:
Labor Group: ERP
Owner:
Group Owner: ERP

Job Plan Tasks

Task ID	Description	Duration	Meter Name
10	Write Mini Spec	02:00	
20	Write Fucntional Requirements	04:00	
30	Design Technical Spec	08:00	
40	Develop Solution	24:00	
50	Unit test Solution	24:00	
60	Install UAT	04:00	
70	Register in UAT	04:00	
80	Solution Refinement	16:00	
90	Install in Production	04:00	
100	Register in Production	00:30	

continued on next page

Report Types continued

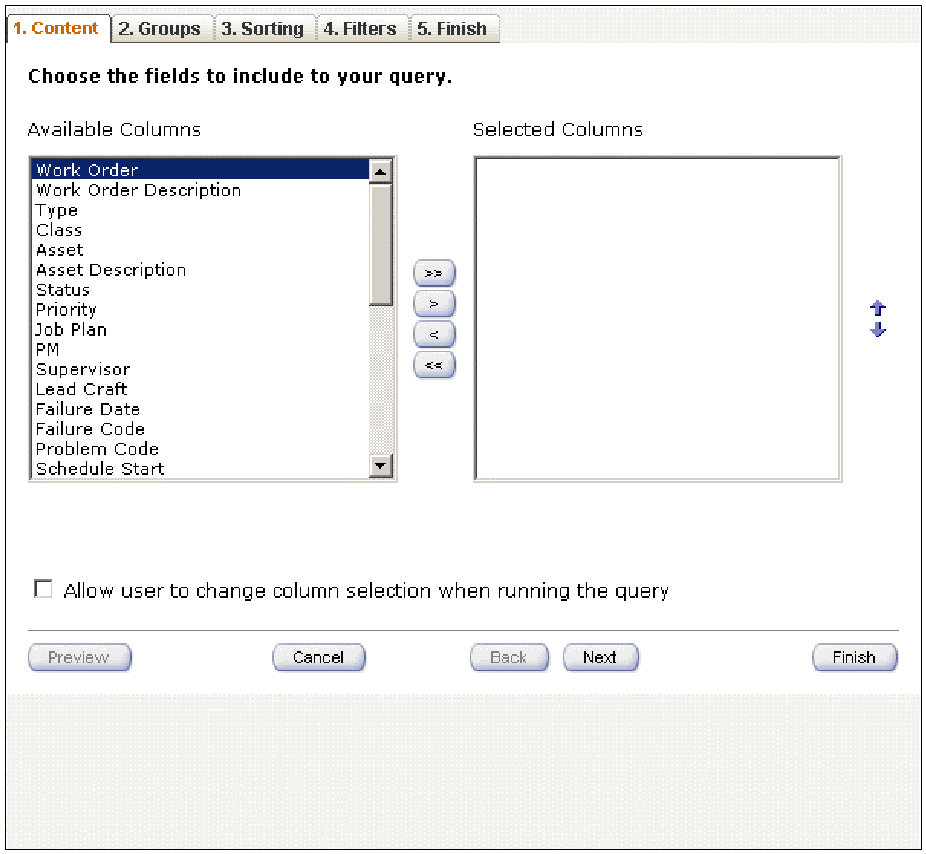
Query Report (New)

You access query reports from the Queries tab of the Business Analysis and Reporting dialog box.

They provide an interface from which you can do such things as select fields or group and sort information.

Example:

Work Order History By Location Query report (Work Order Tracking application)



Notes:

- In the next exercise, you will have the chance to run a query report.
- For more detailed training on using query reports, please contact MRO Software Educational Services.

continued on next page

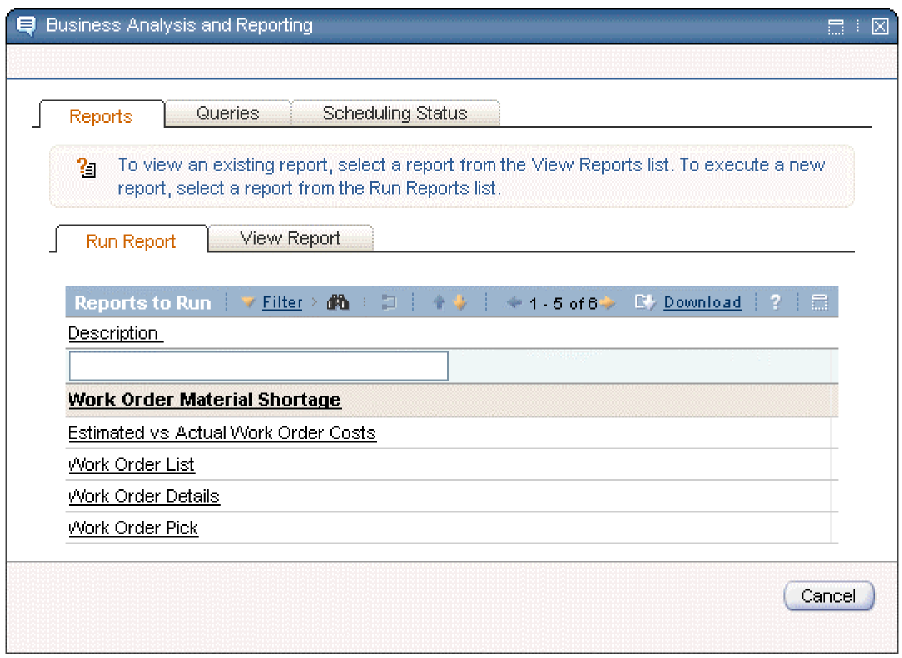
Report Types continued

Creating a Query Report

The steps below will show you how to create the Work Order History by Asset Query report.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Access the Business Analysis and Reporting dialog box from the Work Order Tracking application.

Result: Your screen should display the dialog box, similar to the graphic shown here:



</td></tr>
</table>

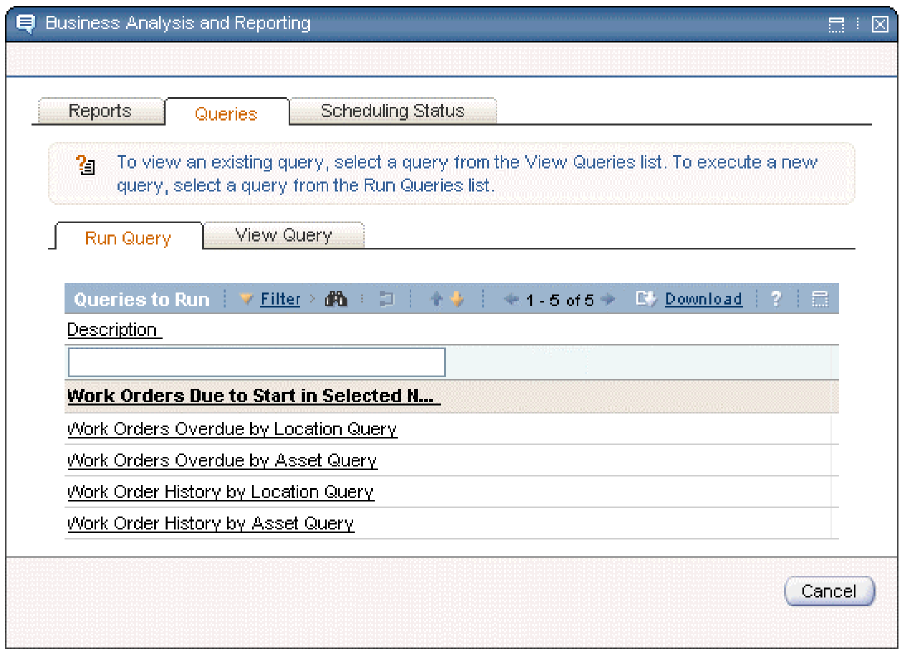
continued on next page

Report Types continued

Creating a Query Report

continued

Step	Action
2	Click the **Queries** tab. Result: The Queries tab displays a list of query-type reports, similar to this example:



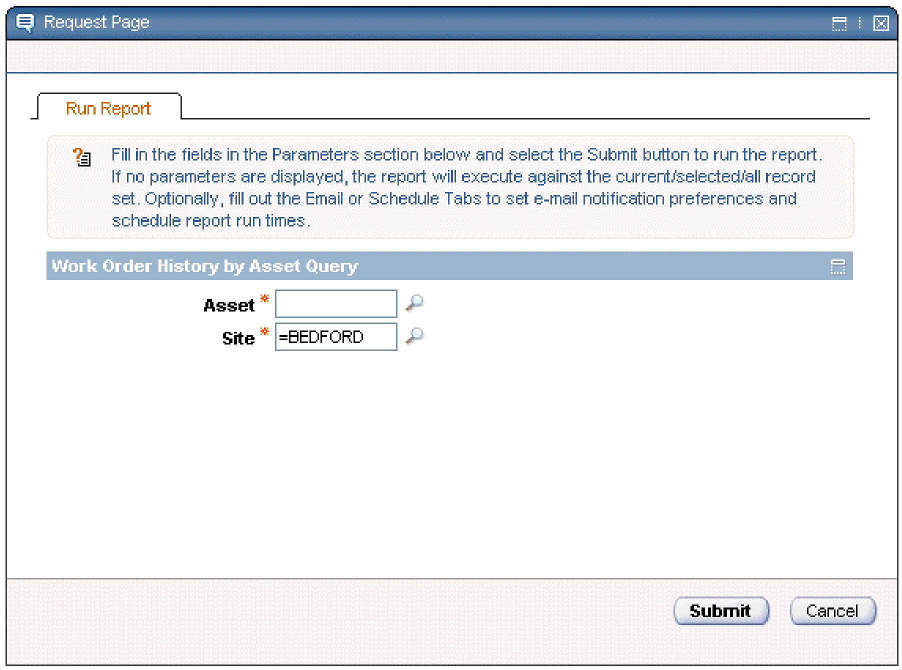
continued on next page

Report Types continued

Creating a Query Report

continued

Step	Action
3	Click on the **Work Order History by Asset Query** report. Result: The Request Page displays.

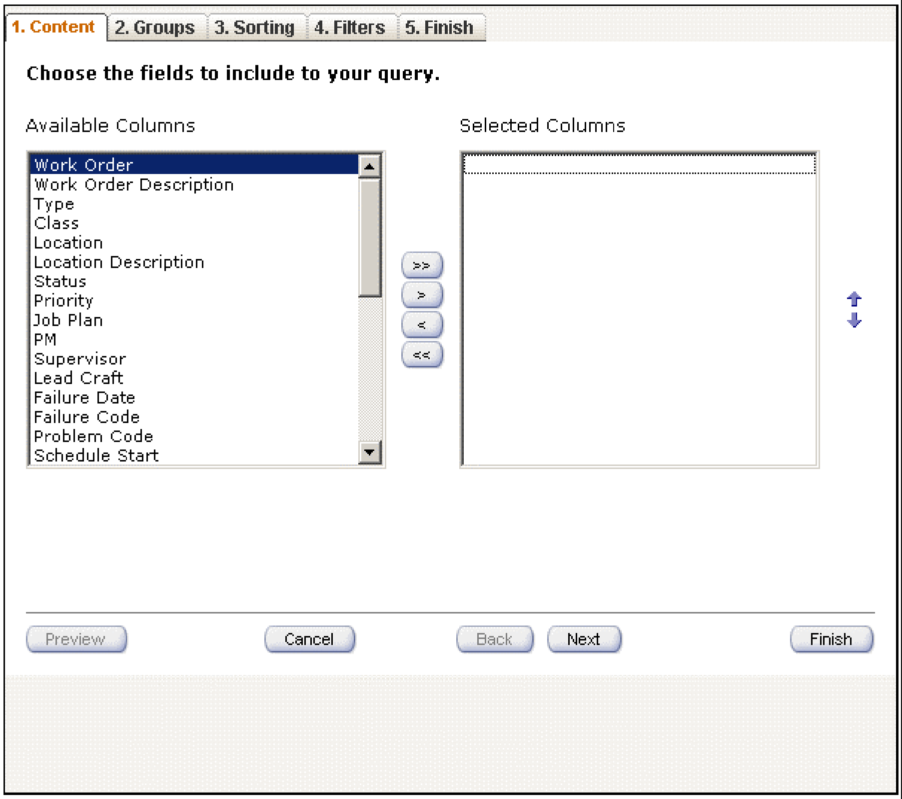


continued on next page

Report Types continued

Creating a Query Report

continued

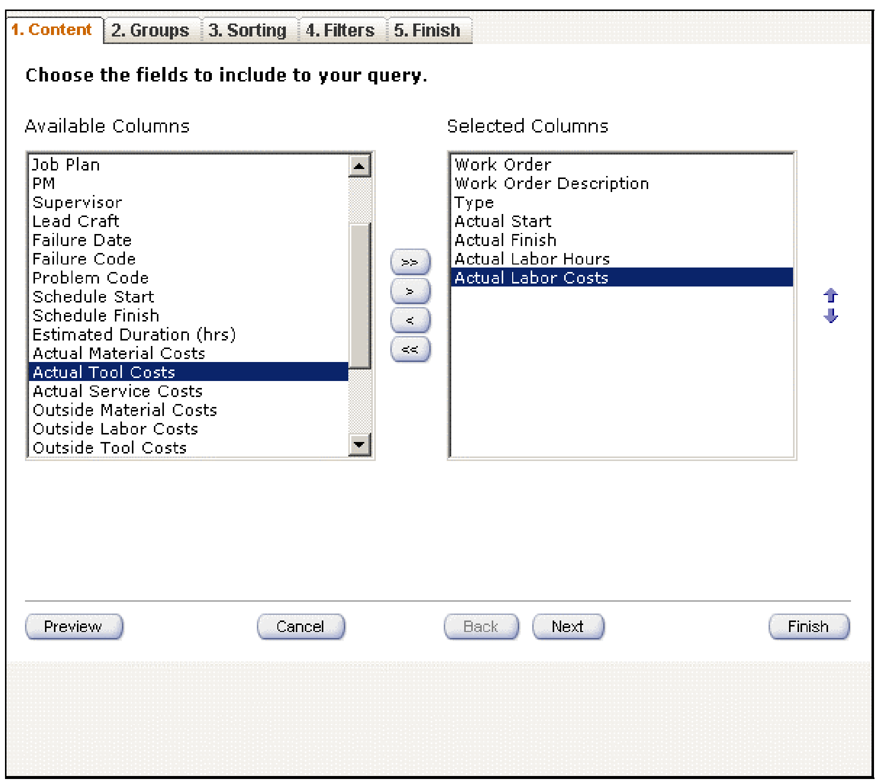
Step	Action
4	Enter the following information, then click **Submit**. **Asset:** 11430 **Site:** BEDFORD Result: The Query screen displays in a separate browser window. 

continued on next page

Report Types continued

Creating a Query Report

continued

Step	Action
5	Move the following fields from Available Columns to Selected Columns by clicking on them and clicking the  button. • Work Order • Work Order Description • Type • Actual Start • Actual Finish • Actual Labor Hours • Actual Labor Costs <u>Result</u>: Your screen should look similar to this: 

continued on next page

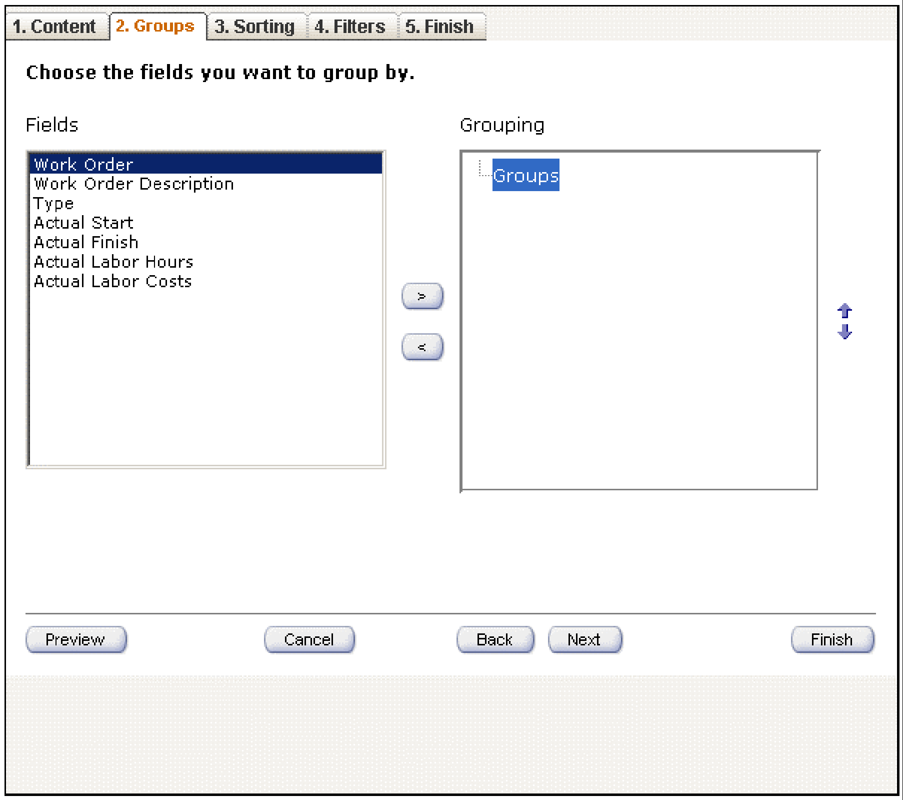
Report Types continued

Creating a Query Report

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>6</td><td>Click on the Groups tab.

Result: Your screen should look similar to this:

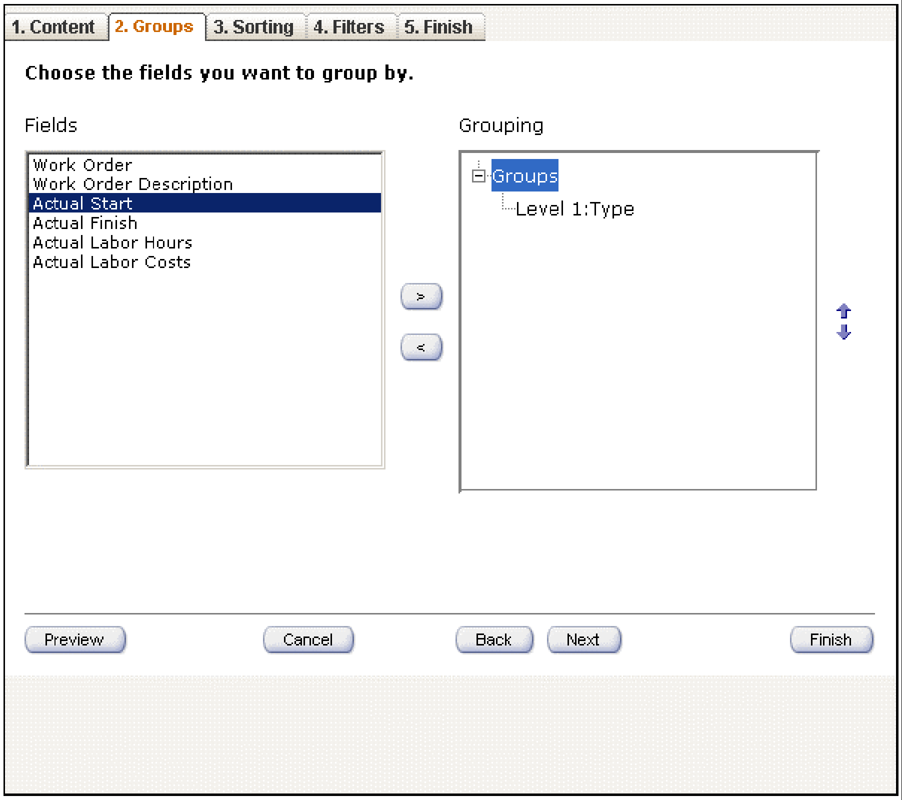

</td></tr>
</table>

continued on next page

Report Types continued

Creating a Query Report

continued

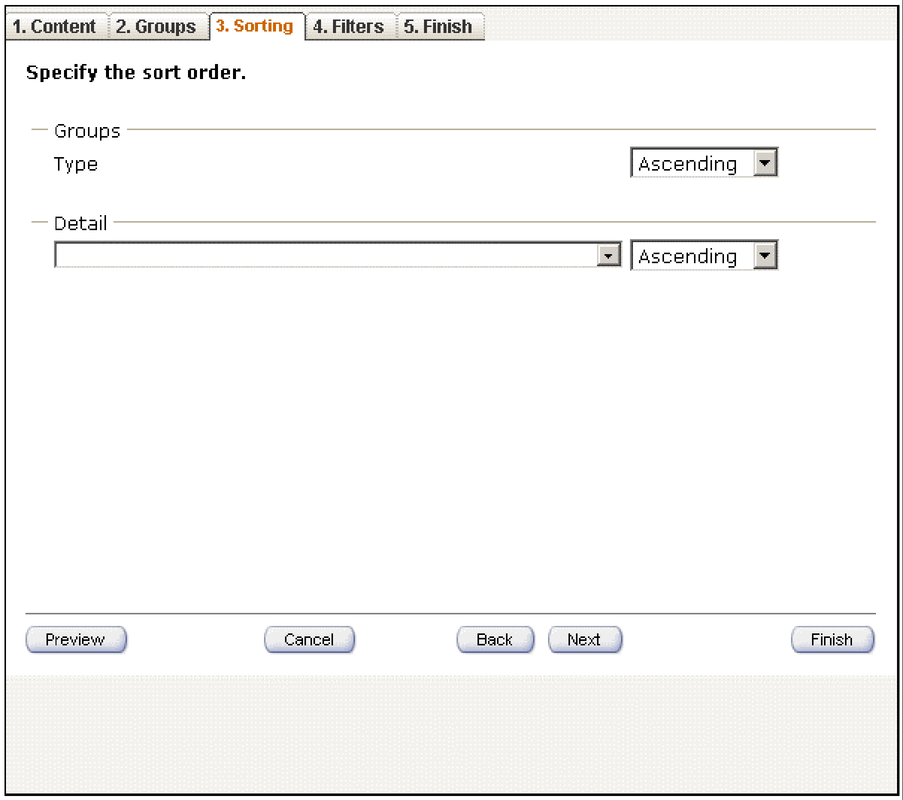
Step	Action
7	You want to group the report by type, so move **Type** from the Fields column to the Grouping column. Result: Your screen should look similar to this: 

continued on next page

Report Types continued

Creating a Query Report

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>8</td><td>Click on the **Sorting** tab.
Result: Your screen should look similar to this:

</td></tr>
</table>

continued on next page

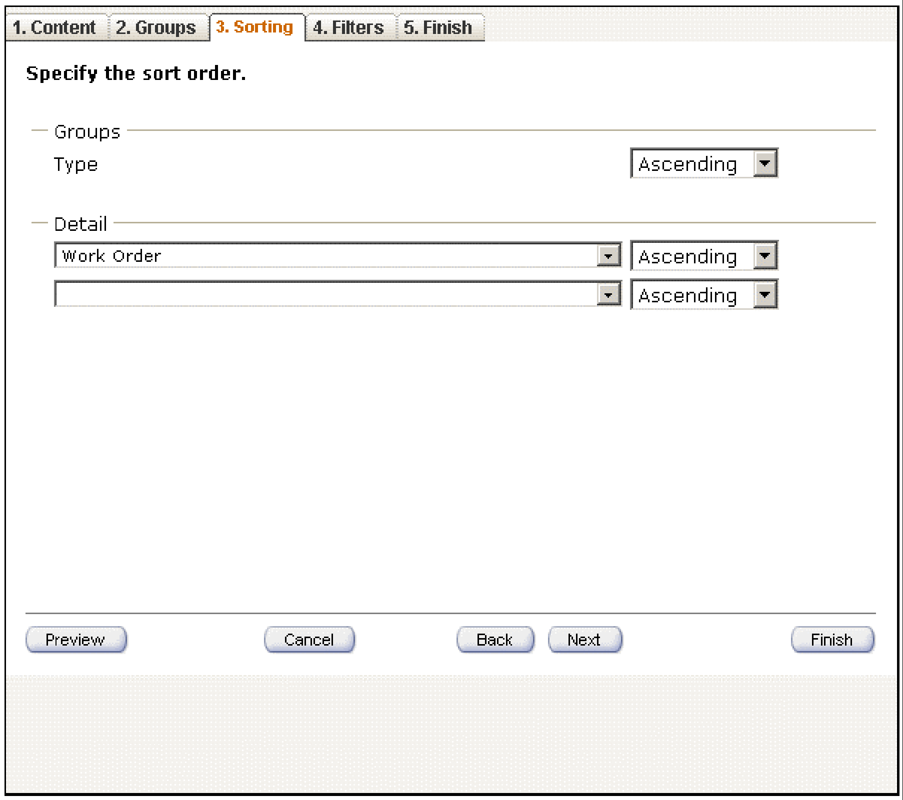
Report Types continued

Creating a Query Report

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>9</td><td>You want to sort the report by Work Order number in Ascending order, so select the Work Order field from the Detail drop-down menu.

<u>Result</u>: Your screen should look similar to this:



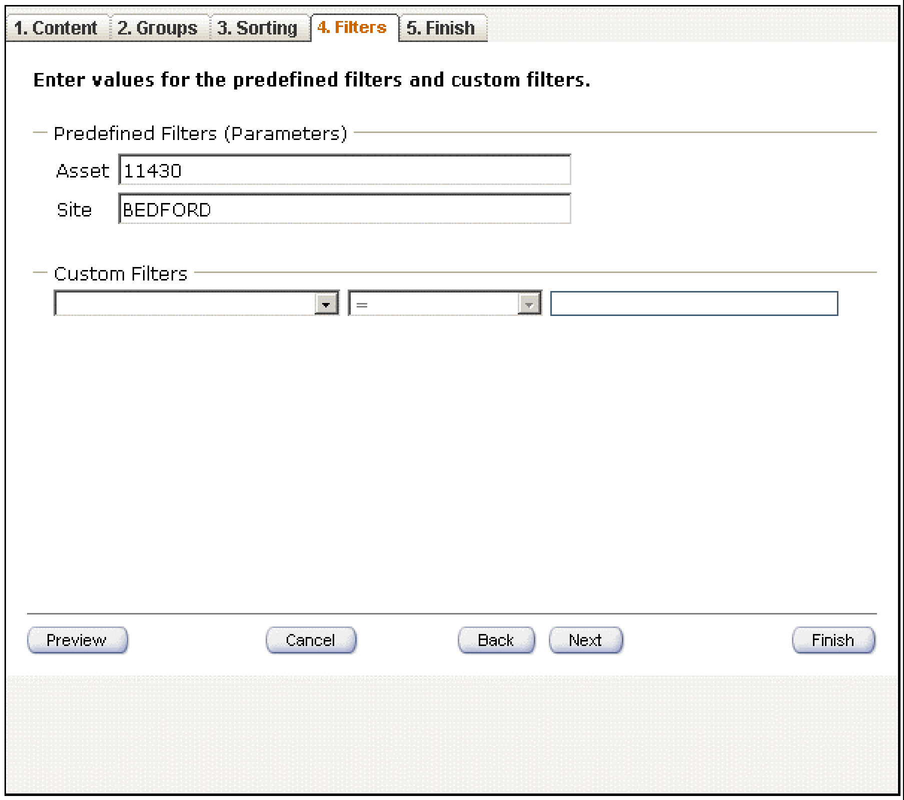
<u>Note</u>: When you indicate the first sort field, another sort field becomes available. We will use only one sort field for this example.</td></tr>
</table>

continued on next page

Report Types continued

Creating a Query Report

continued

Step	Action
10	Click the **Filters** tab. Result: Your screen should look similar to this: 

continued on next page

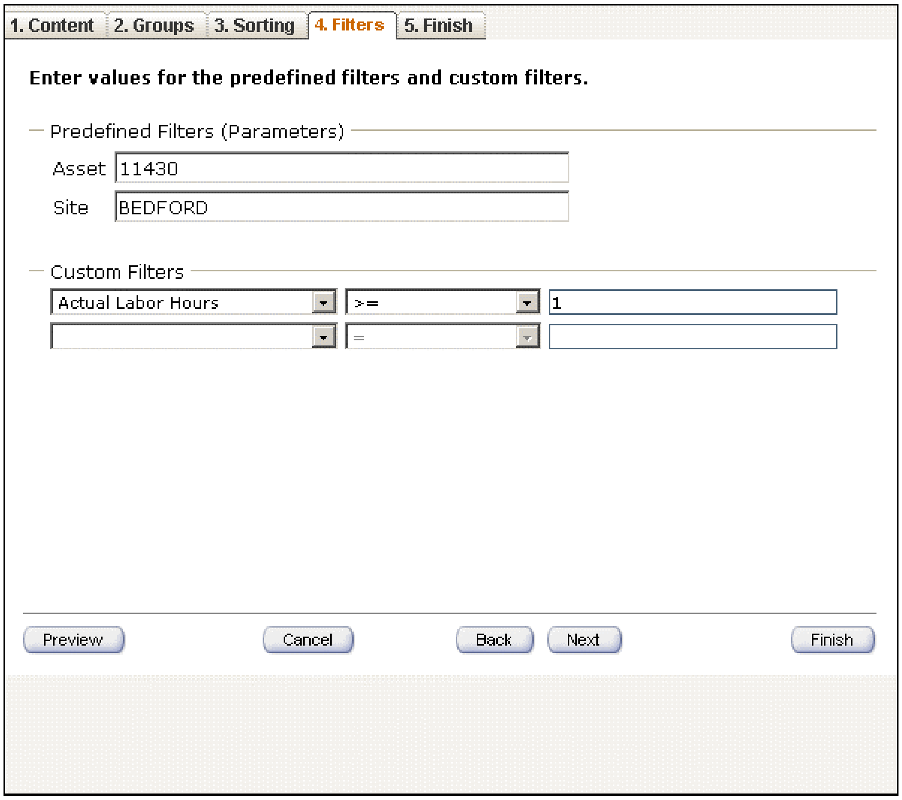
Report Types continued

Creating a Query Report

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>11</td><td>Using the drop-down menus in the Custom Filters section, indicate that you want to filter on Actual Labor Hours > = 1.

Result: Your screen should look similar to this:


</td></tr>
</table>

continued on next page

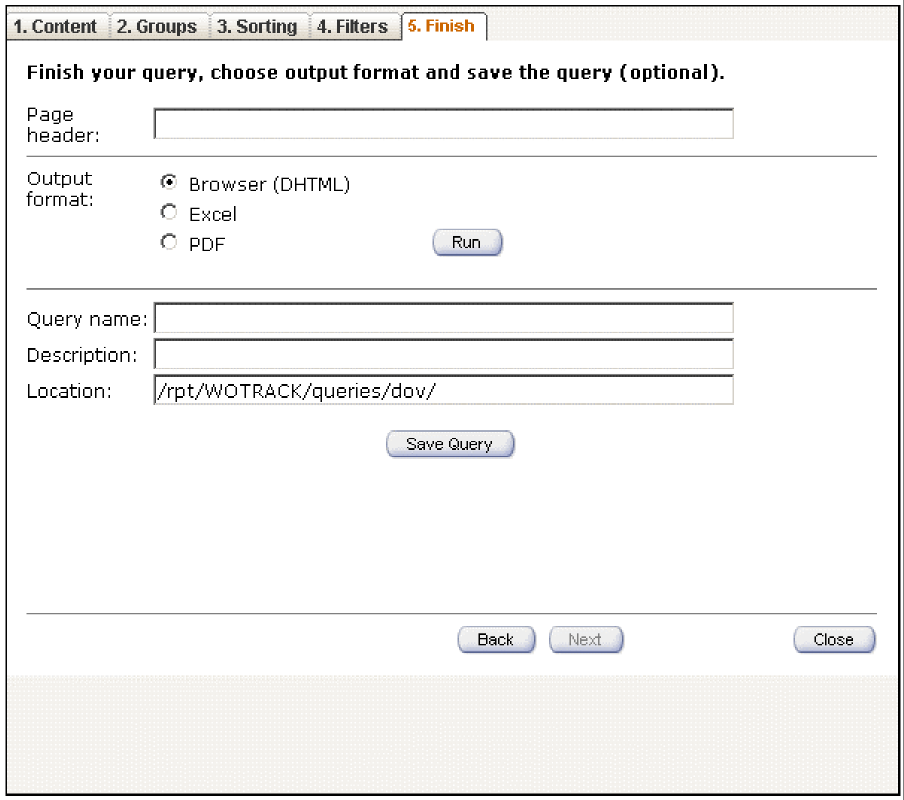
Report Types continued

Creating a Query Report

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>12</td><td>Click on the Finish tab.

Result: Your screen should look similar to this:


</td></tr>
<tr><td>13</td><td>Enter the following information:

Page header: My Query Report
Output format: Excel
Query name: Query Report of [your name]
Description: This is my first Actuate Query Report

Note: In this exercise we will output to Excel so that the resulting data can be manipulated further. However, you can also output the report to a DHTML file or a .PDF file.</td></tr>
</table>

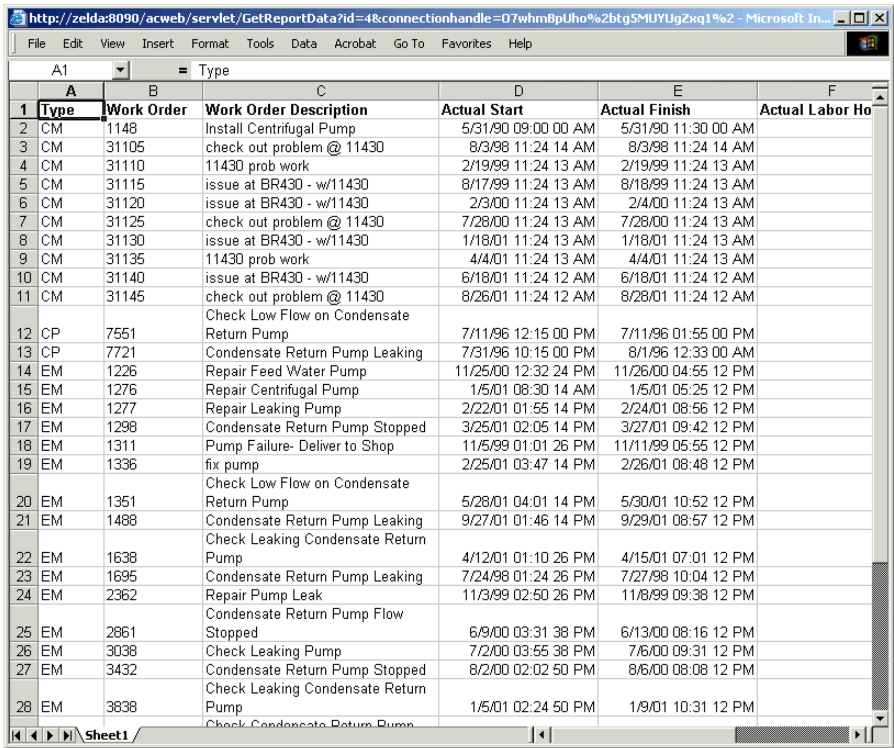
continued on next page

Report Types continued

Creating a Query Report

continued

Step	Action
14	Click the **Run** button. Result: An Excel spreadsheet displays in a separate browser window.



http://zelda:8090/acweb/servlet/GetReportData?id=4&connectionhandle=07whmBpUho%2btg5MUYUgZxq1%2 - Microsoft In...

File Edit View Insert Format Tools Data Acrobat Go To Favorites Help

A1 = Type

	A	B	C	D	E	F
1	Type	Work Order	Work Order Description	Actual Start	Actual Finish	Actual Labor Ho
2	CM	1148	Install Centrifugal Pump	5/31/90 09:00 00 AM	5/31/90 11:30 00 AM	
3	CM	31105	check out problem @ 11430	8/3/98 11:24 14 AM	8/3/98 11:24 14 AM	
4	CM	31110	11430 prob work	2/19/99 11:24 13 AM	2/19/99 11:24 13 AM	
5	CM	31115	issue at BR430 - w/11430	8/17/99 11:24 13 AM	8/18/99 11:24 13 AM	
6	CM	31120	issue at BR430 - w/11430	2/3/00 11:24 13 AM	2/4/00 11:24 13 AM	
7	CM	31125	check out problem @ 11430	7/28/00 11:24 13 AM	7/28/00 11:24 13 AM	
8	CM	31130	issue at BR430 - w/11430	1/18/01 11:24 13 AM	1/18/01 11:24 13 AM	
9	CM	31135	11430 prob work	4/4/01 11:24 13 AM	4/4/01 11:24 13 AM	
10	CM	31140	issue at BR430 - w/11430	6/18/01 11:24 12 AM	6/18/01 11:24 12 AM	
11	CM	31145	check out problem @ 11430	8/26/01 11:24 12 AM	8/28/01 11:24 12 AM	
12	CP	7551	Check Low Flow on Condensate Return Pump	7/11/96 12:15 00 PM	7/11/96 01:55 00 PM	
13	CP	7721	Condensate Return Pump Leaking	7/31/96 10:15 00 PM	8/1/96 12:33 00 AM	
14	EM	1226	Repair Feed Water Pump	11/25/00 12:32 24 PM	11/26/00 04:55 12 PM	
15	EM	1276	Repair Centrifugal Pump	1/5/01 08:30 14 AM	1/5/01 05:25 12 PM	
16	EM	1277	Repair Leaking Pump	2/22/01 01:55 14 PM	2/24/01 08:56 12 PM	
17	EM	1298	Condensate Return Pump Stopped	3/25/01 02:05 14 PM	3/27/01 09:42 12 PM	
18	EM	1311	Pump Failure- Deliver to Shop	11/5/99 01:01 26 PM	11/11/99 05:55 12 PM	
19	EM	1336	fix pump	2/25/01 03:47 14 PM	2/26/01 08:48 12 PM	
20	EM	1351	Check Low Flow on Condensate Return Pump	5/28/01 04:01 14 PM	5/30/01 10:52 12 PM	
21	EM	1488	Condensate Return Pump Leaking	9/27/01 01:46 14 PM	9/29/01 08:57 12 PM	
22	EM	1638	Check Leaking Condensate Return Pump	4/12/01 01:10 26 PM	4/15/01 07:01 12 PM	
23	EM	1695	Condensate Return Pump Leaking	7/24/98 01:24 26 PM	7/27/98 10:04 12 PM	
24	EM	2362	Repair Pump Leak	11/3/99 02:50 26 PM	11/8/99 09:38 12 PM	
25	EM	2861	Condensate Return Pump Flow Stopped	6/9/00 03:31 38 PM	6/13/00 08:16 12 PM	
26	EM	3038	Check Leaking Pump	7/2/00 03:55 38 PM	7/6/00 09:31 12 PM	
27	EM	3432	Condensate Return Pump Stopped	8/2/00 02:02 50 PM	8/6/00 08:08 12 PM	
28	EM	3838	Check Leaking Condensate Return Pump	1/5/01 02:24 50 PM	1/9/01 10:31 12 PM	

Sheet1

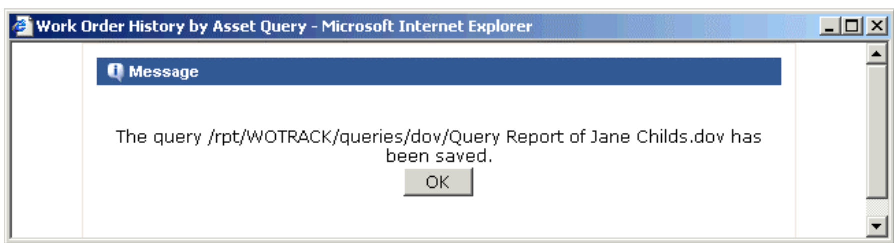
continued on next page

Report Types continued

Save a Query Report for Reuse

After setting up your query report, you can save the setup for later use.

Note: Each time you reuse the query report, the database is accessed and the report provides refreshed data.

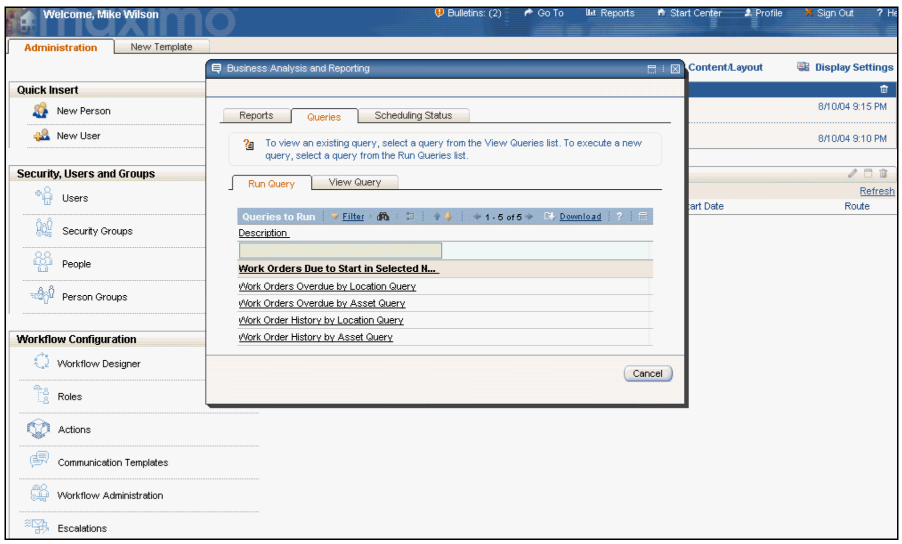
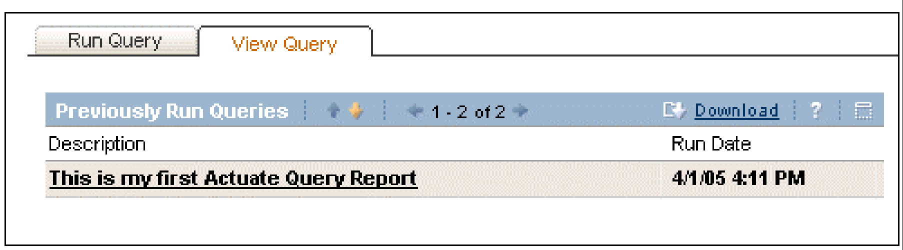
Step	Action
1	Use the **File** menu on the browser to save the Excel report file to your hard drive.
2	Redisplay the browser window with the **Query** screen.
3	Reenter your Query name: Query Report of [*your name*]
4	Click **SaveQuery**. Result: A browser window opens, indicating that your report has been saved. 
5	Click **OK** to close the save notification browser window.
6	Redisplay the **Query** window, then click **Close**.

continued on next page

Report Types continued

Save a Query Report for Reuse

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>7</td><td>Display the browser window containing Maximo.
Result: Your screen should look similar to this:

</td></tr>
<tr><td>8</td><td>Click the View Query subtab.
Result: Your View Query tab should contain your new query report in a list.


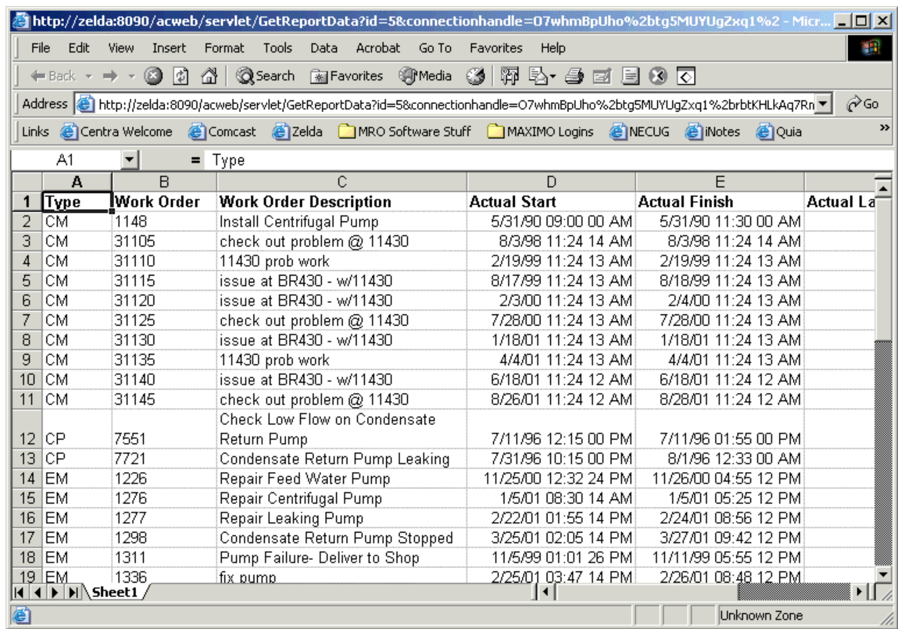
Note: Depending on your classroom setup, there might be other query reports listed.</td></tr>
</table>

continued on next page

Report Types continued

Save a Query Report for Reuse

continued

Step	Action
9	Click your query report in the list. Result: Your query is displayed in a separate browser window.  Note: Each time you run this query, the report will access the database and provide refreshed data.

	A	B	C	D	E	
1	Type	Work Order	Work Order Description	Actual Start	Actual Finish	Actual La
2	CM	1148	Install Centrifugal Pump	5/31/90 09:00 00 AM	5/31/90 11:30 00 AM	
3	CM	31105	check out problem @ 11430	8/3/98 11:24 14 AM	8/3/98 11:24 14 AM	
4	CM	31110	11430 prob work	2/19/99 11:24 13 AM	2/19/99 11:24 13 AM	
5	CM	31115	issue at BR430 - w/11430	8/17/99 11:24 13 AM	8/18/99 11:24 13 AM	
6	CM	31120	issue at BR430 - w/11430	2/3/00 11:24 13 AM	2/4/00 11:24 13 AM	
7	CM	31125	check out problem @ 11430	7/28/00 11:24 13 AM	7/28/00 11:24 13 AM	
8	CM	31130	issue at BR430 - w/11430	1/18/01 11:24 13 AM	1/18/01 11:24 13 AM	
9	CM	31135	11430 prob work	4/4/01 11:24 13 AM	4/4/01 11:24 13 AM	
10	CM	31140	issue at BR430 - w/11430	6/18/01 11:24 12 AM	6/18/01 11:24 12 AM	
11	CM	31145	check out problem @ 11430	8/26/01 11:24 12 AM	8/28/01 11:24 12 AM	
12	CP	7551	Check Low Flow on Condensate Return Pump	7/11/96 12:15 00 PM	7/11/96 01:55 00 PM	
13	CP	7721	Condensate Return Pump Leaking	7/31/96 10:15 00 PM	8/1/96 12:33 00 AM	
14	EM	1226	Repair Feed Water Pump	11/25/00 12:32 24 PM	11/26/00 04:55 12 PM	
15	EM	1276	Repair Centrifugal Pump	1/5/01 08:30 14 AM	1/5/01 05:25 12 PM	
16	EM	1277	Repair Leaking Pump	2/22/01 01:55 14 PM	2/24/01 08:56 12 PM	
17	EM	1298	Condensate Return Pump Stopped	3/25/01 02:05 14 PM	3/27/01 09:42 12 PM	
18	EM	1311	Pump Failure- Deliver to Shop	11/5/99 01:01 26 PM	11/11/99 05:55 12 PM	
19	EM	1336	fix pump	2/25/01 03:47 14 PM	2/26/01 08:48 12 PM	

continued on next page

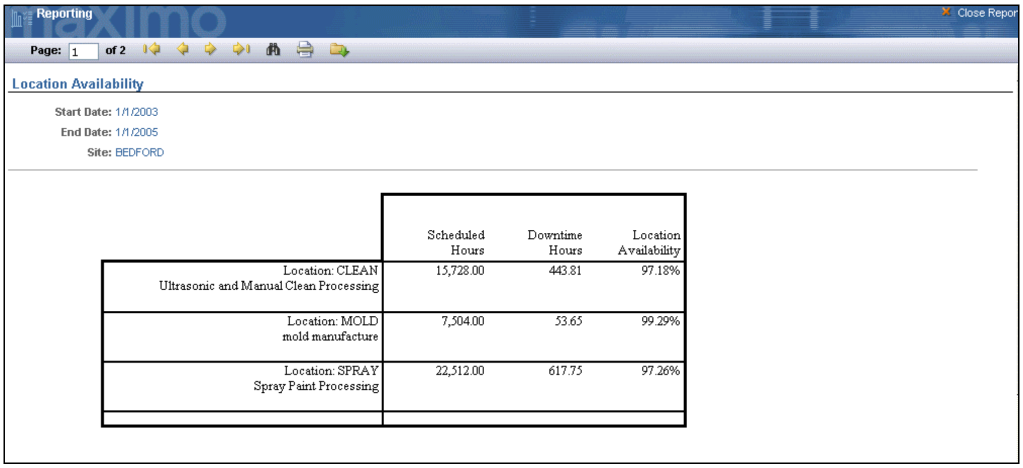
Report Types continued

Cross Tab Reports (New)

Cross tab reports are designed to improve your ability to visually analyze data.

Example:

Location Availability report (Locations application)



	Scheduled Hours	Downtime Hours	Location Availability
Location: CLEAN Ultrasonic and Manual Clean Processing	15,728.00	443.81	97.18%
Location: MOLD mold manufacture	7,504.00	53.65	99.29%
Location: SPRAY Spray Paint Processing	22,512.00	617.75	97.26%

Notes:

- If you want to run this report, use the following data:
  - Location = SPRAY, CLEAN, MOLD (all three comma-separated)
  - Site = TEXAS
  - Start Date = 1/1/03
  - End Date = 1/1/05
- On page 2 there is a graphic.

continued on next page

Report Types continued

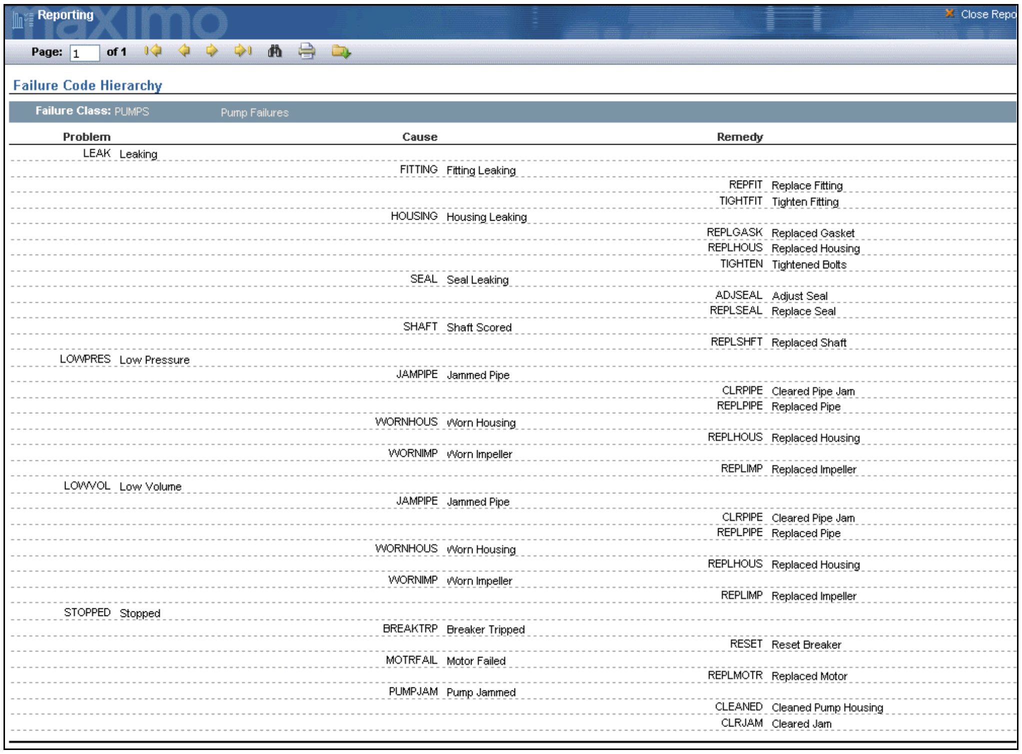
Hierarchy Report

Now let's take a look at the third new type of report.

Hierarchy reports enable users to view children/grandchildren of a record and select details for the record.

Example:

Failure Code Hierarchy report (Failure Codes application)



Reporting   Close Repo

Page: 1 of 1

Failure Code Hierarchy

Failure Class: PUMPS   Pump Failures

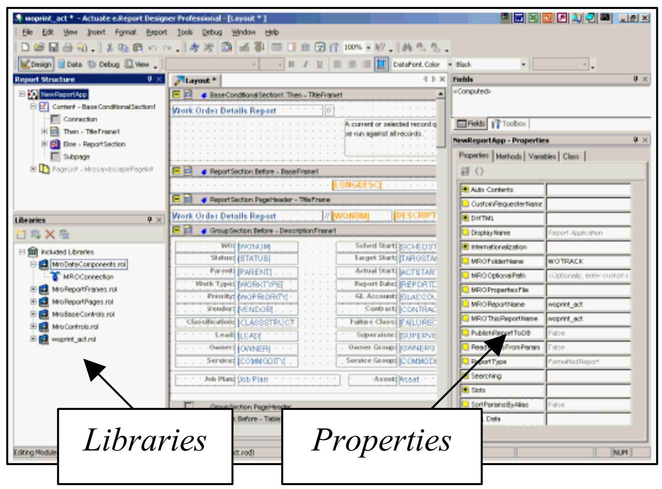
Problem	Cause	Remedy
LEAK Leaking		
	FITTING Fitting Leaking	
		REPFIT Replace Fitting
		TIGHTFIT Tighten Fitting
	HOUSING Housing Leaking	
		REPLGASK Replaced Gasket
		REPLHOUS Replaced Housing
		TIGHTEN Tightened Bolts
	SEAL Seal Leaking	
		ADJSEAL Adjust Seal
		REPLSEAL Replace Seal
	SHAFT Shaft Scored	
		REPLSHFT Replaced Shaft
LOWPRES Low Pressure		
	JAMPIPE Jammed Pipe	
		CLRPIPE Cleared Pipe Jam
		REPLPIPE Replaced Pipe
	WORNHOUS Worn Housing	
		REPLHOUS Replaced Housing
	WORNIMP Worn Impeller	
		REPLIMP Replaced Impeller
LOWVOL Low Volume		
	JAMPIPE Jammed Pipe	
		CLRPIPE Cleared Pipe Jam
		REPLPIPE Replaced Pipe
	WORNHOUS Worn Housing	
		REPLHOUS Replaced Housing
	WORNIMP Worn Impeller	
		REPLIMP Replaced Impeller
STOPPED Stopped		
	BREAKTRP Breaker Tripped	
		RESET Reset Breaker
	MOTRFAIL Motor Failed	
		REPLMOTR Replaced Motor
	PUMPJAM Pump Jammed	
		CLEANED Cleaned Pump Housing
		CLRJAM Cleared Jam

Note: To run this example report, use PUMPS as the Failure Code.

Enhanced Content Creation

Overview

The following table describes some of the new content creation-related features.

New Feature	Description
Enhanced Library Integration	New libraries have been created for use in reports and templates.
Introduction of Additional Properties	• Libraries have been redesigned to minimize the number of times that methods need to be overwritten. This eases modification of reports when customizing. • Additional properties have been added in eReport Designer Pro to correspond with new libraries. 
Textual Queries	In Maximo, reports use a textual query source instead of the previous graphical query source. Consider reserving eReport Designer Pro for detailed report writing by developers.
Common Formatting Through Templates	This enables more consistent formatting of reports.
Improved eReport Designer Pro UI with Actuate Version 8	The new design will provide enhanced flexibility of the eReport Designer Pro application.

Report Administration

Overview

MXES provides a Report Administration application that allows you to create request pages and change labels for existing reports.

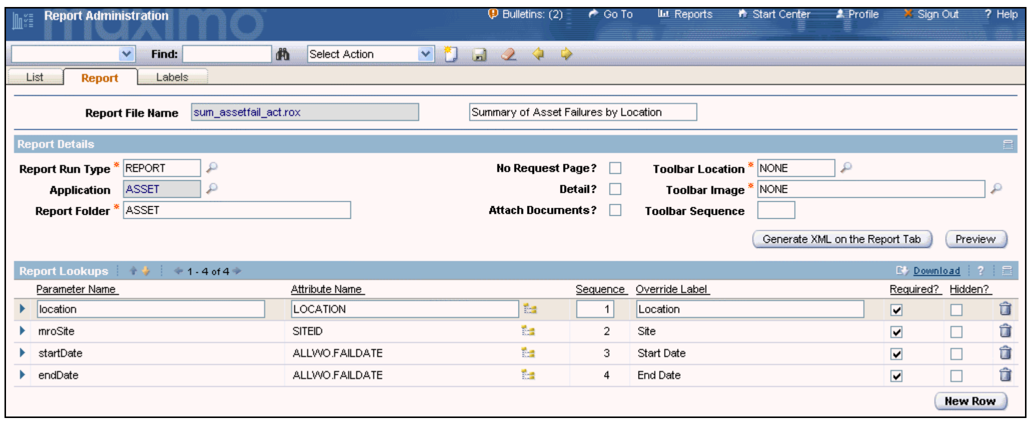
This application is accessed from the Reporting module.

Note: For more detailed training on the use of this application, please contact MRO Software Educational Services.

Creating Request Pages

The Report tab of the Report Administration application allows you to create Request Pages for reports that have been registered on the Actuate server.

When a report page is created, the page can be listed under the reports list for the designated application.



Various report details and listed lookups determine the composition of the request page.

Note: Each registered report can have only one report page per application. Due to this limitation, we cannot create a report page in this class. This procedure is covered in our Actuate training.

continued on next page

Report Administration continued

Report Tab Components

The following table provides an overview of the components found on the Report tab.

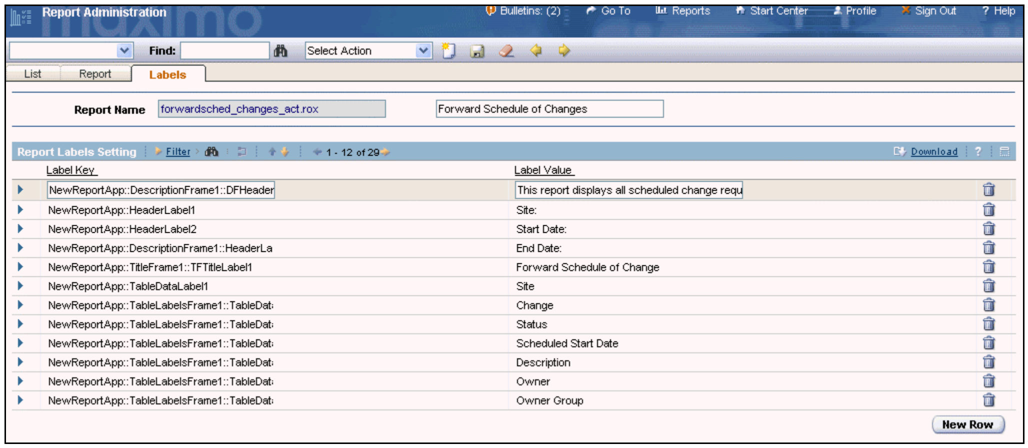
Section	Description
Report Details pane	• This pane indicates the report for which the request page is being generated. • The **Generate XML on the Report Tab** button generates the actual request page as a functioning page in MXES. • The **Preview** button allows a preview of the generated request page to determine if the setup is correct.
Report Lookups pane	• This pane indicates the report parameters to be included on the request page. • Parameters can be indicated as Required on the request page for generation of the report. • Labels and display sequences for parameters on the request page can be indicated. • When you are adding a parameter in a new row, the **Attribute Name** field on details provides a list of fields and relationships for the application to which the report is registered. This prevents accidental indication of an incorrect parameter. • The **Lookup Name** field on details identifies the type of lookup that can be associated with the parameter field on the request page.

continued on next page

Report Administration continued

Report Labels

Labels on reports are stored in the Maximo database, so they can be changed using the Labels tab of the Report Administration application.



Change a Report Label

In the following exercise we will use the Labels tab to change the title shown on the Summary of Asset Failures by Location report to Summary of *Equipment* Failures by Location.

Note: If all students are using the same database, then only one student should follow the steps while demonstrating to the others.

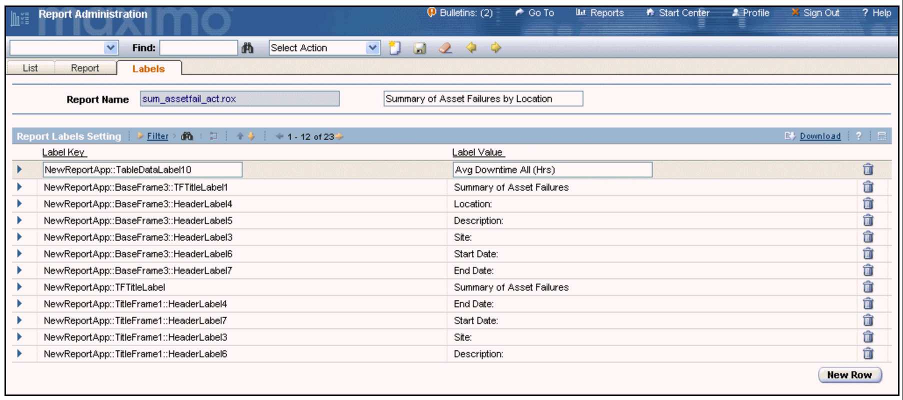
Step	Action
1	In the **Report Administration** application, find the record for the Summary of Asset Failures by Location report. Hint: Filter on the **Description** field.

continued on next page

Report Administration continued

Change a Report Label

continued

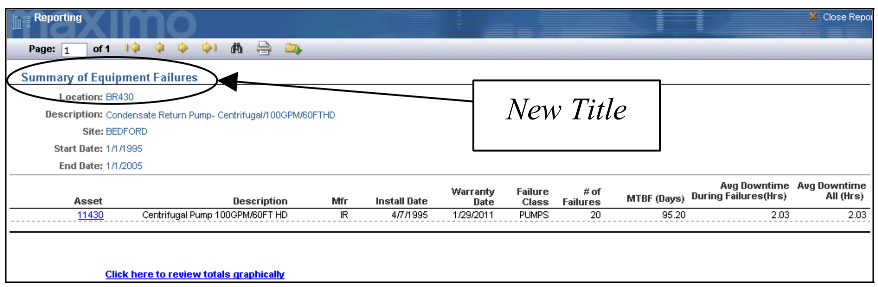
Step	Action
2	Access the **Labels** tab for the report record. Result: Your screen should look similar to this: 
3	On the *NewReportApp::BaseFrame3::TFTitleLabel1* line, change the **Label Value** field to: Summary of Equipment Failures
4	On the *NewReportApp::TFTitleLabel* line, change the **Label Value** field to: Summary of Equipment Failures
5	Save the record.

continued on next page

Report Administration continued

Change a Report Label

continued

Step	Action
6	Using the steps on page 10-8, run the Summary of Asset Failures by Location report from the **Assets** application using the following information: **Location:** BR430 **Site:** BEDFORD **Start Date:** 1/1/95 **End Date:** 1/1/05 Result: The report will display the new title, similar to this graphic: 
	Note: For purposes of comparison, in this exercise we did not change the description on the report record (located to the right of the Report Name field). Had we done so, the description in the report list used to run the report would have changed also.

Other Enhancements

Overview

We will cover the overview for the last couple of enhancements in this section.

Report Translation

MXES provides improvements in the area of report translation capability.

These enhancements are largely due to the following:

- Report text elements are registered in the database, not coded in reports.
  - Labels
  - Titles
  - Parameters
- Report text elements can now be changed directly in the database.
- There is no longer a need to change such things as report text and field lengths using eReport Designer Pro and recompiling.

KPI Reports

All KPI reports have been moved to the KPI Manager application, with the exception of the Overall Equipment Effectiveness (OEE) KPI Level 1 report, which is associated with the Assets application.

Note: You can now show KPIs directly in the Start Center as graphics or numerically.

Chapter Summary

Key Enhancements

The report-related enhancements made to MXES are as follows:

- More integration with the Maximo interface
- Improved standard report content and report types
- Improved ease of content creation
- Easier creation of request pages and parameters using the new Report Administration application
- Improved report translation capability
- Moving of KPIs to the KPI Manager application

Report Types

There is an increased emphasis on value-added reports, so many new report types have been created. You will find far fewer list reports and many more of the other types.

The new types of reports are:

- Query
- Cross tab
- Hierarchy

The existing report types are:

- List
- Analysis
- Detail

Graphics

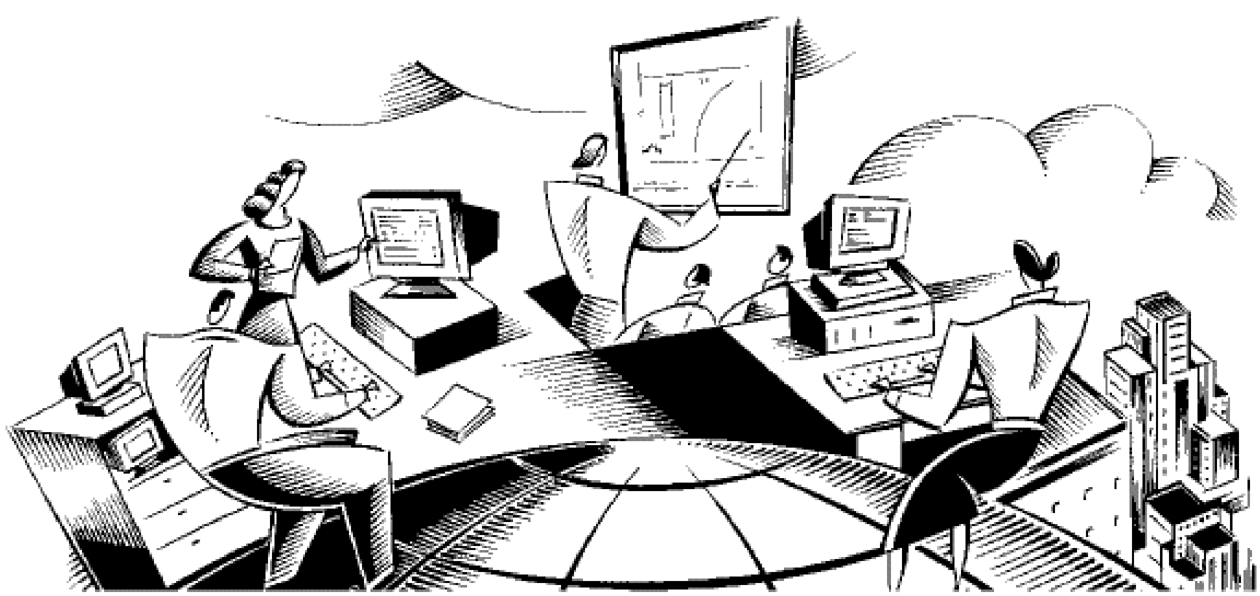
Many graphics have been added to reports. These graphics are a value-add because they help to provide a "quick analysis" of data.

Report Administration

It is now very easy to create request pages and change report labels using the new Report Administration application.

NOTES:

Chapter 11: Security



In This Chapter This chapter contains the following topics:

Chapter Overview

Introduction

Security is handled in a totally new way in MXES. Of the many changes between MXES and MAXIMO 5.x applications, this area is one of the biggest.

In this chapter you will see these changes and gain an understanding of them.

Note: Because the changes to security functionality are so extensive, we suggest that you contact MRO Software Educational Services for more detailed training about security and other administrative functions that might be affected by it.

Chapter Focus

This chapter will focus on the key security-related changes made in MXES.

As with other topics, we will provide an overview and exercises to help you better understand the changes.

Because security is such an essential topic, no matter which other MXES features you use, in this chapter we will provide enough detail so that you can work effectively with the new features and determine the effects of the features on your current implementation of Maximo.

Learning Objectives

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

- Create and perform basic administration functions
- Create security groups to determine rights and privileges
- Associate users with security groups
- Add a native database user
- Modify password functions

Key Enhancements

Overview

This section provides an overview of the key security enhancements available in MXES.

These will give you a chance to discuss and consider them with your instructor. Later on we will do some exercises to demonstrate the enhancements.

Web Architected

All security and other administrative applications are Web architected. This means that you can now perform all security functions through a browser.

The two directly security-related applications—Users and Security Groups—are accessed through a new Security module.

Access Not Assumed

In MXES, access to applications, actions, and so forth must be granted through Security Groups. No longer is the default an assumption of availability of access.

Quick pick options are available for giving all access to some types of data with a couple of clicks. This makes giving all access more simple.

But, quick picks don't change the key fact that:

Nothing is no longer everything

Note: This is a key new concept to keep in mind!

continued on next page

Key Enhancements continued

New Applications

There are three new applications related to security:

People

- In the Resources module
- Defines all people with a relationship to Maximo
- Captures common personal information

Users

- In the Security module
- Defines all people who will actually be using Maximo
- Allows for improved search of user records

Security Groups

- In the Security module
- Defines privileges and other security-related functions of groups
- Users added to groups gain rights indicated in groups

Multiple Groups

Users can be put into multiple security groups to provide a robust ability to tailor their rights to their specific needs.

- Group privileges can be independent of other groups.
- Cumulative with other groups.

Note: This allows more flexibility in implementations.

continued on next page

Key Enhancements continued

Access to All Privileged Data

Rights and privileges are granted by site. Access to organization-level data is inferred by site privileges—in other words, by the organization to which the site belongs.

You no longer need to sign out of a site and sign in to another site.

All the data to which a user has access can be worked with by changing the default site filter in the respective application.

The system administrator controls data privileges, so if a user has read-only access to data, the user can view but not change the data. Data for sites to which the user has read/write access can be viewed *and* changed.

Administrative Rights

Any user can now be given administrative rights. This change allows different organizations and sites to give varying levels of access to a variety of administrators.

Native Database Users

General users are no longer native to the database. All users and their rights are maintained in the Maximo security tables.

This means that there is no longer a need to create grants for users at the database system level, which provides a higher level of security.

However, when necessary, you can use the Maximo interface to create native database users. This might be required for some limited functions, such as Actuate report creation.

Password Administration

MXES provides the following improvements to password administration:

- You can establish a password threshold that will limit the reuse of passwords for a specified period of time.
- The minimum length of passwords can be controlled.
- Passwords can require numeric and special characters.
- Users can be forced to change the password set by admin on next sign-in.
- You can override system password expiration for a group.

continued on next page

Key Enhancements continued

Profile	As you saw in a previous chapter, MXES has added functionality to allow users to change some of their own personal settings. Note: See Chapter 2, "Interface and Navigation," for more details on this new feature.
LDAP and Single Sign-On	MXES is capable of supporting LDAP and Single Sign-On. This functionality allows MXES to integrate with systems that allow people to sign on once and access all the applications that they need, without an additional sign-on.

New Applications

Overview

The three key applications you use when establishing security in MXES are:

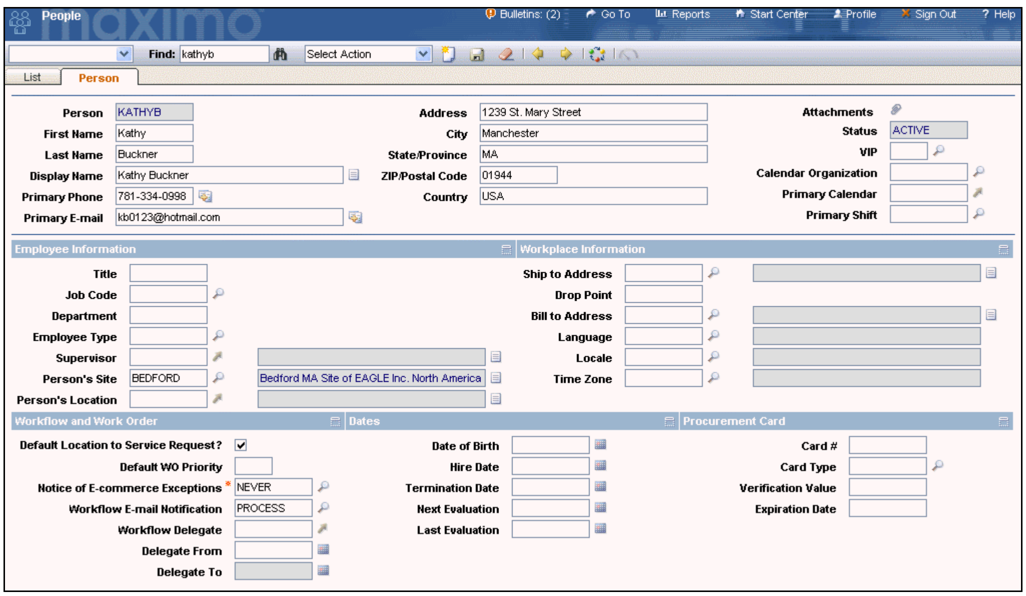
- People
- Users
- Security Groups

We have previously covered the People application, so in this section we will mostly work with the Users and the Security Groups applications.

People Application

You might recall that person records are maintained in the People application, which is in the Resources module.

All users must have a person record.



Person records hold the central information about users.

Some of the information changed in the Users application will change corresponding information in the associated person record.

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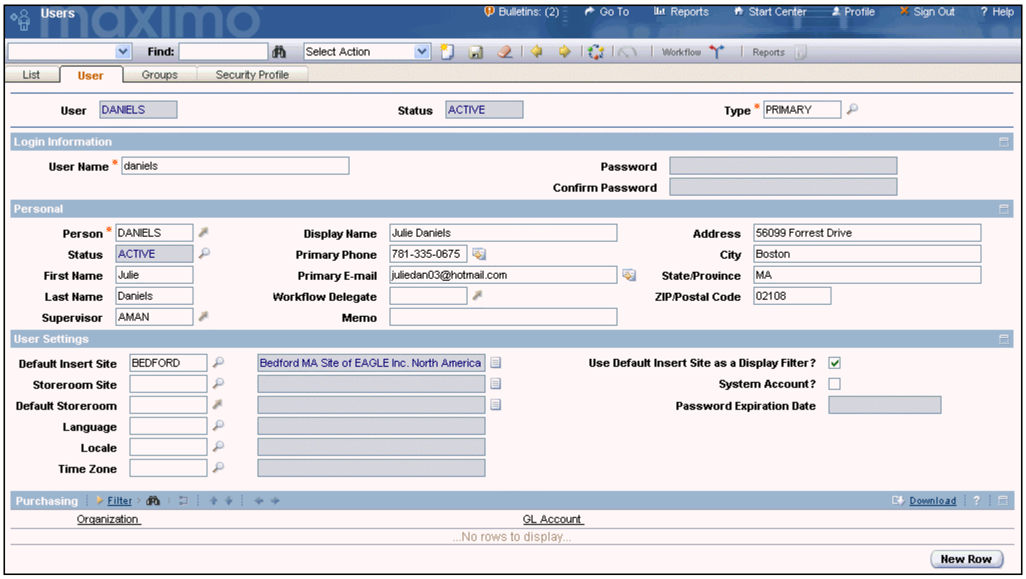
New Applications continued

Users Application: User Tab

The Users application enables you to create user records and associate them with security groups. It is from the associated security groups that users get most of their rights.

The User tab displays personal information and some basic user settings.



Note: Many actions can be performed on a number of users simultaneously. You do this by selecting a group of records from the List tab, then choosing the desired action from the Select Action menu.

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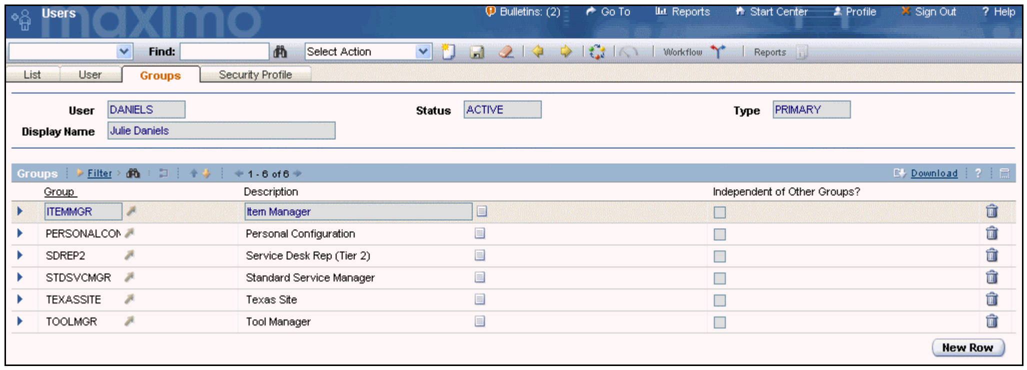
New Applications continued

Users Application: Groups Tab

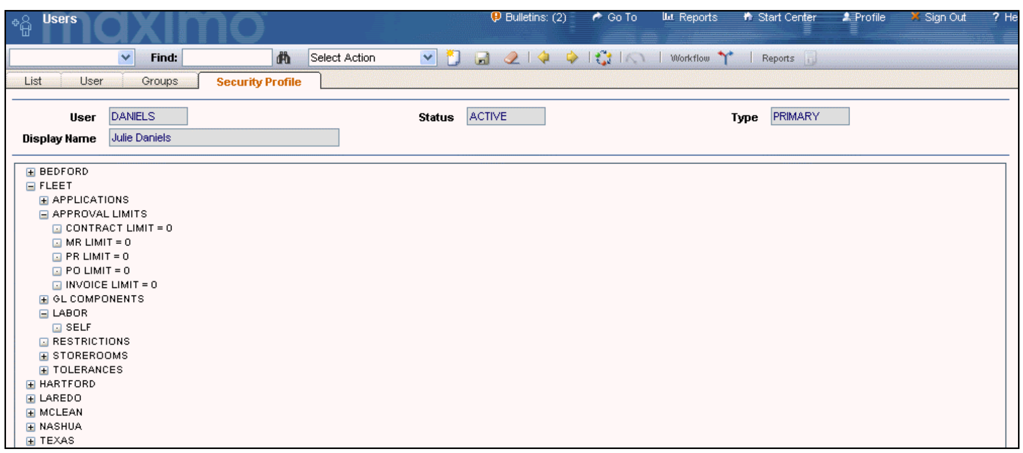
The Groups tab of the Users application displays the list of security groups with which the user is associated. It is also used to add to that list.



The user groups on this list come from the Security Groups application.

Users Application: Security Profile Tab

The Security Profile tab of the Users application provides a drill-down structure that offers a graphical view of the rights of the selected user.



Note: To see an example of this drill-down for yourself, access the Users application from the Security module and view the Security Profile tab for any user.

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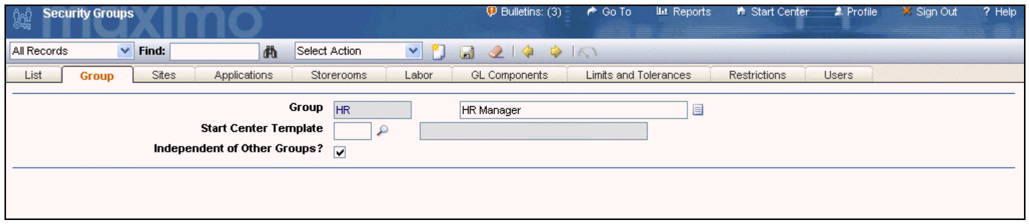
New Applications continued

Security Groups Application

You use the Security Groups application to develop groups with specific sets of right to applications, actions, and so forth.



Notes:

- Users can be members of multiple groups.
- Use the Independent of Other Groups? field to indicate whether a group is independent.
  - If a group is independent, then group rights are not cumulative with other groups with which the user is associated.
  - If a group is not independent, then group rights are cumulative with those of the other groups with which a user is associated.
- The tabs on this application provide a single point of access and administration of all group-dependent settings, including:
  - Sites
  - Application Authorizations
  - Purchasing Limits
  - Invoice Tolerances
  - Start Centers
  - GL Component Authorizations
  - Labor Authorizations
  - Storeroom Authorizations
  - Group Restrictions

Security Groups

Overview

In this section you will work with the Security Groups application to create a security group.

We will also cover additional concepts to help explain how to use the Security Groups application.

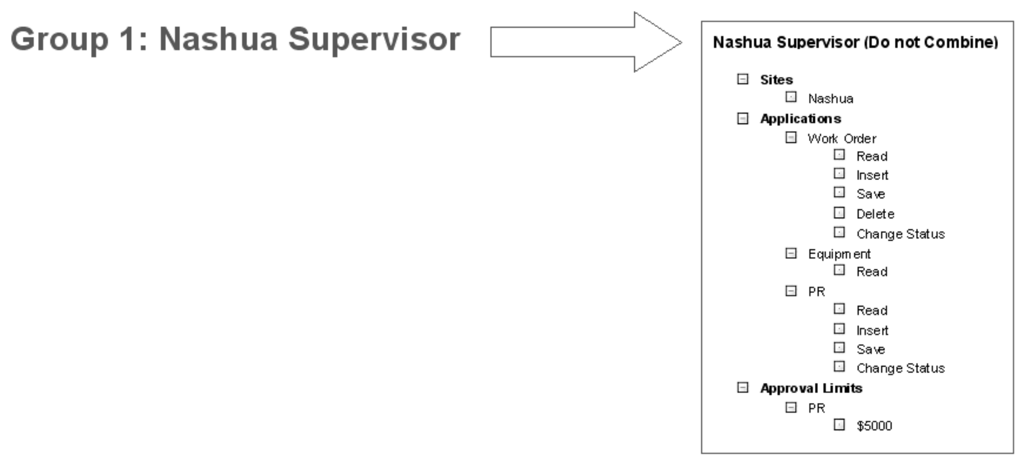
Profile Building Example 1: Two Independent Groups

Earlier we mentioned that groups can be independent or dependent. If they are independent, then their rights are not cumulative. If they are dependent, then their rights are cumulative.

Let's take a look at a graphical example of adding a user to two *independent* (non-combinable) groups.

In the following graphic, the *independent* (non-combinable) Nashua Supervisor group has access to some functions in the Nashua site.

For example: This group provides the ability to read, insert, save, delete, and change status on work order records in the Nashua site only.



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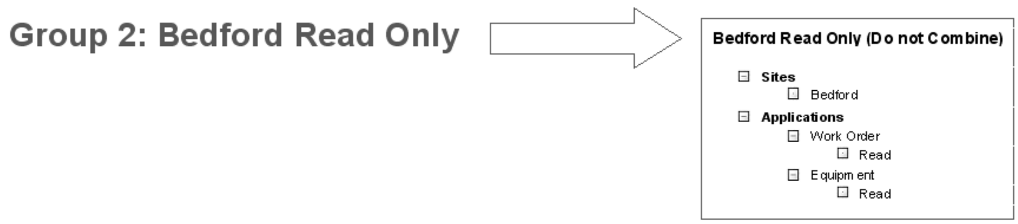
Security Groups continued

Profile Building Example 1: Two Independent Groups

continued

The following graphic shows that the *independent* (non-combinable) Bedford Read Only group has read-only access to two applications in the Bedford site.



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Security Groups continued

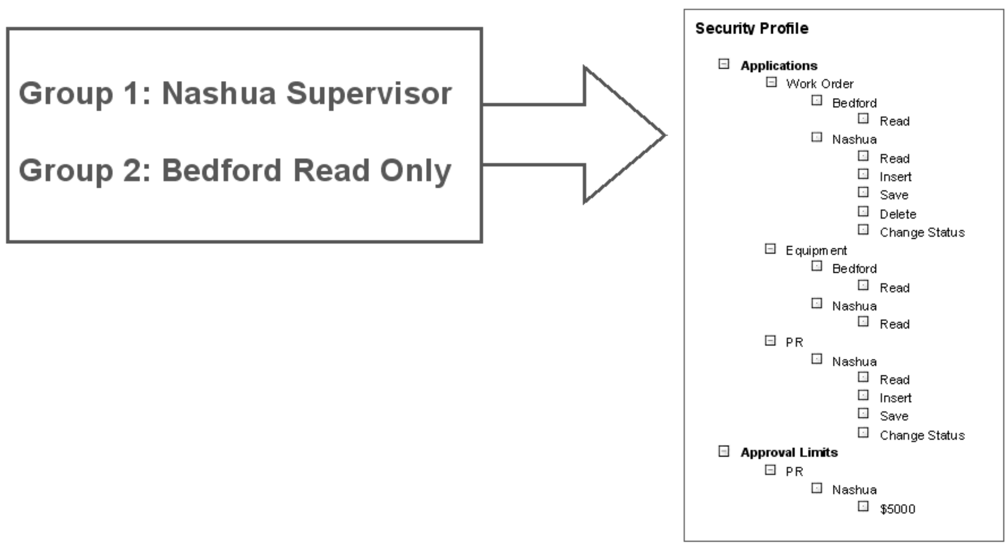
Profile Building Example 1: Two Independent Groups

continued

The following graphic shows the security profile of a user who has been associated with both the Nashua Supervisor and the Bedford Read Only groups.

There has been no addition of rights. For example, the user has the right to read and insert work orders for the Nashua site, but still can only read work orders from Bedford.

There was no *synergistic* gain in rights due to associating the user with both groups.



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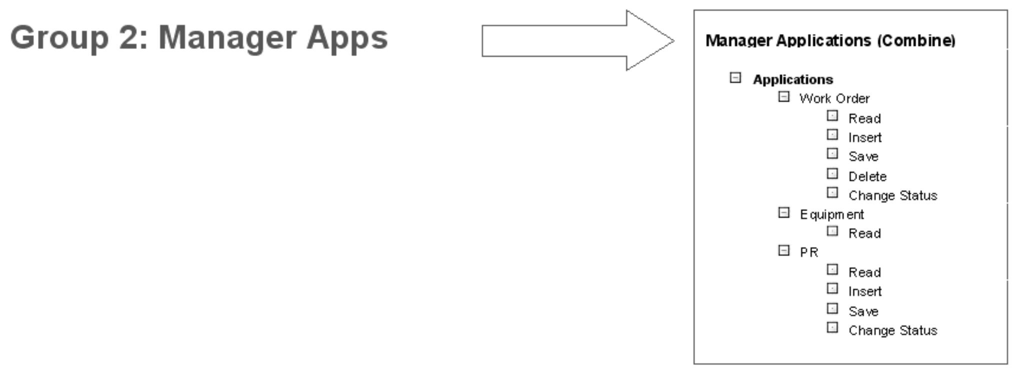
Security Groups continued

Profile Building Example 2: Three Dependent Groups

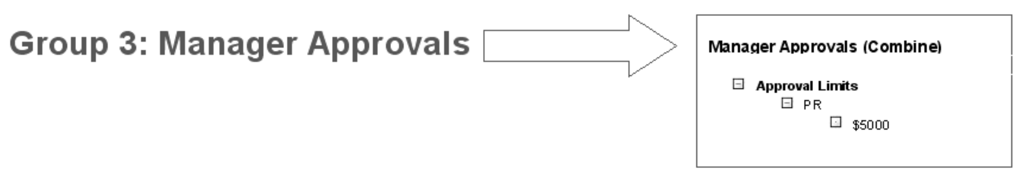
In this example we will associate a user with three *dependent* (combinable) groups and see the results.

In the following graphic we see that the Northeast Sites group provides data access to both the Bedford and the Nashua sites. This group is *dependent*, therefore combinable with others.

In the next graphic we see that the *dependent* Manager Apps group provides varying levels of access to three different applications.



The next graphic shows that the *dependent* (combinable) Manager Approvals group provides approval limits of $5000 on purchase requests.



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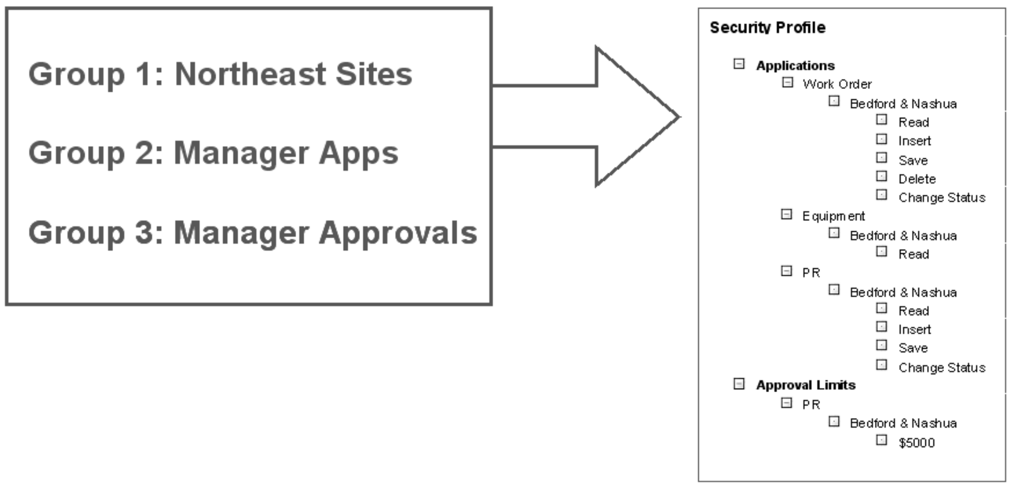
Security Groups continued

Profile Building Example 2: Three Dependent Groups

continued

In the final graphic we see the collective rights as they look when given to a single user.

Because the user belongs to the combinable Northeast Sites group and the other two combinable groups, she now has the access rights from the second two groups on the two sites from the Northeast Sites group.



Profile Building: Summary

We could show you many kinds of combinations of independent and dependent groups given to a user.

The main point that we'd like you to remember from this is that *the combination of groups is an important thing to consider when you set up security groups*.

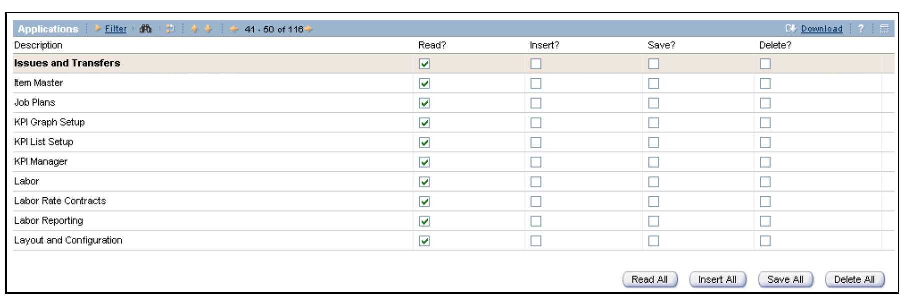
continued on next page

Security Groups continued

Creating a Security Group

Now that you've gotten a bit of philosophical advice about security groups, we will do an exercise that will get you into the Security Groups application to actually create a group.

Follow these steps:

Step	Action
1	Access the **Security Groups** application from the **Security** module.
2	Insert a new group with the following information on the **Group** tab: **Record:** MYGROUP[*your initials*] **Description:** My Security Group [*your initials*] **Start Center Template:** 2 (Note: This is the Maintenance template.) **Independent of Other Groups?:** [*unchecked*]
3	Access the **Sites** tab and add the TEXAS site. Note: The **Authorize Group for All Sites?** check box is a *quick-pick* field that enables you to authorize the group to have access to all sites in the organization of the user. We will not check this box and will have access only to the specified sites.
4	Access the **Applications** tab.
5	In the **Applications** pane, click the **Read All** button. Result: All check boxes in the **Read?** column are checked. This group will allow read access to all applications to associated users.  Notes: • The **Read All** button is a quick-pick button. • If you filter on the application list, the quick-pick buttons affect only the listed applications.

continued on next page

Security Groups continued

Creating a Security Group

continued

Step	Action
6	Save the record.
7	Find the **Work Order Tracking** line in the Applications pane. Tip: To find this line quickly, use the filter on the Applications pane and filter on work in the **Description** field.
8	Ensure that the **Work Order Tracking** line is selected in the Applications pane. Then select the **Grant Access?** check box for the following two actions in the Options for Work Order Tracking section: • Save Current Query • View/Manage Queries Tip: To find these items quickly, you can use the filter in the Options for… pane and query on query in the **Description** field. Note: This is the section where you enable actions for various applications. First you select the application line in the Applications pane, then you grant access to the actions for the selected application.
9	Save the record. Result: Your new security group is saved in Maximo with indicated access and action rights. Note: We now need to authorize another user to manage the group. We'll do that in the next exercise.

continued on next page

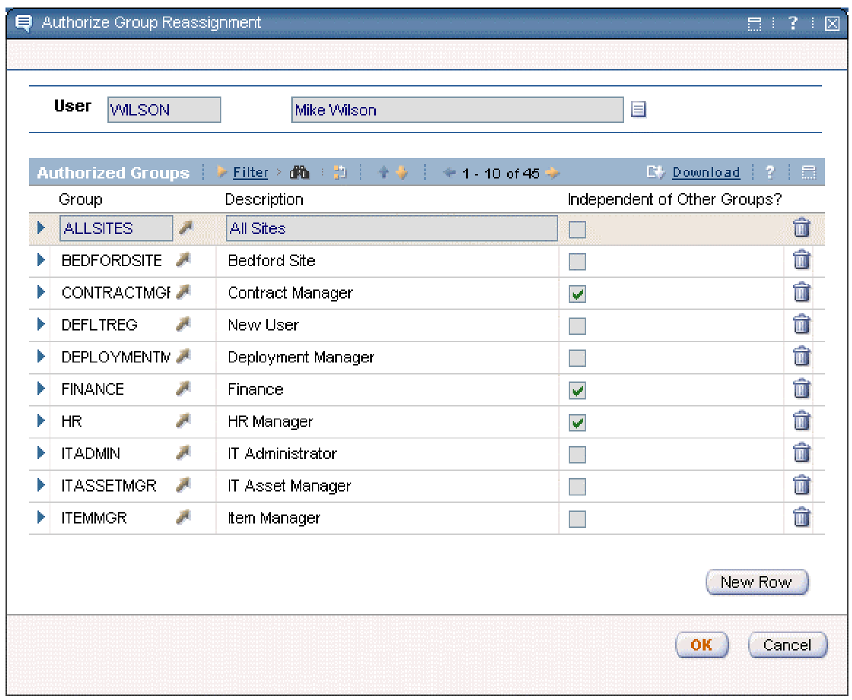
Security Groups continued

Authorize Group Manager

After creating a new security group, you need to tell Maximo which users are authorized to make assignments and reassignments of users to the group.

For our exercise, we will give the user WILSON this right.

Follow these steps to see how this is done:

Step	Action
1	Access the **Users** application from the Security module.
2	Find the WILSON user.
3	Choose **Authorize Group Reassignment** from the Select Action menu. Result: The Authorize Group Reassignment dialog box opens. 
4	Add a new row to this dialog box, then enter the name of your new group into the **Group** field and click **OK**. Result: The Authorize Group Reassignment dialog box closes. WILSON is now authorized to make changes to the list of users assigned to your new group.

Users

Overview

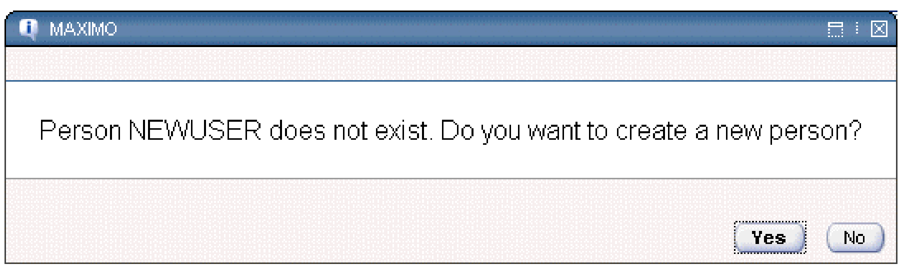
In this section we will do some exercises that will acquaint you with the new Users application and some of its functionality.

Note: We suggest that you attend an MRO Software course to receive more in-depth training on this topic.

Create a User

Previously we did an overview of the Users application. Now we'll have a chance to really use the application to create a user and perform some additional user-related functions.

Follow these steps:

Step	Action
1	Access the **Users** application from the Security module.
2	Insert a new user record.
3	In the **User** field, enter NEWUSER[*your initials*], then tab out of the field. Result: A pop-up message indicates that this person does not exist in Maximo. 

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Users continued

Create a User

continued

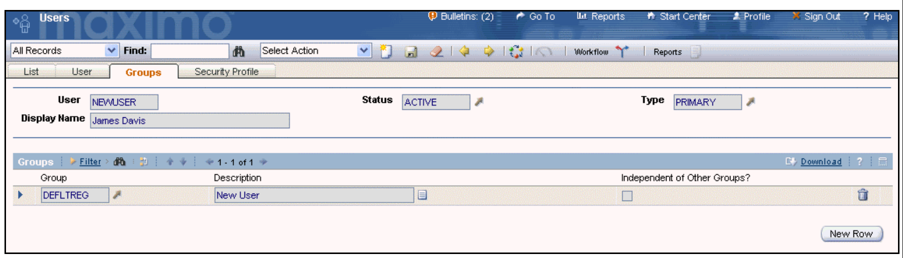
Step	Action
4	Click **Yes**. <u>Result</u>: The corresponding person record is created and the **Person** field is populated. The **User Name** field is populated with the name of your new record. <u>Notes</u>: • You can change the **User Name** field manually, but we will accept the default for this exercise. • If there were a person in the system, but the name of that person record did not correspond to your new user, then you would click **No** and enter the record name from the People application into the **Person** field that you wanted to correspond to your new user.
5	Enter the **Password** and **Password Check** for your new user. <u>Notes</u>: • The Password and Password Check values must match. • Passwords are case sensitive. Write down the password on the line below for later reference. Password: ______________________________
6	In the **First Name** and **Last Name** fields, enter your own first and last names. <u>Result</u>: The **Display Name** field concatenates these two values by default. <u>Notes</u>: • This is the name that will come up on your Start Center when you sign in. It may be used in other places as well. • You can change the **Display Name** field manually to a value other than the default, but we will accept the default for this exercise.

continued on next page

Users continued

Create a User

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>7</td><td>Enter the following information:
Supervisor: WILSON
Workflow Delegate: WILSON
Address: 456 Information Way
City: Techno
State: WA
ZIP/Postal Code: 64789
Memo: My New User For Training
Default Insert Site: TEXAS
Language: EN
Locale: en_US
Time Zone: America/Los_Angeles</td></tr>
<tr><td>8</td><td>Save the record.
Result: Your new user is created with no rights.</td></tr>
<tr><td>9</td><td>Now we want to associate the new user with a group to provide access to applications and actions. Start by accessing the Groups tab.


Note: The DEFLTREG group is added automatically to new user records so that the new user can sign in to Maximo to access the designated Start Center. But once the new user is at the Start Center, there will be limited capability to access functions in Maximo until another group is associated.</td></tr>
</table>

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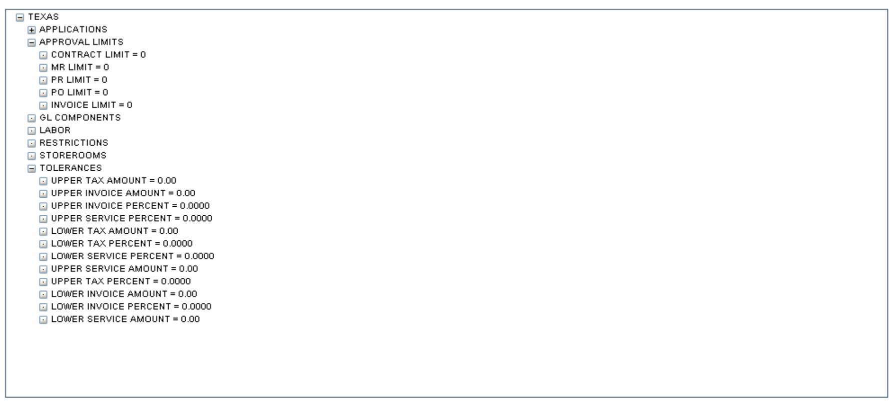
Users continued

Create a User

continued

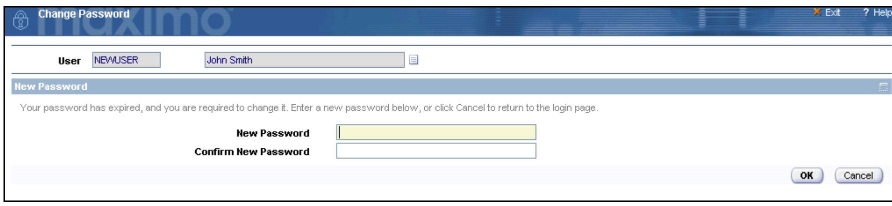
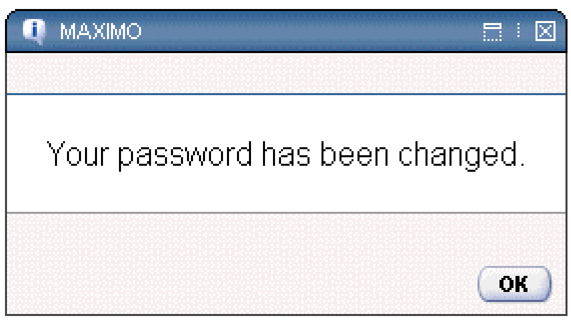
Step	Action
10	In the **Groups** pane, add a line containing the security group that you created. Hint: If you followed the instructions, the name should be MYGROUP[*your initials*].
11	Save the record. Result: Your user now has the basic functionality provided by the DEFLTREG group and the rights defined in the MYGROUP[*your initials*] security group.
12	Access the **Security Profile** tab and drill down in the various locations. Result: The tab and drill-down give you a graphical overview of the rights given to the user, as shown here:  Note: If you check the rights for the Work Order Tracking application, you will see that the new user has read access to records, Save Current Query, and View/Manage Queries actions—rights that you added to your new security group. There will also be a number of other default rights.

continued on next page

Users continued

Check Your New User

In this exercise you will sign in as your new user and take a quick look at the results of your setup.

Step	Action
1	Sign out of Maximo.
2 	Sign in to Maximo as your new user. Note: You wrote the password on page 11-19. Result: If your system is set up to require a new password on sign-in, you will see the following screen. Otherwise you will be taken to a Start Center and can go to Step 5. 
3	Enter and confirm a new password, then click **OK**. Result: You will see the following message: 

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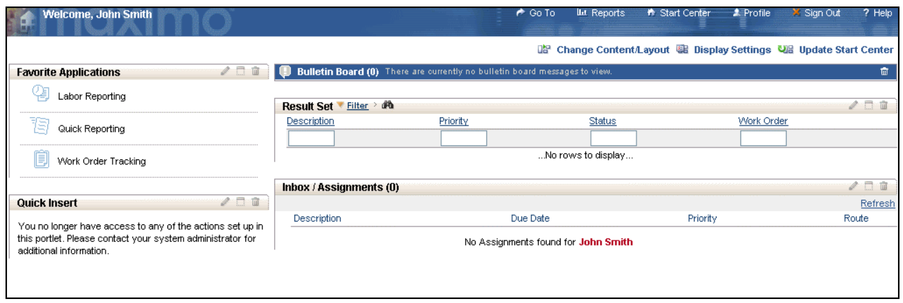
Users continued

Check Your New User

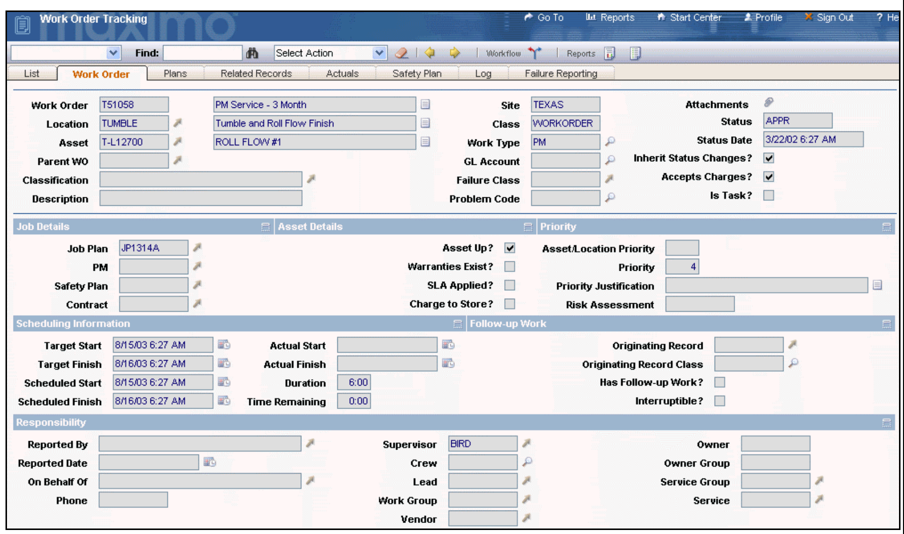
continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>4</td><td>Click OK in the pop-up message.

<u>Result</u>: You will be taken the Start Center for the new user that was designated in your new Security Group.


</td></tr>
<tr><td>5</td><td>Access the Work Order Tracking application and open the Work Order tab of any record.

<u>Result</u>: You will see that all fields are read-only, just as indicated in the rights of your group.



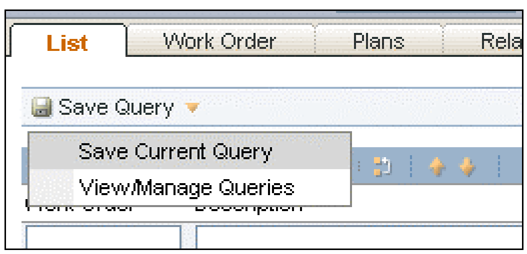
<u>Note</u>: The default filter for records is on the TEXAS site, which is the default site you indicated for your user.</td></tr>
</table>

continued on next page

Users continued

Check Your New User

continued

Step	Action
6	Click the **Select Action** menu. Result: There are only a few default actions, because you gave access only to Save Current Query and View/Manage Queries actions, which are accessed from another location. 
7	Access the **List** tab and click the down arrow to the right of the Save Query link. Result: You see the two actions for which you gave access in your security group, as shown here: 

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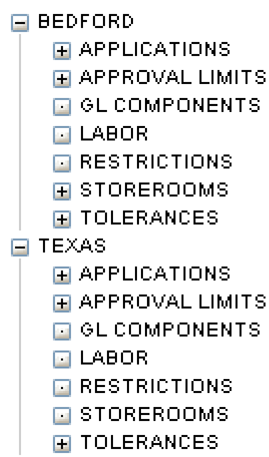
Users continued

Assign a Second Group

We created a group with certain rights, assigned the new user to it, and then checked the results.

Now let's add the user to another group and we can see its effect.

Step	Action
1	Sign out as your new user and sign back in to Maximo as user: wilson with password: wilson (or whatever user your instructor indicated at the beginning of the course).
2	Access the **Users** application, then find your new user.
3	Add the BEDFORDSITE group to your new user.
4	Save the record.
5	Access the **Security Profile** tab. Result: In addition to the TEXAS site, the BEDFORD site is now available.  Note: If you drill down in each site, you will see that the same rights given to your first group are available to applications in both sites. This is because the groups are dependent and combinable.

Additional Functionality

Overview

In this section we will cover some additional new features related to security.

Native Database User

Before MXES, it was necessary to create *native* database users that were outside of the Maximo tablespace and directly within the generic database structure.

These users were also given rights to perform some database-level actions in the generic database structure. Then they were given rights to specific applications within the Maximo tablespace.

In MXES, all users and their rights are maintained directly within the Maximo security tables.

However, there might be times when a user requires access to the database at the *native* level. The main example of this need is when developing Actuate reports against the database. In this case, the developer may need to work directly against the database instead of through the Maximo user interface.

continued on next page

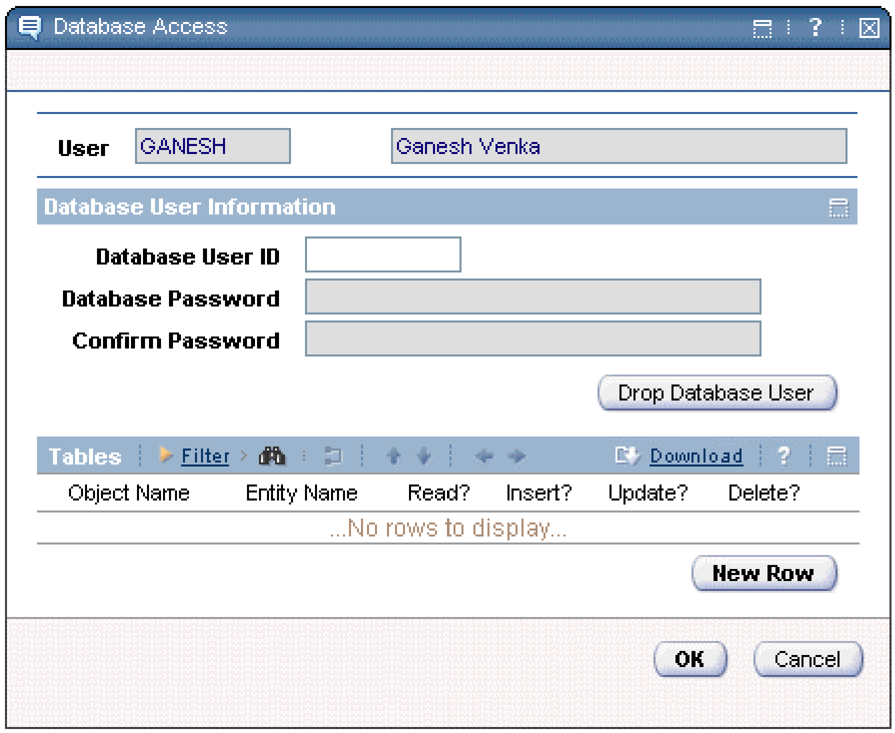
Additional Functionality continued

Native Database User

continued

You can convert a regular non-native user to a native database user with the Maximo user interface as follows:

1. Access the user in the **Users** application.
2. Choose **Database Access** from the Select Action menu.
3. Make appropriate changes in the Database Access dialog box.



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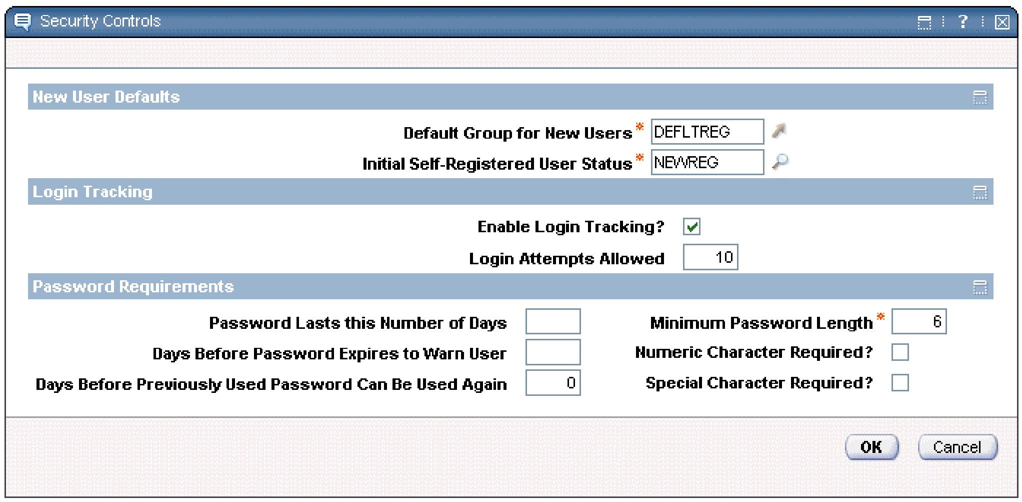
Additional Functionality continued

Security Controls

MXES enables you to more easily administer security controls.

Follow these steps:

1. Access the **Users** application *or* the **Security Groups** application.
2. Select **Security Controls** from the Select Action menu.
3. Make appropriate changes in the Security Controls dialog box.



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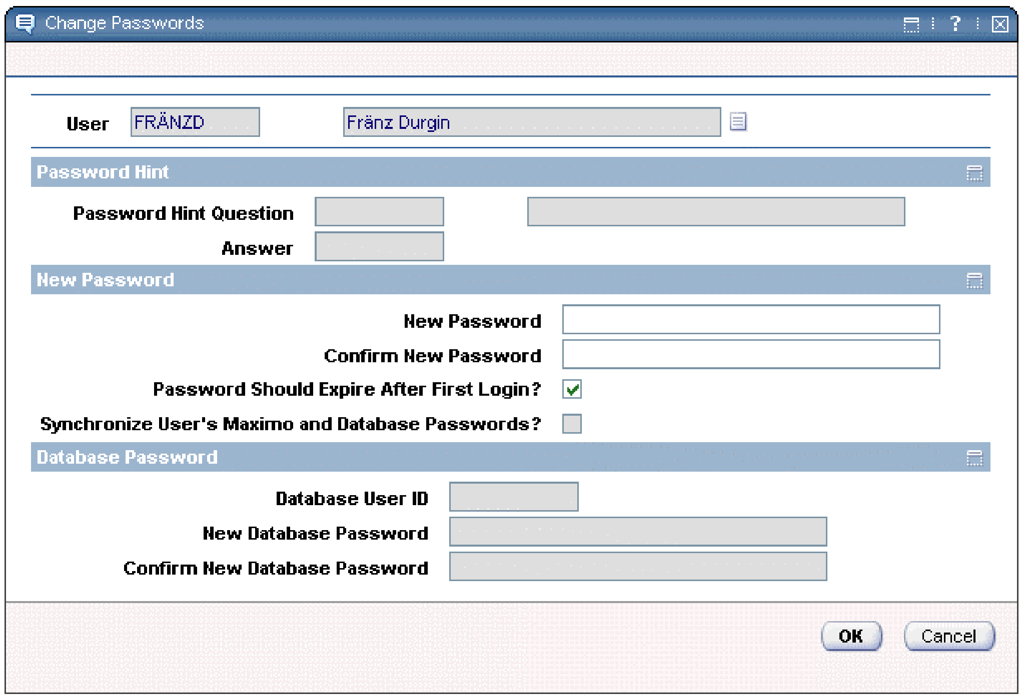
Additional Functionality continued

User-Level Password Control

Some more specific, user-level password controls are available from the Users application.

Follow these steps:

1. Access the desired user in the **Users** application.
2. Select **Change Passwords** from the Select Action menu.
3. Make appropriate changes in the Change Passwords dialog box.



LDAP and Single Sign-On

LDAP and Single Sign-On enable users to sign on once and access all their needed applications and functionality.

MXES supports this functionality.

Note: Speak with your company's IT department to find out about the use of these features in your company.

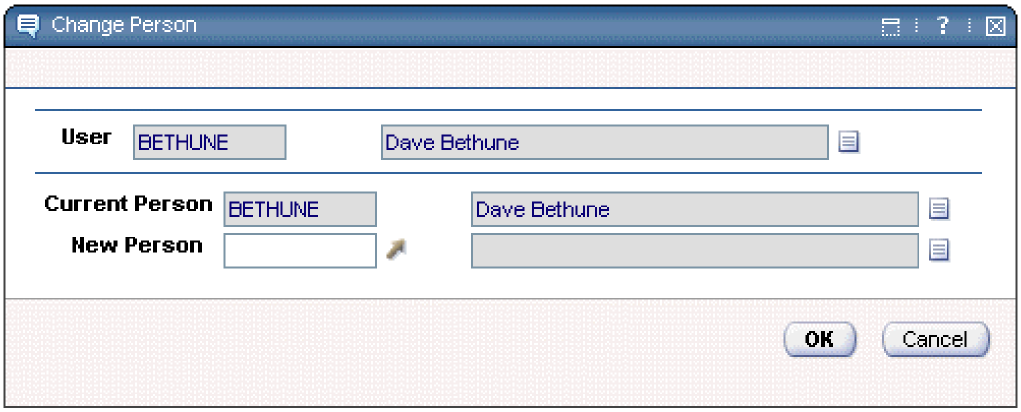
continued on next page

Additional Functionality continued

Change Person

You can change the person record with which a user is associated by following these steps:

1. Access the user in the **Users** application.
2. Select **Change Person** from the Select Action menu.
3. Make appropriate changes in the Change Person dialog box.



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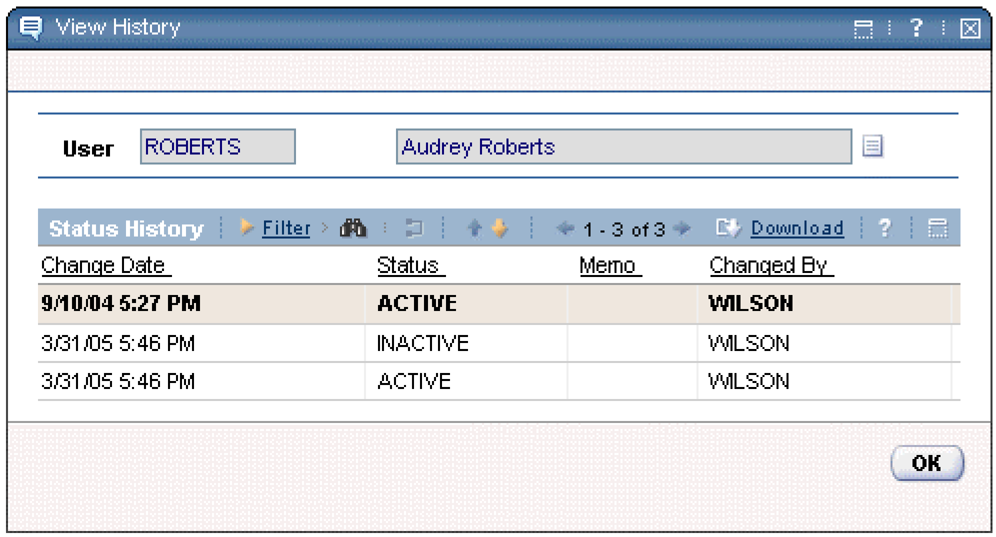
Additional Functionality continued

View Status History

You can make a user active or inactive. Maximo tracks the history of this status, which can be accessed as follows:

1. Access the user in the **Users** application.
2. Select **View History** from the Select Action menu.
3. Make appropriate changes in the View History dialog box.



Chapter Summary

Key Enhancements

MXES offers many security-related enhancements:

- Security is now administered using all Web-architected applications.
- Access is not assumed, it must be granted.
- The three new applications involved in security are People, Users, and Security Groups.
- A user can belong to multiple groups.
- A user has access to all privileged data without having to change sites.
- Any user can be given administrative rights.
- There is no longer a need to make all users also database users. All users and their rights are maintained in the Maximo security tables.
- Password administration has been improved.
- Users can do some user-related administration in the Profile application.
- LDAP and Single Sign-On are now supported.

Security Process

The key steps to creating a user with security are as follows:

- The user is created and associated with a person record.
- Security groups are set up to provide rights to various applications, actions, sites, and so forth.
- A user must be authorized to make reassignments within security groups.
- The user is associated with one or more security groups.

Dependent and Independent Groups

There are two types of security groups:

- *Dependent* groups can be used with other groups to create a synergy of additive rights.
- *Independent* groups add rights but do not combine with other groups.

continued on next page

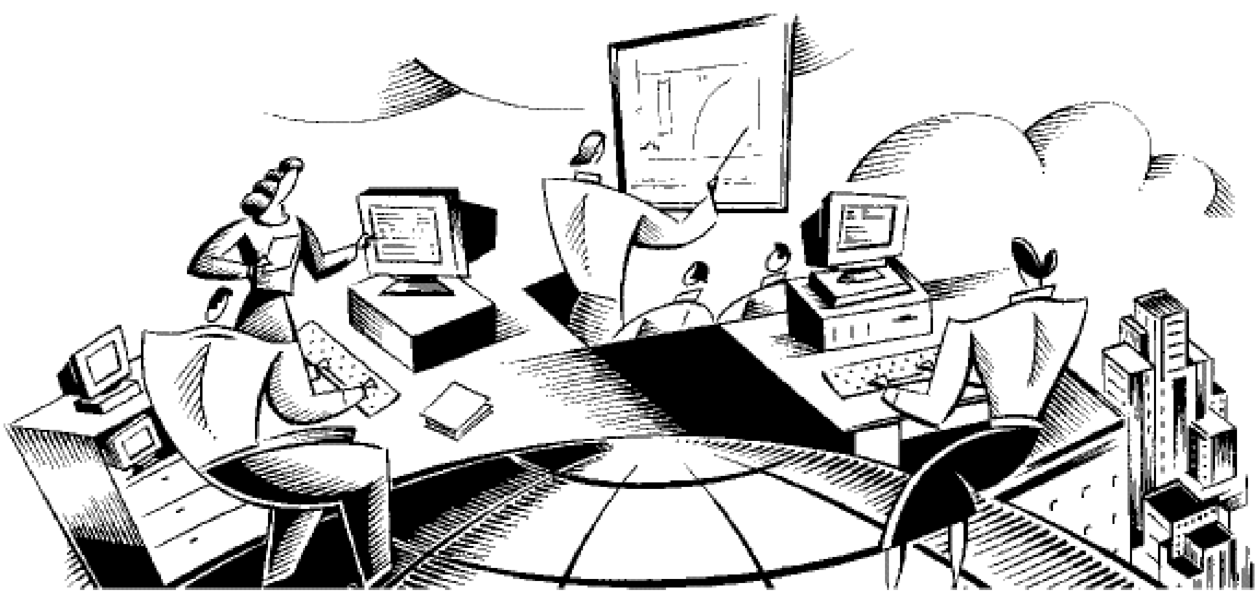
Chapter Summary continued

Native Database Users	In MXES, users are not required to be given rights at the system database level. All users' rights and records are maintained in the Maximo security tables. However, MXES provides an interface for making a Maximo user into a native database user. Some users must be native to directly interact with the database, such as when designing reports.
Security Control	Many security controls are administered through the Security Controls action. This action can be accessed through both the Users application and the Security Groups application.

NOTES:

MXES for EAM – New Features

Chapter 12: Work Management



In This Chapter This chapter contains the following topics:

Chapter Overview

Introduction

In this chapter we will cover the key work management-related changes included in MXES.

Chapter Focus

We will focus on the essential changes made to MXES that improve the ability to manage work.

Because work management is such an important part of MXES functionality, we will highlight the changes and then do some exercises to let you see and work with the changes.

Learning Objectives

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

- prevent charges to a work order;
- determine status inheritance in a work order hierarchy;
- create a work package using the new, simpler methods;
- use the new work order duplication functionality;
- automatically move an asset within a work plan or job plan; and
- create a job plan from a work plan.

Key Enhancements

Overview

In this section we will cover the key work management-related enhancements in MXES.

We will then do some exercises to give you a chance to try out the changes.

Hierarchy Usability

The following enhancements relate to the work order hierarchy:

- You can prevent charges to specific work orders in the hierarchy.
- You can determine whether work order status within a hierarchy inherits parent status.
- Storeroom sites are now allowed on materials and tools.
- Autoseeds can be set from the Organizations application for:
  - Work Orders
  - Activities (Service Desk)
  - Changes (Service Desk)
  - Releases (Service Desk)
- You can create work package from existing work orders.

  Maximo allows selection of a set of work orders and automatic creation of and association with a parent work order.
- You can now delete an entire work order hierarchy if it meets certain defined criteria.

  Note: MAXIMO 5.2 allowed deletion only if no children existed.
- You can duplicate a single work order or work order header.

  Note: MAXIMO 5.2 allowed duplication only to a work order and its hierarchy.

  MXES now allows duplication of:
  - Work order header only
  - Work order and its tasks
  - Entire work order hierarchy

continued on next page

Key Enhancements continued

IT Asset Management

Now that MXES also supports ITAM functionality, a number of ITAM-related enhancements have been made to work order functions, including Move/Modify Assets on work orders:

- Asset moves and attribute modifications can now be made in the Work Order applications. They can also be planned and executed when the work order is completed.
- Multiple assets can all be moved together on a single work order or have their attributes updated.

Planning

A number of enhancements have been made to MXES as they relate to the Planning function. For example:

- Job plans now have statuses:
  - Draft
  - Active
  - Inactive
- You can create a job plan from a work plan.

Multisite

The powerful multisite functionality of MXES is used in work management functions:

- Job plans can now be organization- or site-specific.
- Multisite job plans can be created by not specifying the organization/site.
- Job plans and related resources can be made organization- or site-specific.

  If on a multisite job plan, then resources or tasks that have specific organizations/sites will not be brought over when used by another organization or site.
- Work plan resources can come from other organizations/sites that use the same item set.

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Key Enhancements continued

Job Plan Ownership

The job plan ownership concept has been introduced to provide for the support desk environment.

- The owner of a job plan is the person who is responsible from a service management perspective.

  Note: This is not necessarily the person who is doing the work.

- The concept of ownership of work comes into play in a service environment, as presented in the following example:

  1. A person reports a problem to a service desk via the Maximo Service Desk application.
  2. The Maximo Service Desk application assigns responsibility for the work process to a service agent.
  3. The service agent determines which work needs to be done and enters the work into Maximo
  4. The work is manually or automatically assigned to a technician.

     Notes:

     - The work can be automatically assigned via a workflow.
     - Assignment Manager can partially automate the process.
     - The work can be manually assigned by a supervisor.

  5. The technician performs the work and reports back through Maximo or by other means to the service representative that the work is complete.
  6. The service request and related files are indicated as completed.

  Note: During this entire process, the service representative is the owner of the process, ensuring that service is provided and end users are informed.

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Key Enhancements continued

Miscellaneous

Many other enhancements have been made to MXES to improve work management. For example:

- Maximo checks for open POs when closing work orders.
    - User will get a dialog box when closing work orders that have open POs.
    - Can still close, but will have open POs—not a good thing.
    - You can remove the OK button in the dialog box to prevent the closing of work orders with open POs.
- You can add Yes/No/Close warning messages. This is a much-requested feature from Maximo 4.x being brought to MXES.
- Inventory locations are now allowed on work orders. This enables maintenance to be done on assets in storerooms.
- You can multi-select assets and locations on work orders. On the Plans tab, you can add multiple assets and locations.

New Interface Features

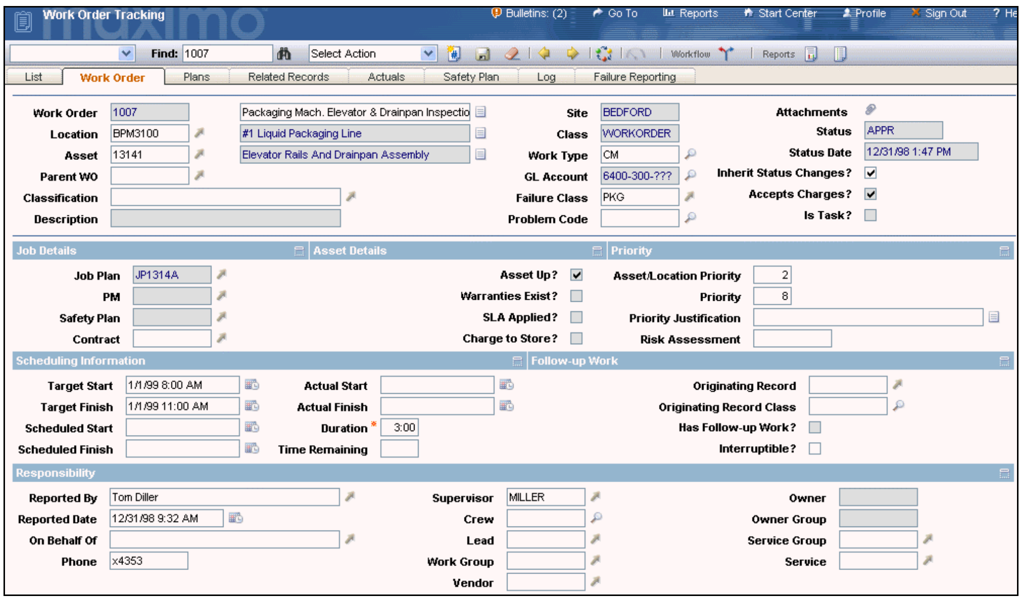
Overview

In this section we will cover several work management-related MXES applications and take a look at some new fields, check boxes, buttons, and other user interface (UI) features.

Work Order Tracking: Work Order Tab

Access the Work Order tab for any record in the Work Order Tracking application.

Note: Work Order Tracking is in the Work Orders module.



The table on the next page describes the new UI components on the Work Order tab.

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New Interface Features continued

Work Order Tracking: Work Order Tab

continued

Feature	Description
Accepts Charges? check box	This check box controls: • whether a work order can accept charges, and • which work orders in a hierarchy can hold cost information for work done. Example: You might want to charge at detailed task level or against a higher-level main parent work order. Note: This is useful mostly in case of a work order hierarchy.
Inherit Status Changes? check box	This check box controls whether a work order can inherit the status of its parent. • In MAXIMO 5.2, status inheritance was set at parent work order level for all children. • It now can be set at the child/task work order level. • Each child/task can independently determine status inheritance. This check box is selected by default on all new work orders. • All child work orders created against the parent with the check box selected will be created with this flag checked. • If child work orders created against this parent should not inherit status, then do not select this check box on the parent and created children will not have the text box checked. This check box can be deselected on created children, even if the parent has it checked.

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New Interface Features continued

Work Order Tracking: Work Order Tab

continued

UI Feature	Description
Location field	Note: This is not a new field. • MAXIMO 5.2 allowed only non-inventory locations. • Change permits work on assets in inventory. Example: Duration-based maintenance on stocked items • Change permits work on actual inventory locations. Example: Painting storeroom

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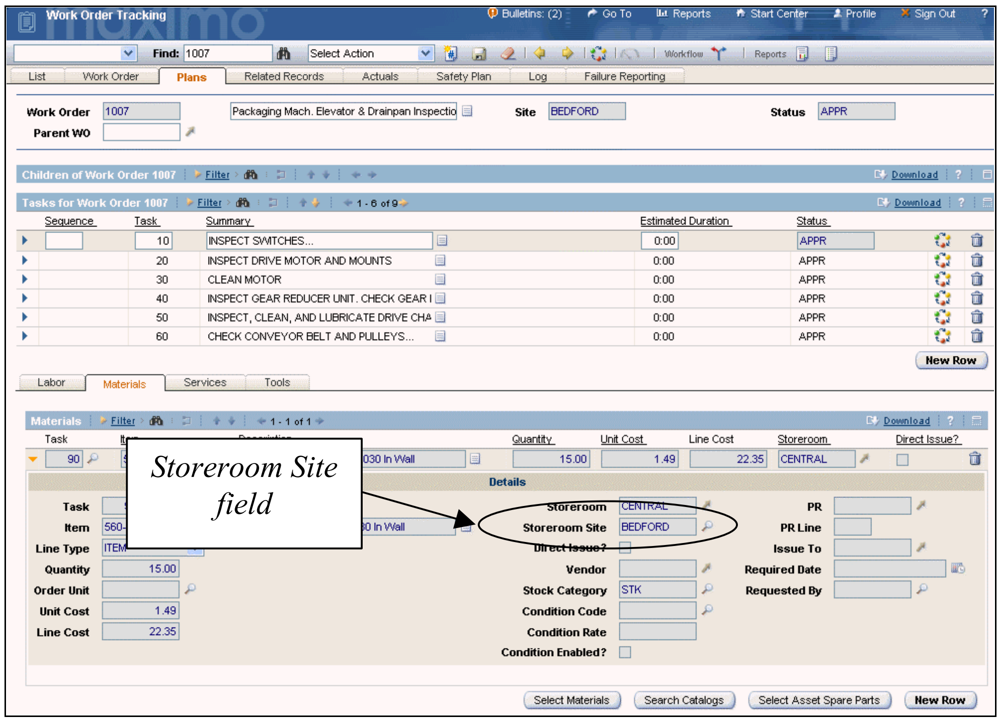
New Interface Features continued

Work Order Tracking: Plans Tab

Access the Plans tab for any record in the Work Order Tracking application. Then review the details on the Materials and Tools subtabs.

Note: If no materials or tools exist on the work order that you selected for this example, you might have to add a row to the Materials and Tools subtabs to show the field.



The Storeroom Site field is now available on the Materials and Tools subtabs of the Plans tab.

This enables the planner to indicate precisely from which site materials and/or tools are coming.

It also allows for non-unique storeroom names in sites.

Note: This data is also present on job plans.

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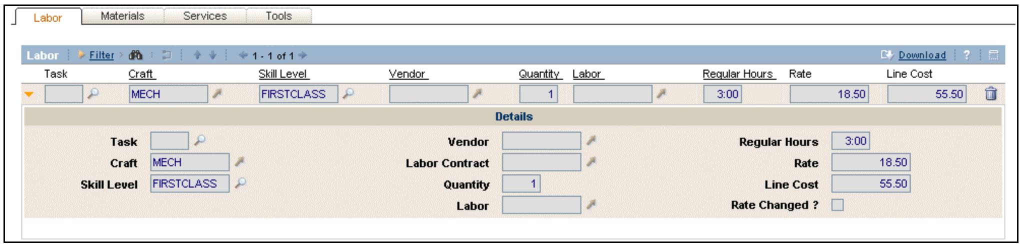
New Interface Features continued

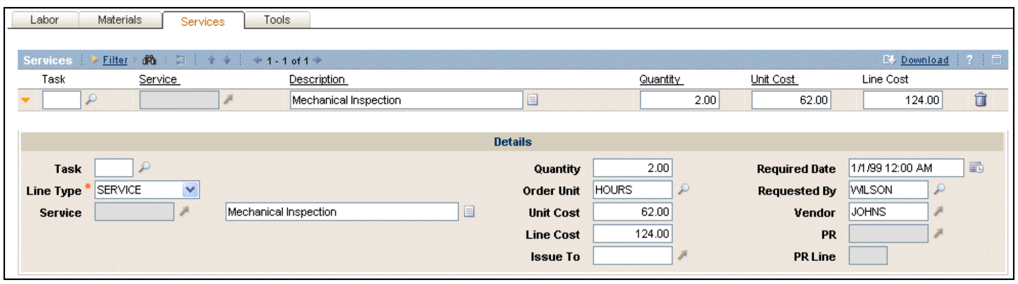
Work Order Tracking: Plans Tab

continued

The Labor subtab allows you to designate a *specific skill level* for the listed labor.



You can use the new Services subtab on the Plans tab to directly indicate services required for the work.



Note: This new subtab is also available on the Actuals tab.

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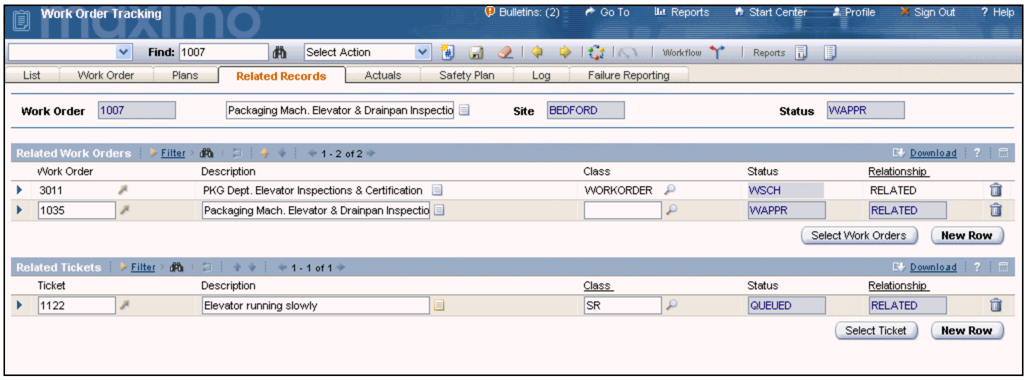
New Interface Features continued

Work Order Tracking: Related Records Tab

MXES includes some new functionality to support the new Service Desk solution. One of these functions is the new Related Records tab in the Work Order Tracking application.

Note: For training on the new Service Desk solution provided by MXES, please contact MRO Software Educational Services.



- The Related Work Orders pane displays work orders related to the current work order. These work orders have one of the following relationship types: Follow Up, Originator, or Related.
- In the Related Tickets pane, Maximo displays service tickets related to the current work order. Tickets can have one of the following relationship types: Follow Up, Originator, Global, Related to Global, or Related.

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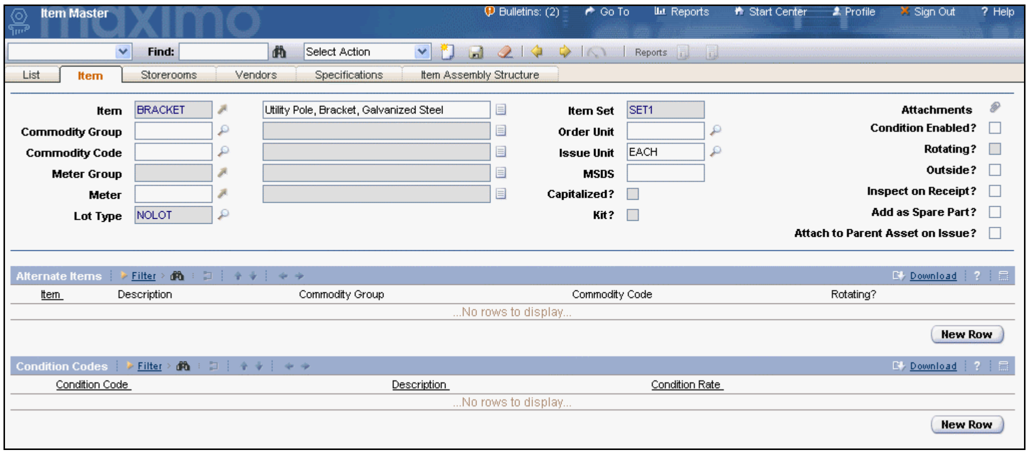
New Interface Features continued

Item Master Application

Access the Item tab of any record from the Item Master application from the Inventory module.



The Attach to Parent Asset on Issue? check box is a new feature.

- This flag determines whether an item remains attached as a child when its parent is issued.
- Items that always become a sub-component of the asset they are issued to should be marked to automatically attach.

Example: Computer memory or software. When issued to a desktop computer, they become a child asset to the computer. Generally, when the computer is moved, its memory and software should move with it.

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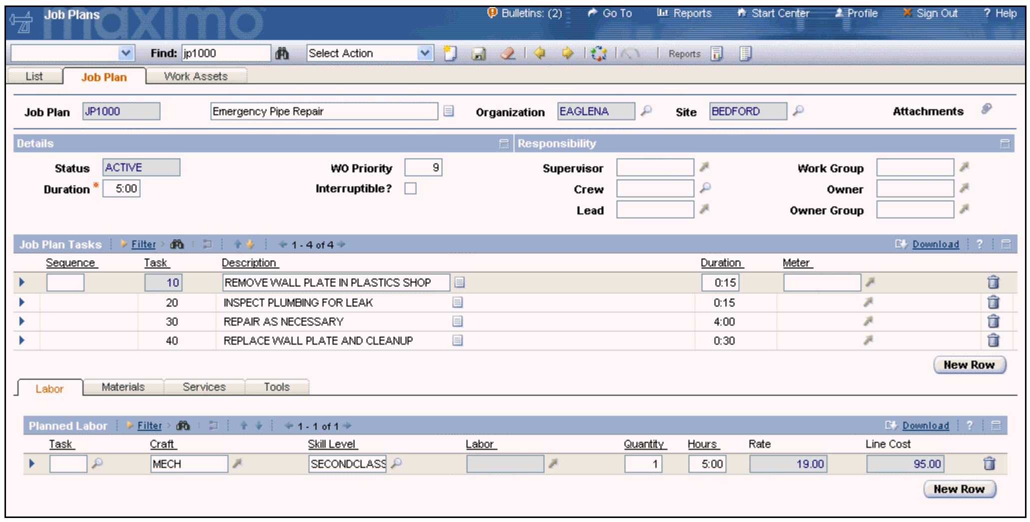
New Interface Features continued

Job Plans: Job Plan Tab

Access the Job Plans tab for any record in the Job Plans application.

Note: Job Plans is in the Planning module.



The following table describes a number of key new UI items in Job Plans.

UI Feature	Description
Organization and Site fields	• You can create multisite job plans for the entire system by not specifying organization or site. • You can create job plans to be used only for a specific site or organization by indicating this information on the job plan. Note: Job plans and related resources can be made organization- or site-specific. • If on a multisite job plan, then resources/tasks that have specific orgs/sites will not be brought over when used by work orders from another org/site. • If only an organization is specified, then resources/tasks that have sites specified will not be brought over when used on work orders from another site.

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New Interface Features continued

Job Plans:
Job Plan Tab

continued

UI Feature	Description
Status field	Job plans are now statusable with three settings: Draft • This is the initial status of all newly inserted job plan records. Note: Once activated, job plans can only be deactivated, not set back to draft. • Job planners can create a draft while working on it. • The draft cannot be seen or used by other applications until it is made active. Active The job plan can be used by other Maximo records. Inactive • The job plan cannot be used by other Maximo applications. • The job plan cannot be made inactive if it is used by other applications. Note: To inactivate a job plan, you must take it off other records or those associated records must be inactive or closed.

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New Interface Features continued

Job Plans: Job Plan Tab continued

UI Feature	Description
Owner and Owner Group fields	Note: These fields mainly apply to Service Desk functionality. • They are mutually exclusive fields. Specify only an owner *or* an owner group — not both. • The fields allow you to designate which person/group is responsible for ensuring that the work is done. Note: This is not necessarily the person actually doing the work. Example: A service desk person needs to make sure a certain printer is fixed. He will request someone to do the work and will communicate with the worker and the person with the problem to make sure that the work is done. • The Owner field uses People records. • The Owner Group field uses Person Group records. o People groups are compilations of people. o People groups are created in the Person Group application.
Resource details	• You can designated the skill level of labor resources. Note: Assignment Manager will look for this skill level as a minimum when searching for designated labor for a work order. • You can now indicate site and organization values on all resources.

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New Interface Features continued

Job Plans: Additional

Like the Work Order Tracking application, the Job Plans application also has the following additional new features:

- Ability to indicate storeroom site for tools and materials
- Ability to indicate skill level for crafts
- A Services subtab for direct application of services for work

Exercise: Job Plans and Multiple Org/Site Data

Job plans can indicate resources by site and organization. When resources are specified for more than one site or organization, work orders with specified job plans will pick up only resources that pertain to their own site and organization.

The exercise below shows this capability.

Step	Action
1	Access the **Job Plans** application and insert a new record with the following information: **Job Plan:** OILCHG[*your initials*] **Description:** Oil Change Job Plan [*your initials*] <u>Note</u>: We will not specify a site or organization, so that this job plan can be used across the system.

continued on next page

New Interface Features continued

Exercise: Job Plans and Multiple Org/Site Data

continued

Step	Action
2	Add two lines to the **Materials** subtab with the following information: <u>Line 1</u> **Organization:** EAGLESA **Site:** CHILEHDQ **Item:** OIL15W30 (Aceite de Motor Diesel - 15W-30) **Quantity:** 8 **Storeroom:** SANTIAGO **Storeroom Site:** CHILEHDQ <u>Line 2</u> **Organization:** EAGLESA **Site:** CHILEHDQ **Item:** 5B-9376 (Filtro de Aceite - Motor Diesel) **Quantity:** 1 **Storeroom:** SANTIAGO **Storeroom Site:** CHILEHDQ

continued on next page

New Interface Features continued

Exercise: Job Plans and Multiple Org/Site Data continued

Step	Action
3	Add two more lines to the **Materials** subtab with the following information: Line 3 **Organization:** EAGLENA **Site:** BEDFORD **Item:** 15W-30 (Diesel Engine Oil - 15W-30) **Quantity:** 8 **Storeroom:** ATLANTA **Storeroom Site:** FLEET Line 4 **Organization:** EAGLENA **Site:** BEDFORD **Item:** 1R-0715 (OIL FILTER - DIESEL ENGINE) **Quantity:** 1 **Storeroom:** ATLANTA **Storeroom Site:** FLEET
4	Save the Job Plan record.
5	Activate the Job Plan record. Note: Status is a key new feature in the use of Job Plans.
6	Access the **Work Order Tracking** application and insert a new record with the following information: **Description:** Change Diesel Engine Oil **Job Plan:** OILCHG[*your initials*] Note: The Work Order record uses the default site information for the current user. In this case the default site is BEDFORD.

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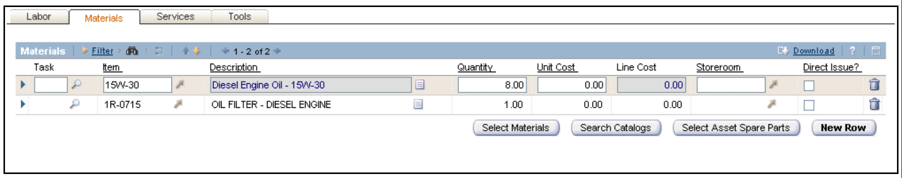
New Interface Features continued

Exercise: Job Plans and Multiple Org/Site Data

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>7</td><td>Save the Work Order.</td></tr>
<tr><td>8</td><td>Access the Materials subtab from the Plans tab.

Result: Only the items from the Atlanta storeroom show as Materials.



Note: Because both the Fleet and Bedford sites are in the EagleNA organization, Bedford work orders can use materials from Fleet.</td></tr>
</table>

Exercise: Using the Job Plan on a CHILEHDQ Work Order

Change your default site to CHILEHDQ and insert a new work order. Then add the OILCHG job plan to it.

- What site is the work order in?

- What shows up on the Materials subtab?

Note: Be sure to change your default site back to BEDFORD before continuing.

New Interface Features continued

Autoseeds

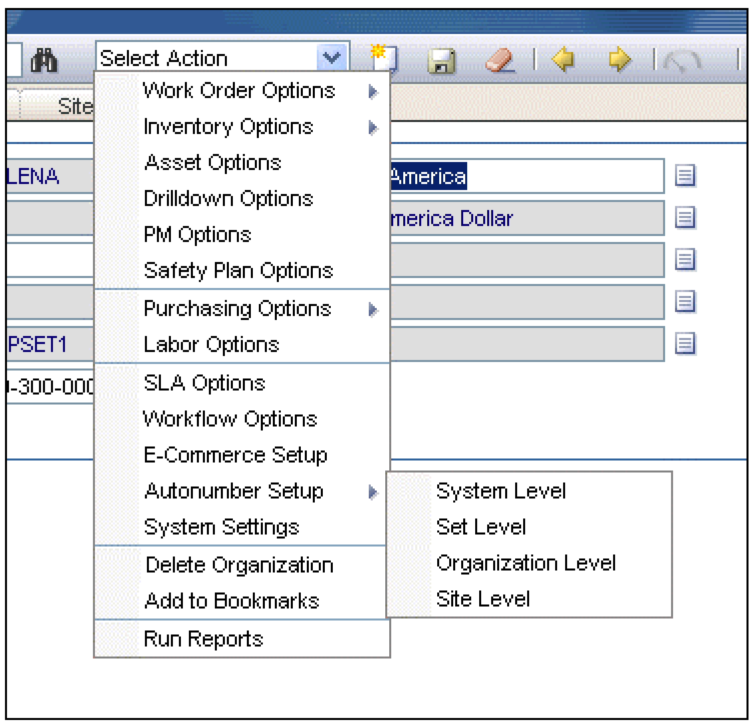
There are now several work management-related types of records:

- Work Orders
- Activities (new)
- Changes (new)
- Releases (new)

Note: The new types of records are related to the Service Management functionality. Please contact MRO Software Educational Services for training on these types of records.

Using the Select Action menu of the Organizations application, you can set the autoseed independently for each one of these types of records at the organization level.

Select Action >> Autonumber Setup >> Organization Level



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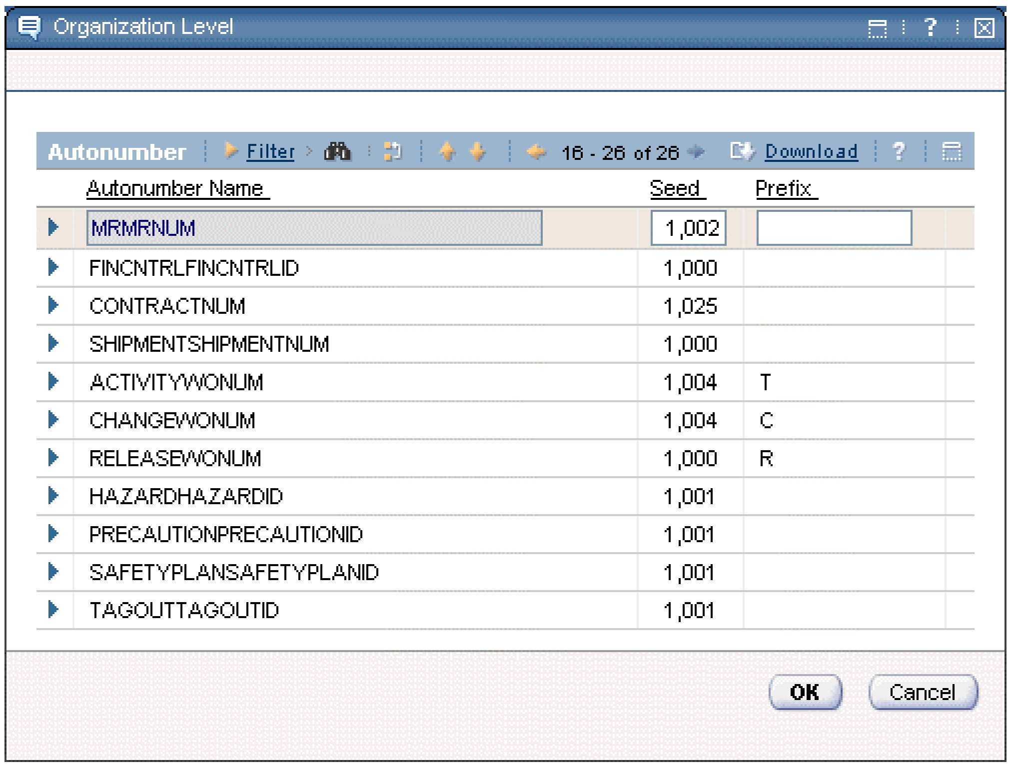
New Interface Features continued

Autoseeds

continued

Result: In the resulting Organization Level dialog box, you can select which autoseed to change.



Work Packages

Overview

MXES provides a quick and easy way to package work orders together.

In this section you will try out this new functionality.

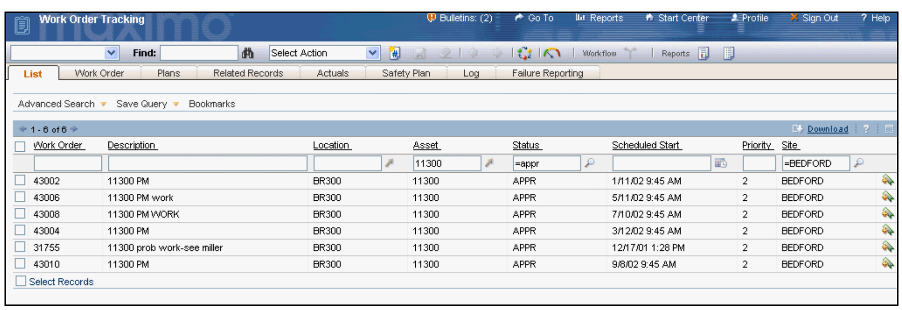
Create a Package

Maximo now allows you to select a group of work orders and indicate that they should be put together in a work package.

Maximo automatically creates a parent work order and adds the selected work orders as children.

The steps below show you how this works.

Note: If all students are working on one database, only one person in the class should perform the exercise while demonstrating it to the others.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Access the Work Order Tracking application.</td></tr>
<tr><td>2</td><td>On the List tab, filter the records on the following criteria:
Asset: 11300
Status: =APPR
Site: =BEDFORD
Result: The list contains a small number of records that meet the criteria, as shown here.

</td></tr>
</table>

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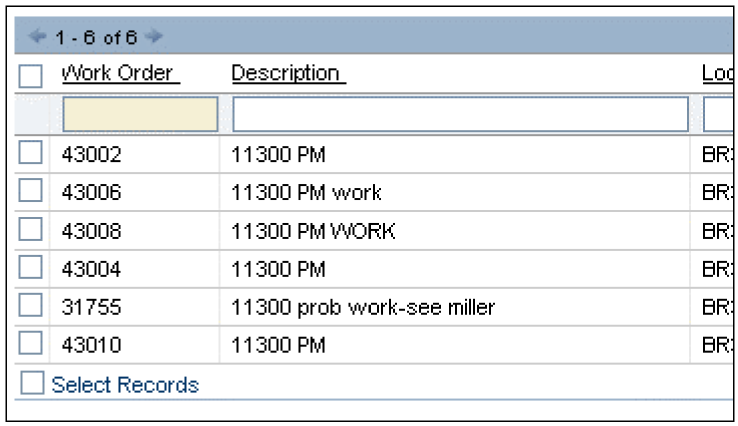
Work Packages continued

Create a Package

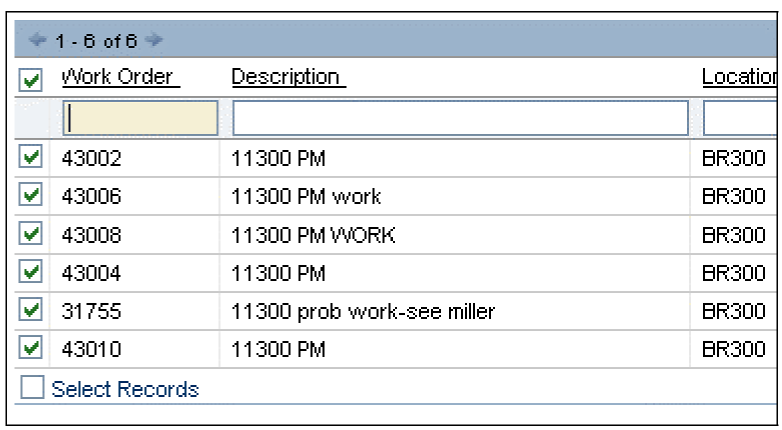
continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>3</td><td>Click on the Select Records check box.

Result: A check box is displayed to the left of each record, allowing you to select them individually.


</td></tr>
<tr><td>4</td><td>Click the Select All Records check box.

Result: The check box for each listed record is selected. Maximo will perform actions on this set of records.



Note: Select All Records is the check box at the very top of all the check boxes for the individual records.</td></tr>
</table>

continued on next page

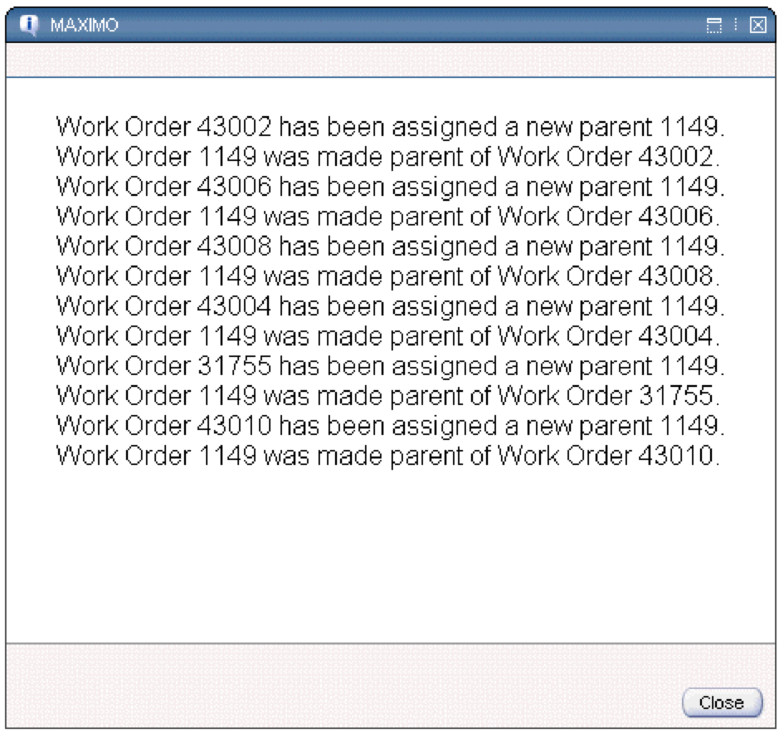
Work Packages continued

Create a Package

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>5</td><td>Select Create Work Package from the Select Action menu.

<u>Result</u>: A dialog box displays the results of the packaging process, as shown here.



<u>Note</u>: All records indicate that they have been assigned to the same parent. This is the parent created by Maximo.</td></tr>
<tr><td>6</td><td>In the space below, write down the number of the new parent work order to which all the existing work orders have been assigned.

Parent: ______________</td></tr>
</table>

continued on next page

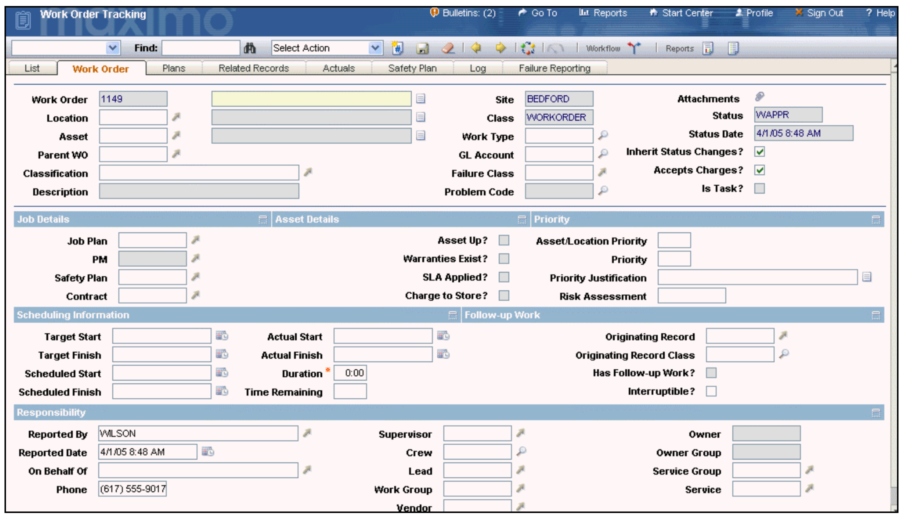
Work Packages continued

Create a Package

continued

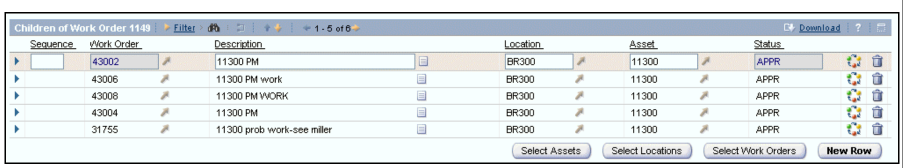
<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>7</td><td>Click Close to close the dialog box.

<u>Result</u>: The new parent work order for the package is displayed.



<u>Note</u>: Check the number of the work order against the number you wrote down in the previous step.</td></tr>
<tr><td>8</td><td>Give the record a description of New Features Packaging Work Order, then save the record.</td></tr>
<tr><td>9</td><td>Display the Children table on the Plans tab for the parent work order.

<u>Result</u>: The individual work orders are now displayed as children of the new parent created by Maximo. They have been packaged into the new parent.


</td></tr>
</table>

Move/Modify Assets

Overview

A time-saving and efficient new function has been added to MXES: the ability to activate asset moves as part of a work plan or job plan.

When a designated task is completed, Maximo actually moves one or more specified assets.

This eliminates the need to move the asset manually in Maximo after a work order has been completed, thereby ensuring that the move is recorded with no need for further intervention.

Note: This functionality works similarly with asset attributes. For our purposes, though, we will focus on moving assets.

Move an Asset on a Work Order: Set Up the Move

In the following exercise we will record a number of work plan steps to load up and move an asset from the field to a repair location.

In one of the work plan steps, we will indicate that the asset must be physically moved from one location to another. In this same step, we will have Maximo record the move electronically.

Note: If all students are working on one database, only one person in the class should perform the exercise while demonstrating it to the others.

Step	Action
1	In the **Work Order Tracking** application, insert a new record with the following information on the **Work Order** tab: **Description:** Move forklift #1 to repair shop **Location:** Shipping **Asset:** 12100

continued on next page

Move/Modify Assets continued

Move an Asset on a Work Order: Set Up the Move

continued

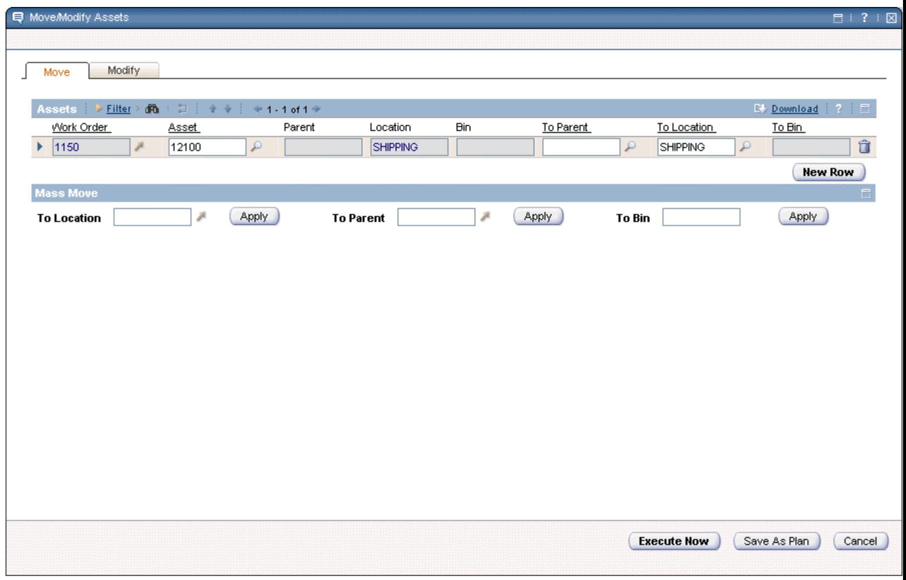
Step	Action
2	Access the **Plans** tab, then add three tasks to the work plan: Task 1 **Sequence:** 1 **Task:** 10 **Description:** Put forklift on flatbed and secure **Estimated Duration:** 00:15 Task 2 **Sequence:** 2 **Task:** 20 **Description:** Drive flatbed to repair shop **Estimated Duration:** 1:30 Task 3 **Sequence:** 3 **Task:** 30 **Description:** Unsecure forklift and remove from flatbed **Estimated Duration:** 00:15
3	Save the record.

continued on next page

Move/Modify Assets continued

Move an Asset on a Work Order: Set Up the Move

continued

Step	Action
4	We will now set up the move in Maximo. Start by selecting **Move/Modify Assets** from the Select Action menu. Result: The Move/Modify Assets dialog box opens. 
	Notes: • The Execute Now button causes the indicated move or modification to occur immediately. • The Save as Plan button causes the move or modification to occur when the task is completed on the work order. • The Modify tab allows you to carry out a similar process for modifying attributes of assets and locations.

continued on next page

Move/Modify Assets continued

Move an Asset on a Work Order: Set Up the Move

continued

Step	Action
5	We want to move the forklift to the repair shop, so enter REPAIR in the **To Location** field in the **Assets** pane. Note: The Mass Move pane allows you to move a group of assets to one particular location at one time. We chose only one asset for our example, but we could have selected a number of assets for this exercise and done a group move.
6	We want to add the move to the work plan, so click the **Save As Plan** button. Result: The Move/Modify Assets dialog box closes and the move is recorded in the work order. Note: We could have put this move onto one of the task work orders, as well. In that case, the move could be controlled by the status of the task work order, instead of the parent work order.

continued on next page

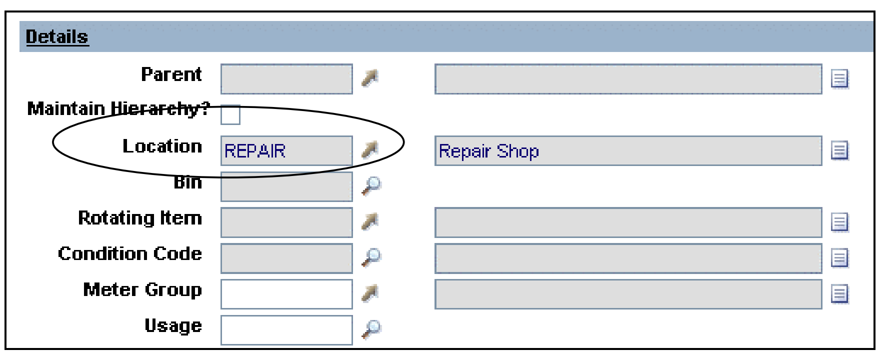
Move/Modify Assets continued

Move an Asset on a Work Order: Complete the Move

The move in Maximo will occur when the work order containing the move is completed. In the next steps we will complete the work order and check that the move occurred.

Tip: For a more controlled approach, we could put the move onto a task work order. If all the tasks are not completed when the parent is completed, you could control precisely when the move occurs in Maximo—when the actual move task work has been completed.

Note: If all students are working on one database, only one person in the class should perform the exercise while demonstrating it to the others.

Step	Action
1	Access the work order record you created in the previous exercise.
2	Change the status to COMP. Result: For our example, the parent and all task work orders are completed. The move is recorded in Maximo.
3	Let's check to ensure that the move occurred. Start by accessing the forklift in the **Assets** application. Hint: The forklift is record 12100.
4	Check the **Location** field for the record. Result: The asset is now in the REPAIR location, just where we want it to be. 

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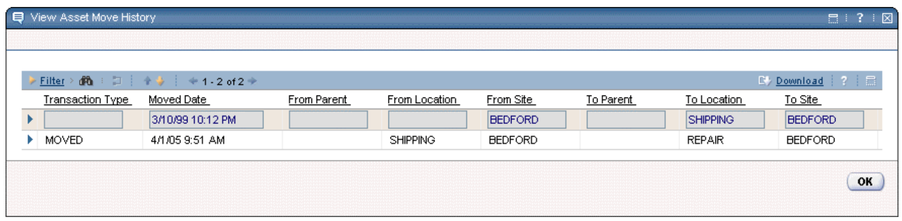
Move/Modify Assets continued

Move an Asset on a Work Order: Complete the Move

continued

Step	Action
5	Let's view the history of this asset as further evidence of the move. Select **View Asset Move History** from the Select Action menu. Result: The View Asset Move History dialog box displays the previous and current locations of this asset.  Note: We now can see when and where the asset has been moved, including the one we recently enacted via a work plan.
6	Click **OK** to close the dialog box.

Other Enhancements

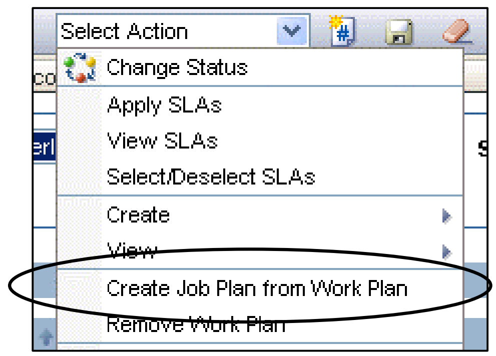
Overview

In this section we will cover some other new work-related MXES features.

Creating Job Plans from Work Plans

MXES enables you to convert work plans into job plans in Work Order Tracking.

You can do this by selecting Create Job Plan from Work Plan on the Select Action menu.



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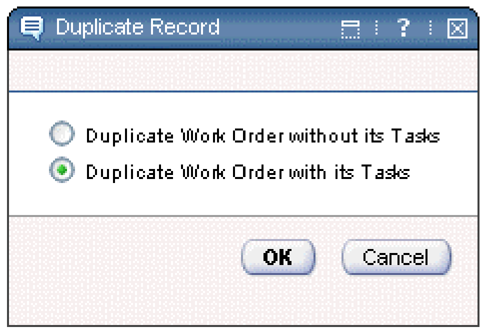
Other Enhancements continued

Duplicating Work Orders

MXES now enables you to duplicate a work order record with or without its tasks. You can do this using Duplicate Work Order from the Select Action menu in Work Order Tracking.

When you select the Duplicate Work Order action, Maximo displays the Duplicate Record dialog box, which contains the following options:

- Duplicate Work Order without its Tasks
- Duplicate Work Order with its Tasks



From this dialog box you can select the desired option, then click OK to duplicate the work order.

Note: If there are no tasks listed on the work order to be duplicated, Maximo does not display the dialog box.

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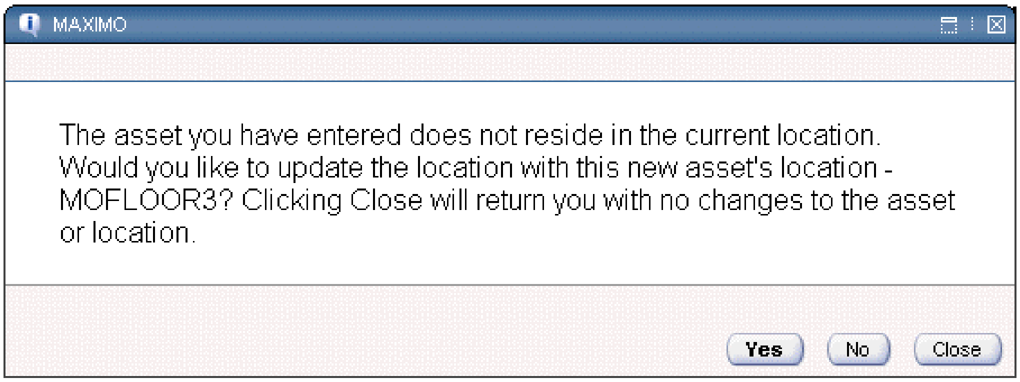
Other Enhancements continued

Yes/No/Close Dialog Box

MXES brings back a feature asked for by many users of the Maximo 4.x application: the Yes/No/Close dialog box.



The actual message depends on the data being entered. In essence, though, it lets you know when the asset and location that you entered do not match in the database.

Maximo provides the following options:

- **Yes** adds the desired asset to the work order record and changes the location to suit.
- **No** forces the incorrect data into the work order record.
- **Close** return you to the work order without making any changes.

Optional: If you want to see this dialog box in action, insert a new work order record, then try to add **Location:** BOILER and **Asset:** 11300 to see what happens.

Chapter Summary

Key Enhancements

The key work-related enhancements in MXES fall into these categories:

- Hierarchy Usability
- IT Asset Management
- Planning
- Multisite
- Job Plan Ownership

New Interface Features: Work Order Tracking

The new interface features in Work Order Tracking include:

- Start and Stop timer buttons
- Accepts Charges? check box
- Inherit Status Changes? check box
- Location field, which accepts inventory locations
- Storeroom Site field on Materials and Tools subtabs
- Related Records tab

New Interface Features: Item Master

The Attach to Parent Asset on Issue? check box is a new UI feature.

- This flag determines whether an item remains attached as a child when its parent is issued.
- Items that always become a sub-component of the asset they are issued to should be marked to automatically attach.

New Interface Features: Job Plans

The new interface features for Job Plans include:

- Organization and Site fields
- Status field
- Owner and Owner Group fields
- Skill levels in Labor

continued on next page

Chapter Summary continued

Autoseeds

Autoseeds can be set at the organization level from the Organizations application for:

- Work orders
- Activities (Service Desk)
- Changes (Service Desk)
- Releases (Service Desk)

Work Packages

You can combine a set of work orders into a work package with the Create Work Package action in Work Order Tracking.

This action creates a parent and attaches all work orders in the selected set as children.

Move/Modify Assets

You can move assets or change their attributes with the Move/Modify Assets action in Work Order Tracking.

You can perform this action immediately with the Execute Now button, or you can use the Save as Plan button to incorporate it into a work plan or job plan.

Moves can be done for large numbers of assets at once on the Mass Move section of the Move/Modify Assets dialog box.

Other Enhancements

You can create a job plan record directly from a work plan on a work order record by selecting Create Job Plan from Work Plan from the Work Order Tracking Select Action menu.

You can duplicate work orders with or without their tasks by using the Duplicate Work Order action in Work Order Tracking.

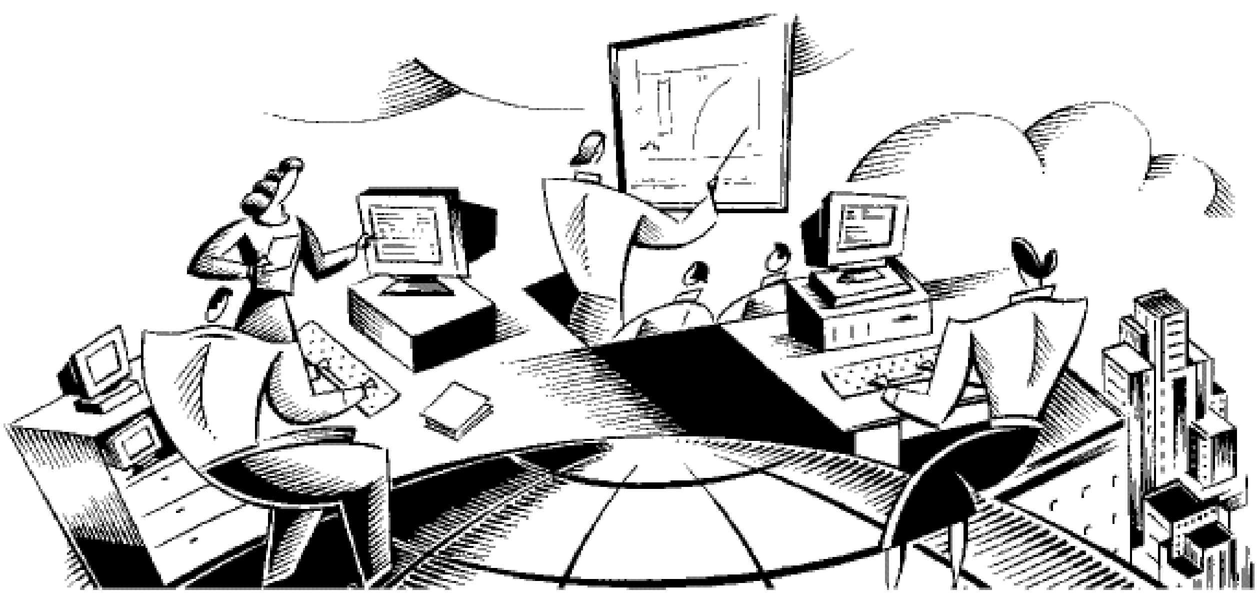
MXES brings back the Yes/No/Close dialog box, which is a requested feature from Maximo 4.x applications.

NOTES:

NOTES:

MXES for EAM – New Features

Chapter 13: Other EAM Administration



In This Chapter This chapter contains the following topics:

Chapter Overview

Introduction

In this chapter we will cover several key EAM-related administrative changes that have not been addressed in previous chapters.

This chapter gives you a brief introduction to these changes. However, due to the extensive scope of administrative changes from MAXIMO 5.x to MXES, we *strongly* suggest that you obtain additional training on these topics.

Chapter Focus

The focus of this chapter is to apprise you of several other miscellaneous administrative changes in MXES.

We will not go into great detail because there would be an excessive amount of material to cover in a limited amount of time.

Note: Please contact MRO Software Educational Services for more detailed training on administration of MXES.

Learning Objectives

When you have completed this chapter, you should be able to access and move around in the following administrative applications:

- Organizations
- Classifications
- Calendars
- Communications Templates
- Work View

Control Center Removed

The Control Center has been removed from Maximo. All administrative and other types of applications are now Web architected. This means that you can perform most administrative functions using a browser.

Organizations Application

Overview

We have discussed the Organizations application a bit in previous chapters. However, to ensure that you are aware of some key changes, we will repeat some of this information.

Renamed and Relocated

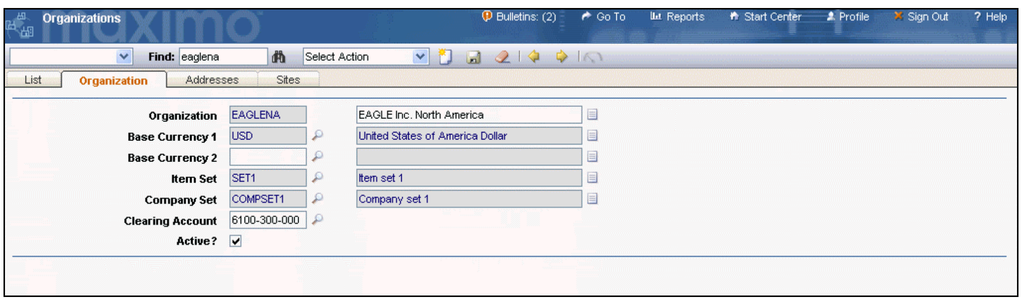
The Organizations application was previously called *Multisite Setup* in MAXIMO 5.x versions. Its name has been changed to more accurately reflect its role in MXES: to provide administration at the organization level.

The Organizations application is now accessible directly from the Administration module.

New Fields: Organization Tab

From the Organizations application, access the Organization tab for the EAGLENA organization.

Result: Your screen should look similar to the following example.



The table on the next page describes the new fields on this tab.

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Organizations Application continued

New Fields: Organization Tab

continued

Field	Description
Item Set	• The Item Set record is created in the Sets application. • The Item Master application is used to associate each inventory item with one item set. • The **Item Set** field in the Organizations application associates the organization with a list (set) of inventory items used by this organization. • This item set can be associated with multiple organizations. • All organizations associated with the same item set can share items on this list with other organizations that also use this set. Note: For further details on this topic, please see Chapter 3, “Multisite/Multiorganization Enhancements.”
Company Set	• The Company Set record is created in the Sets application. • The Company Master application is used to associate each company with one company set. • The **Company Set** field in the Organizations application associates the organization with a list (set) of companies used by this organization. • This item set can be associated with multiple organizations. • All organizations associated with the same company set can share companies on this list with other organizations that also use this set.
Clearing Account	• The clearing account is required to facilitate cross-organization item and asset transfers. • The field is not mandatory. • After you create a new organization, you must first create GL accounts for the organizations. Then you can define the clearing account from the list of GL accounts.

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Organizations Application continued

Improved Organization Options Accessibility

MXES provides improved accessibility to various organization-level options through the Select Action menu.

Examples:

- Work order options
- Purchasing options
- Inventory options
- Autonumber setup options

Inactive Organizations and Sites

Inactive sites or organizations will still show up in value lists. For this reason, you should remove inactive sites or organizations from the rights of security groups that previously had access to them.

Classifications Application

Overview

The Classifications application was called *Asset Catalog Setup* in previous versions of Maximo.

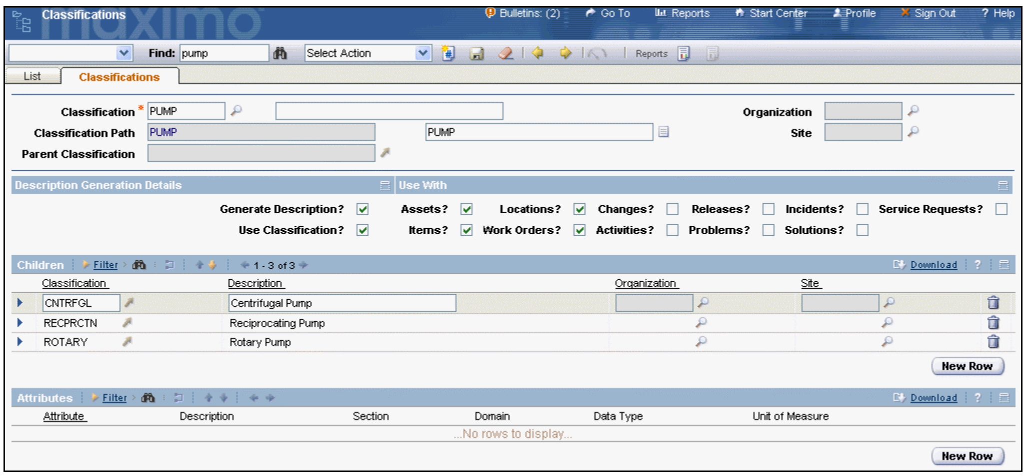
In this section we will cover some new functionality and give you the opportunity to try it out.

Accessing Classifications

The Classifications application is Web architected and is accessible from the Administration module.

To see it, access the classification for the PUMP record.

Result: Your screen should look similar to the following graphic.



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Classifications Application continued

Expanded Usage

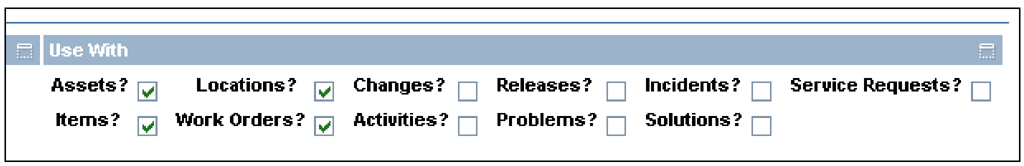
Classifications are now used with a broader range of record types.

Note: Some of these record types are related to IT Asset Management.

The EAM record types that can now contain classifications include:

- Assets
- Items
- Locations
- Work orders

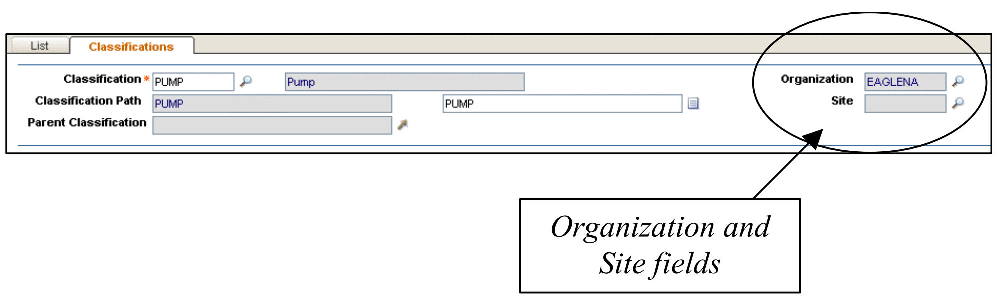
The Use With section of the Classifications tab allows you to determine which record types can be associated with the selected classifications.



Sites and Organizations

You now can control the site and organization for which a classification is available.

This information is indicated in the Organization and Site fields on the Classifications tab.



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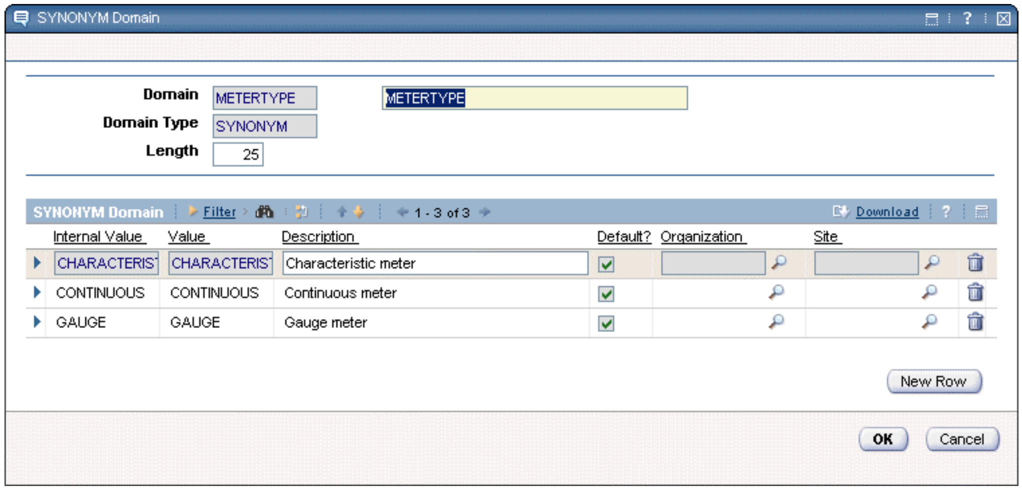
Classifications Application continued

Domains

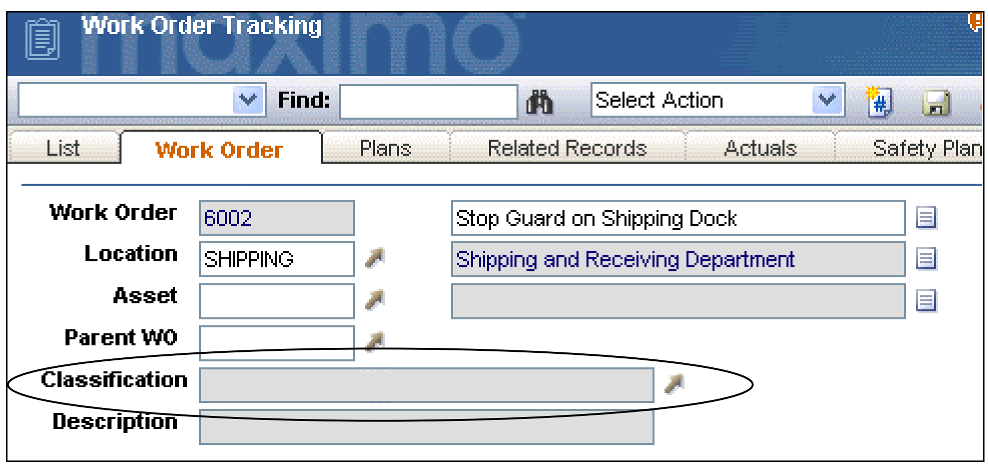
Domains used in classifications are now created in the new Domains application.

You can access the Domains application from the Configuration module.



Classification Field

The Classification field is used in relevant applications to apply a classification.



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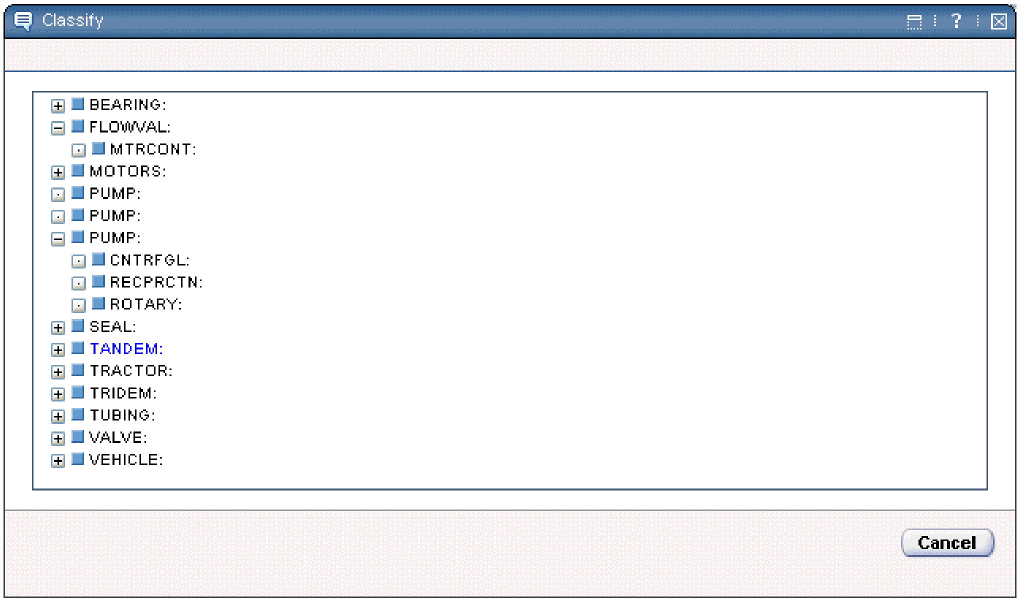
Classifications Application continued

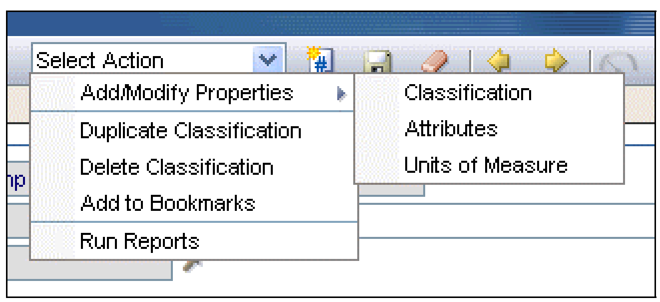
Classification Drill-Down

A drill-down list is now provided to apply classifications to a record.



Properties

You can modify properties with the Add/Modify Properties action.



Bulletin Board Application

Overview

In Chapter 2, “Interface and Navigation,” you learned how to view messages, or *bulletins*, from your Start Center and other Maximo applications.

In this section, you will learn how to create them.

Creating Bulletins

You can create bulletins with the Bulletin Board application in the Administration module.

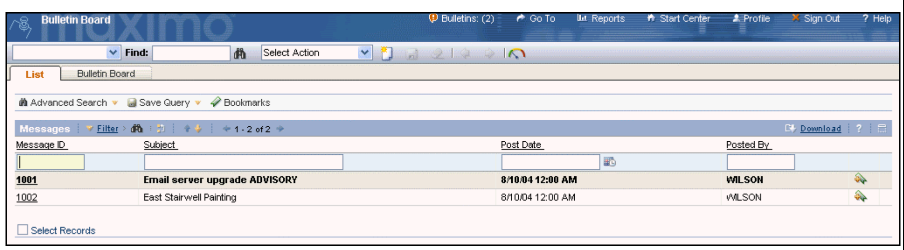
Bulletins can be:

- set to expire at a designated date and time, and
- made available only to specified organizations, sites, and person groups.

Let’s say that you are posting a bulletin to let people know that radon remediation work will be done in the building. The bulletin will suggest that people keep clear of this work if they come across it.

Note: This message will be seen only by the Environmental group.

Follow these steps to create a bulletin:

Step	Action
1	Access the **Bulletin Board** application from the **Administration** module, then press Enter. Result: Maximo displays the List tab for the application, as shown in the following example. 

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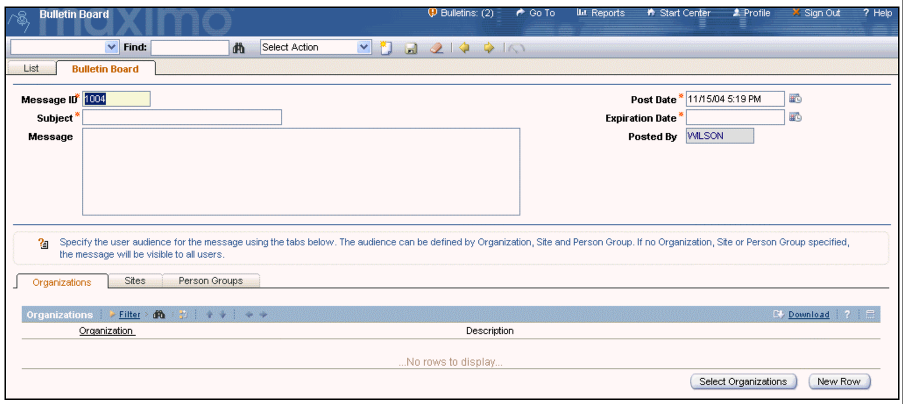
Bulletin Board Application continued

Creating Bulletins

continued

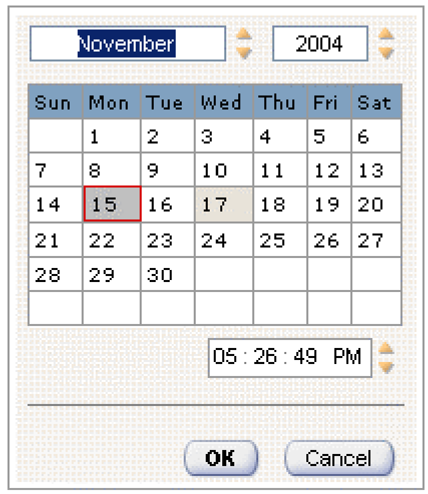
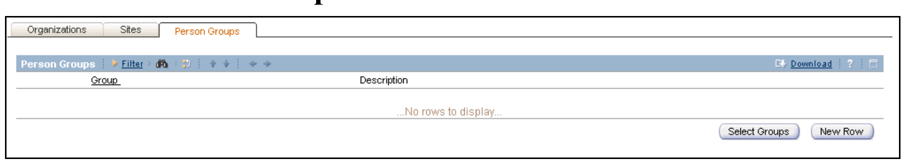
Step	Action
2	Click the **New Message** button to insert a new bulletin record, as shown in the graphic below. Result: The screen will be ready for you to set up your new message.  Note: The new message record will automatically numbered, but you can manually alter the number if you want to.
3	Enter the following information: **Subject:** Radon Abatement Testing [your initials] **Message:** Tomorrow there will be a team from Ace Radon coming to the plant to perform abatement testing. Please stay away from marked areas.

continued on next page

Bulletin Board Application continued

Creating Bulletins

continued

Step	Action
4 	Indicate that the **Expiration Date** is two days from today. Note: You can add the expiration date information by clicking the **Select Date and Time** button to the right of that field to view the Date Selector dialog box.  Click on the desired date, then click **OK** to register the date in the **Expiration Date** field.
5	Save the record.
6	Select the **Person Groups** subtab to view it. 

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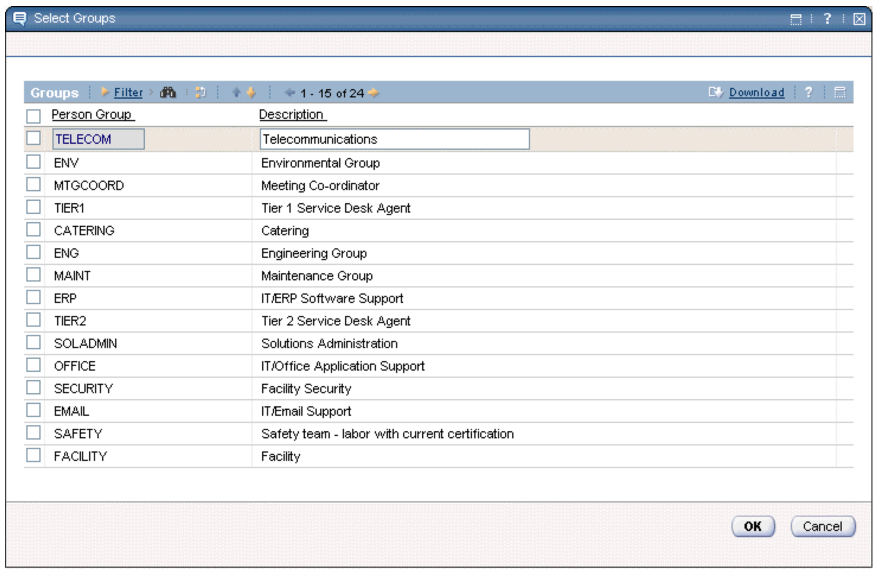
Bulletin Board Application continued

Creating Bulletins

continued

Step	Action
7	Click the **Select Groups** button. Result: The Select Groups dialog box displays a list of person groups in the selected organization(s).



Step	Action
	Note: You can also click the **New Row** button to add a row, then select a group, but this way is faster.
8	Select the check box on the **Environmental Group** line, then click **OK**. Result: The members of the Environmental group will be the only people who can see this new bulletin.
9	Save the record.

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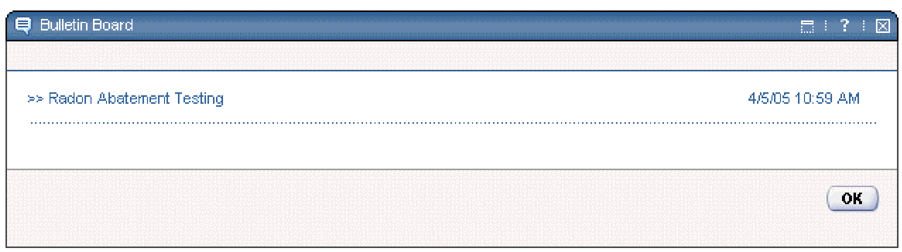
Bulletin Board Application continued

Checking Your New Bulletin

We now want to make sure that your bulletin setup works as intended.

First we'll check whether another group can see the message. Then we'll make sure that someone in the Environmental group of the selected organization can see it.

Step	Action
1	Click the **Bulletins** link on your application screen to view your list of bulletins. Result: Your new bulletin will not be in the list, because your user is not in the Environmental group.
2	Sign out of Maximo.
3	Sign in to Maximo with the following information: **User:** miller **Password:** miller Result: Steve Miller's Start Center displays. Note: Steve is in the Environmental group.
4	Click the **Bulletins** link on the **Start Center**. Result: Maximo displays your new bulletin in the Bulletin Board dialog box.  Note: If you are sharing a database with other students, there might be multiple duplicate bulletins.
5	Click **OK** to close the Bulletin Board dialog box.
6	Sign out of Maximo and sign back in with the user name that your instructor provided at the start of the class. Note: You need to do this to ensure that you have the right privileges for upcoming exercises.

Calendars Application

Overview

There have been several minor changes to Calendars functionality.

There has also been the major change that it is now Web architected and accessible through a Web browser.

We will cover these changes in this section.

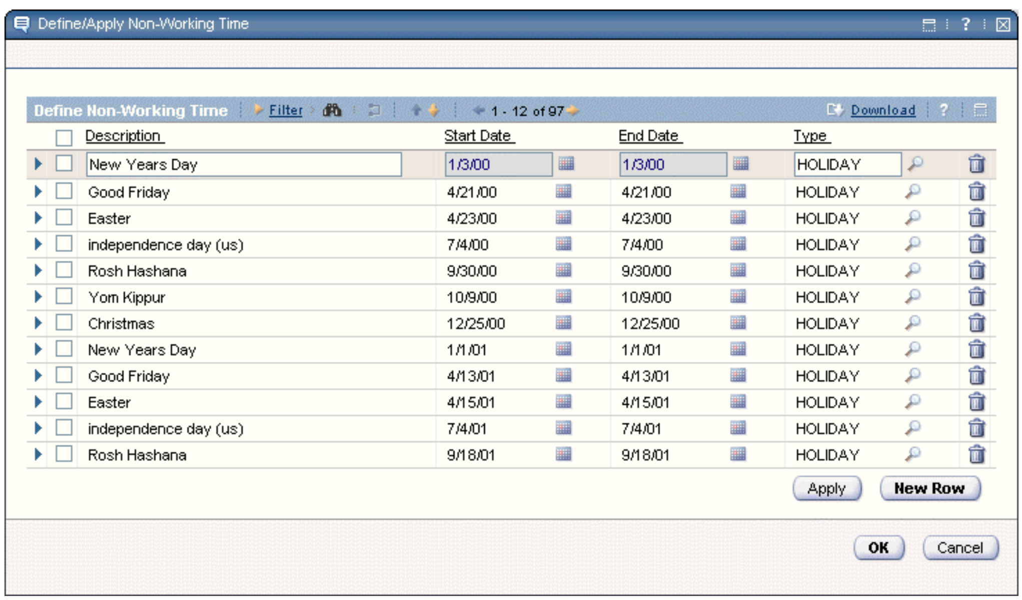
Web Architected

The Calendars application is now Web architected. You can access it through a browser from the Administration module.

Note: Aside from this big change, much of the other functionality works like the Control Center version.

Holiday and Non-Working Time

Holiday and non-working time are now combined in a single dialog box.



You can access this dialog box by using Define/Apply Non-Working Time from the Select Action menu.

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Calendars Application continued

Personal Calendars

A base calendar is created in the Calendars application, then applied to a person record. If the person is also a labor, then the calendar is applied to the corresponding labor record as well.

Note: You can add a calendar to a labor record. However, the calendar value is actually stored in the associated person record.

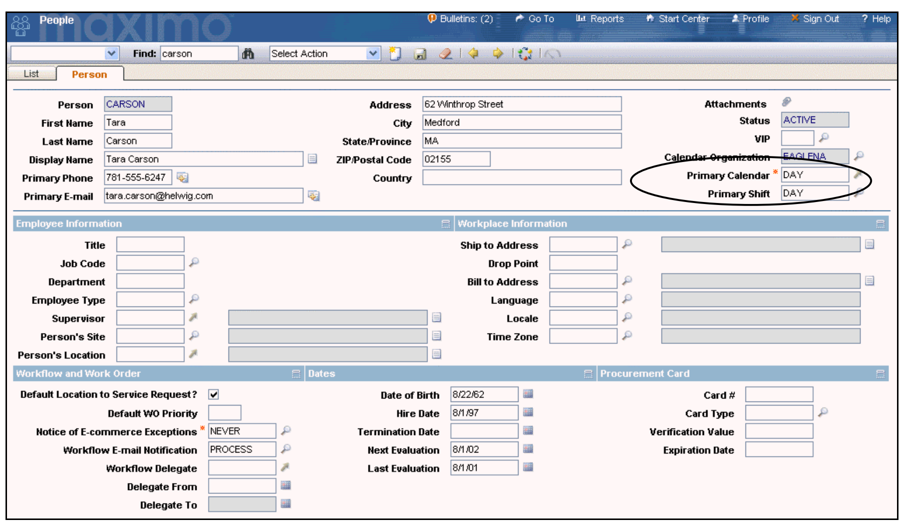
The base calendar indicates the availability of the labor to perform work.

Now there is the possibility of applying the base calendar to a person, then modifying the person's individual calendar to further *personalize* the applied calendar.

The following exercise will show you how to modify a personal calendar.

Note: If all students are working from a single database, only one person should carry out this exercise while demonstrating to the others.

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



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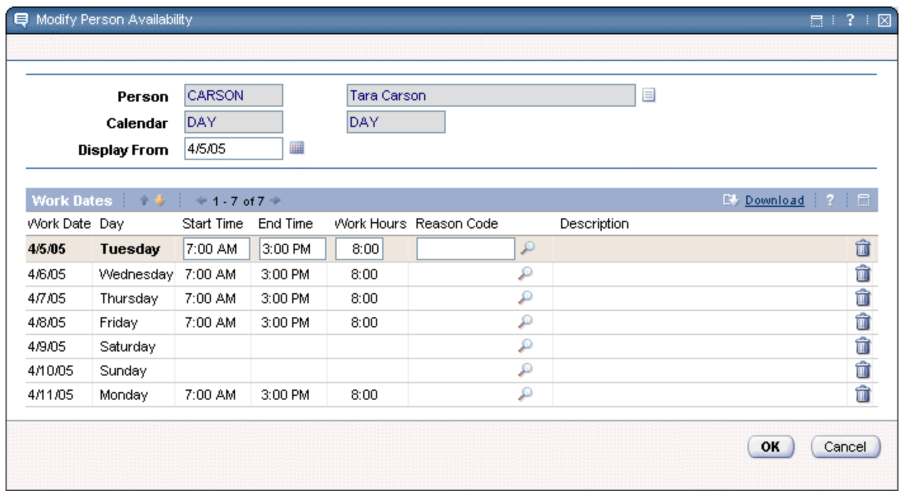
Calendars Application continued

Personal Calendars

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>3</td><td>Choose Modify Person Availability from the Select Action menu.
Result: The Modify Person Availability dialog box shows the next seven days of the Tara’s schedule, starting from today.

</td></tr>
<tr><td>4</td><td>Change the Display From field to a date five days from today.
Note: You can change this date directly in the field or by using the Select Date button.
Result: The displayed seven-day period now starts at the new date.</td></tr>
<tr><td>5</td><td>Set the Work Hours field for any working day to 0.
Note: Leave the scheduled work times as they are.</td></tr>
</table>

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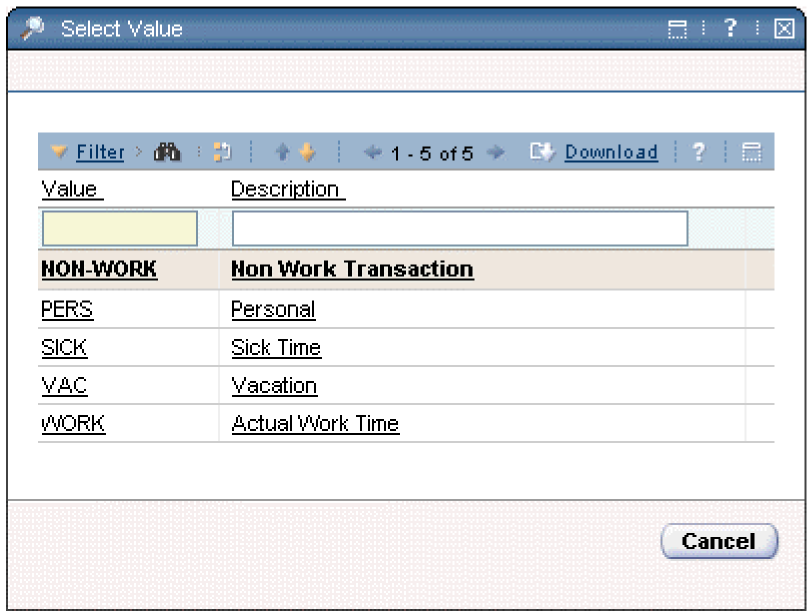
Calendars Application continued

Personal Calendars

continued

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>6</td><td>Click the Select Value button on the Reason Code field for that same day.

Result: Maximo displays a list of reason codes, as shown here.



Note: You can also manually enter the reason code.</td></tr>
<tr><td>7</td><td>Select the Vacation value as the reason that Tara will not be available on the chosen date.

Result: The Select Value dialog box closes and the Reason Code field is shown as VAC.</td></tr>
</table>

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Calendars Application continued

Personal Calendars

continued

Step	Action
8	Click **OK**. Results: • Tara's individual calendar now reflects differences from the Primary DAY calendar. • If Tara is also a labor, then you cannot assign her to work during the time that she has been removed from the schedule.

Assignment Manager and Personal Calendars

You can also use the Assignment Manager application to change the individual calendar of a labor record.

Note: This is not a new feature, so we will not get into details.

Other Applications

Overview

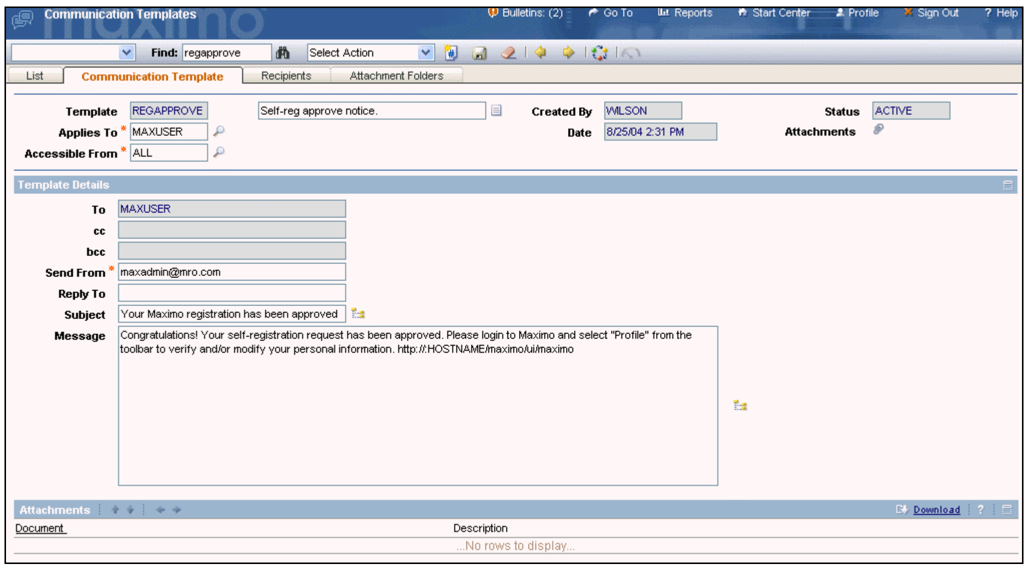
In this section we will introduce two additional new EAM-related administrative applications that have not been addressed elsewhere:

- Communication Templates
- Work View

Note: There are many other applications in the Administration module that have not been covered in this course. They are related to IT Asset Management and are covered in other courses.

Communication Templates

The Communication Templates application is in the Administration module.



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Other Applications continued

Communication Templates

continued

The Communication Templates application is a centralized place in Maximo where a user with appropriate permissions can define communication templates to be used in:

- workflow process notifications;
- escalation management notifications; and
- creation of communications from other Maximo applications (for example, tickets or work orders).

Example: A workflow has been designed to send a message to new self-registered Maximo users. The workflow calls out the REGNOTIFY template to send a predetermined response to self-registered users.

Note: An attachment that sends a document containing basic navigational instructions for Maximo could be added to the template.

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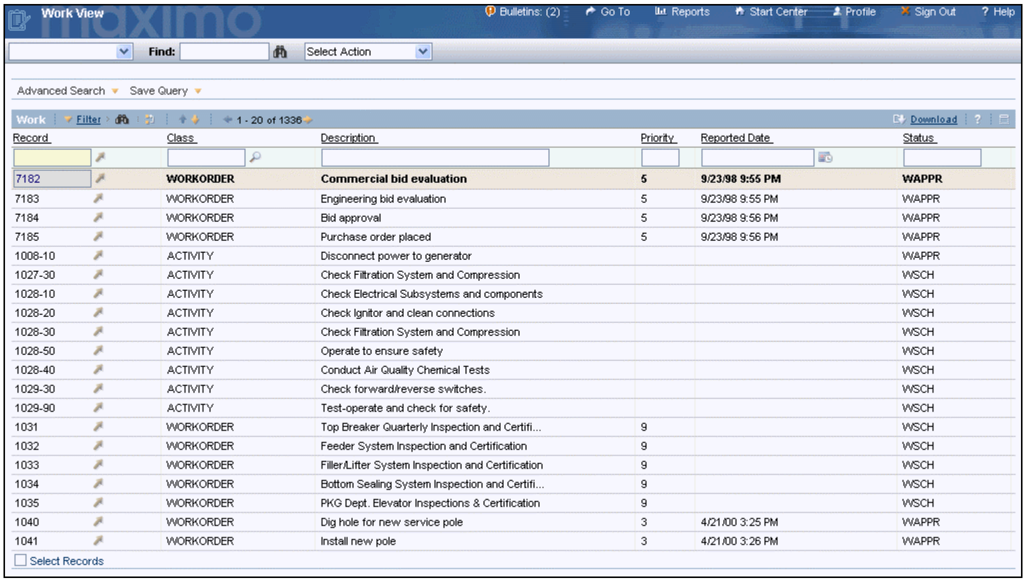
Other Applications continued

Work View

The Work View application is accessed from the Administration module.



The Work View application provides a high-level overview of the work-related records in Maximo.

Note: Because Maximo also manages work related to IT Asset Management, other types of work-related records, including Activities, will be listed in this application.

Chapter Summary

Organizations Application

The Organizations application was previously called *Multisite Setup* in MAXIMO 5.x. Its name has been changed to more accurately reflect its role in MXES: to provide administration at the organization level.

The Organizations application is now accessible directly from the Administration module.

There are three new key fields in this application:

- Item Set
- Company Set
- Clearing Account

Classifications Application

The Classifications application was called *Asset Catalog Setup* in previous versions of Maximo.

Its use now includes the following types of EAM records:

- Assets
- Items
- Locations
- Work orders

Domains are now created in the new Domains application.

Calendars Application

The Calendars application works very much as it did in previous versions of Maximo. However, it is now Web architected and is accessed through a browser.

You now can apply a calendar to a labor record, then modify the individual calendar of the person by using the People application.

Other Applications

There are two other new EAM-related administrative applications:

- Communication Templates
- Work View

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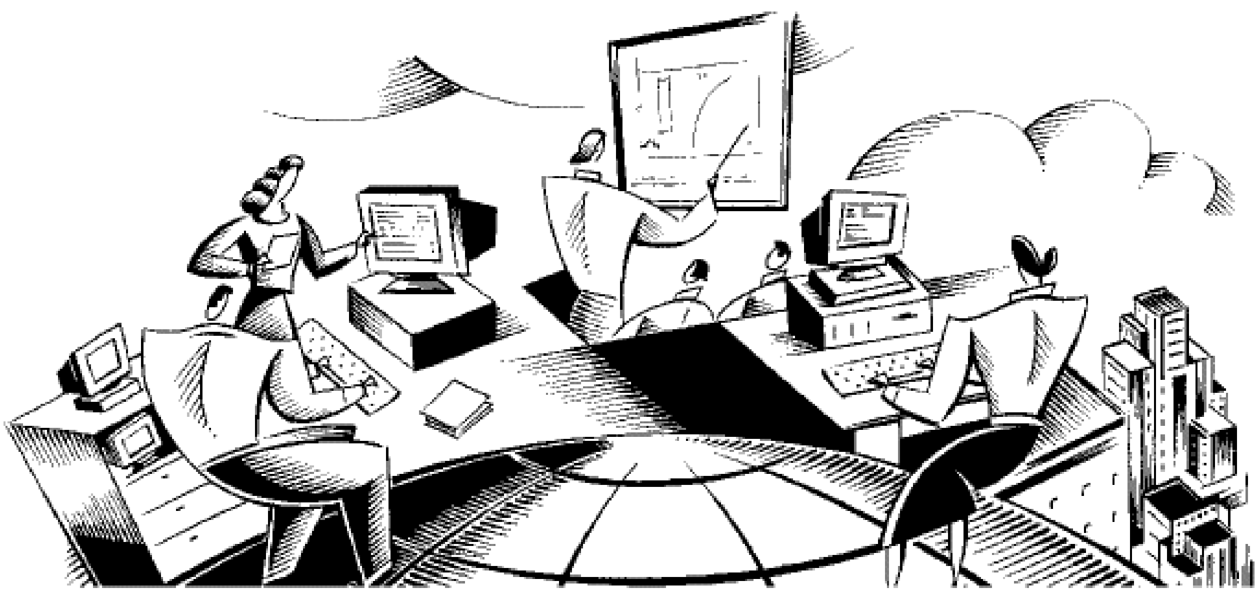
MXES for EAM – New Features

Chapter 14: Financial



In This Chapter This chapter contains the following topics:

Chapter Overview

Introduction

There are some minor financial new features in MXES. The major change is that all financial applications are now Web architected. However, the functionality remains similar.

This chapter highlights the changes.

Chapter Focus

The focus of this chapter is to make you aware of the changes to financial applications. Because the functionality has not changed drastically, we will not go into depth.

Learning Objectives

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

- Access new financial applications
- Describe the function of the new financial applications
- Locate key financial actions

Control Center Removed

The Control Center has been removed in MXES. All financial applications are now accessed from a browser via the module menu.

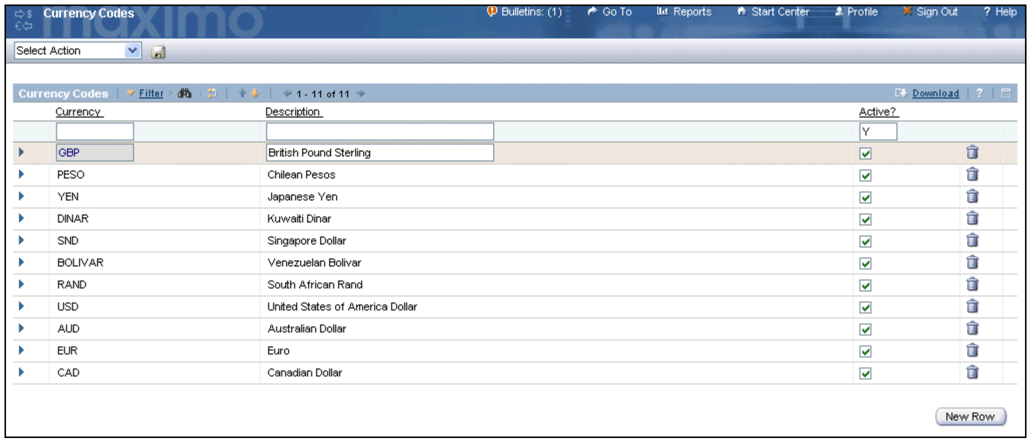
A new Financial module that contains the financial applications has been added.

Currency Codes Application

Overview

The Currency Codes application is designed to define currency codes.

You might note that currency code definition is one part of the work of the Currency Management application found in previous versions of Maximo.



This function was broken out from a combined application to provide more control over the function from a security standpoint.

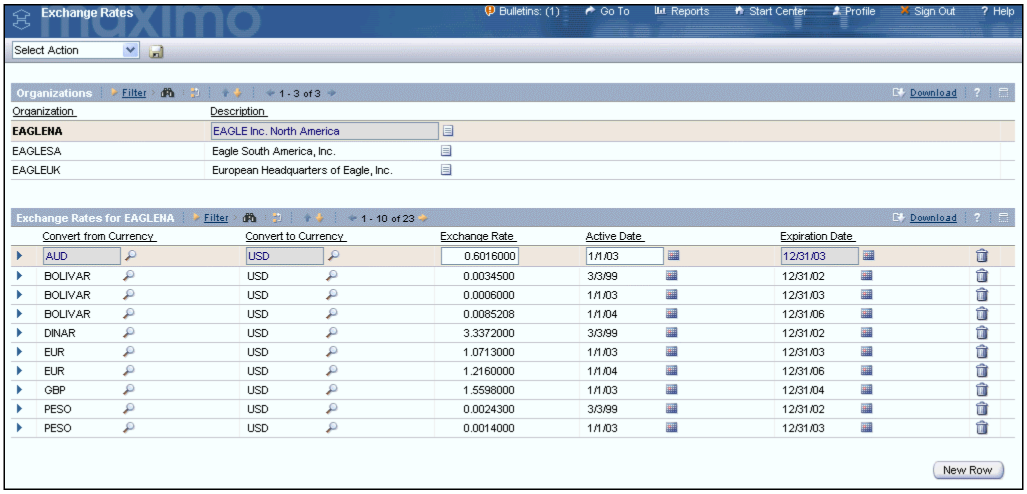
Application rights to this procedure now can be supplied without providing the rights to entering exchange rates.

Exchange Rates Application

Overview

The Exchange Rates application is designed to enter exchange rates between currencies for defined periods of time.

You might note that the entering of exchange rates is one part of the work of the Currency Management application found in previous versions of Maximo.

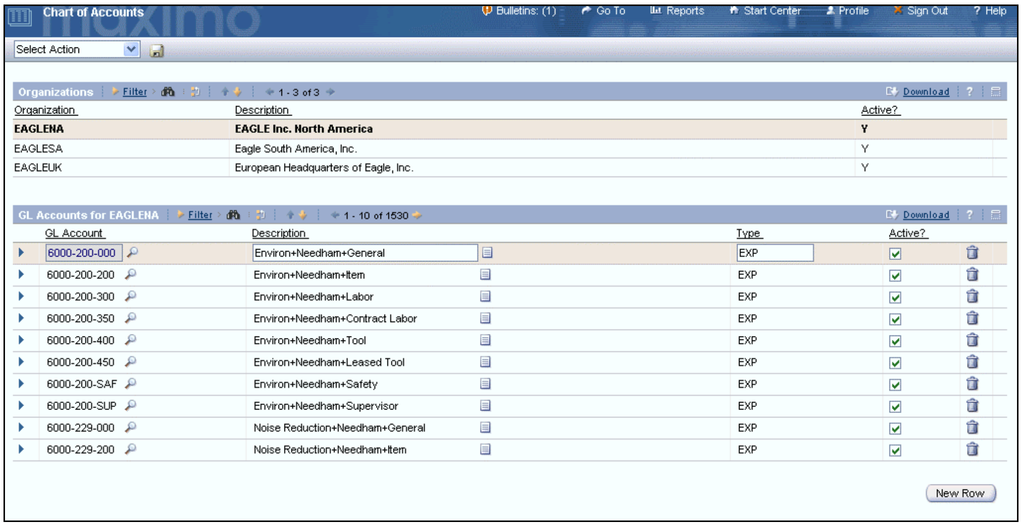


With the exchange rate function in a separate application, a system administrator can separately control who enters currency codes and who enters exchange rates.

Chart of Accounts Application

Overview

The Chart of Accounts application in MXES functions much as it did in previous versions of Maximo. However, there are some differences in the actions provided to the application.



This section provides an overview of these action changes.

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Chart of Accounts Application continued

Action Changes

The following list highlights the changes to the actions in the Chart of Accounts application.

- Global Rotating Expense Accounts are now modified using the **Organization Default Accounts** action.
- There is now a direct **External Labor Control Accounts** action on the Select Action menu.

  Note: This was previously a sub-action of the **Resource Control Accounts** action.
- The Tools Control Account is now set at the storeroom level using the Storerooms application in the Inventory module.
- A **Validation Options** action has been added, which provides the following options:
  - Deactivate GL Validations?
  - Validate GL Component Combinations?
  - Validate Financial Periods?
  - Require valid GL account for all transactions?

  Note: The first three options were previously enacted in the **GL Account Configuration** action of the Database Configuration application.

Chapter Summary

Control Center Removed

The Control Center has been removed. All financial applications are now Web architected and available using a browser through the Maximo menu.

Currency Functions Split

The functions performed by the Currency Management application have been split between two new applications:

- Currency Codes
- Exchange Rates

Splitting this functionality provides increased control over who can perform these separate functions in MXES.

Chart of Accounts

Although the Chart of Accounts application has been Web architected, its functionality remains similar. However, there have been a number of changes to the Select Action menu:

- Global Rotating Expense Accounts are now modified using the **Organization Default Accounts** action.
- There is now a direct **External Labor Control Accounts** action on the Select Action menu.
- The Tools Control Account is now set at the storeroom level using the Storerooms application in the Inventory module.
- A **Validation Options** action has been added, which provides the following options:
  - Deactivate GL Validations?
  - Validate GL Component Combinations?
  - Validate Financial Periods?
  - Require valid GL account for all transactions?

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Educational Services
Student Feedback Form

Name: ______________________ **Instructor:** ______________________
Class: ______________________ **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? ______________________

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18. Which aspects of this course detracted from your learning? ______________________

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19. What suggestions do you have for improving this course? ______________________

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Thank You!

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