

Chapter 4:

Asset Management

Objectives

After completing this section, you will be able to:

- ☐ Add / Update / View / Delete Assets
- ☐ Manage Asset Information and Statuses
- ☐ Check In/Out Assets
- ☐ Reconcile Assets

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Asset Management

In the Asset Management module, users are able to add, edit, and delete Assets. This module can be accessed via Go To from the Task Bar or the appropriate Menu Group.

It consists of four submodules: Assets, Reservation Approval, Asset Reconciliation and Actions.

The Assets submodule maintains a complete database of all assets including production equipment, computers, tools, vehicles, HVAC, pumps and any user defined fixed assets. Assets are manually or automatically assigned an Asset ID and can have additional information listed such as asset description, asset model, group, subgroup, and serial number, as well as an unlimited number of user defined attributes. Assets can be organized by model, vendor, manufacturer or group, such as a cost center or department. Other items can be tracked for each asset, including purchase date, purchase price and warranty information. Documents such as manuals or photos can be linked directly to an asset to be readily available.

Each asset can be assigned a locale in a site. Locales can be configured to include campus or site, building, floor, room, and area.

Asset Management can also be used to assign a Category and SubCategory to equipment via drop-down lists set up by the TME Administrator. The category/subcategory types can be broken down further into modules, which represent individual parts or production assets of the equipment. Each module can have failures assigned with the corresponding corrective actions. A detailed analysis can then be done on the failures and corrective actions of the modules, allowing for cost-effective repair or replacement of an individual part rather than the entire asset.

The Reservation Approval submodule is where Users with appropriate permissions can approve or reject asset reservation requests by other Users.

The Asset Reconciliation submodule is where Users can set up a reconciliation session (known as a Collection) and therefore conduct an inventory of Assets and their locales.

Users can move an Asset easily by scanning barcodes or selecting from a LookUp screen from one locale to another in the Actions submodule. A signature from a User can be collected at the time of the transaction.

Adding an Asset

Exercise 1:



Add an Asset to TME.

1. Go to Asset Management > Assets

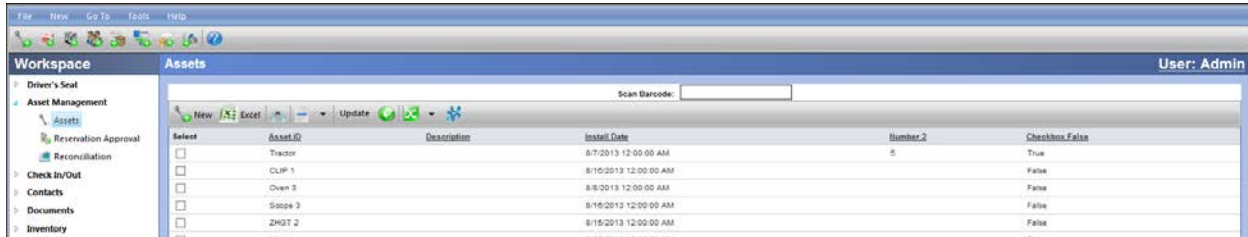


Figure 1 Asset Viewer

2. Click .

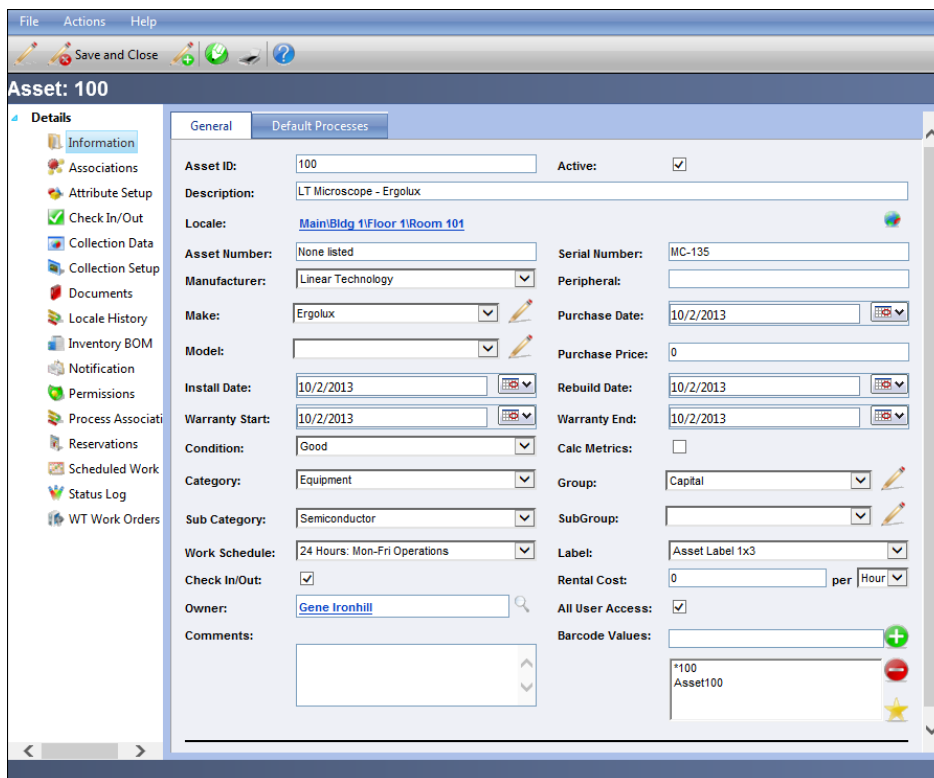










Figure 2 Asset Detail Screen

3. Enter/select the information for each field.
 - a. The Asset ID must be a unique combination of letters and/or number. (If the Auto ID function has been enabled, the field will have “–Auto ID Enabled–” inserted and the field will be grayed out. It can be edited

- b. Select the Active checkbox if Asset is to be immediately available for tracking within the system. If not selected, the Asset will not be available in Operations or Work Tracking.
 - c. Click on the Locale link to select the Locale string for the Asset.
 - d. If a drop-down list does not contain a needed entry and there is a  icon, click on it to add to the list. If the icon is not available, then the drop-down is populated by a drop-down management tool that can be edited by the TME Administrator.
 - e. Make sure to check the Calc Metrics checkbox if the metrics based on uptime/downtime statuses are to be calculated by the runtime engine each night for this Asset.
 - f. Category and Sub Category selections are critical if tracking Failures and Corrective Actions. See TME Administrator if clarification is needed.
 - g. If metrics are to be calculated, it is essential that the correct work schedule for the asset is selected. TME needs to know what hours each day the Asset is expected to be available for operation.
 - h. For the Asset to be made available for checking out and in via the Check In/Out module, select the Check In/Out checkbox and supply the rental cost if applicable.
 - i. Click on the Contact LookUp icon  to select an "Owner." The Contact LookUp screen will appear. Select the Contact by clicking on the Selector icon  to the left of the Contact name. To clear out a Contact from the field, click on  and then the [Clear Selected Item](#) link at the top right corner of the LookUp screen.
 - j. Select the All User Access checkbox if every User in TME may access this particular Asset. If not, keep deselected and click on the Permissions link (discussed later in this chapter) to set Permissions for specific groups of Users.
 - k. Type or scan in the Barcode value (there are many opportunities within TME for scanning the barcode to open up records easily and quickly) into the Barcode Values field and then click on . Repeat for additional Barcode values if there are multiple values attributed to the Asset. To remove a value, select it and then click on . If there is more than one value, select the value that is to be used as the default for the purpose of printing the Asset label and click on .
4. Save/Close. The additional links will now be available when opening this record.
5. Check the Asset Viewer to confirm addition.

Viewing Locale of Asset on Google Map

If the Building that an Asset is located in has been set up with longitude and latitude coordinates, the locale can be viewed in Google Maps by clicking on the  icon to the right of the locale on the Asset's detail screen.

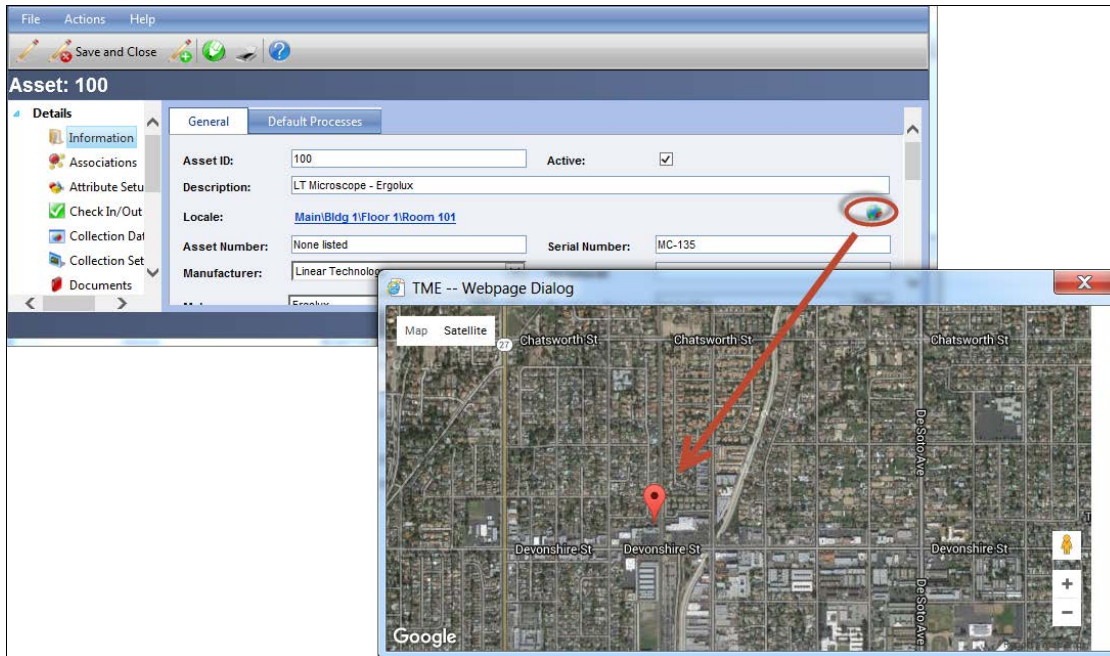


Figure 3 Asset Detail Screen with GIS Icon and Google Map

Editing an Asset

Assets can be edited individually by opening the Asset's Detail screen, making the edit and saving the record.

Alternatively, Assets can be mass edited. Select the Assets via the checkboxes in the Select column. Click on the Update button on the Viewer Toolbar.

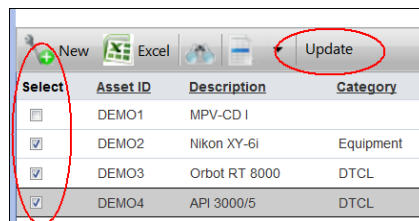


Figure 4 Asset Multi-Edit Feature

The Properties screen will appear with the selected objects on the left. Click on the checkboxes for the fields to be edited. Enter the value for the fields accordingly and click OK. If the checkbox for the field is not selected, TME will not know to edit that field. This is in place to prevent blanks getting inserted for fields that are not to be edited.

The screenshot shows a 'Properties' dialog box for an asset. On the left, there is a list of assets: DEMO2, DEMO3, and DEMO4. The main area contains various fields for asset details. The 'Work Schedule' field is circled in red and set to '24 Hours, 7 Day Oper'. Other fields include 'Active' (False), 'Description', 'Locale' (C01B01FL01RM01R1), 'Manufacturer', 'Make', 'Model', 'Install Date', 'Warranty Start', 'Condition' (Laser Engraving - Co), 'Category', 'Sub Category', 'Check In/Out' (True), 'Comments', 'Peripheral', 'Purchase Date', 'Purchase Price', 'Rebuild Date', 'Warranty End', 'Calc Metrics' (False), 'Group', 'SubGroup', 'Label', and 'Rental Cost' (per HOUR).

Figure 5 Multi-Edit Properties Screen


Exercise 2:



Change an Asset Number by +1 and print label.


1. Double click on the row of the Asset in the Asset Viewer screen.
2. Make the change.
3. Save.
4. Print the Label.
5. Close.

Collecting Data

Numerous pieces of data can be collected on an Asset. The data can be meter readings, documents, inspection results, etc. To collect data, click on  on the Viewer Toolbar (will need to scan or select the Asset ID) or the Asset Detail Screen Toolbar (Asset ID will be prepopulated). The Asset Data Collection screen will appear.

The screenshot shows the 'Asset Data Collection' screen. It has a 'Scan' field and an 'Asset' field with the value '100'. A dropdown menu is open, showing options: Asset_100_Meter, Documentation, Ownership, SPC: Thickness, and Volume Calculation. There is also a 'Help' button and a 'Production' button.

Figure 6 Asset Data Collection Screen

Choose the appropriate Collection from the drop down screen and click on . The Collection screen will open with the fields for which data is to be collected. If a variable onscreen is required, it may have a default entry already applied. If the default entry applies, changes are not needed. If the default entry is incorrect for the record, then change the value accordingly. Click Submit when finished entering data.

For more information on the entry of data for the different data types, see the Collecting Data portion of Chapter 2: Driver's Seat.

Additional Links/Tab for Asset Detail Screen

Default Processes

Default Repair Request and Service Request processes can be set up for an Asset. In essence, the Process is a Work Order template and can be created based on the specific needs of an Asset or group of Assets. By setting up the Default Processes for an Asset, any Repair or Service Request Work Order generated from the Dashboard will be tailored to the Asset. This can include Lock Down Tag Out steps and documentation, customized Bills of Materials (list of inventory items) for different steps within the work order (to distinguish the different spare parts based on the type of work), ability to pre-assign steps within the work order to different Users or Groups, etc.

If no Processes are selected as defaults for the Asset, then the Repair and Service Requests will automatically be set to the Defaults set for the system.

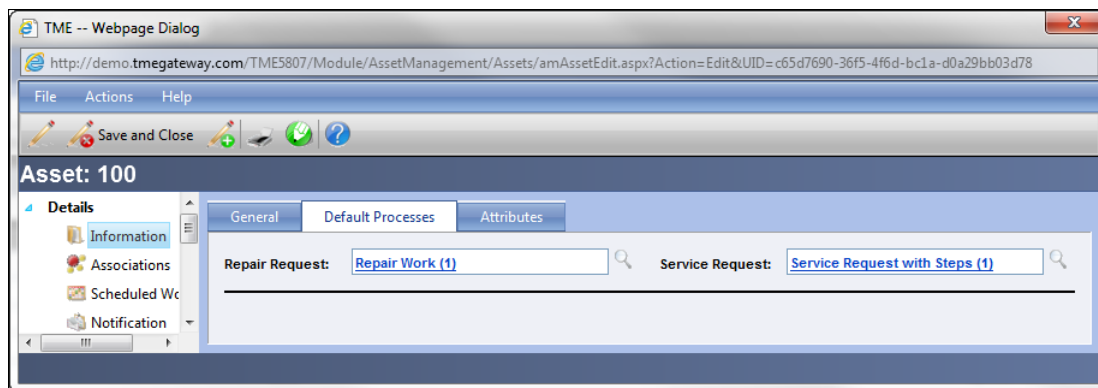


Figure 7 Default Processes Screen

Attributes

Assets have an unlimited number of Attribute fields available accessed via the Attributes tab on the Detail Screen. These fields can be Text, Date, Number, Drop-Down, Check Box, Document, and Formula data types. Many of them can have ranges and default values as appropriate. These attributes can be global or restricted to assets within certain Categories or SubCategories. They can also be set up as required or non-required fields. To supply, edit or view the attributes of an Asset, click on the Attributes link on the Asset's Detail Screen.

To enter an Attribute into a text field, click in the field and type the entry. For an Attribute that requires a date, click on the Open the Calendar Popup icon and select the date. Some Attributes require the entry of a number, click in the field and type in the number. For those Attributes with a drop-down list, click on the arrow on the right side of the drop-down field and select the appropriate entry. If an Attribute has a checkbox, click the checkbox if the Attribute is to be applied to the Asset. For further detail, see the Collecting Data section of Chapter 2.

If the Attribute is required, it may have a default entry already applied. If the default entry applies, then the User does not need to make any changes. If the default entry is incorrect for the Asset, then the User will need to change the Attribute accordingly.

The Attributes may have been set up with run rules for which consequences take place should an entry be made that violates one of those rules. A message may pop up, an email might be sent out, the status of the Asset may change automatically and/or a work order can be generated. It is all dependent on how the rule was set up. A rule may consist of a value not falling within a specified range (i.e., a number value that is not between -25 and 25, selecting a predetermined value from a list, a data that is not within a certain range, etc.). If a violation takes place, make the correction accordingly.

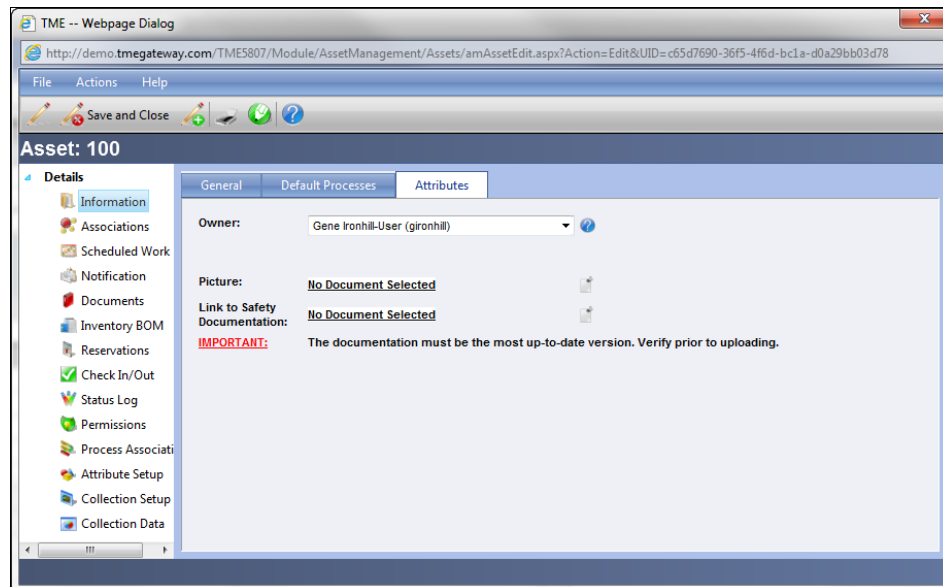


Figure 8 Asset - Attributes Tab

Associations

Assets can be Associated with other Assets within a child or parent relationship. To access, click on the Associations link on the Asset's Detail screen.

Exercise 3:



Set up a Meter and add a Child Association.





1. Click on the Meter Set Up tab and enter information accordingly, include an Increase and Roll Back Limit.
2. Go to the Associations screen.
3. Click on  New

Figure 9 Association Detail Screen

4. Type in a name and Description for the Association. Keep the Asset ID that is to be the parent.
5. Save and activate the Child Members link.
6. Click the Child Members link.

Figure 10 Association - Child Members Screen

7. Select the Asset(s) which are to be the children in the relationship
 - a. Click inside the Other Assets field, type a portion of the Asset ID, click on the Find button and the list will filter accordingly
 - b. To select multiple Assets, hold the Ctrl key on the keyboard while making the selections (or select an Asset, hold the shift key and select another Asset--all Assets in between and including those two will be selected.

8. Click . The Asset(s) will move to the Child Assets field.
 - a. To view the detail screen of an asset, select it and then click on  for the column it is contained in.
 - b. To add a new asset directly from this screen, click on [Add New Asset](#). A blank Asset detail screen will appear. Once Saved/Closed, you will return to the Child Members screen.
 - c. To remove a Child Member Asset from the list, select the Asset and click on .
9. Save/Close.

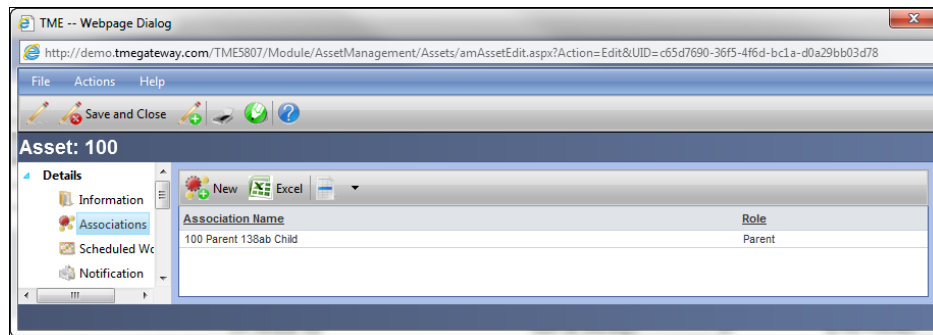


Figure 11 Asset Associations Viewer

10. Review the Association viewer for the Child Asset.

Attribute Setup

If an Attribute(s) is to be applied to a single Asset, the attribute is set up on the detail screen via the Attribute Setup link. The variable groups can be selected and the attribute fields will appear on the Attributes tab on the Information portion of the detail screen.

Select the Variable Group from the drop-down list. Check the Active box to have the Attributes appear onscreen for the Asset. Select the Required Option:

- User Variable Settings: TME will follow the rules set up for the individual variables in the Variable Group; for example, if one or more of the Variables are set up as Required, then entry is required. If they have limits set up, then the entry must be within those limits.
- Data Is Not Required: entry of Attributes is not necessary; for example, if one or more of the Variables are set up as Required, entry is will not required for this Asset. If they have limits set up, the entry can still remain blank and the limits ignored.

Run Rules and Notification

Please see the Run Rules Violations Setup portion of Chapter 10: Settings for details.

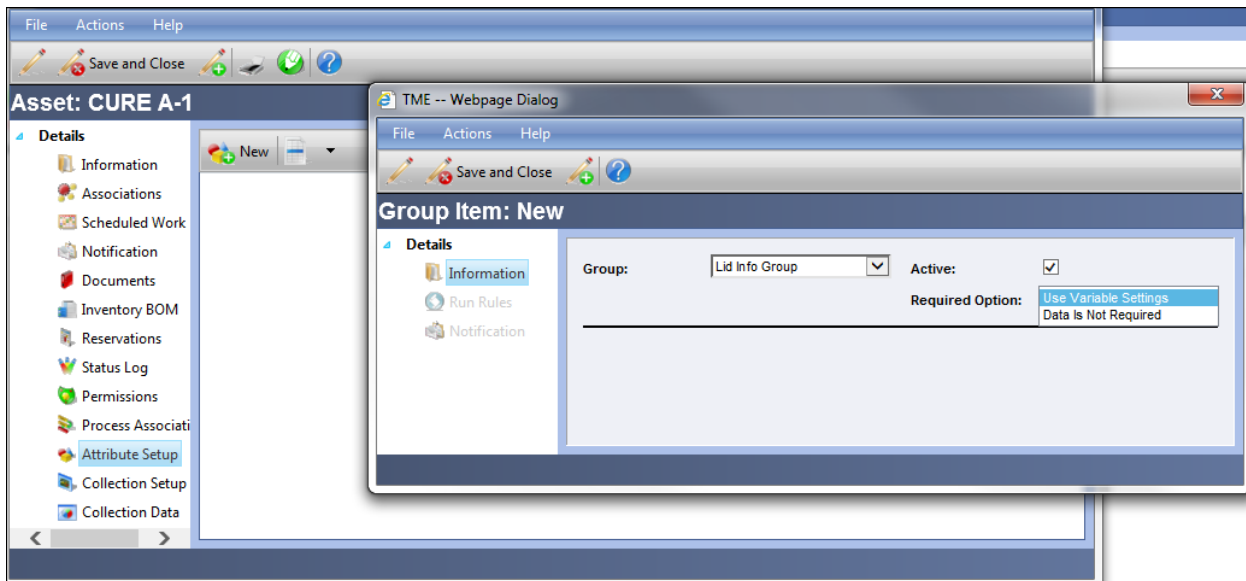


Figure 12 Asset Attribute Setup Screens

Check In/Out

The Check In/Out module keeps track of assets that are checked out by Users. RFID tags can be associated to critical assets. When users take an asset, the asset tag will be saved (or the Asset ID can be typed in if tags are not being used) and the item will be “checked out” to them. When the user returns the item, it is scanned (or the Asset ID is typed) and “checked in”. This module is particularly useful for tracking mobile assets that are moved from a locale (such as an equipment cage) to the possession of a User for any period of time. Further discussion on how to check in / out will be in the Check In/Out section of this chapter.

The Check In/Out additional link lists the transactions that have taken place for the Asset. This screen provides information only and does not provide the means by which to check an Asset in or out.

Reminder: to set up an Asset as available for Check In/Out, select the Check In/Out checkbox available on the General Tab of the Information link of the Detail Screen for that Asset.

Checked Out	Checked In	Checked Out To	Return Condition
1/12/2013 01:36:44 AM		Gene Ironhill-User	
9/18/2012 08:52:28 PM	1/12/2013 01:36:19 AM	Gene Ironhill-User	Good
5/12/2011 01:35:36 AM	9/18/2012 08:51:27 PM	Gene Ironhill-User	Good
3/22/2011 11:09:22 PM	5/12/2011 01:34:55 AM	Admin	Shipped
2/16/2011 07:57:39 PM	2/16/2011 07:57:47 PM	Gene Ironhill-User	Shipped
2/16/2011 07:56:57 PM	2/16/2011 07:57:28 PM	Gene Ironhill-User	Pre-Ship
2/16/2011 07:56:20 PM	2/16/2011 07:56:31 PM	Gene Ironhill-User	Green Tag - Qual
2/16/2011 07:55:45 PM	2/16/2011 07:55:55 PM	Gene Ironhill-User	Green Tag - Dry Fit
2/16/2011 07:55:12 PM	2/16/2011 07:55:23 PM	Gene Ironhill-User	Laser Engraving - Complete
2/16/2011 07:54:21 PM	2/16/2011 07:54:30 PM	Gene Ironhill-User	Green Tag - Function check

Figure 13 Asset Check In/Out Transactions Viewer

Collection Data

To view the data that has been collected, click on the Collection Data link on the detail screen of the Asset. The viewer of all data collection records for that Asset will appear. Double-click on the record in question to open the detail screen and review/edit the data. If the data is edited, the Modified By and Modified Date fields will update accordingly. The original data will not be stored.

Submitted	Collection	User
12/8/2012 12:36:53 AM	Ownership	Admin
10/29/2012 05:23:29 PM	SPC: Thickness	Admin
10/29/2012 05:22:52 PM	SPC: Thickness	Admin
10/2/2012 04:18:41 AM	Asset_100_Meter	Admin
9/28/2012 11:18:45 PM	Asset_100_Meter	Admin
9/28/2012 11:18:01 PM	Asset_00599_Meter	Admin
3/15/2012 08:07:26 PM	Asset_100_Meter	Admin
3/13/2012 08:07:11 PM	Asset_100_Meter	Admin
3/11/2012 08:07:02 PM	Asset_100_Meter	Admin
3/10/2012 09:06:51 PM	Asset_100_Meter	Admin
10/7/2011 09:48:38 PM	Asset_100_Meter	Gene Ironhill-User
5/3/2011 07:25:16 PM	Asset_100_Meter	Admin
4/12/2011 08:41:27 PM	Asset_100_Meter	Gene Ironhill-User
4/12/2011 07:11:23 PM	Asset_100_Meter	Admin
4/12/2011 06:50:43 PM	Asset_100_Meter	Admin
4/11/2011 11:46:52 PM	Asset_100_Meter	Admin
4/11/2011 11:46:48 PM	Asset_100_Meter	Admin
4/11/2011 11:46:42 PM	Asset_100_Meter	Admin

Figure 14 Asset Collection Data Screen

Collection Setup

If a Data Collection(s) is to be applied to a single Asset, the attribute is set up on the detail screen via the Collection Setup link. The variable groups can be selected and the Data Collections will be available for selection for that particular Asset. See Chapter 10: Settings for more details.

Documents

Documents such as manuals and warranty information can be attached to an Asset. These documents were added to the system per the process in the Contacts and Documents chapter.

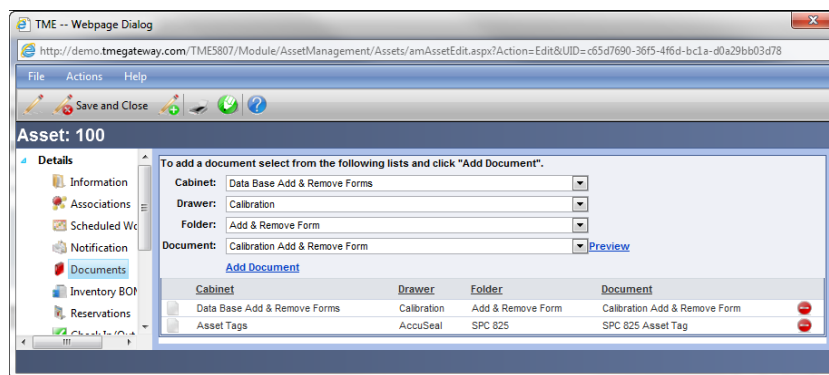




Figure 15 Asset Documents Viewer

Exercise 4:



Attach a previously saved Document to an Asset.

1. Select the Cabinet, Drawer, Folder and Document from the drop-down lists
2. Click [Preview](#) to open the document prior to attaching (make sure it's the document you want).
3. Click on [Add Document](#) to attach. Document information will appear in the viewer under the drop-down lists.
 - a. To view a document attached to an Asset, click on  in the appropriate row.
 - b. To delete an attachment, click on  in the appropriate row.

Locale History

As the Locale for an Asset changes over time, the records are viewable on the Locale History screen. These records include the new Locale, date/time of transaction, the User who conducted the transaction, and if applicable, the signature/text of the individual (need not be a User or Contact) approving the move (See Action Submodule

for details on obtaining signatures). These records are read-only and can't be edited or deleted.

Inventory BOM

A Bill of Materials (BOM) is used to group inventory items with a specific quantity onto a list that is then attached to an Asset, Kit, Work Order, Scheduled Work or WIP Product. BOM's may be set up with Inventory Items that are typically consumed for a specific preventive maintenance, type of repair or within an Inventory Kit that is used to make a product. It can also be set up to simply be a list of the spare parts and the quantities used for an Asset overall. To link an Asset to a BOM from within the Asset's detail screen, click on the Inventory BOM link on the Asset's Detail Screen.

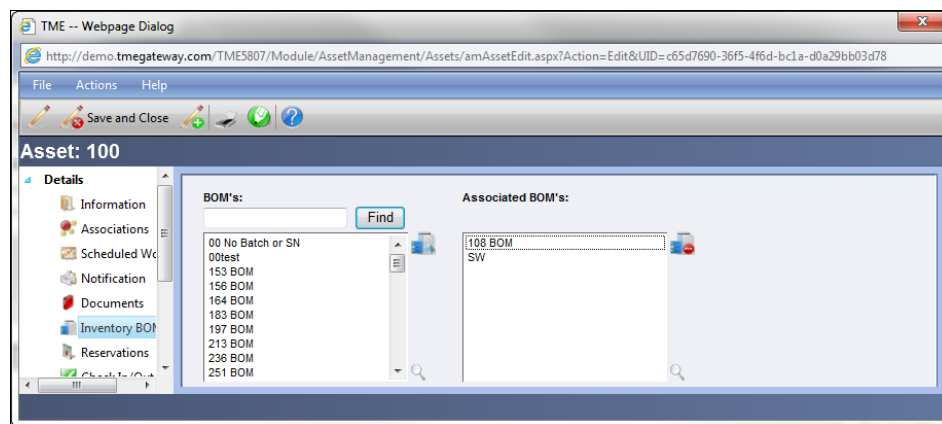





Figure 16 Asset Inventory BOM List

Exercise 5:



Attach a BOM to an Asset.

1. Select the BOM (click Ctrl on the keyboard and select additional BOM's to make multiple selections)
2. Click  to move to the Associated BOM's column

To search for a BOM, type in the name (or partial) of the BOM in the blank field and click on . The list of BOM's will populate with the BOMs accordingly. To add a new BOM, click on [Add New BOM](#) and the blank detail screen will appear. However, adding a new BOM is discussed in the upcoming BOM section. To view the detail screen of a BOM, select the BOM and click on  (for the appropriate column).

Notifications

Specific Users can receive email/text notifications for the following events as soon as they occur: Asset Downtime - Initial Event, Asset Downtime Event (all events, not just

the initial), Repair Request Created, Service Request Created, Manual Work Order Created, Reservation Request, and Return to Uptime. Let's say you have been assigned to be in charge of an Asset. If you put yourself in the notification list for Asset Downtime Event, you will receive an e-mail every time an Asset changes its Major Status to Downtime or if the Minor Status changes within the Downtime state.



Make sure the User information (Contact Detail screen in Contacts module) contains a valid e-mail address.

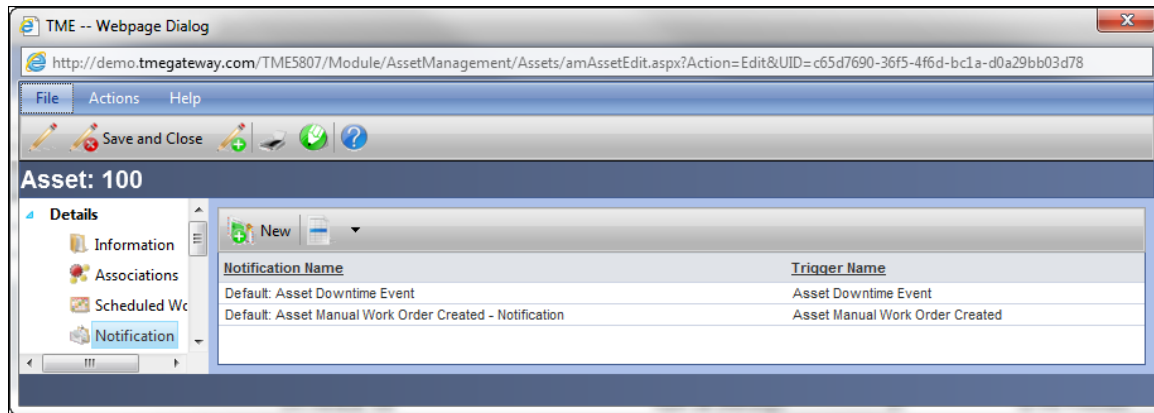



Figure 17 Asset Notifications Viewer

Exercise 6:



Add and Delete yourself and a Group to each Notification trigger available.

1. Click  **New** to add a new Notification.

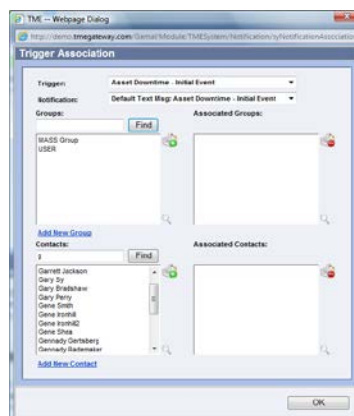

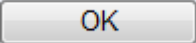


Figure 18 Trigger Notifications Screen

2. Select the first Trigger and the Notification.
3. If notifying an Email Group, select an Available Group (click on ) and move it to the Associated Groups column.

4. If notifying an individual Contact, select the name from the Contacts list and move it to the Associated Contacts column.
5. Repeat for each Trigger.
6. Click .

Permissions

Even though permission may have been given to Groups to have access to the Asset Management Module, restricted permission may be provided for individual Assets. The default is set to allow all Groups with permission to the Module to have access to every Asset for which the All User Access checkbox is selected. However, your business model might need to restrict certain Groups from certain Assets.



Permissions to access Assets may also be set up at the Locale level. If a User is restricted via the Locale, that restriction will override that of the individual Asset.

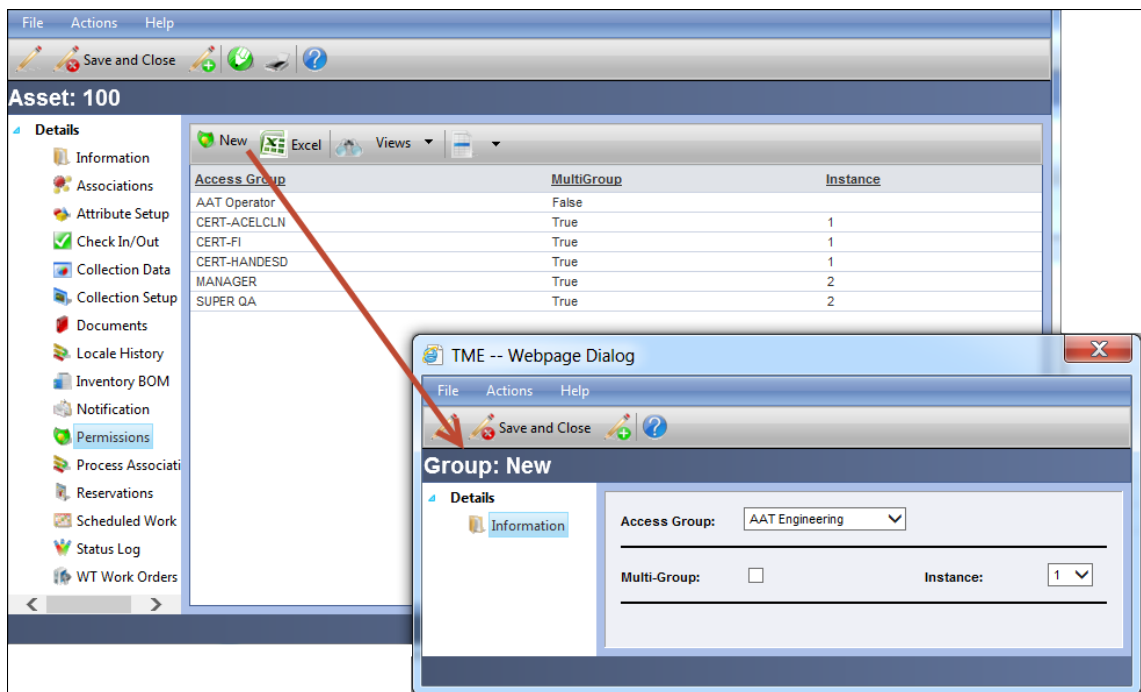


Figure 19 Asset - Permissions Detail Screen

Individual Access Groups can be added to indicate which Groups of Users have access to the Asset. A User need only be a current member of one of the Groups if it does not have Multi-Group selected. If a User is a member but the membership has expired, the User loses access until the membership is renewed. If the User's membership has expired but he/she is a current member of another listed Group, then access is still granted—but only for the permissions set for that Group. This is a situation where a User can be a member of any Group listed and have access.

Another situation is where Groups are tied to one another as an Instance and a User must be a current member of all Groups in that Instance. If the membership expires (or is removed) from one Group within that instance, the User loses access.

In the above example, a User can either be a member of AAT Operator or must be a member of all the groups for Instance 1: CERT-ACELCKN and CERT-FI and CERT-HANDESD or must be a member of all the groups for Instance 2: MANAGER and SUPER QA or a current member of AAT Engineering (once the record is saved without Multi-Group being selected). The User will have whatever viewing and task permissions are set for the culmination of memberships. If the AAT Operator has permission to view the Status Log but the others do not, then only Users who are AAT Operators will be able to see the Status Log.

Exercise 7:



Provide/remove permission for a Group to have access to an Asset and set two additional groups within an Instance to force membership in both for access.

Process Associations

The Notification system within TME can be kept simple or made as complex as needed. In addition to being able to setup overall notifications for Repair Requests, Service Requests, Manual Work Orders (via Notifications link on Asset Detail Screen) and Scheduled Work (via the Notifications link on the Scheduled Work Detail Screen), the Asset can have different Notifications set up for certain or even every Process that is defined in TME and/or for different steps within a Process. To set up these types of Notifications, click on the Process Associations link on the Asset's Detail screen.

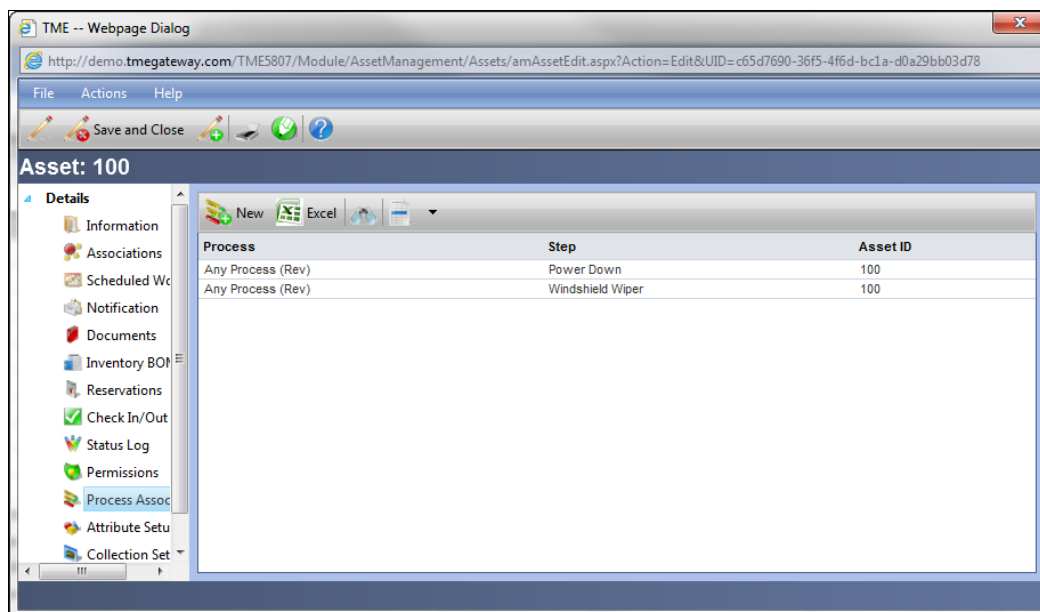



Figure 20 Process Association Viewer

Start by clicking on the New icon . The Association: Add screen appears. The default setting is Any Process and Any Step. To have all notifications go to the same Users and/or Groups for All Processes and All Steps for which the Asset is specifically associated, Save the record and activate the Notification link. Set up the applicable Triggers and Save.

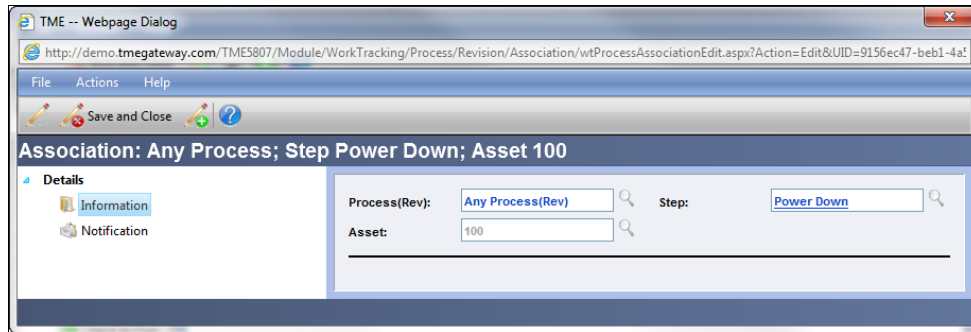



Figure 21 Asset Process Association Detail Screen

To instead specify a Process for which the Association is to be set up, click on the corresponding  icon. The Process Revision LookUp screen will appear. Only those Processes that are active will be available. To drill into the detail screen of a Process, double-click on the row.

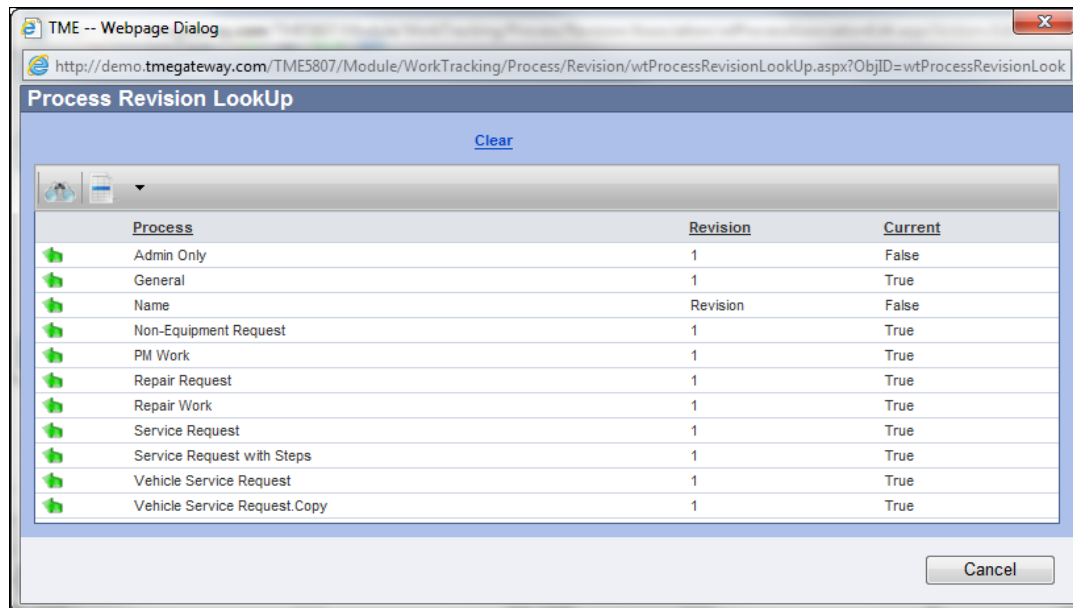



Figure 22 Process Revision LookUp Screen

To select the Process, click on its  icon. Save the record and activate the Notification link. Set up the applicable Triggers and Save.

To go beyond associating to a specific Process but also to a specific Step within the Process (or even choose a Step for Any Process), click on the corresponding  icons


to bring up the LookUp screens and make the selections. There is no filtering of the Steps based on the selected Process, so you will have to know in advance which Step to select. If not sure, set up the Association within the Processes Module itself (See the Processes section of Work Tracking for more details). Save the record and activate the Notification link. Set up the applicable Triggers and Save.

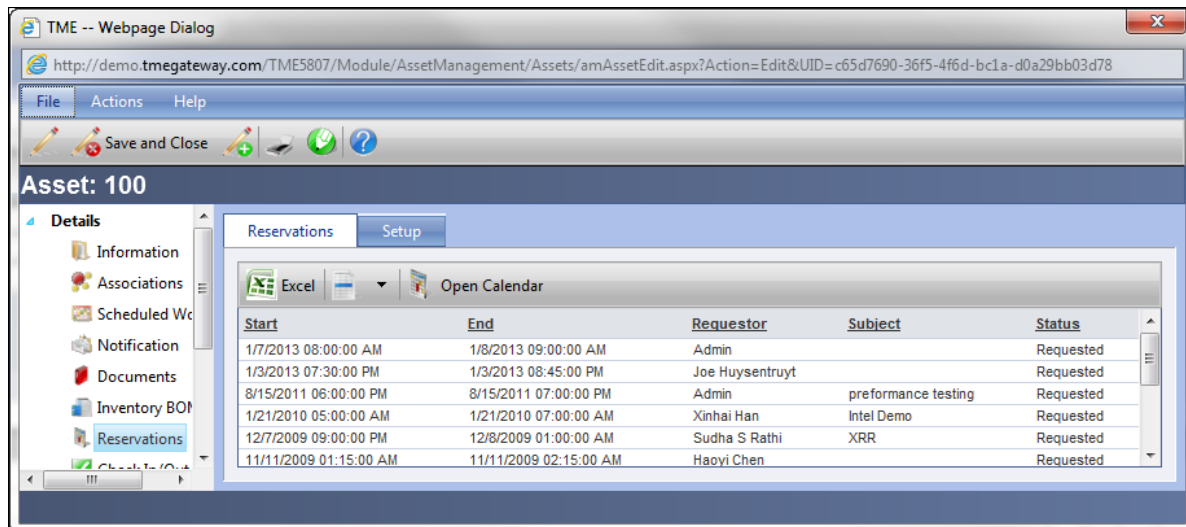
Reservations

To view upcoming reservations for an Asset via the Asset detail screen, click on the Reservations link on the Asset's Detail screen. The Reservations tab lists the upcoming reservations in a viewer format in order of start date.

To view or edit a reservation, double click anywhere within the row or right click within the row and select "View." The Reservation Details screen appears set to the Information Link. Make any edits as necessary on the General tab (save using the Detail Toolbar or Taskbar prior to moving onto the Additional links). As previously indicated, see the Asset Reservations portion of the Driver's Seat chapter for assistance with editing a reservation.

To delete a reservation, double click anywhere within the row, delete the record via Actions on the Details Taskbar or right click on that row and select "Delete".

To access the Reservation Calendar, click on . Adding Reservations is done the same way as indicated in the Driver's Seat chapter.




Start	End	Requestor	Subject	Status
1/7/2013 08:00:00 AM	1/8/2013 09:00:00 AM	Admin		Requested
1/3/2013 07:30:00 PM	1/3/2013 08:45:00 PM	Joe Huysentruyt		Requested
8/15/2011 06:00:00 PM	8/15/2011 07:00:00 PM	Admin	performance testing	Requested
1/21/2010 05:00:00 AM	1/21/2010 07:00:00 AM	Xinhai Han	Intel Demo	Requested
12/7/2009 09:00:00 PM	12/8/2009 01:00:00 AM	Sudha S Rathi	XRR	Requested
11/11/2009 01:15:00 AM	11/11/2009 02:15:00 AM	Haoyi Chen		Requested

Figure 23 Asset Reservations Viewer

Reservation Approval Setup

To set up an Asset to require approval of reservation requests, click on the Setup tab. Click on the checkbox for "Reservations for this asset require approval."

Select a Group (hold the Ctrl key if making multiple selections) from the Other Groups field within that section and click on . The Group(s) selected is now visible in the Approval Groups field. Do the opposite to remove a Group.

An Email Group can be selected to receive notification any time a reservation request for this Asset is made. Select the Email Group from the drop-down list.

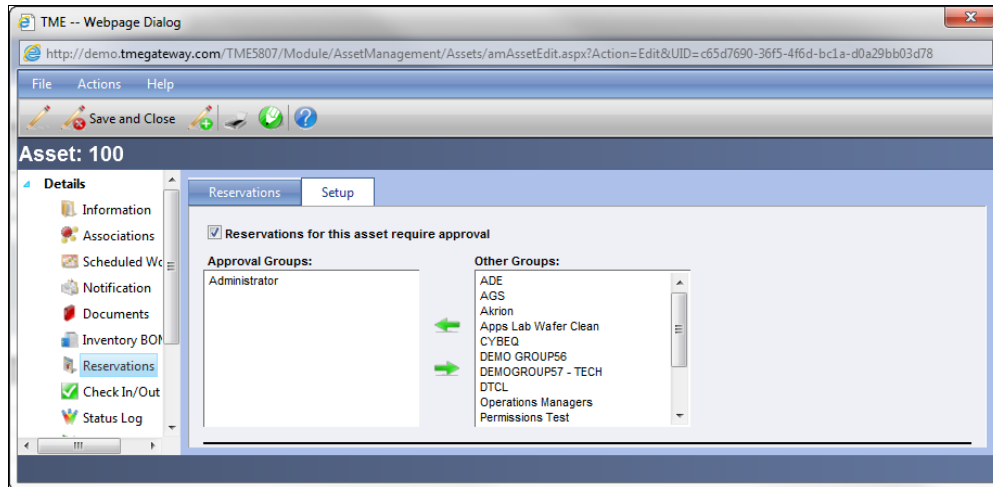


Figure 24 Asset Reservation Setup Screen

Exercise 8:

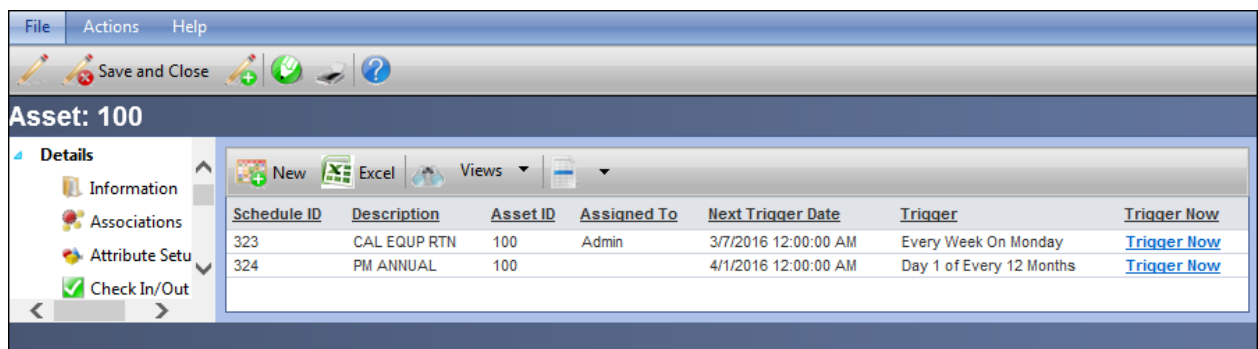


Set up approvals for Asset Reservations.

1. Select your Access Group.
2. Select your Email Group.
3. Save.


Scheduled Work

Click on the Scheduled Work link to view the Scheduled Work set up for the Asset.



Schedule ID	Description	Asset ID	Assigned To	Next Trigger Date	Trigger	Trigger Now
323	CAL EQUIP RTN	100	Admin	3/7/2016 12:00:00 AM	Every Week On Monday	Trigger Now
324	PM ANNUAL	100		4/1/2016 12:00:00 AM	Day 1 of Every 12 Months	Trigger Now

Figure 25 Asset Scheduled Work Viewer

Additional Scheduled WO's can be added by clicking . They can be triggered into Work Orders from this screen by clicking on [Trigger Now](#) provided it has not been set up to prevent work order generation earlier than the Next Trigger Date (or certain number of days earlier and the current date is too far out). Further discussion on Scheduled Work may be found in the Work Tracking chapter.

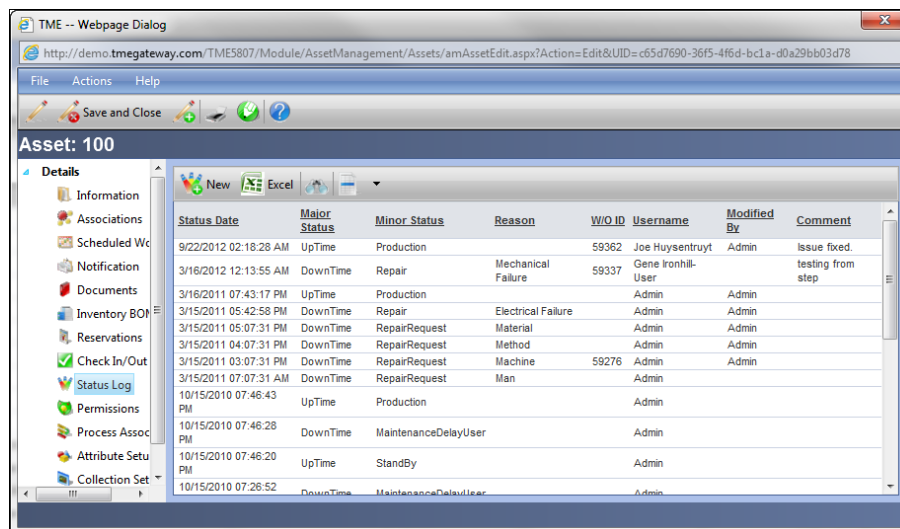
Status Log

Knowing the Major and Minor status of an Asset is the key to tracking down all the events that will be used to compute the Reliability, Availability and Maintainability (RAM) of each Asset. **TME follows the standard formula of the Semi E10.** Please see

[Appendix 6 - "SEMI E10-0304^E Specification for Definition and Measurement of Equipment Reliability, Availability, and Maintainability \(RAM\)"](#) for a complete list of Major Status and Minor Status, its formula, and its definition.

Let's say a Supervisor needs to know the reliability of each Asset. In TME, you will be able to log all the statuses that ever took place with that Asset, so that when you view a report, it will give you the Total Downtime hours and Uptime hours in a month. In this case you will be able to determine whether that piece of equipment was in operation more often than it was broken. Broken down further, a report can show Scheduled versus Unscheduled Downtime, Uptime Production versus Uptime Engineering/ Standby, etc.

To view and/or update a status and the reason for the status, click on the Status Log link on the Asset's Detail Screen.



Status Date	Major Status	Minor Status	Reason	W/O ID	Username	Modified By	Comment
9/22/2012 02:18:28 AM	UpTime	Production		59362	Joe Huysentruyt	Admin	Issue fixed.
3/16/2012 12:13:55 AM	DownTime	Repair	Mechanical Failure	59337	Gene Ironhill-User	Admin	testing from step
3/16/2011 07:43:17 PM	UpTime	Production			Admin	Admin	
3/15/2011 05:42:58 PM	DownTime	Repair	Electrical Failure		Admin	Admin	
3/15/2011 05:07:31 PM	DownTime	RepairRequest	Material		Admin	Admin	
3/15/2011 04:07:31 PM	DownTime	RepairRequest	Method		Admin	Admin	
3/15/2011 03:07:31 PM	DownTime	RepairRequest	Machine	59276	Admin	Admin	
3/15/2011 07:07:31 AM	DownTime	RepairRequest	Man		Admin	Admin	
10/15/2010 07:46:43 PM	UpTime	Production			Admin		
10/15/2010 07:46:28 PM	DownTime	MaintenanceDelayUser			Admin		
10/15/2010 07:46:20 PM	UpTime	StandBy			Admin		
10/15/2010 07:26:52	DownTime	MaintenanceDelayUser			Admin		

Figure 26 Asset Status Log



Statuses cannot be deleted. To "remove" a status, make it the same status as one that is adjacent to it. This, in effect, makes the status "invisible."

Exercise 9:



Add a status to an Asset.

1. Click on .

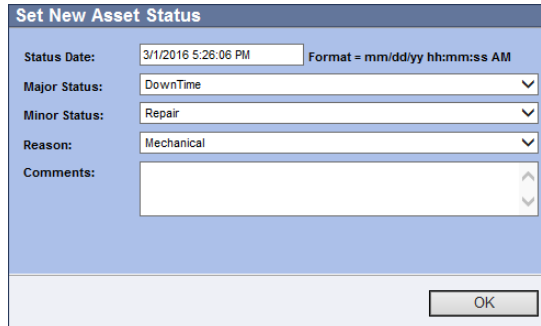
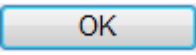


Figure 27 Asset Update Status Screen

2. Use the drop-down menus to change the Major Status to Downtime, the Minor Status to Repair and an applicable Reason if drop-down list is provided. Certain Downtime statuses have an additional checkbox for Scheduled. If the status is to be scheduled downtime, click the checkbox; otherwise, leave unchecked. For example, if a power outage is scheduled in advance and is long enough to warrant putting the asset into a downtime state, the status can be set to Scheduled Downtime Facilities. If the outage was unexpected, the status can be set to Unscheduled Downtime Facilities.
3. Click .

Exercise 9:



Change the status just added to Uptime Production with time adjusted to five minutes earlier.



If you have an Asset that is ready to be used but isn't doing any actual work, it is important to put it on "Standby" first for Statistical purposes. Let's say a supervisor wants to know the total hours an Asset has done work for a particular month. In this case he's only concerned about the time the equipment is doing work, and not the time that it was available but just sitting still. The only time that you should put an Asset into "Uptime Production" is when it's being operated and doing work. This is an example of why it is important to put in the most appropriate status of an Asset, because to get a true and accurate report, you need to add in true and accurate information.

WT Work Orders

This screen shows all open Work Tracking Work Orders for the Asset. This screen is identical to that of the Work Order viewer, however, it is filtered to only show open Work Orders for the specific Asset. Double-click on a record to open the Work Order detail screen in order to view more detail or to process the work. Further discussion on processing Work Orders may be found in the Work Tracking chapter.

Copying an Asset

Assets can be copied individually by opening the Asset's Detail screen, clicking on Actions on the Toolbar and selecting Generate Copy. The screen will refresh and the Asset ID will have the addition of ".copy" at the end. The screen is now open to the new Asset. The identifying information is copied over: General Information, Associations, Scheduled Work (newly created for the Asset), Notification, Documents, Inventory BOM, Permissions, Attribute Setup, and Collection Setup. Transactional or distinguishing information is not: Barcode Values, Attributes, Data Collections, Default Processes, Statuses (will only have the New Asset status with the current date), Reservations, and Check In/Out transactions.

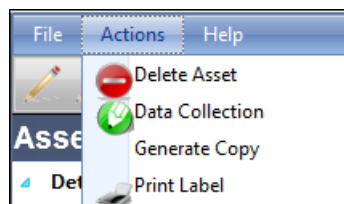





Figure 28 Generate Copy Link

Reservation Approval

The Reservation Approval Viewer lists the Asset Reservations that need approval by Users with the appropriate permissions. Reservations that are recurring will still have each reservation listed individually for approval

To approve a Reservation, select the checkbox to the left of the Reservation. Note that Recurring Reservations are listed individually, not as a group. Approval that can't be granted to a single reservation won't affect the entire group. Click on . The Reservations that have been approved will no longer be visible in the Viewer. An email will be sent to the requestor(s) of the reservations that they have been approved.

To reject a Reservation, click [Reject](#) to the right of the Reservation. The Reservation Rejection screen will appear. Select a reason for the rejection from the Code drop-down list. The full rejection reason will appear in the Message field. To provide a reason not listed, type in the reason in the Message field. Click on [Submit](#) (to reverse the rejection, click on [Reject](#) again and click on [Cancel Rejection](#) that is just under the Asset ID). A  will appear to the right. Click on  to complete the rejection. An email will be sent to the requestor of the Reservation that it had been rejected.

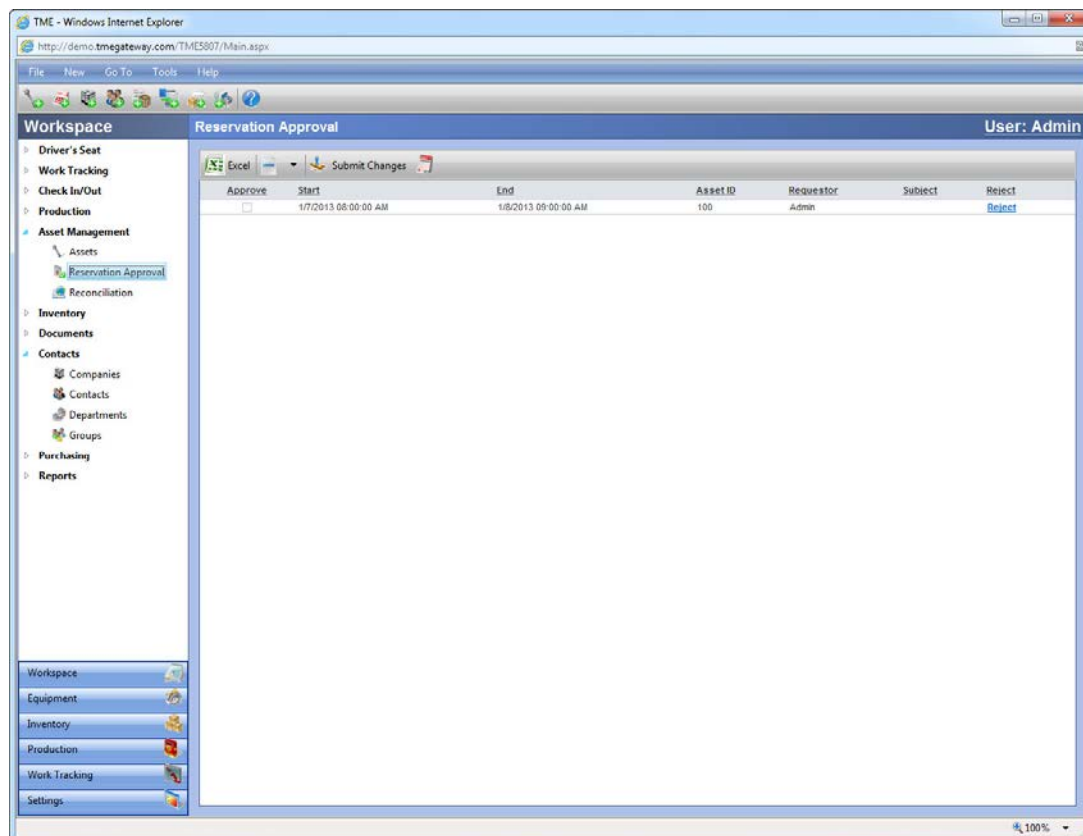


Figure 29 Reservation Approval Screen

Exercise 9:




Create two reservations that require approval. Approve one and reject the other. Check the Reservation Calendar to view the status changes.

Asset Reconciliation

The Asset Reconciliation submodule allows Users to conduct an inventory of Assets and update locales accordingly. The database keeps a record of the locales for easy reporting on locale history.

Adding/Editing a Collection


The inventory of an Asset is conducted by setting up a Collection. It can be added by clicking on  at the left side of the Viewer Toolbar. The New Collection screen appears. Type in the Name of the Collection and click on the Active checkbox to activate. Select the Start and End dates of the inventory timeframe as well as the Owner (User requesting the reconciliation) as well as the checkbox for Limit Locales if applicable (this will provide an additional link for Locales by which to select which locales are to be inventoried). Type in applicable Comments and click OK to Save.

The new Collection is added as a record to the Collection viewer. Save using the Detail Toolbar or Taskbar, close by clicking on File on the Detail Taskbar and then Close or click on the X at the top right corner of the Details Screen window, or continue viewing the record by clicking on the Information link or another Additional Link.

Figure 30 Reconciliation Collection Detail Screen

Locales

Asset Reconciliations can take place anywhere or for specific locales. To specify Locales, click on the Location link on the Collection's Detail Screen.

Locales can be added by clicking on . A blank Details popup screen will appear and will as a default be set to the General tab of the Information link. Click on the Location link and the Select Locale popup will appear.

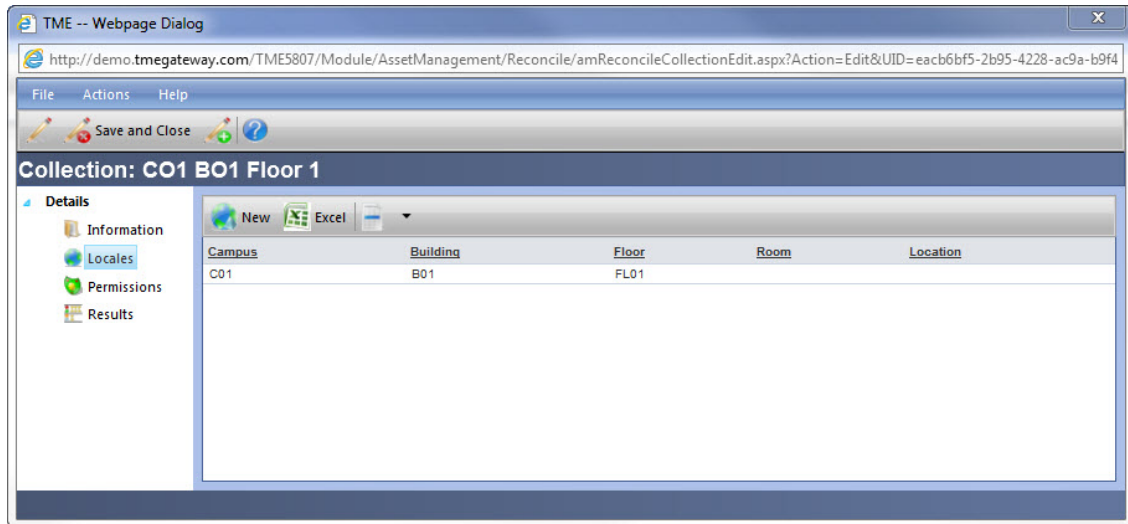


Figure 31 Reconciliation Collection - Locations Detail Screen

Permissions

Permissions to conduct the Asset Reconciliation are based on Access Groups and/or Users. To set up the Permissions, click on the Permissions link on the Collection's Detail screen.

To allow any TME User permission to conduct the reconciliation, select the Everyone checkbox. To restrict permission, select the checkbox for "Members of the following." Select the Access Groups and/or Users.

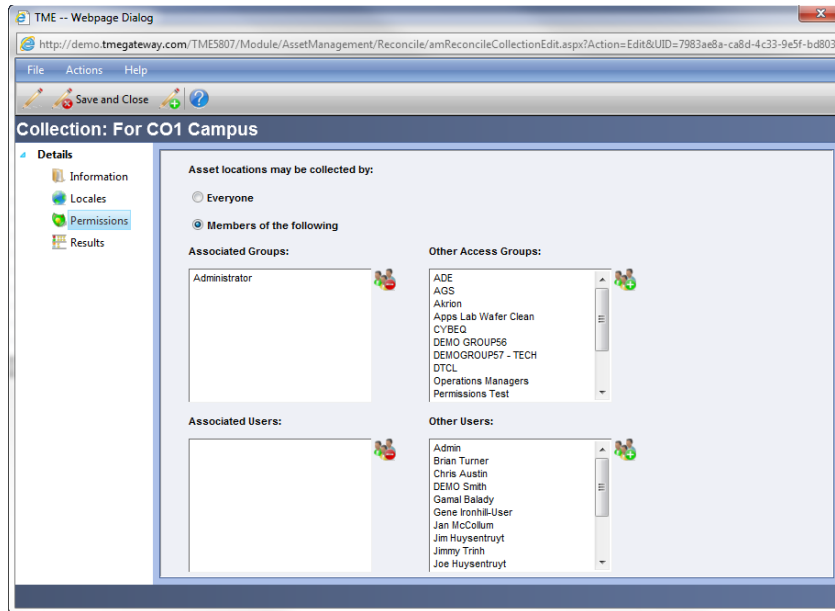


Figure 32 Reconciliation Collection - Permissions Screen

Exercise 10:




Create three collections—one that is for a single locale at the location level, one at the floor level, and another at the building level (all must be locales for the Assets you entered in previous exercises).

Exercise 11:



Edit the collection at the location level so that only you have permission to conduct the reconciliation and delete the Collection for the floor level.

Data Collection for Reconciliation

To conduct the Asset Reconciliation, click on the  for the appropriate Collection. The Collection's screen will appear set to the Scan tab. Verify that the Locale listed is correct. If not correct, click on the Location link and select an alternate locale. If the alternate locale is not within the area of the Collection, you will not be able to select that locale.

TME -- Webpage Dialog
http://demo.tmegateway.com/TME5807/Module/AssetManagement/Reconcile/amReconcileCollectionScan.aspx?Action=Edit

For CO1 Campus

L locale: CO1

Scan Scanned Missing Add New Unknown Assets

Barcode:

Last Item

Asset ID:

Description:

Serial No.:

Locale:

[Remove](#)

Figure 33 Reconciliation Data Collection Screen - Scan

Click within the Barcode field and scan (or type in the barcode value and hit Enter) the barcode of the first Asset. If the Asset is set within the TME system regardless of locale, it will be listed on the Scanned tab.

TME -- Webpage Dialog
http://demo.tmegateway.com/TME5807/Module/AssetManagement/Reconcile/amReconcileCollectionScan.aspx?Action=Edit

For CO1 Campus

L locale: C01/B01/FL01/RM010/R1

Scan Scanned Missing Add New Unknown Assets

Asset ID	Asset Desc	Serial No.	User	Date	Scanned Locale	Locale in TME
100	Leitz Microscope - ERGOLUX	MIC-135	Admin	9/18/2012 09:04:12 PM	C01/B01/FL01/RM010/R1	C01/B01/FL01/RM010/R1
139A	Canary-TopTube-NonCopper-200/300mm	99061401	Admin	9/18/2012 09:06:04 PM	C01/B01/FL01/RM010/R1	C01/B01/FL01/RM010/R1
ee000012	phone		Admin	9/18/2012 09:11:49 PM	C01/B01/FL01/RM010/R1	C01/B01/FL01/RM010/R1

Figure 34 Reconciliation Data Collection Screen - Scanned


If it is not in the system, a popup message will appear stating that the barcode could not be found. Click OK and the system will direct you to the Add New screen for input of Asset ID, Description and Serial Number. Click [Add](#) to add the Asset into the System.

Figure 35 Reconciliation Data Collection Screen - Add New

Click on the Scan tab to continue scanning until finished. Assets that weren't scanned but should have been included in the Collection will be listed in the Missing tab.

Asset ID	Asset Desc	Serial No.	Locale in TME
00599	Kyle Testing	dfg	C01/B01/FL01/RM010/R1
138A	Canary-TopTube-NonCopper-200/300mm	99061403	C01/B01/FL01/RM010/R1
DEMO TEST 88	testing/training		C01/B01/FL01/RM010/R1
Demo55	Child Association for Demo56		C01/B01/FL01/RM010/R1

Figure 36 Reconciliation Data Collection Screen - Missing

If multiple Locales are included in the Collection, change the Location link and scan the Assets for that Location. Repeat until all Locales have been scanned. Click on the Submit button when finished. Scanning does not need to take place all at once. You can go into a locale on different occasions over a period of time--the System will save the scans. However, the Collection does have an expiration date. If you click on the  after the expiration date, a popup message will indicate that the Collection has expired. Click OK and you are returned to the Collection viewer.

Exercise 12:



Conduct reconciliation for your Collections. Include three scanned assets and add two found ones. Make sure there are a few missing Assets remaining as well.

Results

Results of the Asset Reconciliation are available via the Collection's Details screen. Click on the Results link.

There are four tabs--Matching Assets, Missing Assets, Found Assets and Unknown Assets.

- The Matching Assets tab lists the Assets that were scanned and are in the locale as set up in the system. This list can be Exported to Excel and Searched and Sorted on. There are no action links available.

The screenshot shows a web browser window titled "TME -- Webpage Dialog" with the URL <http://demo.tmegateway.com/TME5807/Module/AssetManagement/Reconcile/amReconcileCollectionEdit.aspx?Action=Edit&UID=7983ae8a-ca8d-4c33-9e5f-bd803>. The page has a menu bar with "File", "Actions", and "Help". Below the menu bar is a toolbar with "Save and Close" and a help icon. The main content area is titled "Collection: For CO1 Campus" and has four tabs: "Matching Assets", "Missing Assets", "Found Assets", and "Unknown Assets". The "Matching Assets" tab is selected. On the left side of the page is a sidebar with a tree view containing "Details", "Information", "Locales", "Permissions", and "Results". The "Results" link is highlighted. The main content area displays a table with the following data:

Asset ID	Asset Desc	Serial No.	User	Date	Scanned Locale
100	Leitz Microscope - ERGOLUX	MIC-135	Admin	9/18/2012	C01/B01/FL01/RM010/R1
139A	Canary-TopTube-NonCopper-200/300mm	99061401	Admin	9/18/2012	C01/B01/FL01/RM010/R1
ee000012	phone		Admin	9/18/2012	C01/B01/FL01/RM010/R1

Figure 37 Reconciliation Results Screen - Matching Assets

- The Missing Assets tab lists those Assets that per the System should have been located in the locale specified for the Collection. In addition to the standard toolbar icons, there is a Move link for each Asset. To move the Asset to another locale from what it's listed in the system, click on **Move to Location:** [Click here to select a location.](#) at the bottom of the screen. Select the locale accordingly. Click on **Move** for the Asset and the system will transfer the Asset to the alternate locale and the Asset will no longer be listed under the Missing Assets tab.

Collection: For CO1 Campus

Matching Assets | **Missing Assets** | Found Assets | Unknown Assets

Asset ID	Asset Desc	Serial No.	Locale in TME	Move
00599	Kyle Testing	dfg	C01/B01/FL01/RM010/R1	Move
138A	Canary-TopTube-NonCopper-200/300mm	99061403	C01/B01/FL01/RM010/R1	Move
138B	Canary-BottomTube-NonCopper-200/300mm	99061403	C01/B01/FL01/RM012	Move
139B	Canary-BottomTube-NonCopper-200/300mm	99061401	C01/B01/FL01/RM012	Move
146	PAC-VacuumImpulseSealer (Bag Sealer)	G44126-125148-G3	C01/B01/FL01/RM012	Move
153	BioRad- QS312-NonCopper-xxxxmm	41360-1882	C01/B01/FL01/RM012	Move
252	PHILIPS-2830-XRF-NonCopper-200/300mm	DY613	C01/B01/FL01/RM012	Move
DEMO TEST 88	testing/training		C01/B01/FL01/RM010/R1	Move
Demo55	Child Association for Demo56		C01/B01/FL01/RM010/R1	Move
VMA-Test-Asset-01	VMA-Test-Asset-01		C01/B01/FL01	Move
VMA-Test-Asset-02	VMA-Test-Asset-02		C01/B01/FL01	Move
VMA-Test-Asset-03	VMA-Test-Asset-03		C01/B01/FL01	Move
VMA-Test-Asset-04	VMA-Test-Asset-04		C01/B01/FL01	Move
VMA-Test-Asset-05	VMA-Test-Asset-05		C01/B01/FL01	Move
VMA-Test-Asset-06	VMA-Test-Asset-06		C01/B01/FL01	Move
VMA-Test-Asset-10	VMA-Test-Asset-10		C01/B01/FL01/RM010	Move
VMA-Test-Asset-11	VMA-Test-Asset-11		C01/B02/FL02/RM020	Move
VMA-Test-Asset-12	VMA-Test-Asset-12		C01/B02/FL02/RM020	Move
VMA-Test-Asset-13	VMA-Test-Asset-13		C01/B02/FL02/RM020	Move
VMA-Test-Asset-14	VMA-Test-Asset-14		C01/B02/FL02/RM020	Move
VMA-Test-Asset-15	VMA-Test-Asset-15		C01/B02/FL02/RM020	Move

Move to Location: [C01/B01/FL01/RM010/R1](#)

Figure 38 Reconciliation Results Screen - Missing Assets

- The Found Assets tab lists those Assets that had not been set for the locale scanned in the System (current locale per the System is in the Locale in TME column). If the Asset is not to be included in the Locale scanned (Scanned Locale column), then nothing needs to be done other than physically moving the Asset to the locale set in the System. If the Asset is to be reset for the scanned Locale, click [Update](#) for that Asset. The system will transfer the Asset to the Scanned locale and the Asset will no longer be listed in the Found Assets tab.

Collection: For CO1 Campus

Matching Assets | Missing Assets | **Found Assets** | Unknown Assets

Asset ID	Asset Desc	Serial No.	User	Date	Scanned Locale	Locale in TME	Update
123456786	Beretta 92 FS	123456654	Admin	1/2/2013	C01	County/Employees/Joe Huysentruyt (5464)	Update
123456787	Beretta 92 FS	123456987	Admin	1/2/2013	C01	Sheriff Department/Jail 1	Update
123456788	Sig Sauer P226		Admin	1/2/2013	C01	County/Employees/Gamal Balady (6548)	Update

Figure 39 Reconciliation Results Screen - Found Assets

- The Unknown Assets tab lists those Assets that were scanned but are not set up in the TME system. To add to the System, click [Convert](#). The Asset will be removed from the list and added to the System (it will now be included in the Assets Viewer). To not add the Asset to the System, click [Reject](#). The Asset will simply be removed from the list.

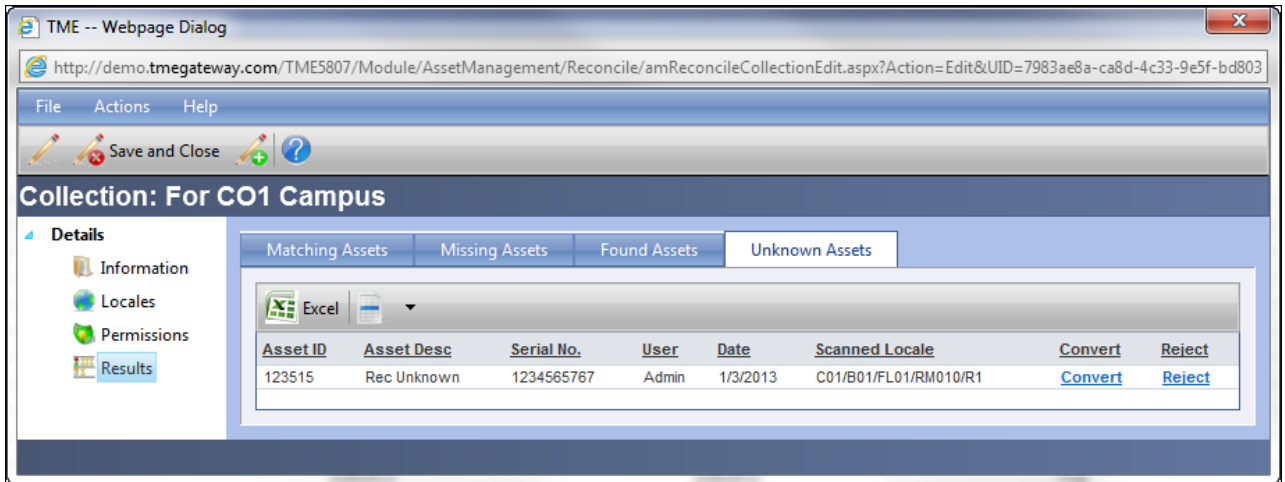


Figure 40 Reconciliation Results Screen - Unknown Assets

Exercise 13:



Move a missing Asset to an alternate locale, update a Found Asset, reject an Unknown Asset and convert one as well.

Actions

The Actions submodule is where an Asset can be moved from one locale to another as a transaction either as a Move Asset or Move Asset w/Signature.

Move Asset


Click on the Move Asset link. The Move Asset screen appear.

The screenshot shows the "Move Asset" screen with the following fields and controls:

- Scan Barcode:
- Auto: ☐ Auto
- Locale: [Click here to select a locale.](#)
- Asset:
-
-
-

Figure 41 Move Asset Screen

Click within the Scan Barcode field to scan the barcodes of the Asset and Locale and then the Move Asset button to complete the transaction.

If not using barcodes, select the Locale with the Locale selector screen and the Asset with the Asset LookUp screen (click on ). Then click on the Move Asset button.

To process quickly, click on the Auto checkbox before scanning/selecting. The Move Asset button will no longer be needed. This removes the ability to double-check the selections before TME processes the move.

Once the move is completed, a message will appear at the bottom of the screen indicating what was done and the screen is ready for the next transaction.

Move Asset w/Signature

Click on the Move Asset w/ Signature link. This screen operates the same way as the Move Asset screen with the exceptions that there is a signature capture screen and no Auto checkbox.

To enter a signature after selecting the Asset and Locale, click in the large rectangle with the mouse. Hold down on the left mouse button and move the mouse slowly to create the signature. Lift up on the mouse button to end the line and click down and hold again to start another line. When finished, click into the Signature Text field and type the signatory's name. Click the Move Asset button when ready to submit. A message will appear at the bottom of the screen to confirm the move and the fields will refresh for the next transaction.

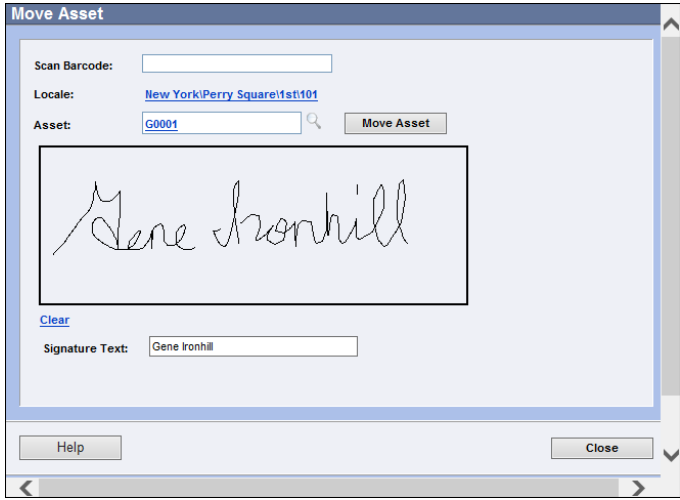


Figure 42 Move Asset w/Signature Screen

For both types of transactions, the Locale History records will update and the current locale will be visible on the Asset's Detail screen.