

IBM® Tivoli® Software

# **IBM Process Content Package – Maximo Inventory Management**

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**Document version 7.5.0.0**





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None

# REVISION HISTORY

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Date	Version	Revised By	Comments
4 February 2014	1.0.0	Jean Bellefeuille	
19 November 2014	2.0.0	Jean Bellefeuille	Revised to reflect that this content pack is stand alone, i.e. it does not need the Work Management content pack.

# 1 Maximo Inventory Management Content

The inventory management process content package is focused strictly on base Maximo and not does take into account any industry solution, add-ons such as Service Provider, or additional licensed products such as Incident, Problem or Change Management. The inventory management process content package supports Inventory Movement and Inventory Replenishment.

The inventory management package contains the following:

- Basic workflow to handle the processing of Purchase Requisitions with supporting Roles and Person Groups.
- Start Centers.
- A change to an Inventory Option.
- Saved Queries.
- A Reorder Cron Task instance.
- Security Groups

Every effort was made to reduce configuration of the product there are however post configuration actions that must be accomplished. No customization to the product has been done, i.e., no Java class files have been added or modified and no scripting has been accomplished.

## 2 Installation Instructions

**Note:** All data installed by this content package is prefixed with IBM.

### 2.1 Prerequisites

1. Run the package as MAXADMIN.

### 2.2 Post Installation Tasks

See Section 4 for Post Installation tasks.

## 3 Content

The content provided has been designed to support the following standard Maximo activities; Inventory Movement and Inventory Replenishment.

## **3.1 Inventory Movement**

Inventory movement consists of the following activities:

- Issuing Items
- Returning Items
- Transferring Items

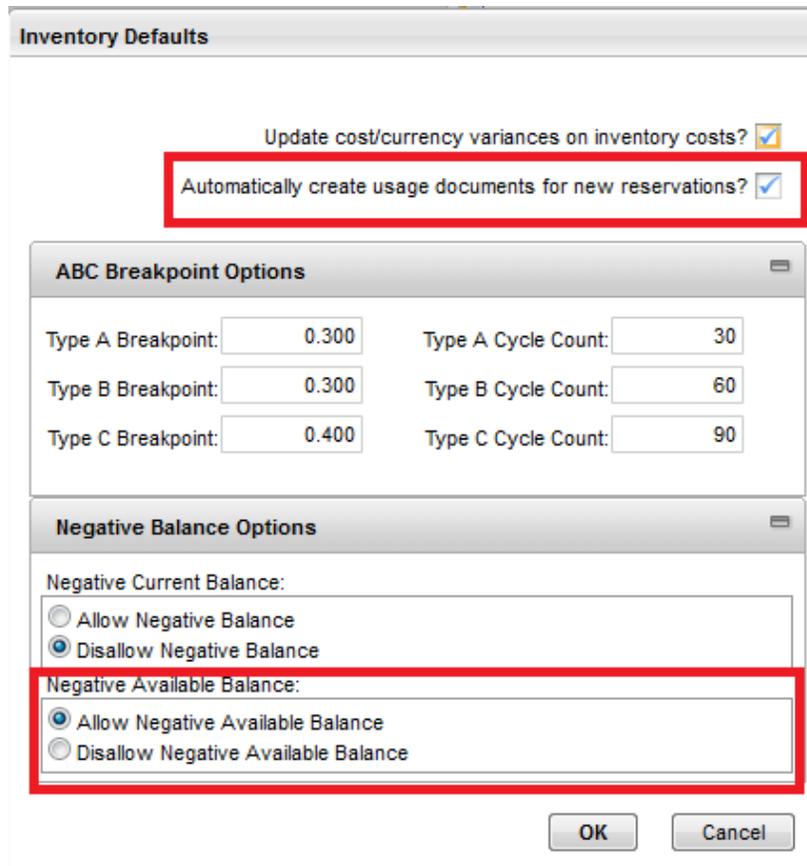
Usage records are used for these actions.

### **3.1.1 Issuing Items**

#### **Organization Options – Inventory Options – Inventory Defaults**

This content package sets the 'Negative Available Balance' option to ALLOW. This will facilitate the reservation of items even when there are no items available.

If you will also be installing the Work Management Process Content Package it will set the 'Automatically create usage documents for new reservations?' option to YES (checked) this will automatically create a usage record of type ISSUE, status = ENTERRED, when items are reserved for work orders.  
See figure below.



The image shows a dialog box titled "Inventory Defaults". At the top, there are two checked checkboxes: "Update cost/currency variances on inventory costs?" and "Automatically create usage documents for new reservations?". Below these are three sections: "ABC Breakpoint Options" with input fields for Type A, B, and C Breakpoints and Cycle Counts; "Negative Balance Options" with radio buttons for "Allow Negative Balance" and "Disallow Negative Balance"; and "Negative Available Balance" with radio buttons for "Allow Negative Available Balance" and "Disallow Negative Available Balance". The "Automatically create usage documents..." checkbox and the "Negative Available Balance" section are highlighted with red boxes. At the bottom are "OK" and "Cancel" buttons.

ABC Breakpoint Options	
Type A Breakpoint:	0.300
Type A Cycle Count:	30
Type B Breakpoint:	0.300
Type B Cycle Count:	60
Type C Breakpoint:	0.400
Type C Cycle Count:	90

Negative Balance Options	
Negative Current Balance:	
<input type="radio"/>	Allow Negative Balance
<input checked="" type="radio"/>	Disallow Negative Balance
Negative Available Balance:	
<input checked="" type="radio"/>	Allow Negative Available Balance
<input type="radio"/>	Disallow Negative Available Balance

Figure 1 - Inventory Defaults options dialog

The usage records will appear on the start center if the document status is ENTERED, SHIPPED, or STAGED.  
See figure below.

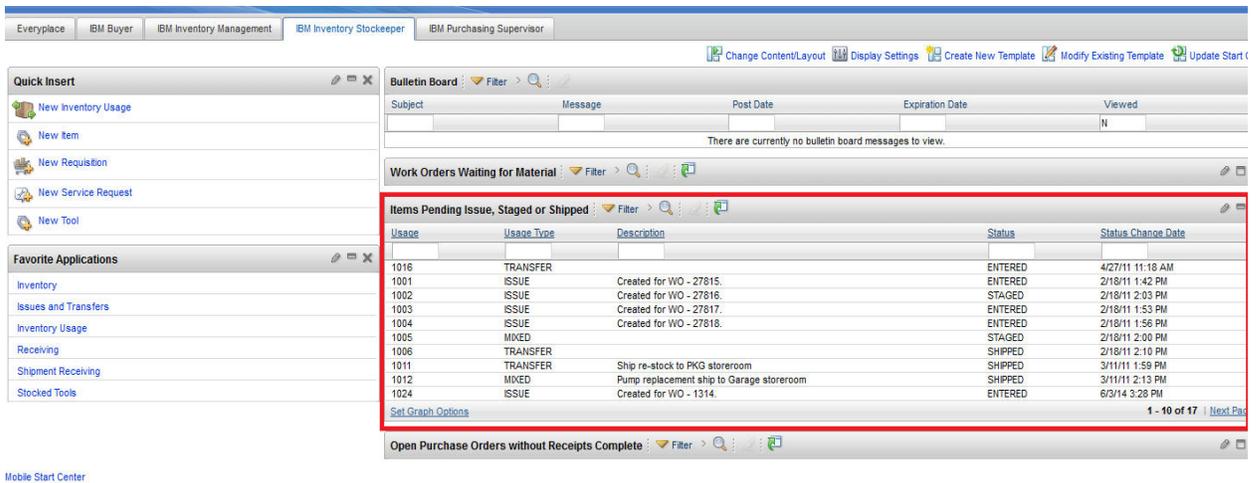


Figure 2 - IBM Inventory Stockkeeper Start Center

### 3.1.2 Transferring and Returning Items

Usage documents for these activities are created manually. These usage documents will also appear on the start center if the document status is ENTERED, SHIPPED, or STAGED. See figure above.

## 3.2 Inventory Replenishment

Inventory replenishment consists of the following activities:

- Reorder items
- Create/review/approve Purchase Requisitions
- Receive Items

### 3.2.1 Reorder

The reorder process is initiated from the Inventory application with the REORDER select action. If automatic reordering is desired an instance, IBMREORDER, of the Reorder Cron Task is installed. See figure below.

The schedule is set for daily at 5:00 AM. Parameter setup must be completed before activating the cron task.

Review the Cron Task instance, make modifications as desired, then activate it.

The screenshot displays the IBM Maximo configuration page for the Reorder Cron Task. At the top, the 'Cron Task' details are shown: 'ReorderCronT' with a value of 'Reorder CronTask', class 'psdi.app.inventory.ReorderCron', and access level 'FULL'. Below this is a table of 'Cron Task Instances' with one entry: 'IBMREORDER' with a schedule of '1d,0,0,5:\*\*\*\*\*', run as user 'MAXADMIN', active status 'false', keep history checked, and max number of history records set to 1,000. The 'Parameters' tab is selected, showing a table of parameters for the 'Cron Task Parameters'.

Parameter	Value	Description
directissue		A list of sites for which direct issue items will be processed
emailto		The e-mail address to whom the reorder result will be sent. T
ignorerorderpoint	0	Whether reorder cron task will ignore the reorder point of the
leadtime	0	The extra lead time that will be included by the reorder cron t
logfile		The complete path of the log file for reorder cron task result.

Figure 3 - Reorder Cron Task

You also determine the status that the PRs are created with from the Reorder process. This is configured post installation. See Section 4, Post Installation Tasks.

### **3.2.2 Create/Review/Approve Purchase Requisitions**

#### **Workflow**

A simple workflow is provided for processing Purchase Requisitions, IBMINVPR.

The workflow is installed disabled and inactive. You should review the workflow and make any changes to meet your organizations needs before activation. See Section 4, Post Installation Tasks.

#### **Roles**

The Roles installed for use in the workflow are:

IBMINVPMGR - Inventory Manager

IBMINVSPUP – Inventory Supervisor

IBMINVSTOCKKP – Inventory Stockkeeper (Note: This role is currently not used in the workflow.)

#### **Actions**

The workflows use standard Maximo supplied actions. The Actions used are:

PRAPPR – PR approval action

PRCLOSE – PR close action

#### **Workflow Design**

IBMINVPR, IBM Inventory Management Purchase Requisition Workflow

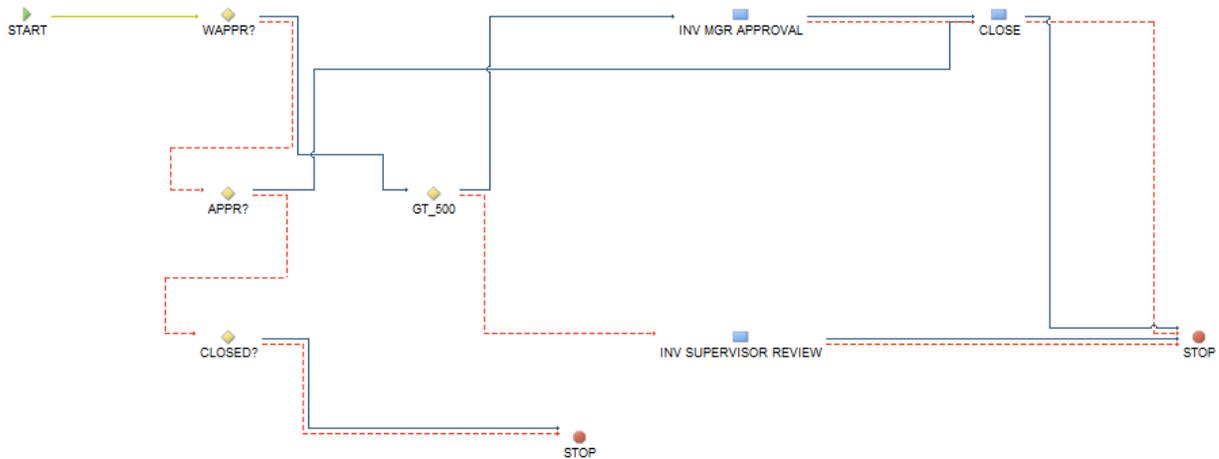


Figure 4 – IBM INVPUR Workflow

When PRs enter the workflow the record status is checked. If the status = WAPPR then the PR is new and the total cost of the PR is checked. If the total cost is less than or equal to \$500, the PR is assigned to the Inventory Supervisor for review and approval. If the total cost is greater than \$500, the PR is assigned to the Inventory Manager group for review and approval.

Approved PRs then await closure by the Inventory Manager group.

PRs that are neither Waiting for Approval or Approved are automatically closed if their status has not already been changed to CLOSE.

## Workflow Initiation

The workflow has not been configured to initiate automatically. If automatic initiation is desired see Post Installation Tasks, Section 4.

## Workflow Other

If you plan to also install the Purchasing Management Process Content Pack then configure and use the Purchase Requisition workflow installed with this process Pack. The process is slightly modified and includes a Buyer in the PR review and approval process.

## Start Centers

Two start centers are installed.

IBM Inventory Stockkeeper:

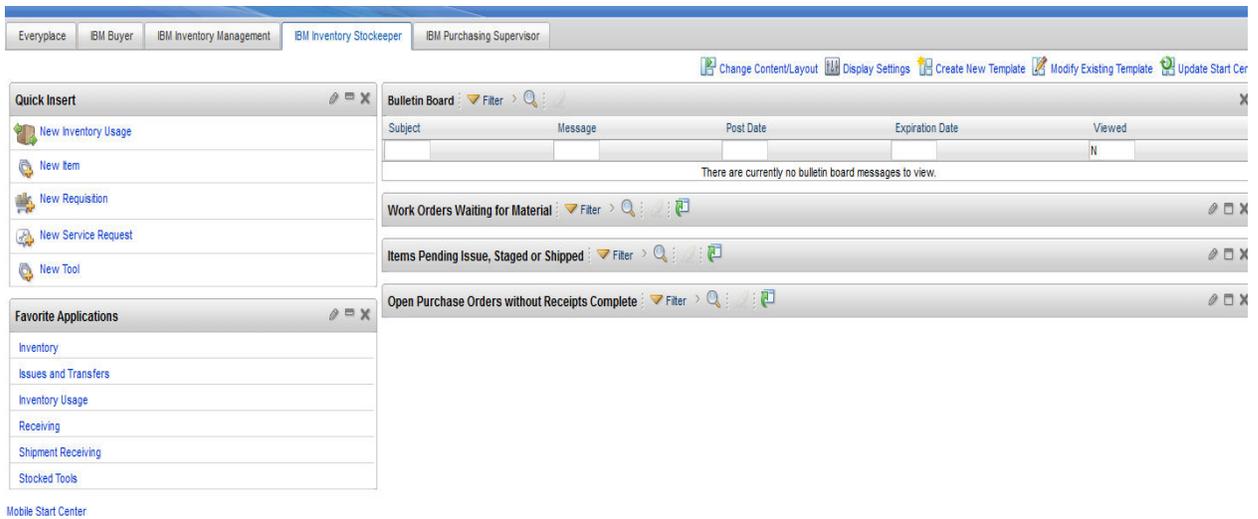


Figure 5 - IBM Inventory Stockkeeper Start Center

## IBM Inventory Management:

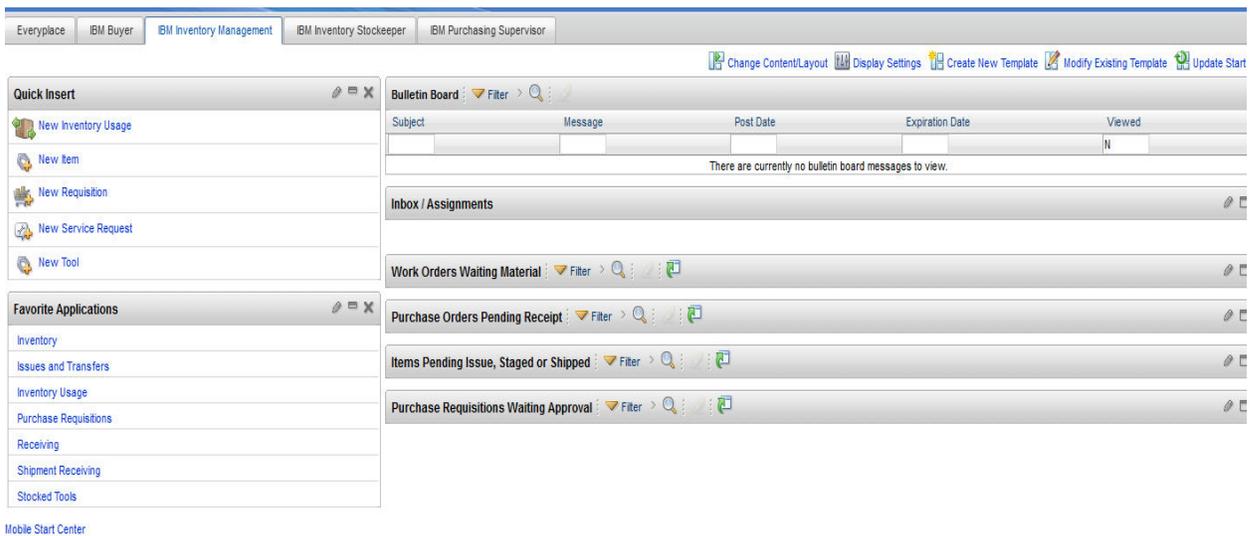


Figure 6 - IBM Inventory Management Start Center

In addition to the portlets on the IBM Inventory Stockkeeper start center the IBM Inventory Management start center also includes a Workflow Assignment Inbox and a Result Set for Purchase Requisitions waiting for approval.

This start center is designed for use by both the Inventory Manager and Inventory Supervisor security groups.

### 3.2.3 Receiving Items

Items requiring receipt are listed on the Open Purchase Orders without Receipts Complete portlet on the start centers.  
See figure below.

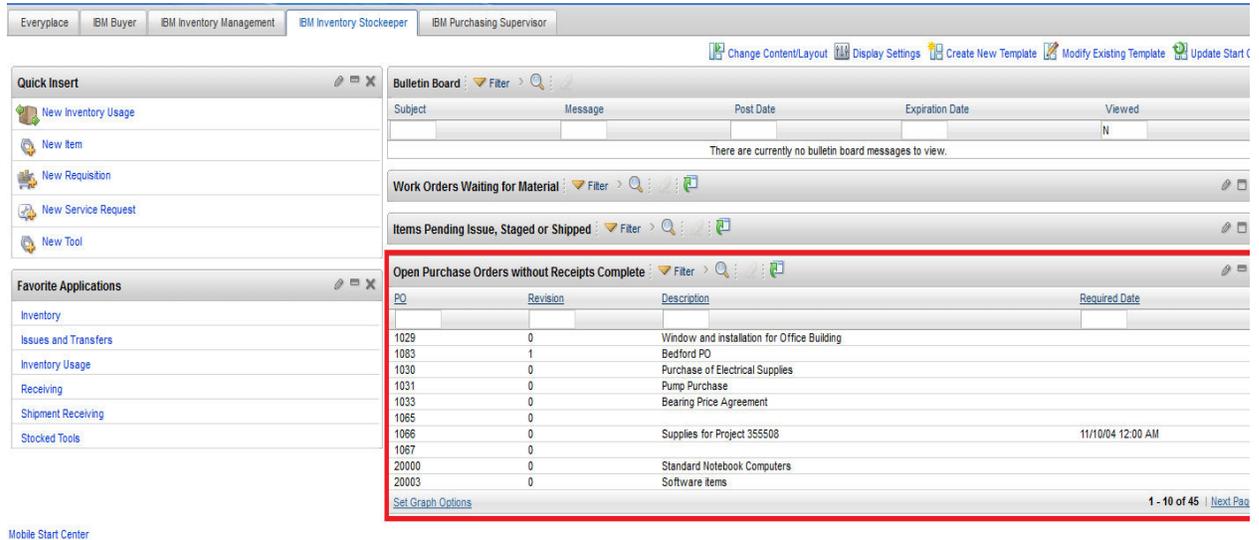


Figure 7 - IBM Inventory Stockkeeper Start Center

## 4 Post Installation Tasks

There are a few simple post installation tasks.

### 4.1 Security Groups

Review the Security Groups installed by this content pack and assign a start center if not already assigned. Also add users if necessary.

<u>Security group</u>	<u>Start Center</u>
IBMINVMGR	IBM Inventory Management
IBMINVSUP	IBM Inventory Management
IBMSTOCKPR	IBM Inventory Stockkeeper

## **4.2 PR Review and Approval by Workflow**

If you plan to use the provided workflow for this process then there are a number of tasks to accomplish.

Review the workflow and accept as is or modify to match your organizations procedures.

### **4.2.1 Workflow Status Locking**

Changing statuses outside of the workflow processes may cause an error for the user. For example, the Purchase Requisition status was changed to Approved outside of the workflow and the workflow attempts to change the status to Approved an error will occur.

There are a number of options, one is to remove or hide the Status change icon from the menu and select action dropdown. Another is to use the OKSTATUS and NOSTATUS actions to prevent uses from changing the record while it is in the workflow. You will need to configure Action groups to replace the single actions in the workflow.

### **4.2.2 Add Workflow Support for PR Application**

Enable and Activate the workflow.

Add workflow support to the Purchase Requisition application using the Select Action – Add Workflow to Applications in the Workflow Designer Application. See figure below for an example:

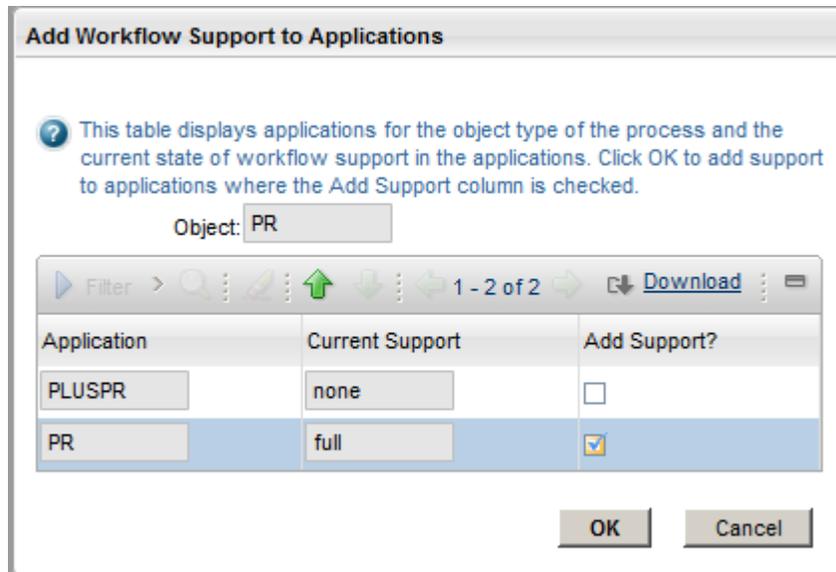


Figure 8 - Add Workflow to Applications dialog

### 4.2.3 Automatic Workflow Initiation

If you wish to have the PRs created from the reorder process be automatically inserted into workflow then identify the respective PR workflow in the Workflow Options of the Organization application. See figure below:

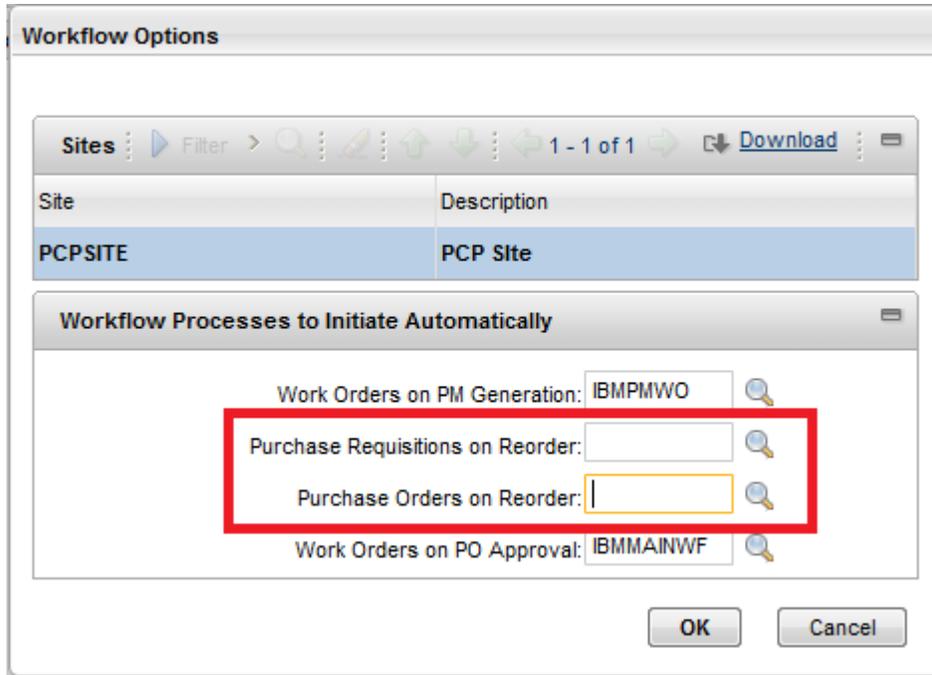


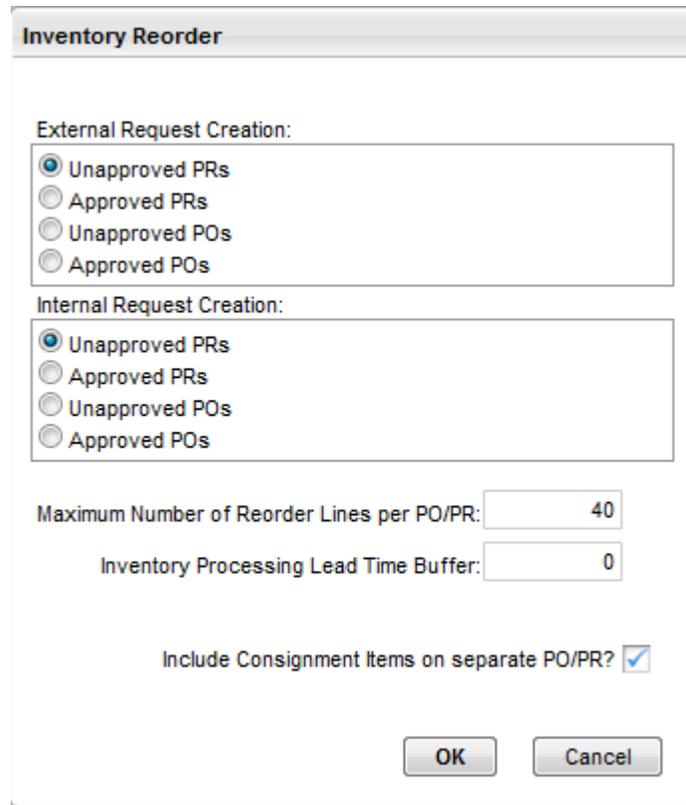
Figure 9 - Workflow Options dialog

## 4.3 Reorder

### 4.3.1 Reorder Document Creation

Decide what status the PRs will be created from the Reorder process. Set this in the Organization application, Inventory Options, Inventory Reorder selection.

Out of the Box settings are as shown in the figure below.



The dialog box is titled "Inventory Reorder". It contains two sections for request creation, each with four radio button options: "Unapproved PRs", "Approved PRs", "Unapproved POs", and "Approved POs". In both sections, "Unapproved PRs" is selected. Below these sections are two input fields: "Maximum Number of Reorder Lines per PO/PR:" with the value "40" and "Inventory Processing Lead Time Buffer:" with the value "0". At the bottom, there is a checked checkbox labeled "Include Consignment Items on separate PO/PR?". The dialog concludes with "OK" and "Cancel" buttons.

Figure 10 - Inventory Reorder Options dialog

### 4.3.2 Automatic Reorder Initiation

Review the IBMREORDER instance of the ReorderCron Task.

Change/accept the schedule.

Update the parameters to include Sites and Storerooms that have been created for your inventory.

Activate the cron task instance.

## 5 Appendix A

### 5.1 Using a local Content Source

By default the ISM Content Installer application includes a Content Source configured to read items from the IBM ISM Library. This requires the IBM Maximo Asset Management server to have Internet connectivity. This section outlines how to create a local Content Source so the Process Content Packs can be installed on an IBM Maximo Asset Management server without Internet connectivity.

Note: the examples shown below reference a Microsoft® Windows server, however the steps are identical on a Unix® or Linux® based server. Simply change the file path to reflect the correct path.

### 5.2 Download the Process Content Packs

Each Process Content Pack is listed on the IBM ISM Library. In the top-right corner is a link to download the item. From a computer with Internet connectivity, click on this download link to save the zip file which contains the components and documentation for each pack. Save one or more Process Content Pack zip files into a directory. Then copy the zip files to a directory on the IBM Maximo Asset Management server.

### 5.3 Create a local ContentSource.xml

In the same directory on the IBM Maximo Asset Management server where the zip files were placed, use a text editor to create a file with the text below. Save the file with the file name ContentSource.xml.

```
<?xml version="1.0" encoding="UTF-8"?>
<catalog infourl="" lastModified="" owner=""
  xmlns:tns="http://www.ibm.com/tivoli/tpae/ContentCatalog"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="ContentCatalog.xsd">
  <catalogItem>
    <version>7.5.0.0</version>
```

```
<type>mriu</type>
<name>Maximo Work Management Package</name>
<description>Maximo Asset Management Work Management
Package</description>
<homepage/>
<licenseurl/>
<category>Maximo Asset Management</category>
<url>file:///E:\MAMWorkMgt.zip</url>
<licenseurl/>
<category> IBM Maximo Asset Management </category>
<url> file:///E:\MAMWorkMgt.zip</url>

</catalogItem>
</catalog>
```

Replace the file paths with the path used on your server for each <URL> entry in the <catalogItem> section. If using Unix or Linux, replace \ with /.

## 5.4 Edit the ISM Content Installer Content Source

Log into IBM Maximo Asset Management with administrative rights and go to the ISM Content Installer application. Click on the default Content Source labeled IBM Maximo Asset Management. From the left-hand menu or the Select Action menu, choose the Edit Catalog action. Edit the file path similar to the image below, replacing the path with the path on your server where the ContentSource.xml file is stored.

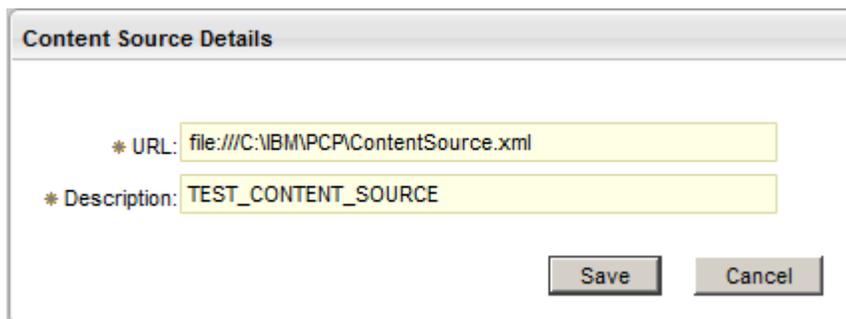


Figure 11 - Content Source Details

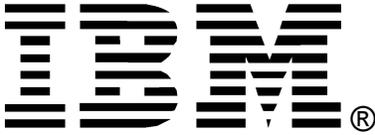
Your Content Source entry should now read the local ContentSource.xml file, which will in turn display an entry for each Process Content Pack zip file and allow you to install the Pack into your IBM Maximo Asset Management environment.

# **REFERENCES**

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IBM Process Content Package – Maximo Purchase Order Management





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