# PlantsByWebsphere Application Walkthrough

# with LMe as Version Control

Last Updated December 10, 2012

## Overview

This demo uses the PlantsbyWebsphere application, which is stored in the LMe repository. This application is hosted on the IBM Websphere Application Server, of which there are two, WAL-VM-TEST for the test environment, and WAL-VM-PROD for the Production environment. The development is performed within IBM Rational Developer for Power Systems. This demo environment basically involves the following;

* Change some text on the web page
* Rebuild the application using ANT to produce a new single EAR file
* Deploy and install the EAR file on the Test Websphere Application Server
* Rebuild the application, deploy and install onto the Production Websphere Application Server

This process uses Community Manager to enforce additional workflow, approvals and promotions, which is described in more detail in the ‘Workflow’ section below.

The LMe Repository is installed on ALDMO1. The LMe client is installed on the Development machine, which is WAL-VM-DEV2. The Eclipse IDE to be used is Rational Developer for Power Systems, also installed on the WAL-VM-DEV2 machine.

## Benefits for the customer

The benefits that this configuration will demonstrate to the customer are;

* Web based facility which allows customers to log issues into a central system.
* Automated workflow to assign request to the correct teams.
* Built in approval processes for authorized users.
* Secure central repository for application code management.
* Business process management aligned with software development lifecycle.
* Automated deployment and installation to an IBM Websphere Application Server (WAS).
* No manual intervention required for Build process, deployment or installation to the WAS.
* Easy rollback functionality of an application hosted on a WAS
* Satisfies auditors requirements – logs from build server, applications servers, test systems etc all stored in a central single location.
* End to end change management.

## Workflow

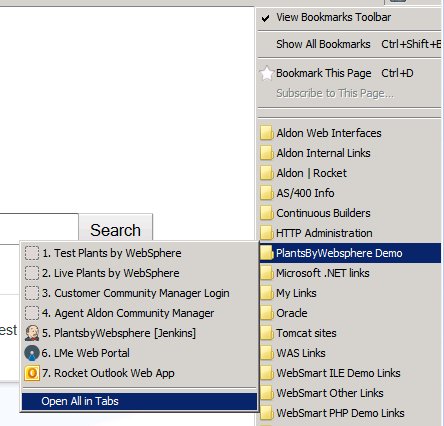
Development Servers:

* Chris and Andy use WAL-VM-DEV1 for their development server.
* Anita and Joe use WAL-VM-DEV2 for their development server.

This is the general workflow of this demo;

* Raise an issue in CM, by logging on as a customer as ‘andy’
* This issue gets assigned to a Manager
* Sign into CM as yourself, and you should see the issue assigned to a ‘Manager’
* Approve the issue
* This assigns the issue to a developer called ‘Jon’
* Go into the issue, and link the request to LM, by creating a task with the same name as the issue in Retail/WebCommerce/Plantsbyweb(1.00)
* Do the development – go into Rational and make changes to the web page file and check in
* Promote to QA from within LMe – this builds the application by running scripts on psg-build, imports the new EAR file into LMe, deploys and installs it to the WAS on WAL-VM-TEST. This promotion/deployment also sends the ‘control.txt’ file to the WAL-S-CMNEW machine. This is then used for future emails back into CM.
* An email is sent back into CM, which changes the status of the issue to PASSED QA, which then starts an approval process, and changes the status to READY FOR PRODUCTION.
* Upon approval (either from email or CM), this will initiate the Promote action, which builds the application, imports the EAR file into LMe, deploys and install it to the WAS on WAL-VM-PROD.
* Once installed, an email is sent back into CM to change the status to COMPLETED.

### Pre-Demo Setup

* Check Build server ‘Jenkins’ - [http://wal-vm-build:8080/view/PlantsbyWebsphere/](http://psg-build:8080/view/PlantsbyWebsphere/)
* If you cannot access this page, log onto the wal-vm-build server, and restart the ‘hudson’ service.
* Check WAL-VM-DEV2: this is the development location
* Check WAL-VM-TEST: this is where the test web application resides
* Check WAL-VM-PROD: this is where the live web application resides.
* Start up RDP.
  + Navigate down to
    - PlantsbyWebsphere
    - Plantsbywebspheresample
    - Src
    - PlantsbywebsphereWeb
    - WebContent
  + Do a Get Latest in RDP
* Check the authority on PROMO.HTML and CONTROLFILE.TXT. Make sure the user has full rights.
* Have the scripts folder open in case you want to show any of it: C:\BUILD\PlantsbyWebsphere\QUA\SCRIPTS
* Open the following tabs in Firefox (in this order)
  + Test PlantsByWebsphere [http://WAL-VM-TEST:9080/PlantsByWebSphere/](http://psg-test:9080/PlantsByWebSphere/)
  + Live PlantsByWebsphere [http://WAL-VM-PROD:9080/PlantsByWebSphere/](http://psg-appsvr:9080/PlantsByWebSphere/)
  + CM logged in as customer Andy
  + CM logged in as agent (you) to workspace \_Development Management
  + Jenkins build server, subset to PlantsByWebsphere
  + LMe web portal
  + Exchange Outlook web portal for emails
  + 

# Demo Walkthru (with CM and Jenkins)

## Development:

* Create issue as end user
  + From the Customer CM portal create an Issue in CM (\_DEVELOPMENT MANAGEMENT Project)
  + Title: I need an update to the online order entry web system
  + Type: Enhancement
  + Product: PlantsByWebsphere
  + Version: 1.5
  + Urgency: Not Urgent
* Approve the request from Agent
  + Switch to your agent CM tab
  + See task in the “DevRequest” status.
  + Edit the issue, and Link the issue to LM by creating a task of the same name as the issue.
  + Approve the issue. This will change the status to ‘DEVELOPMENT’ and the assignee to ‘Jon’
* Do the development work in RDP
  + Hover over the  icon on the main tray bar. Show the pop up text “check out files from Aldon LM”
  + Check these items out
    - PlantsbyWebsphere
    - Plantsbywebspheresample **(ControlFile.txt)**
    - Src
    - PlantsbywebsphereWeb **(AccountServlett.java) \*optional\***
    - WebContent **(Promo.html)**
    - **(Product.jsp) \*optional\***
  + Open up PROMO.HTML, and edit the following lines of code – basically, just change the ‘Prepare your pond for Spring’ to ‘Prepare your pond for Summer’ (or the opposite)
  + Change some comment text in the AccountServlett.java.
  + Explain that the ControlFile is an example of a file or control or config parms that can be used later on in the build and deployment process.
  + Open the CONTROLFILE.TXT and change the top 2 lines to be the name of the issue/task, ISSUE 123
  + Move up to the Plantsbywebspheresample level and hit the “check in with Aldon” icon.
* This will check the files into LMe **Retail/WebCommerce/Plantsbyweb(1.00)** into the first Interim staging environment. (No deployment happens on this environment).
* \*OPTIONAL\*: Do some IBM i development for the task in **Aldon/LMiDemo/Base**. Promote it.

## Promote to QUA

* Switch to the collection tab of LMe.
* Promote all the task files from LMe.
* SHOW:
  + LMe WebPortal taking the source files over to WAL-VM-BUILD
  + Jenkins on WAL-VM-BUILD running the build job in the Test PlantsByWebsphere
  + LMe WebPortal taking the EAR file from Jenkins and deploying it to WAL-VM-TEST
  + LMe client package view. Show details of the package.
  + Emails that go out
  + Information that is automatically updated in CM ticket.
  + test instance changing on PlantsByWebsphere
* Under the covers:
  + The promote in LMe to QUA had an auto-deployment.
  + deploy the .Html files to the WAL-VM-BUILD server
  + deploy the ControlFile.txt to the PSG-CM-NEW server.
  + run a post-exec command which then runs a batch file on WAL-VM-BUILD (C:\BUILD\PlantsbyWebsphere\QUA\SCRIPTS )
  + This batch job will:
    - Run the Jenkins Test PlantsByWebsphere build routine
    - builds the application EAR file via ANT
    - imports the EAR file back into LMe **Retail/WebCommerce/BuildQUA(1.00)**
    - The Import environment is associated with an auto-deploy to the WAL-VM-TEST server.
    - This will:
      * run a post-install batch that runs a Python script containing the WAS server commands to install the new EAR and refresh the server.
      * Send a status update email back to CM
* Once the application has been installed onto the Test WAS, an email will be sent back into CM. This will update the status of the issue to PASSED QA and then immediately to PRODUCTION READY.
* It will also attach several files to the CM task that simulate the results of an automated test returned back to the ticket.

## Promote to Production

* From the agent CM, show that the ticket is in PRODUCTION READY, waiting for signoff.
* Approve the ticket by replying to the request for approval email.
* This will:
  + send out emails to all.
  + it will initiate the ‘PromoteCollectionAssembly’ command for the Task, and start the promotion of the HTML and TXT files to Production.
* This basically repeats the same workflow above, only now targeting production.
* SHOW:
  + WebPortal taking the source files over to WAL-VM-BUILD
  + Jenkins on WAL-VM-BUILD running the build job in the Live PlantsByWebsphere
  + WebPortal taking the EAR file from Jenkins and deploying it to WAL-VM-PROD
  + Live instance of PlantsByWebsphere
* Go into the CM issue
  + Status is now
  + show how we have gathered all of the relevant information required for auditing purposes, and attached them to the issue.
  + In the attachments tab of the issue, you are able to show the build logs from QA and PDN, Test and Promotion logs.

# Demo Walkthru (without CM and Jenkins)

## Development:

* Do the development work in RDP
  + Check out **PROMO.HTML** to the last task in the list.
  + Open up PROMO.HTML, and edit the following lines of code – basically, just change the ‘Prepare your pond for Spring’ to ‘Prepare your pond for Summer’ (or the opposite)

<td bgcolor="#DCEBCD"><p class="tips">Tip of the day:: **Prepare your pond for Spring.** Preserve extra grass seed by keeping it dry.

Tape boxes and bags closed, or seal them into plastic bags. Be sure to remove extra air

from the bags. Store all seed in a cool, dry area such as a garage or basement.</td>

</tr>

* + Save the changes. (The Controlfile.txt contains the Task and Issue information, which is used to communicate back to CM via email.)
  + Right Click and select CHECKIN.
* This will check the files into LMe **Retail/WebCommerce/Plantsbyweb(1.00)** into the first Interim staging environment. (No deployment happens on this environment).

## Promote to QUA

* Switch to the collection tab of LMe.
* Promote all the task files from LMe.
* SHOW:
  + WebPortal taking the source files over to WAL-VM-BUILD
  + Jenkins on WAL-VM-BUILD running the build job in the Test PlantsByWebsphere
  + WebPortal taking the EAR file from Jenkins and deploying it to WAL-VM-TEST
  + test instance of PlantsByWebsphere
* Under the covers:
  + The promote in LMe to QUA had an auto-deployment.
  + deploy the .Html files to the WAL-VM-BUILD server
  + deploy the ControlFile.txt to the PSG-CM-NEW server.
  + run a post-exec command which then runs a batch file on WAL-VM-BUILD (C:\BUILD\PlantsbyWebsphere\QUA\SCRIPTS )
  + This batch job will:
    - Run the Jenkins Test PlantsByWebsphere build routine
    - builds the application EAR file via ANT
    - imports the EAR file back into LMe **Retail/WebCommerce/BuildQUA(1.00)**
    - The Import environment is associated with an auto-deploy to the WAL-VM-TESTserver.
    - This will:
      * runs a post-install batch that runs a Python script containing the WAS server commands to install the new EAR and refresh the server.
      * Send a status update email back to CM

## Promote to Production

* From the Collection view in LMe, promote the task up to Production.
* This triggers another silent deployment.
* This basically repeats the same workflow above, only now targeting production.
* SHOW:
  + WebPortal taking the source files over to WAL-VM-BUILD
  + Jenkins on WAL-VM-BUILD running the build job in the Live PlantsByWebsphere
  + WebPortal taking the EAR file from Jenkins and deploying it to WAL-VM-PROD
  + Live instance of PlantsByWebsphere