Deploying the rmireg.war file in BEA WebLogic 9.2.3 for Windows

Definition of terms

- <Maximo_home> is used for the Maximo home. By default, the Maximo home is C:\IBM\SMP\maximo
- <WL_home> is used to indicate the location of WebLogic. By default, the WebLogic home is C:\BEA.
- <domain_name> is used to indicate the location of the Maximo domain in WebLogic. By default, the Maximo domain home is mydomain.
- <server_name> is the name of the server on which WebLogic has been installed.

First, using <Maximo_home>/deployment/buildrmiregwar.cmd, build the <Maximo_home>/deployment/default/rmireg.war file. This is the file that will be deployed in WebLogic, and its priority must be set so that all Maximo servers will start after this server starts.

Creating the RMI Registry Web Application

- Start the Oracle WebLogic Administrative (Admin) Server:
 - Open a command line prompt and navigate to
 - <WL_home>\user_projects\domains\<domain_name>
- Execute startWebLogic.cmd.

🗪 Command Pre	ompt - start	weblogic						
03/24/2010	10:42 AM		472	fileRealm.properties	_			
11/02/2010	12:38 PM	VDI KZ	754	Init-Info InstallService.bat				
03/24/2010 11/02/2010	10:42 AM	<dir></dir>		lib				
03/24/2010	10:42 AM	<dir></dir>		security				
05/04/2010 11/02/2010 03/24/2010	10:08 AM 02:19 PM 10:42 AM	<dir></dir>	750 307	servers startMX071WL.cmd startWebLogic.cmd				
03/24/2010 11/02/2010 03/24/2010	10:42 HM 03:58 PM 10:42 AM	<dir></dir>	259	startwebLogic.sh tmp user staged config				
03/ 2 1/ 2010	7 Fil 13 Dir	e(s) (s) 11,412,5	2,69 90,59	8 bytes 2 bytes free				
C:\bea\user_ •	_projects	\domains\MX07	P1WL_d	omain>startweblogic				
JAVA Memory	argument	s: -Xms512m -	Xmx10	24m -XX:MaxPermSize=512m				
WLS Start Mo	ode=Produ	ction						
CLASSPATH=C: files\defaul s.jar;C:\bea	CLASSPATH=C:\bea\WEBLOG~1\server\lib\oraclethin.jar;C:\bea\patch_weblogic923\pro files\default\sys_manifest_classpath\weblogic_patch.jar;C:\bea\JDK150~2\lib\tool s.jar;C:\bea\WEBLOG~1\server\lib\weblogic_sp.jar;C:\bea\WEBLOG~1\server\lib\webl							

- Open the WebLogic Administrative Console (by default, http:// <server_name>:7001/console).
- Click Lock & Edit



• Expand the <domain_name>Environment>Servers link

Change Center	Welcome, weblogic	Connected to: MXS62V	VL_domain	🟠 Home	Log Out	Preference	s Help	AskBEA
View changes and restarts	nd restarts Home > Summary of Servers							
Pending changes exist. They must be activated to take effect.	Summary of Servers							
Activate Changes Undo All Changes	A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) a This page summarizes each server that has been configured in the current WebLogic Server							uration.
Domain Structure								
MXS62WL_domain	Customize this table							
Environment	Servers (Filtered - More Columns Exist)							
	New Clone I	New Clone Delete Showing 1 - 2 of 2 Previous Next						
Virtual Hosts Migratable Targets	🗖 Name 🐟	Cluster	Machine	State	H	lealth L	isten Por	t
Machines Work Managers	AdminServer(ad	min)		RUNNING	c	ж 7	001	
Startup & Shutdown Classes	MXS62WL_Serve	er		SHUTDOV	VN	7	003	
B-Services Security Realms B-Internnerability	New Clone Delete Showing 1 - 2 of 2 Previous Next							
⊡-Diagnostics								

- Click New
- Enter RMIRegistry in the Server Name field
- Enter 9999 in the Server Listen Port field
- Leave the No, this is a stand-alone server Radio button selected.
- Click Next

Home	>	Summary	of	Servers
------	---	---------	----	---------

Create a New Server							
Back Next Finish Cancel							
Review choices							
Review the selections. If th	ese are correct, click Finish to create this server.						
Server Name:	RMIRegistry						
Server Listen Address:	(No value specified)						
Server Listen Port:	9999						
Back Next Finish	Cancel						

• Click Finish

▶ Customize this table

Servers (Filtered - More Columns Exist)

New Clone Delete Showing 1 - 3 of 3 Previous Next						
	Name 🚕	Cluster	Machine	State	Health	Listen Port
	AdminServer(admin)			RUNNING	ОК	7001
	MXS62WL_Server			SHUTDOWN		7003
	RMIRegistry			SHUTDOWN		9999
New Clone Delete Showing 1 - 3 of 3 Previous Next						

Select **Deployments** on the left side of the console Click **Install** ٠

٠

Install Application Assistant	
Back Next Finish Cancel	
Locate deployment to install and prepare for deployment	
Select the file path that represents the application root directory, archive file, exploded archive directory, or application module descriptor that you want to install.	
Note: Only valid file paths are displayed below. If you cannot find your deployment files, upload your file(s) and/or confirm that your application contains the required deployment descriptors.	
Location: localhost	
 Select upload your file(s) 	

Install Application Assistant
Back Next Finish Cancel
Upload a Deployment to the admin server
Click the Browse button below to select an application or module on the machine from which you are currently browsing. When you have located the file, click the Next button to upload this deployment to the Administration Server.
Deployment Browse
 Click on the Browse button and navigate to your Maximo root directory, then the deployment and default directory.
File Upload
Look in: 📄 default 💽 📀 😥 🗁 🖽 -
 Select the rmireg.war file and click Open
Install Application Assistant
Back Next Finish Cancel
Upload a Deployment to the admin server
Click the Browse button below to select an application or module on the machine from which you are currently browsing. When you have located the file, click the Next button to upload this deployment to the Administration Server.
Deployment \\tsclient\C\MXS62WL\deployment\default\rmireg.war Browse.
Click Next

• Under Location, select rmireg.war.

Messages
☑ The file rmireg.war has been uploaded successfully to C:\bea\user_projects\domains\MXS62WL_domain\servers \AdminServer\upload
Install Application Assistant
Back Next Finish Cancel
Locate deployment to install and prepare for deployment
Select the file path that represents the application root directory, archive file, exploded archive directory, or application module descriptor that you want to install.
Note: Only valid file paths are displayed below. If you cannot find your deployment files, upload your file(s) and/or confirm that your application contains the required deployment descriptors.
Location: localhost \ C: \ bea \ user_projects \ domains \ MXS62WL_domain \ servers \ AdminServer \ upload
C 🗃 maximo.ear
C D rmireg.war
Click Next
Install Application Assistant
Back Next Finish Cancel
Choose targeting style
Targets are the servers, clusters, and virtual hosts on which this deployment will run. There are several ways you can target an application.
$^{\odot}$ Install this deployment as an application
The application and its components will be targeted to the same locations. This is the most common usage.
$^{ m O}$ Install this deployment as a library
Application libraries are deployments that are available for other deployments to share. Libraries should be available on all of the targets running their referencing applications.
Back Next Finish Cancel
Keep Install this deployment as an application selected.

- Click Next
- Select the **RMIRegistry** check box

Install Application Assistant
Back Next Finish Cancel
Select deployment targets
Select the servers and/or clusters to which you want to deploy this application. (You can reconfigure deployment targets later).
Available targets for rmireg
Servers
MXS62WL_Server
Back Next Finish Cancel
Click Next
Install Application Assistant
Back Next Finish Cancel
Optional Settings
You can modify these settings or accept the defaults
General
What do you want to name this deployment?
Name: rmireg
Security
What security model do you want to use with this application?
$^{\odot}$ DD Only: Use only roles and policies that are defined in the deployment descriptors.

• Accept the defaults and click Finish

Change Center	Welcome, weblogic	Connected to: MXS62WL_domain	🏠 Home	Log Out	Preferences	Help	AskBEA	
View changes and restarts	Home > Summary of Servers Deployments	Home > Summary of Servers > Summary of Deployments > Summary of Servers > Summary of Deployments > Summary of Servers > Summary of Deployments						
Pending changes exist. They must be activated to take effect.	Messages	Messages						
Activate Changes Undo All Changes	☑ The deployment ☑ You must also a	has been installed and added to the list of ctivate the pending changes to commit this	pending chang , and other upd	les successi lates, to the	fully. e active system.			

- Click on the Active Changes button and log out of the console.Exit the Console window.

• Stop the AdminServer command-line session.



Setting up and Starting the RMI Registry Web Application

- Open Windows Explorer
- Navigate to "{drive letter}:\bea\user_projects\domains\{domain name}"
- Copy the startWebLogic.cmd file
- Paste it back as "Copy of startWebLogic.cmd"
- Rename the new copy as "startRMIRegistry.cmd"



- Edit the startRMIRegistry.cmd file
- Change the SERVER_NAME parameter to set SERVERNAME=RMIRegistry

- Add set JAVA_OPTIONS=-Dweblogic.management.discover=false -Dweblogic.management.server=http://localhost:7001 after
- Change the MEM_ARGS parameter to set MEM_ARGS=-Xms20m -Xmx40m

🐻 startRMIRegistry.cmd - Notepad	_ 🗆 🗵
Eile Edit Format View Help	
GECHO OFF	<u> </u>
GREM WARNING: This file is created by the Configuration wizard. GREM Any changes to this script may be lost when adding extensions to this cor	figuration.
SETLOCAL	
set DOMAIN_HOME=C:\bea\user_projects\domains\M×S62wL_domain set SERVER_NAME=RMIRegistry set JAVA_OPTIONS=-Dweblogic.management.discover=false -Dweblogic.management.server=http://localhost:7001 set MEM_ARGS=-×ms20m -×mx40m call "%DOMAIN_HOME%\bin\startwebLogic.cmd" %*	
ENDLOCAL	

• Save and close the file

Confirm that no services are using the ports that will be used by RMI

NOTE: If Maximo is using a different RMI port than the default 1099, an entry must be made in the Maximo Properties application, and the rmireg.war file as well as the maximo.ear files must be rebuilt. That port must be substituted for the 1099 port used here.

NOTE: If port 9999 is in use by other Windows services or if a different port is selected when the RMIRegistry server is created, that port must be substituted for the 9999 port used here.

Using the "netstat" command and piping it through a "find" command can display the port usage. Use the following 2 commands to find the status of the ports to be used. Neither of the ports should return any results.

Netstat –a | find "1099" Netstat –a | find "9999"



- Start the BEA WebLogic Server by opening a command prompt and navigating to the {drive letter}:/bea/user_projects/domains/{domain name}.
- Execute the startWebLogic.cmd file (shown above as StartAdminServer.cmd).
- Open a new command prompt window
- Navigate to {drive letter}:\bea\user_projects\domains\{domain name}
- Execute startRMIRegistry.cmd

Confirm that the RMI services are using the ports

NOTE: If Maximo is using a different RMI port than the default 1099, an entry must be made in the maximo.properties file and the rmireg.war file as well as the maximo.ear files must be rebuilt. That port must be substituted for the 1099 port used here.

NOTE: If port 9999 is in use by other Windows services or if a different port is selected when the RMIRegistry server is created, that port must be substituted for the 9999 port used here.

Using the "netstat" command and piping it through a "find" command can display the port usage. Use the following 2 commands to find the status of the ports to be used. Both of the ports should return a status of "**LISTENING**".

Netstat –a | find "1099" Netstat –a | find "9999"



Need to add section on creating the service

Open the "Windows Explorer"

Navigate to "{drive letter}:\bea\user_projects\domains\{domain name}" Copy the "installService.cmd" file Paste it back as "Copy of installService.cmd" Rename the new copy as "installRMIService.cmd"



Edit the **"installRMIService.cmd**" file Change the **"SERVER_NAME**" parameter to **"RMIRegistry**" Check to see if there is a **"MEM_ARGS**" parameter. If there is, modify it, if there is not, insert it to show:

set MEM_ARGS=-Xms5m -Xmx10m

Save and close the file

```
📑 installRMIService.cmd - Notepad
                                                                                                                          - 0 ×
File Edit Format View Help
                                                                                                                                  ٠
Grem Set SERVER_NAME to the name of the server you wish to start up.
set SERVER_NAME=RMIRegistry
Grem Set DOMAIN_NAME to the name of the server you wish to start up.
set DOMAIN_NAME=mydomain
Grem Set WLS_USER equal to your system username and WLS_PW equal
Grem to your system password for no username and password prompt
Grem during server startup. Both are required to bypass the startup
Grem prompt.
set WLS_USER=weblogic
set WLS_PW=weblogić
if NOT "%1" == "" set WLS_USER=%1
if NOT "%2" == "" set WLS_PW=%2
if "%wLS_USER%" == "" goto usage
if "%wLS_Pw%" == "" goto usage
goto continue
:usage
echo Need to set WLS_USER and WLS_PW environment variables or specify
echo them in command line:
echo Usage: installService.cmd [WLS_USER] [WLS_PW]
echo for example:
echo installService.cmd user password
goto finish
 :continue
Grem Set JAVA_OPTIONS to the java flags you want to pass to the vm. i.e.:
Grem set JAVA_OPTIONS=-Dweblogic.attribute=value -Djava.attribute=value
set JAVA OPTIONS=
Grem Set JAVA_VM to the java virtual machine you want to run. For instance:
Grem set JAVA_VM=-server
Grem set JAVA_VM=
@rem Set MEM_ARGS to the memory args you want to pass to java. For instance:
@rem set MEM_ARGS=-Xms32m -Xmx200m
@rem set MEM_ARGS=
set MEM_ARGS=-Xms5m -Xmx10m
 4
                                                                                                                              •
```

Double-click the "installRMIService.cmd" file to install the service. Confirm that the service installed by opening the "Services" control panel and finding the bea service.

Services				
Eile Action View	Help			
Services (Local)	🍇 Services (Local)	24 ¹		
	beasyc mydomain RMIRegistry	Name 🛆	Description	S-
	<u>Start</u> the service	ACT Runtime Optimization Servi Actuate Process Management D Alerter Application Experience Lookup S Application Layer Gateway Service Application Management ASP.NET State Service Automatic Updates Background Intelligent Transfer Background maximoserver	Microsoft Actuate Se Notifies sel Process ap Provides s Provides s Enables th Transfers f	s s
		beasvc mydomain_RMIRegistry		•
	Extended Standard			

Open the "**Registry Editor**" by clicking "**Start/Run**" and typing "**regedit**" {enter} Choose "**Export**" from the drop down "File" menu



Select the "**All**" option Name the export file Click "**Save**"

Save jn:	My Docume	nts	• 0	1 💌 🖽	
dy Recent Jocuments	🚞 My eBooks				
Desktop					
Documents					
y Computer					
S					
ly Network Places	File <u>n</u> ame:	reg_backup_2006-07-03		<u> </u>	<u>S</u> ave
	Save as type:	Registration Files (*.reg)		•	Cancel
port range					
All					
Selected bra	anch				

Navigate to "HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\beasvc {domain_name}_RMIRegistry" Modify the "DisplayName" to "@MRO_RMIRegistry"

This will cause the service to sort to the top of Windows services in the Services control panel

beasvc mydomain_maximoserver beasvc mydomain_RMIRegistry Enum	REG_SZ (value not set) ame REG_SZ @MRO_RMIRegistry
Geasvc mydomain_RMIRegistry GiploplayM GiploplayM	ame REG_SZ @MRO_RMIRegistry
Enum BillerrorCor	
	trol REG_DWORD 0x00000001 (1)
Parameters ImagePa	th REG_EXPAND_5Z C:\bea\WEBLOG~1\server\bin\beasvc.exe
Decurity Decurity	ame REG_SZ LocalSystem
Beep Book Start	REG_DWORD 0x0000002 (2)
Browser	REG_DWORD 0x00000010 (16)

If there are any Maximo server services installed do the following or complete these steps after installing a Maximo service.

Navigate to "HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\beasvc {domain_name}_{servername}"

Modify the "DisplayName" to "@MRO_{servername}"

This will cause the service to sort to the top of Windows services in the Services control panel

BattC	Name	Туре	Data
🗈 🔄 beasvc mydomain_maximoserver 👘	(Default)	REG_SZ	(value not set)
- Enum 💻	DisplayName	REG_SZ	@MRO_maximoserver
- Parameters	ErrorControl	REG_DWORD	0x00000001 (1)
Security	ab]ImagePath	REG_EXPAND_5Z	C:\bea\WEBLOG~1\server\bin\beasvc.ex
beasvc mydomain_RMIRegistry	ObjectName	REG_SZ	LocalSystem
	B Start	REG_DWORD	0x00000003 (3)
Security	😥 Туре	REG_DWORD	0×00000010 (16)
	1		

While the Maximo service is selected, choose "New/Multi-String Value" from the drop down "Edit" menu

-	<u>M</u> odify	▲ Name	Туре	Data
Ė	Modify Binary Data	r ab (Default)	REG_SZ	(value not set)
	New	Key	REG_SZ	@MRO_maximoserver
	Men	704	REG_DWORD	0×00000001 (1)
1	Permissions	String Value	REG_EXPAND_SZ	C:\bea\WEBLOG~1\server\bin\beasvc.exe
	Delete Del	Binary Value	REG_SZ	LocalSystem
	Deneme Den	<u>D</u> WORD Value	REG_DWORD	0x00000003 (3)
	Vengine	_ <u>M</u> ulti-String Value	REG_DWORD	0x00000010 (16)
	⊆opy Key Name	Expandable String Value		
÷	Find Ctrl+F			
	Find Next F3			

Rename the new value as "DependOnService"

Batte	 Name 	Туре	Data
🗄 🔄 beasvc mydomain_maximoserver	(Default)	REG_SZ	(value not set)
🛅 Enum 🛛 👘 🕹	DisplayName	REG_SZ	@MRO_maximoserver
	ErrorControl	REG_DWORD	0×00000001 (1)
Security	a ImagePath	REG_EXPAND_SZ	C:\bea\WEBLOG~1\server\bin\beasvc.exe
beasvc mydomain_RMIRegistry	ab ObjectName	REG_SZ	LocalSystem
	Start	REG_DWORD	0×00000003 (3)
Parameters	Туре	REG_DWORD	0x00000010 (16)
E Beep		REG_MULTI_SZ	
	-		

Double click the "DependOnService" name

Enter the exact name of the RMI Registry server as shown in the left pane (not the display name modified earlier) in the format:

beasvc {space} {domain_name}_RMIRegistry

beasvc mydomain_RMIRegistry

Click "**OK**" Close the registry editor

Edit Multi-String	<u>? ×</u>
Value <u>n</u> ame:	
DependOnService	
⊻alue data:	
beasvc mydomain_RMIRegistry	*
	
T	Þ
OK	Cancel

Open the Services control panel Find the beasvc {domain_name}_RMIRegistry service (NOTE: this will change to "@MRO_RMIRegistry" after rebooting)

File Action	View Help			
← → 💽				
Services (Lo	🐐 Services (Local)			
	beasyc mydomain RMIRegistry	Name 🗡	Description	Stati 4
		🖏 .NET Runtime Optimization Service	Microsoft	
	<u>Start</u> the service	Actuate Process Management Dae	Actuate Se	StarL
		Alerter 🗧	Notifies sel	
		Application Experience Lookup Service	Process ap	Starl
		Application Layer Gateway Service	Provides s	
		Application Management	Processes i	
		ASP.NET State Service	Provides s	
		Automatic Updates	Enables th	Starl
		Background Intelligent Transfer Ser	Transfers f	
		beasvc mydomain_maximoserver		
		beasvc mydomain_RMIRegistry		
		Check Point SSL Network Extender		Starl
		ClipBook	Enables Cli	
		COM+ Event System	Supports S	Starl
		COM+ System Application	Manages t	
		Sta Computer Browcer	Maintaine a	Ch-w-

Double-click the service to open the properties of the service Confirm that the service "**Startup type**" is set to "**Automatic**"

Service name:	beasvc mydomain_RMIRegistry
Display <u>n</u> ame:	@MR0_RMIRegistry
Description:	
Pat <u>h</u> to executat	le:
C:\bea\WEBLO	G~1\server\bin\beasvc.exe
Startup typ <u>e</u> :	Automatic
Service status:	Stopped
<u>S</u> tart	Stop Bause Besume
You can specify from here.	the start parameters that apply when you start the service
_	

Click the "**Dependencies**" tab Confirm that any Maximo server services are set to depend on the RMI service starting first. Close the Services control panel Reboot the server to complete the registry changes

Dependencies	
aeneral Log Un Recovery Dependencies	
Some services depend on other services, system drivers or load orde groups. If a system component is stopped, or is not running properly, dependent services can be affected.	er
beasvc mydomain_RMIRegistry	
I his service depends on the following system components:	
The following system components depend on this service:	
The following system components depend on this service:	
The <u>following</u> system components depend on this service:	
The <u>following</u> system components depend on this service:	
The <u>following</u> system components depend on this service:	
The <u>following system components depend on this service:</u>	

Confirm all services started normally.