

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\SMMP\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.

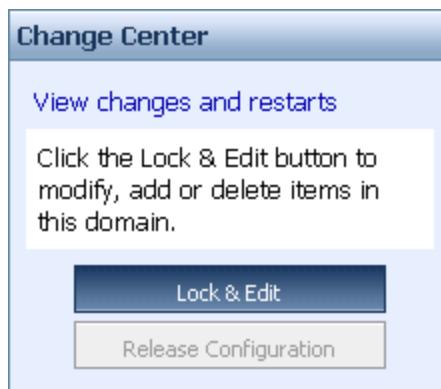
Creating the RMI Registry Web Application

- 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**.

```
03/24/2010 10:42 AM      472 fileRealm.properties
03/24/2010 10:42 AM    <DIR>      init-info
11/02/2010 12:38 PM      754 InstallService.bat
03/24/2010 10:42 AM    <DIR>      lib
11/02/2010 03:58 PM    <DIR>      pending
03/24/2010 10:42 AM    <DIR>      security
05/04/2010 10:08 AM    <DIR>      servers
11/02/2010 02:19 PM      750 startMX071WL.cmd
03/24/2010 10:42 AM      307 startWebLogic.cmd
03/24/2010 10:42 AM      259 startWebLogic.sh
11/02/2010 03:58 PM    <DIR>      tmp
03/24/2010 10:42 AM    <DIR>      user_staged_config
    7 File(s)        2,693 bytes
   13 Dir(s)  11,412,590,592 bytes free

C:\bea\user_projects\domains\MX071WL_domain>startweblogic
.
JAVA Memory arguments: -Xms512m -Xmx1024m -XX:MaxPermSize=512m
WLS Start Mode=Production
CLASSPATH=C:\bea\WEBLOGIC1\server\lib\oraclethin.jar;C:\bea\patch_weblogic923\pro
files\default\sys_manifest_classpath\weblogic_patch.jar;C:\bea\JDK150\2\lib\toll
s.jar;C:\bea\WEBLOGIC1\server\lib\weblogic_sp.jar;C:\bea\WEBLOGIC1\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

The screenshot shows the 'Change Center' interface expanded to show the 'Domain Structure'. Under 'MXS62WL_domain', the 'Environment' node is selected, revealing its sub-nodes: Servers, Clusters, Virtual Hosts, Migratable Targets, Machines, Work Managers, Startup & Shutdown Classes, Deployments, Services, Security Realms, Interoperability, and Diagnostics.

The main content area displays the 'Summary of Servers' page. It includes a message about pending changes and buttons for 'Activate Changes' and 'Undo All Changes'. A table lists two servers: AdminServer(admin) and MXS62WL_Server. The table columns are: Name, Cluster, Machine, State, Health, and Listen Port. The AdminServer is running on port 7001, and the MXS62WL_Server is shutdown on port 7003.

Name	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)			RUNNING	OK	7001
MXS62WL_Server			SHUTDOWN		7003

- 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 these 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			
<input type="checkbox"/>	Name	Cluster	Machine	State	Health	Listen Port
<input type="checkbox"/>	AdminServer(admin)			RUNNING	OK	7001
<input type="checkbox"/>	MXS62WL_Server			SHUTDOWN		7003
<input type="checkbox"/>	RMIRegistry			SHUTDOWN		9999

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

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

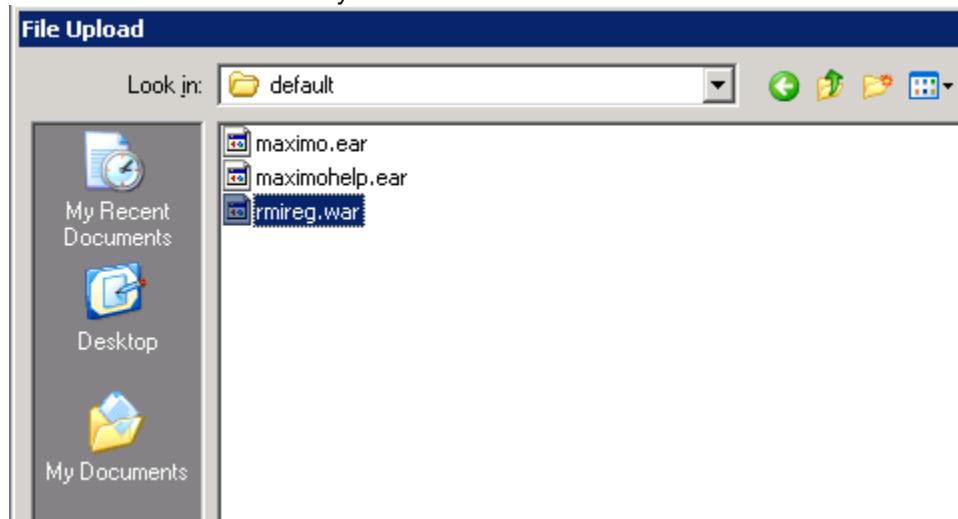
Back | Next | Finish | Cancel

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 Archive:

- Click on the **Browse...** button and navigate to your Maximo root directory, then the **deployment** and **default** directory.



- 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 Archive:

- 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

<input type="radio"/>	maximo.ear
<input checked="" type="radio"/>	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.

Install this deployment as an application

The application and its components will be targeted to the same locations. This is the most common usage.

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

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
<input type="checkbox"/> AdminServer
<input type="checkbox"/> MXS62WL_Server
<input checked="" type="checkbox"/> RMIREgistry

Back **Next** **Finish** **Cancel**

- Click **Next**

Install Application Assistant

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?
 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
Pending changes exist. They must be activated to take effect.

Home > Summary of Servers > Summary of Deployments > Summary of Servers > Summary of Deployments > Summary of Servers > **Summary of Deployments**

Messages

The deployment has been installed and added to the list of pending changes successfully.
 You must also activate the pending changes to commit this, and other updates, to the active system.

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

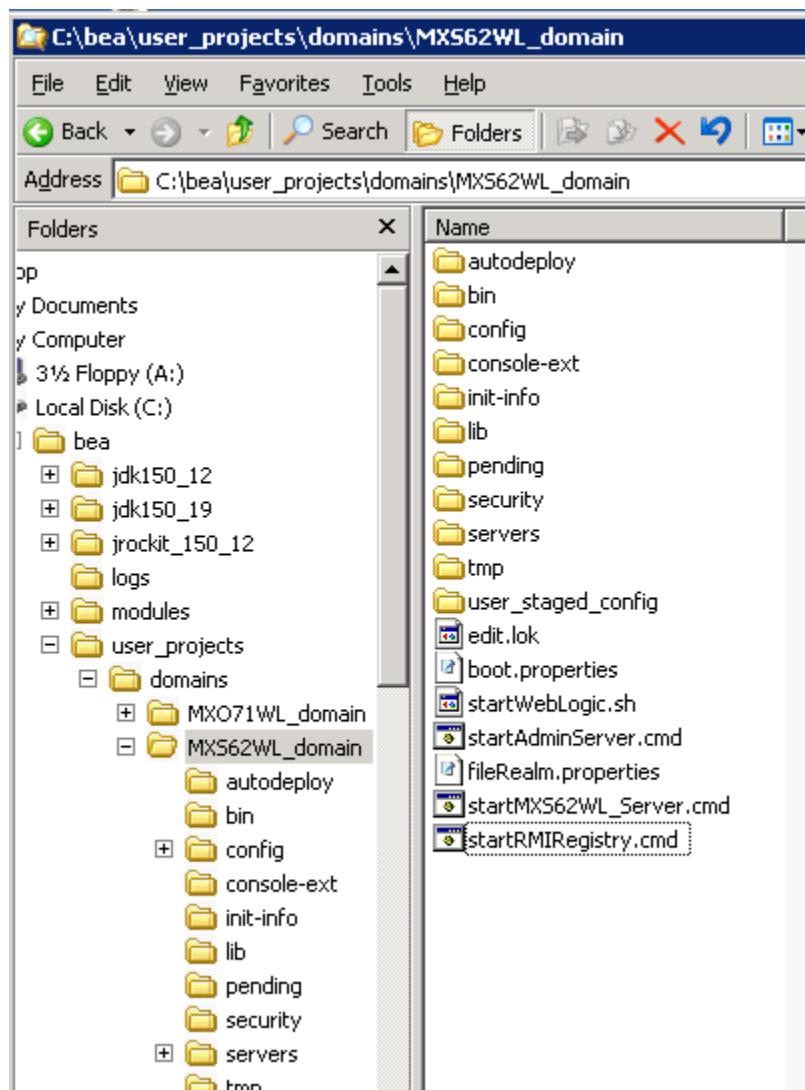
- Stop the AdminServer command-line session.



```
listening on 192.168.204.1:7001 was shutdown.>
<Nov 23, 2010 3:24:01 PM EST> <Notice> <Server> <BEA-002607> <Channel "Default[1]" listening on 192.168.32.1:7001 was shutdown.>
Terminate batch job (Y/N)? _
```

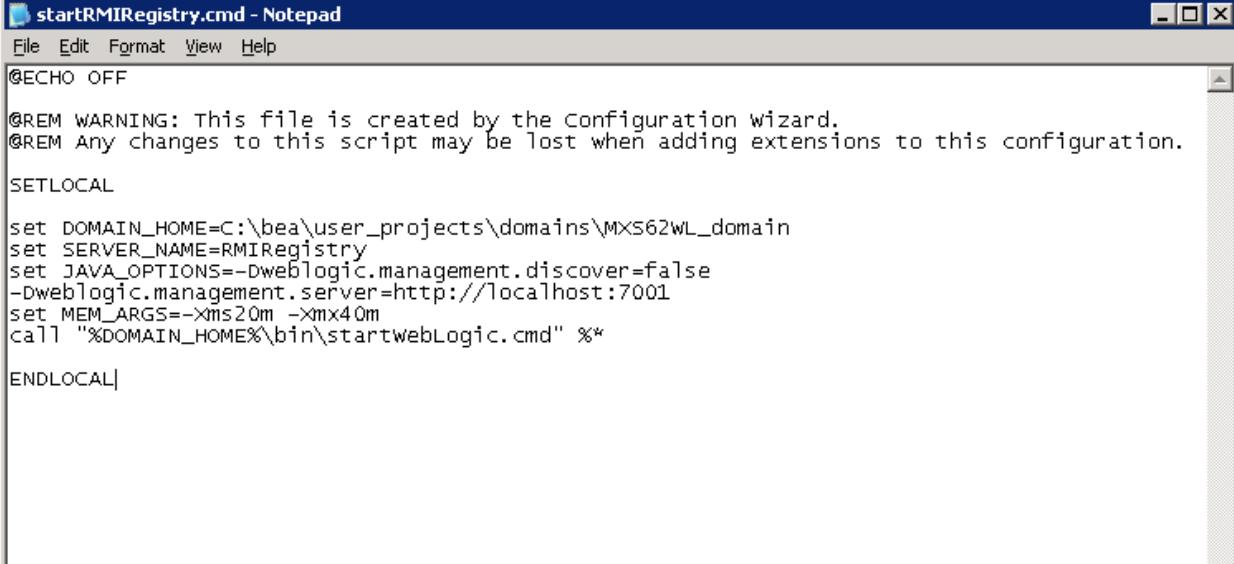
Setting up and Starting the RMI Registry Web Application

- 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 "**startRMIRRegistry.cmd**"



- Edit the **startRMIRRegistry.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**



```

startRMIRRegistry.cmd - Notepad
File Edit Format View Help
@ECHO OFF
@REM WARNING: This file is created by the Configuration wizard.
@REM Any changes to this script may be lost when adding extensions to this configuration.

SETLOCAL
set DOMAIN_HOME=C:\bea\user_projects\domains\MXS62WL_domain
set SERVER_NAME=RMIRegistry
set JAVA_OPTIONS=-Dweblogic.management.discover=false
-Dweblogic.management.server=http://localhost:7001
set MEM_ARGS=-Xms20m -Xmx40m
call "%DOMAIN_HOME%\bin\startWebLogic.cmd" %*
ENDLOCAL

```

- Save and close the file

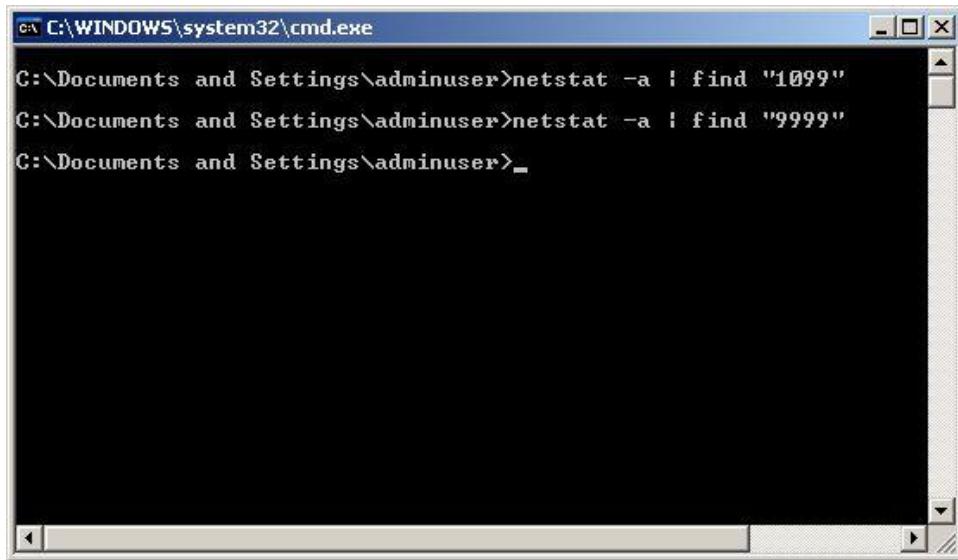
Confirm that no services are using the ports that will be used by RMI

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"
```



```
C:\WINDOWS\system32\cmd.exe
C:\Documents and Settings\adminuser>netstat -a | find "1099"
C:\Documents and Settings\adminuser>netstat -a | find "9999"
C:\Documents and Settings\adminuser>_
```

- 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 **startRMIRRegistry.cmd**

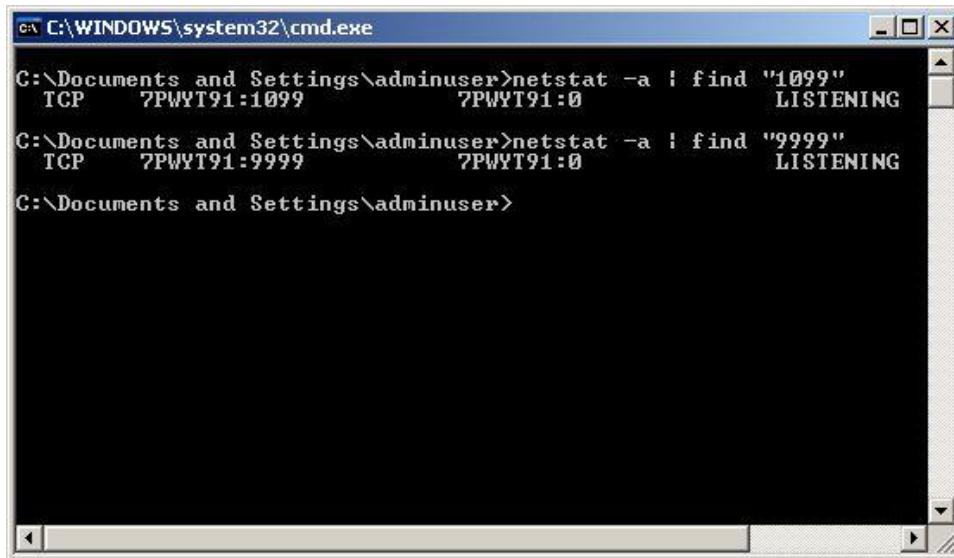
Confirm that the RMI services are using the ports

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 RMIRRegistry 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”



```
C:\Documents and Settings\adminuser>netstat -a | find "1099"
TCP    7PWYT91:1099          7PWYT91:0              LISTENING
C:\Documents and Settings\adminuser>netstat -a | find "9999"
TCP    7PWYT91:9999          7PWYT91:0              LISTENING
C:\Documents and Settings\adminuser>
```

Need to add section on creating the service

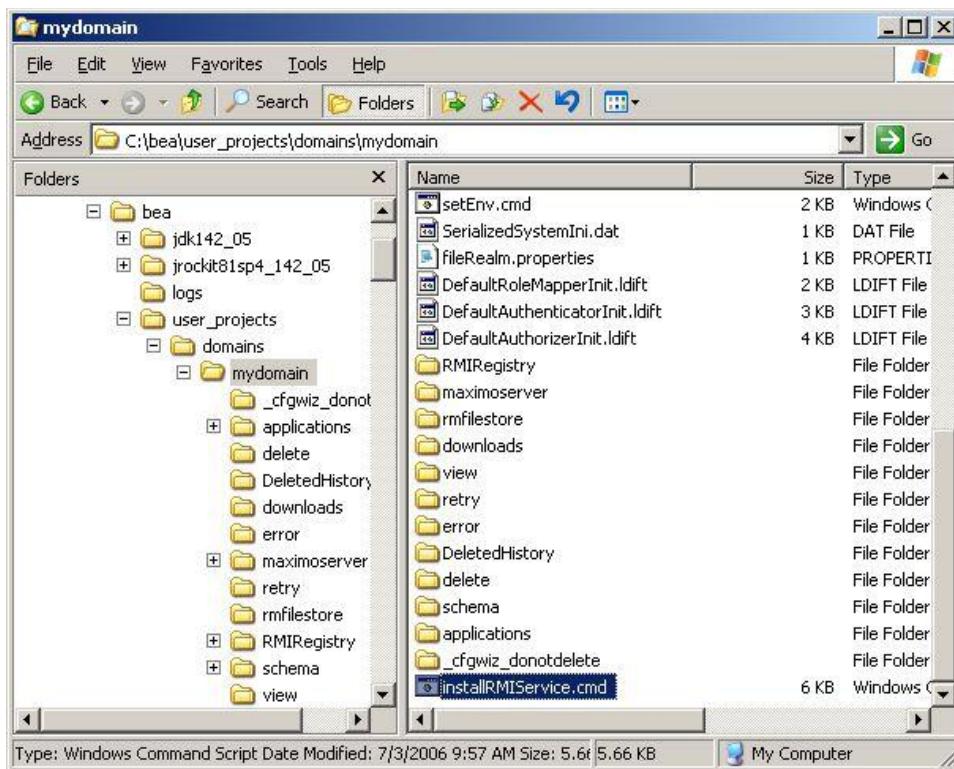
Open the “Windows Explorer”

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**”



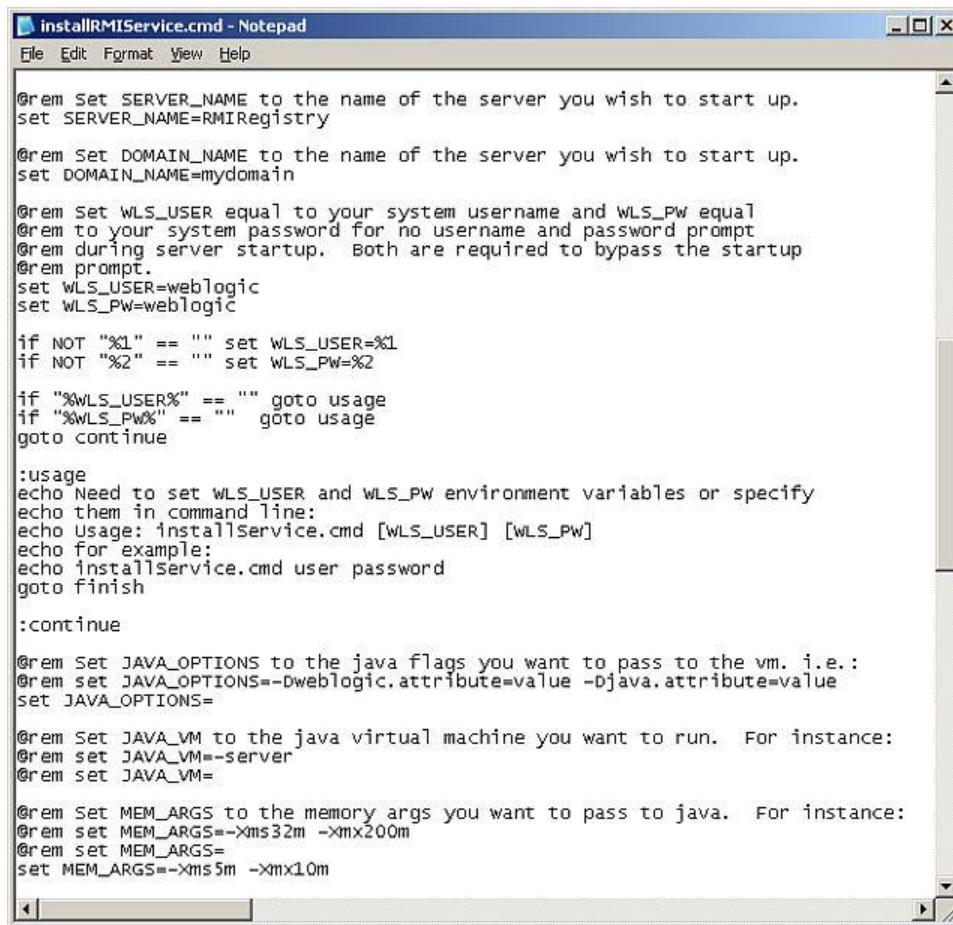
Edit the “**installRMIService.cmd**” file

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



```
@rem Set SERVER_NAME to the name of the server you wish to start up.
set SERVER_NAME=RMIRegistry

@rem Set DOMAIN_NAME to the name of the server you wish to start up.
set DOMAIN_NAME=mydomain

@rem Set WLS_USER equal to your system username and WLS_PW equal
@rem to your system password for no username and password prompt
@rem during server startup. Both are required to bypass the startup
@rem prompt.
set WLS_USER=weblogic
set WLS_PW=weblogic

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

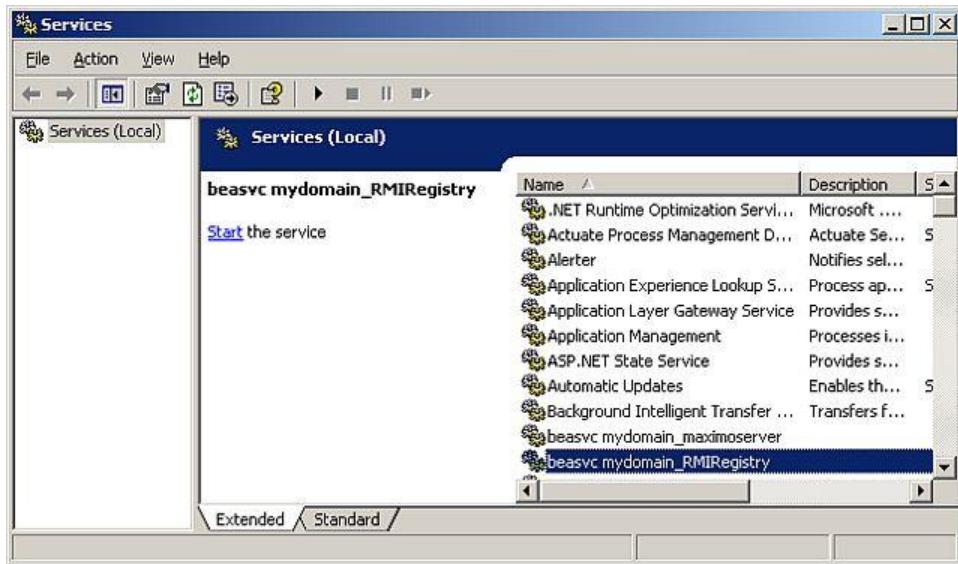
@rem Set JAVA_OPTIONS to the java flags you want to pass to the vm. i.e.:
@rem set JAVA_OPTIONS=-Dweblogic.attribute=value -Djava.attribute=value
set JAVA_OPTIONS=

@rem Set JAVA_VM to the java virtual machine you want to run. For instance:
@rem set JAVA_VM=-server
@rem set JAVA_VM=

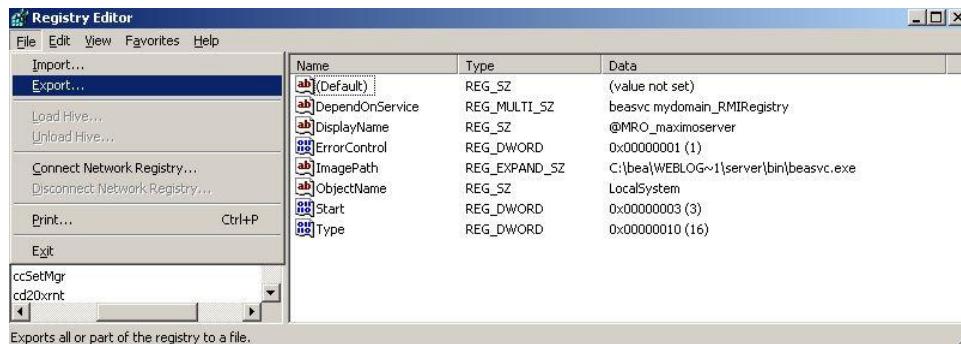
@rem Set MEM_ARGS to the memory args you want to pass to java. For instance:
@rem set MEM_ARGS=-Xms32m -Xmx200m
@rem set MEM_ARGS=
set MEM_ARGS=-Xms5m -Xmx10m
```

Double-click the “**installRMIService.cmd**” file to install the service.

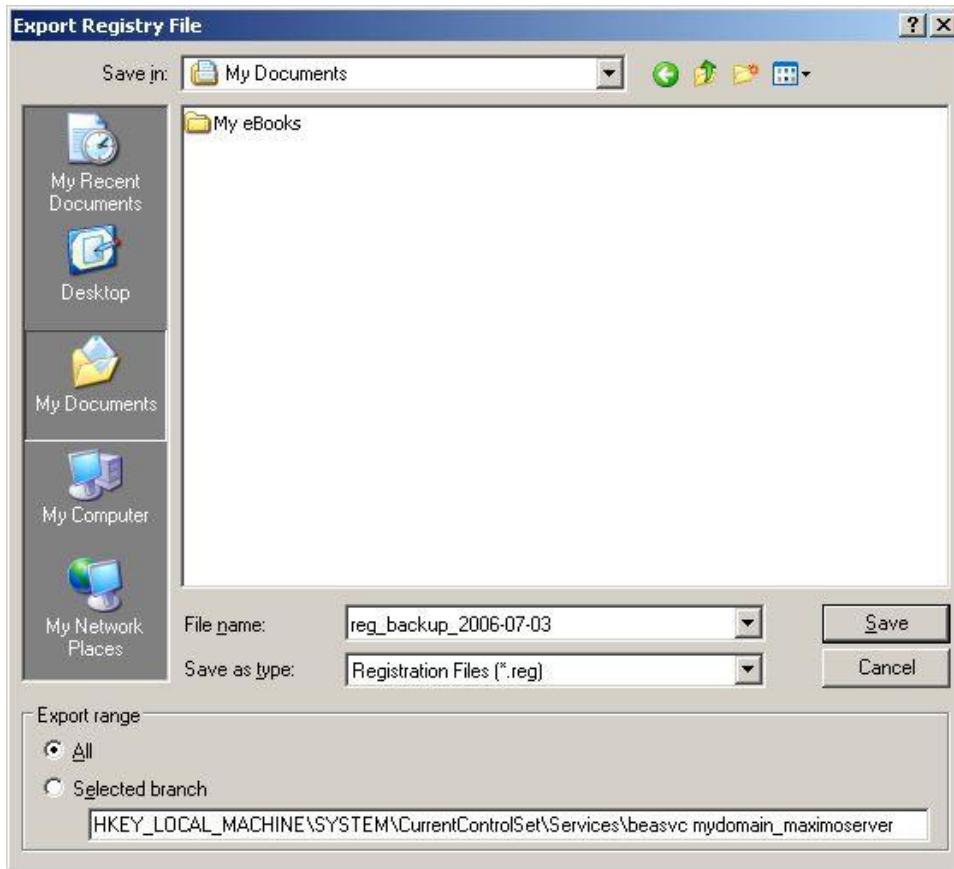
Confirm that the service installed by opening the “**Services**” control panel and finding the bea service.



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



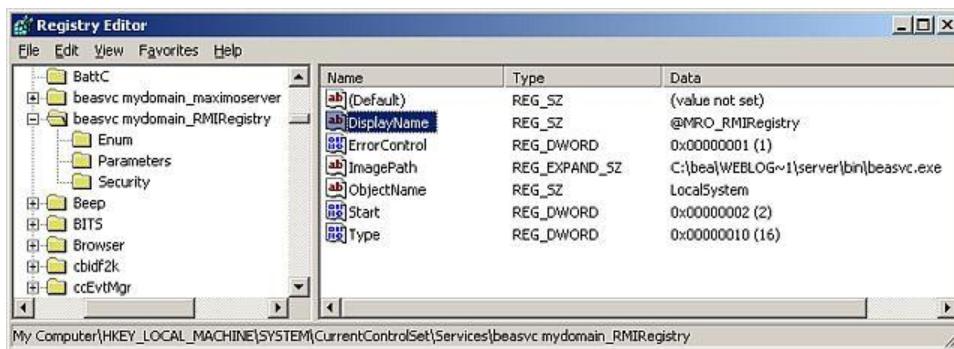
Select the **“All”** option
Name the export file
Click **“Save”**



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

Modify the "DisplayName" to "@MRO_RMIRRegistry"

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

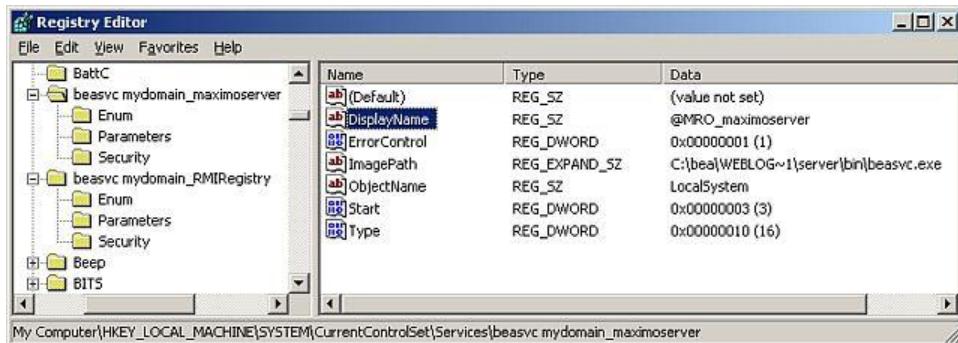


If there are any Maximo server services installed do the following or complete these steps after installing a Maximo service.

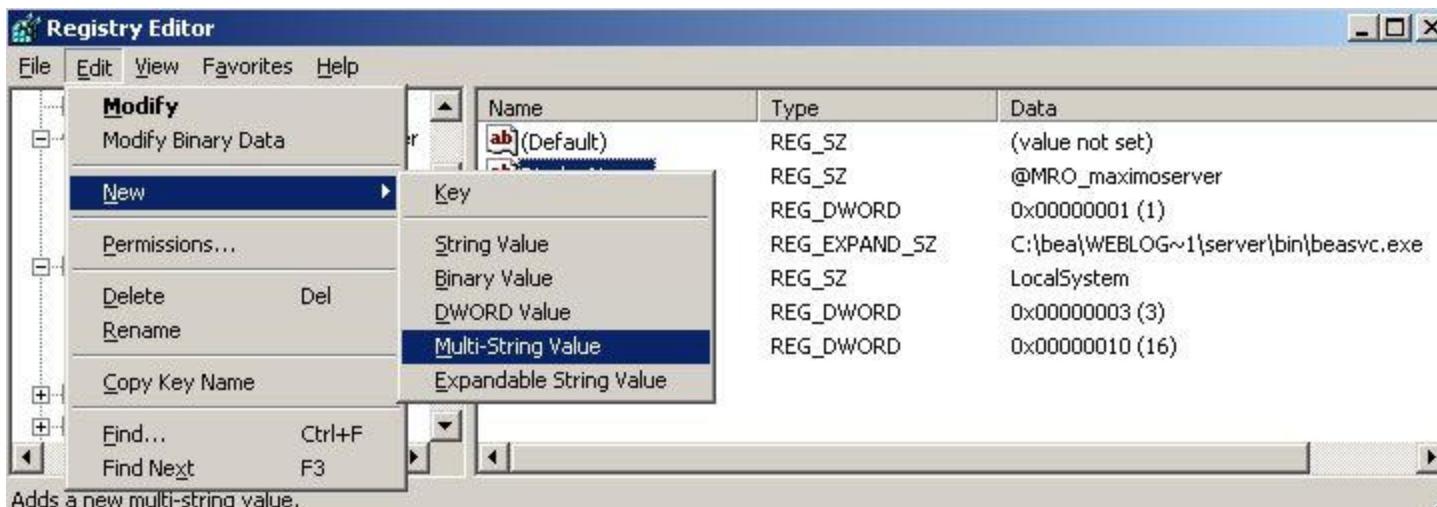
Navigate to "HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\beasvc {domain_name}_{servername}"

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

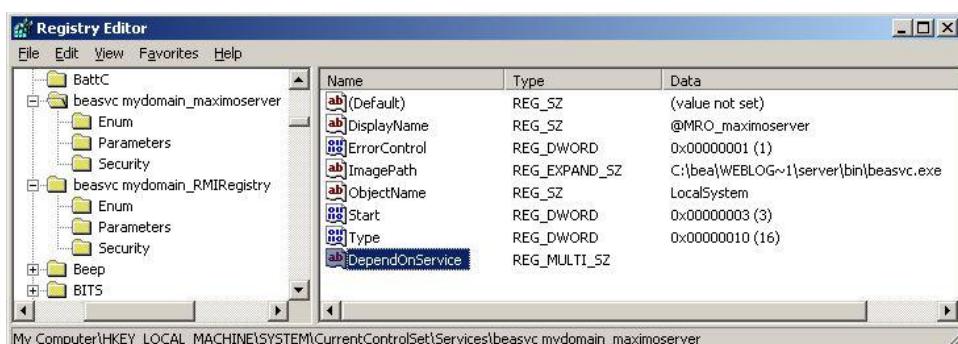
This will cause the service to sort to the top of Windows services in the Services control panel



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



Rename the new value as “**DependOnService**”



Double click the “**DependOnService**” name

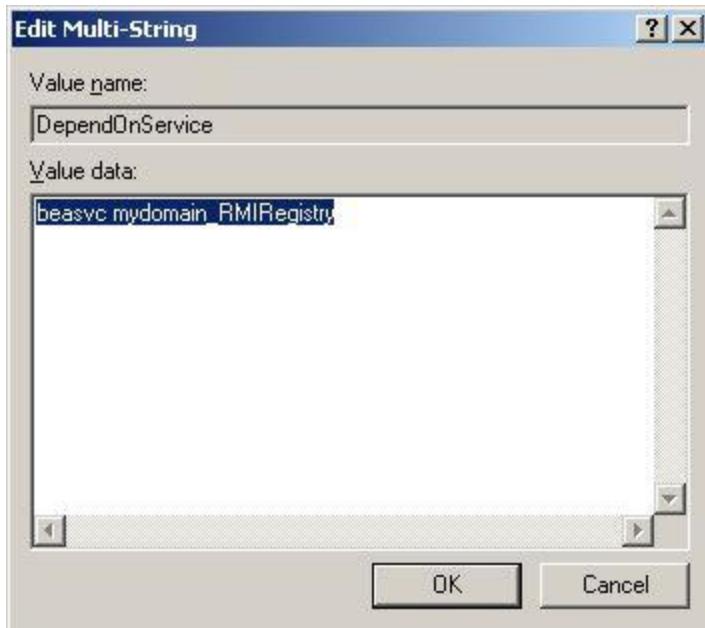
Enter the exact name of the RMI Registry server as shown in the left pane (not the display name modified earlier) in the format:

beasvc {space} {domain_name}_RMIRegistry

beasvc mydomain_RMIRegistry

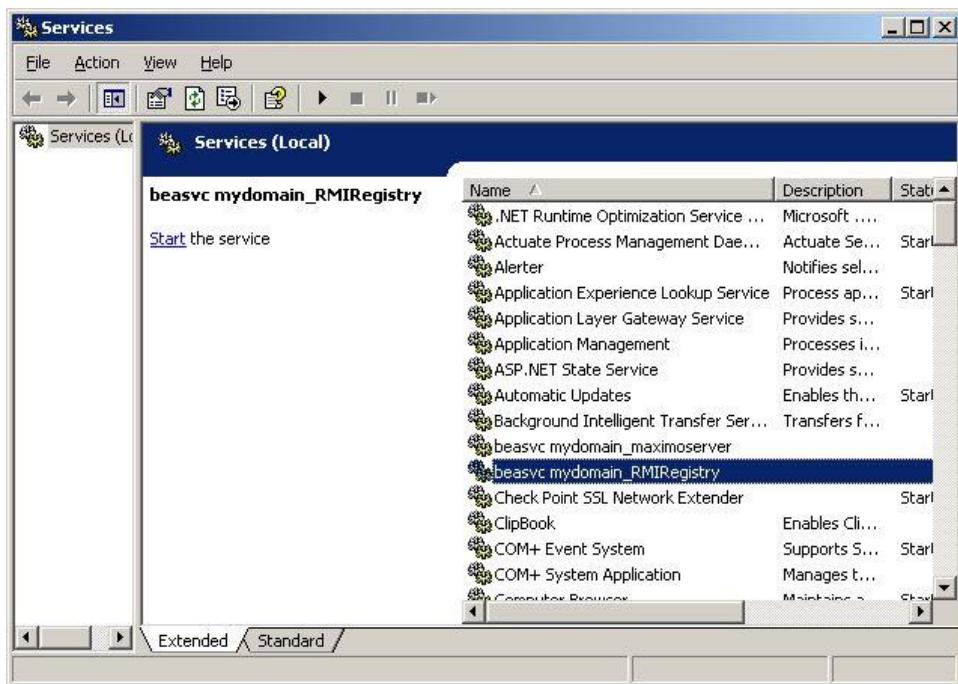
Click “**OK**”

Close the registry editor

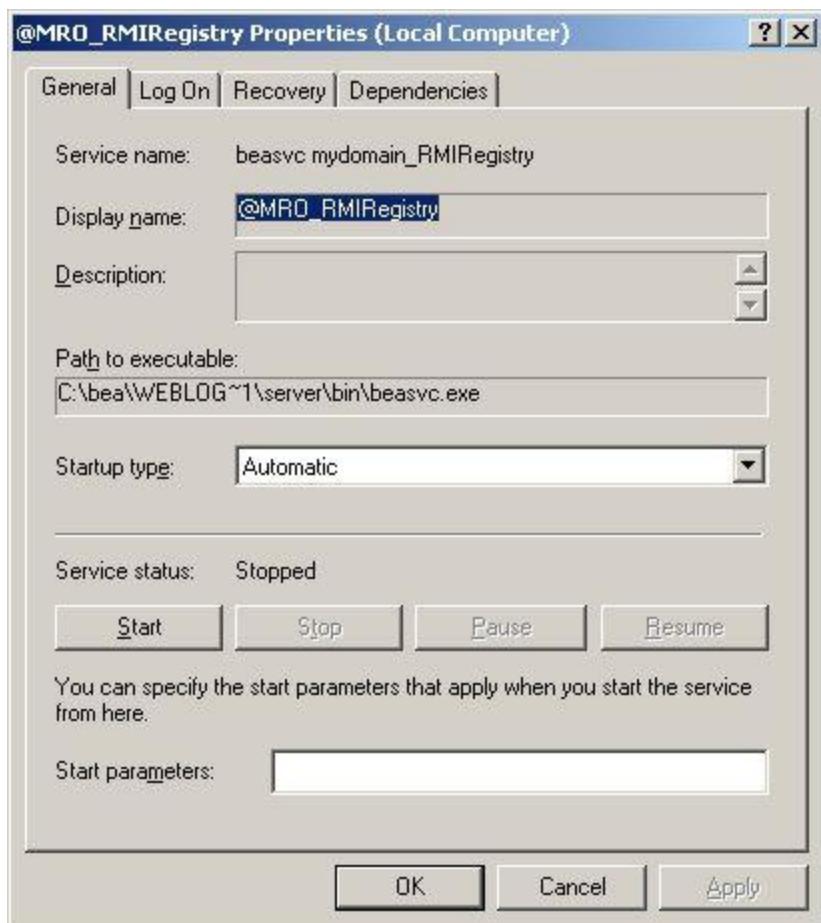


Open the Services control panel

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



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

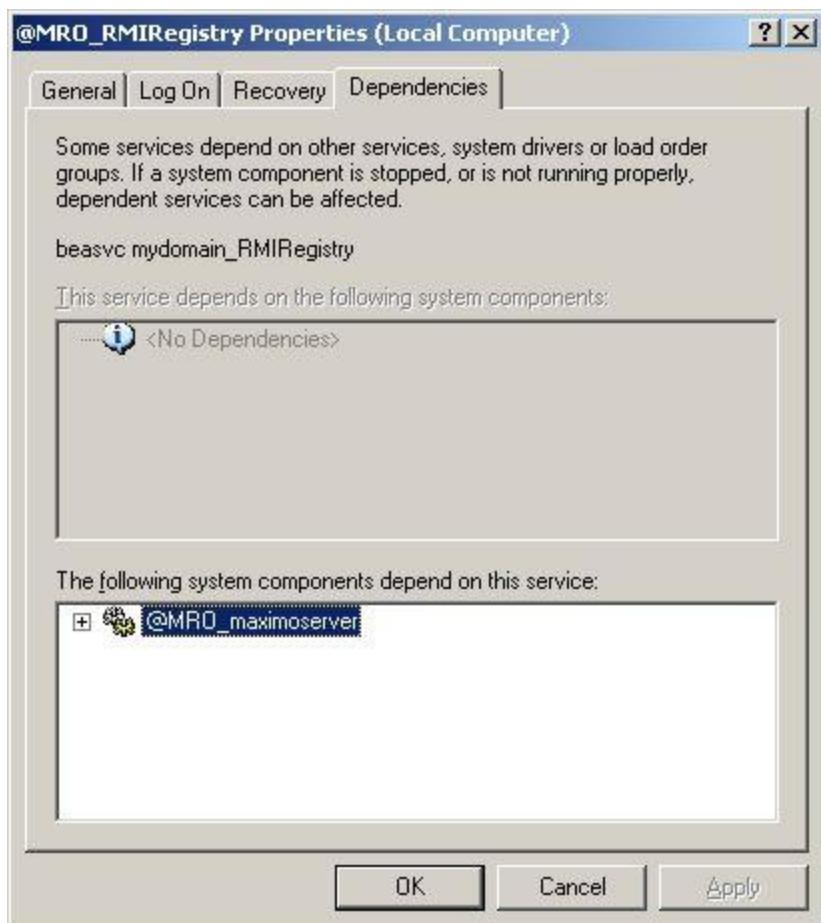


Click the “Dependencies” tab

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



Confirm all services started normally.