

# Radioactivity Project Deployment

[RadioactivityProjectDeployment.htm - uqlpayne 29 Jul 2013]

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  - [Launch Radioactivity LabServer](#)
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## Requirements

- The *GlassFish Server Open Source Edition 4.0* is installed and running.
  - The *UQ-iLab-BatchLabServer-Java* GitHub repository has been downloaded as a ZIP file from:  
`https://github.com/uqlpayne/UQ-iLab-BatchLabServer-Java`
  - The *Radioactivity LabServer Database* has been created and configured (see *RadioactivityLabServerDatabase.pdf*).
  - The *Dummy ServiceBroker Database* has been created and configured (see *DummyServiceBrokerDatabase.pdf*).
  - The folder *D:\iLabs\Radioactivity* has been created for the Radioactivity project application files.
  - The folder *D:\iLabs\Dummy* has been created for the Dummy ServiceBroker application files.
- 

## GlassFish Server Administration Console

- Run the *GlassFish Server Administration Console* by entering the following URL in a web browser.  
`http://localhost:4848/`  
If prompted, log in to the Administration Console.
- There are four web applications that need to be deployed to the GlassFish Server.

## Radioactivity LabEquipment

Packaged File: *UQ-iLab-BatchLabServer-Java/Buils/Radioactivity\_LabEquipment.war*

Local Folder: *D:\iLabs\Radioactivity\LabEquipment*

Context Path: */RadioactivityLabEquipment*

## Radioactivity LabServer

Packaged File: *UQ-iLab-BatchLabServer-Java/Buils/Radioactivity\_LabServer.war*

Local Folder: *D:\iLabs\Radioactivity\LabServer*

Context Path: */RadioactivityLabServer*

## Radioactivity LabClient

Packaged File: *UQ-iLab-BatchLabServer-Java/Buils/Radioactivity\_LabClient.war*

Local Folder: *D:\iLabs\Radioactivity\LabClient*

Context Path: */RadioactivityLabClient*

## Dummy ServiceBroker

Packaged File: *UQ-iLab-BatchLabServer-Java/Buils/Dummy\_ServiceBroker.war*

Local Folder: *D:\iLabs\Dummy\ServiceBroker*

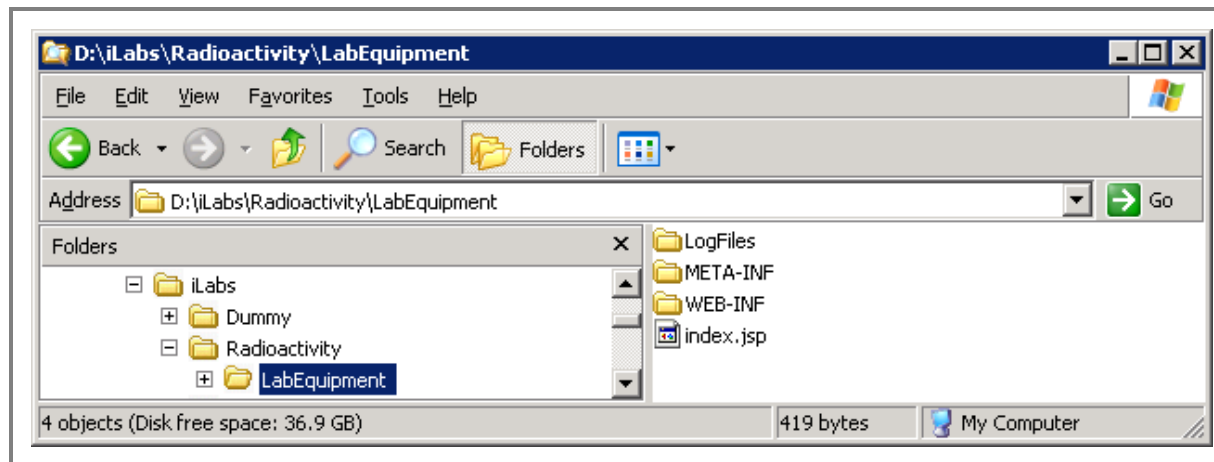
Context Path: */DummyServiceBroker*

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## Deploy Radioactivity LabEquipment

- Create the folder *LabEquipment* in the folder *D:\iLabs\Radioactivity* so that the folder *D:\iLabs\Radioactivity\LabEquipment* exists.

Extract the web archive file *Buils/Radioactivity\_LabEquipment.war* to the folder *D:\iLabs\Radioactivity\LabEquipment*.



- Go to the *GlassFish Server Administration Console*. In the *Common Tasks* panel, click on *Applications*. If you have already completed the *Template Project Deployment* tutorial then there will be some deployed applications shown.

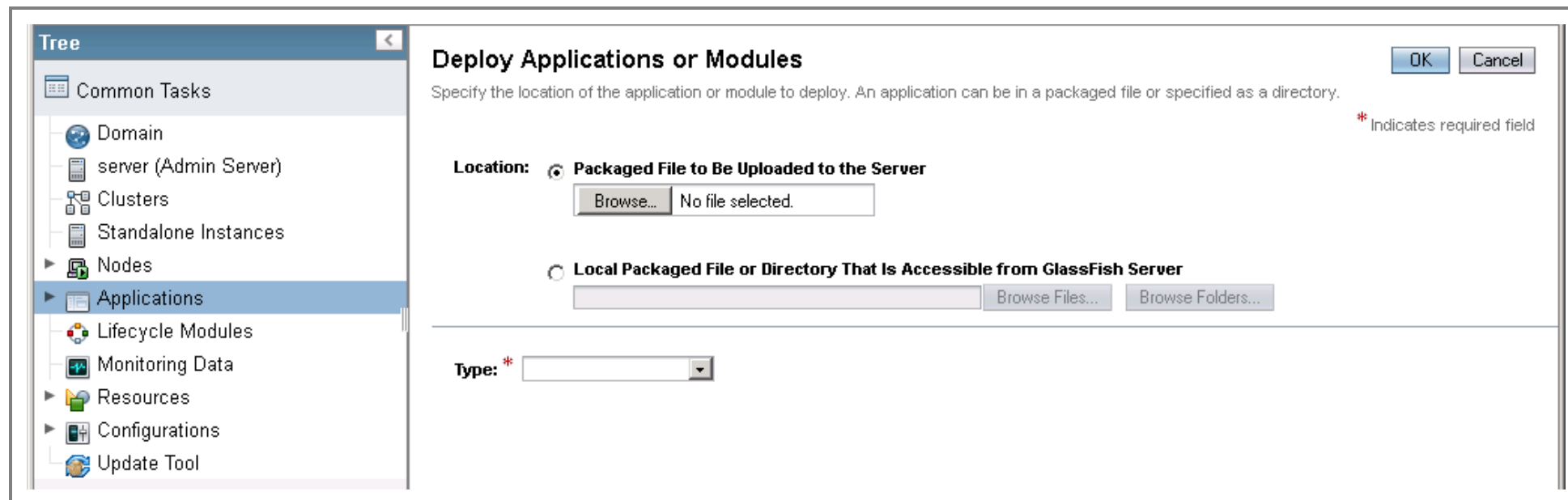
**Applications**

Applications can be enterprise or web applications, or various kinds of modules. Restart an application or module by clicking on the reload link, this action will apply only to the targets that the application or module is enabled on.

**Deployed Applications (4)**

Select	Name	Deployment Order	Enabled	Engines	Action
<input type="checkbox"/>	DummyServiceBroker	100	✓	ejb, webservices, web	Launch   Redeploy   Reload
<input type="checkbox"/>	TemplateLabClient	100	✓	webservices, web	Launch   Redeploy   Reload
<input type="checkbox"/>	TemplateLabEquipment	100	✓	ejb, webservices, web	Launch   Redeploy   Reload
<input type="checkbox"/>	TemplateLabServer	100	✓	ejb, webservices, web	Launch   Redeploy   Reload

In the *Applications* panel, click the *Deploy...* button.



In the *Deploy Applications or Modules* panel, select *Local Packaged File or Directory That Is Accessible from GlassFish Server* and enter `D:\iLabs\Radioactivity\LabEquipment` in the field.

Alternatively, click the *Browse Folders...* button to select the folder.

For *Type*: select *Web Application* from the dropdown list. More fields are then displayed.

For *Context Root*: enter `RadioactivityLabEquipment` in the field.

Also for *Application Name*: enter `RadioactivityLabEquipment` in the field.

Leave the other fields with their default values.

Tree

Common Tasks

Domain

server (Admin Server)

Clusters

Standalone Instances

Nodes

Applications

Lifecycle Modules

Monitoring Data

Resources

Configurations

Update Tool

## Deploy Applications or Modules

Specify the location of the application or module to deploy. An application can be in a packaged file or specified as a directory.

\* Indicates required field

**Location:** ☐ **Packaged File to Be Uploaded to the Server**

No file selected.

☒ **Local Packaged File or Directory That Is Accessible from GlassFish Server**

---

**Type:** \*

**Context Root:**   
Path relative to server's base URL.

**Application Name:** \*

**Virtual Servers:**   
Associates an Internet domain name with a physical server.

**Status:** ☒ **Enabled**  
Allows users to access the application.

Click the *OK* button to deploy the application.

**Tree**

- Common Tasks
- Domain
- server (Admin Server)
- Clusters
- Standalone Instances
- Nodes
- Applications**
- Lifecycle Modules
- Monitoring Data
- Resources
- Configurations
- Update Tool

## Applications

Applications can be enterprise or web applications, or various kinds of modules. Restart an application or module by clicking on the reload link, this action will apply only to the targets that the application or module is enabled on.

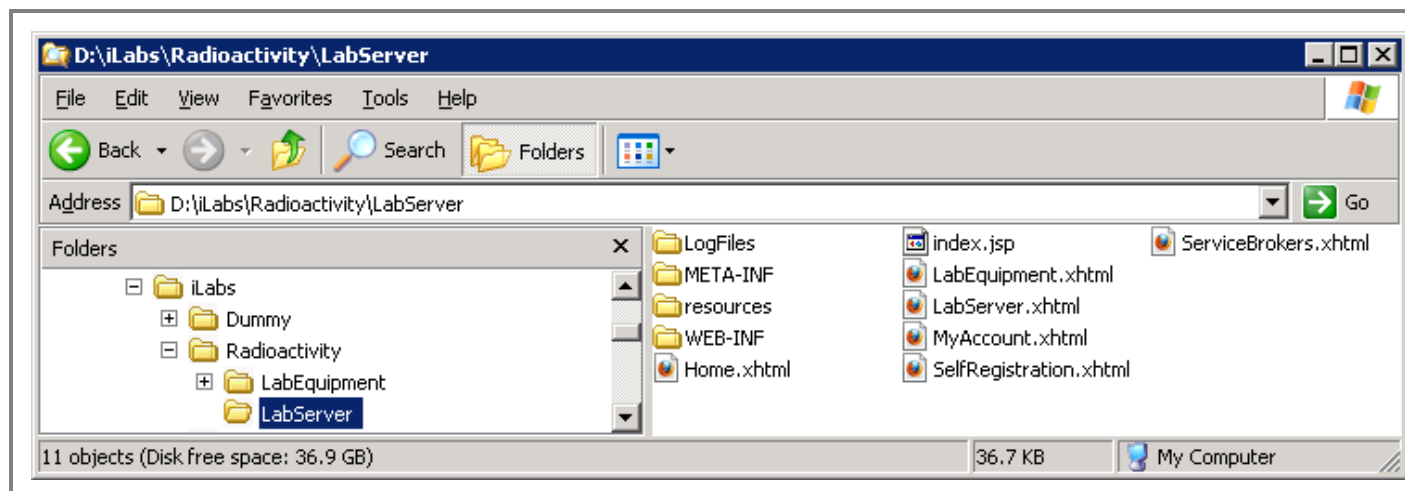
**Deployed Applications (5)**
☐ ☐ | [Deploy...](#) [Undeploy](#) [Enable](#) [Disable](#) | Filter:

Select	Name	Deployment Order	Enabled	Engines	Action
<input type="checkbox"/>	DummyServiceBroker	100	✓	ejb, webservices, web	<a href="#">Launch</a>   <a href="#">Redeploy</a>   <a href="#">Reload</a>
<input type="checkbox"/>	RadioactivityLabEquipment	100	✓	ejb, webservices, web	<a href="#">Launch</a>   <a href="#">Redeploy</a>   <a href="#">Reload</a>
<input type="checkbox"/>	TemplateLabClient	100	✓	webservices, web	<a href="#">Launch</a>   <a href="#">Redeploy</a>   <a href="#">Reload</a>
<input type="checkbox"/>	TemplateLabEquipment	100	✓	ejb, webservices, web	<a href="#">Launch</a>   <a href="#">Redeploy</a>   <a href="#">Reload</a>
<input type="checkbox"/>	TemplateLabServer	100	✓	ejb, webservices, web	<a href="#">Launch</a>   <a href="#">Redeploy</a>   <a href="#">Reload</a>

## Deploy Radioactivity LabServer

- Create the folder *LabServer* in the folder *D:\iLabs\Radioactivity* so that the folder *D:\iLabs\Radioactivity\LabServer* exists.

Extract the web archive file *Builds/Radioactivity\_LabServer.war* to the folder *D:\iLabs\Radioactivity\LabServer*.



- Go to the *GlassFish Server Administration Console*. In the *Applications* panel, click the *Deploy...* button.

In the *Deploy Applications or Modules* panel, select *Local Packaged File or Directory That Is Accessible from GlassFish Server* and enter `D:\iLabs\Radioactivity\LabServer` in the field.

Alternatively, click the *Browse Folders...* button to select the folder.

For *Type*: select *Web Application* from the dropdown list. More fields are then displayed.

For *Context Root*: enter `RadioactivityLabServer` in the field.

Also for *Application Name*: enter `RadioactivityLabServer` in the field.

Leave the other fields with their default values.

The screenshot shows the 'Deploy Applications or Modules' dialog box in the GlassFish Server Administration Console. On the left is a 'Tree' panel with a navigation menu containing: Common Tasks, Domain, server (Admin Server), Clusters, Standalone Instances, Nodes, Applications (selected), Lifecycle Modules, Monitoring Data, Resources, Configurations, and Update Tool. The main area is titled 'Deploy Applications or Modules' and includes an instruction: 'Specify the location of the application or module to deploy. An application can be in a packaged file or specified as a directory.' There are 'OK' and 'Cancel' buttons in the top right. A legend indicates that a red asterisk (\*) denotes a required field. The 'Location' section has two radio buttons: 'Packaged File to Be Uploaded to the Server' (unselected) and 'Local Packaged File or Directory That Is Accessible from GlassFish Server' (selected). The selected option has a text field containing 'D:\iLabs\Radioactivity\LabServer' and two buttons: 'Browse Files...' and 'Browse Folders...'. The 'Type' dropdown is set to 'Web Application'. The 'Context Root' field contains 'RadioactivityLabServer' with a note 'Path relative to server's base URL.' The 'Application Name' field, marked with a red asterisk, also contains 'RadioactivityLabServer'. The 'Virtual Servers' list shows 'server' selected. A note below states: 'Associates an Internet domain name with a physical server.' The 'Status' section has a checked checkbox for 'Enabled' with the note 'Allows users to access the application.'

Click the *OK* button to deploy the application.

**Tree**

- Common Tasks
- Domain
- server (Admin Server)
- Clusters
- Standalone Instances
- Nodes
- Applications**
- Lifecycle Modules
- Monitoring Data
- Resources
- Configurations
- Update Tool

## Applications

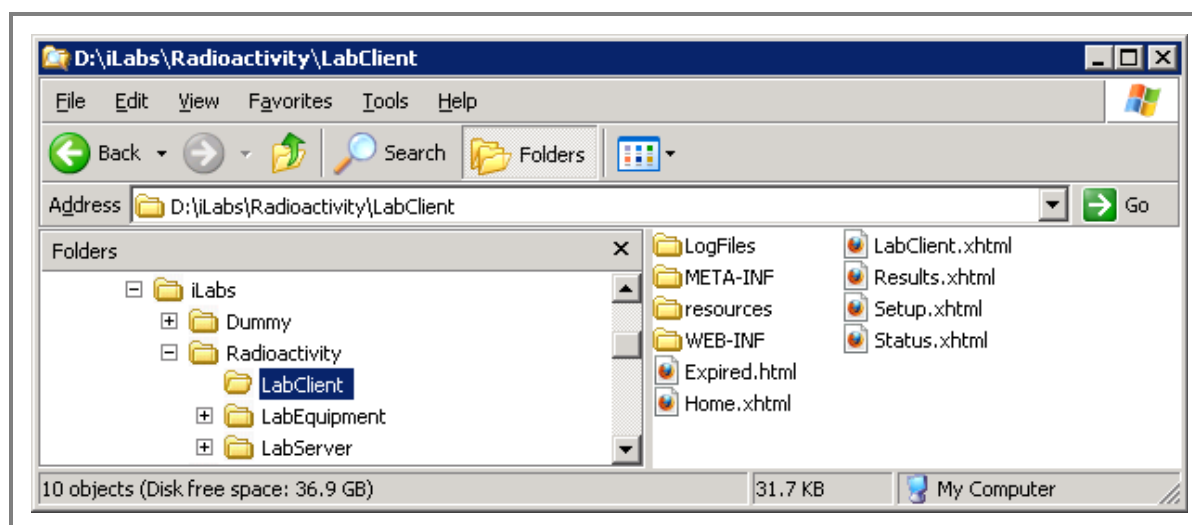
Applications can be enterprise or web applications, or various kinds of modules. Restart an application or module by clicking on the reload link, this action will apply only to the targets that the application or module is enabled on.

Deployed Applications (6)						
Select	Name	Deployment Order	Enabled	Engines	Action	
<input type="checkbox"/>	DummyServiceBroker	100	✓	ejb, webservices, web	Launch   Redeploy   Reload	
<input type="checkbox"/>	RadioactivityLabEquipment	100	✓	ejb, webservices, web	Launch   Redeploy   Reload	
<input type="checkbox"/>	RadioactivityLabServer	100	✓	ejb, webservices, web	Launch   Redeploy   Reload	
<input type="checkbox"/>	TemplateLabClient	100	✓	webservices, web	Launch   Redeploy   Reload	
<input type="checkbox"/>	TemplateLabEquipment	100	✓	ejb, webservices, web	Launch   Redeploy   Reload	
<input type="checkbox"/>	TemplateLabServer	100	✓	ejb, webservices, web	Launch   Redeploy   Reload	

## Deploy Radioactivity LabClient

- Create the folder *LabClient* in the folder *D:\iLabs\Radioactivity* so that the folder *D:\iLabs\Radioactivity\LabClient* exists.

Extract the web archive file *Builds/Radioactivity\_LabClient.war* to the folder *D:\iLabs\Radioactivity\LabClient*.





- Go to the *GlassFish Server Administration Console*. In the *Applications* panel, click the *Deploy...* button.

In the *Deploy Applications or Modules* panel, select *Local Packaged File or Directory That Is Accessible from GlassFish Server* and enter `D:\iLabs\Radioactivity\LabClient` in the field.

Alternatively, click the *Browse Folders...* button to select the folder.

For *Type*: select *Web Application* from the dropdown list. More fields are then displayed.

For *Context Root*: enter `RadioactivityLabClient` in the field.

Also for *Application Name*: enter `RadioactivityLabClient` in the field.

Leave the other fields with their default values.

The screenshot shows the 'Deploy Applications or Modules' dialog box in the GlassFish Server Administration Console. On the left is a 'Tree' panel with a navigation menu containing: Common Tasks, Domain, server (Admin Server), Clusters, Standalone Instances, Nodes, Applications (selected), Lifecycle Modules, Monitoring Data, Resources, Configurations, and Update Tool. The main area is titled 'Deploy Applications or Modules' and includes an instruction: 'Specify the location of the application or module to deploy. An application can be in a packaged file or specified as a directory.' There are 'OK' and 'Cancel' buttons in the top right. A legend indicates that a red asterisk (\*) denotes a required field. The 'Location' section has two radio buttons: 'Packaged File to Be Uploaded to the Server' (unselected) and 'Local Packaged File or Directory That Is Accessible from GlassFish Server' (selected). The selected option has a text field containing 'D:\iLabs\Radioactivity\LabClient' and two buttons: 'Browse Files...' and 'Browse Folders...'. The 'Type' field is a dropdown menu set to 'Web Application'. The 'Context Root' field contains 'RadioactivityLabClient' with a note 'Path relative to server's base URL.' The 'Application Name' field, marked with a red asterisk, also contains 'RadioactivityLabClient'. The 'Virtual Servers' section shows a list box with 'server' selected and a note 'Associates an Internet domain name with a physical server.' The 'Status' section has a checked checkbox for 'Enabled' with a note 'Allows users to access the application.'

Click the *OK* button to deploy the application.

**Tree**

- Common Tasks
- Domain
- server (Admin Server)
- Clusters
- Standalone Instances
- Nodes
- Applications**
- Lifecycle Modules
- Monitoring Data
- Resources
- Configurations
- Update Tool

## Applications

Applications can be enterprise or web applications, or various kinds of modules. Restart an application or module by clicking on the reload link, this action will apply only to the targets that the application or module is enabled on.

**Deployed Applications (7)**

☒
☐

[Deploy...](#)
[Undeploy](#)
[Enable](#)
[Disable](#)

Filter:

Select	Name	Deployment Order	Enabled	Engines	Action
<input type="checkbox"/>	DummyServiceBroker	100	✓	ejb, webservices, web	<a href="#">Launch</a>   <a href="#">Redeploy</a>   <a href="#">Reload</a>
<input type="checkbox"/>	RadioactivityLabClient	100	✓	webservices, web	<a href="#">Launch</a>   <a href="#">Redeploy</a>   <a href="#">Reload</a>
<input type="checkbox"/>	RadioactivityLabEquipment	100	✓	ejb, webservices, web	<a href="#">Launch</a>   <a href="#">Redeploy</a>   <a href="#">Reload</a>
<input type="checkbox"/>	RadioactivityLabServer	100	✓	ejb, webservices, web	<a href="#">Launch</a>   <a href="#">Redeploy</a>   <a href="#">Reload</a>
<input type="checkbox"/>	TemplateLabClient	100	✓	webservices, web	<a href="#">Launch</a>   <a href="#">Redeploy</a>   <a href="#">Reload</a>
<input type="checkbox"/>	TemplateLabEquipment	100	✓	ejb, webservices, web	<a href="#">Launch</a>   <a href="#">Redeploy</a>   <a href="#">Reload</a>
<input type="checkbox"/>	TemplateLabServer	100	✓	ejb, webservices, web	<a href="#">Launch</a>   <a href="#">Redeploy</a>   <a href="#">Reload</a>

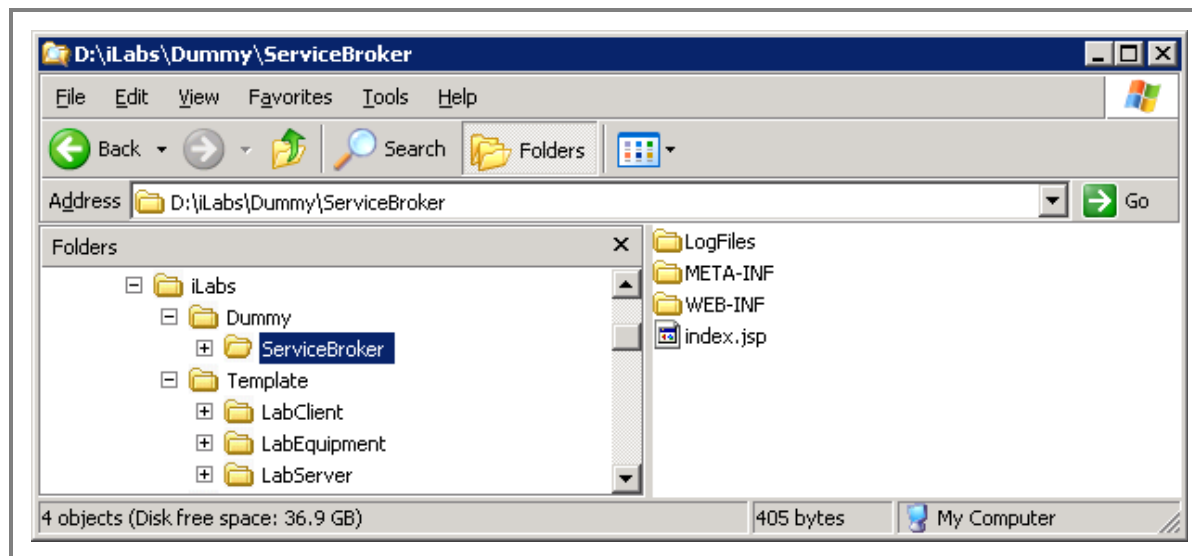
## Deploy Dummy ServiceBroker

If you have already completed the *Template Project Deployment* tutorial then you will have already deployed the Dummy ServiceBroker and can skip this section.

The relevant section from the *Template Project Deployment* tutorial has been reproduced here.

- Create the folder *ServiceBroker* in the folder *D:\iLabs\Dummy* so that the folder *D:\iLabs\Dummy\ServiceBroker* exists.

Extract the web archive file *Builds/Dummy\_ServiceBroker.war* to the folder *D:\iLabs\Dummy\ServiceBroker*.



- Go to the *GlassFish Server Administration Console*. In the *Applications* panel, click the *Deploy...* button.

In the *Deploy Applications or Modules* panel, select *Local Packaged File or Directory That Is Accessible from GlassFish Server* and enter `D:\iLabs\Dummy\ServiceBroker` in the field.

Alternatively, click the *Browse Folders...* button to select the folder.

For *Type*: select *Web Application* from the dropdown list. More fields are then displayed.

For *Context Root*: enter `DummyServiceBroker` in the field.

Also for *Application Name*: enter `DummyServiceBroker` in the field.

Leave the other fields with their default values.

**Tree**

- Common Tasks
- Domain
- server (Admin Server)
- Clusters
- Standalone Instances
- Nodes
- Applications**
  - TemplateLabClient
  - TemplateLabEquipment
  - TemplateLabServer
- Lifecycle Modules
- Monitoring Data
- Resources
- Configurations
- Update Tool

**Deploy Applications or Modules** OK Cancel

Specify the location of the application or module to deploy. An application can be in a packaged file or specified as a directory. \* Indicates required field

**Location:** ☐ **Packaged File to Be Uploaded to the Server**  
Browse... No file selected.

☒ **Local Packaged File or Directory That Is Accessible from GlassFish Server**  
D:\iLabs\Dummy\ServiceBroker Browse Files... Browse Folders...

**Type:** \* Web Application

**Context Root:** DummyServiceBroker  
Path relative to server's base URL.

**Application Name:** \* DummyServiceBroker

**Virtual Servers:** server  
Associates an Internet domain name with a physical server.

**Status:** ☒ **Enabled**  
Allows users to access the application.

Click the *OK* button to deploy the application.

Tree

Common Tasks

Domain

server (Admin Server)

Clusters

Standalone Instances

Nodes

Applications

DummyServiceBroker

TemplateLabClient

TemplateLabEquipment

TemplateLabServer

Lifecycle Modules

Monitoring Data

Resources

Configurations

Update Tool

Applications

Applications can be enterprise or web applications, or various kinds of modules. Restart an application or module by clicking on the reload link, this action will apply only to the targets that the application or module is enabled on.

Deployed Applications (4)

Deploy...

Undeploy

Enable

Disable

Filter:

Select	Name	Deployment Order	Enabled	Engines	Action
<input type="checkbox"/>	DummyServiceBroker	100	✓	ejb, webservices, web	Launch   Redeploy   Reload
<input type="checkbox"/>	TemplateLabClient	100	✓	webservices, web	Launch   Redeploy   Reload
<input type="checkbox"/>	TemplateLabEquipment	100	✓	ejb, webservices, web	Launch   Redeploy   Reload
<input type="checkbox"/>	TemplateLabServer	100	✓	ejb, webservices, web	Launch   Redeploy   Reload

## Launch Radioactivity LabEquipment

- Launch the Radioactivity LabEquipment client by entering the following URL in a web browser:

`http://localhost:8080/RadioactivityLabEquipment/`

The web page simply displays *Radioactivity LabEquipment*. This is sufficient to show that the Radioactivity LabEquipment application has been deployed correctly. At this point in time, the Radioactivity LabEquipment service has not been invoked.



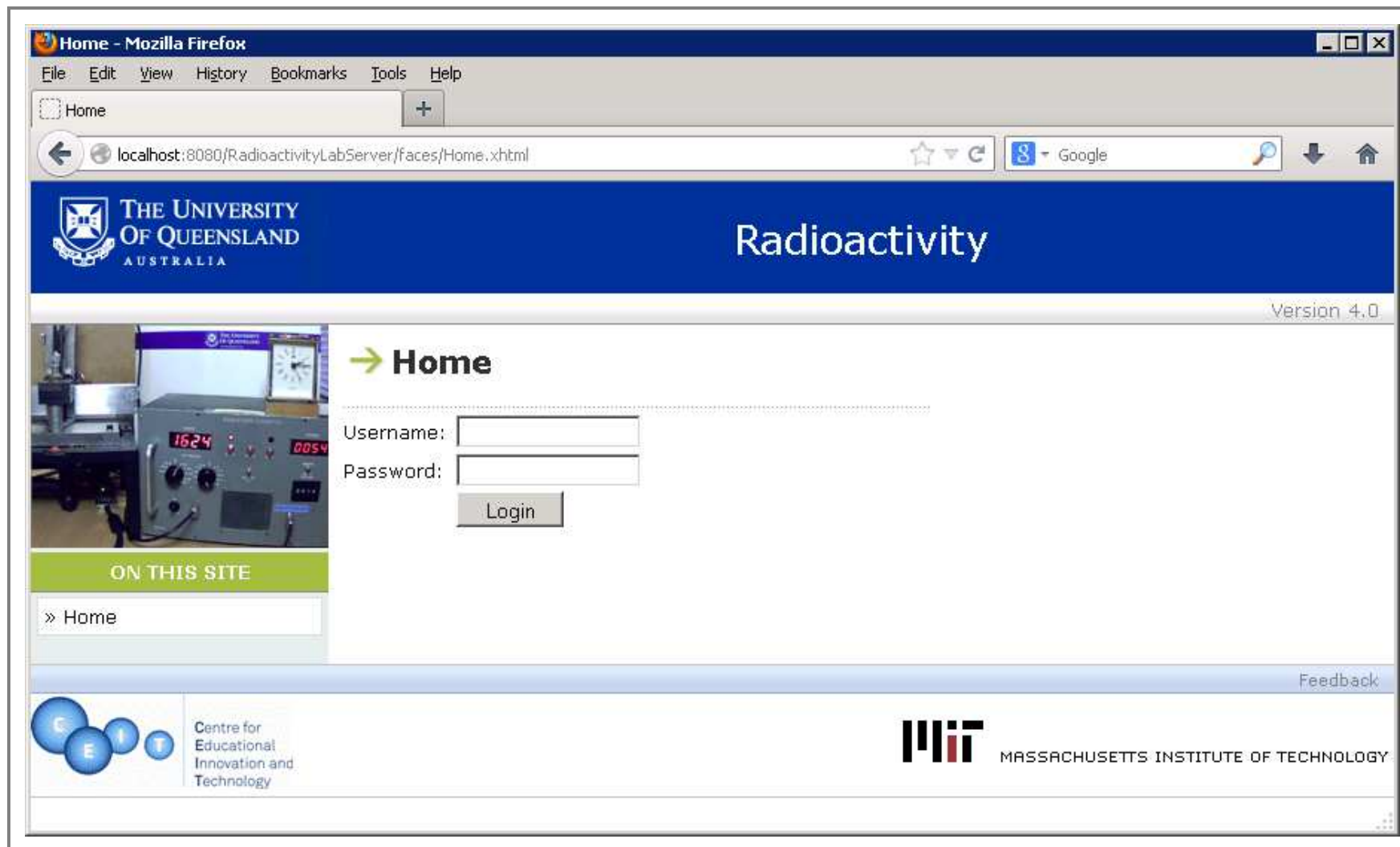
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### Launch Radioactivity LabServer

- Launch the Radioactivity LabServer client by entering the following URL in a web browser:

`http://localhost:8080/RadioactivityLabServer/`

The web page displays the *Radioactivity LabServer* login. This is sufficient to show that the Radioactivity LabServer application has been deployed correctly. At this point in time, the Radioactivity LabServer service has not been invoked.



- Log in to the Radioactivity LabServer with the following username and password:

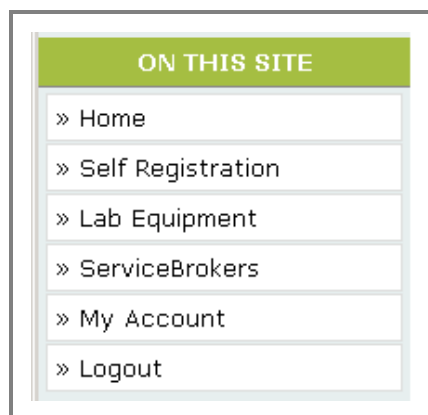
Username: **manager**

Password: **ilab**

The menu provides a number of items to configure the LabServer.

- Self Registration - Configure the LabServer by specifying the name, guid, service URL and email address.
- Lab Equipment - Configure one or more LabEquipment services by specifying the service URL and passkey.

- ServiceBrokers - Specify the details of one or more ServiceBrokers that are permitted to access the LabServer.
- My Account - Specify the LabServer manager's account information.
- Logout - Log out of the LabServer.



- Select the *My Account* menu item.

A screenshot of the 'My Account' page in a web application. The page has a green arrow icon followed by the text 'My Account'. Below this is a section titled 'User Information:'. This section contains a form with the following fields: 'Username:' (with the value 'manager'), 'First Name:' (with the value 'LabServer'), 'Last Name:' (with the value 'Manager'), 'Contact Email:' (with the value 'manager@your.email.domain'), 'Password:', and 'Confirm Password:'. At the bottom of the form is an 'Update' button.



Change the *Contact Email* to your email address or some other appropriate email address.

Change the *Password* to something else especially if the LabServer is deployed on a networked server.

Click the *Update* button to save the changes.

- Select the *Self Registration* menu item.

## → Self Registration

---

### LabServer Information:

Name<sup>1</sup>:

Radioactivity Java

Guid<sup>1</sup>:

FF464E3507564f28A64F156282BB912E

Create

Service Url<sup>1</sup>:

http://localhost:8080/RadioactivityLabServer/LabServerWebService

Contact Email:

labserver@your.email.domain

Authenticate:

☒

#### Optional Information

Completed Email<sup>2</sup>:

Failed Email<sup>2</sup>:

Update

Test

New

Notes:

1. Changing this item requires a LabServer restart.
2. Semicolon-separated list of email addresses.

Change the *Contact Email* to your email address or some other appropriate email address. This is the LabServer's email address and not the LabServer Manager's email address although they could be the same.

If you require the LabServer to send an email when an experiment completes, enter an email address in the *Completed Email* field.

If you require the LabServer to send an email when an experiment fails, enter an email address in the *Failed Email* field.

Leave the *Name*, *Guid* and *Service Url* fields with their default values.

- Select the *Lab Equipment* menu item. Select LabEquipment Unit 1 from the dropdown list and click the *Select* button.

## → Manage Lab Equipment

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**Select LabEquipment Unit:**

**LabEquipment Unit Information:**

Unit:

Service Url<sup>1</sup>:

Passkey<sup>1</sup>:

Enabled: ☒

*Notes:*

1. Changing this item requires a LabServer restart.

Leave the fields with their default values.

Click the *Test* button. This makes a web service call to the LabEquipment to retrieve the LabEquipment status. A message is displayed showing the status of the LabEquipment.

If the message indicates that the LabEquipment is *Offline*, wait a few seconds for the LabEquipment web service to initialise and start and then click the *Test* button again.

Open the logfile for the LabEquipment located at *D:\iLabs\Radioactivity\LabEquipment\LogFiles\LabEquipment.log* to view the activity of the LabEquipment service.

- Select the *Self Registration* menu item again.

Click the *Test* button. This makes a web service call to the LabServer to retrieve the LabServer status as well as the status of the LabEquipment services that are enabled. It may take a few seconds for the LabServer web service to initialise and start.

Open the logfile for the LabServer located at *D:\iLabs\Radioactivity\LabServer\LogFiles\LabServer.log* to view the activity of the LabServer service.

- Select the *ServiceBrokers* menu item. Select the ServiceBroker *localhost* from the dropdown list and click the *Select* button.

## → Manage ServiceBrokers

---

**Select a ServiceBroker:**

Select

**ServiceBroker Information:**

ServiceBroker Name: localhost

ServiceBroker Guid: 196495303F294B13856D7E48872E51CC

Outgoing Passkey<sup>1</sup>: FD3CF16CC855484FB06801379F475837

Allow Access: ☒

Create

**Optional Information**

Service Url: http://localhost:8080/DummyServiceBroker/ServiceBrokerService

Incoming Passkey<sup>2</sup>:

Update

Delete

New

*Notes:*

1. Passkey sent by the ServiceBroker to the LabServer.
2. Passkey sent by the LabServer to the ServiceBroker.

Leave the fields with their default values.

If a *Service Url* is specified then the LabServer will notify the ServiceBroker that an experiment has completed successfully or failed.

- Log out of the Radioactivity LabServer.
- 

## Launch Dummy ServiceBroker

- Launch the Dummy ServiceBroker client by entering the following URL in a web browser:

`http://localhost:8080/DummyServiceBroker/`

The web page simply displays *Dummy ServiceBroker*. This is sufficient to show that the Dummy ServiceBroker application has been deployed correctly. At this point in time, the Dummy ServiceBroker service has not been invoked.



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## Launch Radioactivity LabClient

- Launch the Radioactivity LabClient by entering the following URL in a web browser:

`http://localhost:8080/RadioactivityLabClient/LabClient.do?CouponId=12345&Passkey=qwerty`


Home - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Home


localhost:8080/RadioactivityLabClient/faces/Home.xhtml

Google

 THE UNIVERSITY OF QUEENSLAND AUSTRALIA

# Radioactivity

Version 4.0

 **Home**

Welcome! This LabClient enables you to submit an experiment to a remote iLab LabServer for processing. The results can then be retrieved, saved to file. A description for each of the LabClient's webpages is provided below.

**Setup**

Specify the setup for running the experiment.

[More](#)

**Status**

Check the status of an experiment or the LabServer.

[More](#)

**Results**


Retrieve the results for an experiment and process.


[More](#)

**ON THIS SITE**

- » Home
- » Setup
- » Status
- » Results

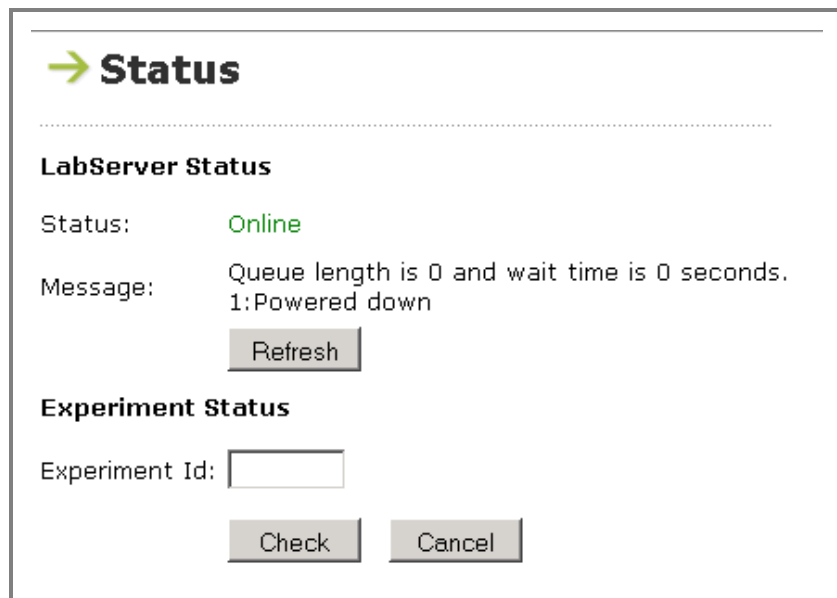
[Feedback](#)

 Centre for Educational Innovation and Technology

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The title *Radioactivity* should be displayed at the top of the web page and a version number near the top-right of the page.

- Select the *Status* menu item.




The screenshot shows a web application interface with a header bar. On the left, there is a green arrow pointing right followed by the word "Status" in bold. Below this, there is a section titled "LabServer Status". Under this title, the text "Status: Online" is displayed, where "Online" is in green. Below that, the text "Message: Queue length is 0 and wait time is 0 seconds. 1: Powered down" is shown. A "Refresh" button is located below the message. Below the "LabServer Status" section, there is a section titled "Experiment Status". Under this title, the text "Experiment Id:" is followed by an empty text input field. Below the input field, there are two buttons: "Check" and "Cancel".

The LabServer status should be *Online*

Open the logfile for the LabClient located at *D:\iLabs\Radioactivity\LabClient\LogFiles\LabClient.log* to view the activity of the LabClient application.

- Select the *Setup* menu item.

 **Setup**

---

**Experiment Setups**

Setup:

Measure radioactivity over time at a fixed distance from the source.

Source:

Absorber:


Distance:  (mm)

Duration:  (secs)

Trials:

To run an experiment, select the *Radioactivity over Time* experiment setup from the *Setup* dropdown list. Leave the fields with their default values and then click the *Submit* button. The experiment setup should be successfully submitted and an experiment number presented.

Select the *Status* menu item.

 **Status**

---

**LabServer Status**

Status: Online

Message: Queue length is 0 and wait time is 32 seconds.  
1:2:Starting

Refresh

**Experiment Status**

Experiment Id:

Check Cancel

The experiment number should automatically appear in the *Experiment Id* field.

Click the *Check* button to check the status of the experiment repeatedly until the experiment completes.



**→ Status**

---

**LabServer Status**

Status: **Online**

Message: Queue length is 0 and wait time is 0 seconds.  
1: Powered down

**Experiment Status**

Experiment Id:

Experiment 2 - Completed

- Select the *Results* menu item.


**→ Results**

---

**Experiment Results**

Experiment Id:

When the experiment completes, the experiment number should automatically appear in the *Experiment Id* field. Click the *Retrieve* button to retrieve the experiment results.

 **Results**

---

**Experiment Results**

Experiment Id:

Experiment 2 - Completed

**Experiment Information**

Timestamp: Mon Jul 29 11:43:46 EST 2013

Experiment Id: 2

Unit Id: 1

**Experiment Setup**

Setup Name: Radioactivity over Time

Source: Strontium-90

Absorber: None

Distance (mm): 20

Duration (secs): 5

Trials: 3

**Experiment Results**

Data Type: Real

Counts at:

20mm: 305,303,303

Save the results to a comma-separated-value (CSV) file by clicking the *Save button*.

- Select the *Setup* menu item again.

Run another experiment but this time, select the *Radioactivity versus Distance* experiment setup from the *Setup* dropdown list. Leave the fields with their default values and then click the *Submit* button. The experiment setup should be successfully submitted and an experiment number presented.

Check the status of the experiment repeatedly until the experiment completes.

Retrieve the experiment results.

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**That's it.**