

# Using IBM DevOps Services & Bluemix Services

## Part 1: Deploying & Updating a Simple App

This series of labs demonstrates how easy it is to use IBM DevOps Services and Bluemix together to plan, code, and deploy applications. Each part of the workshop guides you through the steps to experiment with key DevOps Services features

- **Part 1:** Deploy and make change to a simple application.
- **Part 2:** Add a data management Bluemix service and enable automatic deployment.
- **Part 3:** Use the planning capabilities to add a text messaging service, and enable traceability between code changes and work items.
- **Part 4:** Leverage automated builds and deployments, then explore integration between DevOps Services and Rational Team Concert (RTC)

After completing each part of the workshop, as a bonus, you'll also get applications that you can use to demonstrate DevOps Services and Bluemix capabilities to your colleagues and friends.

Before we get started, let's discuss the products you will be using in this workshop. **IBM DevOps Services** is a place where you can collaborate with others to develop, track, plan, build, and deploy software. **Bluemix** is an open-standards cloud-based platform where you can run the applications that you develop in DevOps Services. Bluemix provides a variety of services that you can leverage in your applications, so you don't have to start coding from scratch.

### Learning Objectives

In this lab, you will learn how to do the following:

- Fork an existing application.
- Deploy an application to Bluemix from IBM DevOps Services.
- Make changes to an application in the IBM DevOps Services web IDE (Integrated Development Environment).

### Time Required:

This lab takes about 30 minutes to complete.

### Before you begin

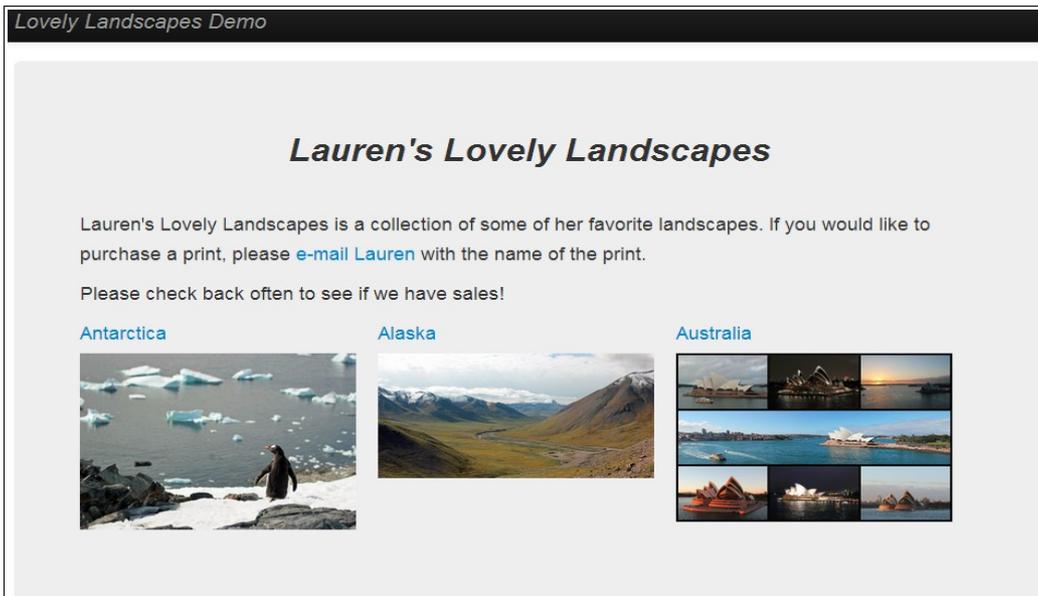
What do you need to begin this lab? You need to register at [Bluemix](#) and [DevOps Services](#). See the prerequisites for the workshop on <http://bluelabs.mybluemix.net>.

You'll also need one of the following modern browsers:

- Firefox 15 / Chrome 21 / Internet Explorer 10 / Safari 7 or later versions of these browsers

### About the App

In this lab, you'll be working with a sample online store called "Lauren's Lovely Landscapes." The store currently sells three prints; each print's page displays the name, image, and price associated with the print. This online store application will be used in Part 2 and Part 3 of the workshop when you create a new Fabulous Price Finder application.



## 1- Fork the Lovely Landscapes application

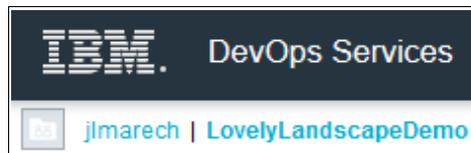
To develop your own online store, you decide that it is not a good idea to start from scratch. So you want to leverage an existing application. IBM DevOps Services provide this option with the fork capability. Forking a project means to take a copy of the code in an existing project and put it into a new project.

1. Navigate to <https://hub.jazz.net/project/jlmarech/LovelyLandscapeDemo>
2. Click the **EDIT CODE** button in the upper-right corner. You are asked to sign in on JazzHub. Then the DevOps Services web development environment opens.
3. From the left pane, click the README.md file and read the application description. You can access other files to review the code of this application.

This application seems to be a good starting point for your online store. So you will fork it.

4. In the upper-left corner, note that at this point, the project belongs to another user (jlmarech) and is prefixed by the user name (jlmarech | Lovely Landscapes Demo)
5. Click the **FORK** button in the upper-left corner.
6. Type a name for your project.
7. Make sure that the options for **Scrum development** and **Bluemix deployment** are checked (see image below)
8. Then click **Save**.

When you fork a project, you create a copy of the source code in your environment: <your-username> | <project-name>



9. After the fork operation completes, verify if your project contains a **launchConfigurations** folder. If it does, delete the folder and the file it contains.



Now that you have a copy of the code in your own project, it is time to deploy and test it.

## 2- Deploy the Lovely Landscapes application

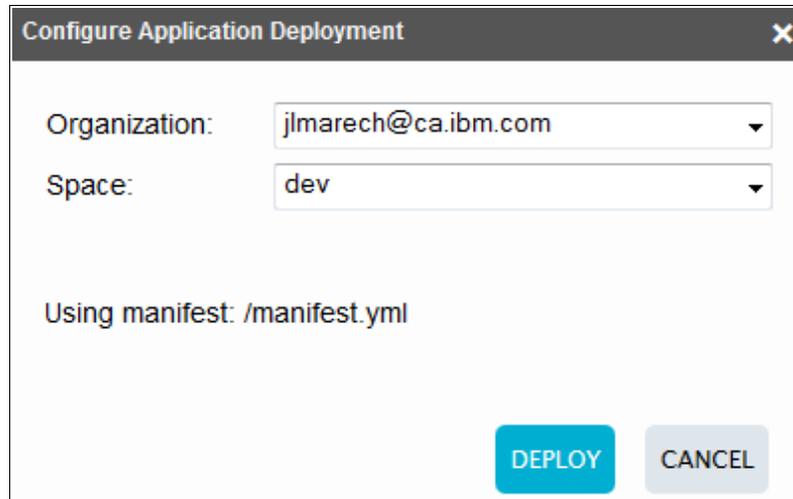
Deploying the application translates into bundling up the project artifacts, creating an application at Bluemix, transferring the bundled application to Bluemix, and starting the application. Bluemix application names and URLs are created using properties, which are often defined in the `manifest.yml` file in a project. The “Lauren’s Lovely Landscapes” project already has the manifest created for you.

1. In the left navigation pane of the web IDE, expand the **app** directory and select *manifest.yml*.

The manifest file includes everything required to deploy an application on Bluemix, such as how many instances to create and how much memory to allocate to what services applications should

use. For more information on deployment options with a manifest, go to <http://docs.cloudfoundry.org/devguide/deploy-apps/manifest.html>

2. Click the **DEPLOY** button in the upper-left corner.
3. In the Configure Application Deployment dialog, select the Organization and Space you would like to deploy your application to (the defaults are fine) and click **DEPLOY**. (keep default values as you probably have only one account and once space)



### 3- See the Lovely Landscapes application running

Once your application has finished deploying to Bluemix, a green bar will be displayed at the top of the page.

1. Click the link in the green bar to open the root folder page.
2. On the root folder page, scroll down the right pane until you see the Manual Deployment Information section.
3. In the Manual Deployment Information section, click the link to your deployed application to access it. The name depends on the name you specified when you forked the project (It is “LovelyLandscapesDemo” in the example below).



4. Click the Antarctica image to check its price. You will update the price later in this lab.
5. Browse around your application that is running live on Bluemix.

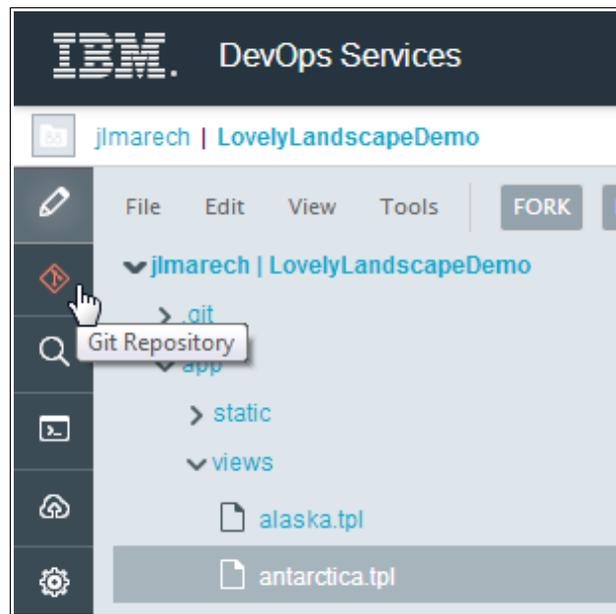
### 4- Update the price of an item

Let's make a change to the application by updating the price of an item.

1. In the left pane, expand *app > views* and select *antarctica.tpl*.
2. Scroll down until you see `<div id="price">100.00</div>`
3. Replace 100.00 with 99.99.
4. Click *File > Save*.

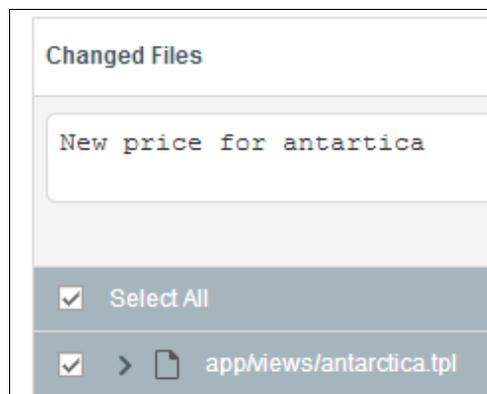
5. Click the **DEPLOY** button.
6. Once your application has finished deploying, click on the link in the green bar to open the root folder page.
7. On the root folder page, scroll down the right pane until you see the Manual Deployment Information section.
8. Click “LovelyLandscapesDemo” in the Manual Deployment Information section to open your application.
9. Click *Antarctica*. Notice that the price of the item has been updated. Success!

## 5- Deliver your changes to the repository



1. In the **Changed File** section, enter a comment, check the antarctica.tpl file.
2. Click the "**Commit 1 File(s)**" button.
3. Your change now appears in the "OUTGOING" section. Click PUSH to deliver the changes to the master branch on the hosted GitHub.

Your change to the application is now available to all the project team members.



**Note:** The first time that you deploy an application on Bluemix, DevOps Services creates a

configuration file, under folder launchConfigurations. This file contains information to facilitate and speed up future deployments.

Include this configuration file in your commits when it appears in the **Changed Files** section.



## Summary

In this lab, you learned how to:

- Fork an existing project (copy code for reuse)
- Use the WEB IDE to modify code from a web browser, on the cloud
- Deploy and test an application on the cloud (Bluemix)
- Deliver code changes to the source control management system (hosted Git repository)

## Next Steps...

Continue on to PART 2 of this workshop where you'll learn how to deploy an application that uses a Bluemix data management service.

<http://bluelabs.mybluemix.net>