If you've been following developerWorks over the last few months, you've noticed how excited we are about Bluemix, IBM's open-standards cloud platform. Using Bluemix, along with IBM, third-party, and open source services, you can build, deploy, run, and manage almost any kind of application you can dream of. We've published so much content about Bluemix and its many services and runtimes that we wanted to step back and give you a look at what we think are some of the very best tutorials we've published on this exciting topic. So here it is, the Bluemix Top 15 as chosen by the developerWorks editorial team!

If you're anything like me, you love "Best of" and "Top 10" lists. Each year, I look forward to the 10 Best Books of the Year from the New York Times, the best movies of the year from Flixster, and so on. Well, here at developerWorks, we've published so much content about Bluemix and its many services and runtimes that we thought it might be helpful give you a look at what we, the editors, think are some of the very best Bluemix tutorials of the year. There are so many great contenders that we had a hard time getting it down to 10, so instead I'll share with you, in no particular order, the top 15 Bluemix tutorials as chosen by the developerWorks editorial team.

"It's a wonderful time to be a developer. We have an abundance of frameworks and tools at our disposal that make developing great apps not only simpler and faster, but also more enjoyable."

Joe Lennon, CTO, ePubDirect
(Blue)mixing IoT and GPS services for your health

Here, Phil Estes shows you how to quickly assemble a web application that gives a status update on your Fitbit statistics for the day, provides encouragement, and helps you find places to increase your step count. You'll start with a simple Node.js application and bind two pre-existing Bluemix services to it — the Wearable Fitness service (a community-developed service from IBM IoT Labs) and the Pitney Bowes Travel Boundary Service — and also tap into external APIs for map data.

Read the tutorial

Analyze game data from the Oculus Rift using Bluemix

Virtual Reality (VR) is the technology of the moment, and VR devices such as the Oculus Rift have gained prominence in technology companies. The device captures movements from the player's head and sends this data to a computer, which creates an immersive, interactive virtual environment. This captured data can be stored for further analysis to improve the user experience. Bluemix is the perfect platform for the task.

This tutorial describes how to create a simple application using Bluemix and vr.js, a browser plug-in. This application captures the quaternion positions (x, y, z, and w) from the Oculus Rift and sends them to Cloudant, a database as a service (DBaaS). You can deploy this application to Bluemix and use it by plugging in the Oculus Rift and opening a browser.

Read the tutorial

Jump-start your hackathon efforts with DevOps Services and Bluemix

A hackathon is typically a brief, intense period of collaborative development around a particular cause or topic. The idea is to get something done quickly and, of course, to totally rock the judges. Given the short time period, it can be challenging to build in basic features like Facebook authentication, or sending emails or texts, while still making significant progress on your main goal.

The Hackathon Starter Project, by Sahat Yalkabov et. al., hosted at GitHub, provides a great collection of capabilities to use as the base for your hackathon efforts. DevOps Services provides a collaborative on-the-web development environment and continuous delivery pipeline, while Bluemix provides the cloud hosting you need to run it, making this a perfect pair for hackathon success. You'll see how to stand up your own copy of Hackathon Starter from a fresh version of the source using DevOps Services and to automatically deploy it after every change to the Bluemix PaaS.

Read the tutorial

Automate Famo.us mobile apps with Cloudant on Bluemix

In this tutorial, a follow-up to "Create high-performance mobile UIs with Famo.us," Sing Li takes a reusable application template (a Famo.us widget) based on the app he created in the first
article, and shows you how to reuse the template in a mobile app and deploy it to Bluemix. The UI customization is data-driven via a replicated JSON document that is stored in Cloudant.

Read the tutorial

**Build a cloud-ready temperature sensor with the Arduino Uno and the IBM IoT Foundation**

IBM Distinguished Engineer Kyle Brown wants to help you harness technology by using Arduino Uno, Bluemix, and the IoT service to build a cloud-ready application in this hands-on four part series.

Frustrated when his home wifi router sometimes quit working, Kyle wanted to gather data to determine whether the issue was related to temperature or humidity in his wiring closet. To solve that puzzle, he built a custom application that can store and display historical data using Bluemix features and its connection to the IBM IoT Foundation.

Read the tutorial

**Build an Android app using the IBM Mobile Data for Bluemix cloud service**

Have you ever gone to the grocery store and forgotten the exact ingredient your spouse needed for that fabulous soufflé recipe? Or the lunch box dessert the kids had requested for the next day? What if they all could enter their requests into a shared grocery list, and you could receive push notifications alerting you to the updates? Enter the BlueList application, a simple app that uses Bluemix services and will get you started writing your own (more complex) apps in no time! This tutorial shows you how to start with an Android app and add the IBM Mobile Data for Bluemix service to store, delete, update, and query objects stored on the cloud.

Read the tutorial

**Extend an Android app using the IBM Push for Bluemix cloud service**

Learn how to extend an Android application using the IBM Push for Bluemix service. In this tutorial, you'll use the BlueList application you created in "Build an Android app using the IBM Mobile Data for Bluemix cloud service," and add the IBM Push for Bluemix service (invoked from a Node.js-hosted application) to the BlueList app, so that notifications are sent when a list is updated, and the list is updated on all devices when one of the devices updates the list in some way.

Read the tutorial

**Build a simple photo location application with Pitney Bowes location services**

Over a billion people worldwide use Pitney Bowes location intelligence solutions when they check into or use location-sharing features on major social media platforms. Pitney Bowes
provides powerful APIs for geocoding, address lookup, and more. Using a simple and fun example — an app that combines the latitude and longitude of any U.S. street address with a media search in Instagram — this tutorial shows you how to use the Pitney Bowes APIs in your Bluemix applications.

**Read the tutorial**

**Build a real-time polls application with Node.js, Express, AngularJS, and MongoDB**

In this tutorial, Joe Lennon shows how he built a simple polling application using DevOps Services to manage the source code for his project. DevOps Services, a component of Bluemix, provides full version control, as well as an online IDE for editing code in the cloud, and abundant agile features for project management. DevOps Services also integrates easily with Eclipse, which has plug-ins to enable one-click deployment to platforms like Bluemix or Cloud Foundry.

**Read the tutorial**

**Building a real-time chat app in five minutes**

Node-RED simplifies code development by providing a set of nodes ready to be wired together and used. It's easy to create a new Node-RED runtime on Bluemix. With just a few clicks you have a working environment, ready for you to create your new application. This article shows how to build — in just a few minutes — a real-time chat application on Node-RED using Bluemix.

**Read the tutorial**

**Getting started with Ruby on Rails and Bluemix**

In this tutorial, you'll build a bare-bones blog as a sample application to show how you can get started with Bluemix and Ruby on Rails. You'll create a Rails app, create a SQLDB database (a Bluemix service powered by IBM DB2), connect the app to the database, then deploy and run the app.

**Read the tutorial**

**Build a conference check-in app on BlueMix with Sinatra and MongoDB**

In this tutorial, Joe Lennon teaches you how to build an app that allows users to check in at a conference, and enables attendees to see who else has checked in and where. The app also displays a stream of tweets containing the conference hashtag.

To build the app, you'll use Ruby and Sinatra, a lightweight web framework that lets you quickly create apps. You'll use Haml for the app's views, Bootstrap for the user interface, and all of the data will be stored in a MongoDB database. You'll deploy the final product on BlueMix, which makes it really easy to put your code into production without having to worry about managing servers and databases.
Read the tutorial

Build and deploy a mobile-friendly calorie counter on Bluemix with PHP, MySQL, AngularJS, and the Nutritionix API

Worried about counting calories? Aren't we all?! Vikram Vaswani shows you how to create an online calorie counter that enables users to search for food items by name, with results retrieved through an API to the online nutrition database Nutritionix, group food items to create meal records, and save these records to a MySQL database, together with their calorie counts, using a PHP/AngularJS application; retrieve reports of total calories that consumed; and access the app from mobile devices. Finally, you'll deploy the application to the Bluemix cloud to ensure that users have around-the-clock access.

Read the tutorial

Build a reactive sales chart app with Meteor

In Sing Li's second contribution to the Top 15, he shows you how to create a Meteor real-time sales chart application on IBM DevOps Services and deploy it to Bluemix for global web access. Meteor uses MongoDB on the server side to store data, so you'll use the predefined MongoDB service on Bluemix to store sales data for the app. After you have your own application up, you can explore Meteor's reactive programming model by changing the code.

Read the tutorial

Build a time-control app using iBeacons and the IBM MobileData service

Beacons are small electronic devices that emit Bluetooth Low Energy (BLE) signals, which can be captured by any device with BLE technology, such as smartphones and tablets. This new technology revolutionizes the decisions that companies make about how to customize their products and services to meet customer needs.

Learn how to create a simple time- and attendance-tracking system using the Android SDK by Estimote, one of the companies who build such devices. With the Estimote app, you can easily simulate an Estimote iBeacon for testing with an iOS device. You'll learn how to create a MobileData service on Bluemix to store the data from the Android device and how to create a simple website that retrieves data from the database and shows it to the user.

Read the tutorial

Conclusion

I hope you've found this list useful. You'll find a wealth of additional tutorials, videos, and applications on developerWorks. With IBM Bluemix and developerWorks know-how and samples, it's never been easier to build and deploy your apps in the cloud!
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