Ian Duffy

Cloud Engineer

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I am passionate about automation, cloud, continuous delivery, infrastructure and security.

EXPERIENCE

Present
Apr 2018

Senior Software Engineer
Shipyard Technology Ventures

I developed a control plane on-top of managed Kubernetes services, primarily focused on Google Cloud Platform but with support for Amazon Web Services and Azure. The control plane is responsible for defining a base Kubernetes configuration, this included provisioning SSL certificates (CertManager), Monitoring (Prometheus), Ingress (Nginx), Integration with Cloud Provider Resources via Service Brokers, and DNS provisioning (external-dns). From this base configuration, all necessary environments and developer tooling infrastructure which provided Source Control Management (GitLab) and CI/CD (Jenkins) was created. The control plane is developed with Spring Boot in an API first approach with Swagger.

I designed an Identity access management solution on top of Keycloak. This provided single-sign-on via SAML and OpenID for internal applications. Additionally, it was used to supply user management for any developed products.

Working at a startup supplies a highly dynamic environment which allowed for the opportunity to work in areas I wouldn't normally - Managing the Office WiFi, creating setup scripts for developer workstations, Managing Office 365, Creating proof of concept user interfaces with VueJS.

Mar 2018
Nov 2016

Senior Software Engineer
Zalando SE

My area was focused on extracting fashion insights from the world wide web. My team was responsible for building the web crawler. The web crawler's role was to schedule pages to crawl, fetch the pages, classify the pages as fashion articles and parse all articles to extract the article date, article author, article content, article relevant images, and any additional metadata (JSON-LD, Microdata, RDFa, etc.). The system ran on AWS and was built up of many components written in Java and Scala and linked by Kafka which was heavily utilized for data streaming, aggregation, and persistence.

Oct 2016

Aug 2015

Contractor / Senior Cloud Engineer

Allied Irish Banks

Worked on providing a Platform as a service and Continuous Delivery capabilities on top of OpenStack, AWS, and Azure by bringing together many opensource utilities such as Chef, HashiCorp Terraform, and Packer, Jenkins, and ElasticSearch.

June 2015

Sept 2013

Apache Project Management Committee and Committer

Apache Software Foundation - CloudStack

Apache Cloudstack is opensource software designed to deploy and manage large networks of virtual machines, as highly available, highly scalable Infrastructure as a Service cloud-computing platform.

My role as a PMC member and committer involved participating on mailing lists, software development, assisting with product growth and community.

Sept 2014

April 2014

Cloud DevOps Engineer

PaddyPower

During my 6 months internship at PaddyPower, I was responsible for designing and building a RESTful API and Frontend application to enable developers to define and deploy services.

The project was built using Spring Boot and AngularJS, the infrastructure was supplied by Apache CloudStack and provisioned with Chef.

May 2013

Sept 2012

Lab tutor

Dublin City University

Provided programming tutorials and labs to various first year students who were learning Java for the first time. Along with this, I assisted with running and correcting lab exams.

PROJECTS

### Comprised the Azure RedHat Enterprise Linux estate

Microsoft online services bug bounty

Discovered issues with the RedHat Enterprise Linux (RHEL) update delivery mechanism within Azure that if exploited had the potential to grant full root access to all RHEL virtual machines within Azure. Additionally, a second issue allowed elevation from root on an instance to storage account administrator.

CarCloud

DCU Final Year Project

CarCloud is a mobile and web based application that focuses on supplying car owners with access to trip information and enables them to set alerts for specific trip events. This was displayed as points on a map, each point having various metrics associated with it, including speed, RPM, mileage, stopping time, etc.
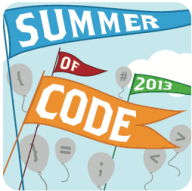
Automated Apache Cloudstack Environment

Google Summer of Code 2014 – Apache Cloudstack

As part of Google Summer of Code I worked with Apache Cloudstack. It is a private cloud management platform. My project involved using chef and vagrant to automate the creation of a Cloudstack cloud.

The end result provided developers with a straight forward, fast, and easy way to virtualize a full Cloudstack cloud on their machine.

Google Compute Engine (GCE) and Amazon web services (AWS) compatibility interface for Apache Cloudstack

DCU Third Year Project

The developed compatibility layer enabled users of a CloudStack cloud to use utilities created for GCE and AWS against their CloudStack cloud. The compatibility layer sits on-top of the Cloudstack API and translate requests from GCE and AWS clients into Cloudstack API calls.

LDAP authenticator for Apache Cloudstack

Google Summer of Code 2013 – Apache Cloudstack

This feature involved extending the Cloudstack authentication engine to support LDAP as a backend for authentication. Additionally to this, it provided administrators an automated way to provision their LDAP users onto their cloud.

EDUCATION

Dublin City University

B.Sc in Computer Applications

Throughout my time in DCU I maintained a first class honours (1.1) grade for every academic year.