# POWER8 Continuous Integration

## Automated Build and Test Infrastructure for POWER8 Linux

## Project Introduction and Background

Open Source software projects are often designed to work on as broad a range of hardware architectures as possible. The users of Open Source software want the flexibility to consider a variety of hardware solutions in order to take advantage of different capabilities and to avoid vendor lock-in in the future. To support their users, Open Source software projects spend their time and resources on adding support for new architectures as they become available.

The introduction of IBM's POWER8 architecture broadened the range of possible solutions available to the end users of Open Source software. This creates a need for Open Source projects to ensure that their software builds and functions correctly on POWER8. Open Source software projects often use Continuous Integration (CI) systems to build and test their software. CI enables these projects to validate their software after each change, ensuring that it continues to work as expected.

## Technology

•IBM POWER8 OpenStack Cluster

•Jenkins

•Ansible - https://www.ansible.com/

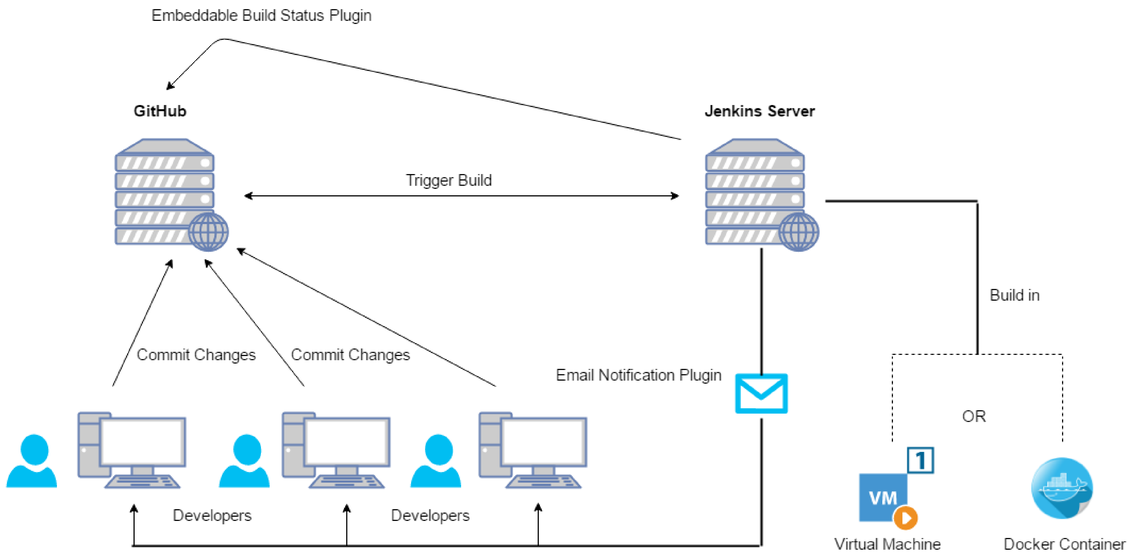


Figure 1: This is a flowchart of our service.

## Project Description

This project is focused on providing an easy to use, public, Cloud-based, POWER8 CI infrastructure for Open Source projects in order to increase the ability of these projects to build and test their software on POWER8. We created a POWER8 CI system to lower the cost and effort needed for Open Source software developers to ensure that their software runs on POWER8.

•POWER8 Cluster running OpenStack

•Hosted at OSU Open Source Lab (OSL)

•Uses Jenkins automation software

•Uses both Linux virtual machines and Docker containers

•Uses GitHub credentials for authentication

•Open Source project
  •Located @ GitHub:

**https://github.com/Project-35/power8ci**

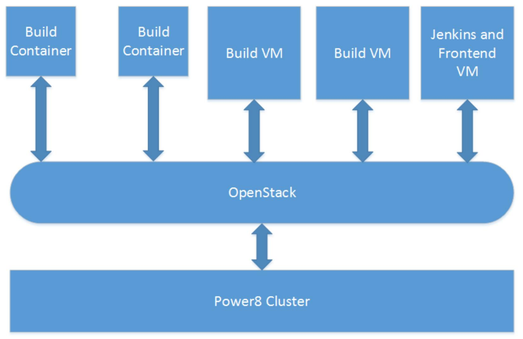


Figure 2: The infrastructure of our system.

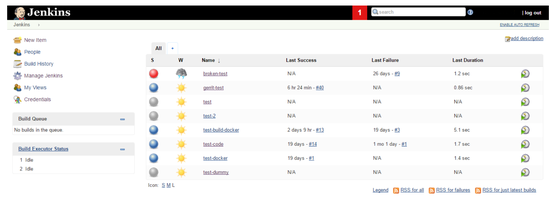


Figure 3: This is the Jenkins web interface.

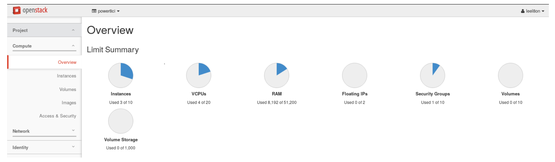


Figure 4: This is an overview of our system.

# Project Team 35

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