CloudLaunch is a web application and REST API for launching cloud-enabled applications on the user’s cloud of choice. CloudLaunch abstracts away the differences in APIs between different cloud providers making it easier to define the requirements of a successful deployment of an application in a cloud agnostic fashion. Here we describe CloudLaunch and the enhancements made as part of an EDS consultation with the project.

**CloudLaunch Architecture**

CloudLaunch admin users register clouds and VM images for those clouds. Admins also register applications including possibly custom launching UI and custom backend provisioning and deployment logic. CloudLaunch user select an application to launch, select the cloud on which to launch it, provide cloud credentials, configure the application as necessary, then launch the application. After launching, the IP address and SSH keypair can be retrieved to log into the VM.

**CloudLaunch UI Enhancements**

Prior to consultation, CloudLaunch users could launch an application but couldn’t get the current status or manage applications.

The following UI enhancements were made to provide CloudLaunch users with more of a live dashboard of their applications.

- Get a live health check on the application
- Split application list into Active and History
- Delete and/or archive an application

UIs were also developed to allow deploying applications to Google Compute Engine.

**CloudLaunch CLI**

Uses Core API schema to determine what API methods are available and how to construct a request

CloudLaunch CLI Python library can be used directly to add cloud launching capability to an existing Python app

**Science Gateways Community Institute**

The Science Gateways Community Institute (SGCI) was funded by the NSF starting in 2016 to offer services to the research community to help with building science gateways and to create and support a community of science gateway developers.

**Extended Developer Support (EDS)**

The work described here with the CloudLaunch project was supported by an Extended Developer Support consultation. With EDS, science gateways can get help from an experienced science gateway developer. EDS consultations typically last from 6 – 12 months. To learn more or apply for an EDS consultation, please visit: https://sciencegateways.org/consulting/development

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