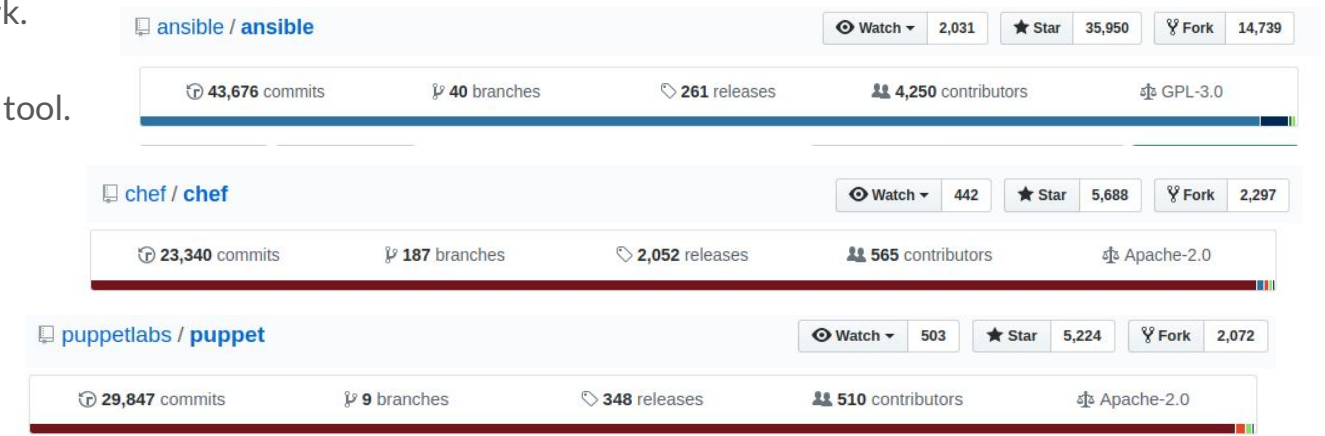
Ansible at G-Research

Why G-Research chose Ansible

- Popular open source software.
- Large community with mix of developers and users.
- Flexible framework.
- Easily extensible.
- Great automation tool.



G-Research

Create today. Predict tomorrow.

We apply scientific techniques to find patterns in large, noisy and real-world data sets, using the latest statistical and “big data” analysis methodologies to predict global financial markets.

G-Research

The base infrastructure components we've Ansiblized;

- Container Platforms
- Compute Farms
- Big Data Systems
- Storage
- Virtual-Desktop Infrastructure
- Cloud (AWS/OpenStack)

Speaker

Luke Griffith

Cloud Engineer

G-Research >3years

Automation & Cloud adoption

GitHub: lukemgriffith
Twitter: @lukegriffith

How GR use Ansible

Used to integrate multiple technologies into ci/cd pipelines.

Drives operations through GitOps. Enable self service.

Workstation / Server standardization.

Self-Service Patching.

Initiating validation tests.

Immutable server builds.

Powershell & DSC

Pester Testing Output

Chocolatey, linux like package management for windows.

Deployment of Openstack controller environments.
Automated configuration deployment.
Image pipeline

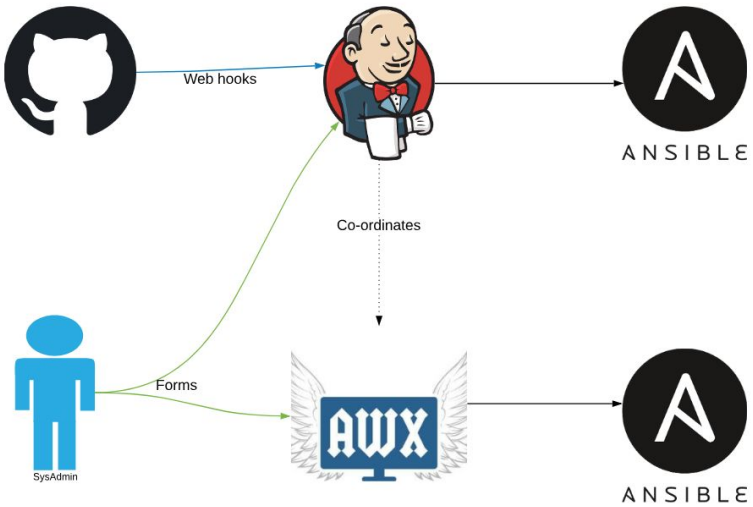
Orchestration of Terraform deployments.

Onboarding new AWS accounts, Organization OU and SCP management.

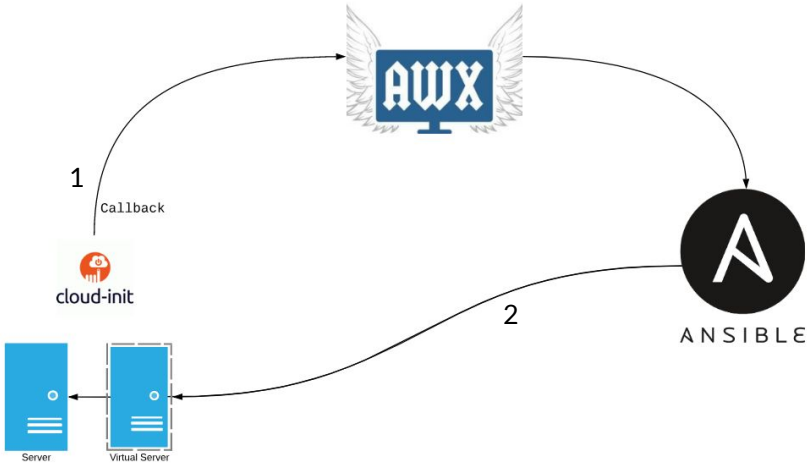
Integration to vault for central secure state and secret storage.

How GR run Ansible

Pipelines



Host Initiated



Development / Testing

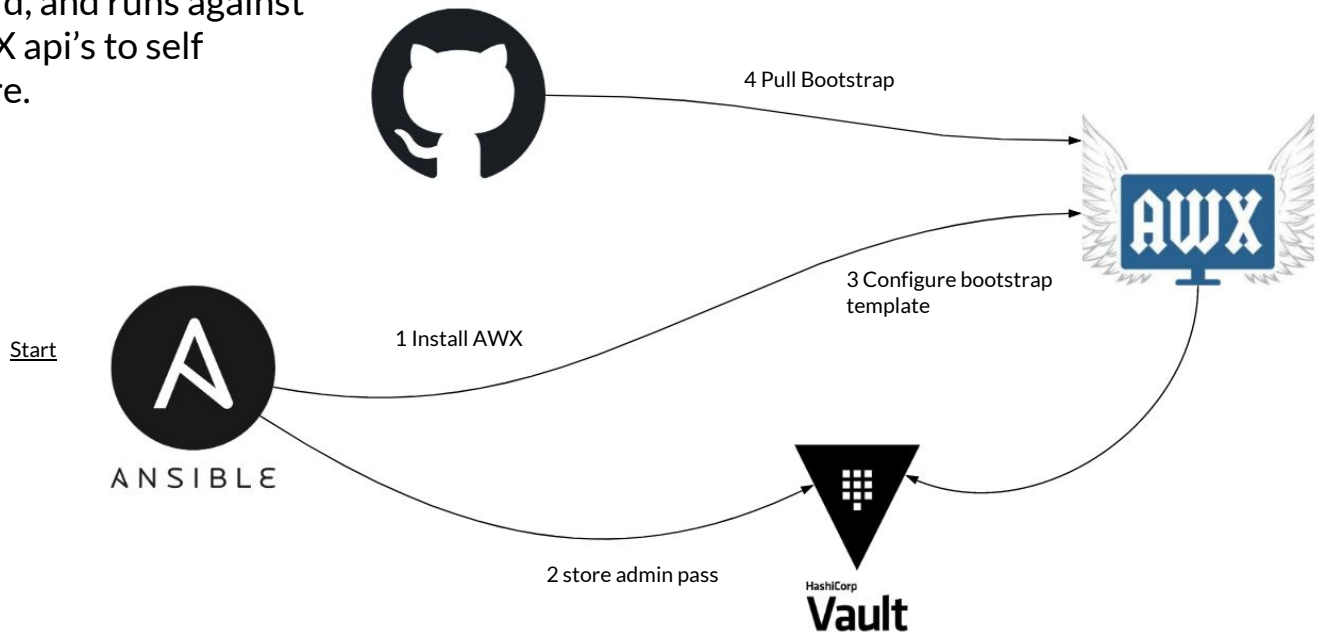
- Playbooks developed locally.
- Allows experimentation.
- Path to prod is end to end automation.
- Playbook testing required.
- Libraries unit tested (pytest).

```
$ ansible-playbook main.yml -i inv
```

Running AWX with integrity

- Production, we need to know exactly what codebase, and what configuration is running.
- Need to be able to rebuild quicky.
- No human should have administration access.
- Configuration fully as code.

A bootstrap template has attached the admin password, and runs against the AWX api's to self configure.



What about problems?

First response is rebuild, we run AWX statelessly with all configuration as code and required state external to system.

Break Glass access from Vault KV Store.

We're Hiring