Red Hat

Summit/AnsibleFest Lab

Terraforming Ansible

AnsibleFest

Battle of technologies

Terraform vs Ansible

VS

Infrastructure as code

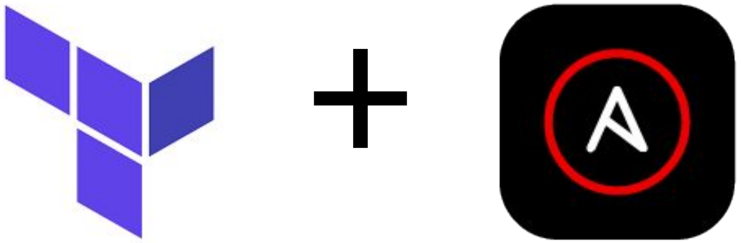
- Building
- Changing
- Managing

Automation Tool

- Deploy
- Configure
- Orchestrate
- Advanced Automation

But..... we make a great team

We work better together



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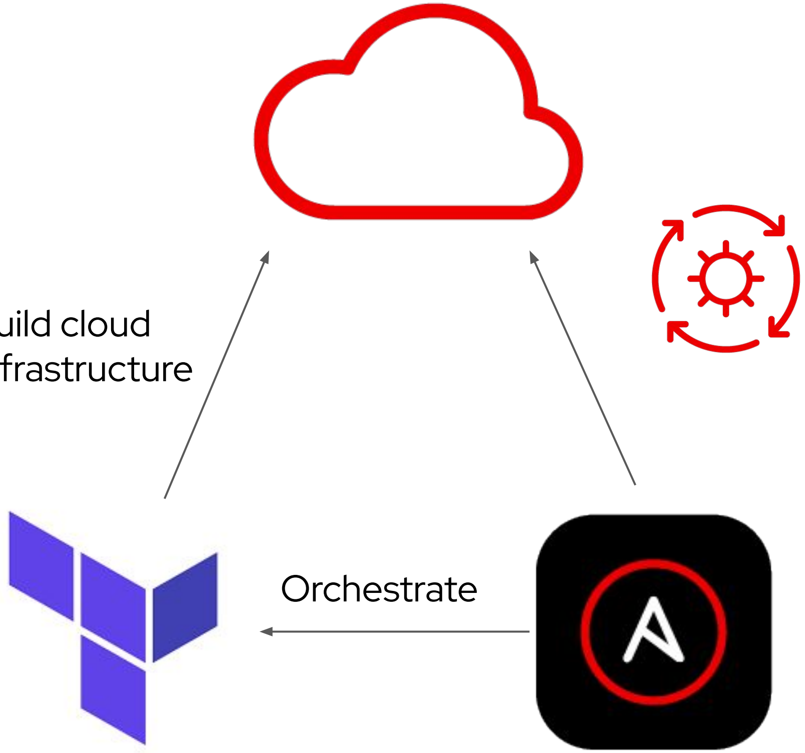


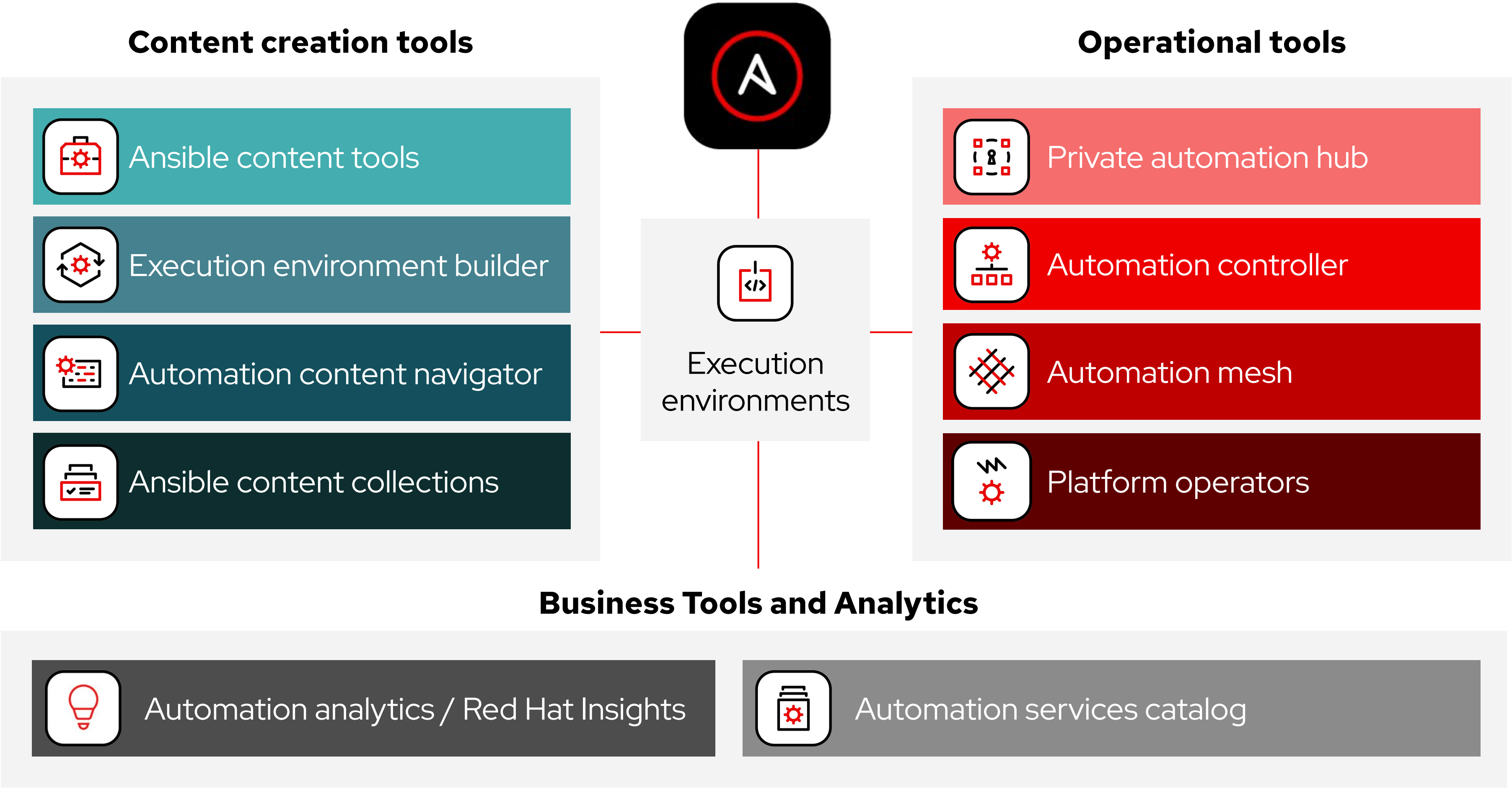
- Configure
- Manage Drift
- Deploy Applications
- Secure

Why use Ansible with Terraform

Enhance Infrastructure-as-code with Ansible Automation Platform

- Create and manage Terraform resources
- Extend infrastructure-as-code with Ansible automation content and practices
- Secure and manage infrastructure states
- Orchestrate Infrastructure-as-code centrally
- Ensure configuration compliance and mitigate risk by automating system setup
- Import and use existing Terraform Manifests

An integrated solution for the enterprise.



Content creation tools

- Ansible content tools
- Execution environment builder
- Automation content navigator
- Ansible content collections

Execution environments

Operational tools

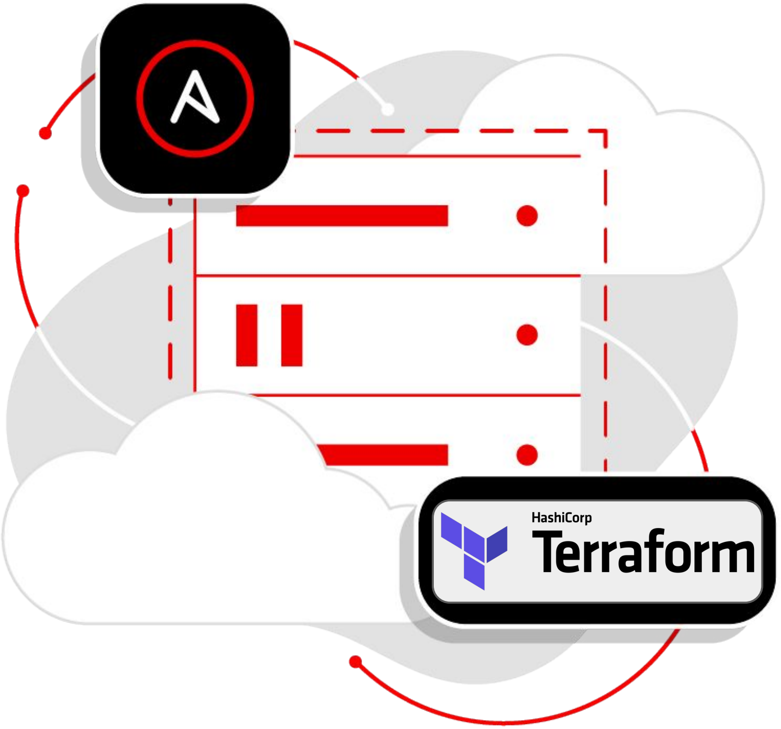
- Private automation hub
- Automation controller
- Automation mesh
- Platform operators

Business Tools and Analytics

- Automation analytics / Red Hat Insights
- Automation services catalog

Ansible Certified Content Collection for Terraform

cloud.terraform



Overview

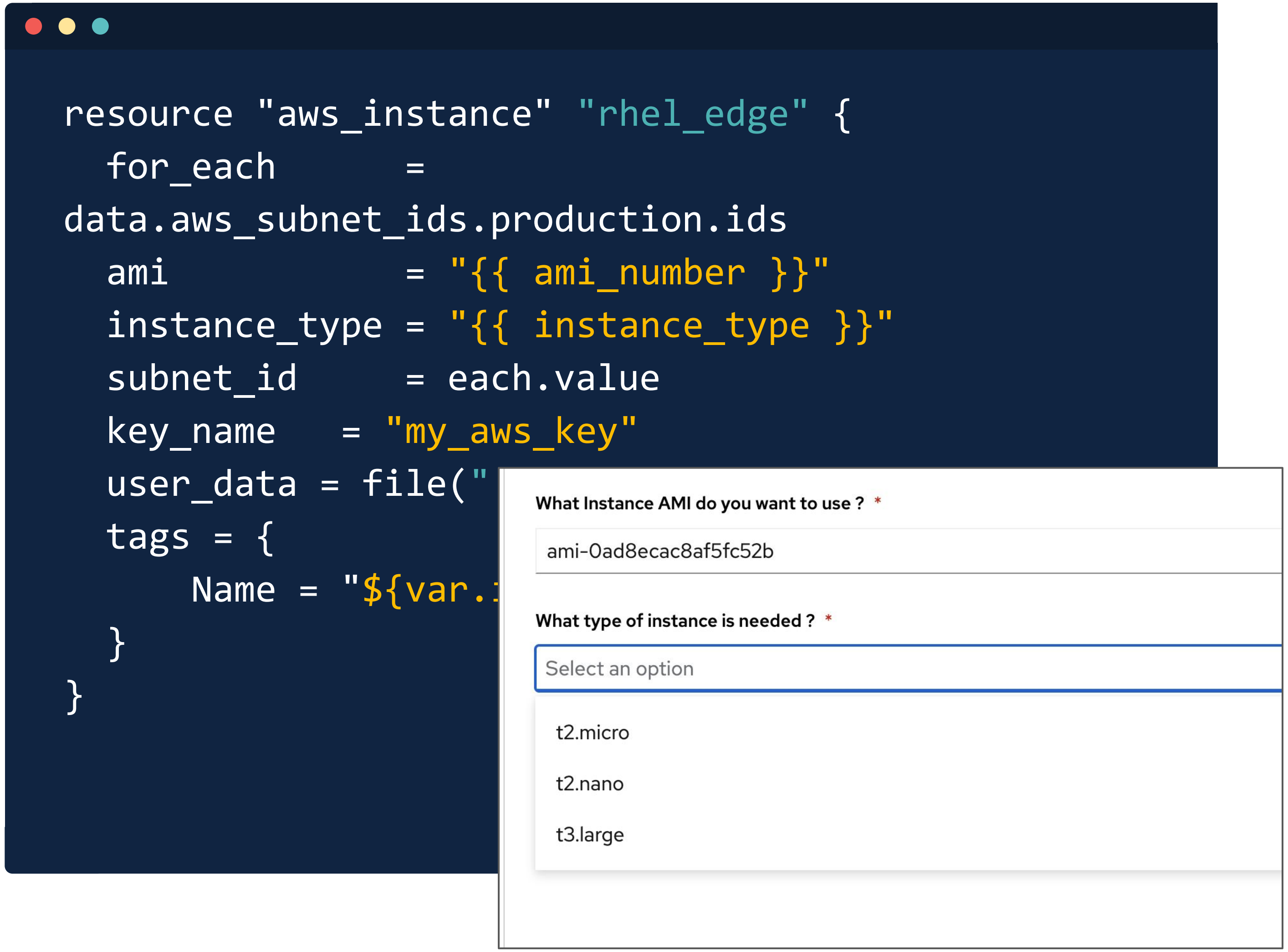
- Release: November 2022
- Enables an Ansible automation playbook to initiate a Terraform automation workflow (plan)
- Automates the management and provisioning of infrastructure as code using Terraform and AAP, as the primary automation platform, to automate configuration and life cycle management of cloud infrastructure.

Details:

- Includes two modules, with one module compatible with the current community.general.terraform module for general Terraform functionality
- Modules are a wrapper for the open source terraform command line tool
- Certified to support the following:
  - Providers: AWS, Azure, Google Cloud
  - Backends: azurerm, gcs, s3

AnsibleFest

Jinja2 Templates for Terraform Builds



```
resource "aws_instance" "rhel_edge" {
  for_each      =
data.aws_subnet_ids.production.ids
  ami           = "{{ ami_number }}"
  instance_type = "{{ instance_type }}"
  subnet_id     = each.value
  key_name    = "my_aws_key"
  user_data = file("
  tags = {
      Name = "${var.i
  }
}
```

What Instance AMI do you want to use ? *

ami-0ad8ecac8af5fc52b

What type of instance is needed ? *

Select an option

t2.micro

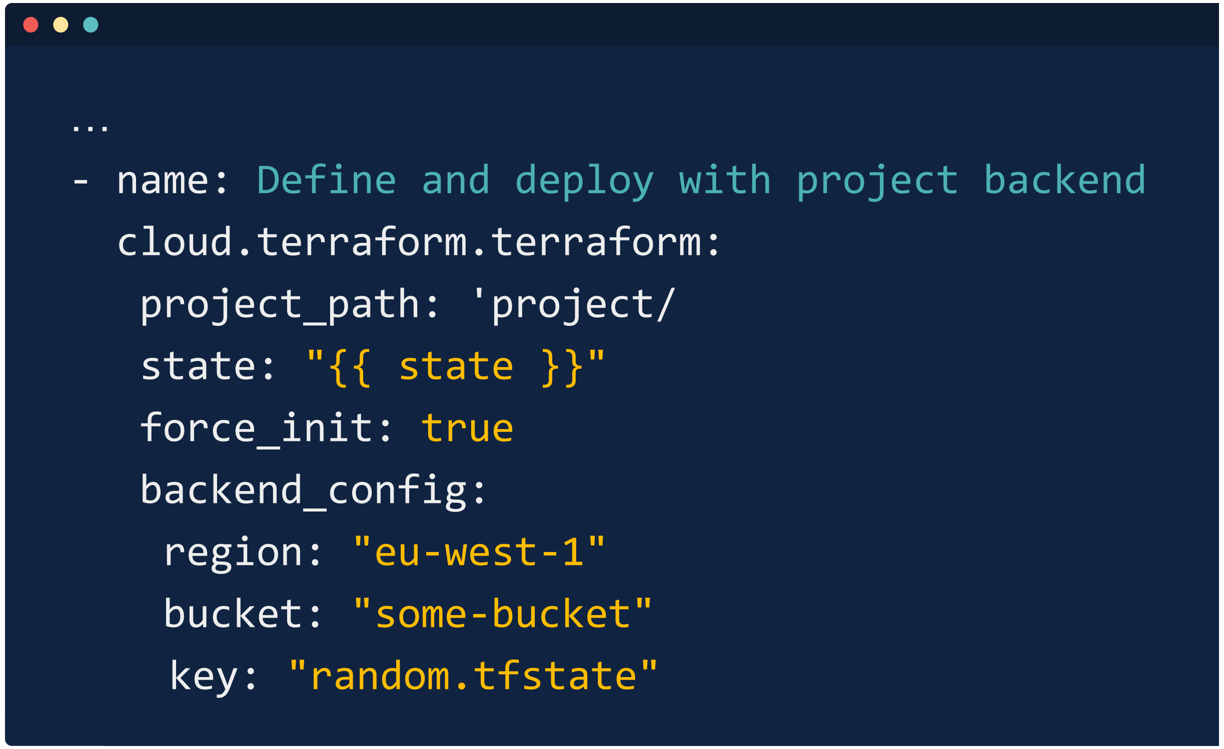
t2.nano

t3.large

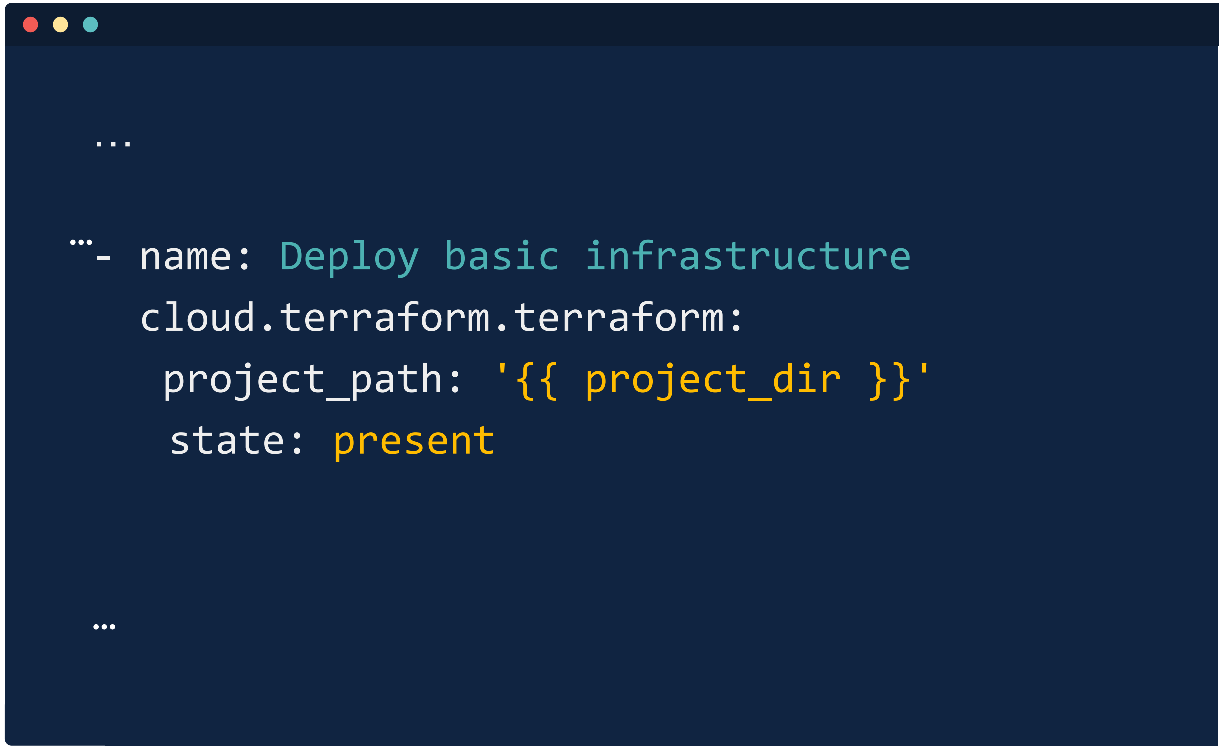
- Ansible Automation Platform allows you to template Terraform builds and resources.
- Jinja templates allow users to modify certain components of their infrastructure while maintaining organizational standards.
- Utilize template surveys to allow users to customize their required infrastructure.

AnsibleFest

Initialise Plan and Deploy with Ansible



```
...
- name: Define and deploy with project backend
  cloud.terraform.terraform:
   project_path: 'project/
   state: "{{ state }}"
   force_init: true
   backend_config:
    region: "eu-west-1"
    bucket: "some-bucket"
    key: "random.tfstate"
```



```
 ...

…- name: Deploy basic infrastructure
   cloud.terraform.terraform:
    project_path: '{{ project_dir }}'
    state: present


 …
```

- cloud.terraform is a certified collection and is able to deploy Terraform infrastructure and projects.
- Import existing backends and automate them with Ansible

Resources

- Repository: GitHub
- Automation Hub: cloud.terraform
- Labs: Self-Paced
- Webpage: Ansible vs. Terraform, clarified
- Blogs:
  - Providing Terraform with that Ansible Magic
  - Walking on cloud with Ansible
  - Ansible vs. Terraform Demystified
  - Terraforming clouds with Ansible

Time for Action!

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Thank you

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