## Infra Generation - UI

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### Terraform - CLI

To provision/uplift infra on Cloud Environment using Infrastructure As Code



Terraform Files: (mostly fixed)
\*.tf -> Actual magic happens

Terraform Variables:

variables.tf -> Place holder variables for values
used by \*.tf files



**Terraform Runtime Values:** 

terraform.tfvars -> Runtime values to be sent to 'variables.tf' via this file.

This file will vary based on Application to Application based on input values.



### Terraform - UI



Programs
Terraform scripts

Terraform Files: \*.tf

Variables: variables.tf

Reviews & Authorize to Merge



**REVIEWER** 







RESTful Node Interface

#### Node Program #1

Generates "terraform.tfvars" at run-time based on User Inputs

#### Node Program #2

Combines "\*.tf, variables.tf, terraform.tfvars" and Run terraform commands as per request (i.e, validate, plan, apply..etc) to provision infra.







### UI – Submit : Infra Request

CREATE INFRA REQUEST		
Application Name firstproj	Application CI firstproj	Appln Description  project infra on cloud
Requestor Id  venkat	Attachments NA	
Org Account  vkorg	Region us-east-2	vpc test-vpc-1
Subnet test-subnet-1	CIDR range 10.0.0.0/16	Subnet Zone us-east-2b
Server Stack  EK-Cloud-Ubuntu-Micro ▼	Ports to Open 22,3000,8080,8092	
Environment(s) *	Choose Cloud *	Choose Software Stack *
✓ DEV	✓ AWS	✓ Jdk11
☐ TEST	AZURE	✓ Node9
☐ STAGE	GOOGLE	☐ Jboss 8
☐ PROD	Error goes here	☐ Tomcat 9

### UI – Review : Infra Request

ation Name roj	Application CI firstproj		Appln Description project infra on cloud
stor Id at	Attachments		
DEV			
INFRASTRUCTURE NAME		WAS	NOW
CLOUD		N/A	AWS
REGION		N/A	US-EAST-2
SERVER TAG		N/A	FIRSTPROJ-DEV
SERVER STACK		N/A	T2.MICRO
SERVER AMI		N/A	AMI-05C1FA8DF71875112
SERVER IP RANGE		N/A	10.0.0.0/16
VPC		N/A	TEST-VPC-1
SUBNET		N/A	TEST-SUBNET-1
SUBNET ZONE		N/A	US-EAST-2B
OPENED PORTS		N/A	22,3000,8080,8092
SOFTWARE NAME		WAS	NOW
NODEJS		N/A	NODE9
JAVA		N/A	JDK11
	,		

#### Server – Invoke Terraform APIs & Provision on AWS

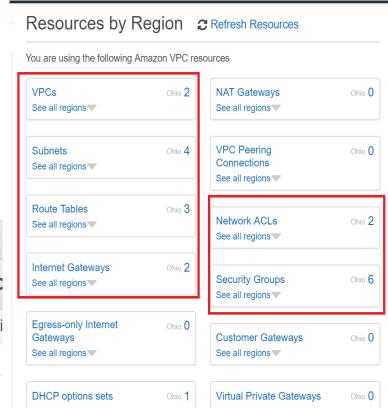
#### **CLI - logs**

```
aws_vpc.vk_trfm_new_vpc: Creation complete after 16s [id=vpc-0dd957c4f0bd82e23]
aws_internet_gateway.vk_test_env_gw: Creating...
aws_subnet.vk_trfm_new_subnet: Creating...
aws_security_group.ingress_application_ports: Creating...
aws_security_group.ingress_ssh_connection: Creating...
aws_subnet.vk_trfm_new_subnet: Creation complete after 4s [id=subnet-0d5f1f1714a027de6]
aws_internet_gateway.vk_test_env_gw: Creation complete after 6s [id=igw-03b948c61c2852512]
aws_route_table.vk_route_table_test_env: Creating...
aws_security_group.ingress_application_ports: Creation complete after 8s [id=sg-025843e9dc96d98fe]
```

#### **EC2 Micro: Provisioned on AWS and tagged as per input-<env>**



Provisioned on AWS - VPCs, Subnets, Routing Tables, Security Groups



# Thanks