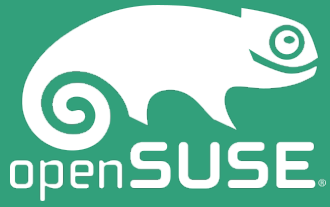

Automate Infrastructure Deployment using Terraform

Easy Ways to Spin up Your openSUSE Machine
on Linode Public Cloud Providers

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Class Objectives

1. Understanding Terraform Concepts
2. Understanding Basic of Terraform Configuration File
3. Understanding How to Provision your Infra using terraform
4. Understanding How to provision and deploy apps using terraform

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- Product Manager at https://www.excellent.co.id
- Student at STMIK Bani Saleh Bekasi
- Geeko Lovers!
- Community Members of openSUSE & openSUSE Indonesia
  - Not a code contributor
  - Organizing openSUSE Translator Meetup ID
  - openSUSE Asia Summit 2016 Volunteer (Yogyakarta, ID)
  - openSUSE Asia Summit 2017 Speaker (Japan)
  - Local Commitee for openSUSE Asia Summit 2019

What is Terraform?

Terraform is …

- A Tool to provisioning your infrastructure as a code
- Just imagine you are consumer of this ...

And then you want to …

- Spin up some machines/instances
- Deploy an application

Why Terraform?

- Terraform is a tool for automation your infrastructure easily
- Auditable, you know what you created and changed
  - You can keep change history in system versioning like Git
- Keep your infrastructure in a certain state
- Terraform can provision your cloud or on-premise infrastructure

Terraform VS Ansible, SaltStack, Chef

Terraform has a focus to provision the infrastructure

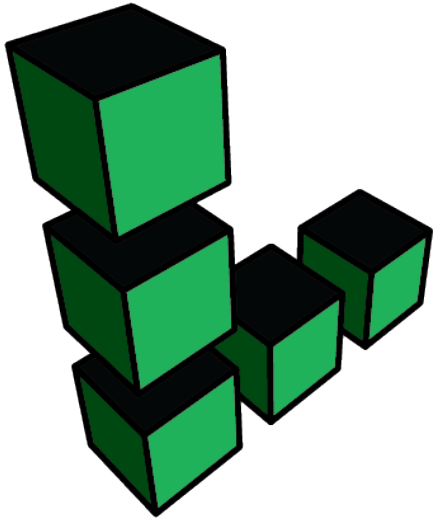
Terraform communicate with provider using API

These tools has a focus to instal, configure and manage the software

These tools communicate with the software using SSH or agent

You can use all of these tools to manage your deployment

And We will collaborate Terraform with ...



linode

Why Linode?

- Officialy support for openSUSE Leap Cloud Images every single release!
- API Support
- Simple management
- Powerfull

< > Before this, make sure you have ..

01 Installing terraform on your PC

02 registered and verified Linode Account

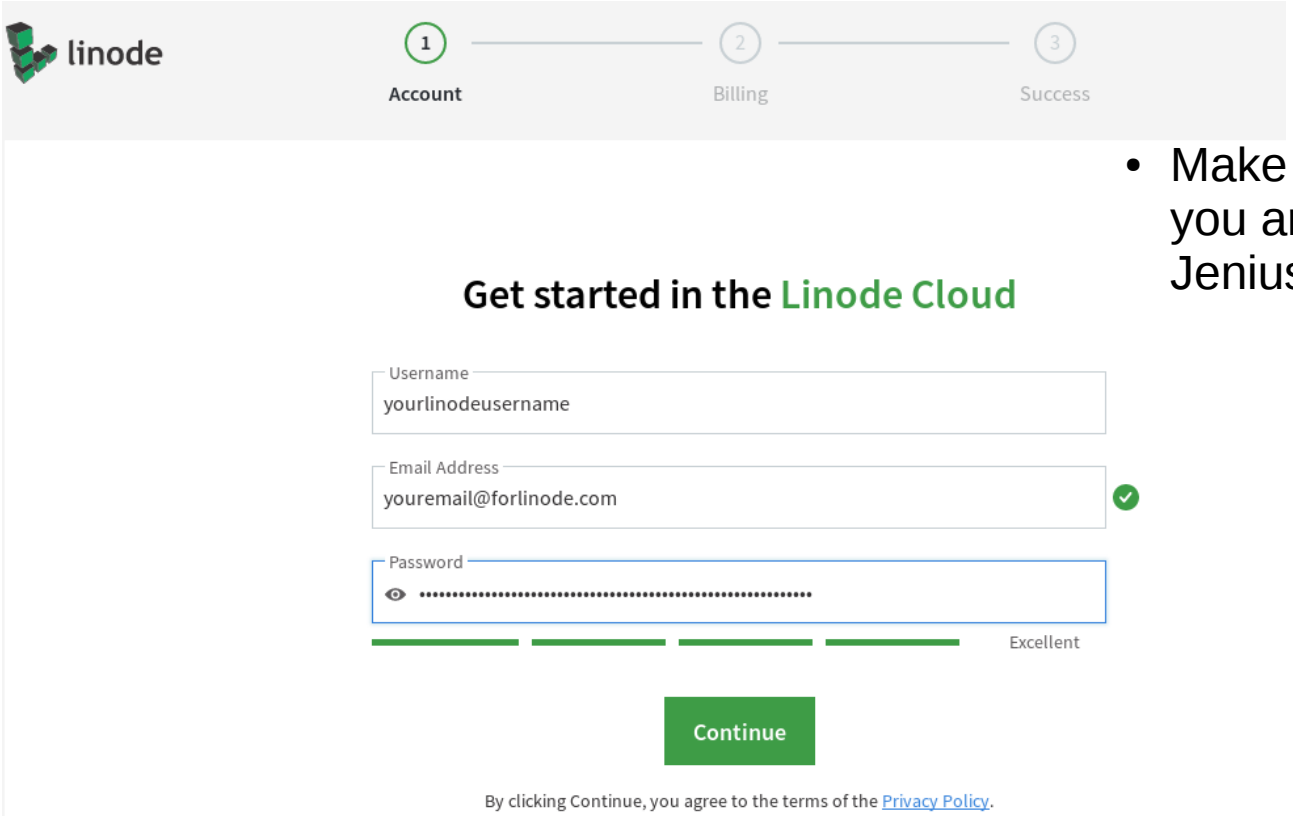
03 You have internet connection

1. Terraform Installation

https://learn.hashicorp.com/terraform/getting-started/install.html

2. Registering Linode Account

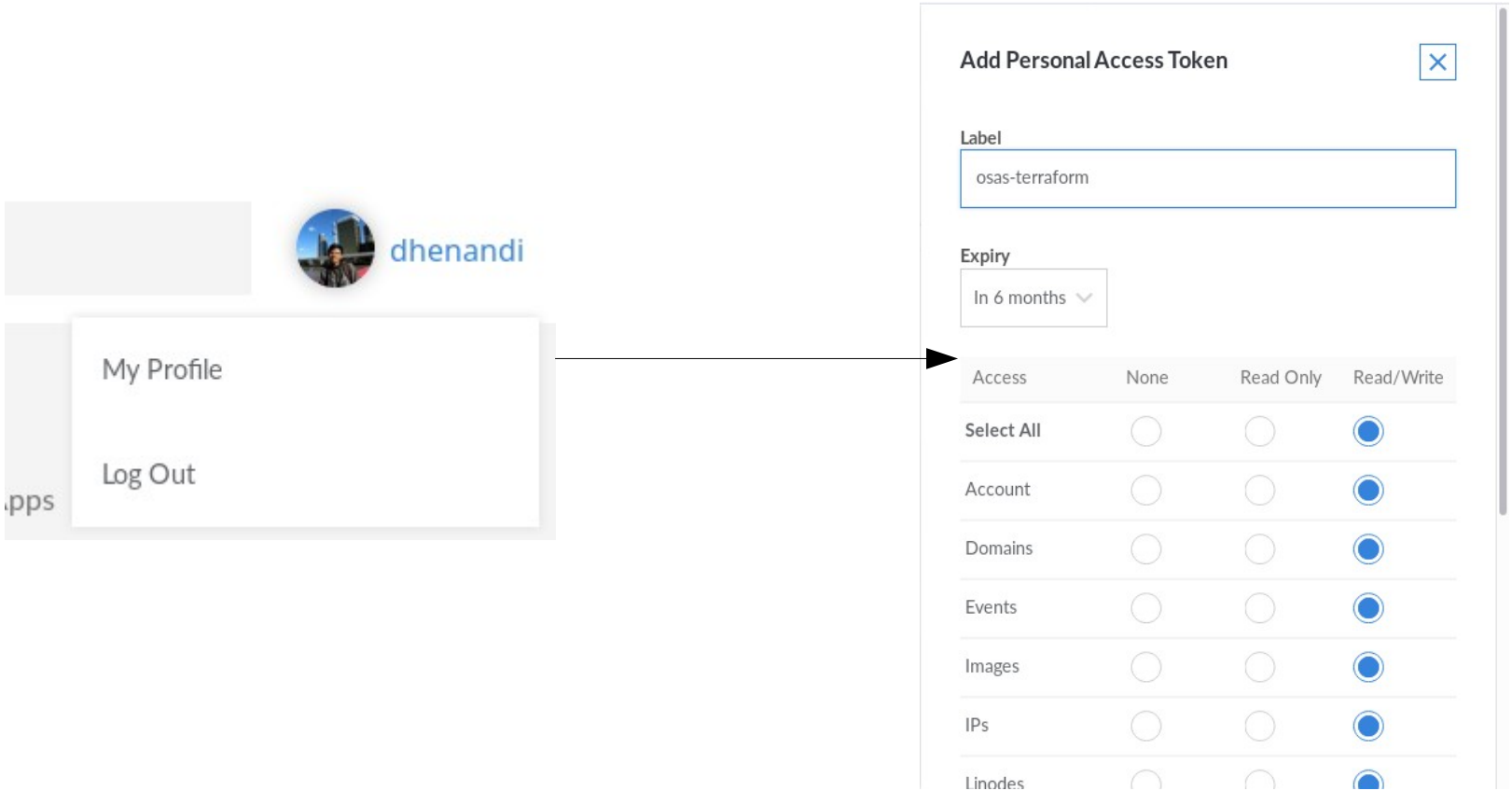
- Navigate to: https://login.linode.com/signup



- Make sure you have a credit card (or if you are Indonesian people you can use Jenius)

Initializing Terraform (Create an API)

- Go to My Profiles | API Token | Create New API with full access



Terraform Syntax

- Define the Provider
- Specify the Resources

```
provider "linode" {
    token = "YOUR TOKEN HERE"
}

1 references
resource "linode_sshkey" "opensusekey" {
    label = "opensuse-asus-pub-key"
    ssh_key = "${chomp(file("~/.ssh/id_rsa.pub"))}"
}
```

Execute!

terraform init
terraform plan
terraform apply

Let’s Hands on!

https://github.com/dhenandi/osas19-terraform