



# HashiTalks

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# Streamlining infrastructure deployment

With **Packer** and **Terraform**

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aws  
certified

**Solutions  
Architect**

PROFESSIONAL

aws  
certified

**DevOps  
Engineer**

PROFESSIONAL

aws  
certified

**Solutions  
Architect**

ASSOCIATE

aws  
certified

**SysOps  
Administrator**

ASSOCIATE

aws  
certified

**Developer**

Associate

aws  
certified

**Security**

SPECIALTY



**Terraform**  
ASSOCIATE

 HashiCorp  
CERTIFIED



# —Agenda

**Infrastructure** Intro

**Creating vs Configure**

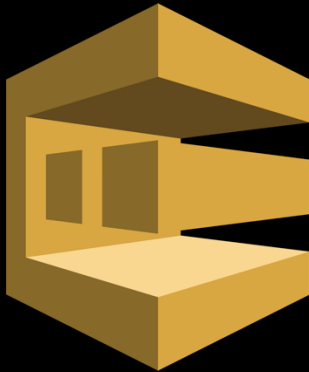
**Terraform** for IaC

**Packer** to Configure

**Streamline it in pipeline**

**Best Practices**

# Infrastructure

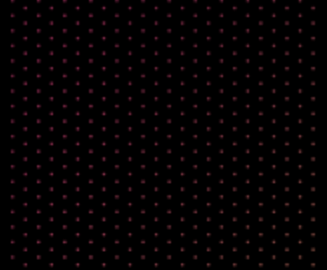


# — **Infra As Code**

**Track your change**

**Quick Replication**

**Automate**





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# Terraform

The bottom right corner of the image features a series of overlapping geometric patterns. These include a grid of small red dots, a series of parallel yellow lines forming a chevron shape, and a grid of small yellow dots. The patterns are set against a black background.

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# Supports Multicloud



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**Not limited to Cloud**

The bottom right corner of the slide features several overlapping geometric patterns. These include a dark blue square with a fine grid of small red dots, a green square with a fine grid of small red dots, and a green square with several parallel diagonal lines. The patterns are arranged in a way that they appear to be layered on top of each other.

## Filters

[Clear Filters](#)

## Tier

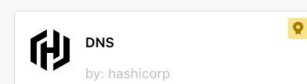
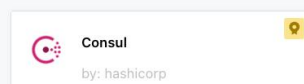
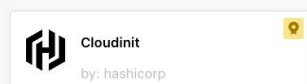
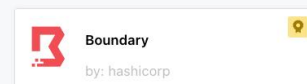
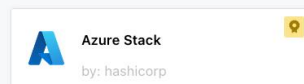
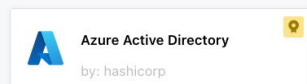
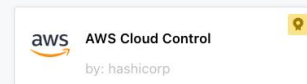
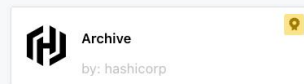
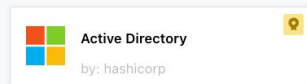
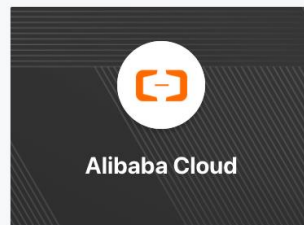
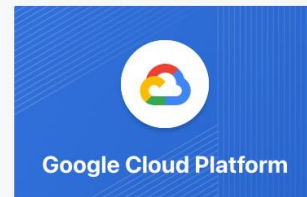
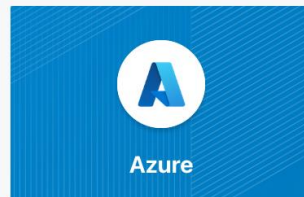
- ☒ Official
- ☒ Partner
- ☒ Community

## Category

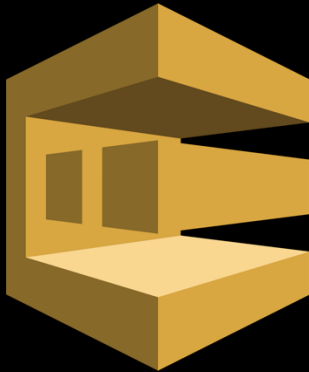
- ☐ HashiCorp Platform
- ☐ Infrastructure Management
- ☐ Public Cloud
- ☐ Asset Management
- ☐ Cloud Automation
- ☐ Communication & Messaging
- ☐ Container Orchestration
- ☐ Continuous Integration/Deployment (CI/CD)
- ☐ Data Management
- ☐ Database
- ☐ Infrastructure (IaaS)
- ☐ Logging & Monitoring
- ☐ Networking
- ☐ Platform (PaaS)
- ☐ Security & Authentication
- ☐ Utility
- ☐ VCS (Version Control)
- ☐ Web Services

## Providers

Providers are a logical abstraction of an upstream API. They are responsible for understanding API interactions and exposing resources.



# Infrastructure



# Infrastructure

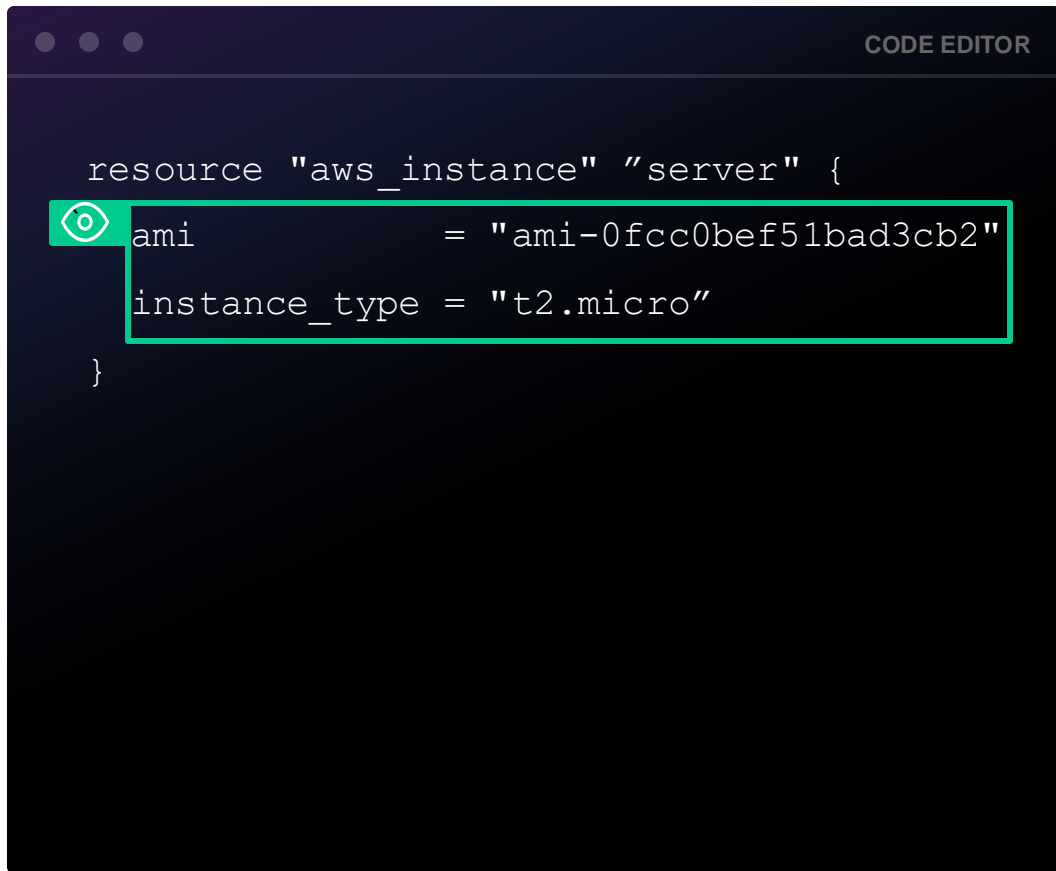


# Infrastructure



Create

Configure



A code editor window with a dark background and three window control buttons in the top-left corner. The text "CODE EDITOR" is in the top-right corner. The code is in a light blue monospace font. A red rectangle highlights the lines `ami = "ami-0fcc0bef51bad3cb2"` and `instance_type = "t2.micro"`. A red icon of an eye with a slash is positioned to the left of the `ami` line.

```
resource "aws_instance" "server" {  
  ami           = "ami-0fcc0bef51bad3cb2"  
  instance_type = "t2.micro"  
}
```



---

# Terraform



CODE EDITOR

```
resource "aws_instance" "server" {  
    ami          = "ami-0fcc0bef51bad3cb2"  
    instance_type = "t2.micro"  
}  
  
provider "aws" {  
    region = "eu-west-1"  
}  
  
terraform {  
    required_providers {  
        aws = {  
            source = "hashicorp/aws"  
            version = "5.76.0"  
        }  
    }  
}
```



---

# Terraform

```
CODE EDITOR

resource "aws_instance" "server" {
    ami          = "ami-0fcc0bef51bad3cb2"
    instance_type = "t2.micro"
    user_data = . . . .
}

provider "aws" {
    region = "eu-west-1"
}

terraform {
    required_providers {
        aws = {
            source = "hashicorp/aws"
            version = "5.76.0"
        }
    }
}
```



# Terraform

---

# Demo

The bottom right corner of the slide features a series of overlapping geometric patterns. These include a grid of small red dots, a grid of small yellow dots, and several sets of parallel lines in red and yellow, some of which form a chevron shape.

CODE EDITOR

```
user_data = <<-EOF
#!/bin/bash
yum update -y
yum install -y httpd
systemctl start httpd
systemctl enable httpd
echo "Hello, Apache is running!" >
/var/www/html/index.html
EOF
```



---

# User Data

CODE EDITOR

```
user_data = <<-EOF
```

```
#!/bin/bash
```

```
yum update -y
```

```
yum install -y httpd
```

```
systemctl start httpd
```

```
systemctl enable httpd
```

```
echo "Hello, Apache is running!" >
```

```
/var/www/html/index.html
```

```
EOF
```



# User Data

CODE EDITOR

```
user_data = <<-EOF
```

```
#!/bin/bash
```

```
yum update -y
```

```
yum install -y httpd
```

```
systemctl start httpd
```

```
systemctl enable httpd
```

```
echo "Hello, Apache is running!" >
```

```
/var/www/html/index.html
```

```
EOF
```



---

# User Data

---

# Packer

The bottom right corner of the image features a series of overlapping geometric patterns. These include a grid of small red dots, a series of parallel yellow lines forming a chevron shape, and a pattern of yellow lines forming a series of nested triangles. The patterns are set against a black background.

CODE EDITOR

```
packer {  
  required_plugins {  
    amazon = {  
      version = ">= 1.2.8"  
      source  =  
"github.com/hashicorp/amazon"  
    }  
  }  
}
```



---

# Packer



CODE EDITOR

```
source "amazon-ebs" "ubuntu" {  
  ami_name      = "vasan-packer"  
  instance_type = "t2.micro"  
  region        = "us-west-2"  
  source_ami_filter {  
    filters = {  
      name      = "ubuntu/images/*ubuntu-jammy-22.04-  
amd64-server-*"  
      root-device-type = "ebs"  
      virtualization-type = "hvm"  
    }  
    most_recent = true  
    owners      = ["099720109477"]  
  }  
  ssh_username = "ubuntu"  
}
```



---

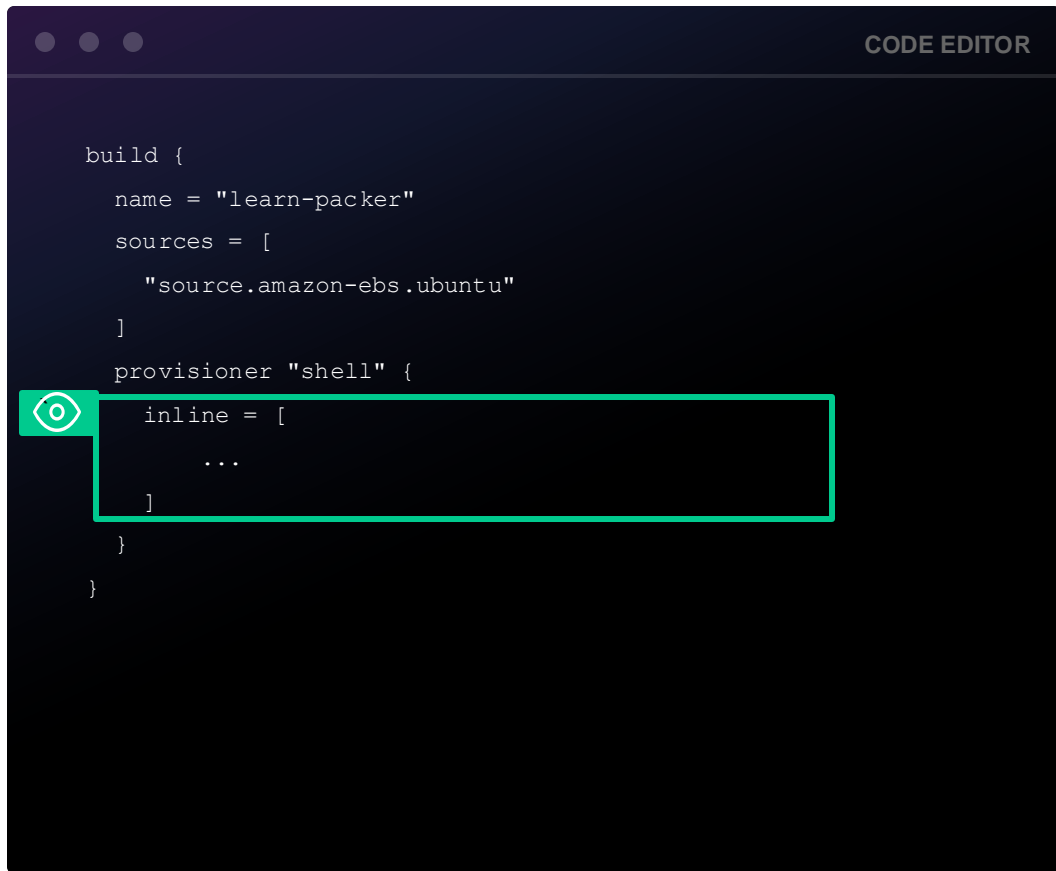
# Packer

CODE EDITOR

```
source "amazon-ebs" "ubuntu" {  
  ami_name      = "vasan-packer"  
  instance_type = "t2.micro"  
  region        = "us-west-2"  
  source_ami_filter {  
    filters = {  
      name      = "ubuntu/images/*ubuntu-jammy-22.04-  
amd64-server-*"  
      root-device-type = "ebs"  
      virtualization-type = "hvm"  
    }  
    most_recent = true  
    owners      = ["099720109477"]  
  }  
  ssh_username = "ubuntu"  
}
```



# Packer



A code editor window with a dark theme. The title bar shows three window control buttons on the left and the text "CODE EDITOR" on the right. The code is a Packer build configuration for a learn-packer image using an Amazon EBS Ubuntu source and a shell provisioner. A red rectangle highlights the inline array within the shell provisioner, and a red icon with a magnifying glass is positioned to its left.

```
build {  
  name = "learn-packer"  
  sources = [  
    "source.amazon-ebs.ubuntu"  
  ]  
  provisioner "shell" {  
    inline = [  
      ...  
    ]  
  }  
}
```



---

# Packer

CODE EDITOR

```
user_data = <<-EOF
```

```
#!/bin/bash
```

```
yum update -y
```

```
yum install -y httpd
```

```
systemctl start httpd
```

```
systemctl enable httpd
```

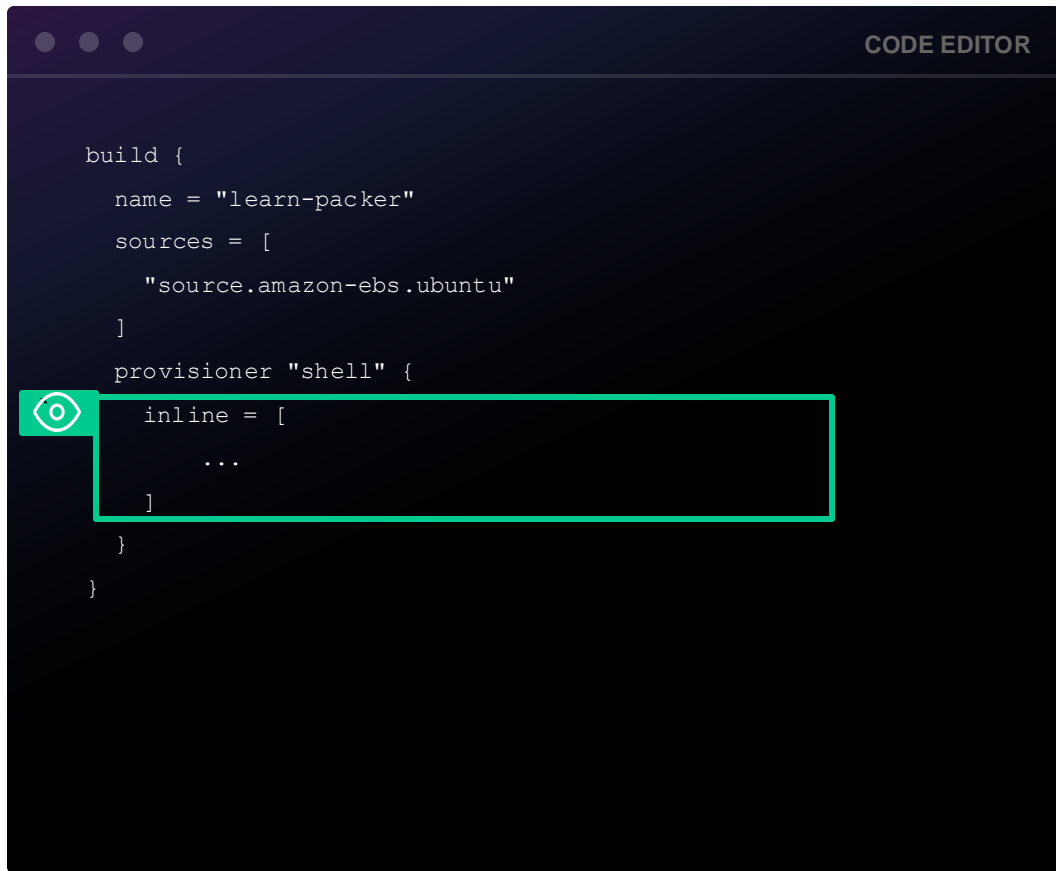
```
echo "Hello, Apache is running!" >
```

```
/var/www/html/index.html
```

```
EOF
```



# User Data



A code editor window with a dark theme. The title bar on the right says "CODE EDITOR". The code is a Packer build configuration. A green box highlights the `inline` array within the `provisioner "shell"` block. A green icon with an eye symbol is on the left side of the editor, next to the highlighted section.

```
build {  
  name = "learn-packer"  
  sources = [  
    "source.amazon-ebs.ubuntu"  
  ]  
  provisioner "shell" {  
    inline = [  
      ...  
    ]  
  }  
}
```



---

# Packer

CODE EDITOR

```
build {  
  name = "learn-packer"  
  sources = [  
    "source.amazon-ebs.ubuntu"  
  ]  
  provisioner "shell" {  
    inline = [  
      "yum update -y",  
      "yum install -y httpd",  
      "echo 'Hello, Apache is running!' > /var/www/html/index.html"  
    ]  
  }  
}
```



---

# Packer

---

# Demo

The bottom right corner of the slide features a series of overlapping geometric patterns. These include a grid of small red dots, a grid of small yellow dots, and several sets of parallel lines in red and yellow, some forming a chevron shape. The patterns are set against a black background.

# — Best Practices

Keep AMI **Centralised**

To avoid issues **Containerise** your ami process

Use **Tags** on resources for **cost tracking**

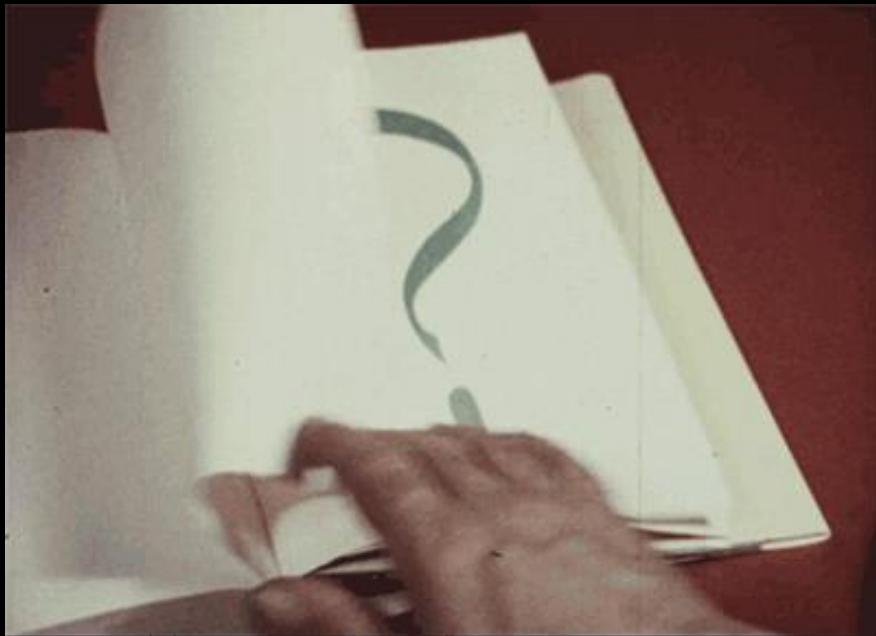
Follow **DRY**



<https://github.com/evidhai/infra-streamline/>



# Questions





**AWS**  
community  
builder



**Keerthivasan Kannan**   
(He/Him)  
Senior Cloud & Devops Engineer | AWS  
Community Builder | 6x AWS Certified |  
Terraform Associate Certified

 Mindera  
 Sri Ramakrishna  
Engineering...

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**THANK YOU**

The bottom right corner of the slide features several overlapping geometric patterns. These include a grid of small red dots, a series of parallel yellow lines forming a chevron shape, and a pattern of parallel yellow lines. The patterns are set against a black background.

# Keerthivasan Kannan

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