Terraform Actions in Action

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New in

Terraform 1.14

```
$ terraform version
Terraform v1.14.0
```

Terraform Core Workflow

Before Terraform 1.14

CREATE
READ
UPDATE
DELETE
+ resource "aws_s3_bucket" "demo" {
+ bucket_prefix = "demo"
+
+ tags = {
+ ManagedBy = "terraform"
+ Owner = "HUG"
+ }
+ }

Terraform workflow

External workflow/action

Terraform workflow

```
resource "terraform_data" "arbitrary_script" {
  provisioner "local-exec" {
    working_dir = "${path.module}/scripts"
    command     = "./arbitrary-script.sh"
  }
}
```

```
#!/bin/sh

aws s3 mb s3://demo-bucket-12345
aws s3 cp data.txt s3://demo-bucket-12345/
aws ec2 run-instances \
  --image-id ami-0123456789abcdef0 \
  --instance-type c5.4xlarge \
  --count 100
aws dynamodb create-table \
```

Terraform Core Workflow

After Terraform 1.14

`with Terraform Actions`

> Actions are preset operations built into providers that let Terraform perform day-two operations.

Terraform Actions

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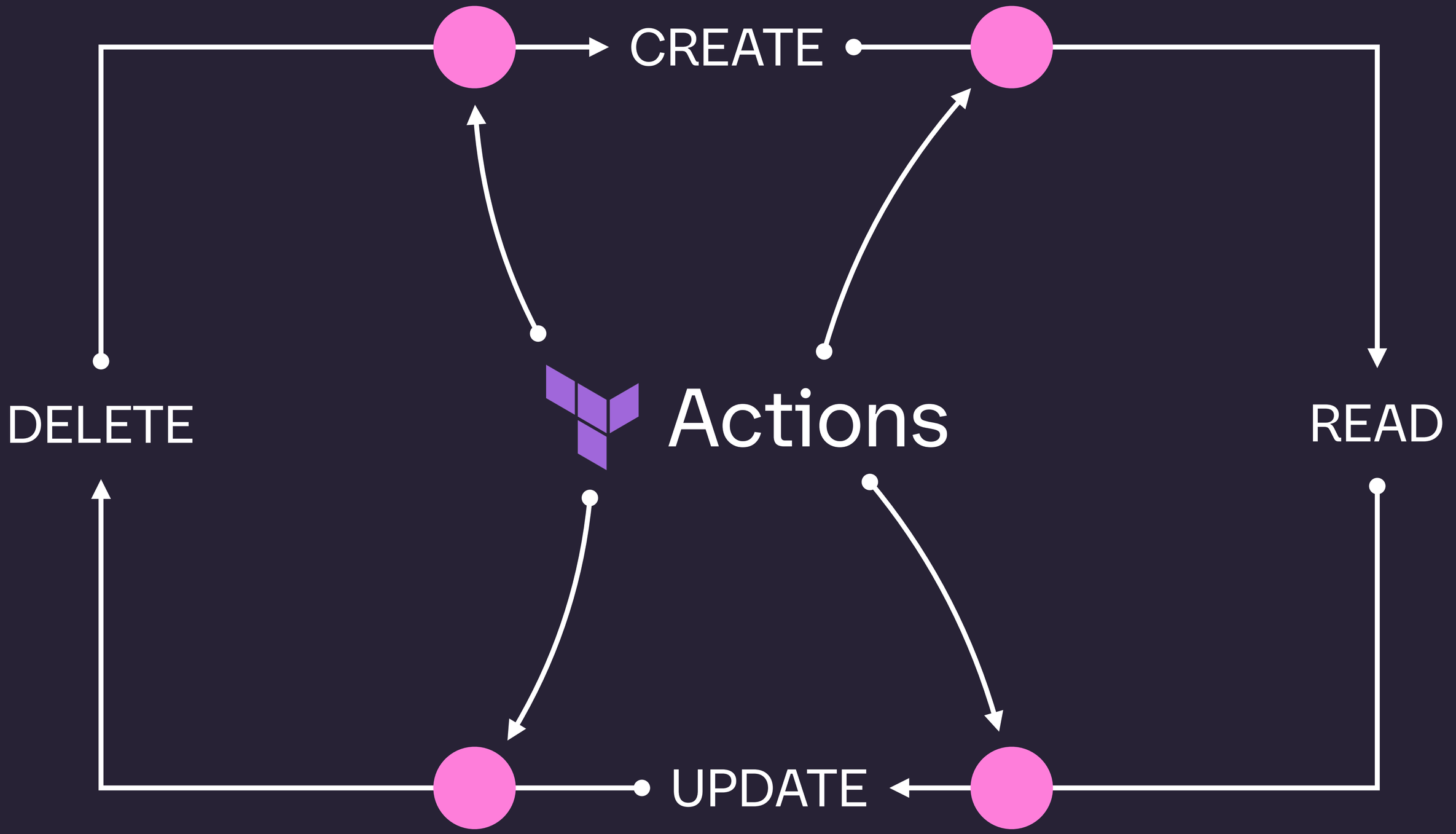
GitHub Actions


CREATE
READ
UPDATE
DELETE
Actions

```
action "<type>" "<name>" {
  config {
    # ...
  }
}
```

```
action "aws_lambda_invoke" "slack" {
  config {
    function_name = "terraform-actions-slack"

    payload = jsonencode({
      blocks = [
        {
          type = "section",
          text = {
            type = "mrkdwn",
            text = "👋 Hello world!"
          }
        }
      ]
    })
  }
}
```

```
resource "aws_instance" "servers" {
  ami           = data.aws_ami.ubuntu.id
  instance_type = "t3.medium"

  lifecycle {
    action_trigger {
      actions   = [action.aws_lambda_invoke.slack]
      events    = [
        after_create,
        after_update
      ]
    }
  }
}
```