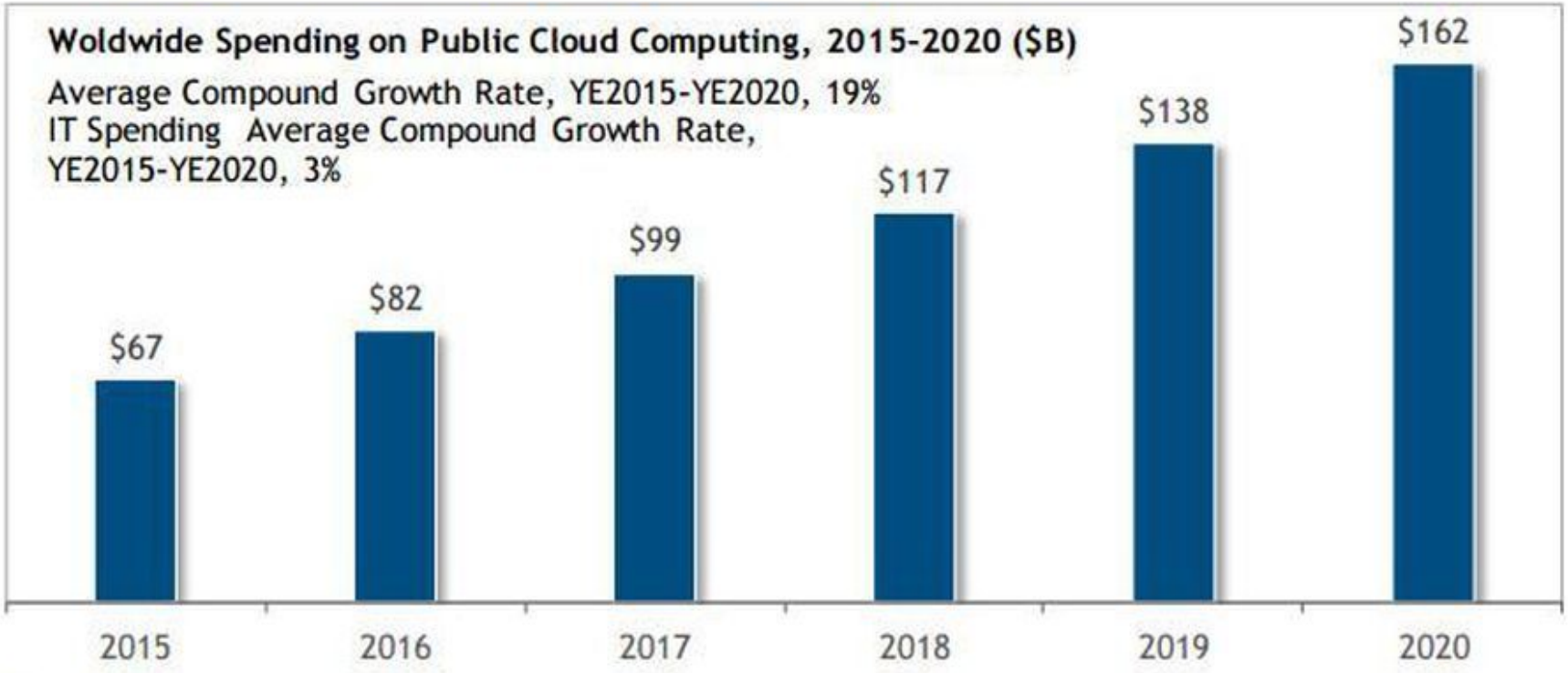
HashiCorp

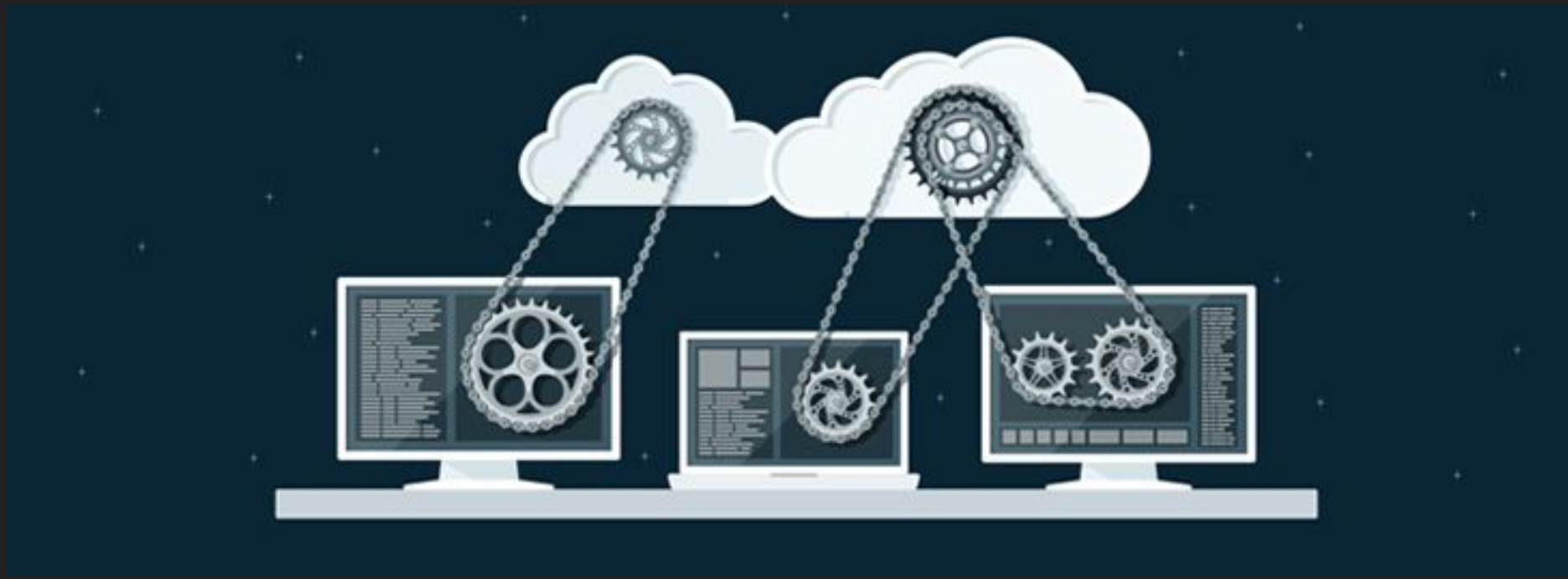
Terraform

The Rapid Growth of Cloud Computing, 2015-2020



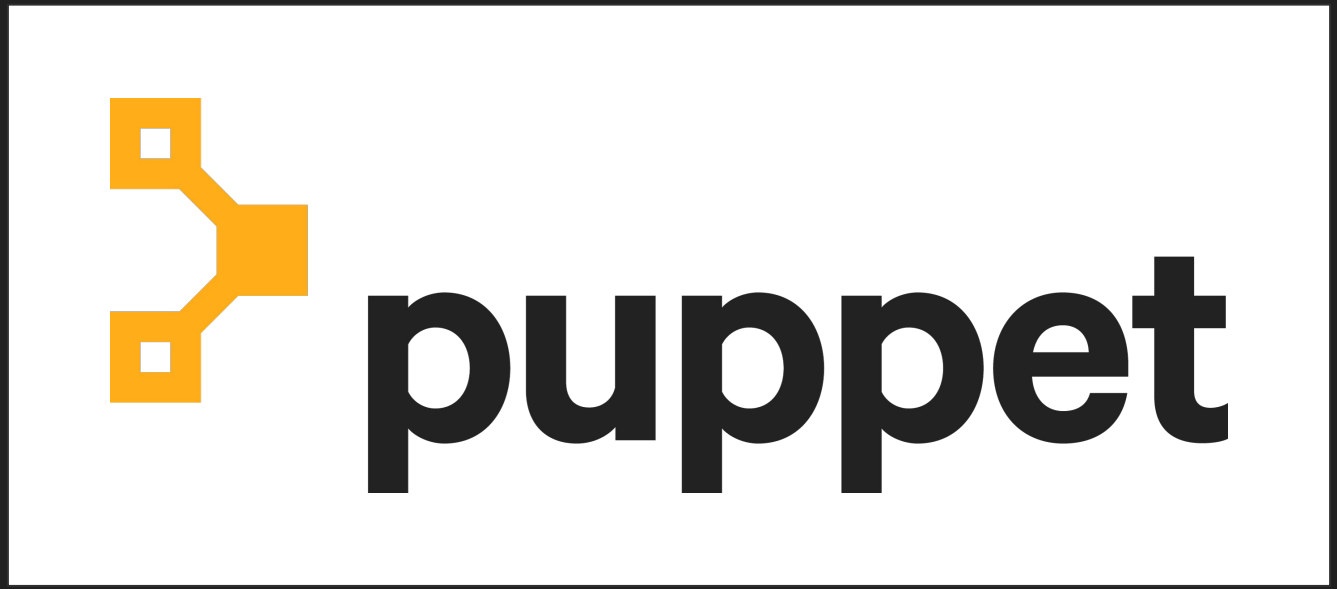
Source: IDC, 2016

Cloud Growth by Segment & Market Leaders
Cloud Infrastructure Services
Other Cloud Services
Infrastructure Hardware & Software
IaaS & PaaS
Amazon
Microsoft
Hosted Private Cloud
IBM
Rackspace
Enterprise SaaS
Microsoft
Salesforce
UCaaS
Cisco
Citrix
Public Cloud
Cisco
HPE
Private Cloud
HPE
Dell EMC
0%
10%
20%
30%
40%
50%
Annualized Revenue Growth - Q3 2016
Source: Synergy Research Group

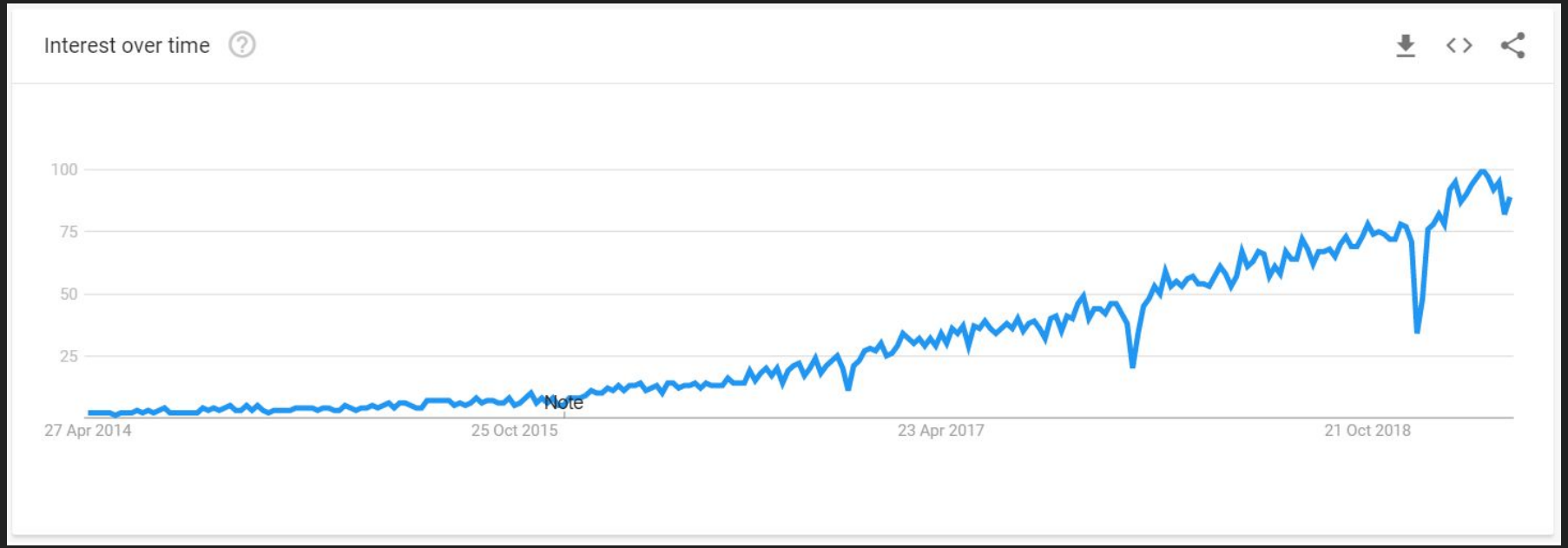


Could automation and Cloud orchestration

ANSIBLE

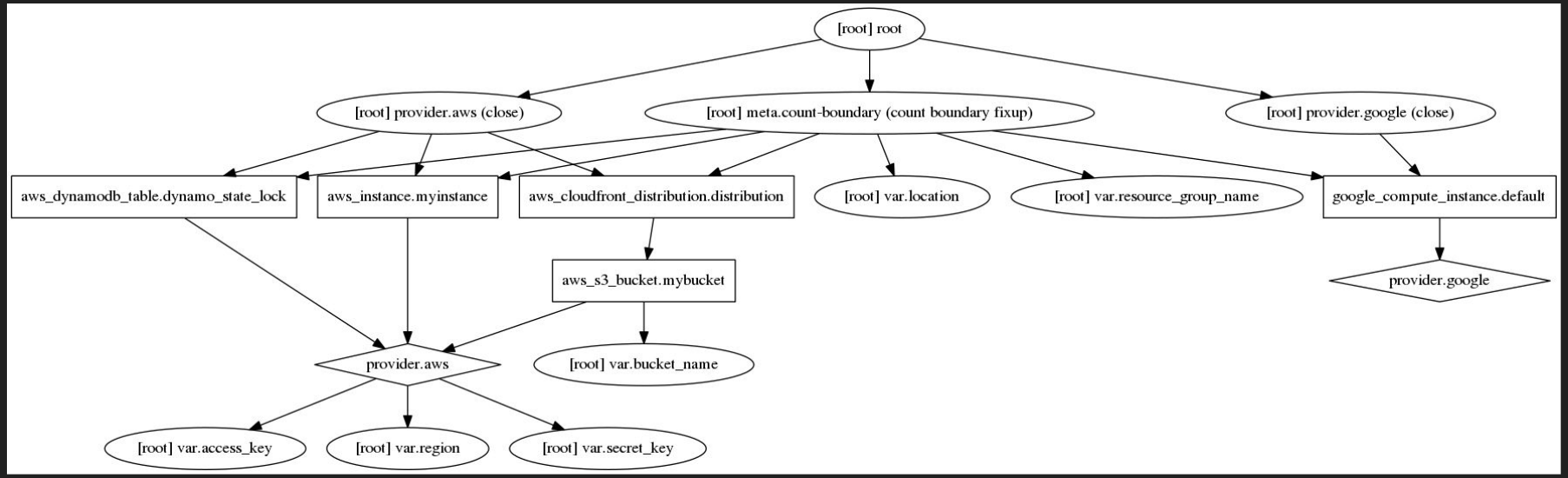

puppet

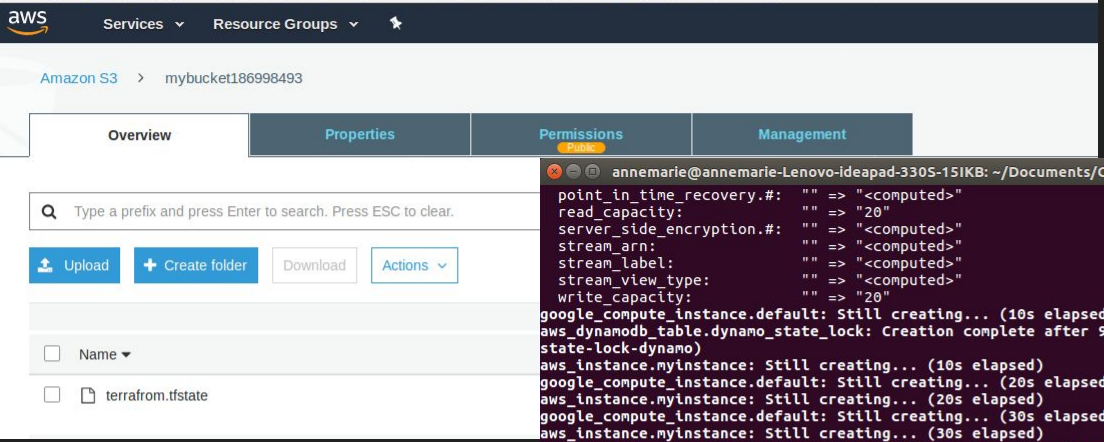
HashiCorp
Terraform

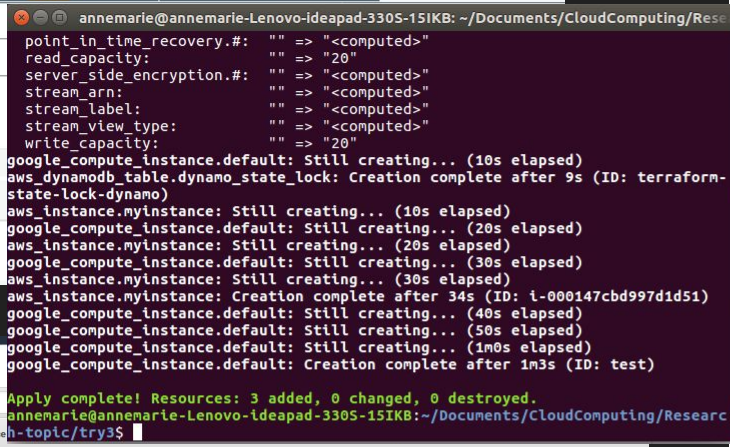

Interest over time
100
75
50
25
Note
27 Apr 2014
25 Oct 2015
23 Apr 2017
21 Oct 2018

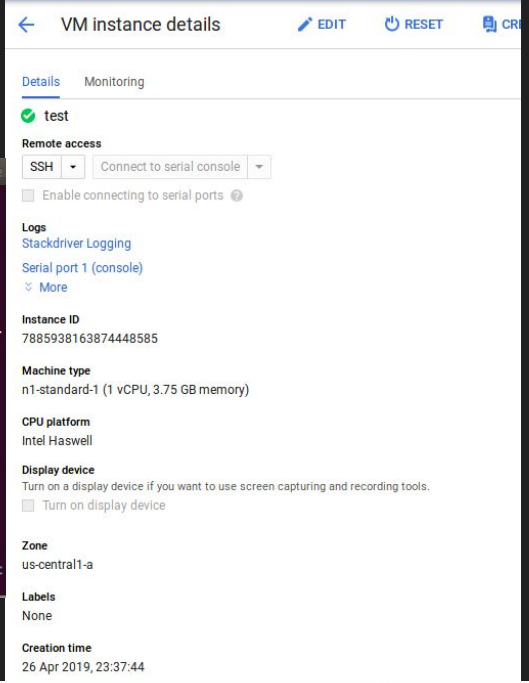
Example: Simple Webservice (part 1)

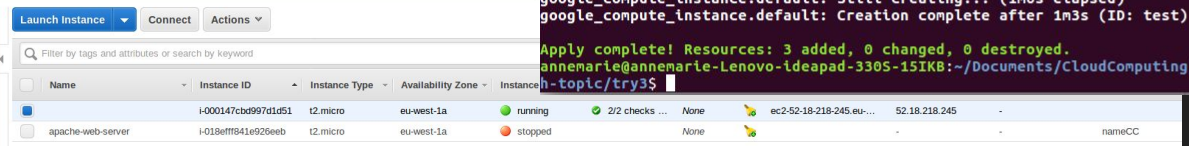
```
### AWS Setup
provider "aws" {
  profile = "${var.aws_profile}"
  region  = "${var.aws_region}"
}

# Queue
resource "aws_sqs_queue" "importqueue" {
  name = "${var.app_name}-${var.aws_region}-importqueue"
}

# Storage
resource "aws_s3_bucket" "importdisk" {
  bucket = "${var.app_name}-${var.aws_region}-importdisk"
  acl    = "private"
}
```

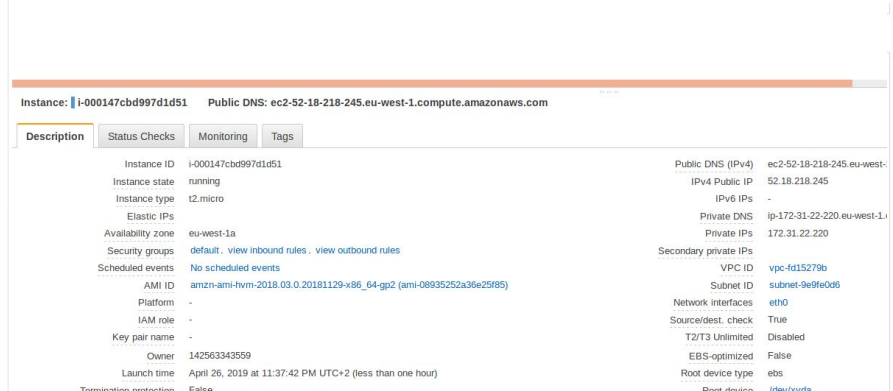

[root] root
[root] provider.aws (close)
[root] meta.count-boundary (count boundary fixup)
[root] provider.google (close)
aws_dynamodb_table.dynamo_state_lock
aws_instance.myinstance
aws_cloudfront_distribution.distribution
[root] var.location
[root] var.resource_group_name
google_compute_instance.default
aws_s3_bucket.mybucket
provider.google
provider.aws
[root] var.bucket_name
[root] var.access_key
[root] var.region
[root] var.secret_key


aws
Services
Resource Groups
Amazon S3 > mybucket186998493
Overview
Properties
Permissions
Public
Management
Type a prefix and press Enter to search. Press ESC to clear.
Upload
Create folder
Download
Actions
Name
terrafrom.tfstate

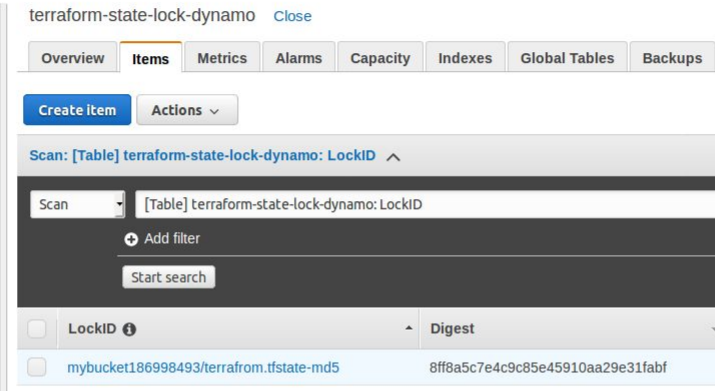

annemarie@annemarie-Lenovo-ideapad-330S-15IKB: ~/Documents/CloudComputing/Rese
point_in_time_recovery.#: "" => "<computed>"
read_capacity: "" => "20"
server_side_encryption.#: "" => "<computed>"
stream_arn: "" => "<computed>"
stream_label: "" => "<computed>"
stream_view_type: "" => "<computed>"
write_capacity: "" => "20"
google_compute_instance.default: Still creating... (10s elapsed)
aws_dynamodb_table.dynamo_state_lock: Creation complete after 9s (ID: terraform-state-lock-dynamo)
aws_instance.myinstance: Still creating... (10s elapsed)
google_compute_instance.default: Still creating... (20s elapsed)
aws_instance.myinstance: Still creating... (20s elapsed)
google_compute_instance.default: Still creating... (30s elapsed)
aws_instance.myinstance: Still creating... (30s elapsed)
aws_instance.myinstance: Creation complete after 34s (ID: i-000147cbd997d1d51)
google_compute_instance.default: Still creating... (40s elapsed)
google_compute_instance.default: Still creating... (50s elapsed)
google_compute_instance.default: Still creating... (1m0s elapsed)
google_compute_instance.default: Creation complete after 1m3s (ID: test)
Apply complete! Resources: 3 added, 0 changed, 0 destroyed.
annemarie@annemarie-Lenovo-ideapad-330S-15IKB:~/Documents/CloudComputing/Researc
h-topic/try3$


VM instance details
EDIT
RESET
Details
Monitoring
test
Remote access
SSH
Connect to serial console
Enable connecting to serial ports
Logs
Stackdriver Logging
Serial port 1 (console)
More
Instance ID
7885938163874448585
Machine type
n1-standard-1 (1 vCPU, 3.75 GB memory)
CPU platform
Intel Haswell
Display device
Turn on a display device if you want to use screen capturing and recording tools.
Turn on display device
Zone
us-central1-a
Labels
None
Creation time
26 Apr 2019, 23:37:44


Launch Instance
Connect
Actions
Filter by tags and attributes or search by keyword
Name
Instance ID
Instance Type
Availability Zone
i-000147cbd997d1d51
t2.micro
eu-west-1a
running
2/2 checks ...
apache-web-server
i-018efff841e926eeb
stopped


Instance: i-000147cbd997d1d51
Public DNS: ec2-52-18-218-245.eu-west-1.compute.amazonaws.com
Description
Status Checks
Monitoring
Tags
Instance ID
Instance state
Instance type
Elastic IPs
Availability zone
Security groups
Scheduled events
AMI ID
Platform
IAM role
Key pair name
Owner
Launch time
Public DNS (IPv4)
IPv4 Public IP
IPv6 IPs
Private DNS
Private IPs
Secondary private IPs
VPC ID
Subnet ID
Network interfaces
Source/dest. check
T2/T3 Unlimited
EBS-optimized
Root device type

Create table
Delete table
Filter by table name
Name
gsg-signup-table
terraform-state-lock-dynamo


terraform-state-lock-dynamo
Close
Overview
Items
Metrics
Alarms
Capacity
Indexes
Global Tables
Backups
Create item
Actions
Scan: [Table] terraform-state-lock-dynamo: LockID
Scan
[Table] terraform-state-lock-dynamo: LockID
Add filter
Start search
LockID
Digest
mybucket186998493/terrafrom.tfstate-md5
8ff8a5c7e4c9c85e45910aa29e31fabf