

#### BootCamp AWS - Module 5

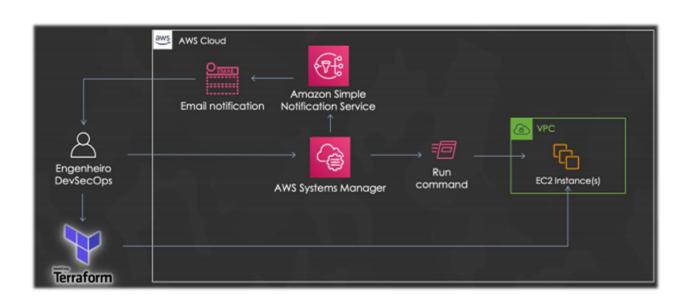
In this project you will act as a DevSecOps Engineer.

You received the requirement to implement a set of EC2 Instances in an automated way.

Also as part of the DevSecOps team you must install a specific security agent used by the company that will run in an automated way in all this Instances.



# **BootCamp AWS - Module 5 - Architecture**





#### **BootCamp AWS - Module 5 - Terraform**

```
EXPLORER: TERRAFORM
                   C E C E …
                                       w main.tf
> .terraform
                                         🦖 main.tf > 😭 resource "aws_instance" "webserver2"
                                                #Get Ubuntu AMI
> conf
                                               data "aws_ami" "ubuntu" {
most recent = true
■ M3KEY

■ M3KEY.pub

                                                 filter {
main.tf
🚏 outputs.tf
                                                   values = ["ubuntu/images/hvm-ssd/ubuntu
parameters.tf
terraform.tfstate
                                                 filter {

    ■ terraform.tfstate.backup

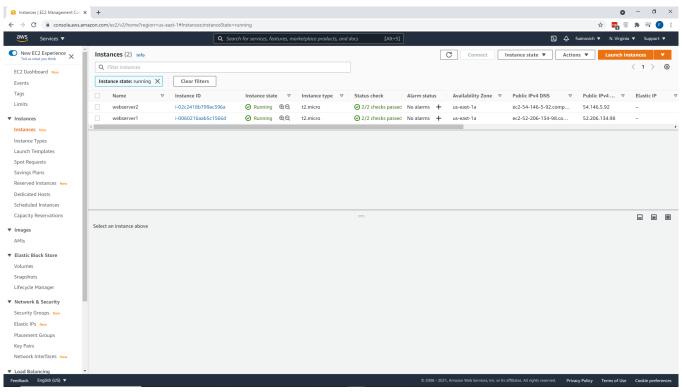
                                                   name = "virtualization-type"
👺 tfvars.tf
                                                   values = ["hvm"]
                                                 owners = ["099720109477"] # Canonical
                                               resource "aws_vpc" "VPC_BOOTCAMP1" {
                                                 cidr block = "10.1.0.0/16"
                                                 enable dns hostnames = true
                                                   Name = "VPC BOOTCAMP"
```

#### **IaC** with Terraform:

- Get ubuntu AMI;
- Create VPC and Subnet;
- Internet Gateway and Routing Table;
- Security Group;
- Role for SSM access SNS;
- SNS topic and subscription;
- EC2 Instances;

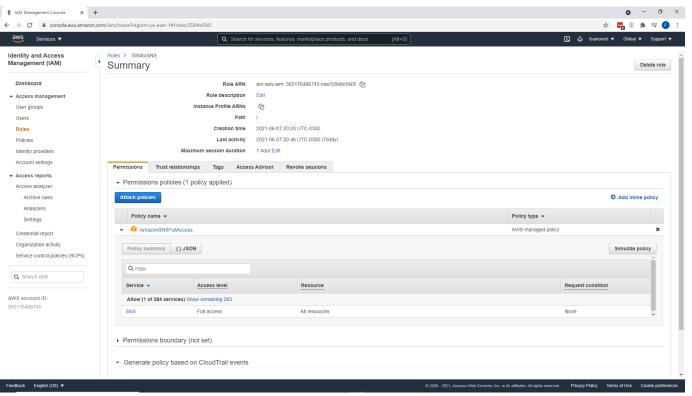


# BootCamp AWS - Module 5 - EC2 Instances



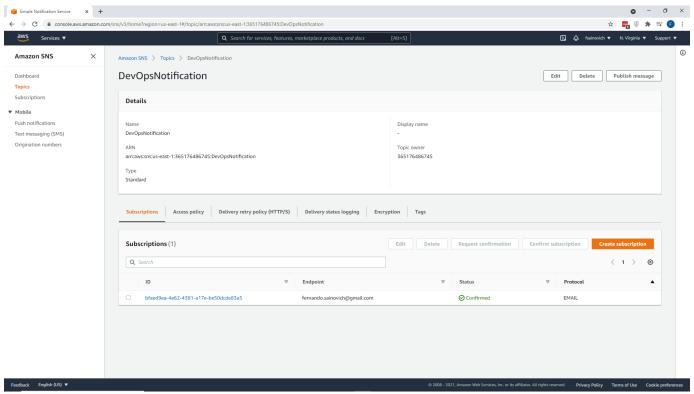


# BootCamp AWS - Module 5 - Role SSMtoSNS



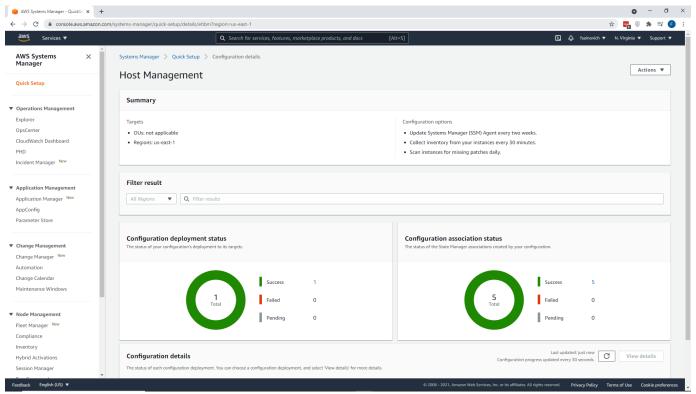


# **BootCamp AWS - Module 5 - Topic and Subscription**



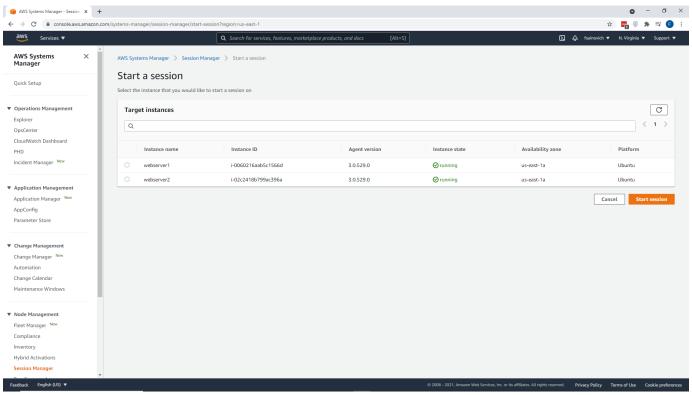


# BootCamp AWS - Module 5 - SSM Host Association



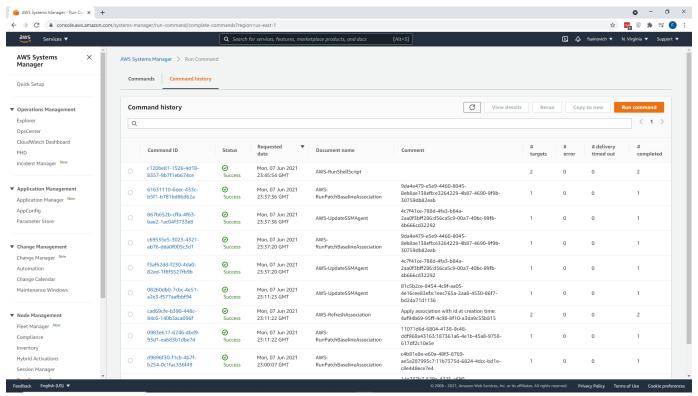


# BootCamp AWS - Module 5 - SSM Session Manager



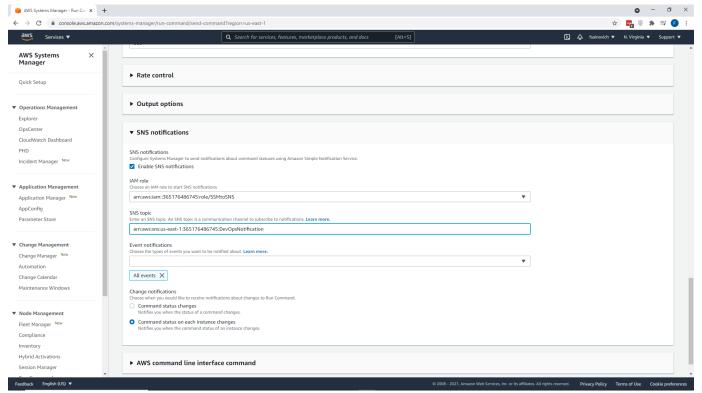


# BootCamp AWS - Module 5 - SSM Run Command



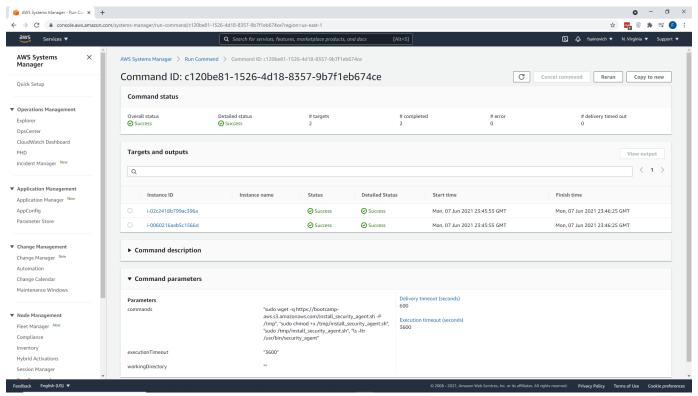


# BootCamp AWS - Module 5 - SSM Run to SNS Topic



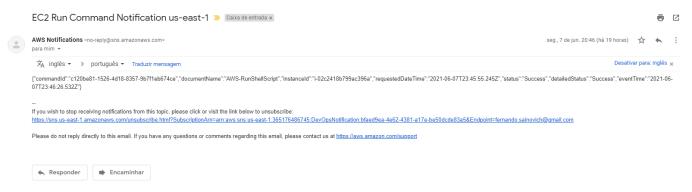


## BootCamp AWS - Module 5 - SSM Run Result



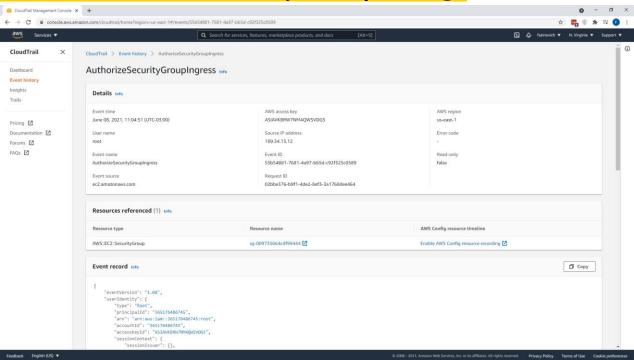


## BootCamp AWS - Module 5 - SSM Run Result - E-mail



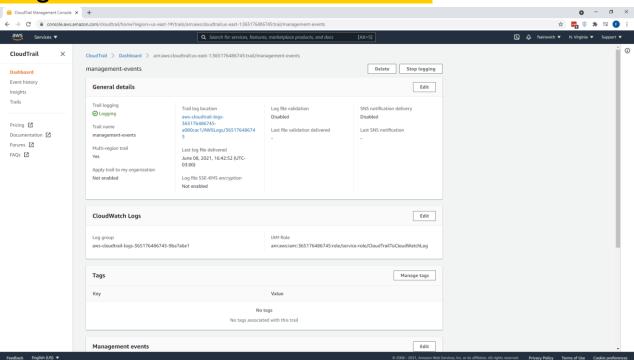


## **CloudTrail Audit - Security Group change**



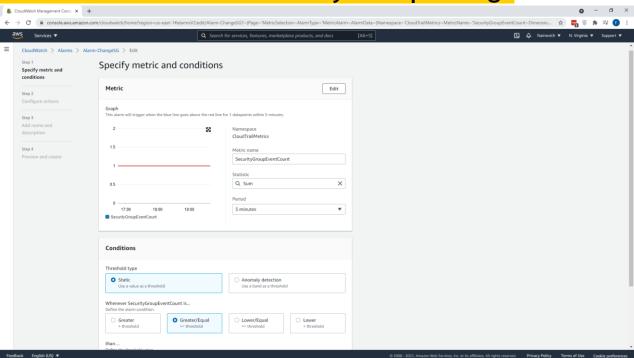


# Integrate CloudTrail with CloudWatch



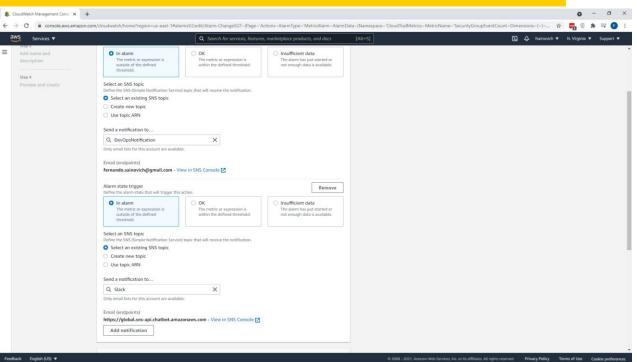


CloudWatch alarm on Security Group change



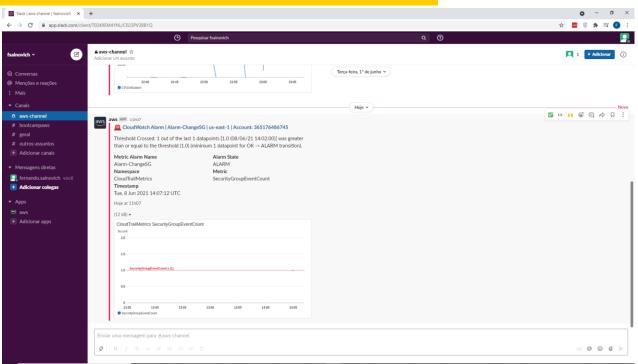


#### CloudWatch alarm notification - Slack and E-mail



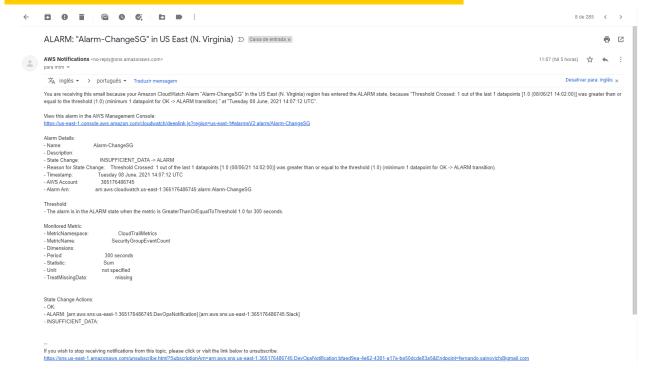


#### CloudWatch alarm notification - Slack





#### CloudWatch alarm notification - E-mail





#### BootCamp AWS - Module 5 - Github REPO

https://github.com/fsainovich/tcb-aws-m5