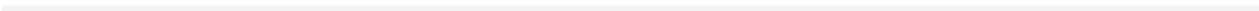


# GET HANDS-ON & LEARN BEST PRACTICES FOR AWS DATA MIGRATIONS



# OVERVIEW

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The prospect of moving data workloads to the cloud can be daunting, so can trying to make sense of the array of tools, protocols, and mechanisms available to move data into AWS.

**Objective of workshop** - Get hands on experience in transferring data at scale using the available AWS online & hybrid services, where you will copy 10,000 local small files to Amazon S3, using AWS File Gateway.

## CLIENT REQUIREMENTS

**AWS account** – you will need an AWS account to deploy & run this workshop

**Browser** – It is recommended that you use the latest version of Chrome or Firefox

**Remote Desktop Client** - You will need a RDP client to logon to the Windows EC2 instance (Windows RDP)

**Key Pair** – You will need a valid EC2 Key Pair in the AWS region you choose for your workshop (US-EAST-1 N.Virginia). Instructions are provided in this workshop on generating and downloading an EC2 Key Pair.

## WORKSHOP MODULES

This workshop encompasses 2 modules

**Module 1** - Deploy resources

**Module 2** - AWS File Gateway

# MODULE 1: DEPLOY RESOURCES

## INTRODUCTION

In this module you will firstly deploy the base AWS VPC network environment via the first CloudFormation template, then using the second CloudFormation template deploy the workshop resources into the **US-EAST-1 (N.VIRGINIA)** region which contains the following:

- 1 x Windows instance (used as the access machine for the workshop)
- 1 x Linux Instance (used to perform the data migrations)

## LOG INTO AWS CONSOLE

1. From your local workstation, open a web browser and go to the following URL <https://dashboard.eventengine.run/login>
2. In the Textbox, input the 12 character Hash given to you by the organizers.

Event Engine - Team Dashboard x +

← → ↻ dashboard.eventengine.run/login ☆ 🔍 📱 📺 📖 📄 📌 📎 📏 📐 📑 📔 📕 📖 📗 📙 📚 📛 📞 📠 📡 📢 📣 📤 📥 📦 📧 📨 📩 📪 📫 📬 📭 📮 📯 📰 📱 📲 📳 📴 📵 📶 📷 📸 📹 📺 📻 📼 📽 📾 📿 📠 📡 📢 📣 📤 📥 📦 📧 📨 📩 📪 📫 📬 📭 📮 📯 📰 📱 📲 📳 📴 📵 📶 📷 📸 📹 📺 📻 📼 📽 📾 📿

Who are you?

Terms & Conditions:

1. By using the Event Engine for the relevant event, you agree to the Event Terms and Conditions and the AWS Acceptable Use Policy. You acknowledge and agree that are using an AWS-owned account that you can only access for the duration of the relevant event. If you find residual resources or materials in the AWS-owned account, you will make us aware and cease use of the account. AWS reserves the right to terminate the account and delete the contents at any time.
2. You will not: (a) process or run any operation on any data other than test data sets or lab-approved materials by AWS, and (b) copy, import, export or otherwise create derivate works of materials provided by AWS, including but not limited to, data sets.
3. AWS is under no obligation to enable the transmission of your materials through Event Engine and may, in its discretion, edit, block, refuse to post, or remove your materials at any time.
4. Your use of the Event Engine will comply with these terms and all applicable laws, and your access to Event Engine will immediately and automatically terminate if you do not comply with any of these terms or conditions.

Team Hash (e.g. abcdef123456)

This is the 12 digit hash that was given to you or your team.

✓ Invalid Hash

### 3. Click Accept Terms & Login

Reload this page Event Engine - Team Dashboard x +

dashboard.eventengine.run/login

Who are you?

**Terms & Conditions:**

1. By using the Event Engine for the relevant event, you agree to the Event Terms and Conditions and the AWS Acceptable Use Policy. You acknowledge and agree that are using an AWS-owned account that you can only access for the duration of the relevant event. If you find residual resources or materials in the AWS-owned account, you will make us aware and cease use of the account. AWS reserves the right to terminate the account and delete the contents at any time.
2. You will not: (a) process or run any operation on any data other than test data sets or lab-approved materials by AWS, and (b) copy, import, export or otherwise create derivate works of materials provided by AWS, including but not limited to, data sets.
3. AWS is under no obligation to enable the transmission of your materials through Event Engine and may, in its discretion, edit, block, refuse to post, or remove your materials at any time.
4. Your use of the Event Engine will comply with these terms and all applicable laws, and your access to Event Engine will immediately and automatically terminate if you do not comply with any of these terms or conditions.

81c2baa86fbd

This is the 12 digit hash that was given to you or your team.

✓ Accept Terms & Login

### 4. Click **AWS Console**

Event Engine - Team Dashboard x +

dashboard.eventengine.run/dashboard

Dashboard Logout

**Team Dashboard**

Event

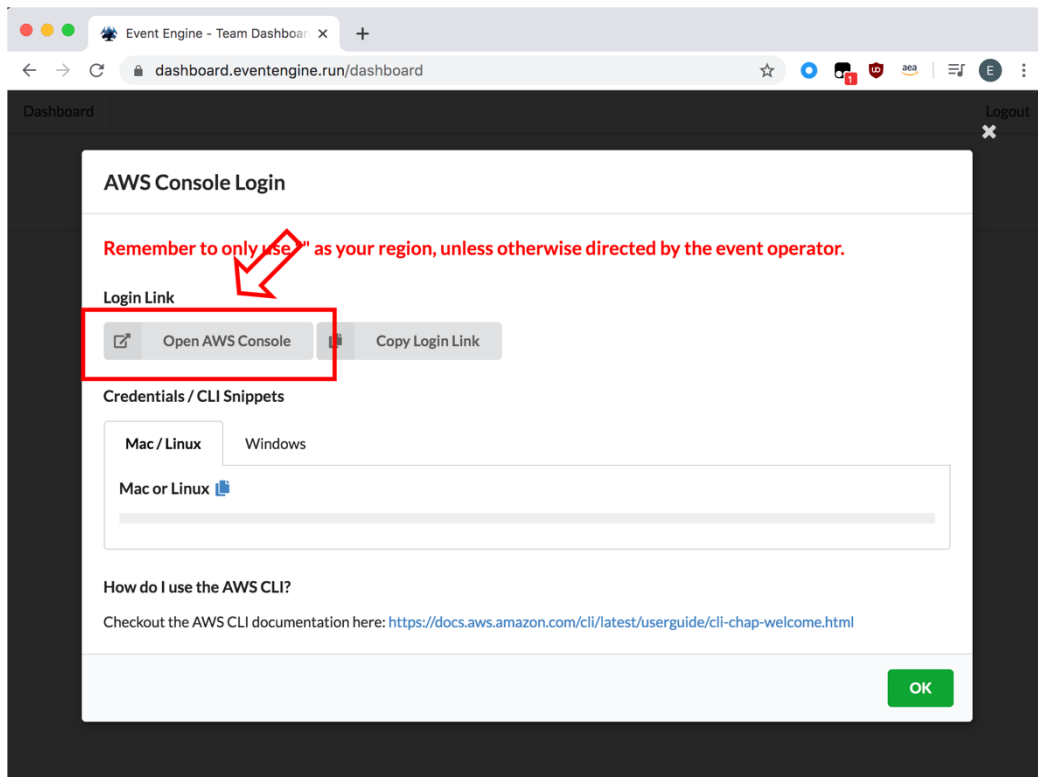
AWS Console SSH Key

**Event: AWS Backup + DR Webinar**  
Team Name: (Team Name Not Set Yet)

Event ID: 5b5ab6c50a654fc5a07723f5c11b5d81  
Team ID: f1c7f559ad43482889dbfc2a638fa035

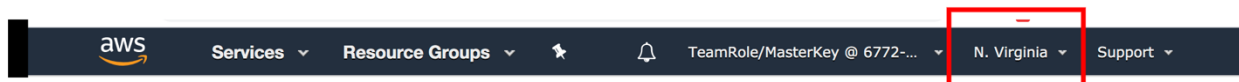
**Team Not Ready**  
Team assets not ready yet. Stay tuned!

## 5. Click **Open AWS Console**

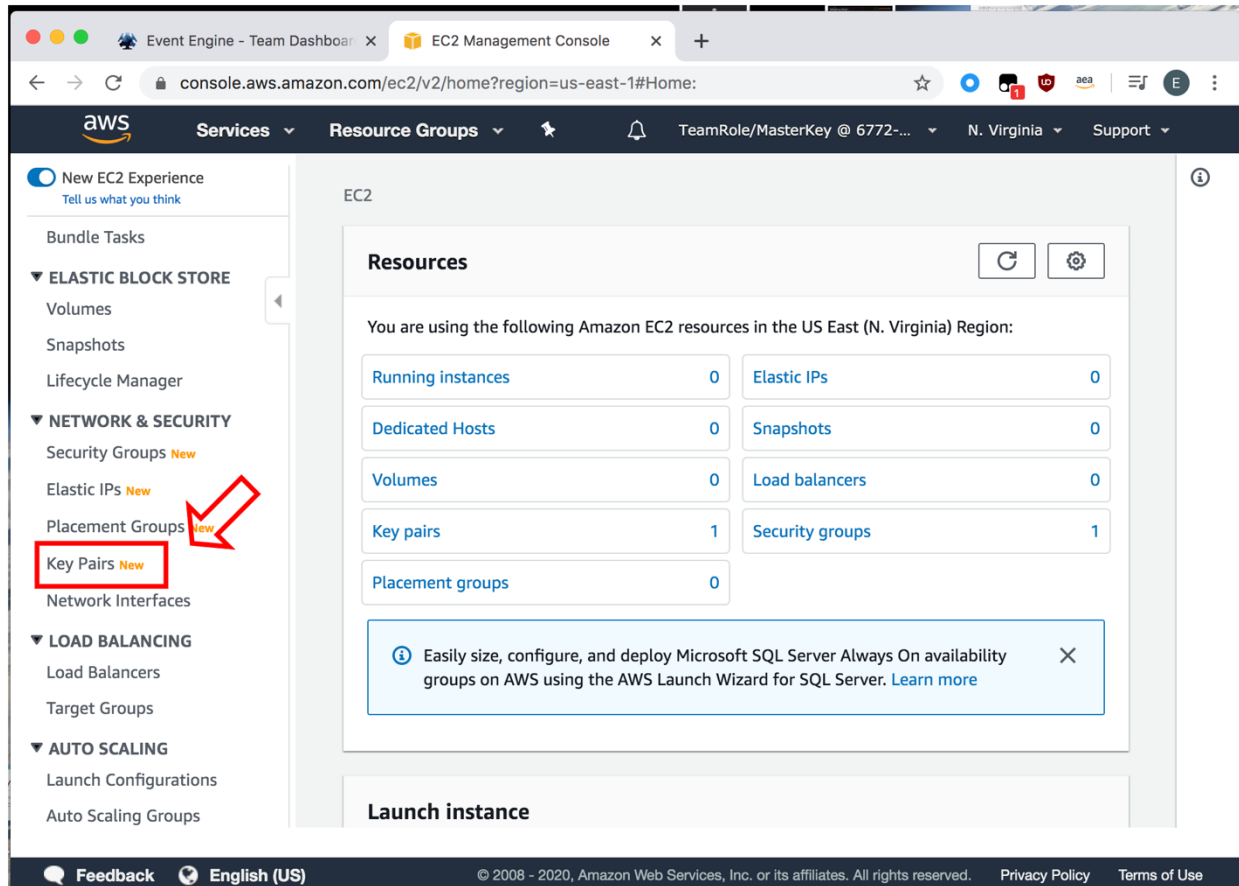


## CREATE KEYPAIR

1. In the AWS Console window that you opened, in the top right hand corner, next to your account name, click on the drop down and change your region to **us-east-1 (N.Virginia)**



2. From the top left of the screen click **Services** and type & select **EC2**
3. From the left hand window pane, navigate to **Network & Security**, and select **Key Pairs** from the menu



- Click **Create key pair**
- Enter the Key pair name of : **stg316 key**  
Select **PEM** file format
- Select **Create**

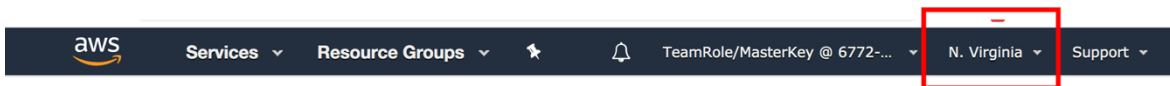
4. It will then download a \*.pem file to your users **“downloads”** folder (or a location you have specified). If you are using Google Chrome, the downloaded file will also be shown at the bottom of the screen for reference.

**Note:** Take note of the location of this .pem file you download, as you will copy this to your deployed Windows EC2 instance (after the deploying the below CloudFormation template

## DEPLOY VPC ENVIRONMENT

**Note:** Make sure you set your region to **us-east-1 (N.Virginia)**

1. From the AWS console on your local laptop/workstation, click **Services** and type & select **CloudFormation**
2. In the top right hand corner, next to your account name, click on the drop down and change your region to **us-east-1 (N.Virginia)**



- Now in the CloudFormation page click on **Create stack**
  - Click on **With new resources** from the drop down
    - Under Amazon S3 URL copy and paste this URL  
<https://ee-assets-prod-us-east-1.s3.amazonaws.com/modules/2343f58921ff4b66b136904c1265d64b/v1/part-1-deploy-vpc.json>
  - Click on **Next** at the bottom of the window
3. Enter the **Stack name** of **STG316-VPC**

4. Leave all other values as unchanged

### Specify stack details

**Stack name**

Stack name

STG316-VPC

Stack name can include letters (A-Z and a-z), numbers (0-9), and dashes (-).

**Parameters**

Parameters are defined in your template and allow you to input custom values when you create or update a stack.

**AWS - Network configuration**

**EnvironmentName**  
An environment name that will be prefixed to resource names

STG316

**Which VPC should this be deployed to?**  
Please enter the IP range (CIDR notation) for this VPC

192.168.0.0/16

**PublicSubnet1CIDR**  
Please enter the IP range (CIDR notation) for the public subnet in the first Availability Zone

192.168.10.0/24

Cancel Previous **Next**

5. Click on **Next** to continue
6. On the next page scroll to the bottom and click on **Next** to continue
7. Click on **Create stack**
8. Click on the **Stack info** tab and click on the **refresh** icon as highlighted in **RED** until the status value changes to **CREATE\_COMPLETE** (this may take 1-2 minutes) as shown below, you can then progress to the next steps

CloudFormation > Stacks > STG316-VPC

Stacks (2)

Filter by stack name

Active

☐ View nested < 1 >

| Stack name | Status  |
|------------|---|
| STG316-VPC | 2020-01-28 17:14:40 UTC+1100<br>CREATE_COMPLETE |

**STG316-VPC**

Delete Update Stack actions Create stack

**Stack info** Events Resources Outputs Parameters Template Change sets

**Overview**

Stack ID  
arn:aws:cloudformation:us-west-2:008310422716:stack/STG316-VPC/7778a7f0-4195-11ea-bb42-023709c486f0

Description  
-



## DEPLOY WORKSHOP RESOURCES

**Note:** Make sure your region is set to **us-east-1(N.Virginia)**

9. From the AWS console on your local laptop/workstation, click **Services** and type & select **CloudFormation**

- Click on **Create stack**
- Click on **With new resources** from the drop down
- Under Amazon S3 URL enter this address

<https://ee-assets-prod-us-east-1.s3.amazonaws.com/modules/2343f58921ff4b66b136904c1265d64b/v1/part-2-deploy-resources.json>

- Click on **Next** at the bottom of the window

10. Enter the **Stack name** of **STG316-Resources**

11. Select the following for the other values

- **VPC** : Select option that has **STG316** in the name
- **subnet** : Select option that has **STG316 Public Subnet-AZ1** in the name
- **KeyName** : Select the key pair name you created in the previous step
- **SecurityGroupIds**: Select **STG316-BastionHostSG**
- Do not modify the two values for **LatestWindowsAmiID** & **LatestLinuxAmiID**

12. Click on **Next** to continue

## Specify stack details

**Stack name**  
  
Stack name  
  
Stack name can include letters (A-Z and a-z), numbers (0-9), and dashes (-).

**Parameters**  
Parameters are defined in your template and allow you to input custom values when you create or update a stack.

**AWS - Resource deployment**  
**vpc**  
VPC to deploy resources into

**subnet**  
Subnet to deploy resources into

**KeyName**  
Name of an existing EC2 KeyPair to enable SSH access to the Linux instance

**SecurityGroupIds**  
Specify the security group for resources

**LatestWindowsAmild**  
Do Not modify the below default value

**LatestLinuxAmild**  
Do Not modify the below default value

Cancel Previous Next

5. Scroll to the bottom of the next screen and click on **Next**
6. Scroll to the bottom of the next screen, check the **CloudFormation acknowledgement** box and click on **Create stack**

## Capabilities

**The following resource(s) require capabilities: [AWS::IAM::Role]**

This template contains Identity and Access Management (IAM) resources that might provide entities access to make changes to your AWS account. Check that you want to create each of these resources and that they have the minimum required permissions. [Learn more](#)

☒ I acknowledge that AWS CloudFormation might create IAM resources.

7. You will be taken to the CloudFormation stack status page
8. Click on the **Stack info** tab and click on the **refresh** icon as highlighted in **RED** until the status value changes to **CREATE\_COMPLETE** (this may take approx. 4-5 minutes) as shown below, you can then progress to the next steps

CloudFormation > Stacks > STG316-Resources

**Stacks (2)**

Active

☐ View nested < 1 >

**STG316-Resources**

**Stack info** Events Resources Outputs Parameters Template Change sets

**Overview**

| Stack ID  | Description |
|---|-------------|
| arn:aws:cloudformation:us-west-2:008310422716:stack/STG316-Resources/8aa372e0-423c- | -           |

## SUMMARY

In this module you deployed your base VPC, subnets, security groups, Amazon EC2 instances and the SSH key that that you will use for the remainder of the workshop.

## END OF MODULE 1