

Westcon AWS

Active Directory Starter Kit

Deployment Guide



Windows Virtual Machine Bundle – CloudFormation Deployment Guide

This guide is for the deployment of the **Windows Virtual Machine Bundle** using CloudFormation.

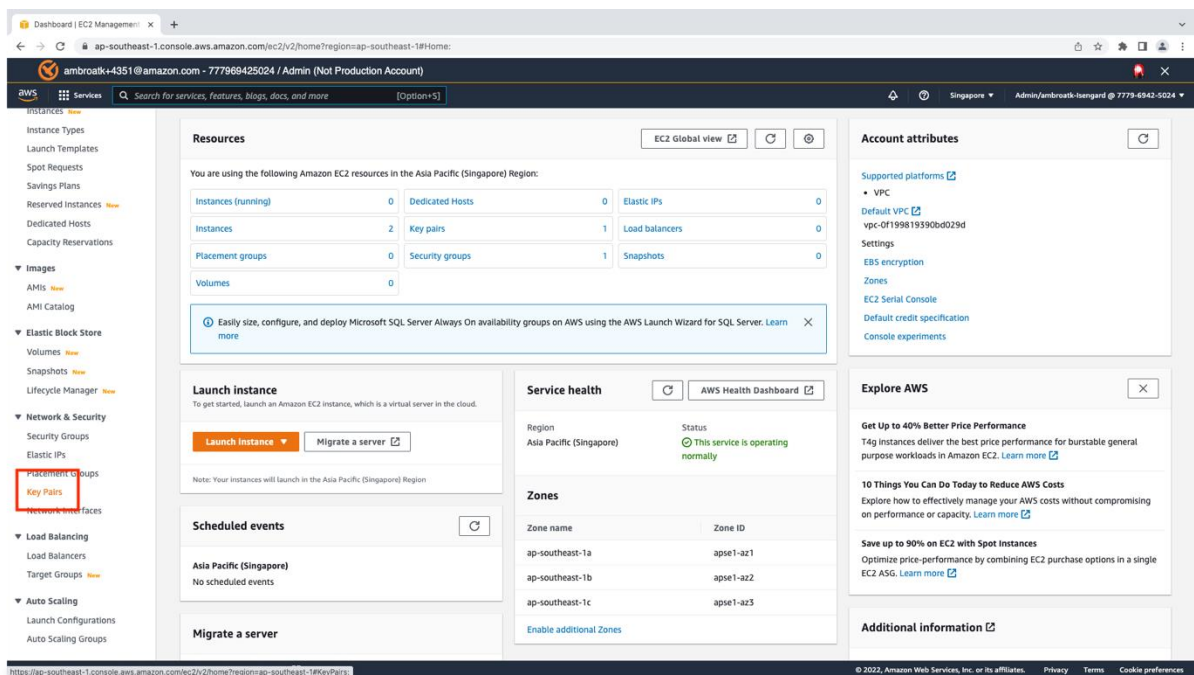
Pre-requisites

1. An existing EC2 Key Pair
2. A VPC – please identify the VPC ID from the AWS Console
3. A subnet within the VPC – please identify the Subnet ID in which you will deploy the VM

An existing EC2 Key pair is needed. If you already have an existing EC2 Key Pair, skip the “Creating EC2 Key Pair” portion and proceed to the “Deploying Template Using CloudFormation” portion.

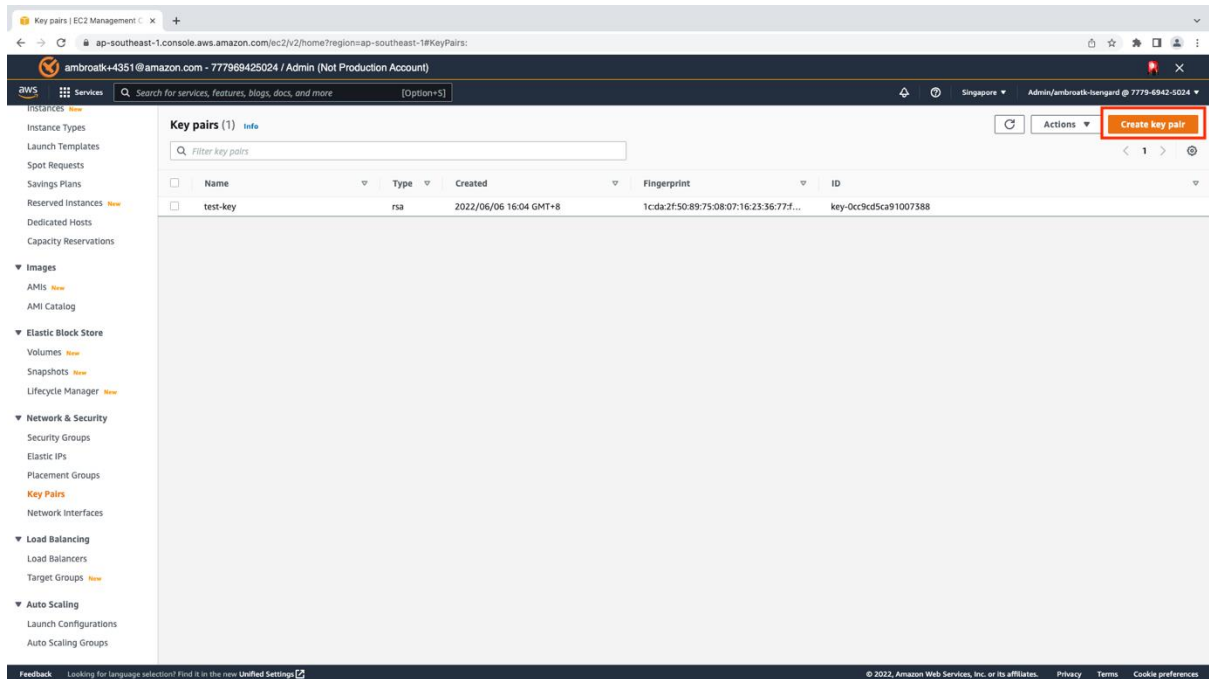
Creating an EC2 Key Pair

1. On the AWS console, navigate to the EC2 service.
2. Under Network and Security, click on “Key Pairs”.



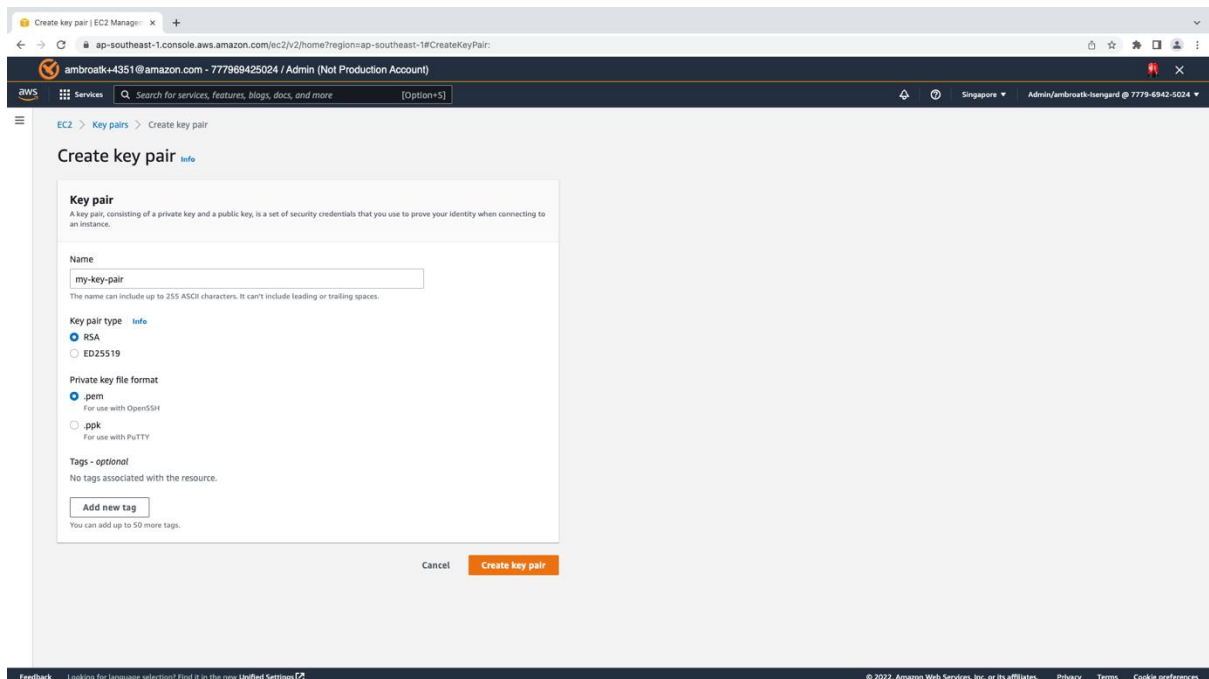
The screenshot shows the AWS Management Console for the EC2 service in the Asia Pacific (Singapore) region. The left-hand navigation menu is visible, with 'Key Pairs' highlighted under the 'Network & Security' section. The main content area displays 'Resources' for EC2, including a table of running instances, dedicated hosts, elastic IPs, load balancers, placement groups, security groups, and snapshots. Below this, there are sections for 'Launch instance', 'Service health', 'Zones', 'Scheduled events', and 'Migrate a server'. The 'Service health' section shows that the EC2 service is operating normally. The 'Zones' section lists three availability zones: ap-southeast-1a, ap-southeast-1b, and ap-southeast-1c. The 'Scheduled events' section shows no events for the Asia Pacific (Singapore) region. The 'Migrate a server' section is currently empty.

3. Click on “Create key pair” to continue.



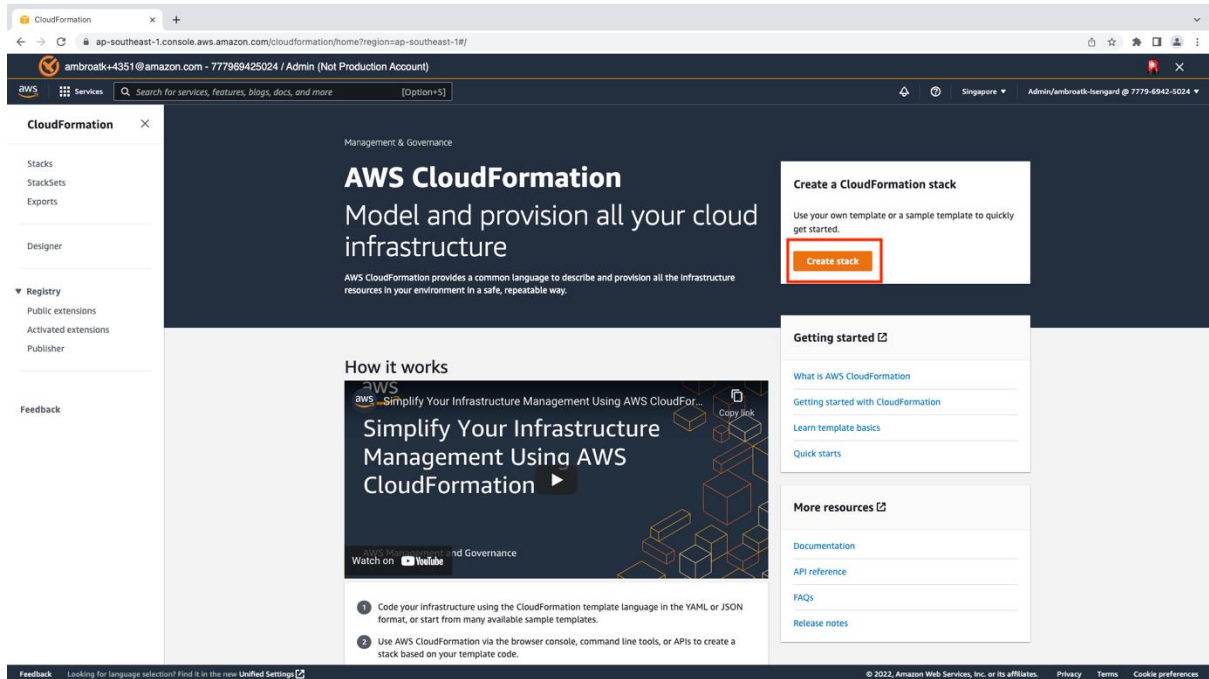
4. Enter a name for the Key Pair. Ensure that the “RSA” type and “.pem” format is selected.

5. Click on “Create key pair”.



Deploying Template Using CloudFormation

1. On the AWS console, navigate to the CloudFormation service. Click “Create stack”.



2. Select “Upload a template file”
3. Click on “Choose File”, then select the “EC2-AD.yaml” file. Click “Next”.

Create stack

Prerequisite - Prepare template

Prepare template
Every stack is based on a template. A template is a JSON or YAML file that contains configuration information about the AWS resources you want to include in the stack.

Template is ready
 Use a sample template
 Create template in Designer

Specify template

A template is a JSON or YAML file that describes your stack's resources and properties.

Template source
Selecting a template generates an Amazon S3 URL where it will be stored.

Amazon S3 URL
 Upload a template file

Upload a template file

EC2-AD.yaml
JSON or YAML formatted file

S3 URL: `https://s3.ap-southeast-2.amazonaws.com/cf-templates-1cdfs45ir0zl-ap-southeast-2/2022-12-08T040017.8932dmf-EC2-AD.yaml`

4. In the next page, enter a name for the stack. You will have to fill in the following information:
- Network Configuration
 - VPC where you want to deploy the Domain Controller. Please use the networking bundle if this is a fresh AWS setup
 - The Subnet where this Domain Controller will be deployed
 - Domain Controller Configuration:
 - Hostname of the Domain Controller
 - Domain DNS Name – this will be the FQDN of the domain
 - Domain Mode
 - Forest Mode
 - Safe Administrator Password
 - Virtual Machine Configuration Parameters
 - VM name
 - Key Pair – the file used to connect to the Virtual Machine
 - Instance type – Size of the Instance
 - Allowed Subnets or IP's to connect to the instance (0.0.0.0/0 – by default)

Network Configuration

myVPC

The VPC ID where the instance is going to be deployed

SubnetID

The SubnetID where this instance is going to be deployed

AD Configuration Parameters

Hostname

Hostname - maximum 15 characters

DomainDNSName

Fully Qualified Domain Name

DomainNetBiosName

NETBIOS Domain Name

DomainMode

Domain Mode

ForestMode

Forest Mode

SafeModeAdministratorPassword

SafeModeAdministrator

Virtual Machine Configuration Parameters

ServerName

Please provide a server name

KeyName

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

InstanceType

WebServer EC2 instance type (for SMALL server use t3.medium, for a MEDIUM server use m5.large, for a LARGE server use m5.xlarge)

RDPLocation

The IP address range that can be used to RDP to the Virtual Machine

5. Once All the parameters are filled in, click "Next".
6. In the "Configure Stack Option" click "Next".

- In the “Review Page” make sure that you allow the template to create custom IAM resources and then click “Submit”.

► Quick-create link

Capabilities

ⓘ The following resource(s) require capabilities: [AWS::CloudFormation::Stack]

This template contains Identity and Access Management (IAM) resources. Check that you want to create each of these resources and that they have the minimum required permissions. In addition, they have custom names. Check that the custom names are unique within your AWS account. [Learn more](#)

For this template, AWS CloudFormation might require an unrecognized capability: {0}. Check the capabilities of these resources. [Learn more](#)

- I acknowledge that AWS CloudFormation might create IAM resources with custom names.
- I acknowledge that AWS CloudFormation might require the following capability:
CAPABILITY_AUTO_EXPAND

- Once submitted you will see the template being deployed.

CloudFormation > Stacks > New-DC-Bundle

Stacks (2)

Filter by stack name

Active View nested

< 1 >

- New-DC-Bundle**
 2022-12-08 16:45:59 UTC+0800
 CREATE_IN_PROGRESS
- Network-Bundle**
 2022-10-24 23:21:17 UTC+0800

New-DC-Bundle

Stack info
Events
Resources
Outputs
Parameters
Template
Change sets

Events (1)

Search events

Timestamp	Logical ID	Status	Status reason
2022-12-08 16:45:59 UTC+0800	New-DC-Bundle	CREATE_IN_PROGRESS	User Initiated

- Wait for all the resources to be created. Press the refresh button on the top right until the stack creation is complete.

Timestamp	Logical ID	Status	Status reason
2022-12-08 16:46:21 UTC+0800	NewVolume	CREATE_IN_PROGRESS	Resource creation initiated
2022-12-08 16:46:20 UTC+0800	NewVolume	CREATE_IN_PROGRESS	-
2022-12-08 16:46:19 UTC+0800	EC2Instance	CREATE_COMPLETE	-
2022-12-08 16:46:11 UTC+0800	EC2Instance	CREATE_IN_PROGRESS	Resource creation initiated
2022-12-08 16:46:10 UTC+0800	EC2Instance	CREATE_IN_PROGRESS	-
2022-12-08 16:46:09 UTC+0800	InstanceSecurityGroup	CREATE_COMPLETE	-
2022-12-08 16:46:08 UTC+0800	InstanceSecurityGroup	CREATE_IN_PROGRESS	Resource creation initiated

- The created stack should look like this. All the resources have now been created and deployed.

- Click on the “Outputs” tab to retrieve information about your server

Key	Value	Description	Export name
AZ	ap-southeast-2a	Availability Zone of the newly created EC2 instance	-
Instanceld	i-07a80860118bc2302	Instanceld of the newly created EC2 instance	-
PrivateDNS	ip-10-0-5-24.ap-southeast-2.compute.internal	Private DNSName of the newly created EC2 instance	-
PrivateIP	10.0.5.24	Private IP address of the newly created EC2 instance	-

- Use the public IP to remote to your Virtual Machine if it is in a public subnet, or use the private subnet if you are using a Bastion host/jump server to access the Virtual Machine



Have a question?

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