Ortus Cloud Servers

Welcome To The Cloud

Welcome to the repository of documentation for the Ortus Solutions' cloud servers that you can use to deploy ColdFusion (CFML), CommandBox and ContentBox hardened servers to many cloud providers like: AWS, Google Cloud, Azure and Digital Ocean.

Intro

Overview

This book is born out of a need to keep introducing our customers to new and innovative products. There are just too many folks who want to be in the Cloud but have no idea of how to get there. This guide is intended to be a journal on how to move your products to the ANY cloud using any of the supported providers.

Supported Providers

- Amazon Web Services (AWS)
- Digital Ocean (`Coming soon`)
- Google Cloud (`Coming soon`)
- Azure Cloud (`Coming soon`)

Cloud Servers

Here is a listing of the cloud servers that are available now or in progress of being built.

Server	Providers	Status
Lucee+Nginx+Ubuntu	AWS	√
Lucee+IIS+Windows	AWS	In Progress
ContentBox CMS+Nginx+Ubuntu+MySQL	AWS	In Progress
ContentBox CMS+Nginx+Ubuntu	AWS	In Progress

All of our cloud servers come pre-installed with the latest CommandBox CLI

About this Book

The source code for this book is hosted in GitHub: https://github.com/ortus-docs/cloud-servers. You can freely contribute to it and submit pull requests. The contents of this book is copyright by Ortus Solutions, Corp and cannot be altered or reproduced without author's consent. All content is provided *"As-Is"* and can be freely distributed.

- The majority of code examples in this book are done in `cfscript`.
- The majority of code generation and running of examples are done via **CommandBox**: The ColdFusion (CFML) CLI, Package Manager, REPL - http://www.ortussolutions.com/products/commandbox
- All ColdFusion examples designed to run on the open source Lucee Platform or Adobe ColdFusion 2016+

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Contributing

We highly encourage contribution to this book and our open source software. The source code for this book can be found in our GitHub repository where you can submit pull requests: https://github.com/ortus-docs/cloud-servers.

Charitable Proceeds

10% of the proceeds of using our cloud images will go to charity to support orphaned kids in El Salvador - https://www.harvesting.org/.

Shalom Children's Home

Shalom Children's Home (https://www.harvesting.org/) is one of the ministries that is dear to our hearts located in El Salvador. During the 12 year civil war that ended in 1990, many children were left orphaned or abandoned by parents who fled El Salvador. The Benners saw the need to help these children and received 13 children in 1982. Little by little, more children came on their own, churches and the government brought children to them for care, and the Shalom Children's Home was founded.

Shalom now cares for over 80 children in El Salvador, from newborns to 18 years old. They receive shelter, clothing, food, medical care, education and life skills training in a Christian

environment. The home is supported by a child sponsorship program.

We have personally supported Shalom for over 6 years now; it is a place of blessing for many children in El Salvador that either have no families or have been abandoned. This is good earth to seed and plant.

Author

George Murphy

George Murphy is a Software Engineer who has a long history in the IT and television industry. He has traveled extensively and has many benefits and experiences from doing this. One of those benefits was being able to meet his wife while on a business trip to Hungary. George lives about 20 miles outside of the Washington DC area with his wife Erzsebet and daughter Virag.

He is a highly accomplished senior-level Software Design Engineer with extensive project leadership and solution design experience, successfully managing people, processes, and technology to implement critical enterprise solutions on time. Adept at learning and using new technologies and integrating them into corporate applications. Skilled team leader and mentor with excellent communication skills; can design and support Cloud and on premises applications for clients in diverse industries. Working in the cloud has become such a huge passion for him. Along with that passion has come a never ending thirst to learn new technologies such as Terraform, Nomad, and Vault.

George, would rather spend time fishing with his free time than anything else. He also loves to spend time with family and travel. He loves mentoring others in new technology. His mission is to share with other his acceptance of Jesus as his personal savior.

Luis Fernando Majano Lainez

Luis Majano is a Computer Engineer that has been developing and designing software systems since the year 2000. He was born in San Salvador, El Salvador in the late 70's, during a period of economical instability and civil war. He lived in El Salvador until 1995 and then moved to Miami, Florida where he completed his Bachelors of Science in Computer Engineering at Florida International University. Luis resides in Houston, Texas with his beautiful wife Veronica, baby girl Alexia and baby boy Lucas!

He is the CEO of Ortus Solutions, a consulting firm specializing in web development, ColdFusion (CFML), Java development and all open source professional services under the

ColdBox and ContentBox stack. He is the creator of ColdBox, ContentBox, WireBox, MockBox, LogBox and anything “BOX”, and contributes to many open source ColdFusion/Java projects. You can read his blog at www.luismajano.com

Luis has a passion for Jesus, tennis, golf, volleyball and anything electronic. Random Author Facts:

- He played volleyball in the Salvadorean National Team at the tender age of 17
- The Lord of the Rings and The Hobbit is something he reads every 5 years. (Geek!)
- His first ever computer was a Texas Instrument TI-86 that his parents gave him in 1986. After some time digesting his very first BASIC book, he had written his own tic-tac-toe game at the age of 9. (Extra geek!)
- He has a geek love for circuits, microcontrollers and overall embedded systems.
- He has of late (during old age) become a fan of organic gardening.

> Keep Jesus number one in your life and in your heart. I did and it changed my life from desolation, defeat and failure to an abundant life full of love, thankfulness, joy and overwhelming peace. As this world breathes failure and fear upon any life, Jesus brings power, love and a sound mind to everybody!
>
> “Trust in the LORD with all your heart, and do not lean on your own understanding.”
> Proverbs 3:5

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Ortus Cloud Images

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2. Software Licenses.

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Ortus Solutions' failure to exercise or delay in exercising any right, power or privilege under this Agreement shall not operate as a waiver thereof; nor shall any single or partial exercise of any right, power or privilege preclude any other or further exercise thereof.

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If you have any questions regarding this document or if you wish to request any information from Ortus Solutions please contact us via web at http://www.ortussolutions.com/contact

Lucee, Mod_cfml, and Nginx are companies NOT associated with Ortus Solutions.

AWS

Overview

In this section you will find all the server images we have created so you can run on AWS as either EC2 instances or ECS Containers.

EC2 Instance

What is an ec2 instance? It is simply a virtual machine running in the AWS (Amazon Web Services) cloud. EC2 stands for Elastic Compute Cloud. An on-demand ec2 instance is a virtual machine that a user can rent by the minute, hour or annually, which ever his use need may dictate. Ortus Solutions has seen a long need to bring Lucee servers to the AWS cloud. What are it's benefits? You can have a site up and running in minutes without going through configuration hell. There are many people still running legacy applications who see a need to upgrade for security purposes or modernization reasons. It just makes since to remove your servers from on premises providers and move to the cloud. If you want customization on the AMI image we can help you.

https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/concepts.html

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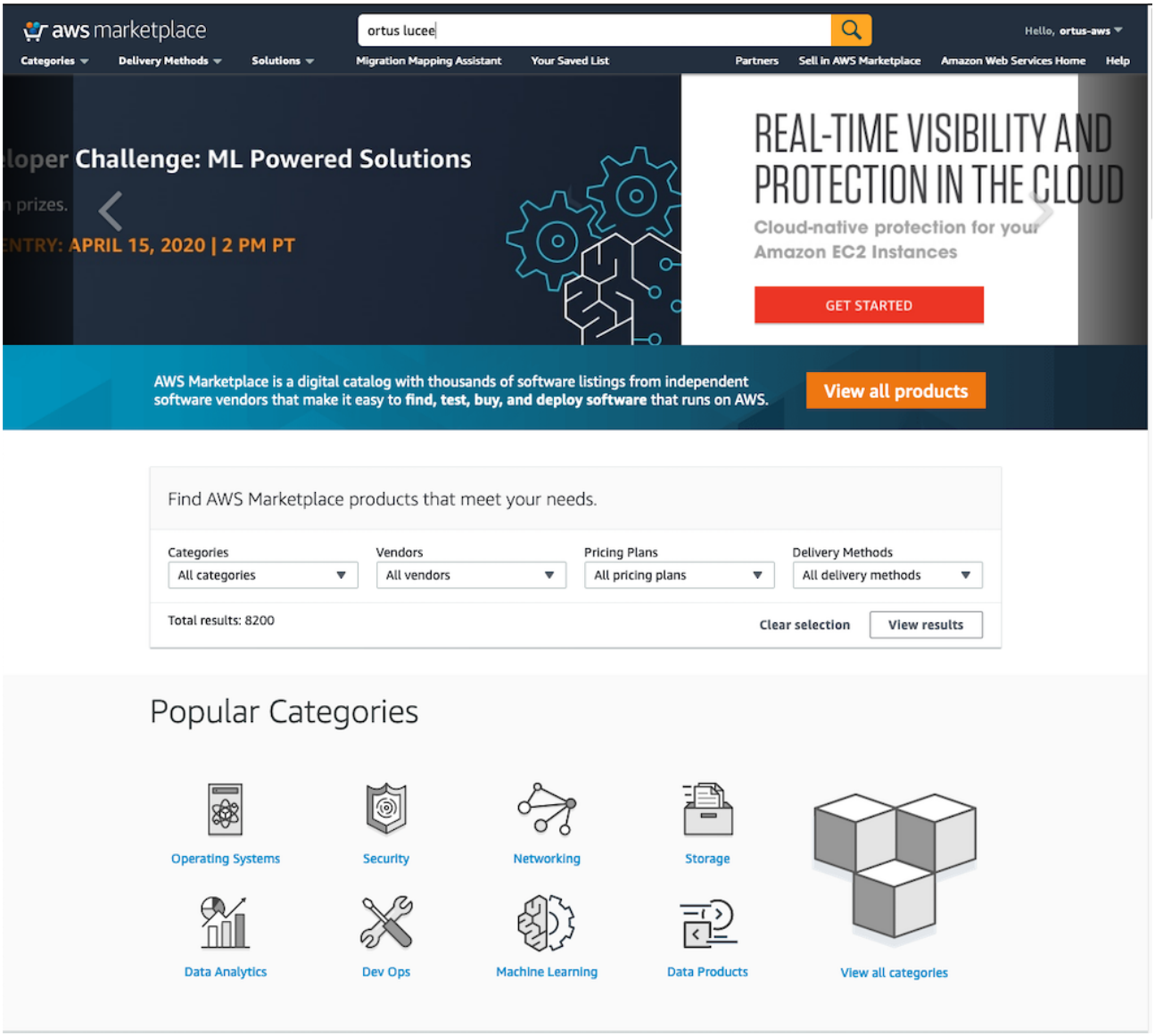
Setup Your AWS Account

Going forward we will show you how to create an AWS ec2 web site using our Ortus hardened AMI's even if you have never done this before. The first thing you will need to do is setup an [AWS account](https://aws.amazon.com/premiumsupport/knowledge-center/create-and-activate-aws-account/) if you do not have one.

AWS Marketplace



The AWS marketplace is the place to find the Ortus Lucee CFML engine (Ubuntu Server 18.04 LTS) AMI (Amazon Machine Image). You have a choice of a multitude of different sizes and use agreements. This includes from the free tier to the high performance paid tier. If you already have an Amazon account go login and go the Amazon Marketplace at this URL https://aws.amazon.com/marketplace/
Once on this URL search for Ortus. From there click the subscribe button off to the right.

Ubuntu Based Images

Create an ec2 instance from an Ortus Lucee CFML engine (Ubuntu Server 18.04 LTS) AMI (Amazon Machine Image). We have created several based Ubuntu based images.

	Images	Status
	Lucee + Nginx	√
	CommandBox + Nginx	

Lucee Versions

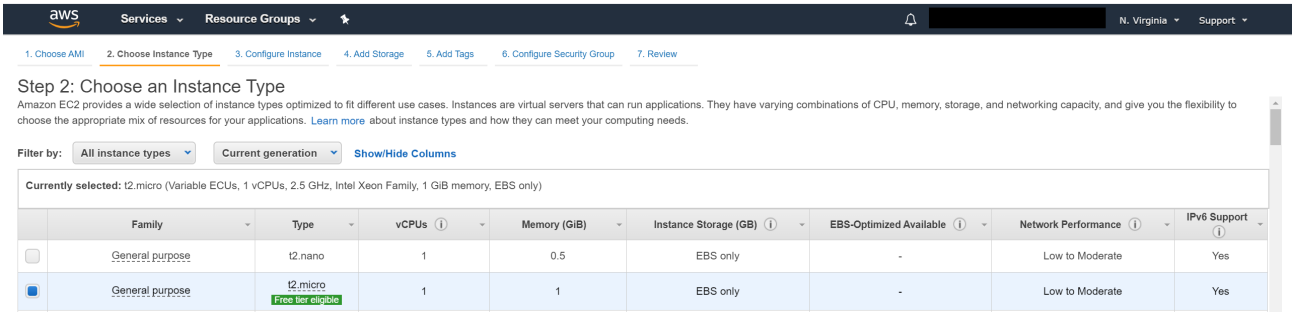
We will be creating images that support different Lucee Versions. Please note that you can update and patch each instance as you see fit as well.

Lucee Version	Status
5.3.2.9	√
5.3.5+92	In Progress

Lucee + Nginx

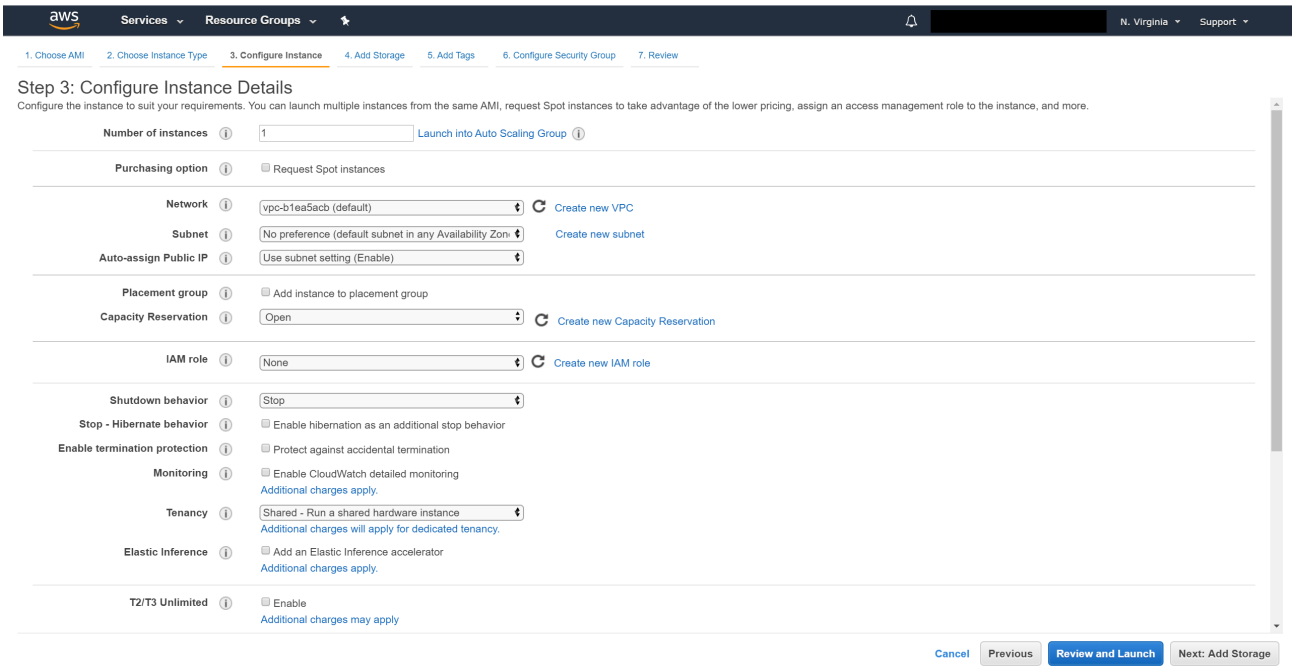
This AMI image will create a running Lucee site for you. If you do not want a ColdBox site we will show you how to remove it and have your own site. The first step is to have an AWS account. If you do not have one go to this URL to learn how to create an [AWS account.](https://aws.amazon.com/premiumsupport/knowledge-center/create-and-activate-aws-account/)

- Choose the AWS AMI. Go to this URL and do a search for Ortus at the top of the screen https://aws.amazon.com/marketplace/
- Click the **continue** to subscribe button
- Click the **accept terms** button
- Next go to this page and click launch new instance https://console.aws.amazon.com/marketplace/home?#/subscriptions
- This will take you to the "Choose an Instance Type." The default instance and AWS free tier selected is t3.micro. Unless you need more resources keep it at this. Go to the bottom of the screen and select Next: `Configure Instance Details`.



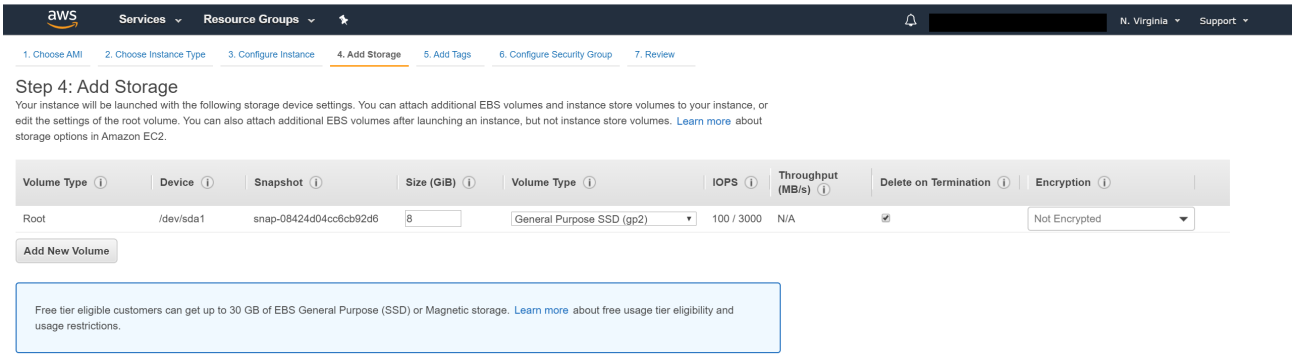
Choose an Instance Type

- You are on the "Configure Instance Details" page and keep the defaults. Go to bottom of the page and click "Next: Add Storage" button.



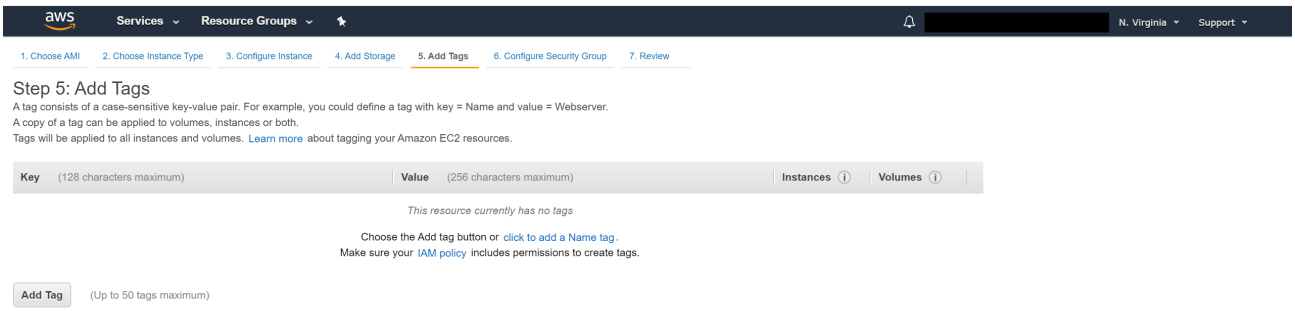
Configure Instance Details

- You are now on the "Add Storage" page. Keep the defaults and click the button at the bottom right "Next: Add Tags."



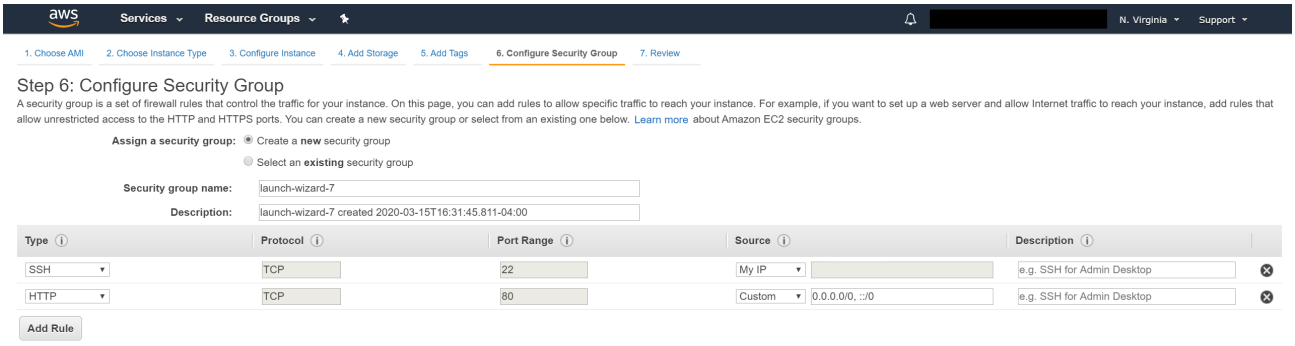
Add Storage

- You are now on the "Add Tags" page. Let's add a tag. Click the add Tag. The y should be Key=Name and Value=Ortus Lucee CFML engine 5.2.9.31 (Ubuntu Server 18.04 LTS). Next go to the bottom of the page and click the button that says "Next: Configure Security Group."



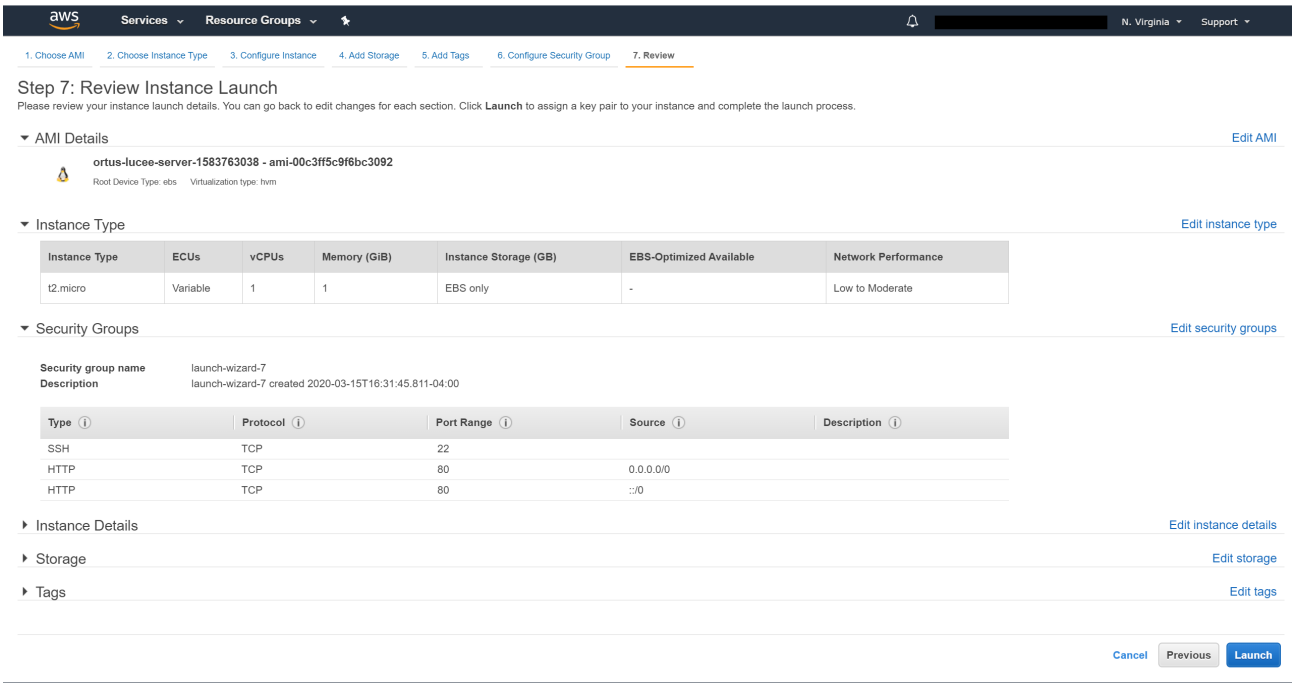
Add Tags

- You are on the "Configure Security Group" page. We need to make a couple of changes before leaving this page. First is to go to the source column and select **MyIP** so that ssh will only be enabled for your IP address (**VERY IMPORTANT**).
- Next click the "Add Rule" button and under the type column select **http** and leave port 80 selected. Go to the bottom right of the page and select and click the "Review and Launch" button.



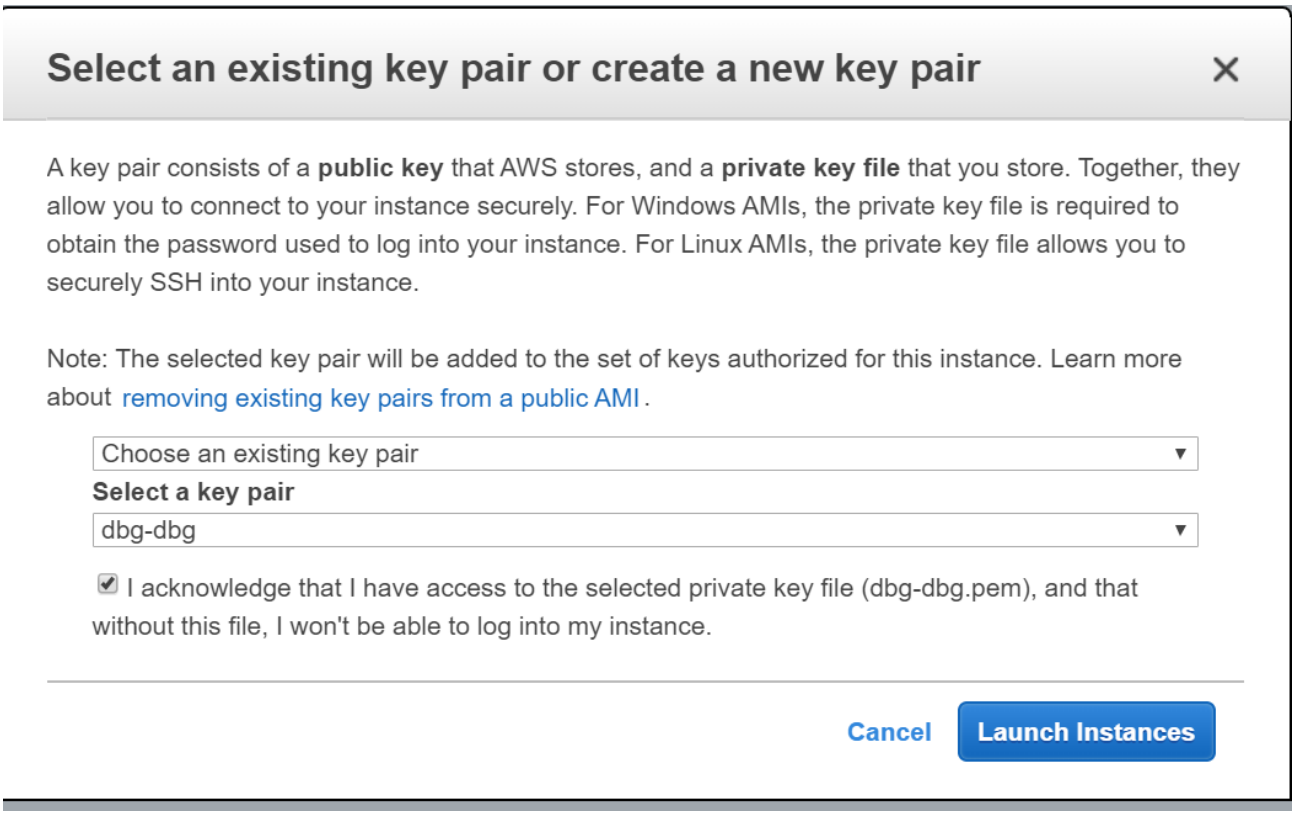
Configure Security Group

- You are on the "Review Launch Instance" page. Review it and once you are okay click the "Launch" bottom on the bottom right of page.



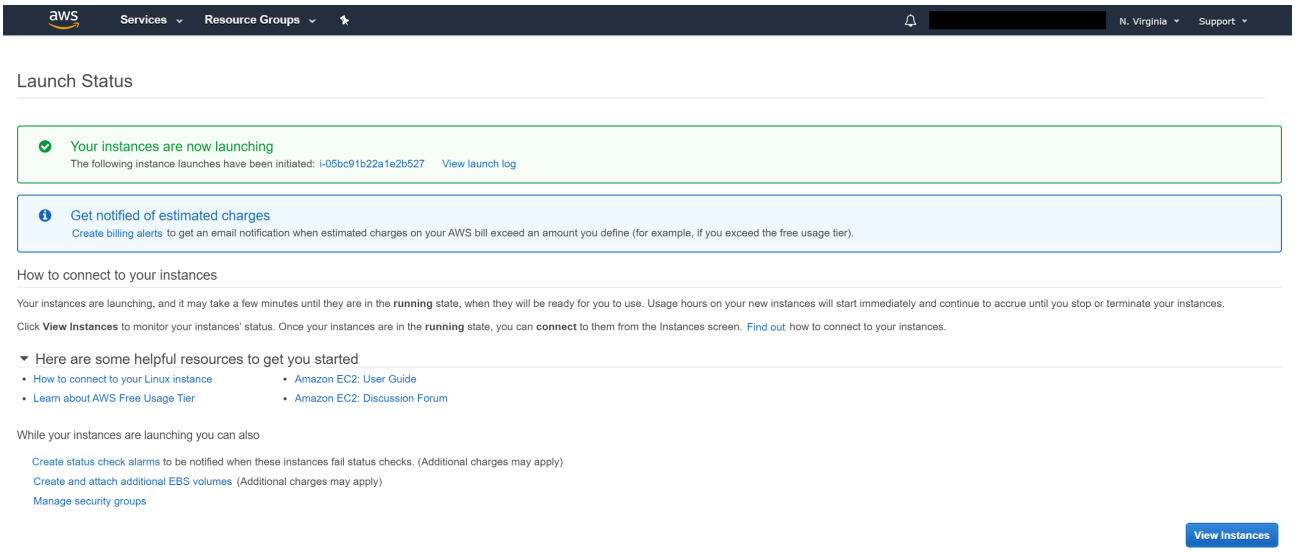
Review Instance Launch

- This opens a module window that is prompting you to suggesting an existing key pair or create a new open. If you do not know what this means I suggest you create a new key pair and put it in a folder that you have access to. If all went well you will see a green colored headline that says "Your instances are now launching."



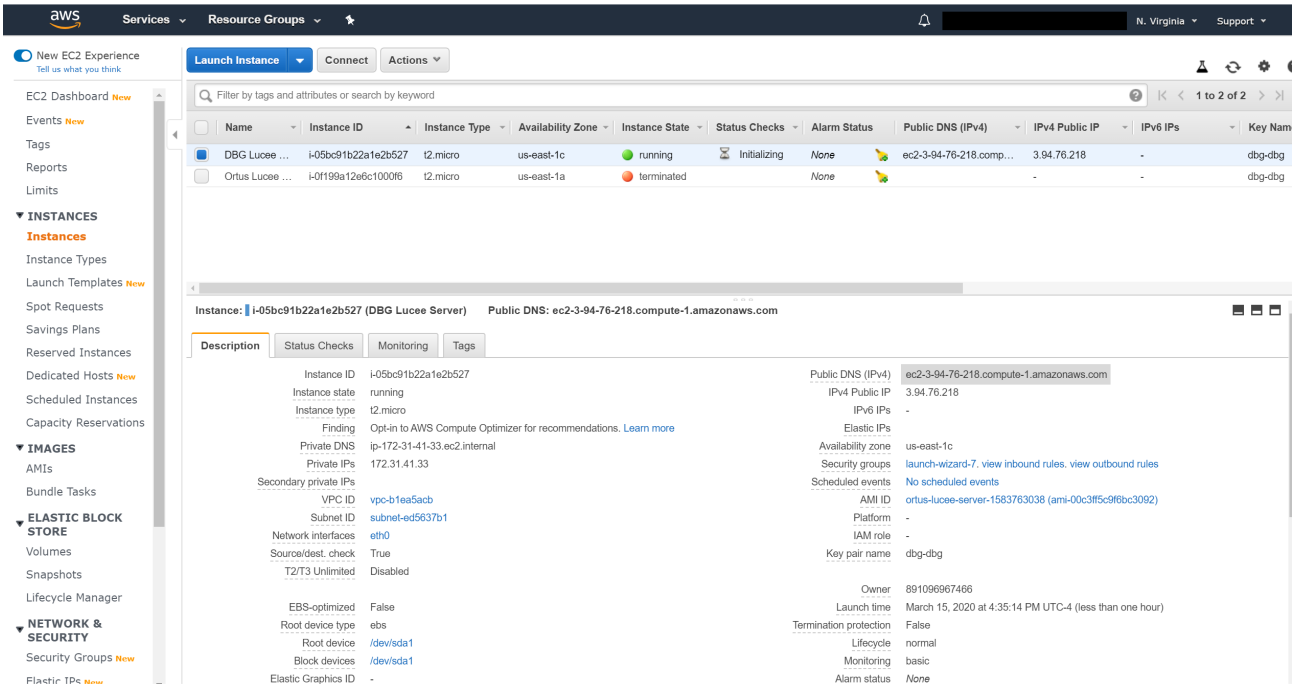
Select Key Pair

- You are on the "Launch Status" page. Go to the bottom right and click the button labeled "View Instances."



Launch Status

- Select your running instance. This will open some tabs at the bottom of the page. Select the "Description" tab. Look to the right on the description tab and look for "Public DNS (IPv4)." To the right of this text is the dns name. Copy that name and paste it in a browser. It should look something like this.
- `ec2-{public_dns}.compute-1.amazonaws.com`
- Paste that URL in a browser and you should see the default ColdBox site.



Enjoy your servers!

Managing your web site

Now that you have a site running in the cloud you will want to customize it. Remember that SSH pem file you downloaded. That is going to allow you to go on the server and edit files. If you are on a windows platform like me. Here are some tools I strongly suggest that you get locally.

1. CommandBox. This tool will allow you to make files and remove them locally. If you so decide that you want to edit and add files directly on the EC2 instance this can be done using the default instance of CommandBox on the server. https://commandbox.ortusbooks.com/
2. VSCode the editor of choice, and the reason I say that is because it has so many useful extensions. https://code.visualstudio.com/download
3. WinSCP the default file manager tool for Windows. https://winscp.net/eng/index.php

If you are using the Windows Package Manager Chocolatey you can download all of these from there.

Here is a script to download them in powershell. Save the script as anything.ps1. Remember where you saved it. With PowerShell, you must make sure Get-ExecutionPolicy is not Restricted. We suggest using `Bypass` to bypass the policy to get things installed or `AllSigned` for quite a bit more security.

- Run `Get-ExecutionPolicy`. If it returns `Restricted`, then run `Set-ExecutionPolicy AllSigned` or `Set-ExecutionPolicy Bypass -Scope Process`.

Go to the right corner of the dialog box below and copy this script and save it naming it whatever you like as long as the extension ends as *.ps1

```
#Install Chocolatey
Set-ExecutionPolicy Bypass -Scope Process -Force; [System.Net.ServicePoint

#Assign Packages to Install
$Packages = 'commandbox',`
            'vscode',`
            'winscp'

#Install Packages
```

```
10  ForEach ($PackageName in $Packages)
11  {choco install $PackageName -y}
```

```
PS> .\anything.ps1 (enter)
```

If your scripts successfully installed you should see a new desktop icon for VSCode. If you open a shell (cmd, powershell, git bash) and type box you should see that Commandbox is installed.

Connecting to your server

This page will walk you through connecting to your new server using the popular free software program WinSCP. I have a script for you to download on step 11 "Managing your web site" page. We will also take a look at an exciting VSCode extension called Remote Development. It allows you to ssh directly to the EC2 instance and map the remote folder in your local VSCode IDE.

Changelog

Version 1.0.0_5.2.3.9

- Initial Release

CommandBox + Nginx

Coming Soon...

Windows Based Images

Create an ec2 instance from an Ortus Lucee CFML engine (Windows Server 2019) AMI (Amazon Machine Image). We have created several based Windows-based images.

Lucee Versions

We will be creating images that support different Lucee Versions. Please note that you can update and patch each instance as you see fit as well.

Lucee + IIS-Boncode

This AMI image will create a running Lucee Windows site for you. If you do not want a ColdBox site we will show you how to remove it and have your own site. The first step is to have an AWS account. If you do not have one go to this URL to learn how to create an [AWS account.](https://aws.amazon.com/premiumsupport/knowledge-center/create-and-activate-aws-account/)

- Choose the AWS AMI. Go to this URL and do a search for Ortus at the top of the screen https://aws.amazon.com/marketplace/
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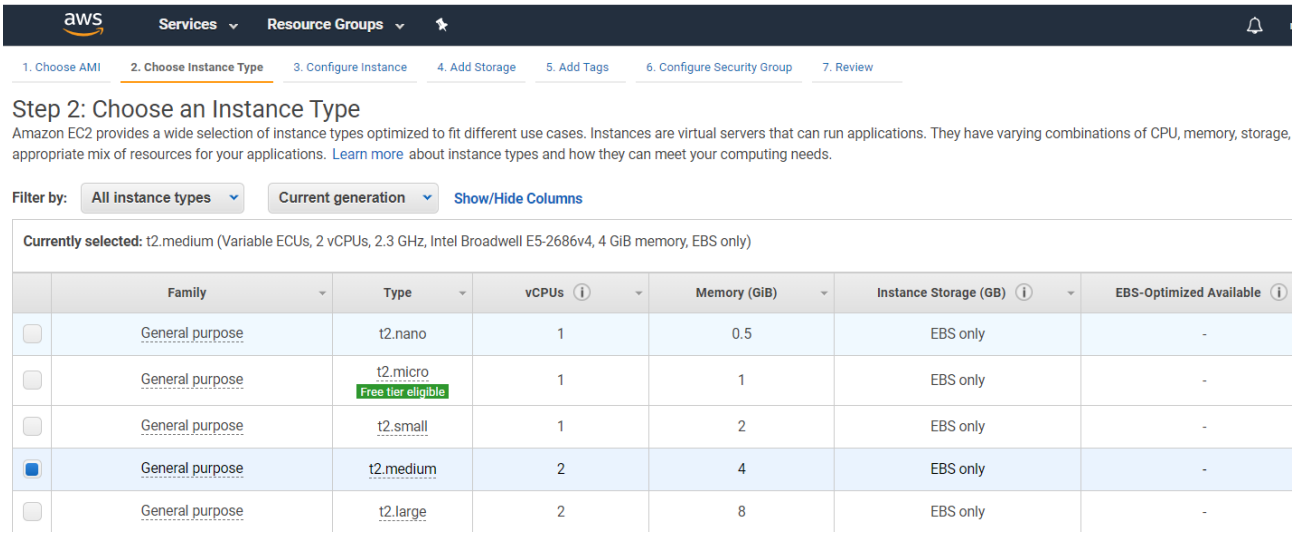

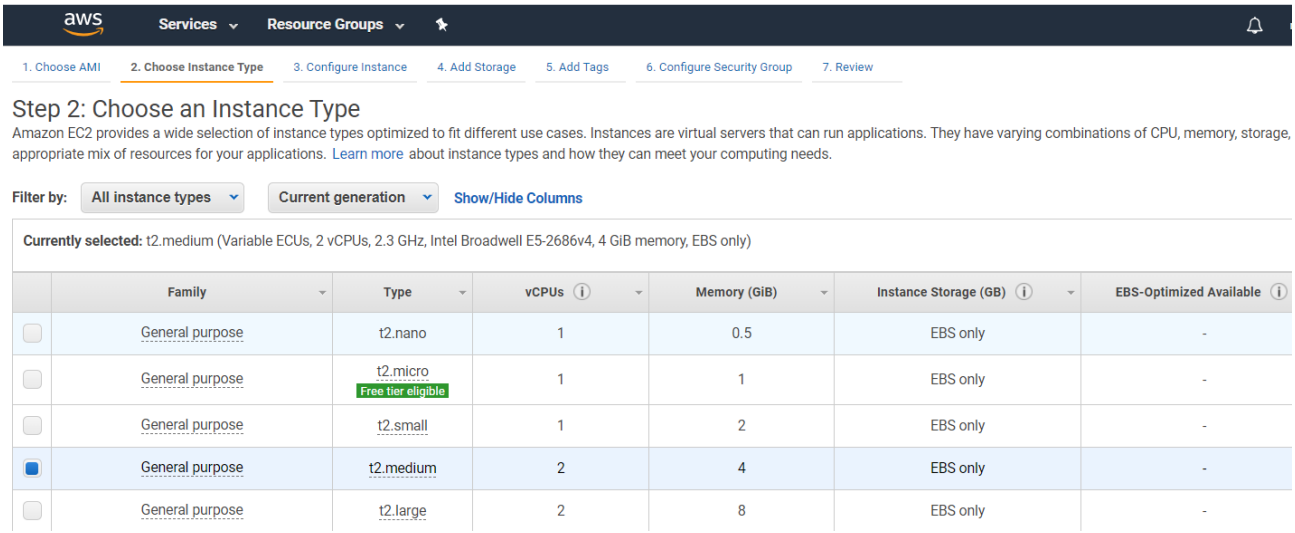

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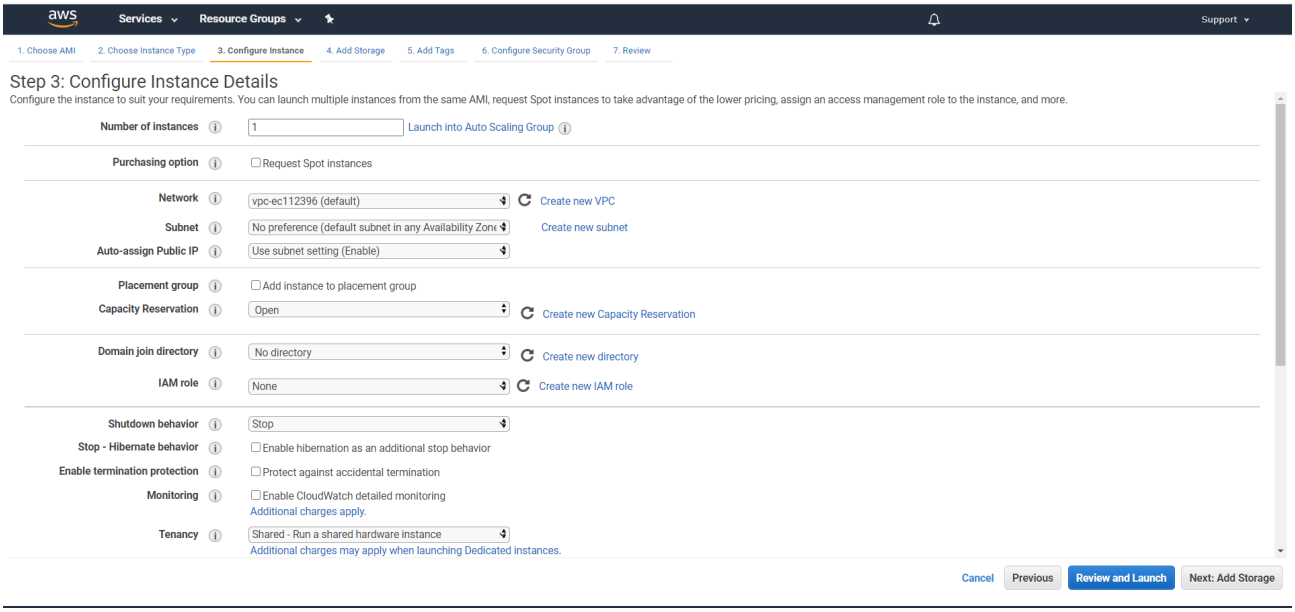

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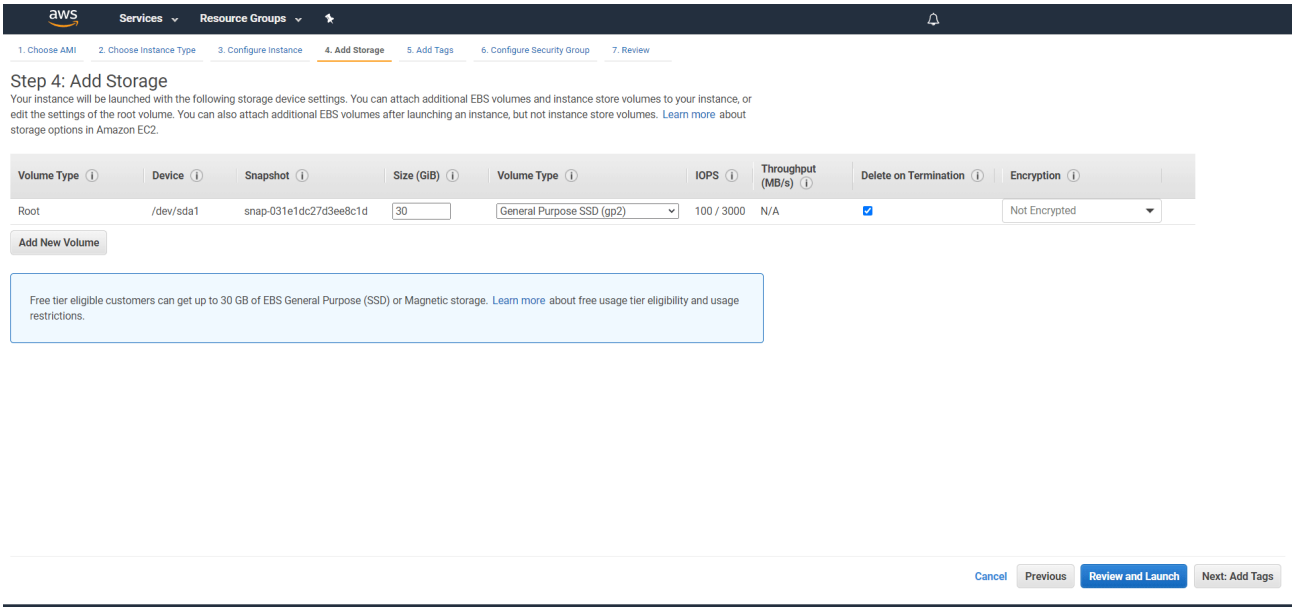

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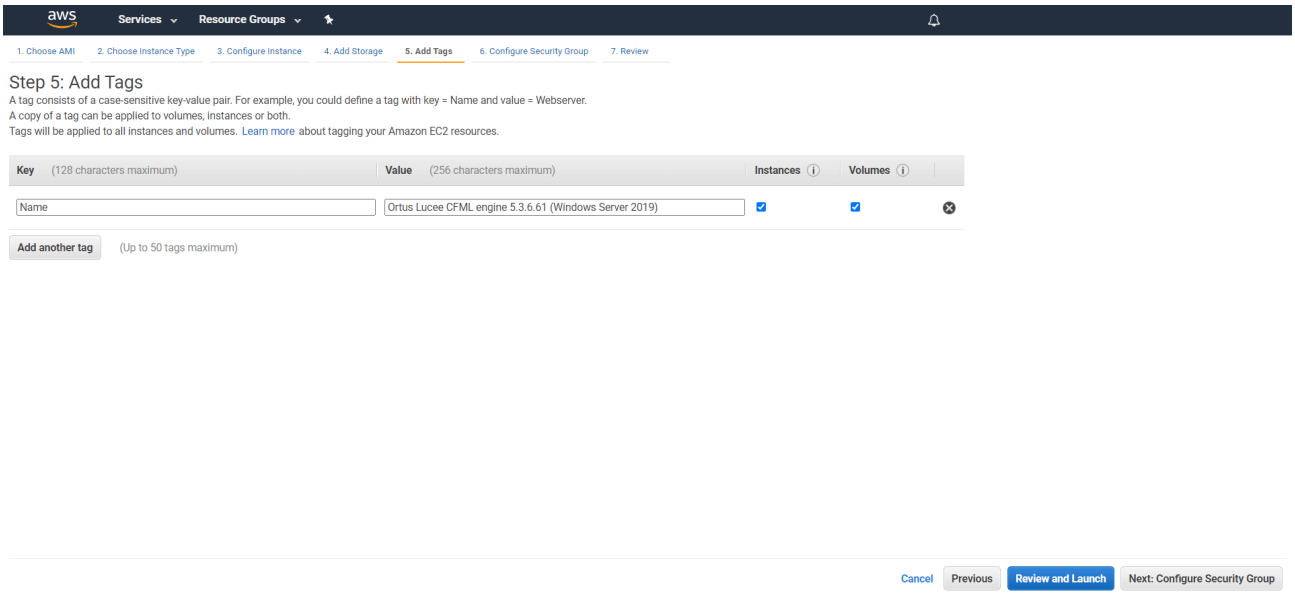
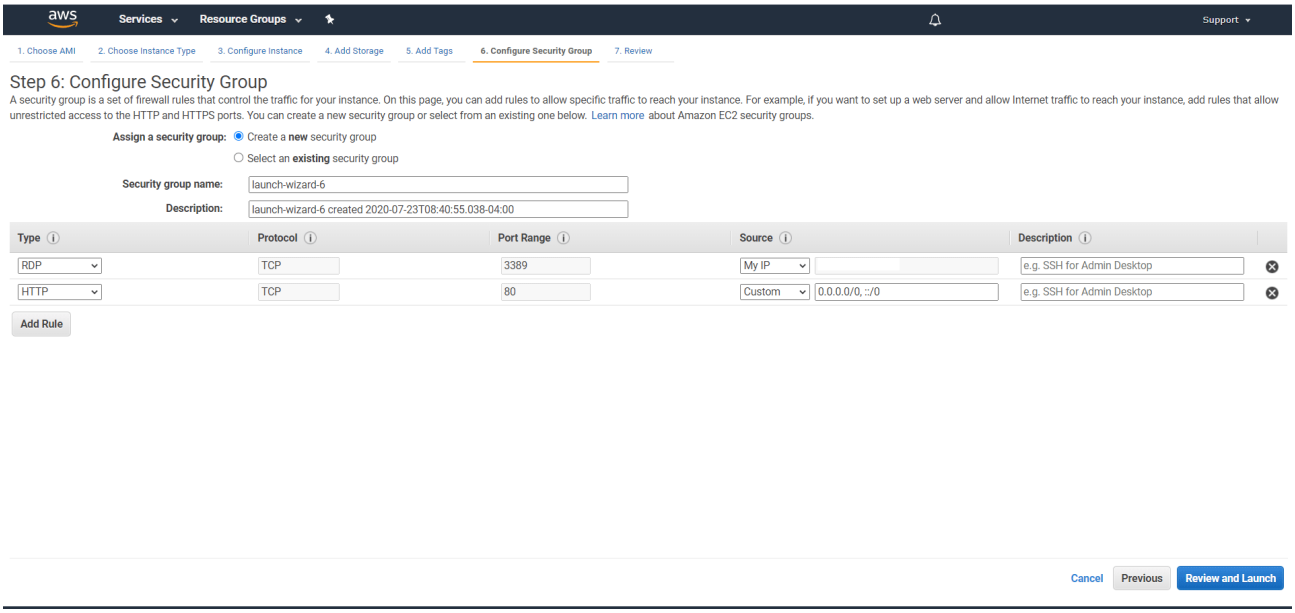
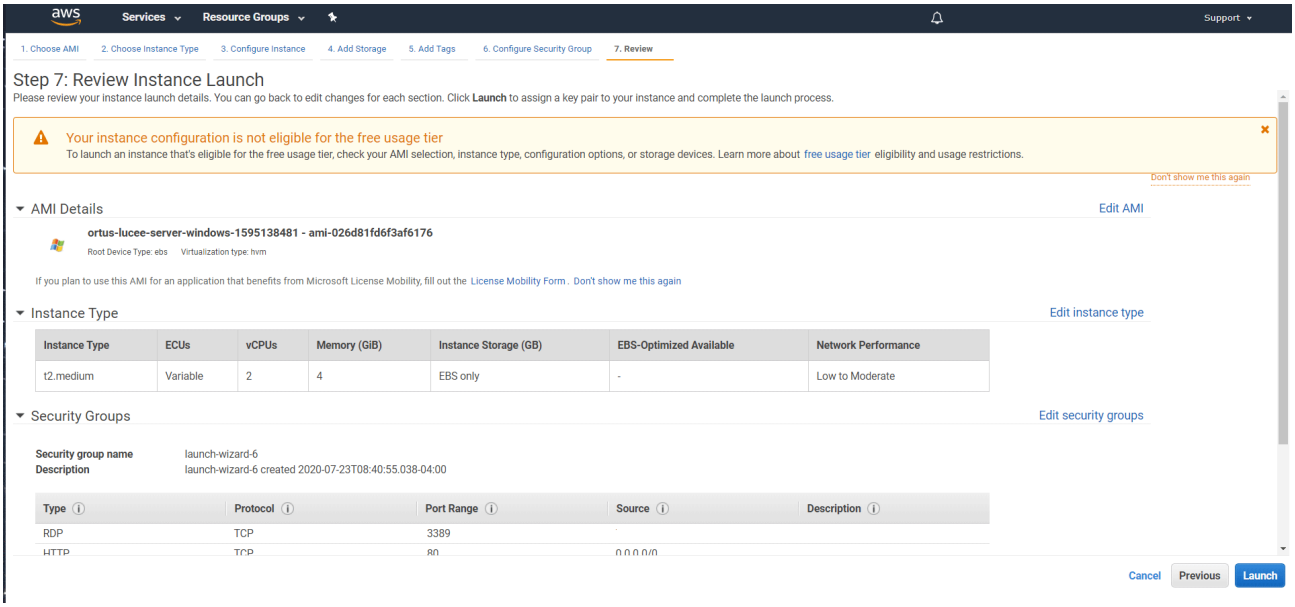


- You are on the "Configure Security Group" page. We need to make a couple of changes before leaving this page. First is to go to the source column and select **MyIP** so that ssh will only be enabled for your IP address (**VERY IMPORTANT**).
- Next click the "Add Rule" button and under the type column select **http** and leave port 80 selected. Go to the bottom right of the page and select and click the "Review and Launch" button.

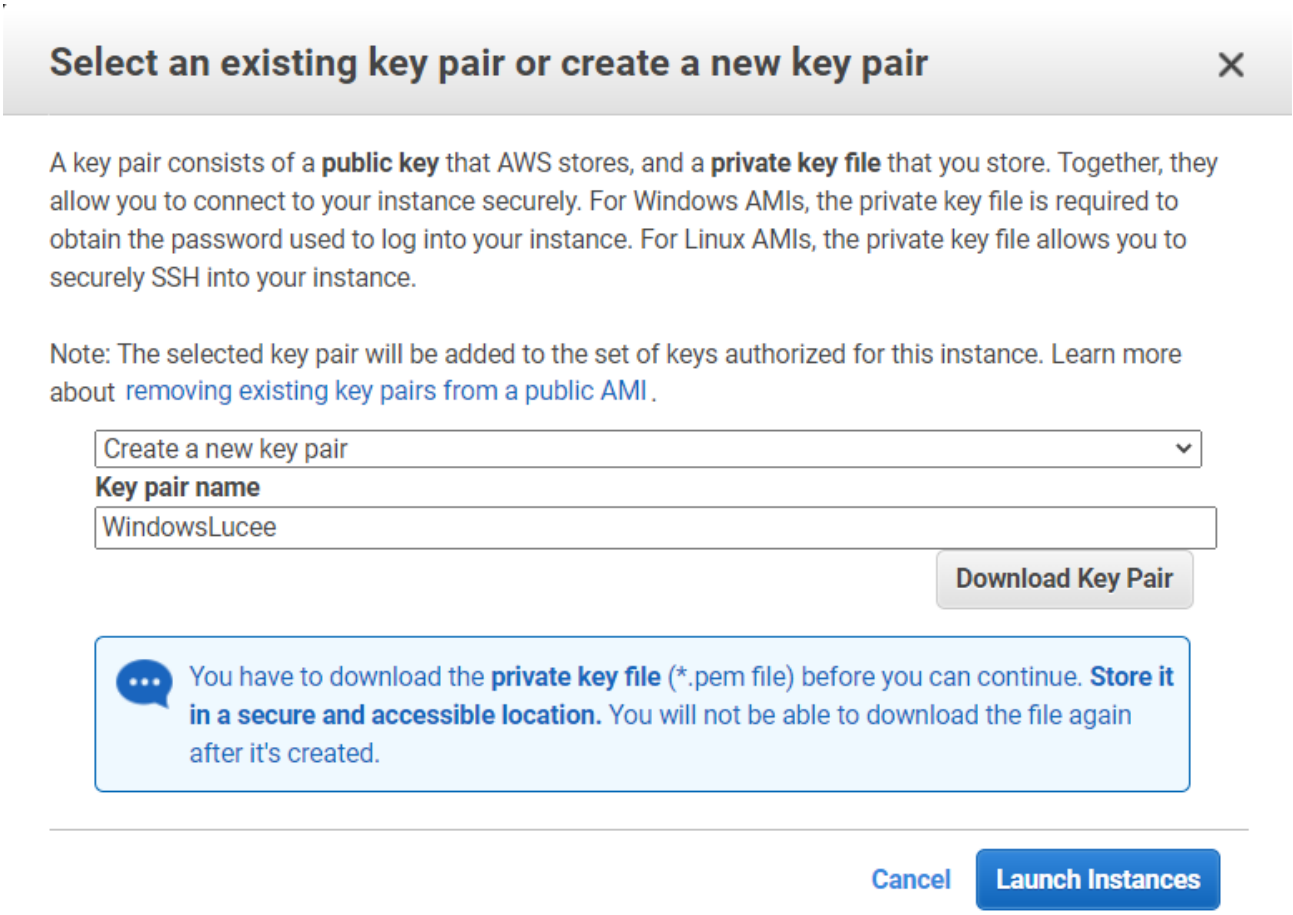


- You are on the "Review Launch Instance" page. Review it and once you are okay click the "Launch" bottom on the bottom right of page.

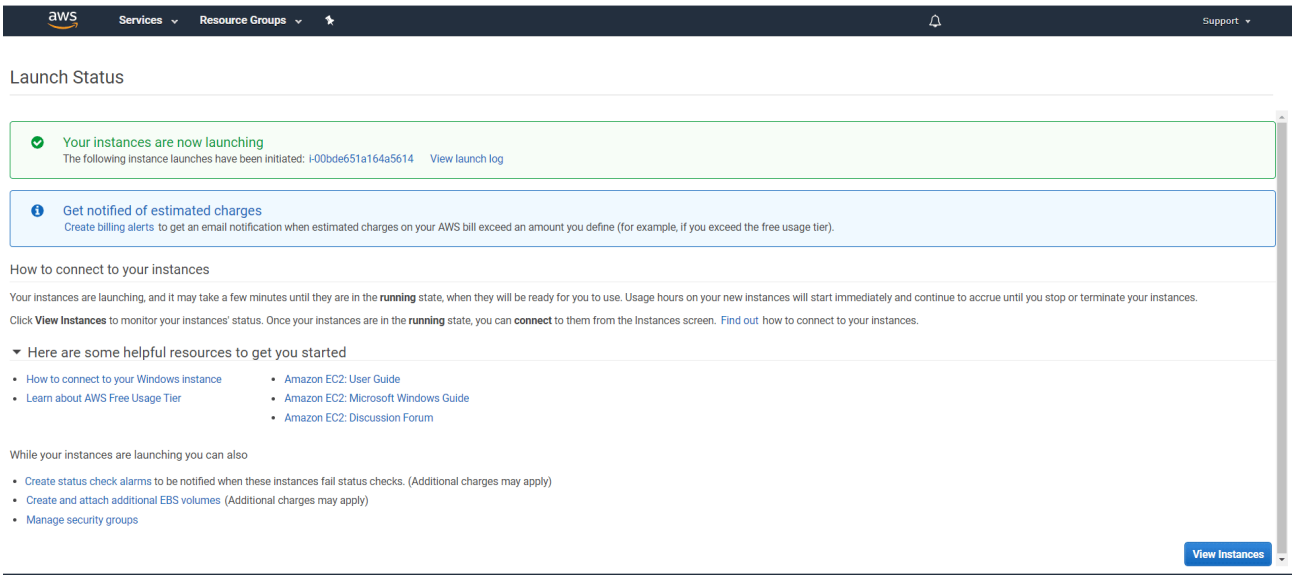


Review Instance Launch

- This opens a module window that prompts you to an existing key pair or to create a new key pair. If you do not know what this means I suggest you create a new key pair and put it in a folder that you have access to. If all went well you will see a green colored headline that says "Your instances are now launching."

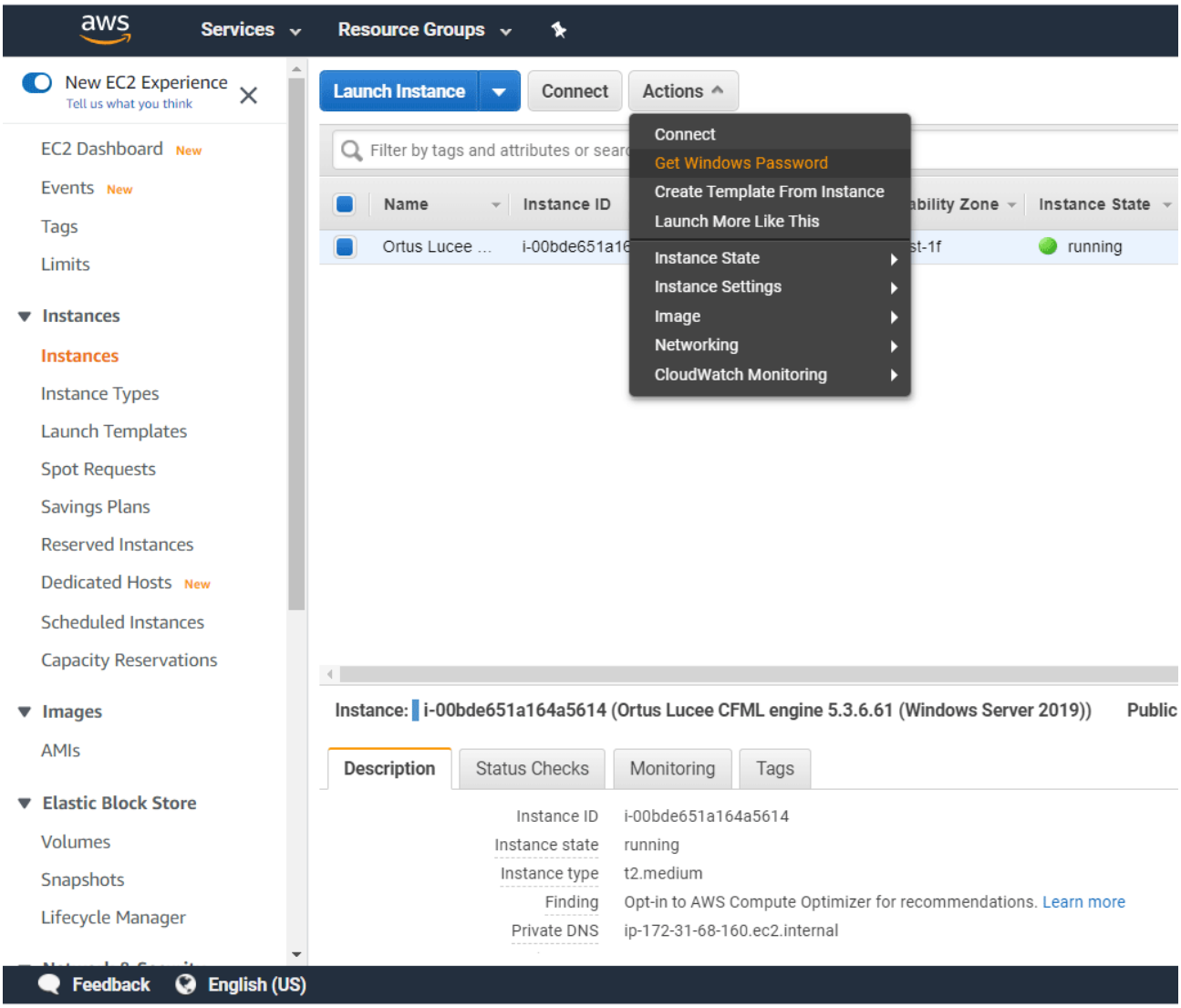


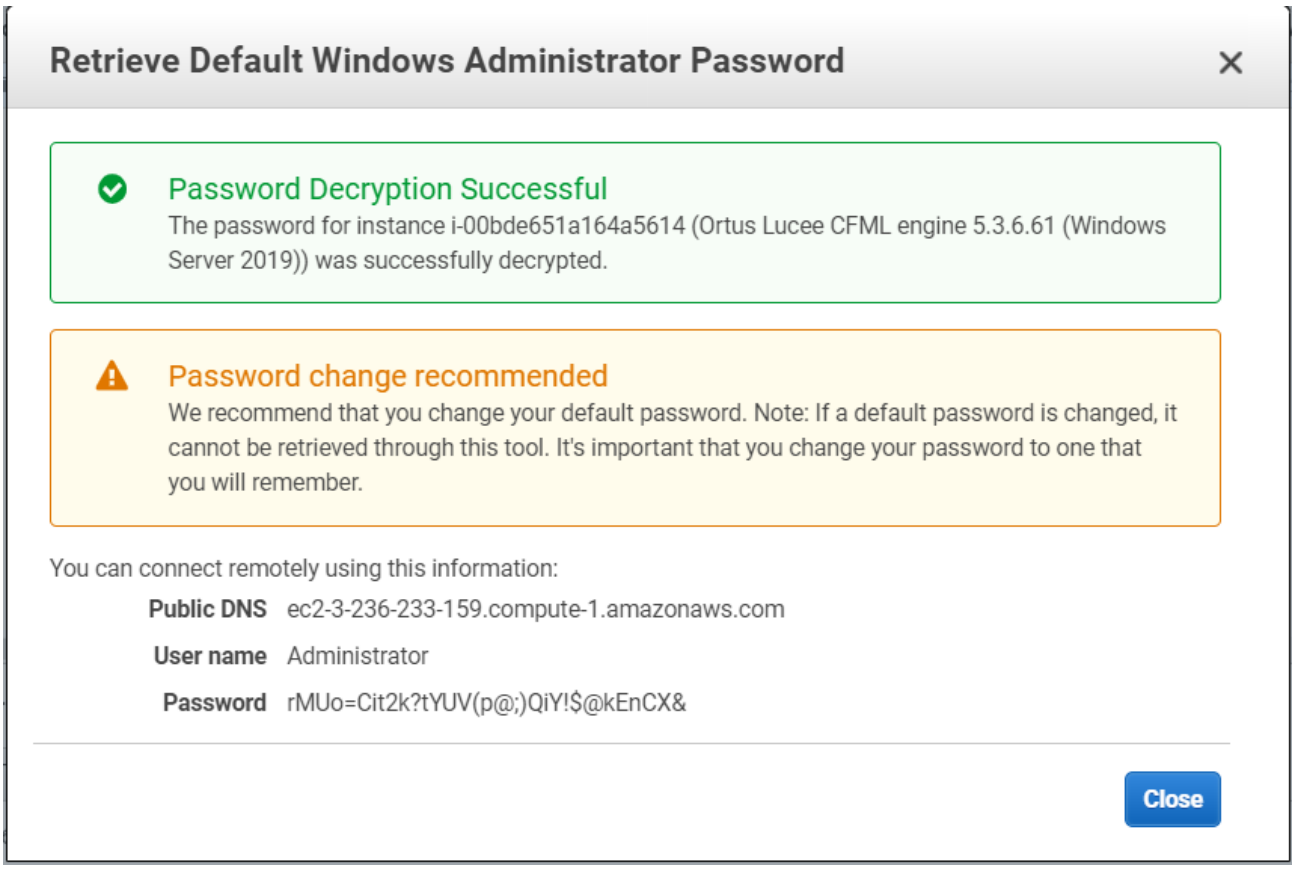
- You are on the "Launch Status" page. Go to the bottom right and click the button labeled "View Instances."



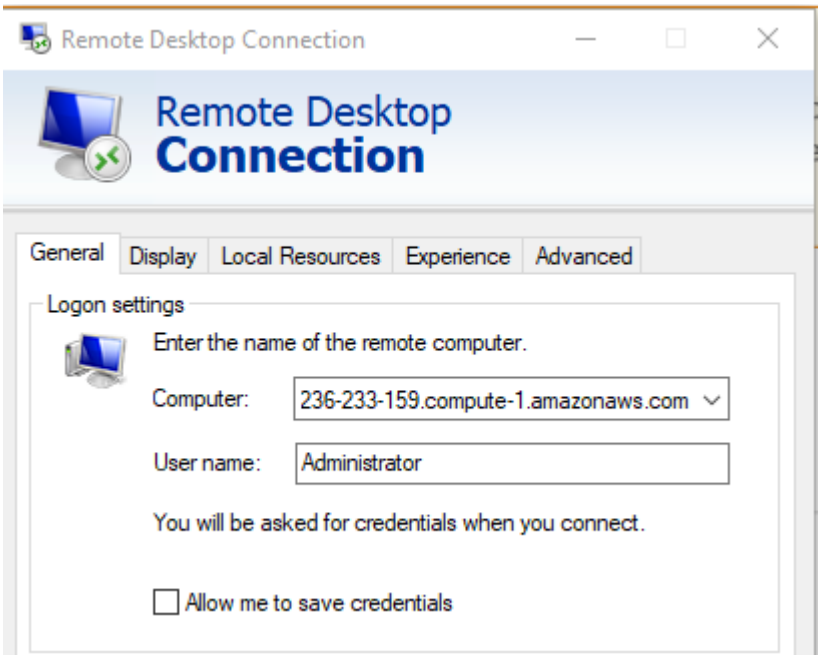
- Select your running instance. This will open some tabs at the bottom of the page. Click the action menu at the top of the page. Then click Windows Password. This will open a

dialog asking you to decrypt your Windows RDP administrative password using the pem file you downloaded or the pem file you selected.





- Look to the right on the description tab and look for "Public DNS (IPv4)." To the right of this text is the dns name. Copy that name and paste it in a browser. It should look something like this.
- `ec2-{public_dns}.compute-1.amazonaws.com`
- Paste that URL in a browser and you should see the default ColdBox site
- Let's RDP to the server.


Remote Desktop Connection
Remote Desktop
Connection
General
Display
Local Resources
Experience
Advanced
Logon settings
Enter the name of the remote computer.
Computer:
236-233-159.compute-1.amazonaws.com
User name:
Administrator
You will be asked for credentials when you connect.
Allow me to save credentials

Managing your web site

Changelog

Version windows-v1.0.0_5.3.6.61

Digital Ocean

Coming Soon..

Azure

Coming Soon..

Google Cloud

Coming Soon...