Start Using Amazon Web Services in Your ColdFusion Apps

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WELCOME TO DEVOPS ADVENTURE!
YOU ARE STANDING INSIDE AWS.
NEARBY IS AN ANGRY ELB.
THERE ARE SOME SSH KEYS ON THE GROUND.

– @dysinger

Best decision we ever make in startup was outsource all site outage to Cloud provider.

– @Devops_Borat

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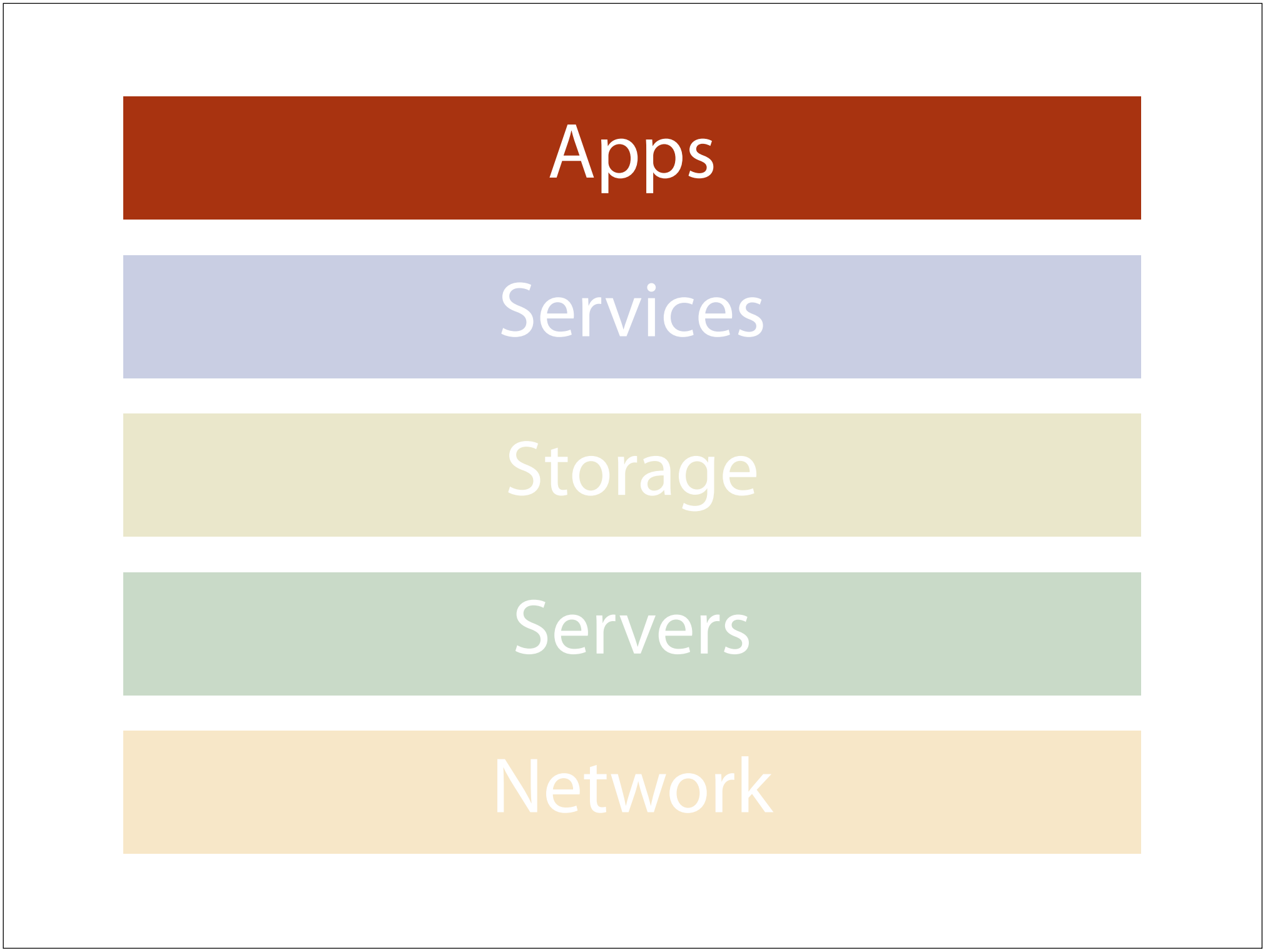
languages
features
servers
customers
options
messages
More
browsers
tools
memory
bugs
storage
services
platforms
everything

Stefan Tell@Flickr


Apps
Services
Storage
Servers
Network

Start Using Amazon Web Services in Your ColdFusion Apps

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How does AWS fit with Cf ?

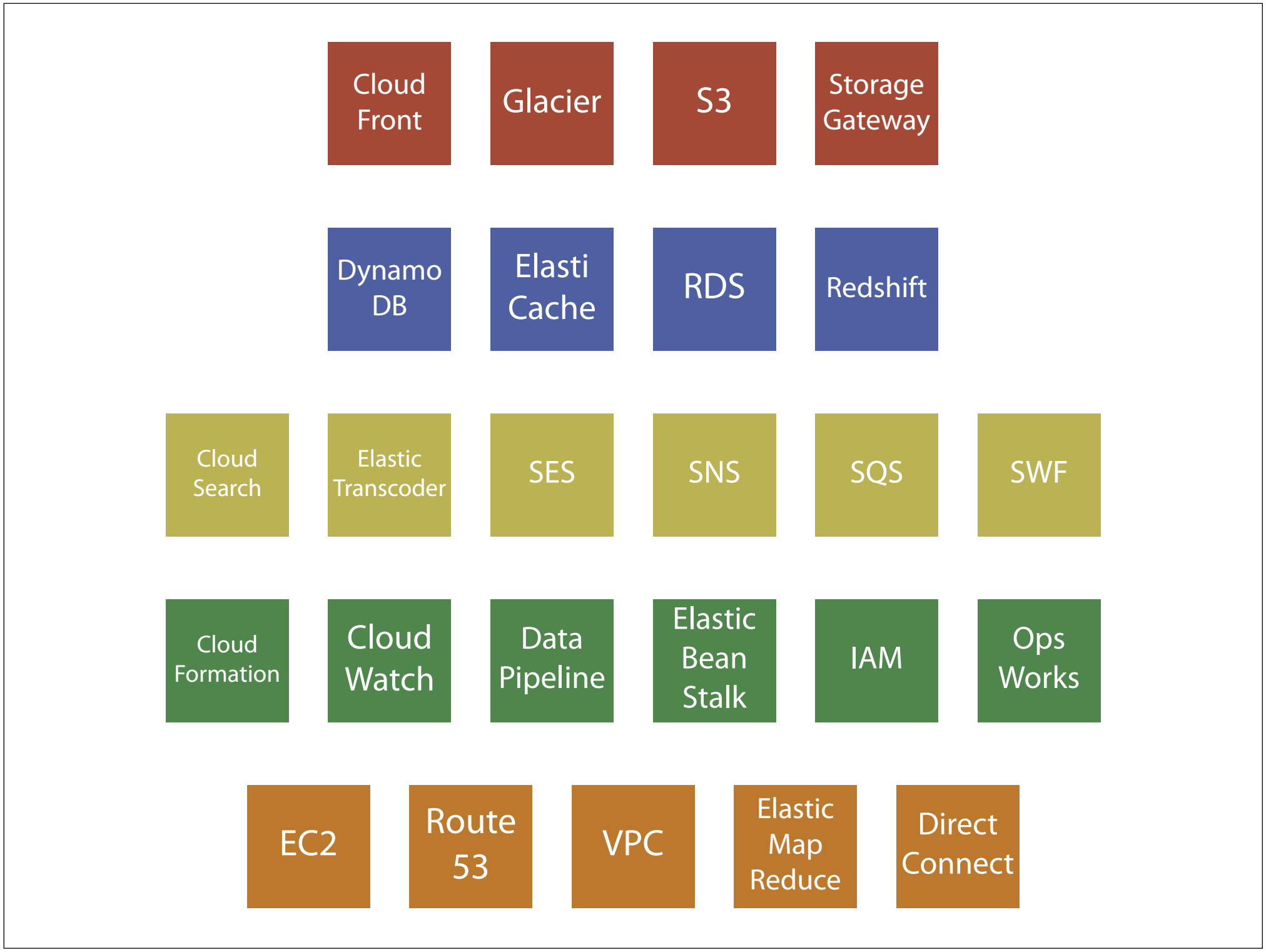
How do I run Cf in AWS?

1. Hello AWS
2. Simple, Cheap Storage with S3
3. Plugging Other AWS Services into CF
4. Running ColdFusion 10 on AWS
5. Lessons Learned Running with AWS

Hello AWS

Or, what can AWS do for me?

AWS = Utility Computing


Cloud Front
Glacier
S3
Storage Gateway
Dynamo DB
Elasti Cache
RDS
Redshift
Cloud Search
Elastic Transcoder
SES
SNS
SQS
SWF
Cloud Formation
Cloud Watch
Data Pipeline
Elastic Bean Stalk
IAM
Ops Works
EC2
Route 53
VPC
Elastic Map Reduce
Direct Connect

AWS is HTTP–based development

```
PUT /photos/puppy.jpg HTTP/1.1
Content-Type: image/jpeg
Content-Length: 94328
Host: mybucket.s3.amazonaws.com
Date: Tue, 27 Mar 2013 21:15:45 +0000

Authorization: AWS AKIAIOSFODNN7EXAMPLE:
MyyxeRY7whkBe+bq8fHCL/2kKUg=
```

AWS SDKs for:

- Java*
- PHP
- Ruby
- Node.js
- Python
- .NET
- Android
- iOS

*ColdFusion

: Making Stuff Easy

Simple, Cheap Storage with S3

S3

Simple Storage Service

Store all the things.

You can't delete anything.

EVER

1 byte

5 terabytes

Regions

- US Standard (NoVA)
- US West (Oregon)
- US West (NorCal)
- EU (Ireland)
- Asia Pacific (Singapore)
- Asia Pacific (Sydney)
- Asia Pacific (Tokyo)
- South America (São Paulo)

99.999999999% durability*

99.99% availability

*Stuff rarely gets lost.

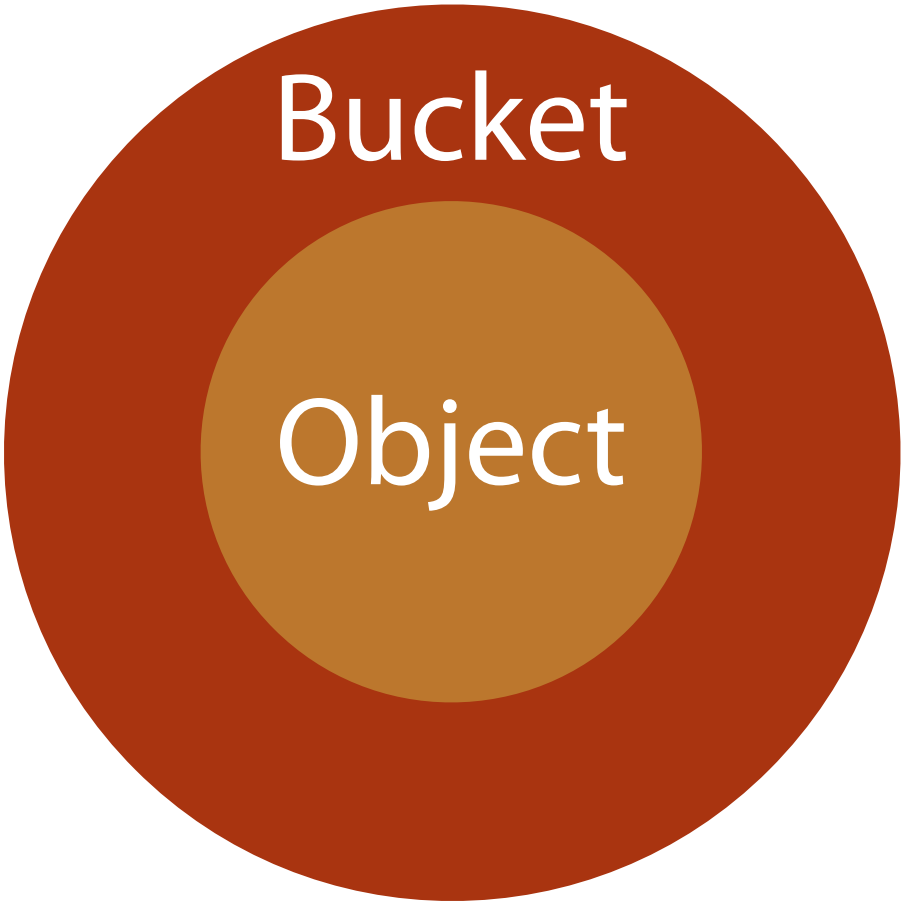
$0.095 per GB stored

$0.004 per 10,000 GET

$0.005 per 1,000 PUT

$0.12 per GB out after 1GB


Bucket
myfiles.s3.amazonaws.com


Bucket
Object

Everything is an object

Objects have metadata

Everything in S3 is private by default.

```
http://mybucket.s3.amazonaws.com/
path/to/file.png
```

~~C:/~~

s3://

Basic ColdFusion Integration

```
<cffile action="read"
file="s3://somebucket/somefile.txt"
variable="fileData" />

<cffile action="write"
file="s3://somebucket/somefile.txt"
output="#someStuff#" />

<cffile action="delete"
file="s3://somebucket/somefile.txt" />
```

Basic ColdFusion Integration

```
<cfdirectory action="create"
directory="s3://somebucket/
someDirectory" />

<cfdirectory action="list"
directory="s3://somebucket/
someDirectory" />
```

ColdFusion Example

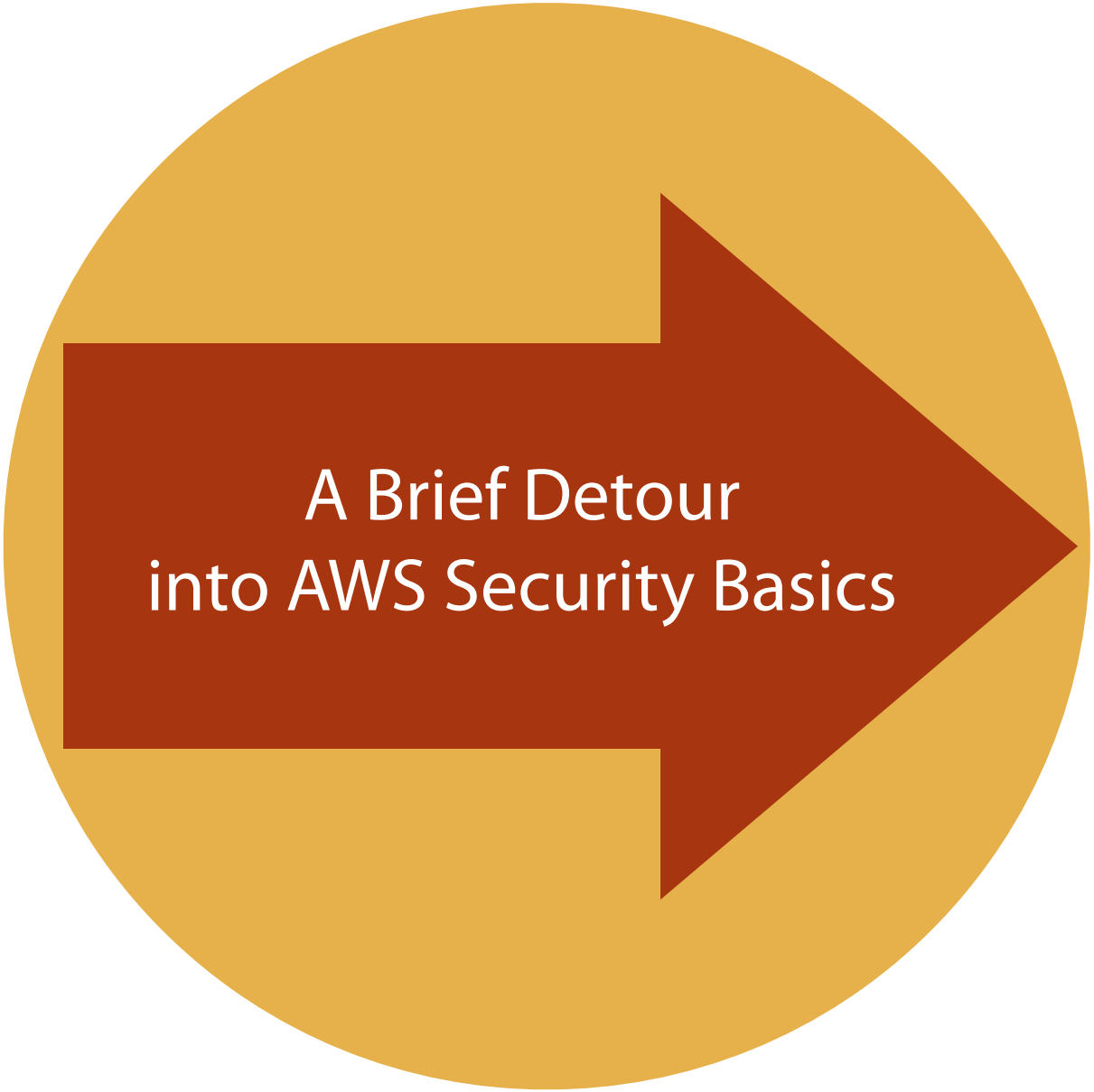
```
<cfif not directoryExists("s3://somebucket.s3.amazonaws.com")>
    <cfset perms = [
        {group="all", permission="read"},
{id="canonicalIDofYourAWSAccount", permission="full_control"}
    ]>
    <cfdirectory action="create" directory="s3://
somebucket.s3.amazonaws.com" storeacl="#perms#">
</cfif>

<cfset fileWrite("s3://somebucket.s3.amazonaws.com/myFile.txt",
"#someOutput#")>

<cfset files = directoryList("s3://somebucket.s3.amazonaws.com")>
```

Tags and Functions Which Support S3

- cffile*
- cfdirectory
- cfdocument
- cfftp
- cffeed
- cfimage
- cfloop†
- fileOpen
- fileClose
- fileCopy
- fileDelete
- fileExists
- fileisEOF
- fileMove
- fileWrite
- fileRead
- fileReadBinary
- fileReadLine
- fileSetLastModified
- getFileInfo
- getDirectoryFromPath
- directoryCreate
- directoryDelete
- directoryExists
- directoryList
- imageNew
- imageRead
- imageWrite
- imageWriteBase64
- isImageFile
- isPDFFile

*Except rename
† Looping over directory information

Um, don’t you need credentials?


A Brief Detour
into AWS Security Basics


IAM Account
Key Pair
Master AWS Account
Access Key
Secret Key
Key Pair ID
Public Key
Private Key

Master AWS Account

Groups

Authenticated Users
All Users
Log Delivery
{Custom}

ACL

Policies

Sample Policy

```
{
  "Version":"2008-10-17",
  "Statement":[{
   "Sid":"Add Read Permissions",
       "Effect":"Allow",
        "Principal": {
              "AWS": "*"
          },
       "Action":["s3:GetObject"],
       "Resource":["arn:aws:s3:::bucket/*"
       ]
    }
  ]
}
```

Requests from a Specific Domain Policy

```
{
  "Version":"2008-10-17",
  "Id":"http referrer policy example",
  "Statement":[
    {
      "Sid":"Allow get requests referred by www.mysite.com
and mysite.com",
      "Effect":"Allow",
      "Principal":"*",
      "Action":"s3:GetObject",
      "Resource":"arn:aws:s3:::example-bucket/*",
      "Condition":{
        "StringLike":{
          "aws:Referer":[
            "http://www.mysite.com/*",
            "http://mysite.com/*"
          ]
        }
      }
    }
  ]
}
```

S3 requests in CF require IAM credentials.

Setting AWS IAM credentials

1. In the individual S3 call
2. In application.cfc

Setting AWS IAM credentials

```
<cffile action="read"
file="s3://
accessKey:awsSecretKey@somebucket/
somefile.txt" variable="fileData" />
```

Setting AWS IAM credentials

In application.cfc:

```
this.s3.accessKeyId="accessKey";
this.s3.awsSecretKey="secretKey";
```

ColdFusion Example

```
<cfif not directoryExists("s3://somebucket.s3.amazonaws.com")>
    <cfset perms = [
        {group="all", permission="read"},
{id="canonicalIDofYourAWSAccount", permission="full_control"}
    ]>
    <cfdirectory action="create" directory="s3://
somebucket.s3.amazonaws.com" storeacl="#perms#">
</cfif>

<cfset fileWrite("s3://somebucket.s3.amazonaws.com/myFile.txt",
"#someOutput#")>

<cfset files = directoryList("s3://somebucket.s3.amazonaws.com")>
```

Everything in S3 is private by default.

ColdFusion Example

```
<cfif not directoryExists("s3://somebucket.s3.amazonaws.com")>
    <cfset perms = [
        {group="all", permission="read"},
{id="canonicalIDofYourAWSAccount", permission="full_control"}
    ]>
    <cfdirectory action="create" directory="s3://
somebucket.s3.amazonaws.com" storeacl="#perms#">
</cfif>

<cfset fileWrite("s3://somebucket.s3.amazonaws.com/myFile.txt",
"#someOutput#")>

<cfset files = directoryList("s3://somebucket.s3.amazonaws.com")>
```

Get/set file ACL with

`storeGetACL()`

`storeSetACL()`

Setting permissions with ACLs

```
<cfset permissions = storeGetACL(fileOnS3) />
<cfset arrayAppend(permissions,
{group="all",permission="read"}) />
<cfset storeSetACL(fileOnS3, "#permissions#") />
```

Get/set object metadata with

`storeGetMetadata()`

`storeSetMetadata()`

Setting content type

```
<cfset metadataStruct.content_type=
"video/webm" />
<cfset storeSetMetadata(s3File,
"#metadataStruct#") />
```

More cool stuff

Expire URLs

Changing file properties
on a per-request basis

Requires request signing.

Upload to S3 from the browser

S3RequestSigningUtils on GitHub

github.com/brianklaas/ctlS3Utils

*Requires CF10

Some issues to consider:

What happens when an upload fails?

S3 is storage, not a file system

Can get basic file info with
<cfhttp url="http://bucket.s3.amazonaws.com/filename" method="head">

What happens when S3 goes down?

Plugging Other AWS Services into CF

DynamoDB

NoSQL database service

CloudFront

Cheap global content delivery network

SES

Bulk email service

SQS

High–performance message queue service

Relational Database Service

RDS

IOPS

RDS Costs

- Database license
- IOPS
- Data transfer in/out
- You can't alter the server setup.

AWS is HTTP–based development

Running CF10 in AWS

Or, exploring the official ColdFusion 10 AMI

EC2

EC2 Instance Types

Name	Memory	Compute Units	Storage	Architecture	I/O Performance	Max IPs	API Name	Linux cost	Windows cost
Micro	0.60 GB	2 (only for short bursts)	0 GB (EBS only)	32/64-bit	Low	1	t1.micro	$0.02 hourly	$0.02 hourly
M1 Small	1.70 GB	1 (1 core x 1 unit)	160 GB	32/64-bit	Moderate	8	m1.small	$0.06 hourly	$0.09 hourly
M1 Medium	3.75 GB	2 (1 core x 2 units)	410 GB	32/64-bit	Moderate	12	m1.medium	$0.12 hourly	$0.18 hourly
High-CPU Medium	1.70 GB	5 (2 cores x 2.5 units)	350 GB	32/64-bit	Moderate	12	c1.medium	$0.14 hourly	$0.23 hourly
M1 Large	7.50 GB	4 (2 cores x 2 units)	850 GB (2x420 GB)	64-bit	Moderate / 500 Mbps	30	m1.large	$0.24 hourly	$0.36 hourly
High-Memory Extra Large	17.10 GB	6.5 (2 cores x 3.25 units)	420 GB	64-bit	Moderate	60	m2.xlarge	$0.41 hourly	$0.51 hourly
M1 Extra Large	15.00 GB	8 (4 cores x 2 units)	1690 GB (4x420 GB)	64-bit	High / 1000 Mbps	60	m1.xlarge	$0.48 hourly	$0.73 hourly
M3 Extra Large	15.00 GB	13 (4 cores x 3.25 units)	0 GB (EBS only)	64-bit	Moderate / 500 Mbps	60	m3.xlarge	$0.50 hourly	$0.78 hourly
High-CPU Extra Large	7.00 GB	20 (8 cores x 2.5 units)	1690 GB (4x420 GB)	64-bit	High / 1000 Mbps	60	c1.xlarge	$0.58 hourly	$0.90 hourly
High-Memory Double Extra Large	34.20 GB	13 (4 cores x 3.25 units)	850 GB	64-bit	High	120	m2.2xlarge	$0.82 hourly	$1.02 hourly
M3 Double Extra Large	30.00 GB	26 (8 cores x 3.25 units)	0 GB (EBS only)	64-bit	High / 1000 Mbps	120	m3.2xlarge	$1.00 hourly	$1.56 hourly
Cluster Compute Quadruple Extra Large	23.00 GB	33.5 (2 x Intel Xeon X5570)	1690 GB (2x840 GB)	64-bit	Very High	1	cc1.4xlarge	$1.30 hourly	$1.61 hourly
High-Memory Quadruple Extra Large	68.40 GB	26 (8 cores x 3.25 units)	1690 GB (2x840 GB)	64-bit	High / 1000 Mbps	240	m2.4xlarge	$1.64 hourly	$2.04 hourly
Cluster GPU Quadruple Extra Large	22.00 GB	33.5 (2 x Intel Xeon X5570)	1690 GB (2x840 GB)	64-bit	Very High	1	cg1.4xlarge	$2.10 hourly	$2.60 hourly
Cluster Compute Eight Extra Large	60.50 GB	88 (2 x Intel Xeon E5-2670)	3370 GB (4x840 GB)	64-bit	Very High	240	cc2.8xlarge	$2.40 hourly	$2.97 hourly
High I/O Quadruple Extra Large	60.50 GB	35 (8 cores + 8 hyperthreads)	2048 GB (2x1024 GB SSD)	64-bit	Very High	1	hi1.4xlarge	$3.10 hourly	$3.58 hourly
High Memory Cluster Eight Extra Large	244.00 GB	88 (2 x Intel Xeon E5-2670)	240 GB SSD	64-bit	Very High	1	cr1.8xlarge	$3.50 hourly	$3.83 hourly
High Storage Eight Extra Large	117.00 GB	35 (8 cores + 8 hyperthreads)	48 TB (24x2 TB)	64-bit	Very High	1	hs1.8xlarge	$4.60 hourly	$4.93 hourly

AMI on EC2

The Official Adobe CF10 AMI

- Windows 2008 R2 SP1
  - Standard Large - $0.51/hr = ~$370/month
  - Standard XL - $1.02/hr = ~$740/month
- Ubuntu 12.0.4
  - Standard Large - $0.39/hr = ~$281/month
  - Standard XL - $0.78/hr = ~$561/month
- Includes EC2 charges
- Includes Adobe Support

Large vs. XL Instances

- m1.large
  - 7.5GB RAM
  - 4 ECUs (2 cores x 2 units)
  - 850GB storage
  - Moderate IO performance (500 Mbps)
- m1.xlarge
  - 15GB RAM
  - 8 ECUs (4 cores x 2 units)
  - 1690GB storage
  - High IO performance (1000 Mbps)

ECU = 1–1.2 Ghz processor

AMI Setup

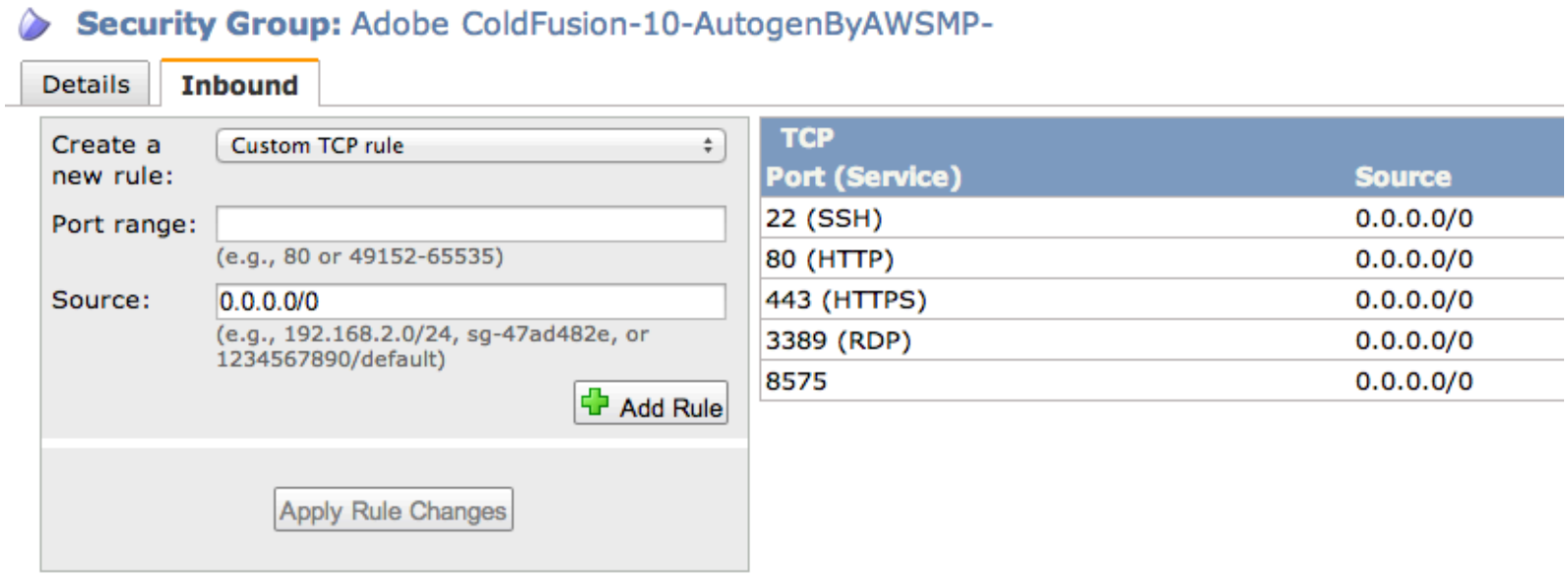
- CF10 Enterprise, Hotfix 7
- JRE 1.7.0_15
- Windows: IIS 7.5
- Linux: Apache 2.2.4
- Both: MySQL 5.5

Launching the CF10 AMI

Stuff You Need Before You Start

- Custom Security Group (preferred)
- Key pair
- RDP (Windows) or SSH client (Linux)

Security Groups



Found in the AWS Console under
EC2 ➡ Security Groups

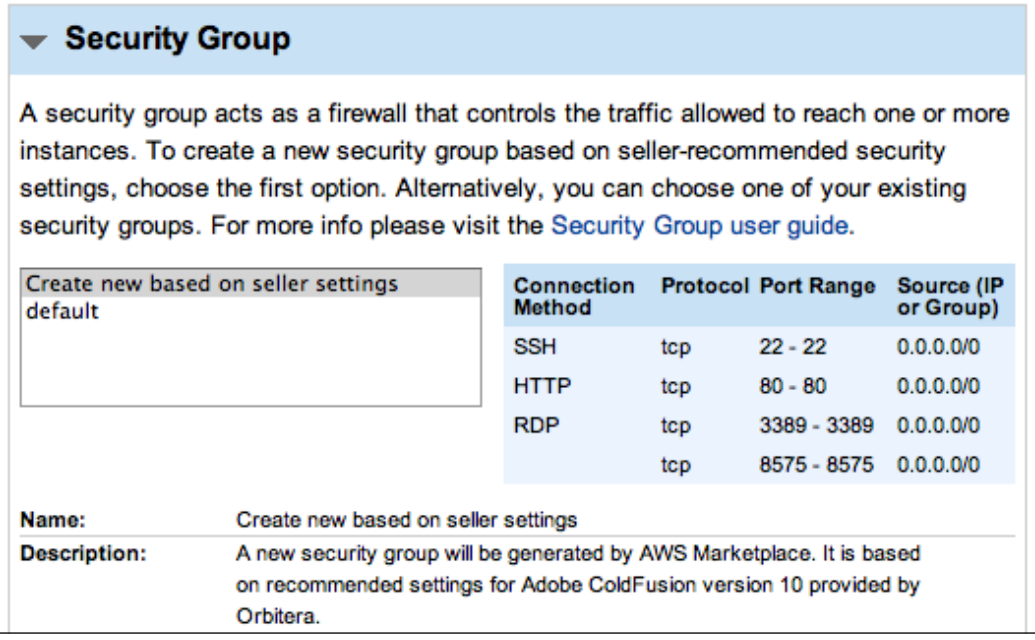
Key Pair

- Public/private key
- Tied to a specific region
- Only one opportunity to download!

Found in the AWS Console under
EC2 ➡ Key Pairs

Purchase the AMI

- Select region and instance size (L or XL)
- EC2 Classic or VPC
- Use preconfigured security group or one of your own
- Select a key pair



Security Group

A security group acts as a firewall that controls the traffic allowed to reach one or more instances. To create a new security group based on seller-recommended security settings, choose the first option. Alternatively, you can choose one of your existing security groups. For more info please visit the Security Group user guide.

Create new based on seller settings
default

Connection Method	Protocol	Port Range	Source (IP or Group)
SSH	tcp	22 - 22	0.0.0.0/0
HTTP	tcp	80 - 80	0.0.0.0/0
RDP	tcp	3389 - 3389	0.0.0.0/0
	tcp	8575 - 8575	0.0.0.0/0

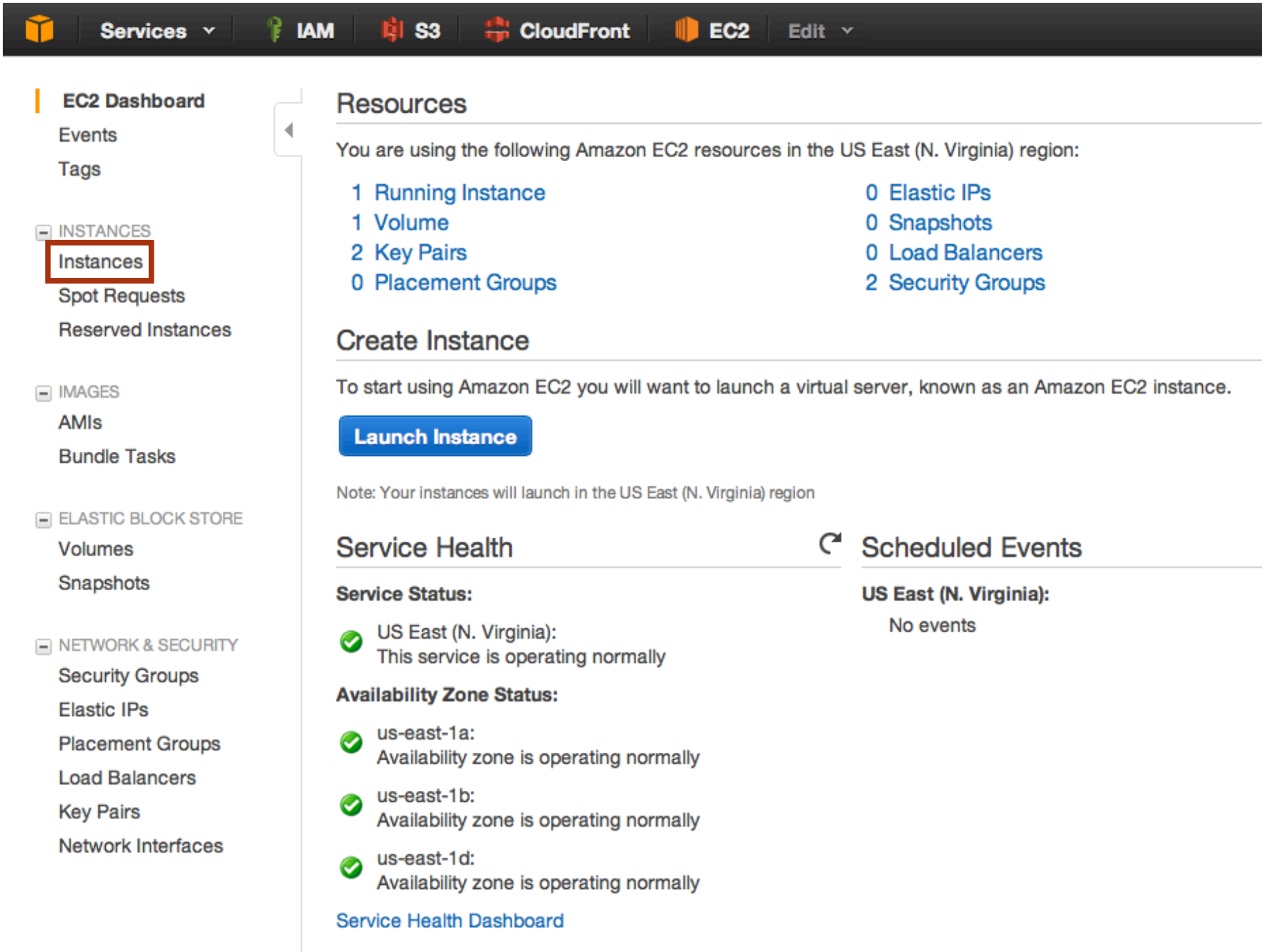
Name: Create new based on seller settings

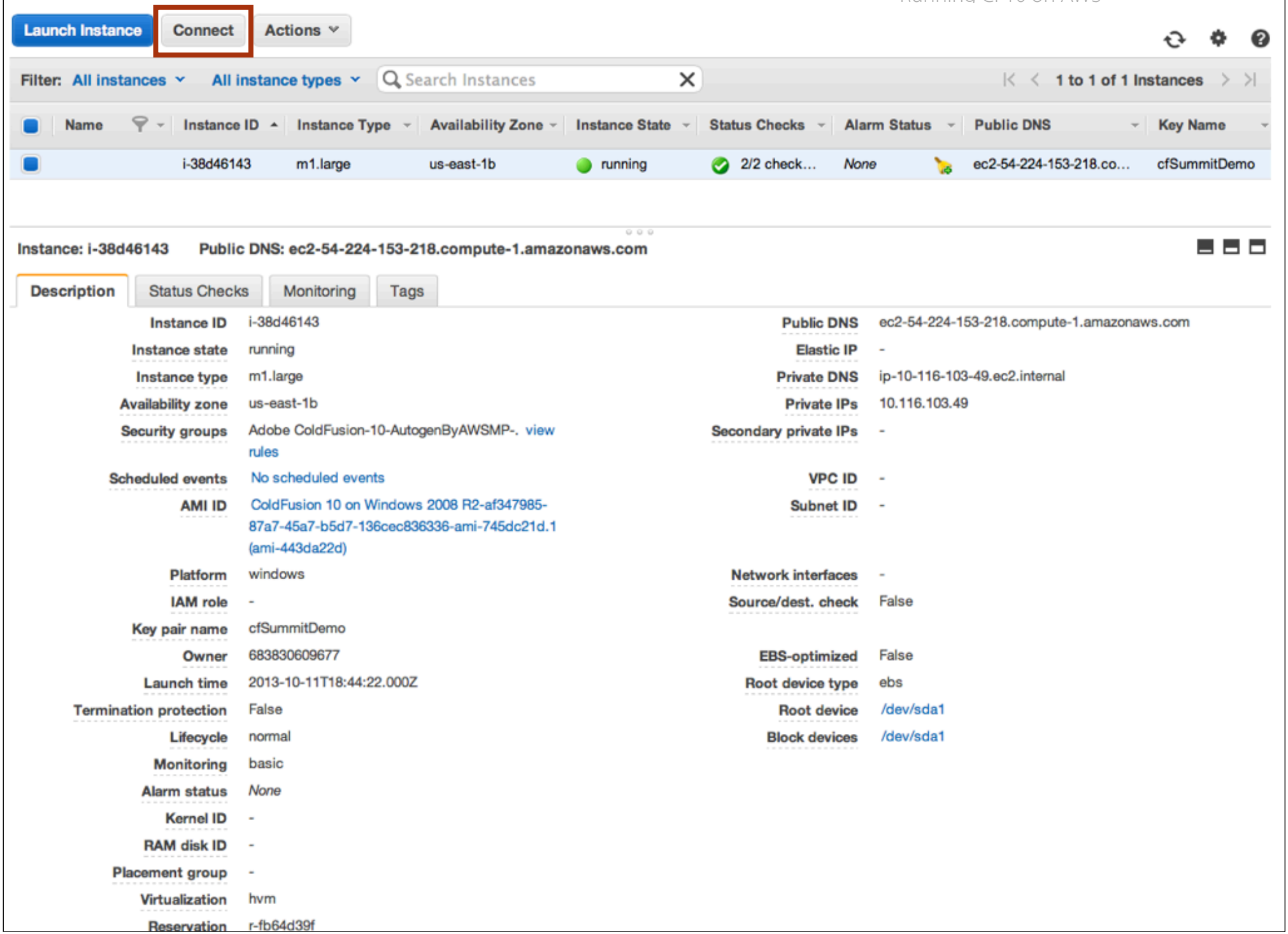
Description: A new security group will be generated by AWS Marketplace. It is based on recommended settings for Adobe ColdFusion version 10 provided by Orbitera.

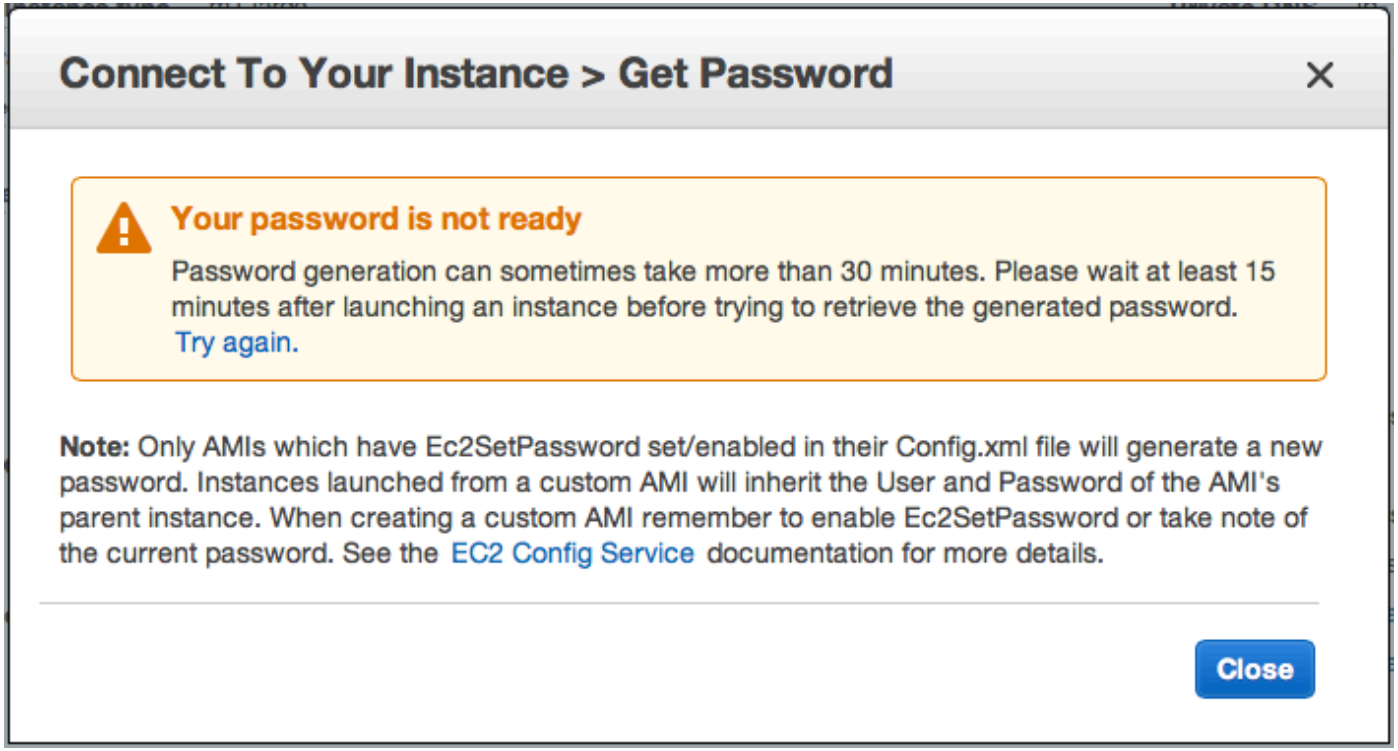
Once you launch an instance, you start paying for it.

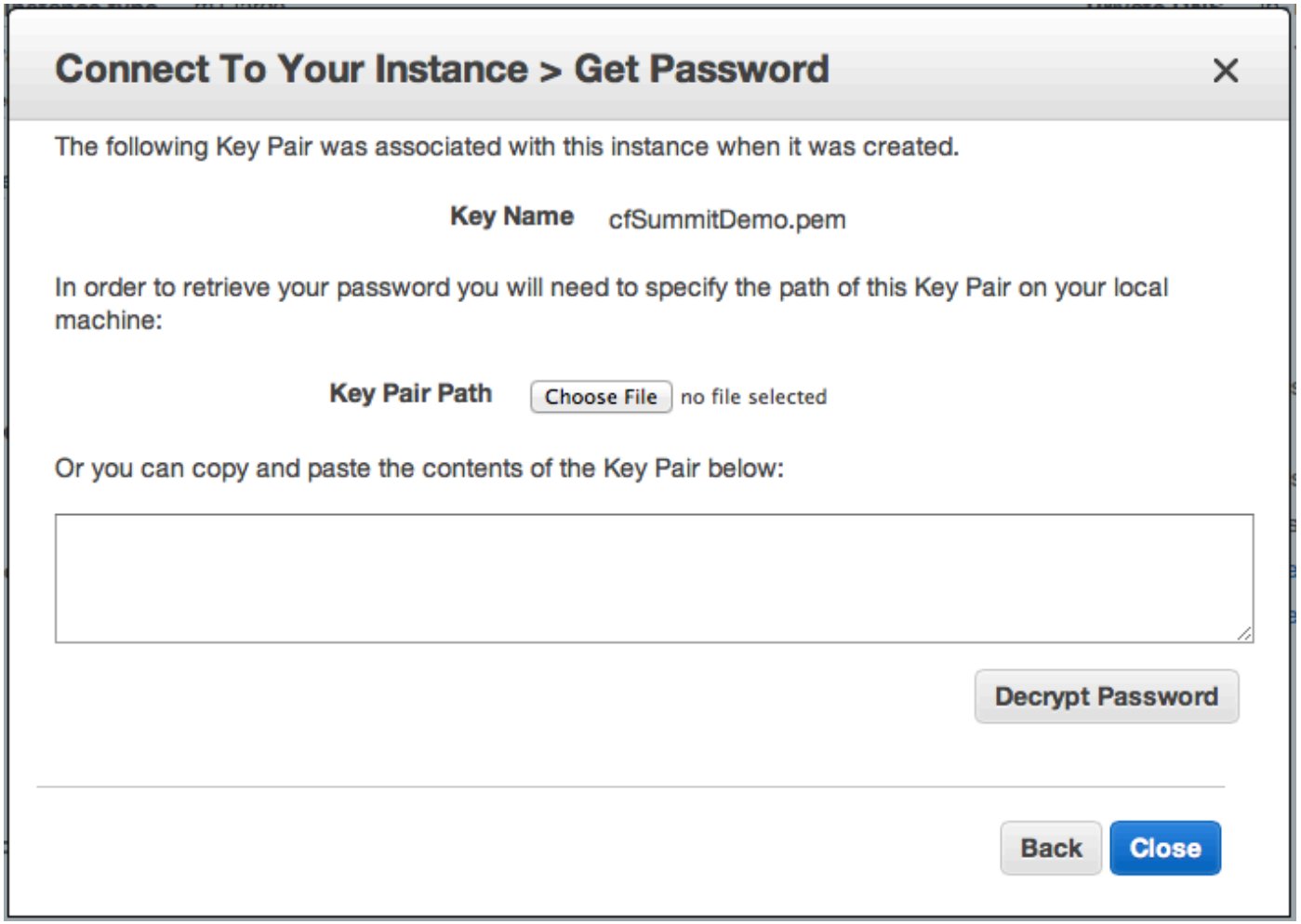
Connecting to the Instance

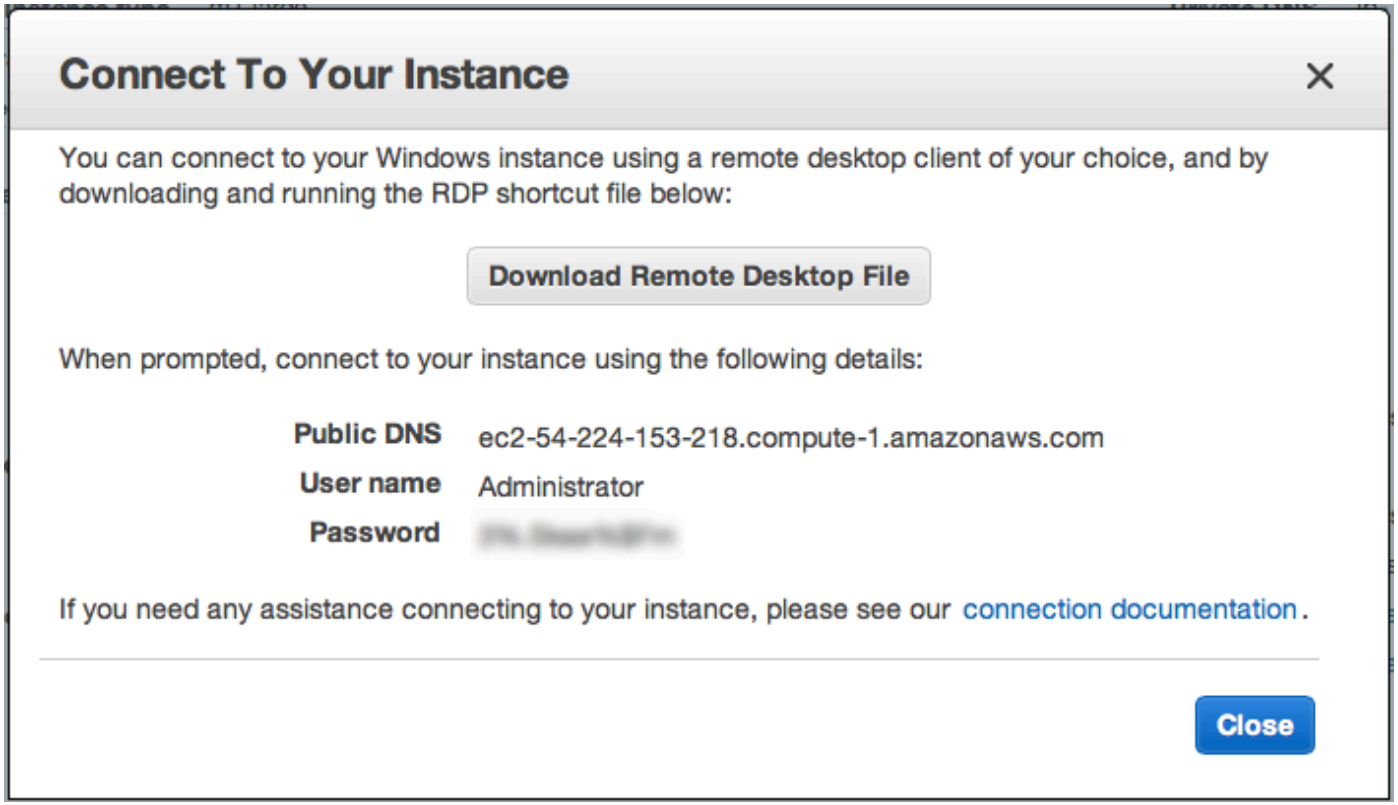
- Retrieve the Windows admin password
- Connect via RDP as “Administrator”
- Go through the Jumpstart Tool

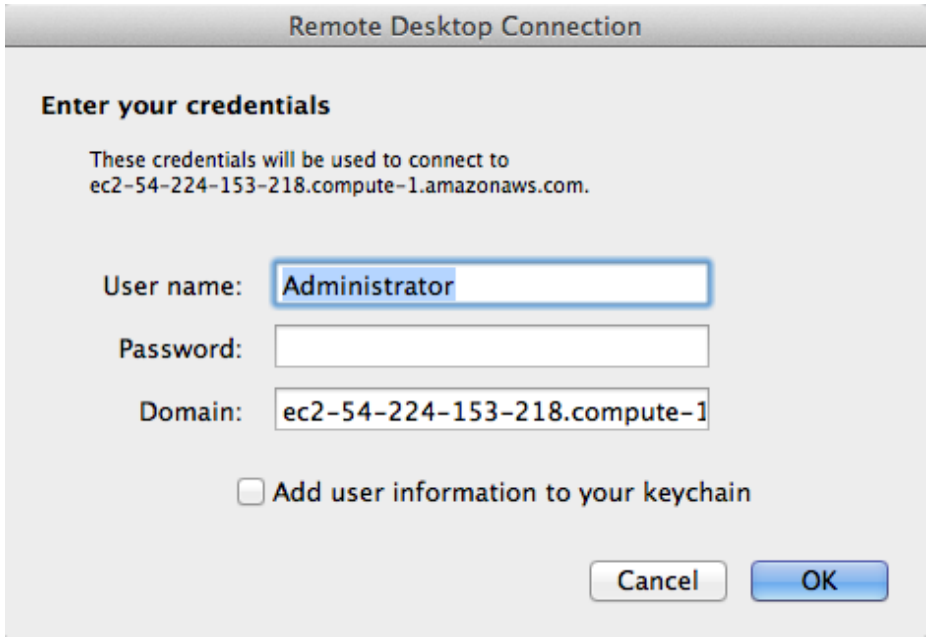

Services
IAM
S3
CloudFront
EC2
Edit
EC2 Dashboard
Events
Tags
INSTANCES
Instances
Spot Requests
Reserved Instances
IMAGES
AMIs
Bundle Tasks
ELASTIC BLOCK STORE
Volumes
Snapshots
NETWORK & SECURITY
Security Groups
Elastic IPs
Placement Groups
Load Balancers
Key Pairs
Network Interfaces
Resources
You are using the following Amazon EC2 resources in the US East (N. Virginia) region:
1 Running Instance
1 Volume
2 Key Pairs
0 Placement Groups
0 Elastic IPs
0 Snapshots
0 Load Balancers
2 Security Groups
Create Instance
To start using Amazon EC2 you will want to launch a virtual server, known as an Amazon EC2 instance.
Launch Instance
Note: Your instances will launch in the US East (N. Virginia) region
Service Health
Service Status:
US East (N. Virginia):
This service is operating normally
Availability Zone Status:
us-east-1a:
Availability zone is operating normally
us-east-1b:
Availability zone is operating normally
us-east-1d:
Availability zone is operating normally
Service Health Dashboard
Scheduled Events
US East (N. Virginia):
No events


Launch Instance
Connect
Actions
Filter: All instances
All instance types
Search Instances
1 to 1 of 1 Instances
Name
Instance ID
Instance Type
Availability Zone
Instance State
Status Checks
Alarm Status
Public DNS
Key Name
i-38d46143
m1.large
us-east-1b
running
2/2 check...
None
ec2-54-224-153-218.co...
cfSummitDemo
Instance: i-38d46143
Public DNS: ec2-54-224-153-218.compute-1.amazonaws.com
Description
Status Checks
Monitoring
Tags
Instance ID
i-38d46143
Instance state
running
Instance type
m1.large
Availability zone
us-east-1b
Security groups
Adobe ColdFusion-10-AutogenByAWSMP-. view rules
Scheduled events
No scheduled events
AMI ID
ColdFusion 10 on Windows 2008 R2-af347985-87a7-45a7-b5d7-136cec836336-ami-745dc21d.1 (ami-443da22d)
Platform
windows
IAM role
-
Key pair name
cfSummitDemo
Owner
683830609677
Launch time
2013-10-11T18:44:22.000Z
Termination protection
False
Lifecycle
normal
Monitoring
basic
Alarm status
None
Kernel ID
-
RAM disk ID
-
Placement group
-
Virtualization
hvm
Reservation
r-fb64d39f
Public DNS
ec2-54-224-153-218.compute-1.amazonaws.com
Elastic IP
-
Private DNS
ip-10-116-103-49.ec2.internal
Private IPs
10.116.103.49
Secondary private IPs
-
VPC ID
-
Subnet ID
-
Network interfaces
-
Source/dest. check
False
EBS-optimized
False
Root device type
ebs
Root device
/dev/sda1
Block devices
/dev/sda1

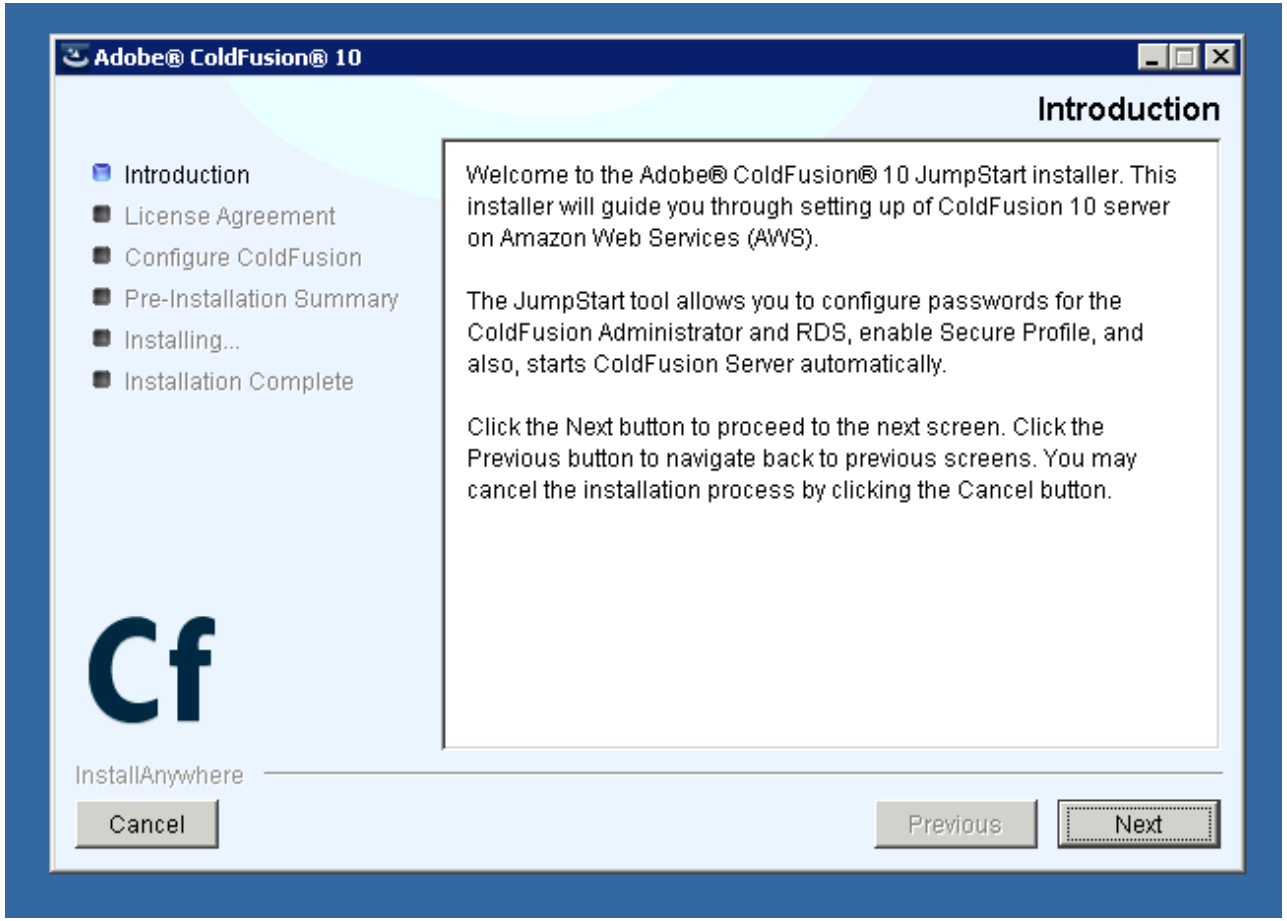

Connect To Your Instance > Get Password
Your password is not ready
Password generation can sometimes take more than 30 minutes. Please wait at least 15 minutes after launching an instance before trying to retrieve the generated password.
Try again.
Note: Only AMIs which have Ec2SetPassword set/enabled in their Config.xml file will generate a new password. Instances launched from a custom AMI will inherit the User and Password of the AMI's parent instance. When creating a custom AMI remember to enable Ec2SetPassword or take note of the current password. See the EC2 Config Service documentation for more details.
Close


Connect To Your Instance > Get Password
The following Key Pair was associated with this instance when it was created.
Key Name
cfSummitDemo.pem
In order to retrieve your password you will need to specify the path of this Key Pair on your local machine:
Key Pair Path
Choose File
no file selected
Or you can copy and paste the contents of the Key Pair below:
Decrypt Password
Back
Close


Connect To Your Instance
You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:
Download Remote Desktop File
When prompted, connect to your instance using the following details:
Public DNS
ec2-54-224-153-218.compute-1.amazonaws.com
User name
Administrator
Password
If you need any assistance connecting to your instance, please see our connection documentation.
Close

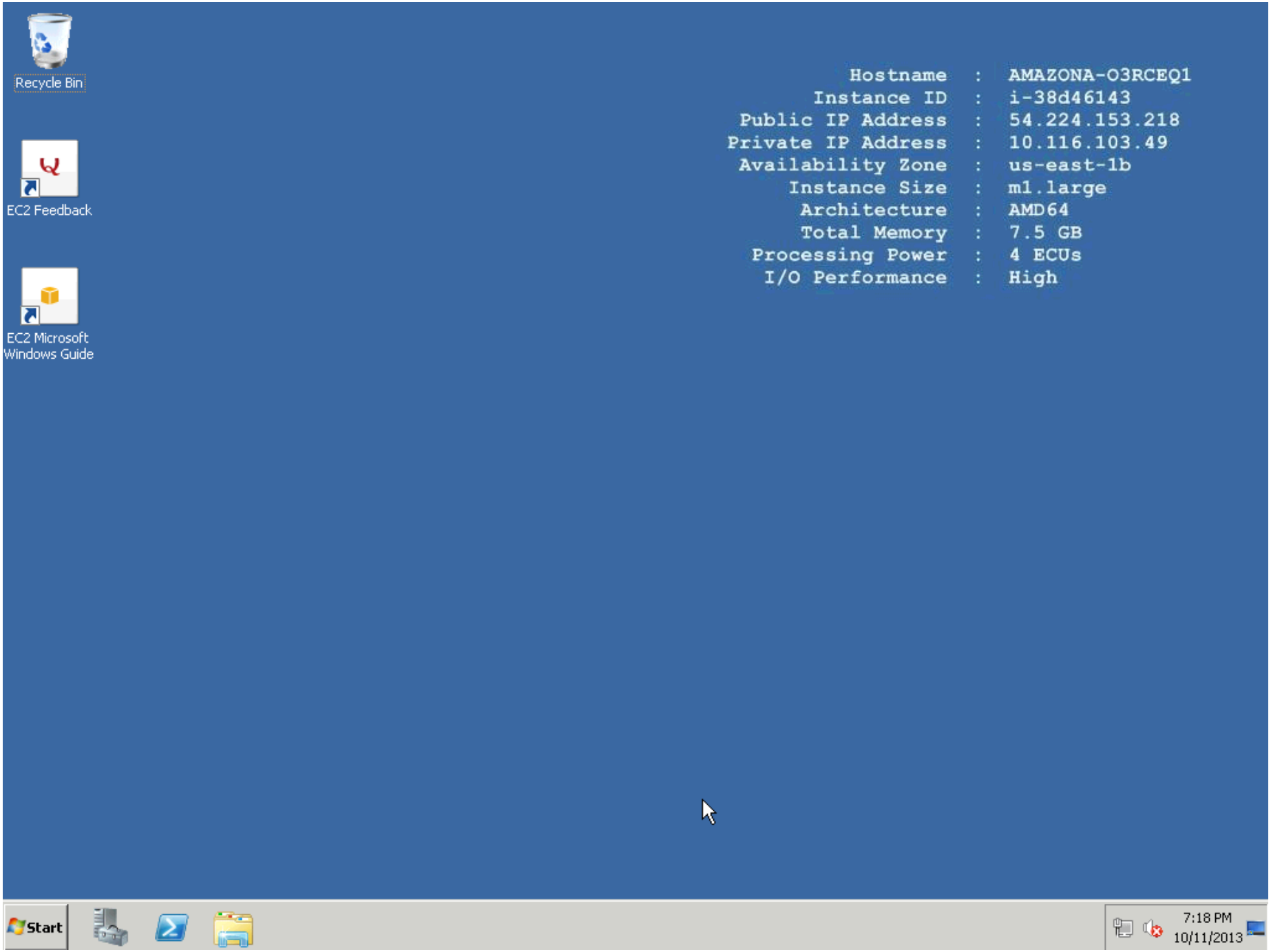

Remote Desktop Connection
Enter your credentials
These credentials will be used to connect to
ec2-54-224-153-218.compute-1.amazonaws.com.
User name:
Administrator
Password:
Domain:
ec2-54-224-153-218.compute-1
Add user information to your keychain
Cancel
OK

The Jumpstart Tool


Adobe® ColdFusion® 10
Introduction
Introduction
License Agreement
Configure ColdFusion
Pre-Installation Summary
Installing...
Installation Complete
Welcome to the Adobe® ColdFusion® 10 JumpStart installer. This installer will guide you through setting up of ColdFusion 10 server on Amazon Web Services (AWS).
The JumpStart tool allows you to configure passwords for the ColdFusion Administrator and RDS, enable Secure Profile, and also, starts ColdFusion Server automatically.
Click the Next button to proceed to the next screen. Click the Previous button to navigate back to previous screens. You may cancel the installation process by clicking the Cancel button.
Cf
InstallAnywhere
Cancel
Previous
Next

Jumpstart Steps

- Agree to the license
- Secure profile is turned on by default
- Specify the IP addresses that can connect to the CF Administrator
- CF Administrator credentials


Recycle Bin
EC2 Feedback
EC2 Microsoft Windows Guide
Hostname : AMAZONA-O3RCEQ1
Instance ID : i-38d46143
Public IP Address : 54.224.153.218
Private IP Address : 10.116.103.49
Availability Zone : us-east-1b
Instance Size : m1.large
Architecture : AMD64
Total Memory : 7.5 GB
Processing Power : 4 ECUs
I/O Performance : High
Start
7:18 PM
10/11/2013

You are now responsible.

You are responsible for security.

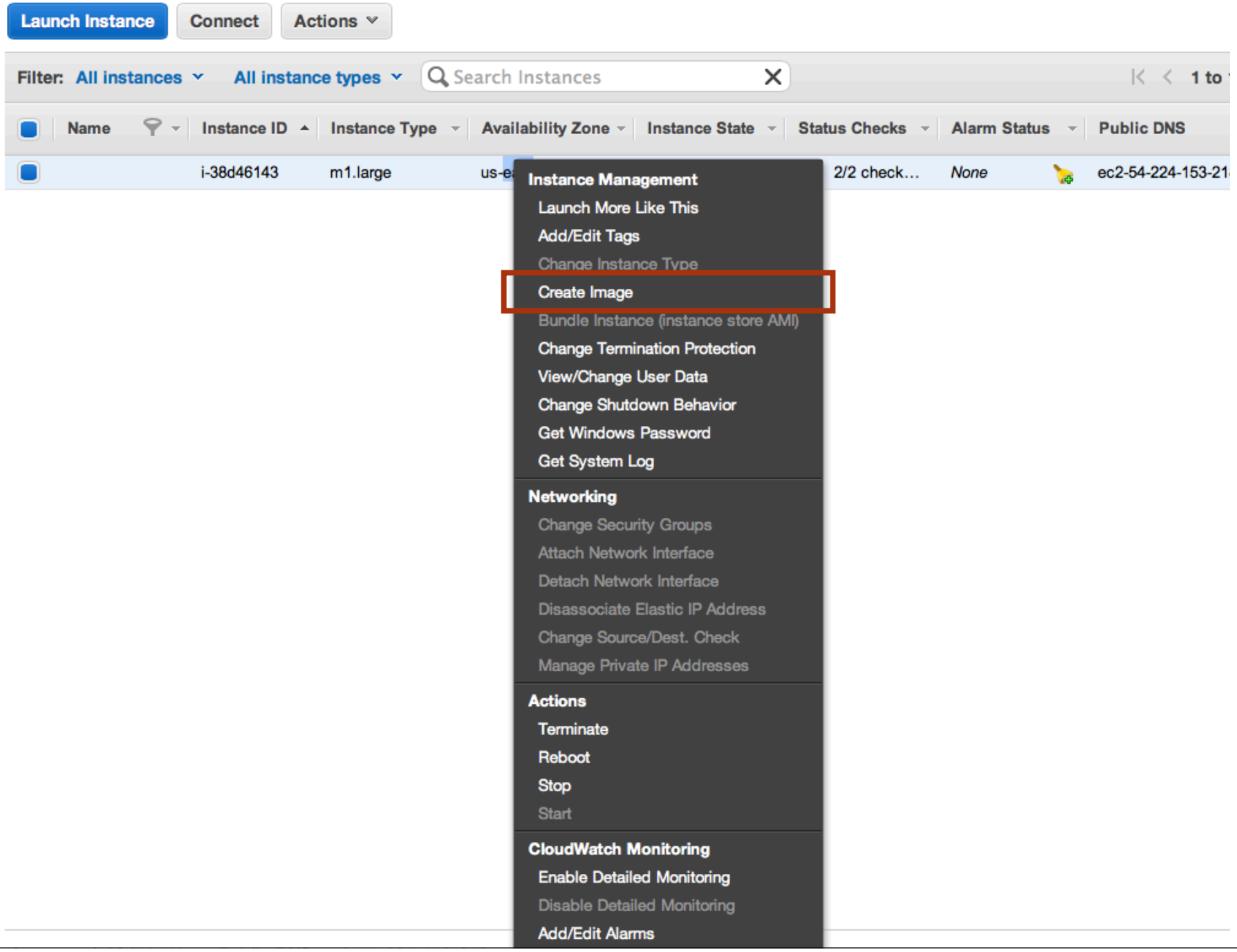
You are responsible for software updates.

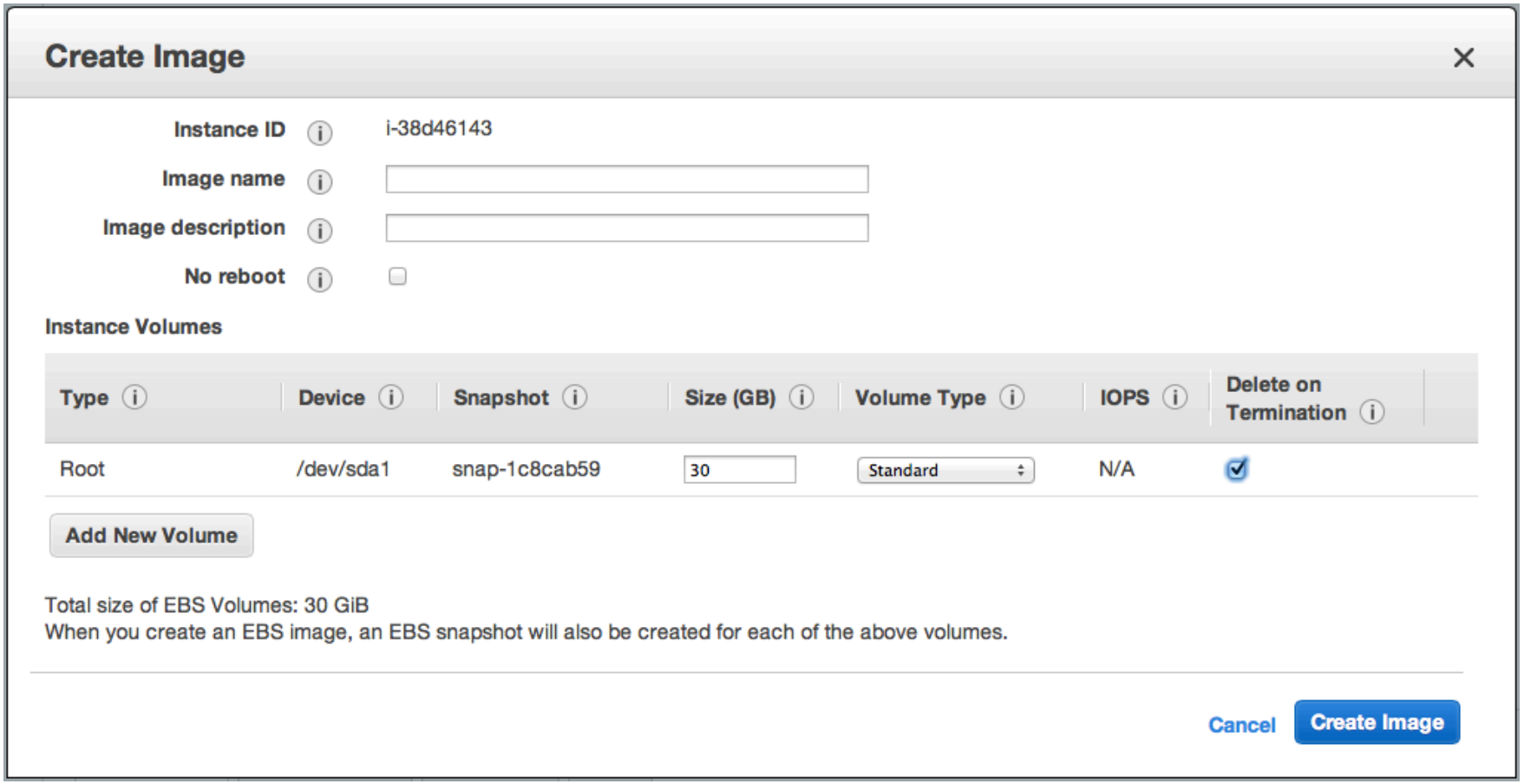
You are responsible for everything.

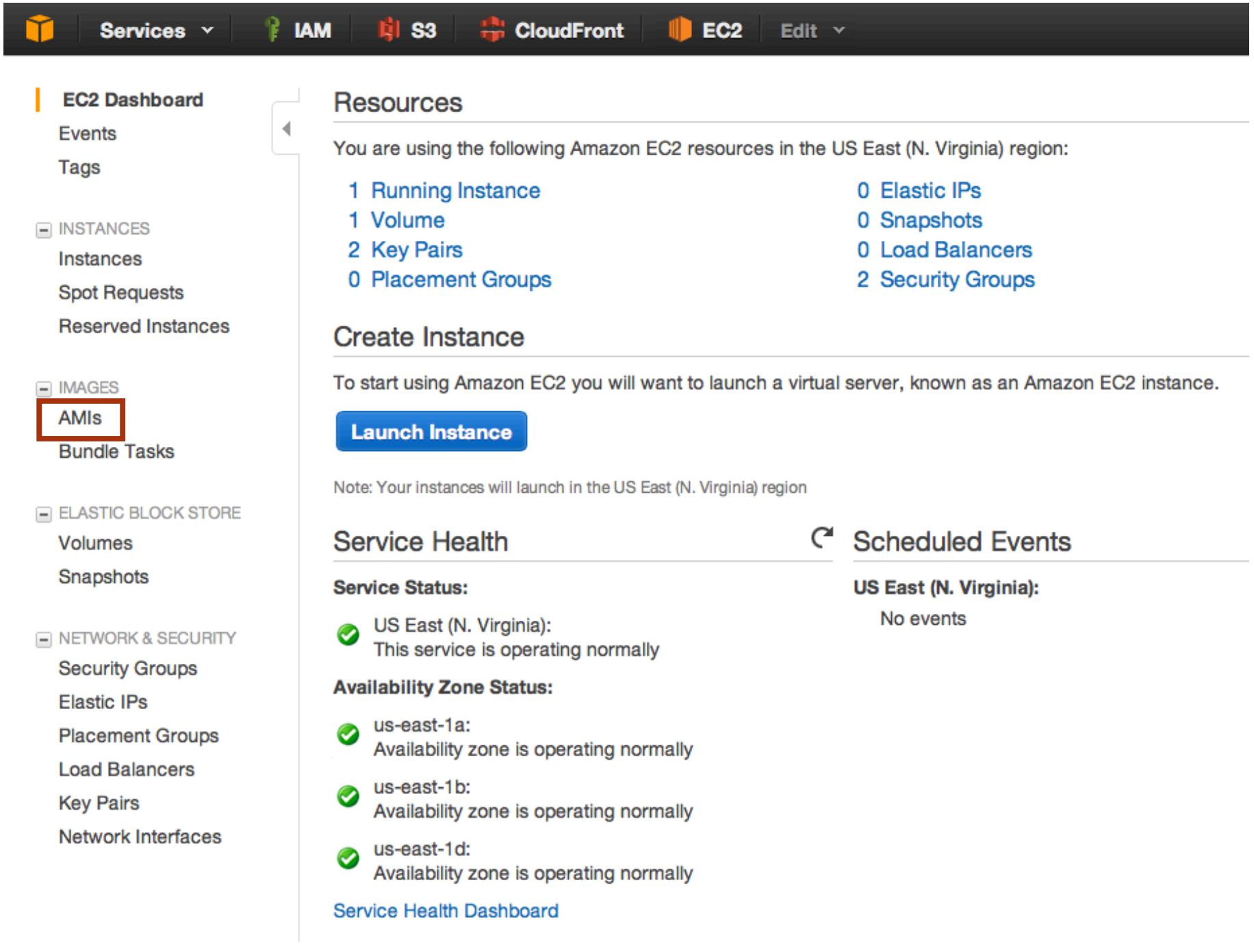
First Steps Post–Jumpstart

- Install CF10 Update 11
- Update the JRE
- Change the JVM allocation
- Shut off MySQL

Create your own AMI.


Launch Instance
Connect
Actions
Filter: All instances
All instance types
Search Instances
1 to
Name
Instance ID
Instance Type
Availability Zone
Instance State
Status Checks
Alarm Status
Public DNS
i-38d46143
m1.large
2/2 check...
None
ec2-54-224-153-21
Instance Management
Launch More Like This
Add/Edit Tags
Change Instance Type
Create Image
Bundle Instance (instance store AMI)
Change Termination Protection
View/Change User Data
Change Shutdown Behavior
Get Windows Password
Get System Log
Networking
Change Security Groups
Attach Network Interface
Detach Network Interface
Disassociate Elastic IP Address
Change Source/Dest. Check
Manage Private IP Addresses
Actions
Terminate
Reboot
Stop
Start
CloudWatch Monitoring
Enable Detailed Monitoring
Disable Detailed Monitoring
Add/Edit Alarms


Create Image
Instance ID
i-38d46143
Image name
Image description
No reboot
Instance Volumes
Type
Device
Snapshot
Size (GB)
Volume Type
IOPS
Delete on Termination
Root
/dev/sda1
snap-1c8cab59
30
Standard
N/A
Add New Volume
Total size of EBS Volumes: 30 GiB
When you create an EBS image, an EBS snapshot will also be created for each of the above volumes.
Cancel
Create Image


Services
IAM
S3
CloudFront
EC2
Edit
EC2 Dashboard
Events
Tags
INSTANCES
Instances
Spot Requests
Reserved Instances
IMAGES
AMIs
Bundle Tasks
ELASTIC BLOCK STORE
Volumes
Snapshots
NETWORK & SECURITY
Security Groups
Elastic IPs
Placement Groups
Load Balancers
Key Pairs
Network Interfaces
Resources
You are using the following Amazon EC2 resources in the US East (N. Virginia) region:
1 Running Instance
1 Volume
2 Key Pairs
0 Placement Groups
0 Elastic IPs
0 Snapshots
0 Load Balancers
2 Security Groups
Create Instance
To start using Amazon EC2 you will want to launch a virtual server, known as an Amazon EC2 instance.
Launch Instance
Note: Your instances will launch in the US East (N. Virginia) region
Service Health
Service Status:
US East (N. Virginia):
This service is operating normally
Availability Zone Status:
us-east-1a:
Availability zone is operating normally
us-east-1b:
Availability zone is operating normally
us-east-1d:
Availability zone is operating normally
Service Health Dashboard
Scheduled Events
US East (N. Virginia):
No events

Create your own AMI from scratch.

CF10 Licensing for the Cloud

- 16 ECUs per CF10 Enterprise license
- Large instance = 4 ECUs
- One license = 4 large instances

blogs.coldfusion.com/post.cfm/coldfusion-10-eula

Zero to Your Own CF AMI

- Create a Windows or Linux instance using a pre–existing AMI, VMware instance or using EC2 tools.
- Configure the OS, Web Server, etc.
- Install CF10
- Update CF, configure as needed
- Create an AMI

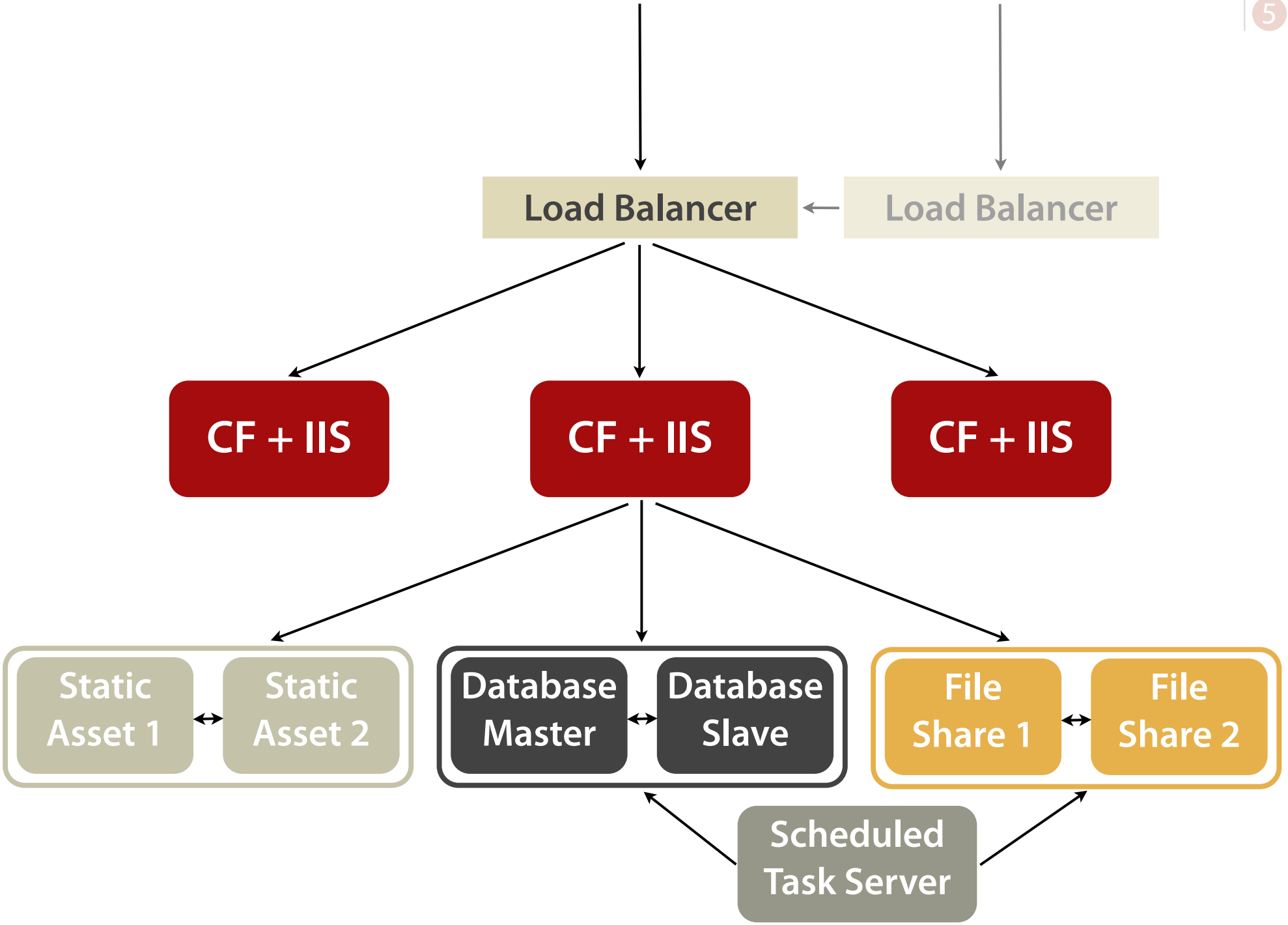
It’s not hard.

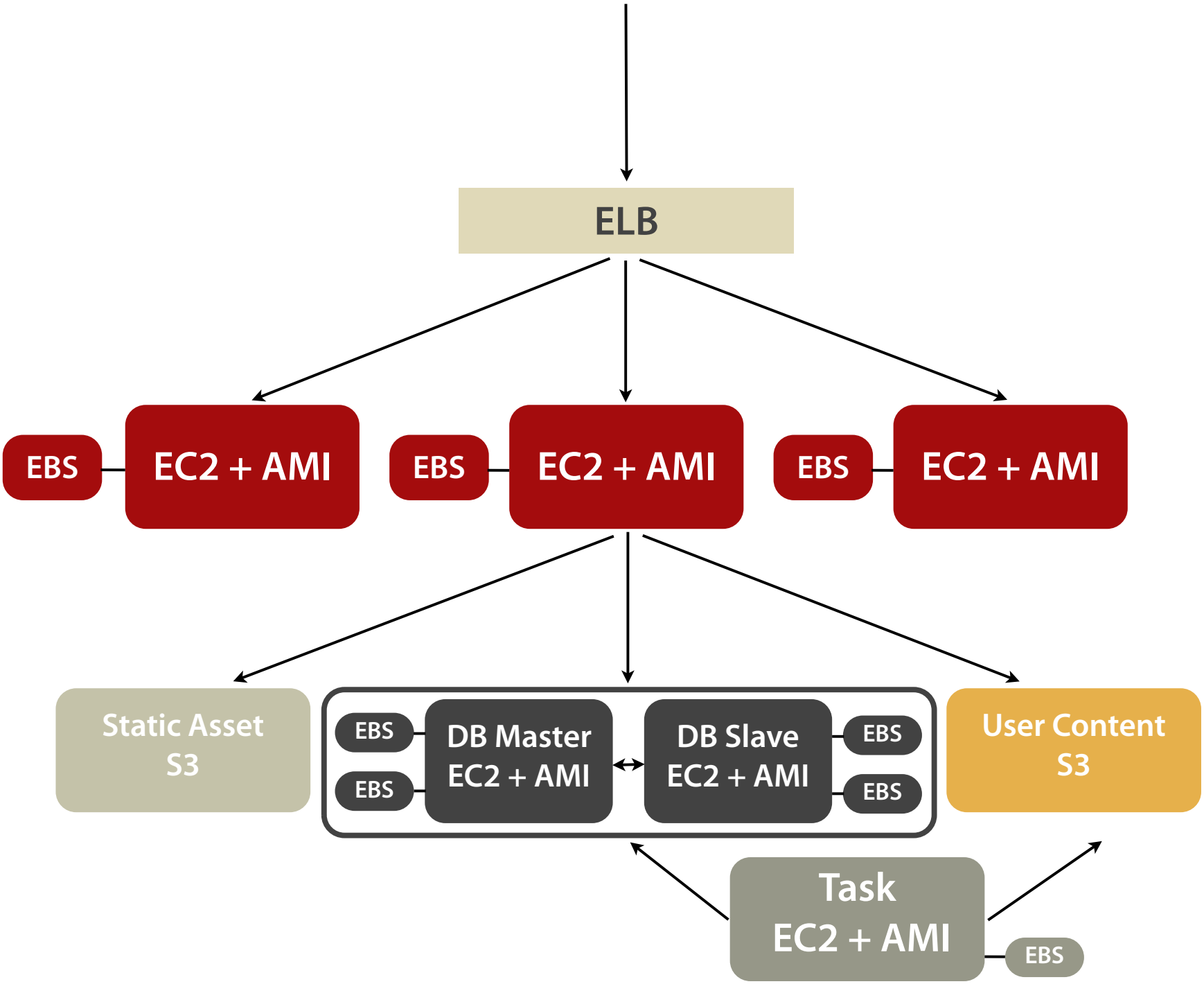
*Remember: you’re the sysadmin.

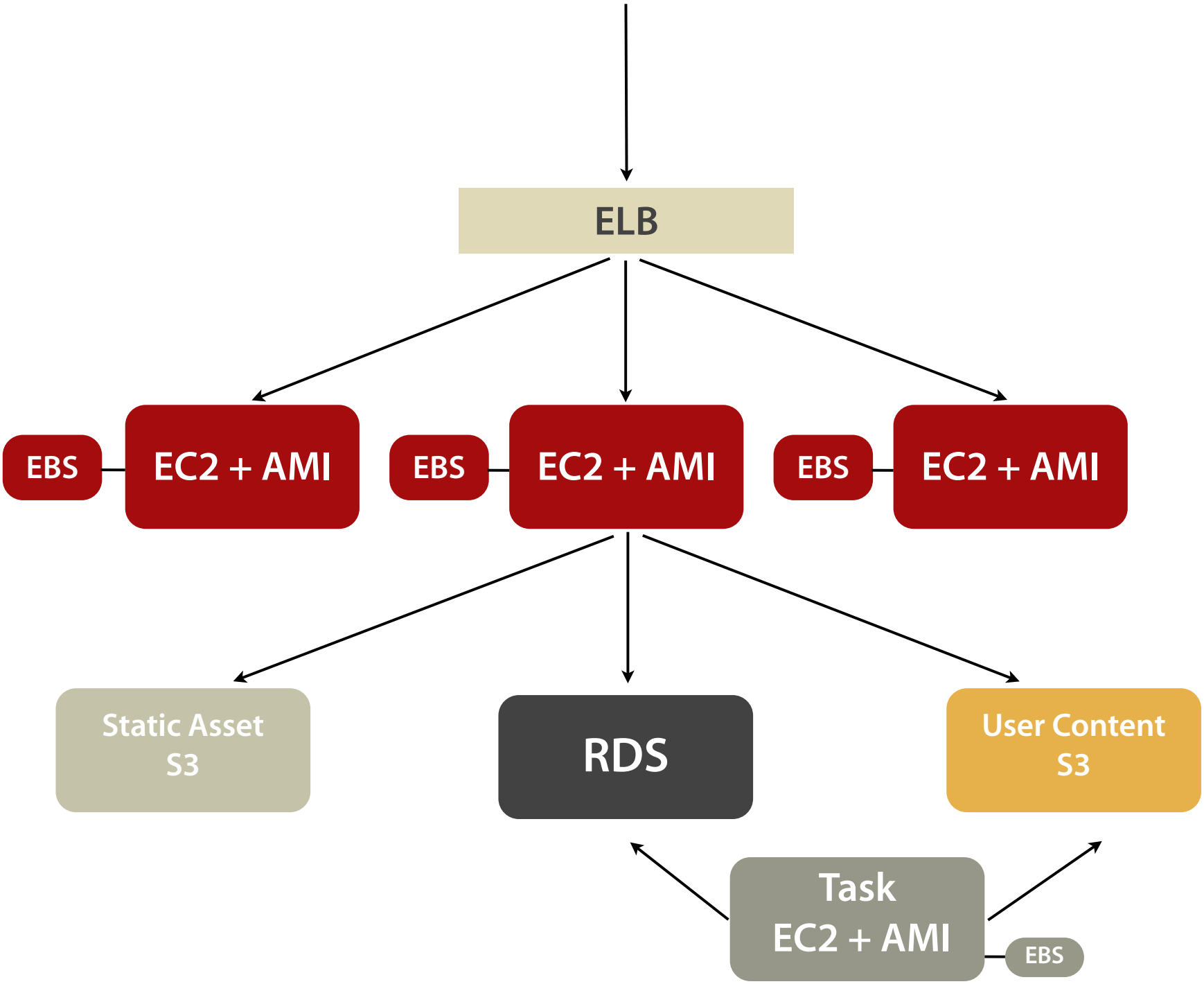
Lessons Learned Running with AWS

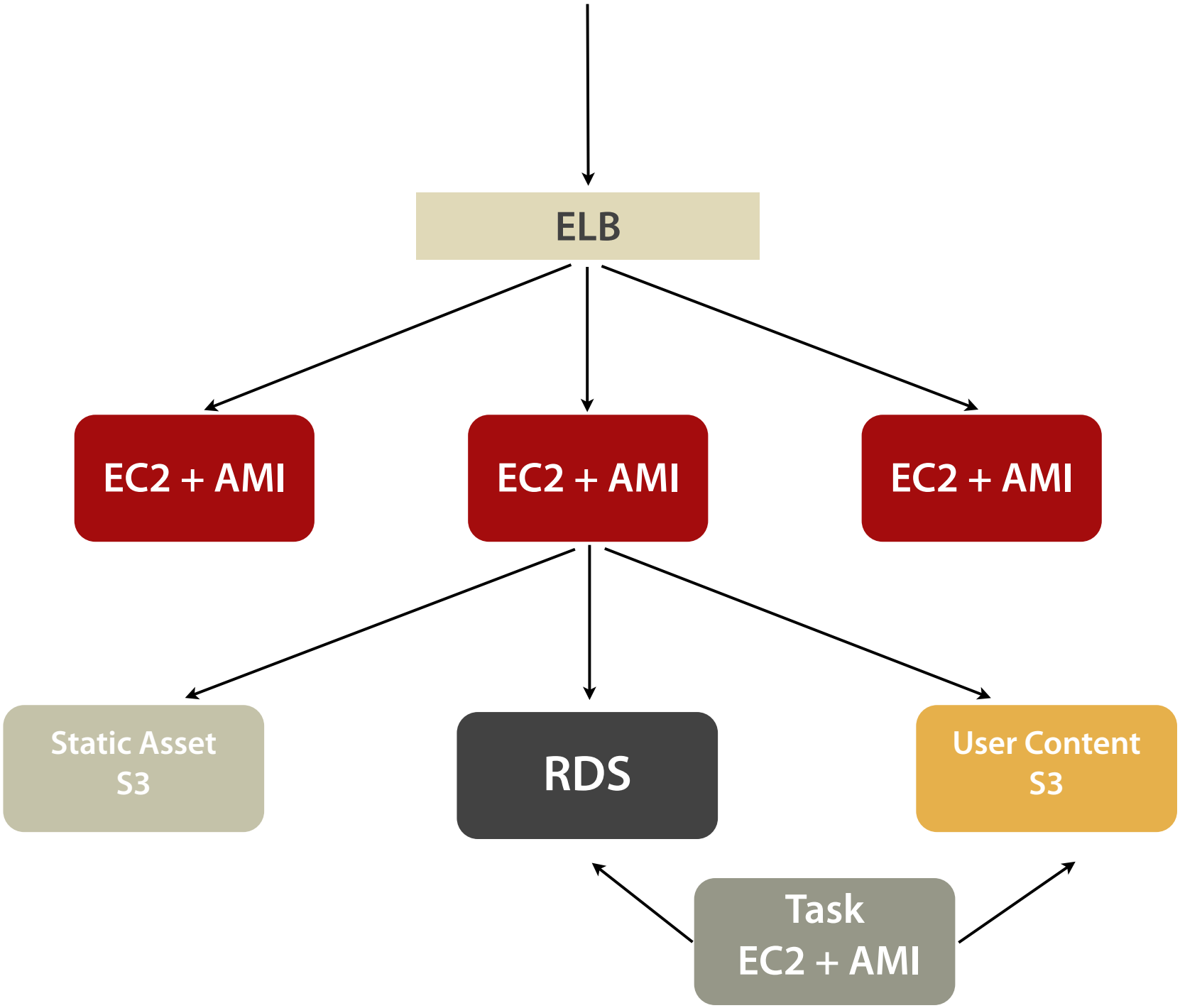
Everything fails.

You are responsible for redundancy.


Load Balancer
Load Balancer
CF + IIS
CF + IIS
CF + IIS
Static Asset 1
Static Asset 2
Database Master
Database Slave
File Share 1
File Share 2
Scheduled Task Server


ELB
EBS
EC2 + AMI
EBS
EC2 + AMI
EBS
EC2 + AMI
Static Asset
S3
EBS
EBS
DB Master
EC2 + AMI
DB Slave
EC2 + AMI
EBS
EBS
User Content
S3
Task
EC2 + AMI
EBS


ELB
EBS
EC2 + AMI
EBS
EC2 + AMI
EBS
EC2 + AMI
Static Asset
S3
RDS
User Content
S3
Task
EC2 + AMI
EBS


ELB
EC2 + AMI
EC2 + AMI
EC2 + AMI
Static Asset
S3
RDS
User Content
S3
Task
EC2 + AMI

But still:
You are responsible for redundancy.

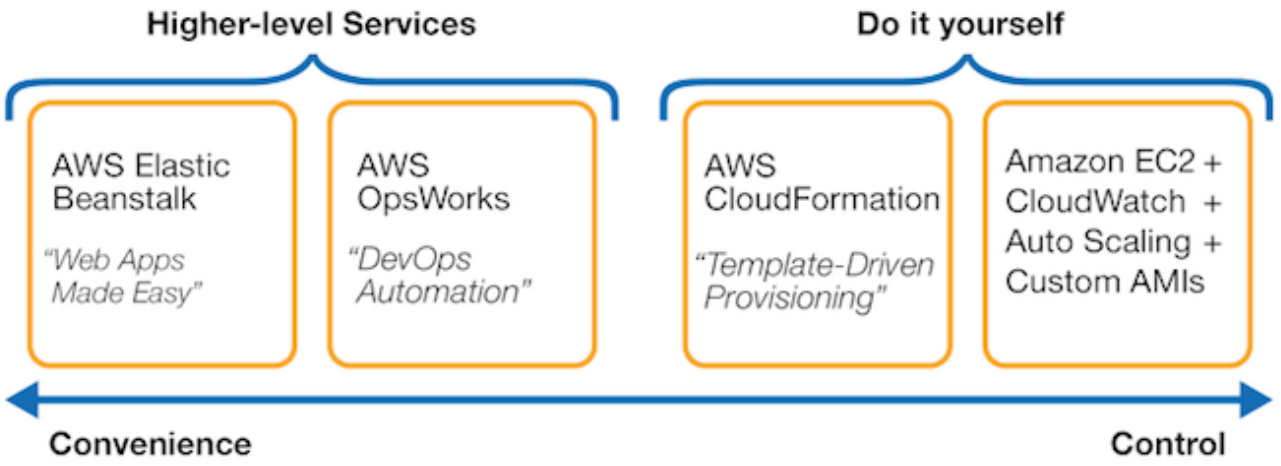
Autoscale.

Elastic Beanstalk

CloudFormation

OpsWorks

CloudWatch



Considering an EC2 instance as a normal server that you ssh into and apt-get update/upgrade is plain wrong.

– Werner Vogels, Amazon CTO

Autoscale is not required.

Legal and Regulatory Issues

EU data storage law != US data storage law

Every service incurs a charge.

http://calculator.s3.amazonaws.com/calc5.html

You get what you pay for.


Go Do

Thank you!

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www.iterateme.com

Resources

- Amazon AWS
  aws.amazon.com
- Ben Nadel's excellent example of uploading to S3 directly from the browser:
  www.bennadel.com/blog/2500-Uploading-Files-To-Amazon-S3-Using-A-Form-Post-And-ColdFusion.htm
- The CF10 AMI on AWS:
  https://aws.amazon.com/marketplace/pp/B00BR6SYHW (Ubuntu)
  https://aws.amazon.com/marketplace/pp/B00BQNEX5S (Windows)

Resources

- Tutorial on Deploying a CF WAR to Elastic Beanstalk
  quetwo.com/tag/elastic-beanstalk/
- Setting up the Adobe CF10 AMI Walkthrough
  www.adobe.com/devnet/coldfusion/articles/coldfusion-cloud-aws.html
- Ports needed by CF10 for cloud deployment
  helpx.adobe.com/coldfusion/release-note/coldfusion-10-cloud.html
- The Official Word on CF10 Licensing Changes
  blogs.coldfusion.com/post.cfm/coldfusion-10-eula

Resources

- Amazon's complete walkthrough of setting up instances and then a load–balanced cluster in EC2
  Windows – docs.aws.amazon.com/gettingstarted/latest/computebasics/web-app-hosting-intro.html
  Linux – docs.aws.amazon.com/gettingstarted/latest/computebasics-linux/web-app-hosting-intro.html

- Setting Up EC2 Security Groups
  docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-network-security.html

Resources

- Wharton's Chef recipes for installing CF10
  github.com/wharton/chef-coldfusion10
- EC2 Instance and Pricing Comparator
  www.ec2instances.info