Using Amazon Web Services with ColdFusion 11

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languages

features

servers

customers

options

messages

More

browsers

tools

memory

bugs

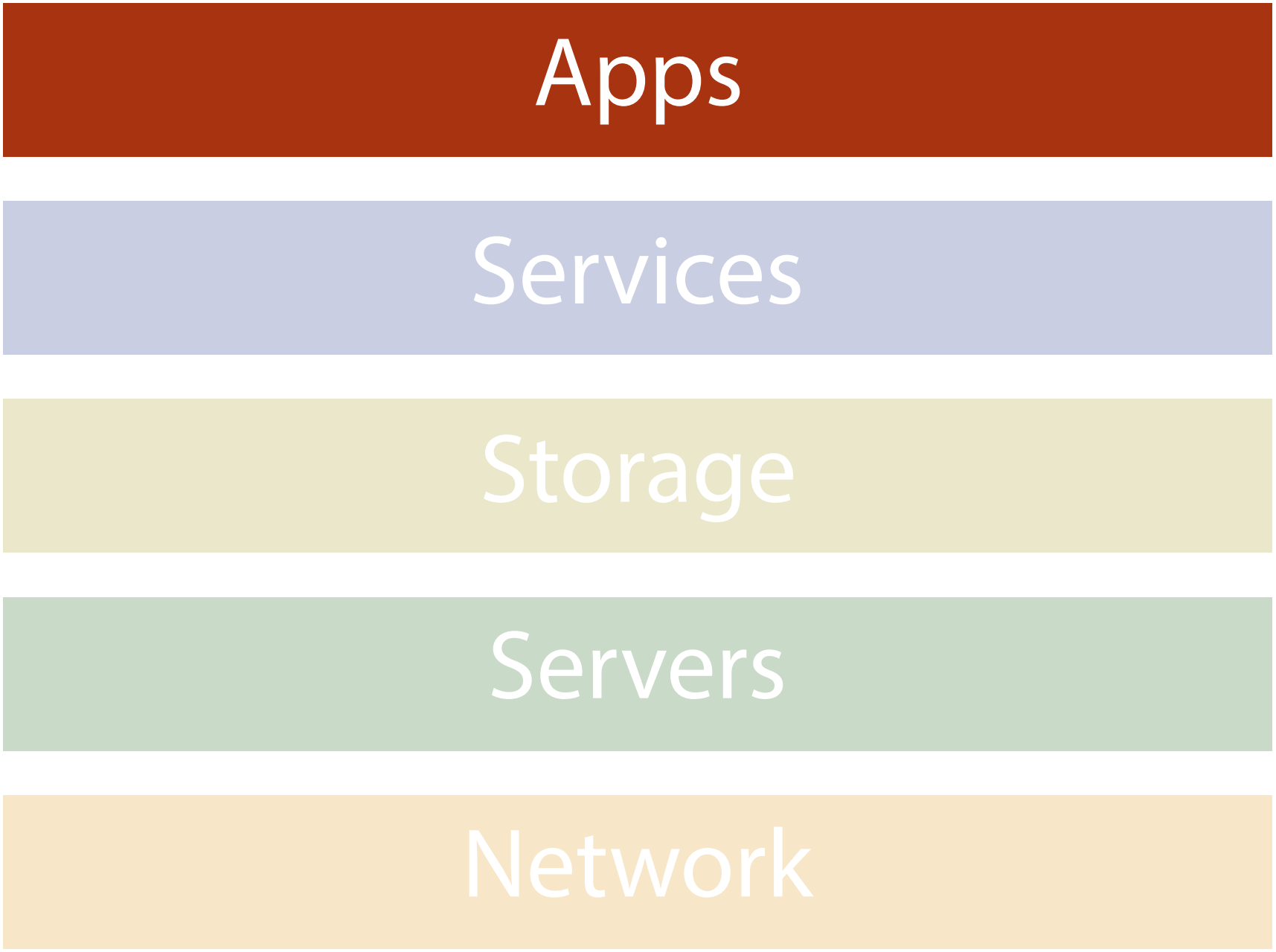
storage

services

platforms

everything

Stefan Tell@Flickr


Apps
Services
Storage
Servers
Network

Using Amazon Web Services with ColdFusion 11

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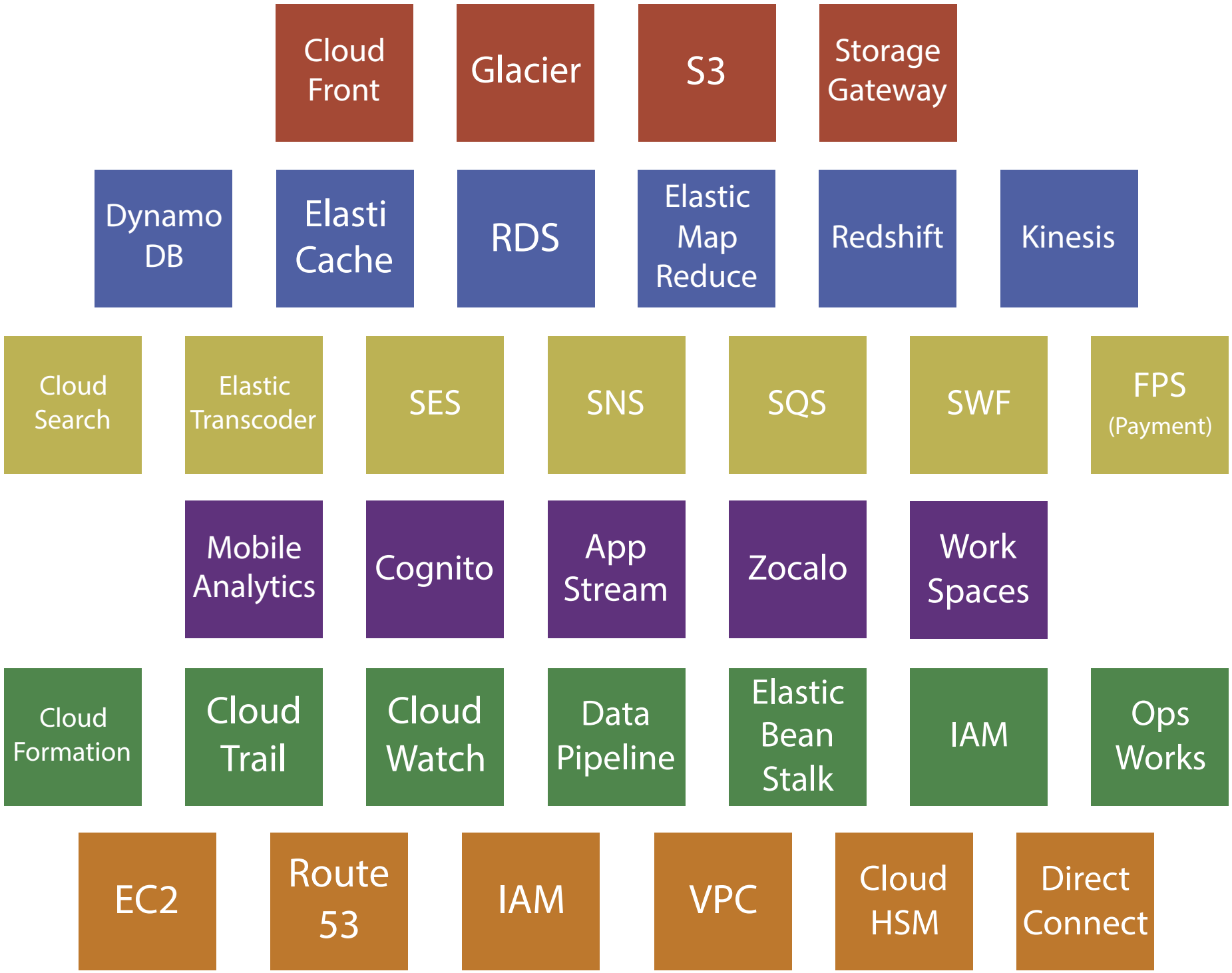
How does AWS fit with Cf ?

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 [11] on AWS
5. Lessons Learned Running with AWS

Hello AWS

AWS = Utility Computing


Cloud Front
Glacier
S3
Storage Gateway
Dynamo DB
Elasti Cache
RDS
Elastic Map Reduce
Redshift
Kinesis
Cloud Search
Elastic Transcoder
SES
SNS
SQS
SWF
FPS (Payment)
Mobile Analytics
Cognito
App Stream
Zocalo
Work Spaces
Cloud Formation
Cloud Trail
Cloud Watch
Data Pipeline
Elastic Bean Stalk
IAM
Ops Works
EC2
Route 53
IAM
VPC
Cloud HSM
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
- JavaScript
- 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)
- US GovCloud
- EU (Ireland)
- Asia Pacific (Singapore)
- Asia Pacific (Sydney)
- Asia Pacific (Tokyo)
- Asia Pacific (Beijing)*
- South America (São Paulo)

99.999999999% durability*

99.99% availability

*Stuff rarely gets lost.

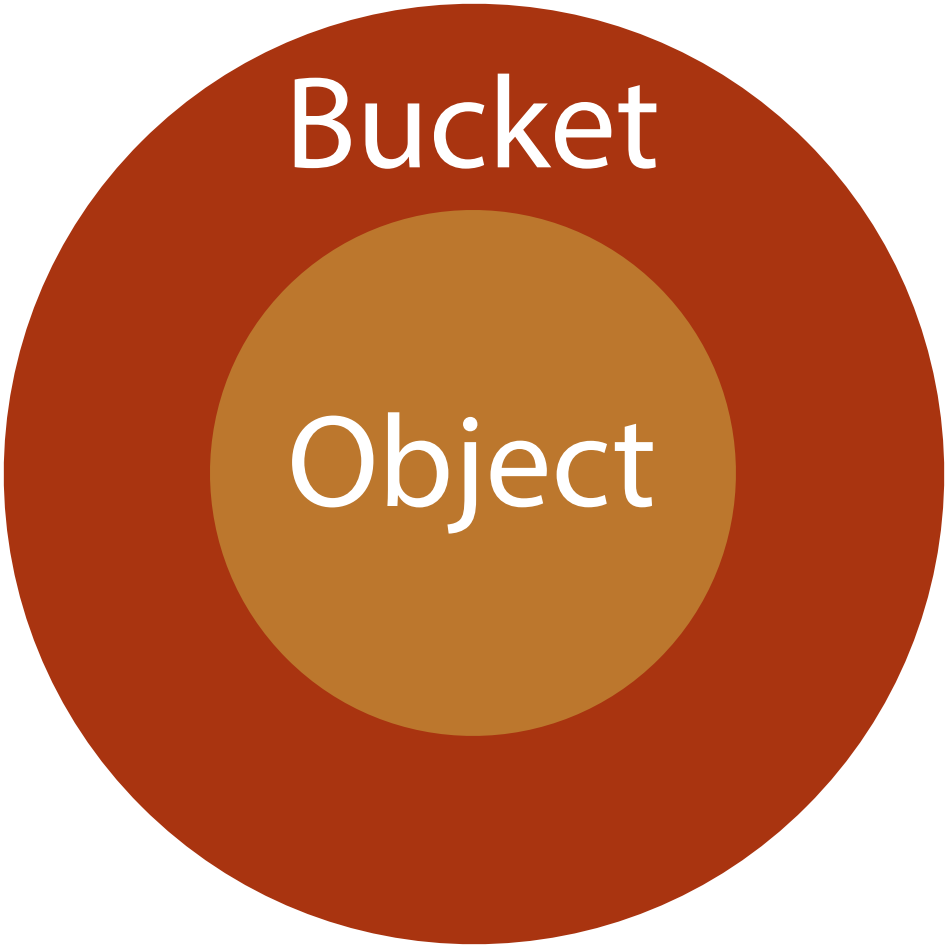
$0.03 per GB stored

$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

SDK for Other Languages

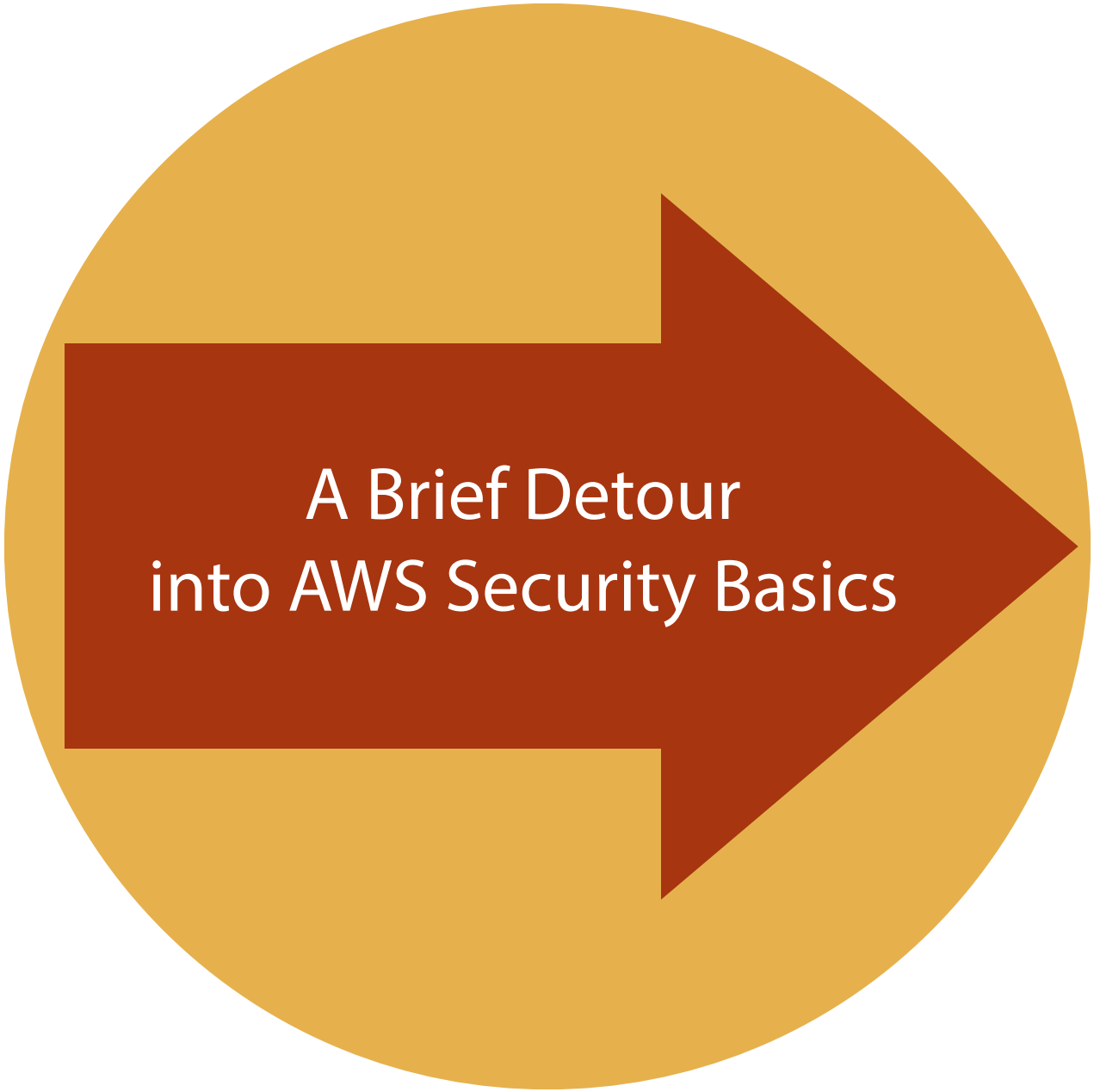
JavaScript:

```
var bucket = new AWS.S3({params: {Bucket: ‘myBucket'}});
var params = {Key: file.name, ContentType: file.type, Body:
file};
bucket.putObject(params, function (err, data) {
   results.innerHTML = err ? 'ERROR!' : 'UPLOADED.';
});
```

Ruby:

```
s3 = AWS::S3.new
key = File.basename(file_name)
s3.buckets[bucket_name].objects[key].write(:file => file_name)
puts "Uploading file #{file_name} to bucket #{bucket_name}."
```

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 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

Elasticache

Distributed memcached or Redis

CloudFront

Cheap global content delivery network

SES

Bulk email service – Can be your <cfmail> mail server

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 CF11 in AWS

Or, exploring the official ColdFusion 11 AMI

EC2

EC2 Instance Types

M1 General Purpose Extra Large	15.0 GB	8 (4 core x 2 unit)	1680 GB (4 * 420 GB)	High / 1000 Mbps	m1.xlarge	$0.350 hourly	$0.598 hourly
M1 General Purpose Large	7.5 GB	4 (2 core x 2 unit)	840 GB (2 * 420 GB)	Moderate / 500 Mbps	m1.large	$0.175 hourly	$0.299 hourly
M1 General Purpose Medium	3.75 GB	2 (1 core x 2 unit)	410 GB	Moderate	m1.medium	$0.087 hourly	$0.149 hourly
M1 General Purpose Small	1.7 GB	1 (1 core x 1 unit)	160 GB	Low	m1.small	$0.044 hourly	$0.075 hourly
M2 High Memory Double Extra Large	34.2 GB	13 (4 core x 3.25 unit)	850 GB	Moderate / 500 Mbps	m2.2xlarge	$0.490 hourly	$0.690 hourly
M2 High Memory Extra Large	17.1 GB	6.5 (2 core x 3.25 unit)	420 GB	Moderate	m2.xlarge	$0.245 hourly	$0.345 hourly
M2 High Memory Quadruple Extra Large	68.4 GB	26 (8 core x 3.25 unit)	1680 GB (2 * 840 GB)	High / 1000 Mbps	m2.4xlarge	$0.980 hourly	$1.380 hourly
M3 General Purpose Double Extra Large	30.0 GB	26 (8 core x 3.25 unit)	160 GB (2 * 80 GB SSD)	High / 1000 Mbps	m3.2xlarge	$0.560 hourly	$1.064 hourly
M3 General Purpose Extra Large	15.0 GB	13 (4 core x 3.25 unit)	80 GB (2 * 40 GB SSD)	High / 1000 Mbps	m3.xlarge	$0.280 hourly	$0.532 hourly
M3 General Purpose Large	7.5 GB	6.5 (2 core x 3.25 unit)	32 GB SSD	Moderate	m3.large	$0.140 hourly	$0.266 hourly
M3 General Purpose Medium	3.75 GB	3 (1 core x 3 unit)	4 GB SSD	Moderate	m3.medium	$0.070 hourly	$0.133 hourly
R3 High-Memory Double Extra Large	61.0 GB	26 (8 core x 3.25 unit)	160 GB SSD	High / 1000 Mbps	r3.2xlarge	$0.700 hourly	$1.080 hourly
R3 High-Memory Eight Extra Large	244.0 GB	104 (32 core x 3.25 unit)	640 GB (2 * 320 GB SSD)	10 Gigabit	r3.8xlarge	$2.800 hourly	$3.500 hourly
R3 High-Memory Extra Large	30.5 GB	13 (4 core x 3.25 unit)	80 GB SSD	Moderate / 500 Mbps	r3.xlarge	$0.350 hourly	$0.600 hourly
R3 High-Memory Large	15.25 GB	6.5 (2 core x 3.25 unit)	32 GB SSD	Moderate	r3.large	$0.175 hourly	$0.300 hourly
R3 High-Memory Quadruple Extra Large	122.0 GB	52 (16 core x 3.25 unit)	320 GB SSD	High / 1000 Mbps	r3.4xlarge	$1.400 hourly	$1.944 hourly
T1 Micro	0.613 GB	Burstable	0 GB (EBS only)	Very Low	t1.micro	$0.020 hourly	$0.020 hourly
T2 Medium	4.0 GB	Burstable	0 GB (EBS only)	Low to Moderate	t2.medium	$0.052 hourly	$0.072 hourly
T2 Micro	1.0 GB	Burstable	0 GB (EBS only)	Low to Moderate	t2.micro	$0.013 hourly	$0.018 hourly
T2 Small	2.0 GB	Burstable	0 GB (EBS only)	Low to Moderate	t2.small	$0.026 hourly	$0.036 hourly

Pick the EC2 instance type that has the right network, RAM and CPU for your tasks.

Use M3 instances

AMI on EC2

The Official Adobe CF11 AMI

- Windows Server 2012 Standard x64
  - m3.medium - $0.24/hr = ~$173/month
  - m3.large - $0.49/hr = ~$352/month
- Ubuntu 14.04
  - m3.medium - $0.18/hr = ~$129/month
  - m3.large - $0.36/hr = ~$259/month
- Includes EC2 charges
- Includes Adobe Support

20% less if purchased on an annual basis

Medium vs. Large Instances

- m3.medium
  - 3.5GB RAM
  - 3 ECUs (1 cores x 3 units)
  - 4GB SSD storage
  - Moderate IO performance (500 Mbps)
- m3.large
  - 7.5GB RAM
  - 6.5 ECUs (2 cores x 3.25 units)
  - 32GB SSD storage
  - Moderate IO performance (500 Mbps)

ECU = 1–1.2 Ghz processor

AMI Setup

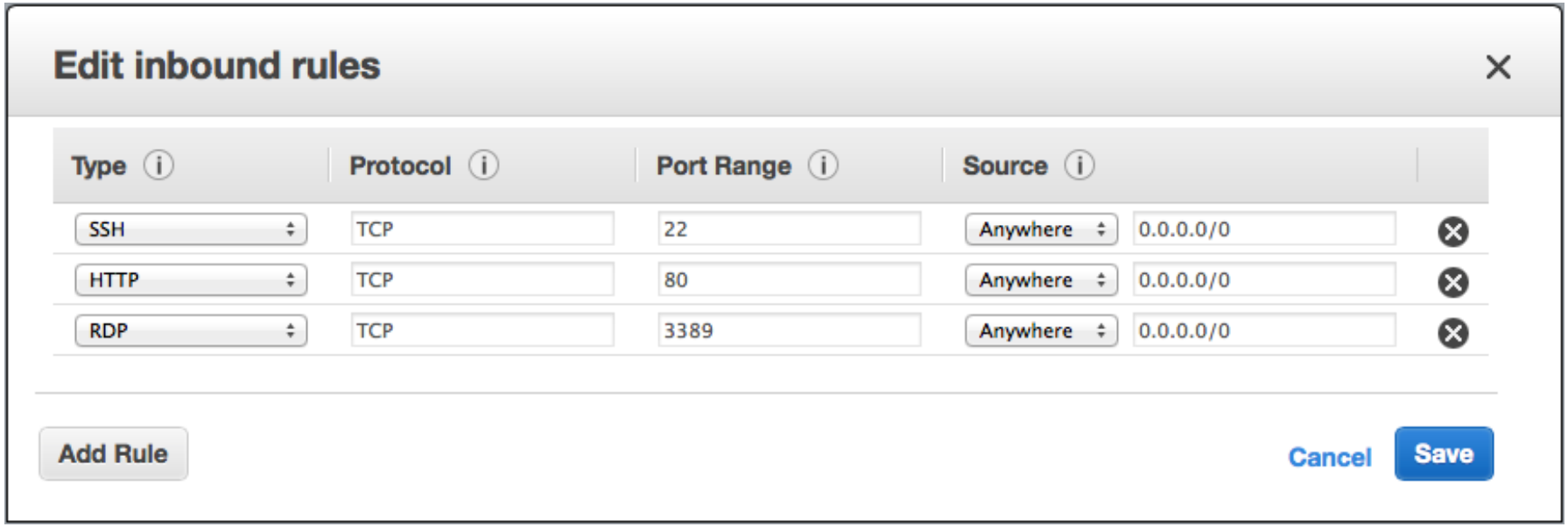
- CF11 Enterprise
- JRE 1.7.0_55 (64–bit)
- Windows: IIS 8.0.92
- Linux: Apache 2.4.7
- Both: MySQL 5.6.17

Launching the CF11 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 type
- EC2 Classic or VPC
- Use preconfigured security group or one of your own
- Select a key pair

ColdFusion 11 on Windows Server 2012 x64 >

Launch on EC2

1-Click Launch
Review, modify, and launch

Manual Launch
With EC2 Console, APIs or CLI

Click "Accept Terms & Launch with 1-Click" to launch this software with the settings below

Once you accept the terms, you will have access to launch any version of this software in any supported region. For future launches, you can return to this page or launch directly from the EC2 console, APIs or CLI.

Software Pricing

Subscription Term

- (•) Hourly
- ( ) Annual

Applicable Instance Type

m1.large
m1.xlarge
m3.medium
m3.large
m3.xlarge
m3.2xlarge
c3.large
c3.xlarge
c3.2xlarge
c3.4xlarge

Hourly fee

$0.13 / hour

Find instance details in EC2 instance section below.

Version

11, released 06/09/2014

Region

US East (Virginia)

EC2 Instance Type

m1.large
m1.xlarge
m3.medium
m3.large
m3.xlarge
m3.2xlarge
c3.large
c3.xlarge
c3.2xlarge

Memory	3.75 GiB
CPU	3 EC2 Compute Units (1 virtual core)
Storage	1 x 4 GB SSD
Platform	64-bit
Network performance	Low
API Name	m3.large

Price for your selections:

$0.24 / hour
$0.13 m3.medium EC2 Instance usage fees +
$0.11 hourly software fee

$0.05 / GB / month
EBS Magnetic Storage

$0.05 / 1 million I/O requests
EBS Magnetic Storage

Free Trial

Try one instance of this product for 31 days. There will be no software charges but AWS infrastructure charges still apply. Free Trials will automatically convert to a paid subscription upon expiration.

Accept Terms & Launch with 1-Click

You will be subscribed to this software and agree that your use of this software is subject to the pricing terms and the seller's End User License Agreement (EULA) and your use of AWS services is subject to the AWS Customer Agreement

Cost Estimator

$174.96 / month
m3.medium EC2 Instance usage fees
Assumes 24 hour use over 30 days

Software Charges

$79.20 / month
$79.20 hourly software fees for m3.medium

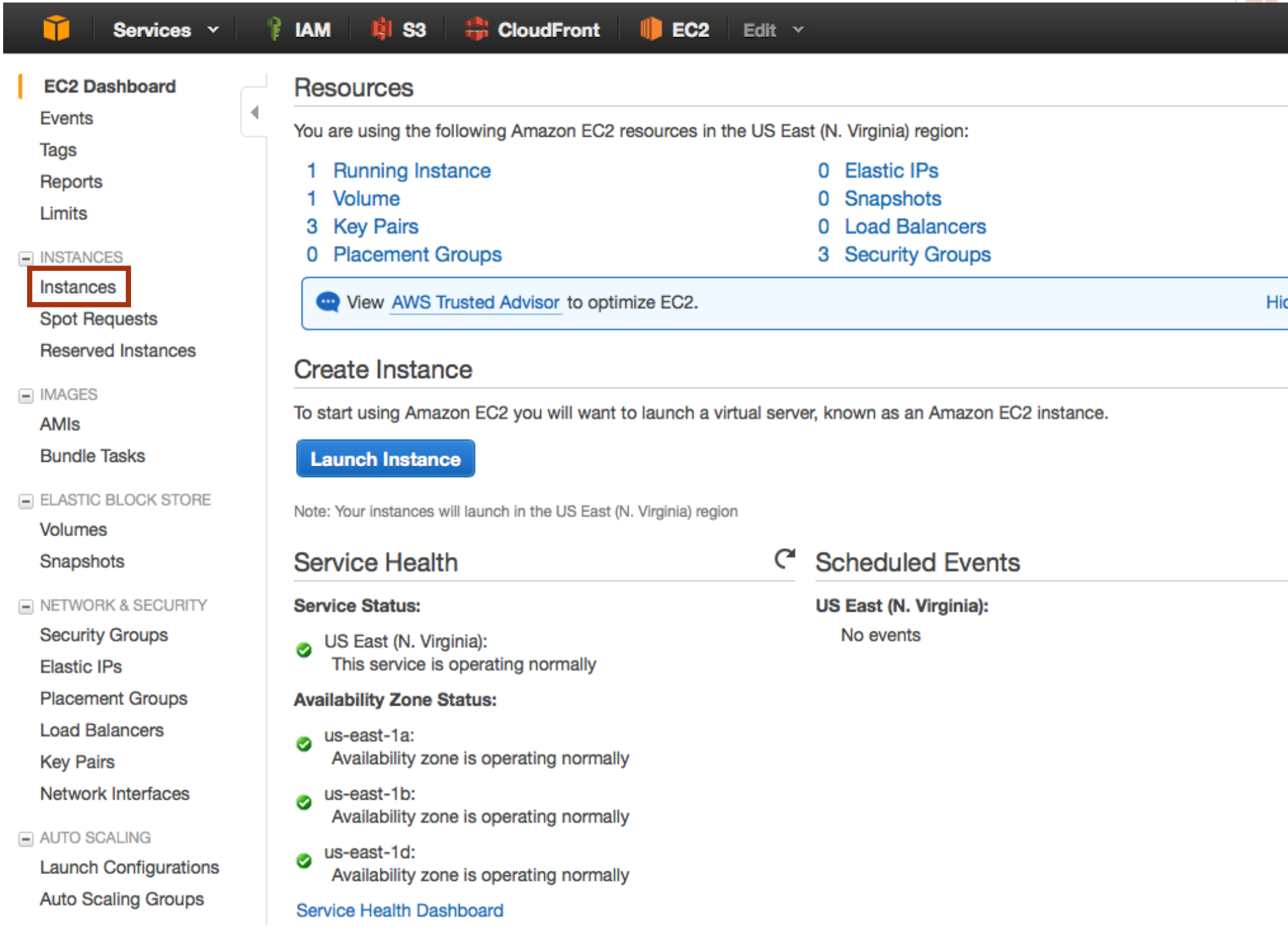
AWS Infrastructure Charges

$95.76 / month
Cost varies for storage fees
$95.76 hourly EC2 Instance fees for m3.medium
Varied EBS Storage and data transfer fees

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
Reports
Limits
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
AUTO SCALING
Launch Configurations
Auto Scaling Groups
Resources
You are using the following Amazon EC2 resources in the US East (N. Virginia) region:
1 Running Instance
1 Volume
3 Key Pairs
0 Placement Groups
0 Elastic IPs
0 Snapshots
0 Load Balancers
3 Security Groups
View AWS Trusted Advisor to optimize EC2.
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 by tags and attributes or search by keyword

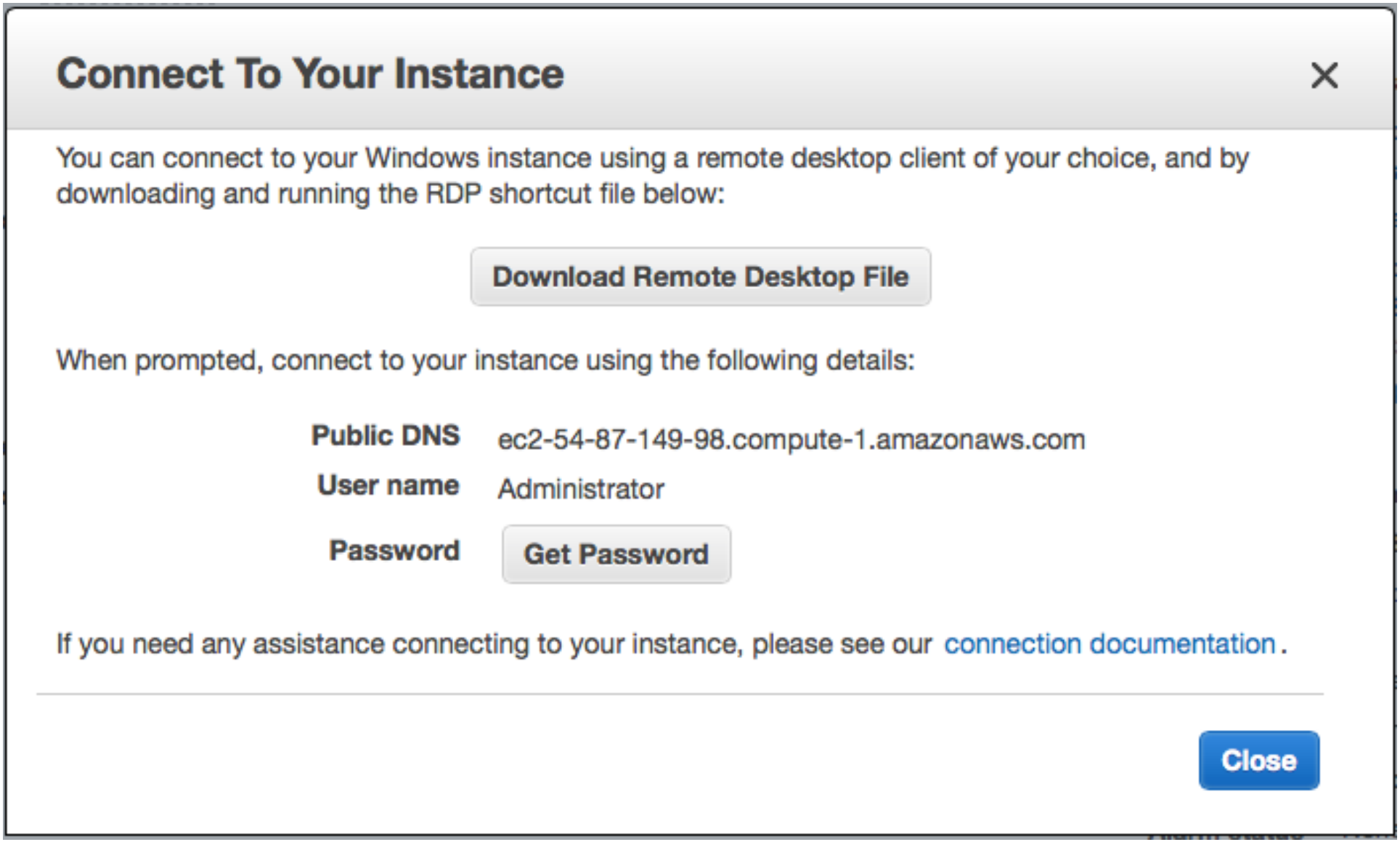
1 to 1 of 1

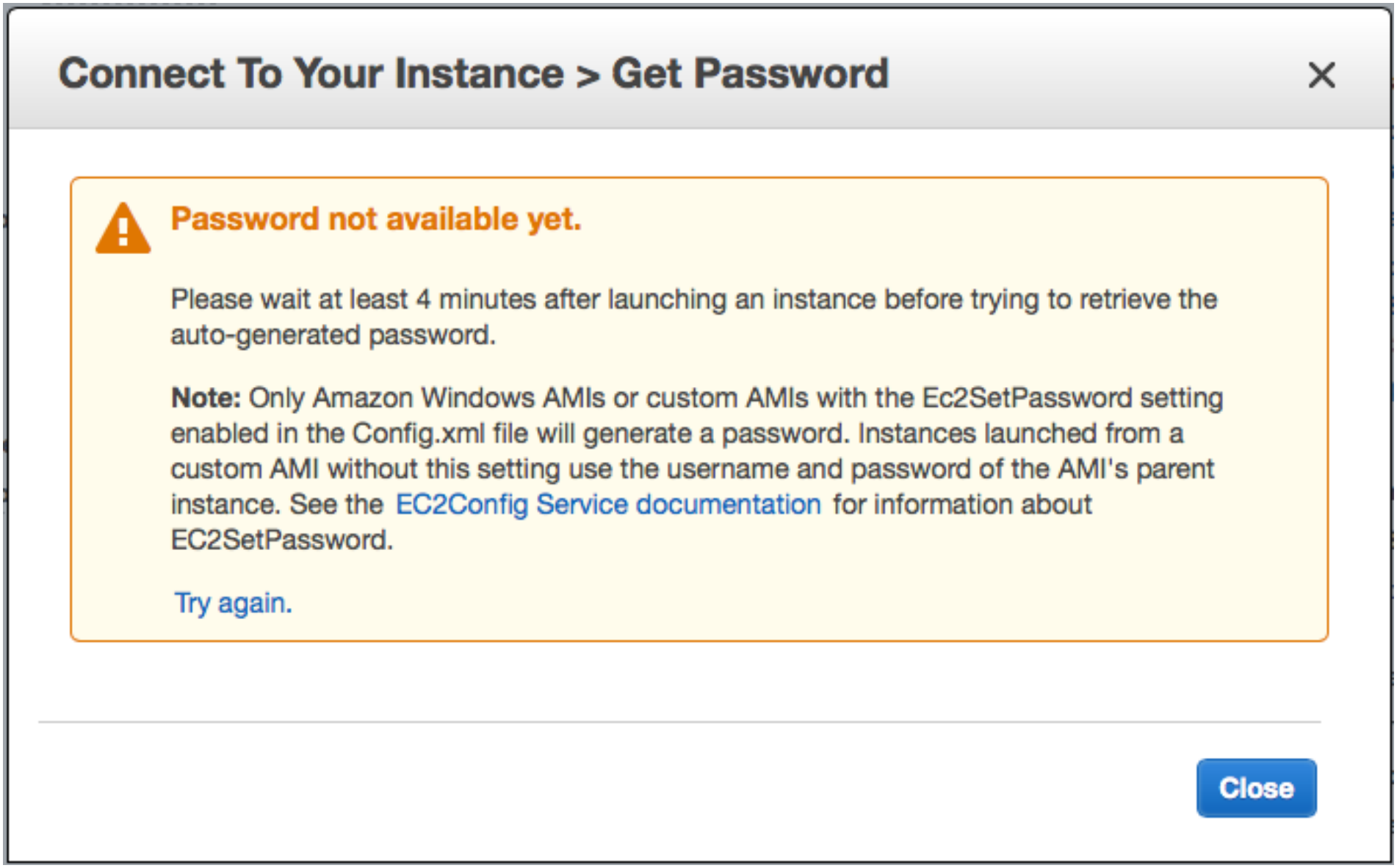
Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS	Public IP
	i-fbc12e15	m3.medium	us-east-1d	running	Initializing	None	ec2-54-87-149-98.com...	54.87.149.98

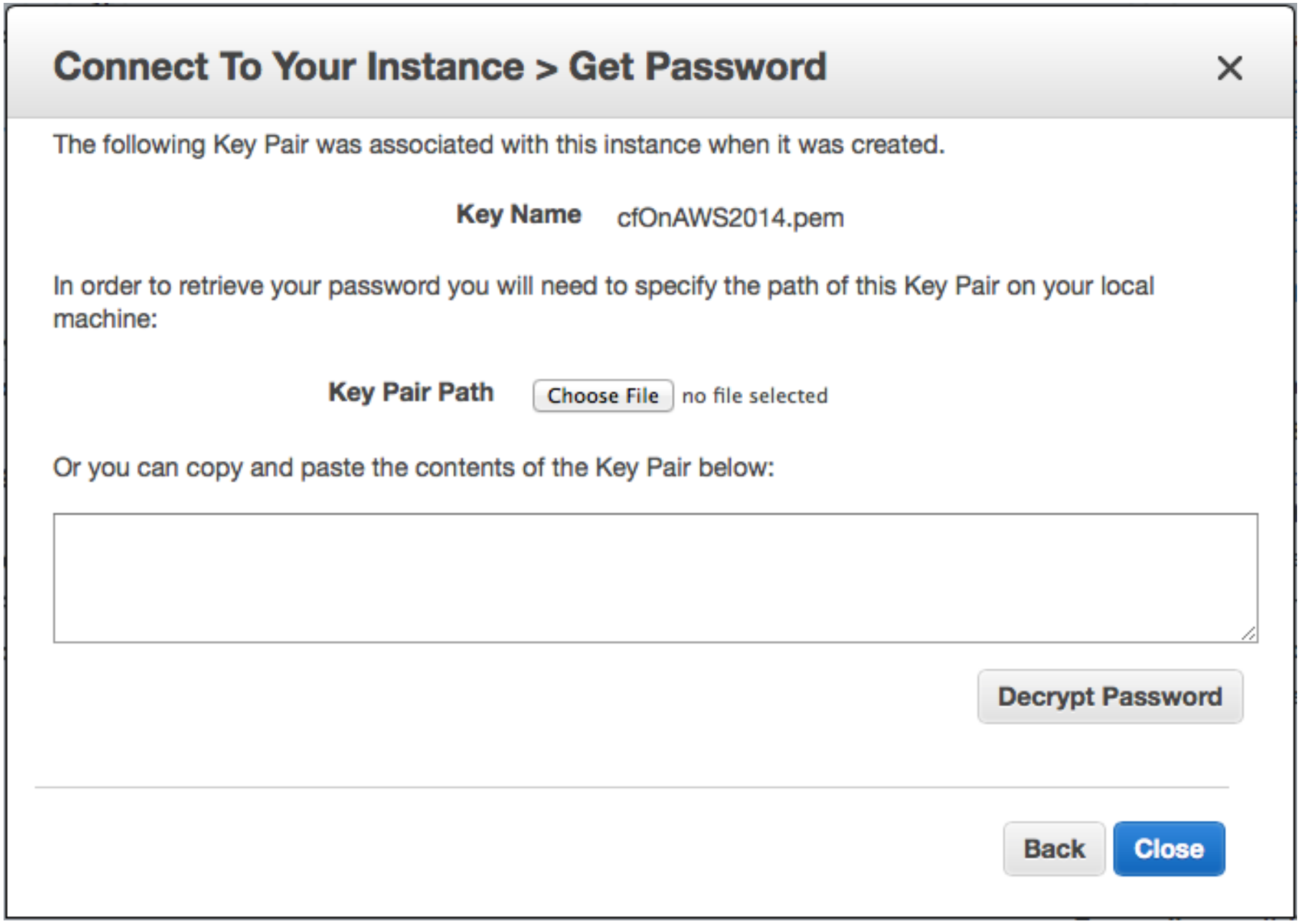
Instance: i-fbc12e15 **Public DNS: ec2-54-87-149-98.compute-1.amazonaws.com**

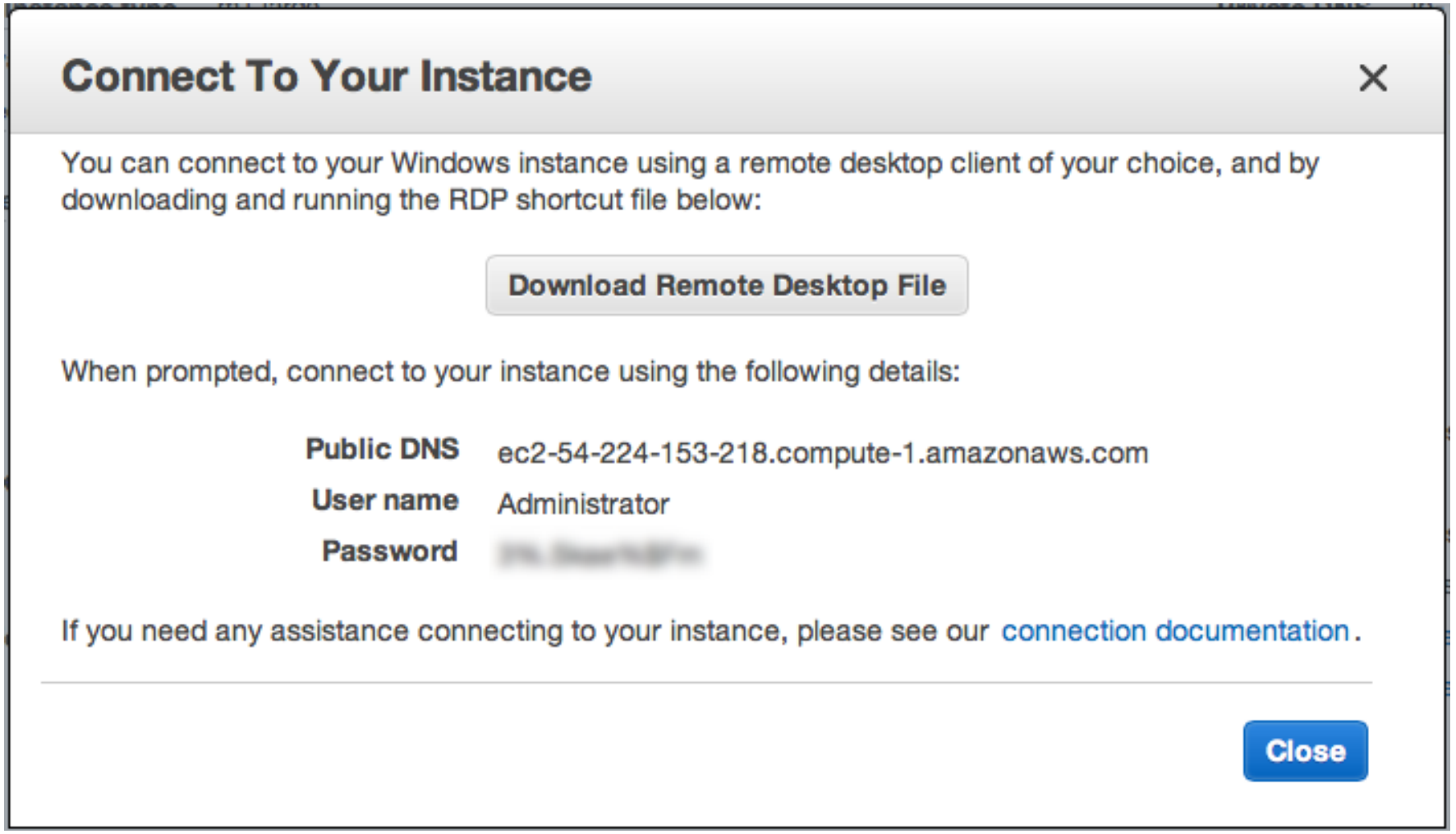
Description | Status Checks | Monitoring | Tags

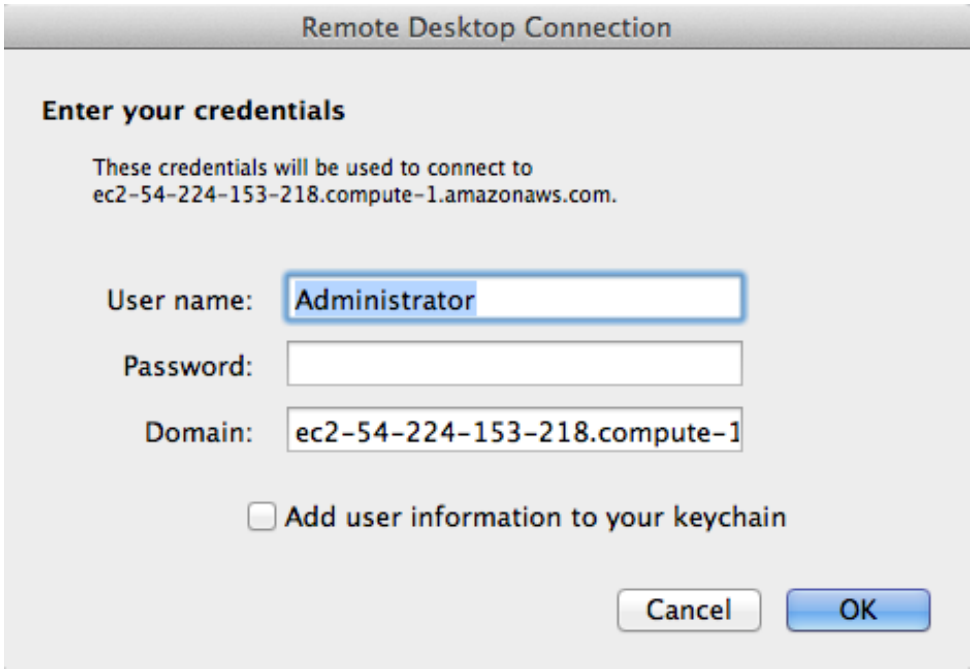
Instance ID	i-fbc12e15	**Public DNS**	ec2-54-87-149-98.compute-1.amazonaws.com
Instance state	running	**Public IP**	54.87.149.98
Instance type	m3.medium	**Elastic IP**	-
Private DNS	ip-10-231-49-126.ec2.internal	**Availability zone**	us-east-1d
Private IPs	10.231.49.126	**Security groups**	ColdFusion 11-11-AutogenByAWSMP-. view rules
Secondary private IPs	-	**Scheduled events**	No scheduled events
VPC ID	-	**AMI ID**	ColdFusion 11 on Windows 2012 Server-5613d5bc-5778-4962-b7d2-59dd34469e31-ami-34e6125c.2 (ami-363acb5e)
Subnet ID	-	**Platform**	windows
Network interfaces	-	**IAM role**	-
Source/dest. check	False	**Key pair name**	cfOnAWS2014
		Owner	683830609677
EBS-optimized	False	**Launch time**	September 8, 2014 11:21:15 AM UTC-4 (less than one hour)
Root device type	ebs	**Termination protection**	False
Root device	/dev/sda1	**Lifecycle**	normal
Block devices	/dev/sda1	**Monitoring**	basic
		Alarm status	None
		Kernel ID	-
		RAM disk ID	-


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
ec2-54-87-149-98.compute-1.amazonaws.com
User name
Administrator
Password
Get Password
If you need any assistance connecting to your instance, please see our connection documentation.
Close

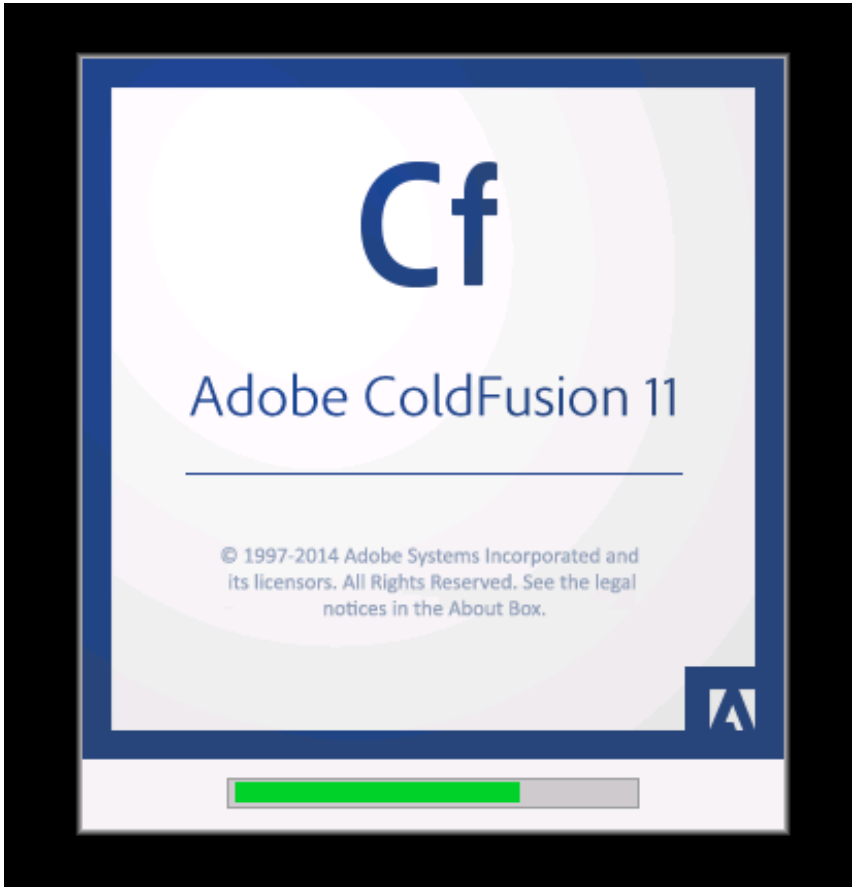

Connect To Your Instance > Get Password
Password not available yet.
Please wait at least 4 minutes after launching an instance before trying to retrieve the auto-generated password.
Note: Only Amazon Windows AMIs or custom AMIs with the Ec2SetPassword setting enabled in the Config.xml file will generate a password. Instances launched from a custom AMI without this setting use the username and password of the AMI's parent instance. See the EC2Config Service documentation for information about EC2SetPassword.
Try again.
Close

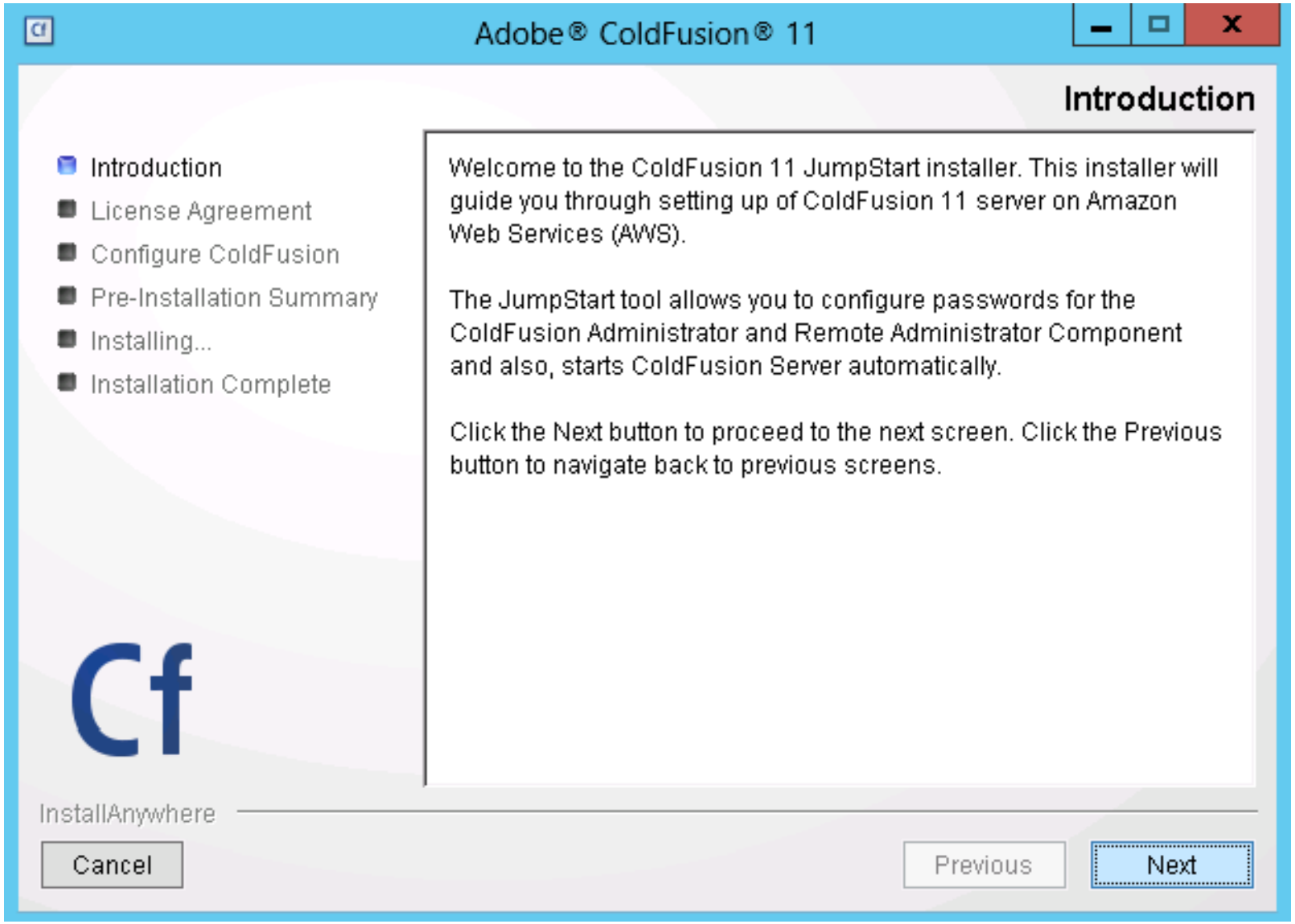

Connect To Your Instance > Get Password
The following Key Pair was associated with this instance when it was created.
Key Name
cfOnAWS2014.pem
In order to retrieve your password you will need to specify the path of this Key Pair on your local machine:
Key Pair Path
Choose File
no file selected
Or you 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

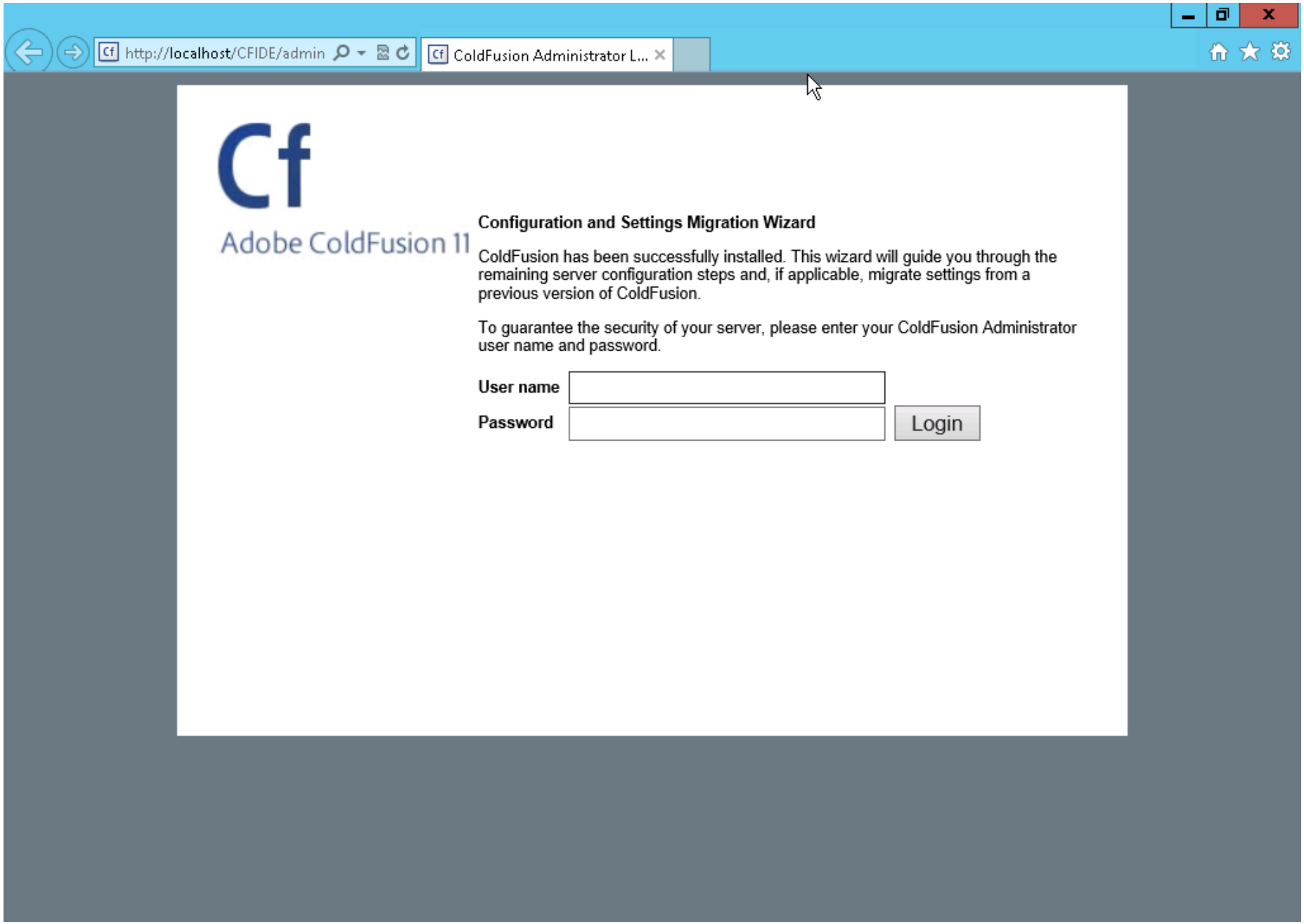
The Jumpstart Tool

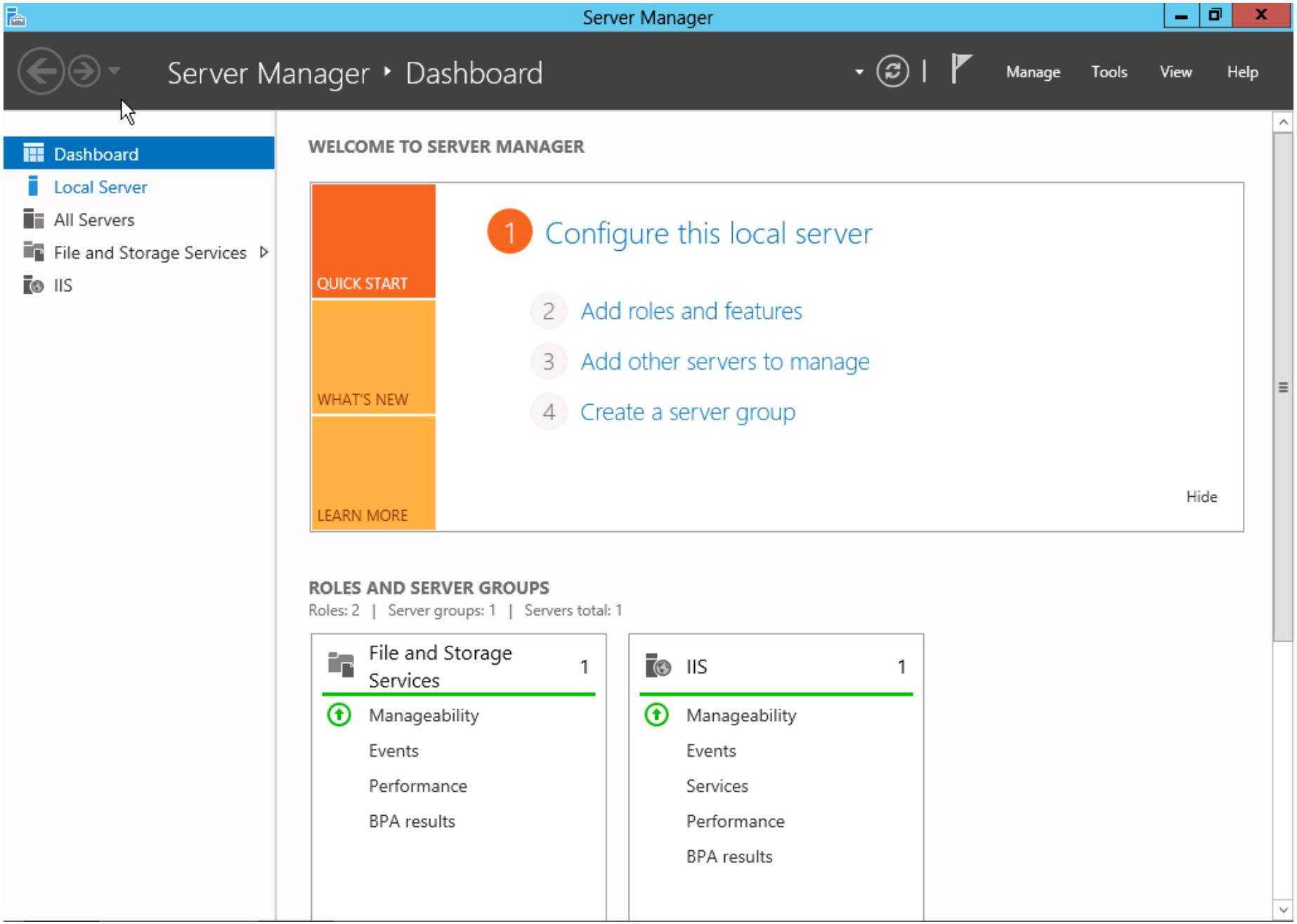



Adobe® ColdFusion® 11
Introduction
Introduction
License Agreement
Configure ColdFusion
Pre-Installation Summary
Installing...
Installation Complete
Welcome to the ColdFusion 11 JumpStart installer. This installer will guide you through setting up of ColdFusion 11 server on Amazon Web Services (AWS).
The JumpStart tool allows you to configure passwords for the ColdFusion Administrator and Remote Administrator Component 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.
InstallAnywhere
Cancel
Previous
Next

Jumpstart Steps

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


http://localhost/CFIDE/admin
ColdFusion Administrator L...
Adobe ColdFusion 11
Configuration and Settings Migration Wizard
ColdFusion has been successfully installed. This wizard will guide you through the remaining server configuration steps and, if applicable, migrate settings from a previous version of ColdFusion.
To guarantee the security of your server, please enter your ColdFusion Administrator user name and password.
User name
Password
Login


Server Manager
Server Manager ‣ Dashboard
Manage
Tools
View
Help
Dashboard
Local Server
All Servers
File and Storage Services
IIS
WELCOME TO SERVER MANAGER
QUICK START
WHAT'S NEW
LEARN MORE
1 Configure this local server
2 Add roles and features
3 Add other servers to manage
4 Create a server group
Hide
ROLES AND SERVER GROUPS
Roles: 2 | Server groups: 1 | Servers total: 1
File and Storage Services 1
Manageability
Events
Performance
BPA results
IIS 1
Manageability
Events
Services
Performance
BPA results

You are now responsible.

You are responsible for security.

You are responsible for software updates.

You are responsible for everything.

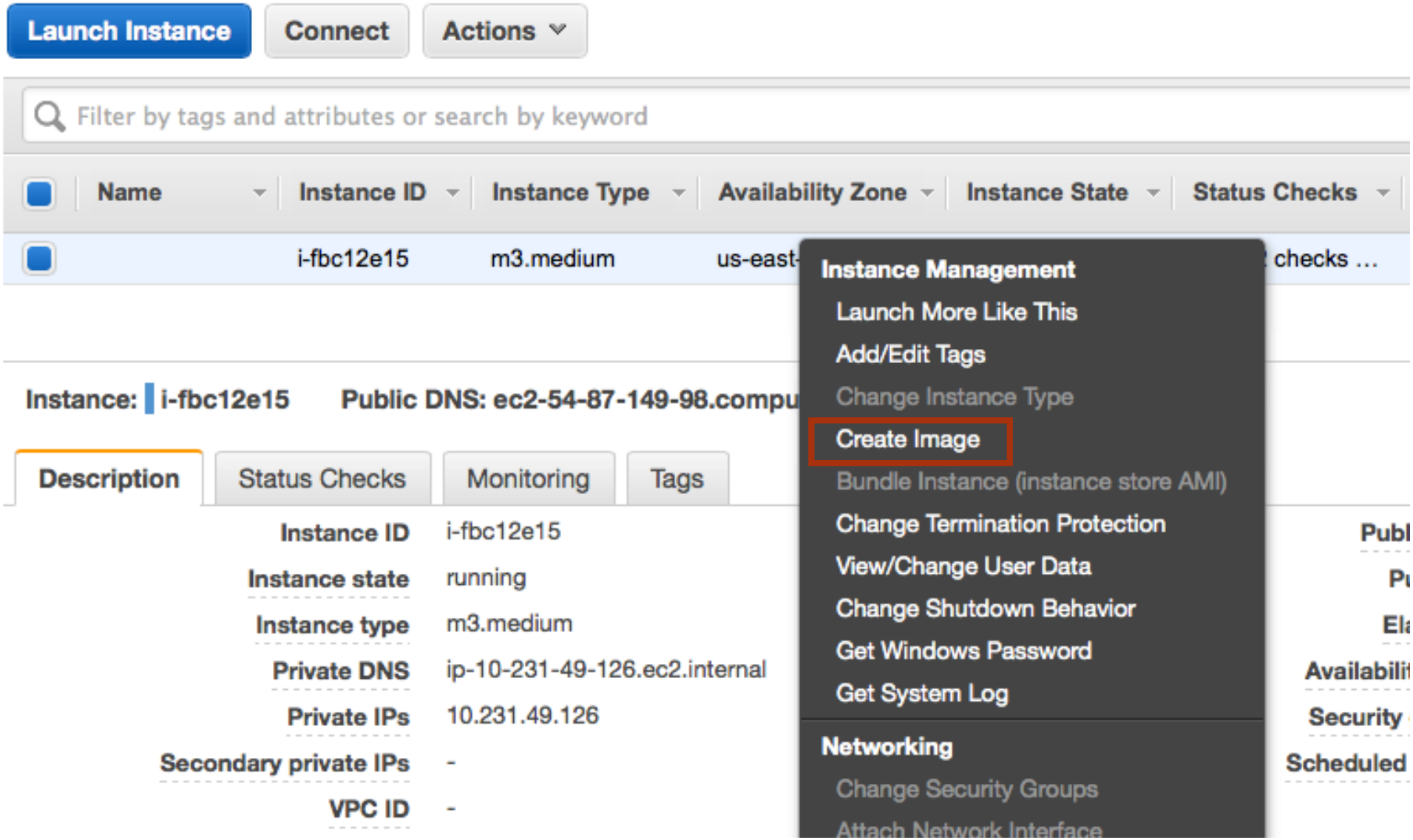
First Steps Post–Jumpstart

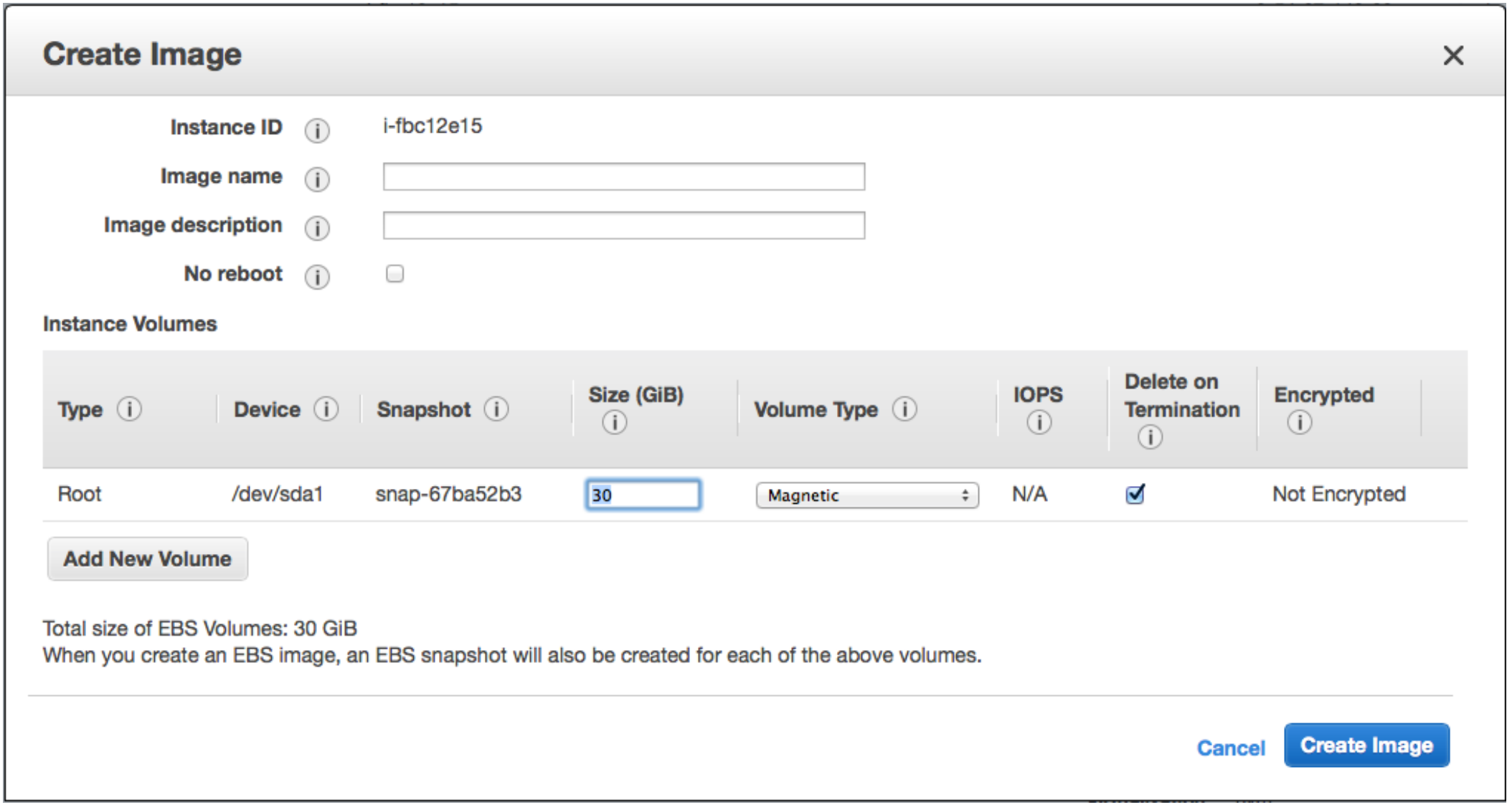
- Install the latest CF 11 Update
- Update the JRE
- Change the JVM allocation
- Shut off MySQL
- Follow the CF Lockdown Guide

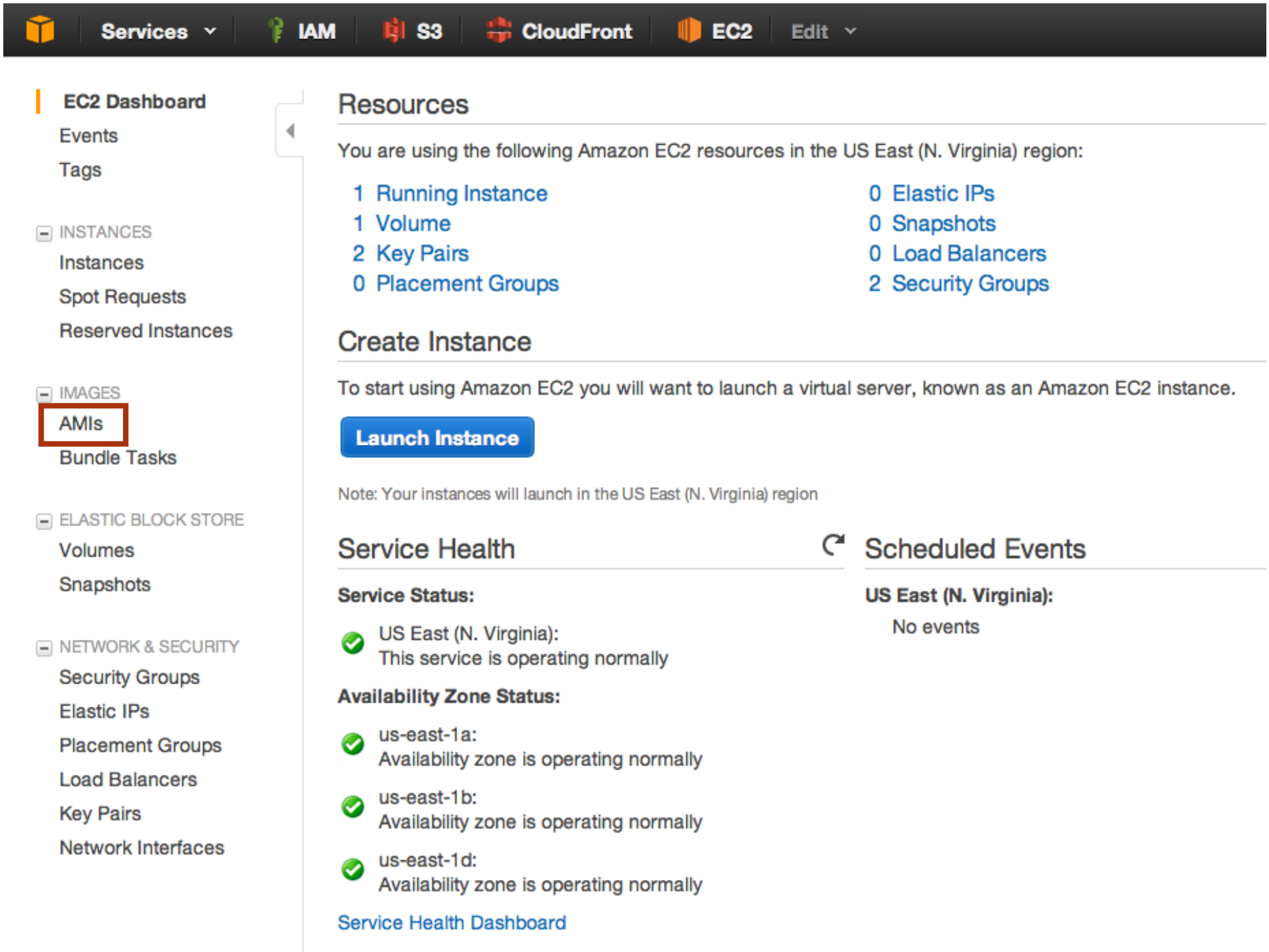
For CFS

Install C

Create your own AMI.


Launch Instance
Connect
Actions
Filter by tags and attributes or search by keyword
Name
Instance ID
Instance Type
Availability Zone
Instance State
Status Checks
i-fbc12e15
m3.medium
us-east-
checks ...
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
Instance: i-fbc12e15
Public DNS: ec2-54-87-149-98.compu
Description
Status Checks
Monitoring
Tags
Instance ID
i-fbc12e15
Instance state
running
Instance type
m3.medium
Private DNS
ip-10-231-49-126.ec2.internal
Private IPs
10.231.49.126
Secondary private IPs
-
VPC ID
-


Create Image
Instance ID
i-fbc12e15
Image name
Image description
No reboot
Instance Volumes
Type
Device
Snapshot
Size (GiB)
Volume Type
IOPS
Delete on Termination
Encrypted
Root
/dev/sda1
snap-67ba52b3
30
Magnetic
N/A
Not Encrypted
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.

CF11 Licensing for the Cloud

- 8 cores, 16GHz per license for VM use
- 13 ECUs per CF11 Enterprise license
- m3.medium instance = 3 ECUs
- m3.large instance = 6.5 ECUs
- One license = 4 m3.medium instances
- One license = 2 m3.large instances

http://wwwimages.adobe.com/content/dam/Adobe/en/legal/licenses-terms/pdf/Adobe_ColdFusion-Multi-20140214_1311.pdf

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 CF11
- Update CF, configure as needed
- Create an AMI

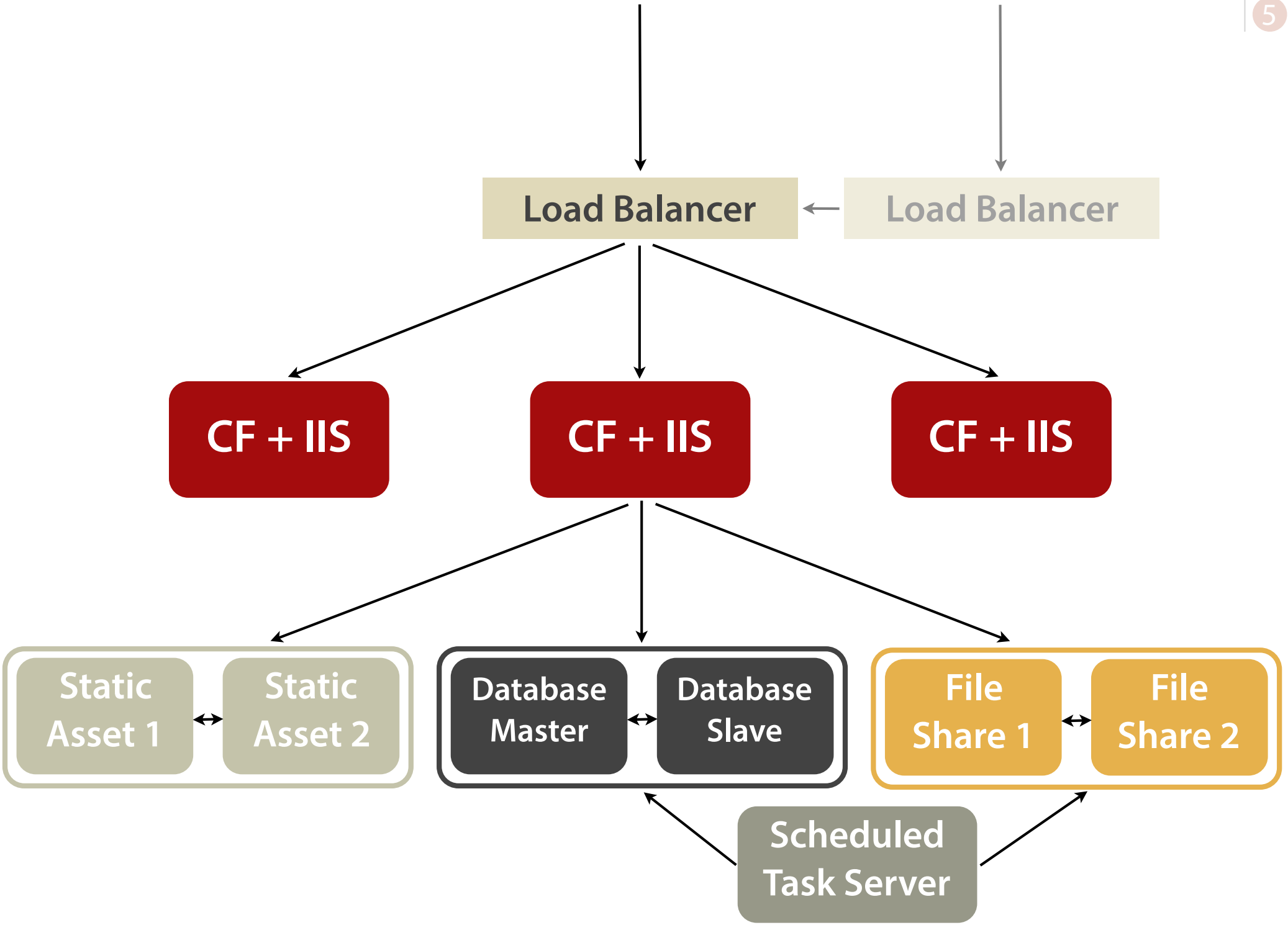
It’s not hard.

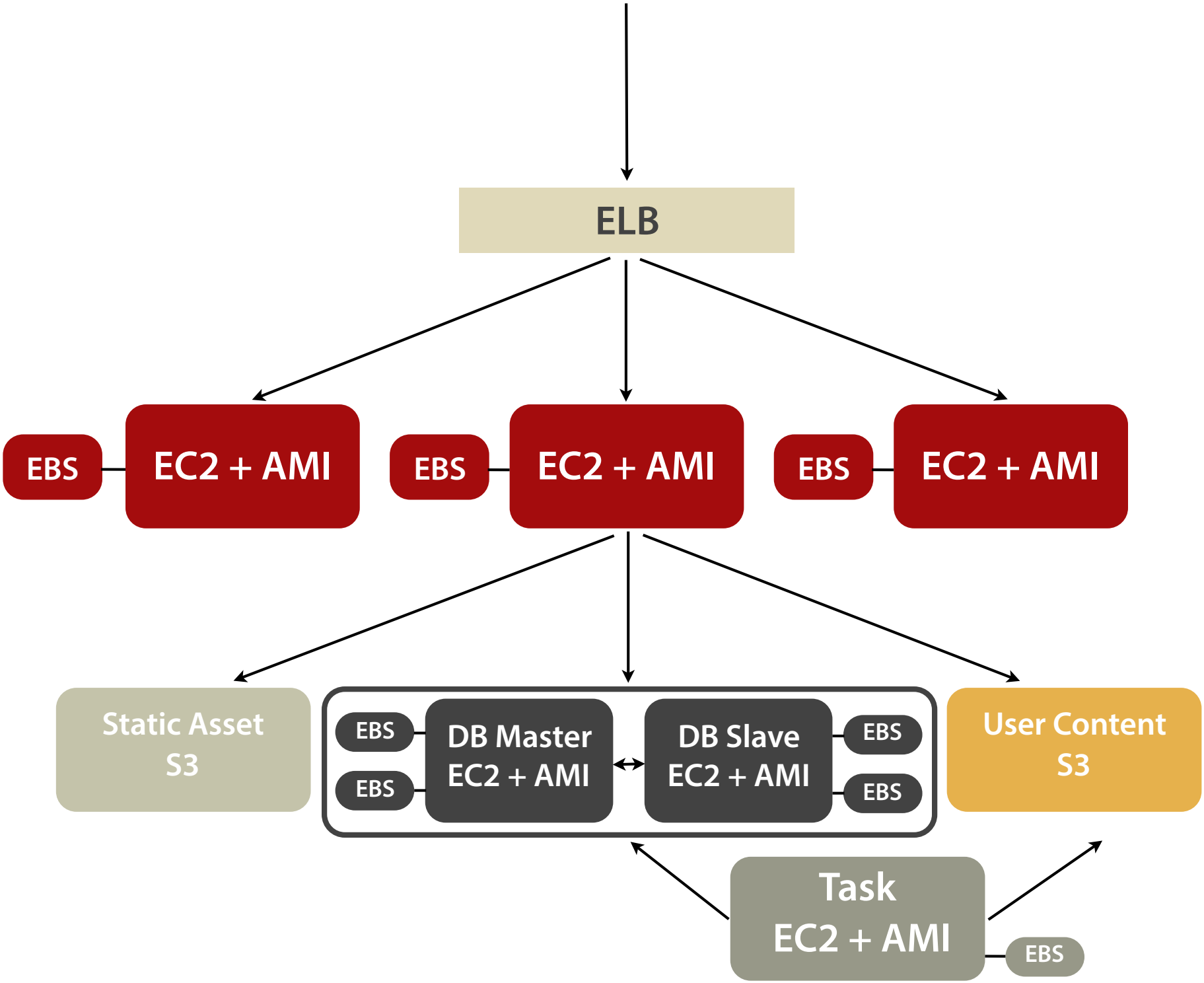
*Remember: you’re the sysadmin.

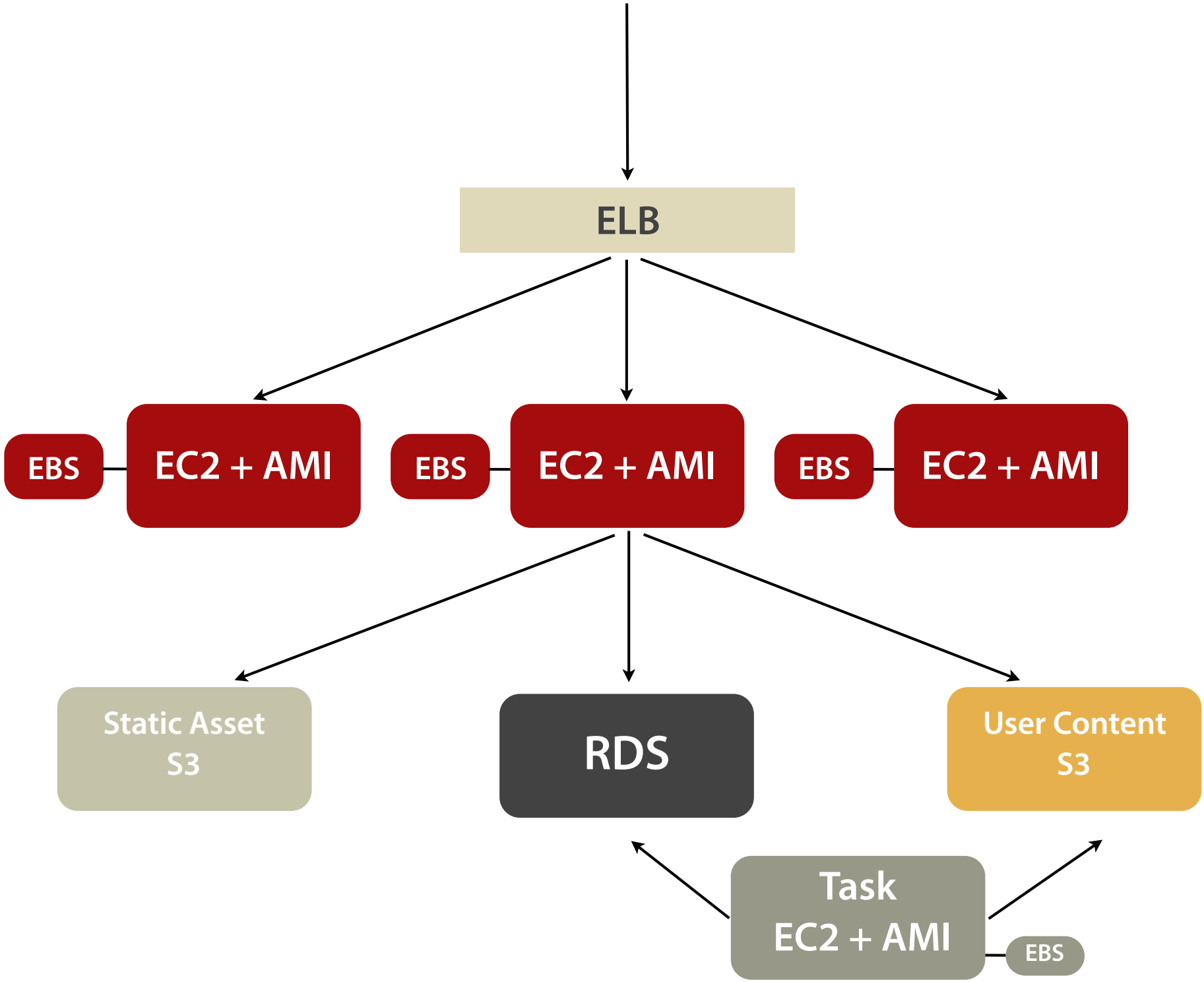
Lessons Learned Running with AWS

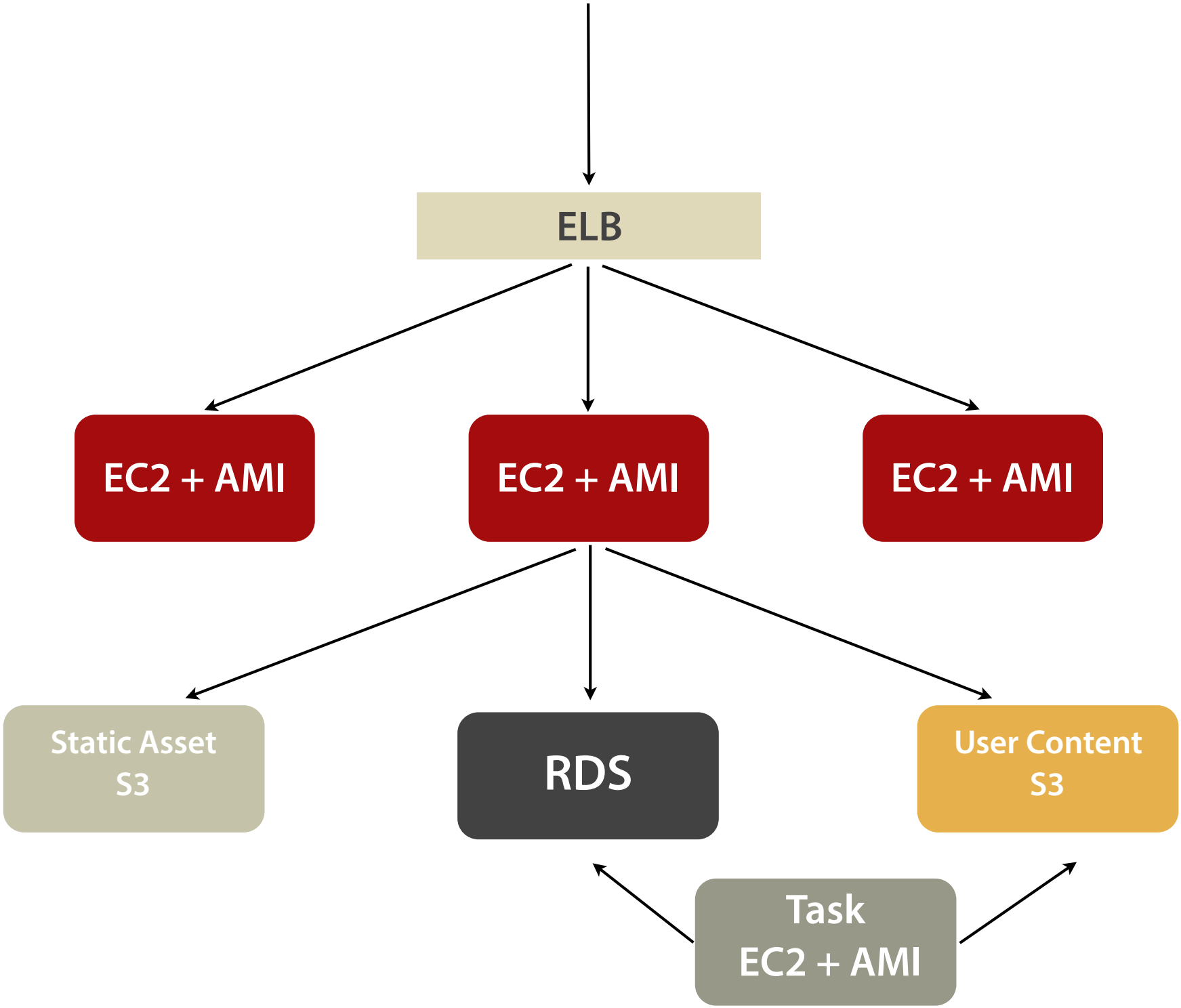
Everything fails.

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

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

Session Evaluation

On the CFSummit mobile app!

Thank you!

Brian Klaas
Johns Hopkins Bloomberg School of Public Health
bklaas@jhu.edu
@brian_klaas
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 CF11 AMI on AWS:
  https://aws.amazon.com/marketplace/pp/B00KXA6KAQ/ (Ubuntu)
  https://aws.amazon.com/marketplace/pp/B00KVODI4A/ (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
- How to select the right instances for databases on AWS
  http://www.brentozar.com/archive/2014/06/sizing-sql-server-aws/

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