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

Apps

Services

Storage

Servers

Network

Using Amazon Web Services with ColdFusion 11

Brian Klaas
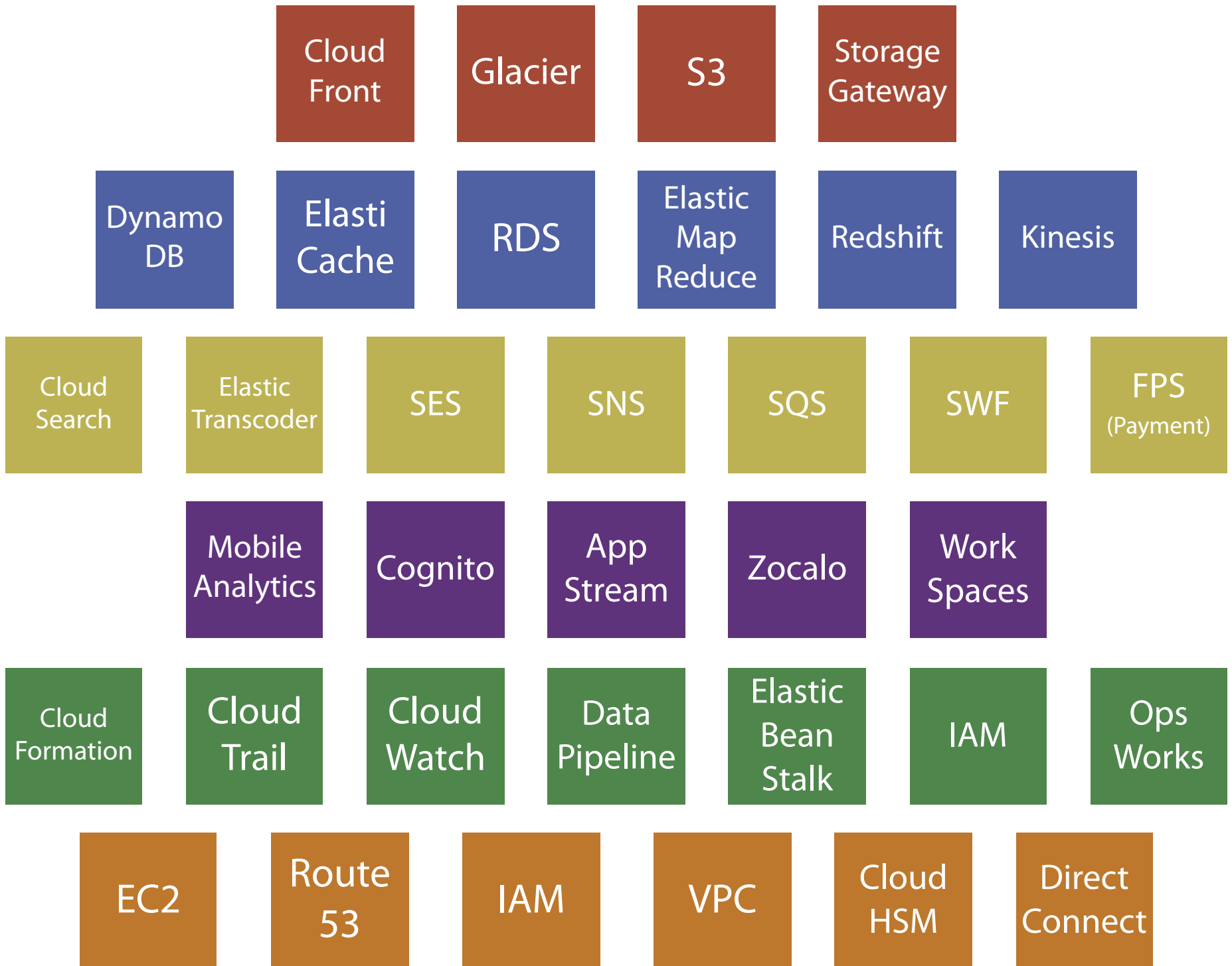Johns Hopkins Bloomberg School of Public Health
bklaas@jhu.edu
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How does AWS fit with **Cf** ?

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

Cf : 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)

99.9999999999% durability*

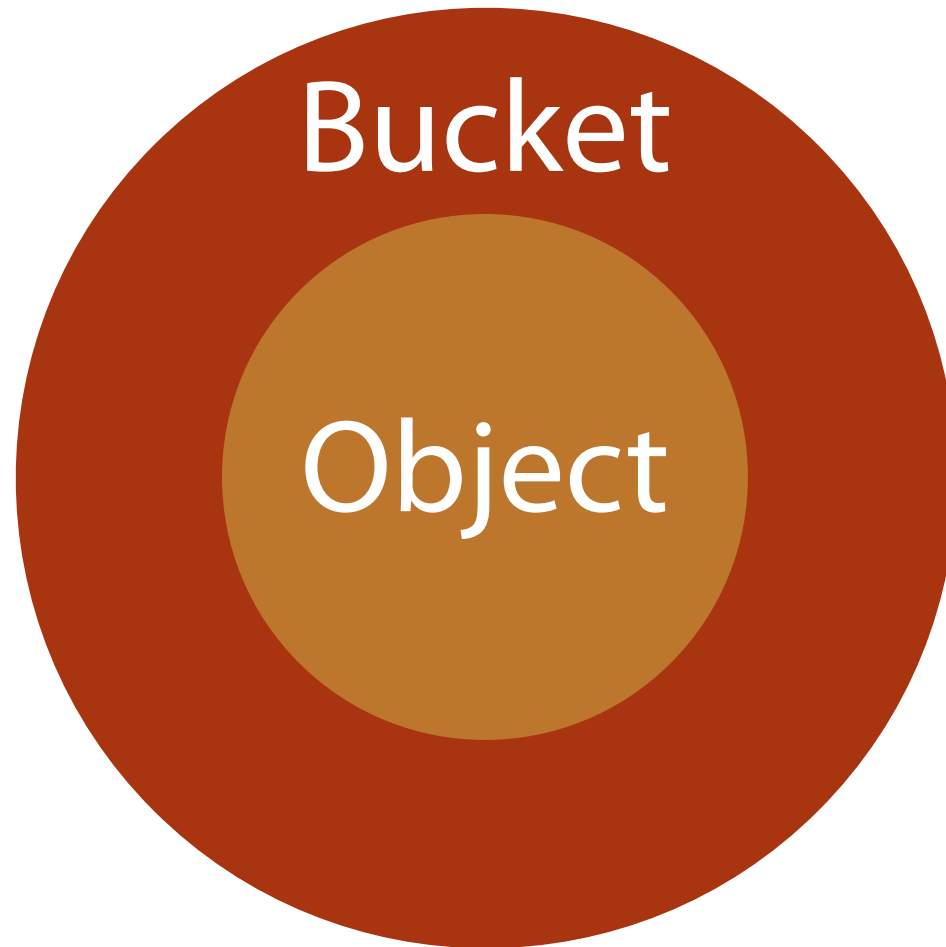# 99.99% availability

*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

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:

```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:

```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}."
```
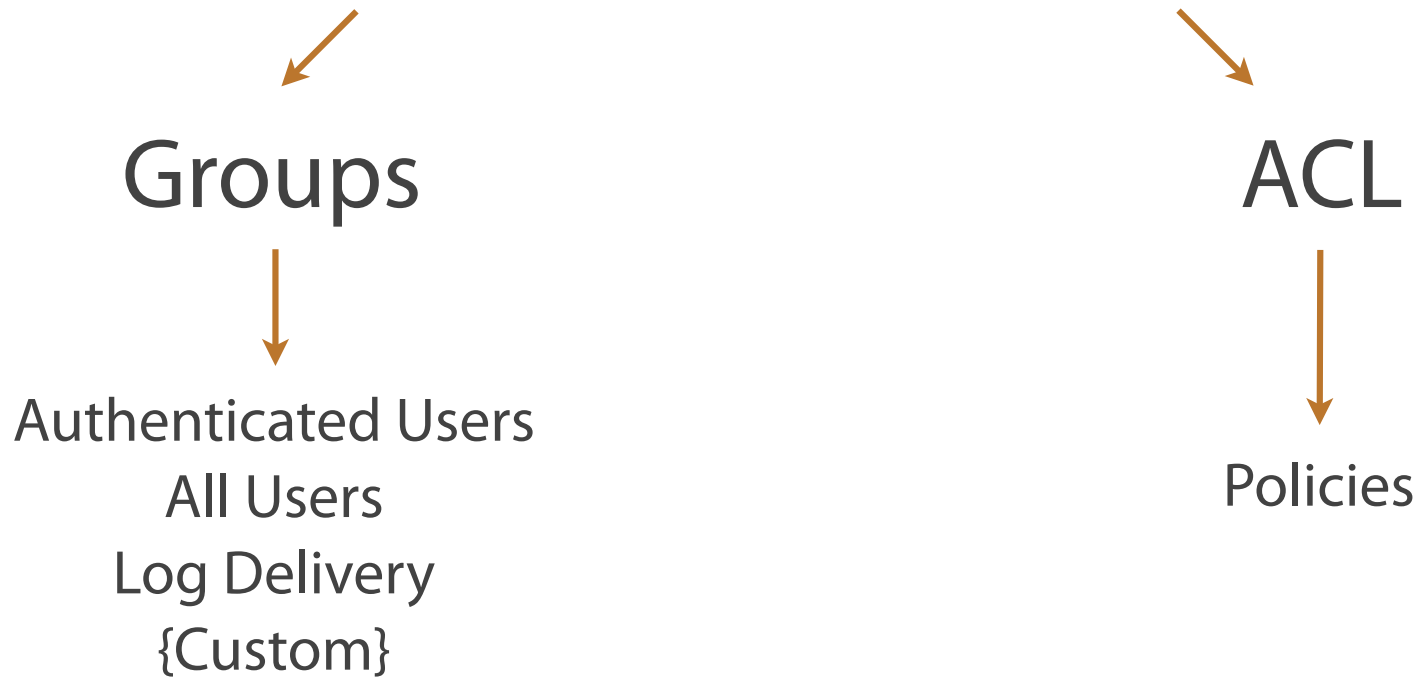
Um, don't you need credentials?

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

Upload to S3 from the browser

Requires request signing.

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

4

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	0 Elastic IPs
1 Volume	0 Snapshots
3 Key Pairs	0 Load Balancers
0 Placement Groups	3 Security Groups

💬 View **AWS Trusted Advisor** to optimize EC2.   Hic

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   ↻ Scheduled Events

Service Status: **US East (N. Virginia):**

✅ US East (N. Virginia):   No events
    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

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:

<div align="center">

Download Remote Desktop File

</div>

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

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.

Cf

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

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

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: ▎i-fbc12e15   Public DNS: ec2-54-87-149-98.compu

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

Description	Status Checks	Monitoring	Tags

Instance ID   i-fbc12e15   Publ

Instance state   running   Pu

Instance type   m3.medium   Ela

Private DNS   ip-10-231-49-126.ec2.internal   Availabili

Private IPs   10.231.49.126   Security

Secondary private IPs   -   Scheduled

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   0 Elastic IPs

1 Volume   0 Snapshots

2 Key Pairs   0 Load Balancers

0 Placement Groups   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   ⟳   Scheduled Events

Service Status: **US East (N. Virginia):**

✅ US East (N. Virginia):   No events
    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

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

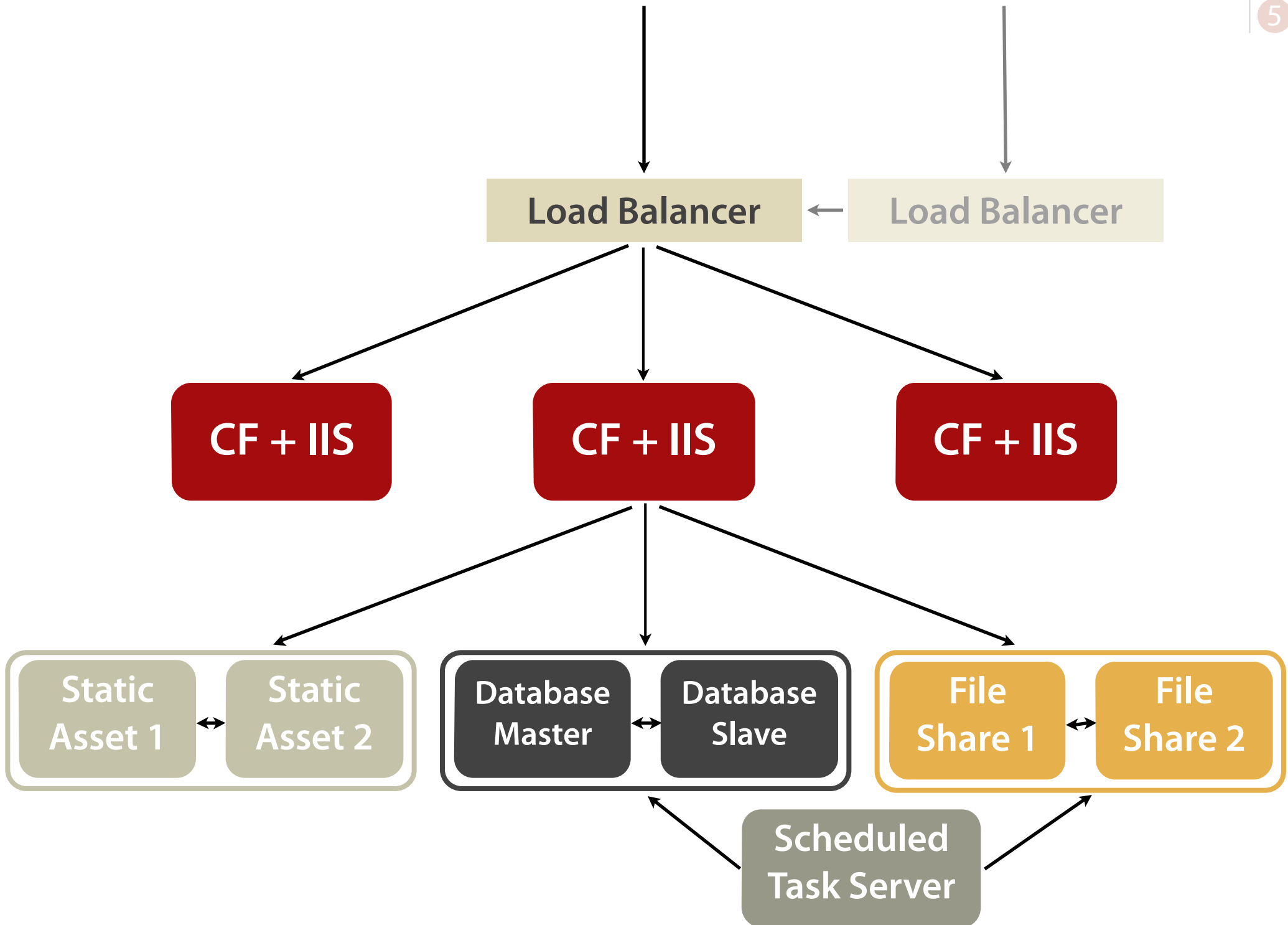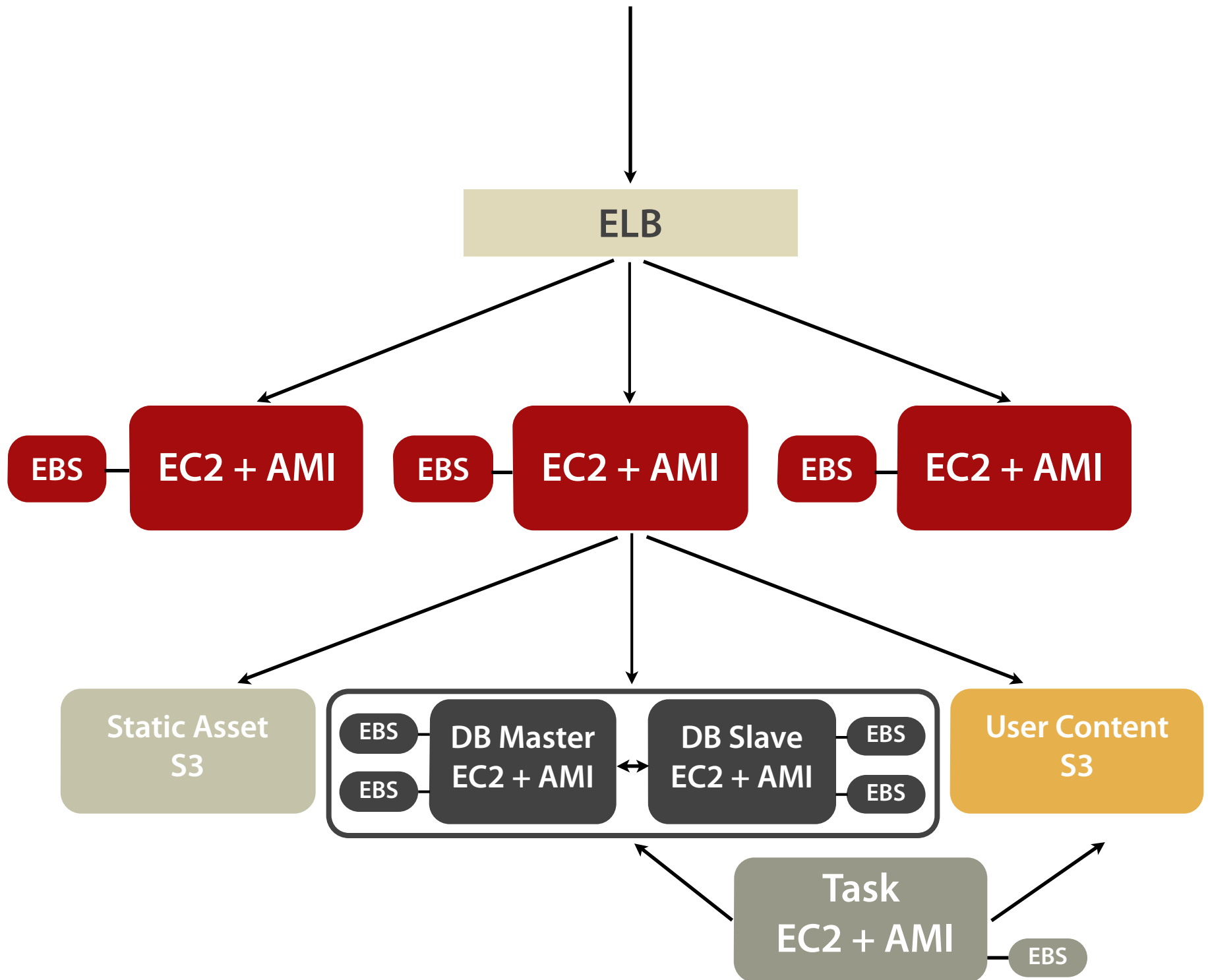- Update CF, configure as needed

- Create an AMI
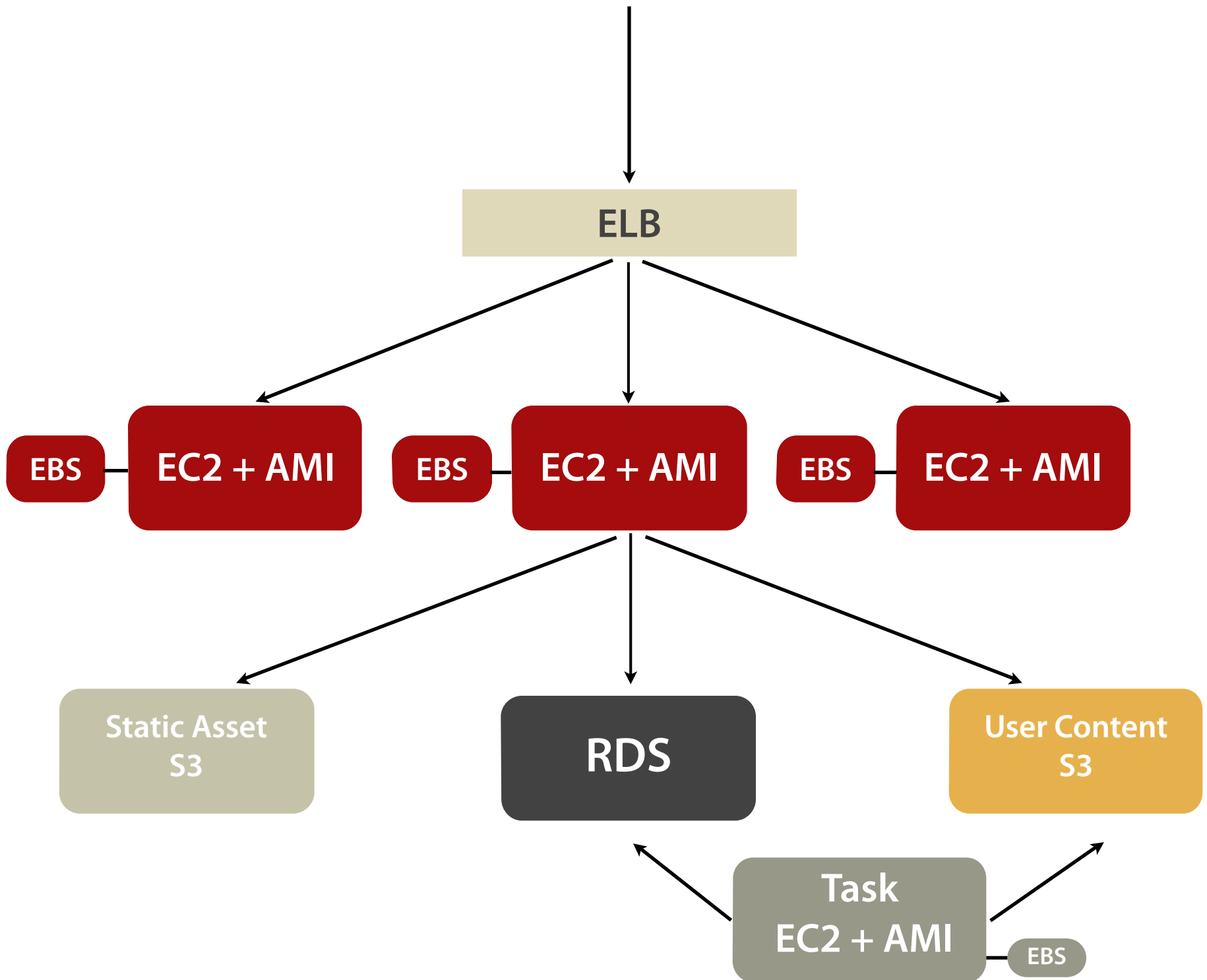
It's not hard.

*Remember: you're the sysadmin.
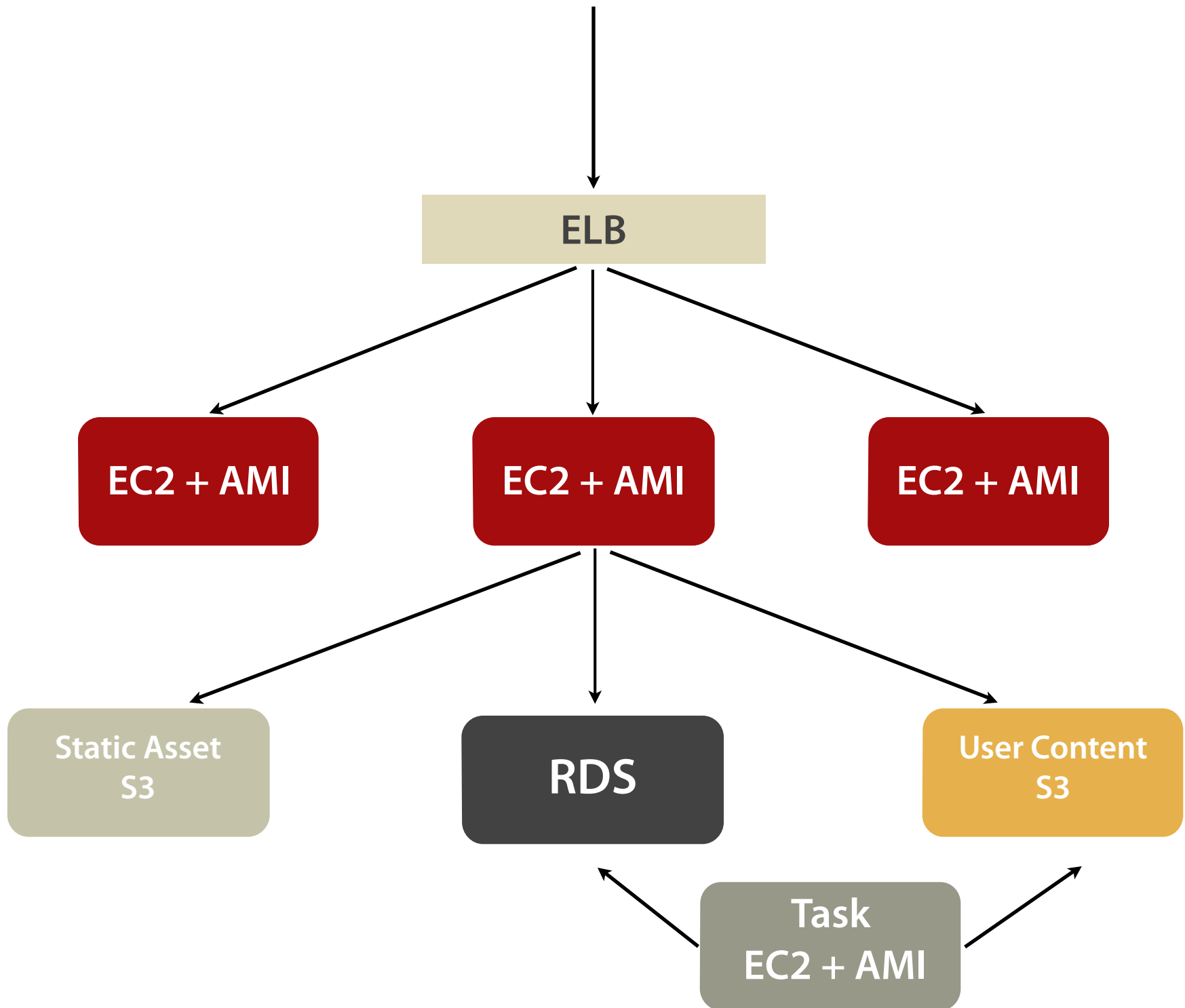
Lessons Learned Running with AWS

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

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!

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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 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