



Java™ in the amazon cloud

Christopher M. Judd



Christopher M. Judd

CTO and Partner at

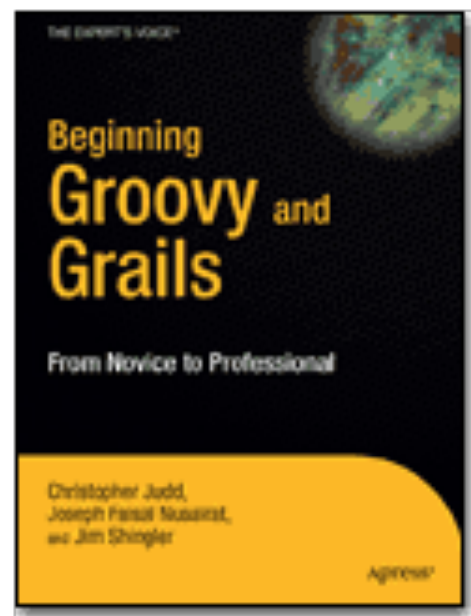


Central Ohio Java Users Group leader

Columbus



Developer User Group (CIDUG)



zendern / nuez

Unwatch Fork Pull Request 2 1

NUEZ | Java in the (Amazon) Cloud

localhost:8080/neuz/entry/show/1

NUEZ
The blog about anything....really...Anything!

Home All Posts About

Your signed in as blogger Logout

Add a new post Delete this post Update this post

JAVA IN THE (AMAZON) CLOUD AT CODEMASH

2012-01-07 16:55:38

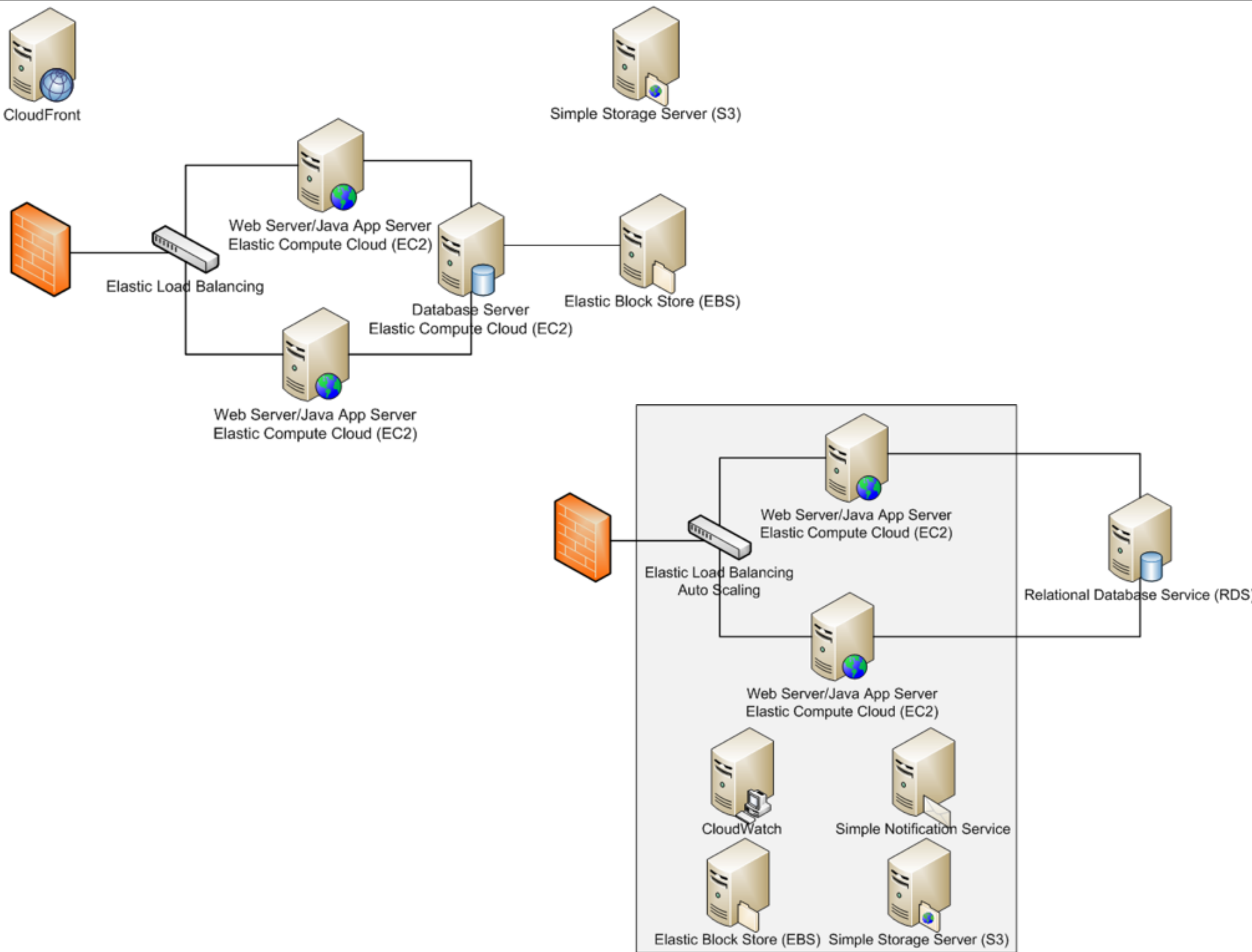
Nathan and Chris did a fantastic job of explaining how to deploy Java applications to the Amazon Web Service (AWS) cloud.

[Permalink](#)

ADD A COMMENT

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<https://github.com/zendern/nuez>





What is cloud computing?

How do I get started?

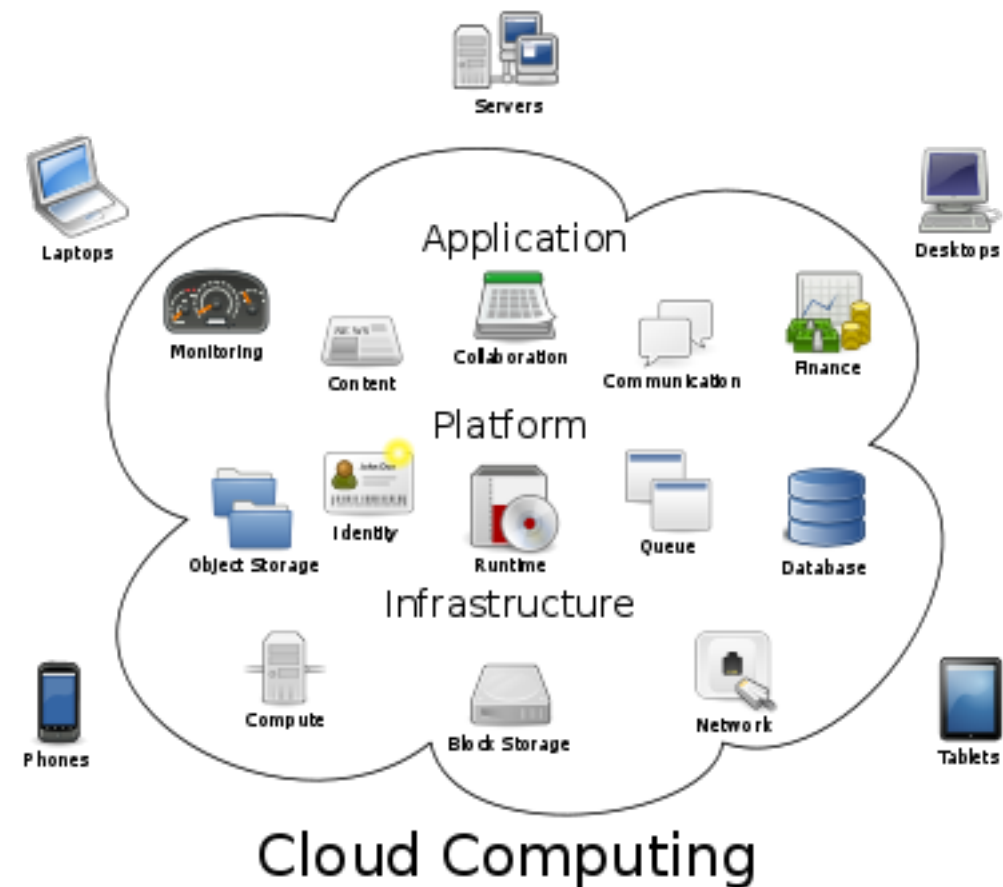


How is different from what I am doing today?

Will I get a raise?

CLOUD COMPUTING

Cloud computing is the delivery of [computing](#) as a [service](#) rather than a [product](#), whereby shared resources, software, and information are provided to computers and other devices as a metered [service](#) over a [network](#) (typically the [Internet](#)).



Software as a service (SaaS) - “on-demand” software



Platform as a service (PaaS) - solution stack



Infrastructure as a service (IaaS) - virtual computing infrastructure



PaaS

IaaS



AWS Elastic Beanstalk



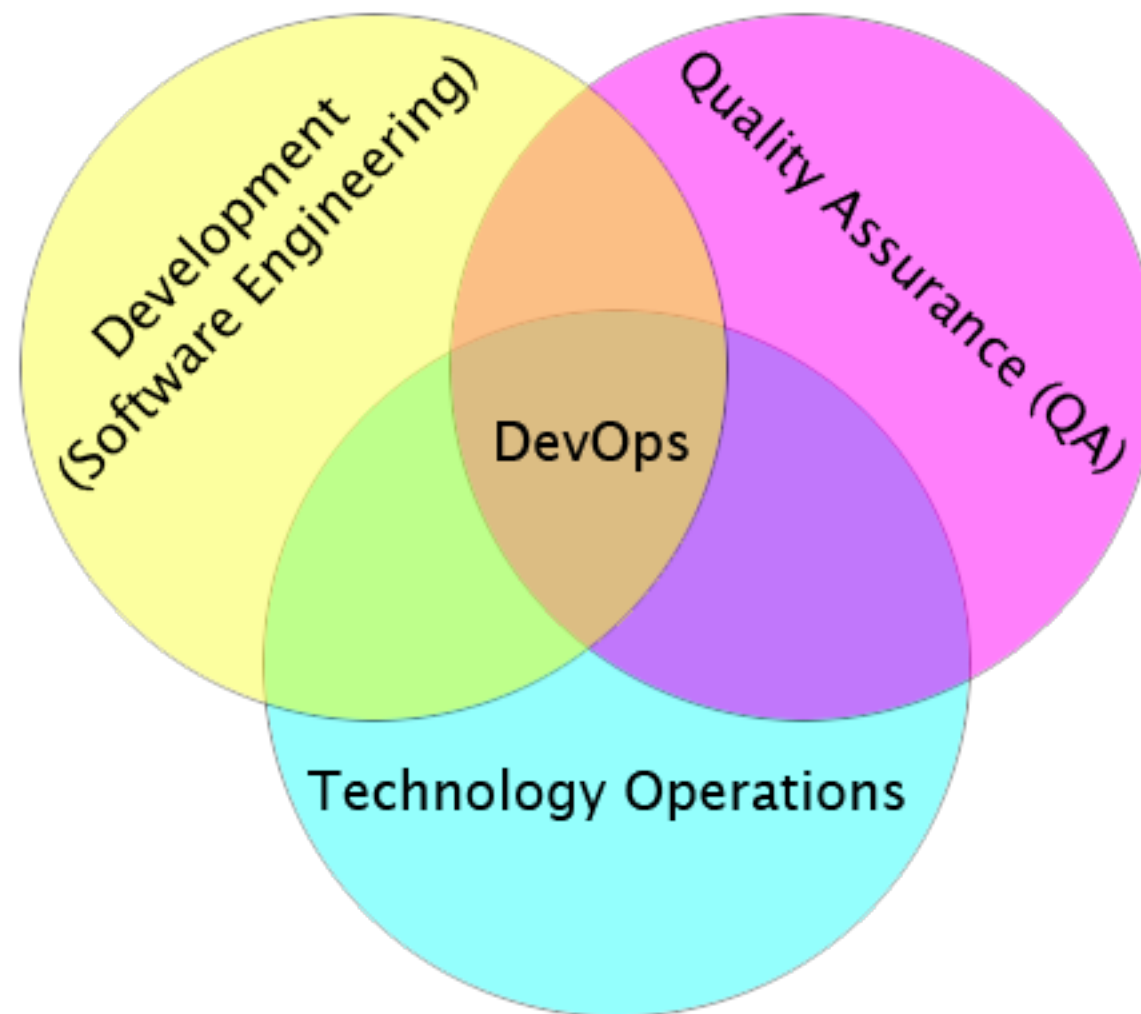
↓ flexibility ↑

↓ complexity ↑

↓ cost ↑

DevOps

an emerging set of principles, methods and practices for communication, collaboration and integration between [software development](#) (application/software engineering) and [IT operations](#) (systems administration/infrastructure) professionals. It has developed in response to the emerging understanding of the interdependence and importance of both the development and operations disciplines in meeting an organization's goal of rapidly producing [software](#) products and services.

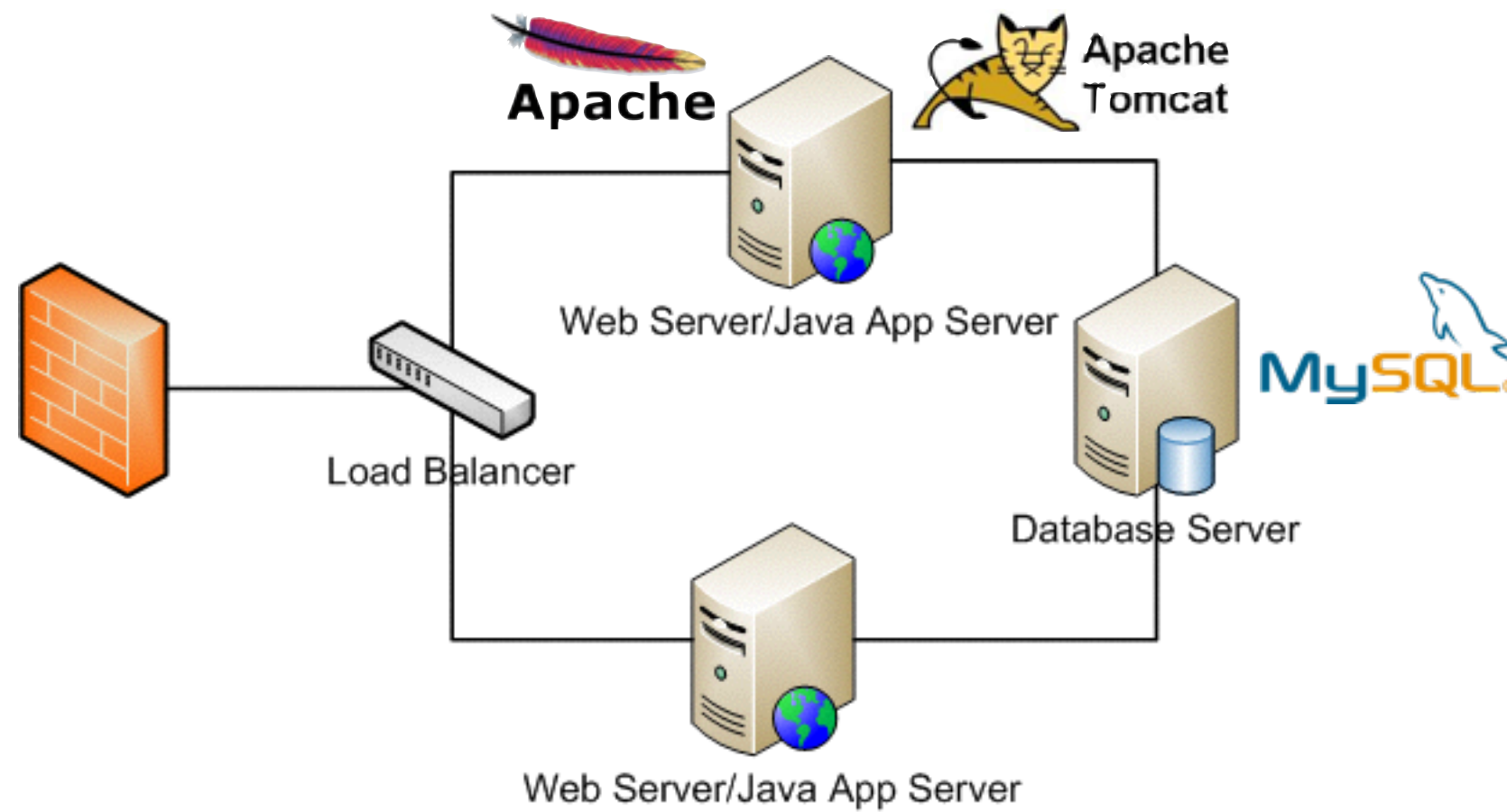


treat infrastructure like
cattle not like pets

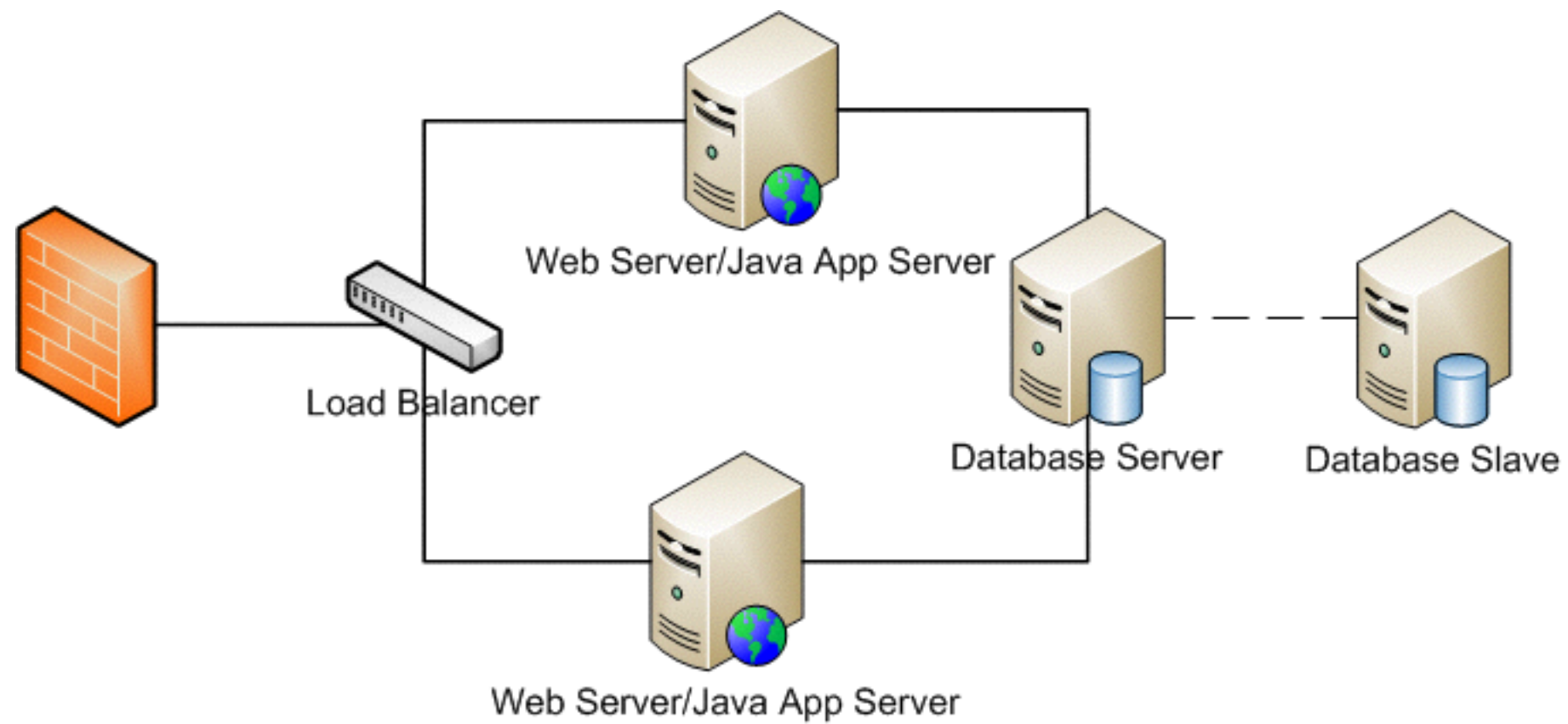


CURRENT ARCHITECTURE

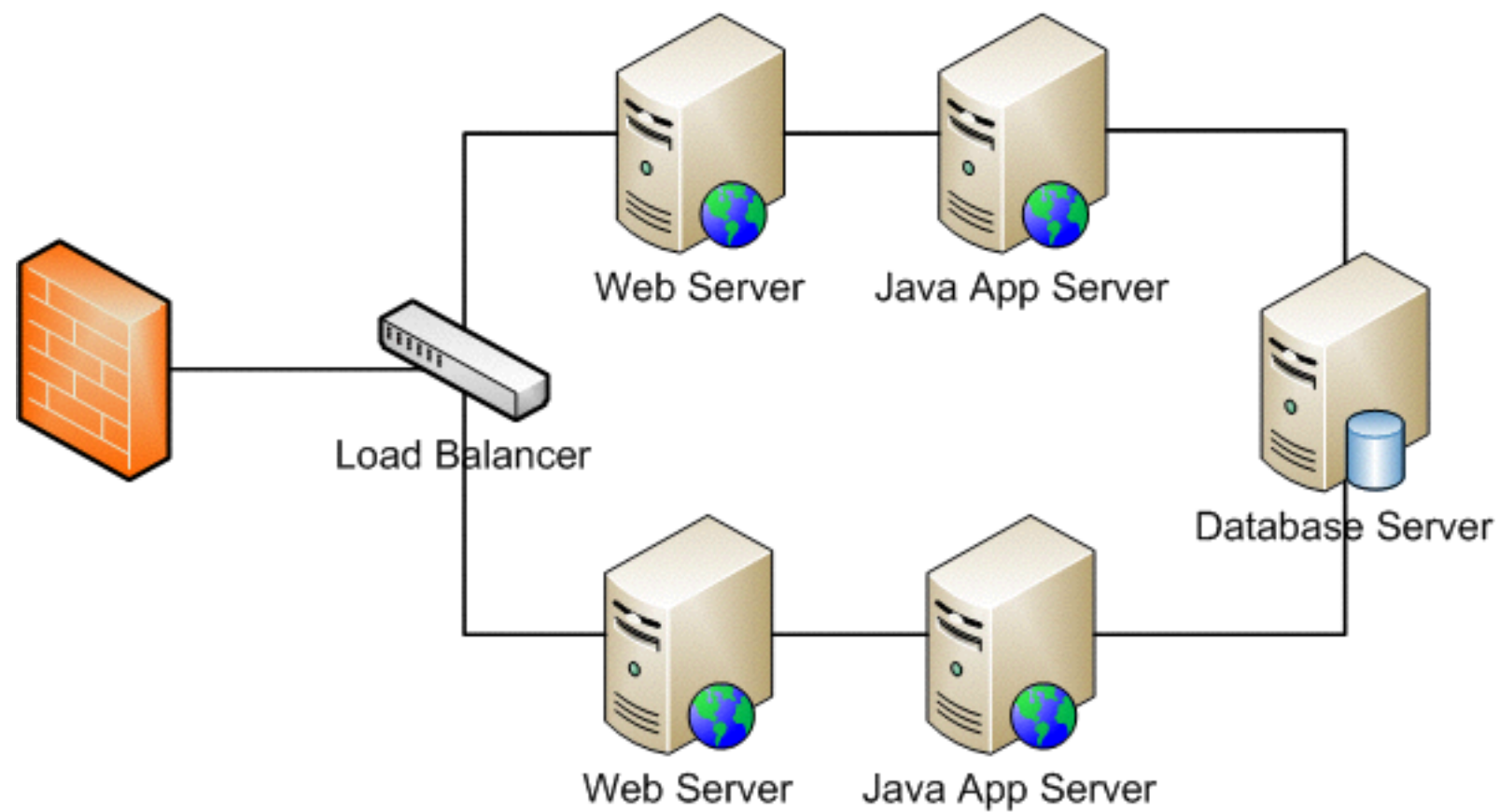
traditional Java architecture



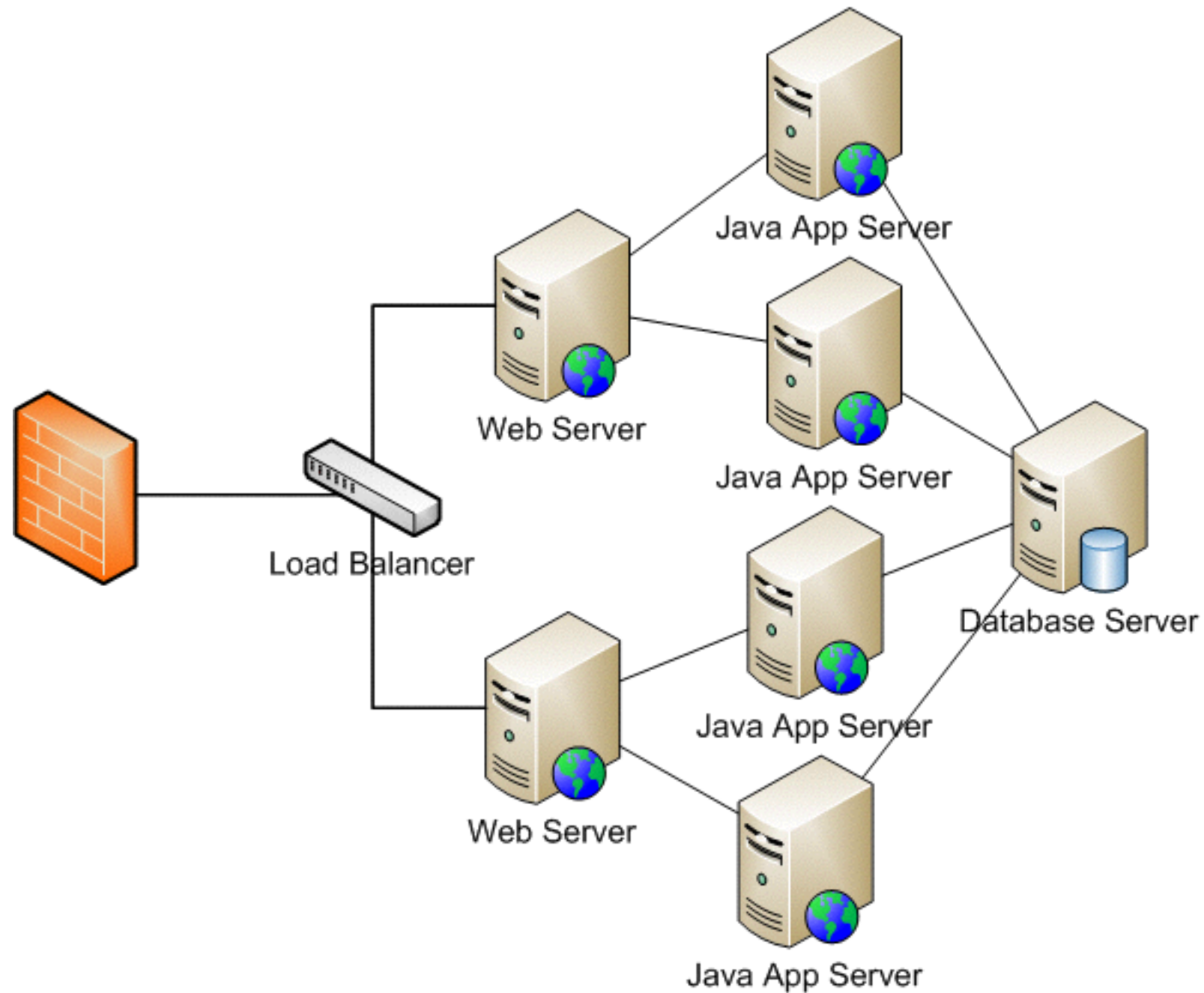
traditional Java architecture



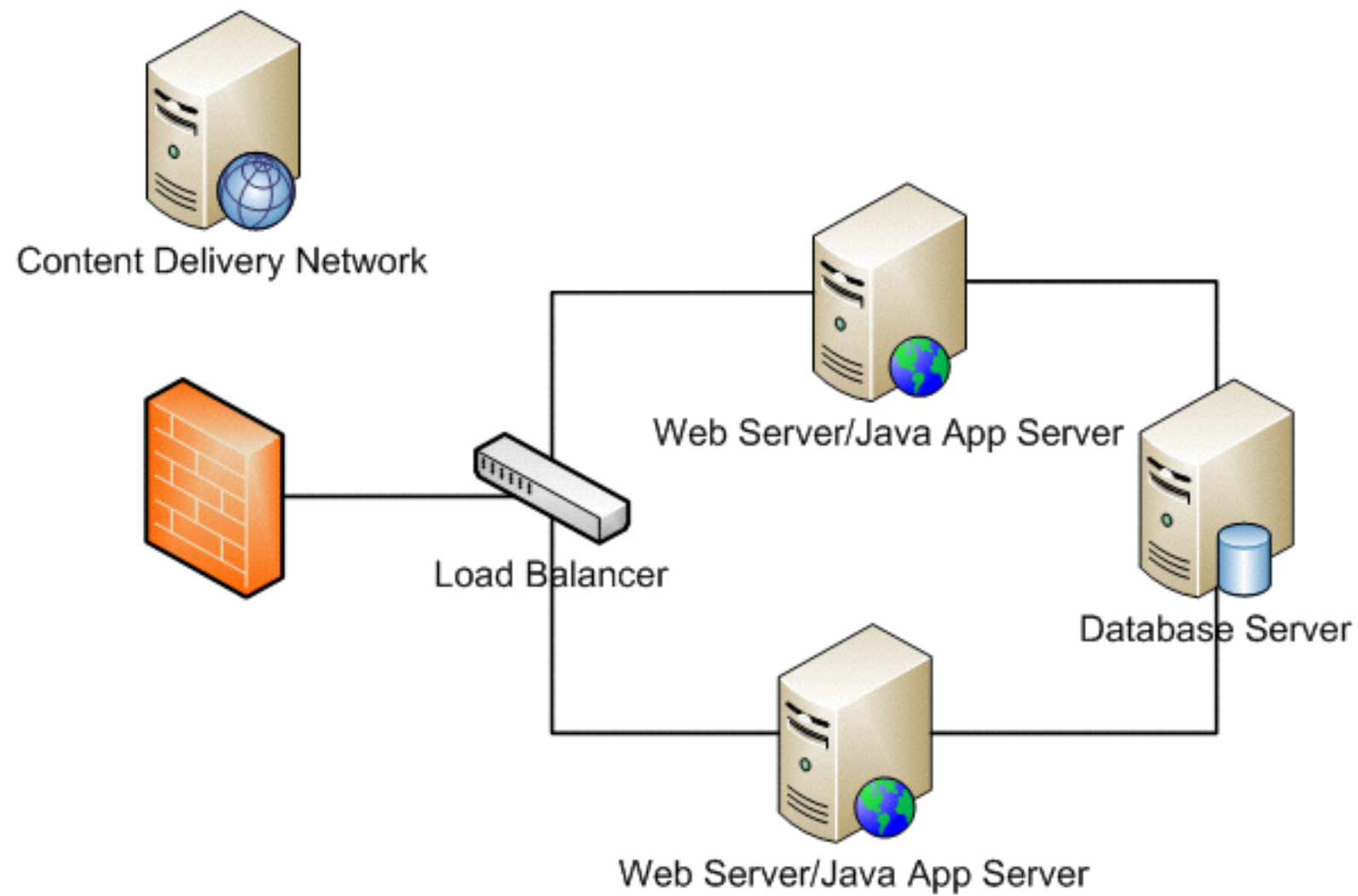
traditional Java architecture



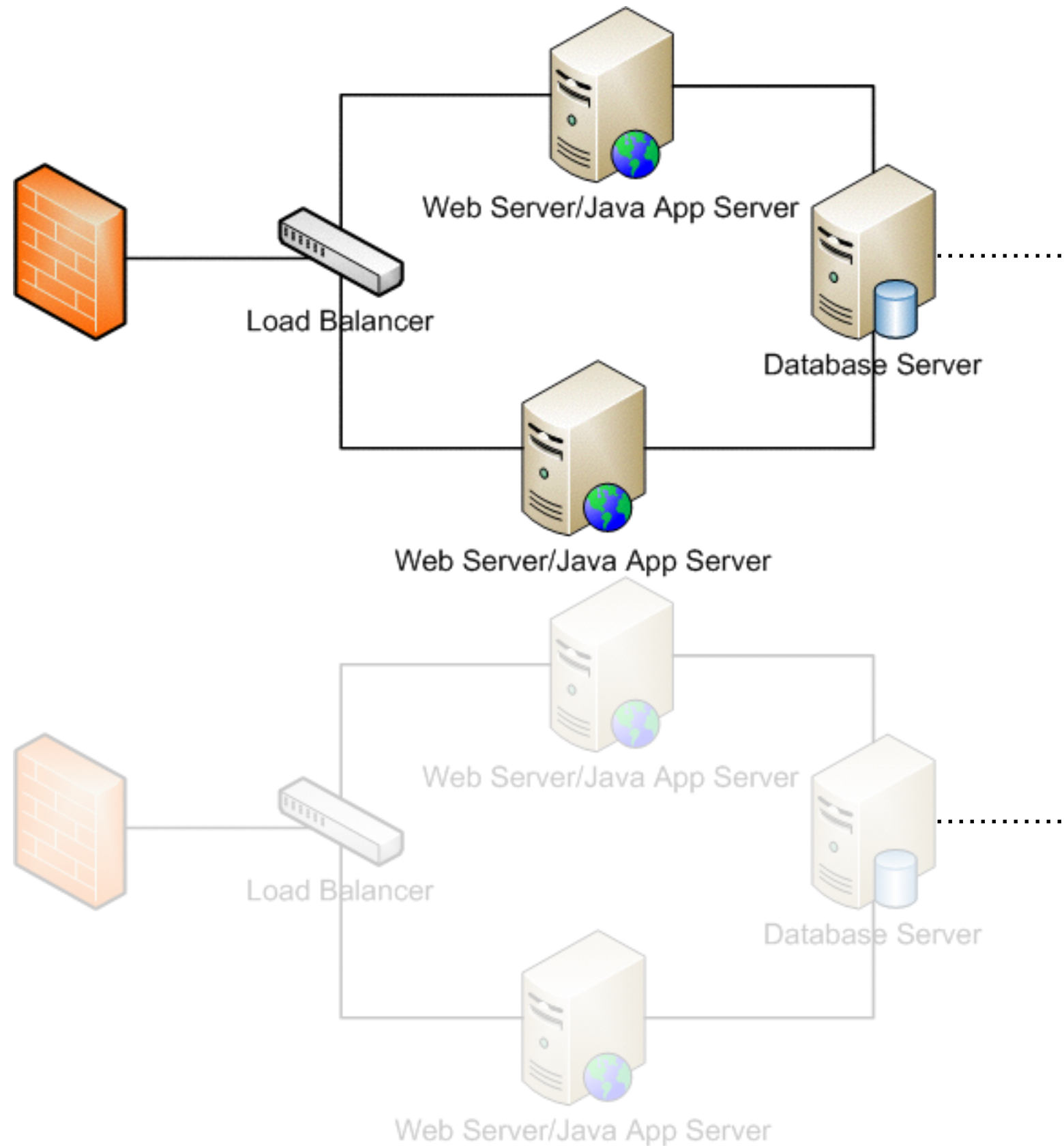
traditional Java architecture



traditional Java architecture



traditional Java architecture





amazon
webservices™

Your Applications

Management & Administration

Web Interface

AWS Management Console

Identity & Access

IAM

Identity Federation
Consolidated Billing

Deployment & Automation

AWS Elastic Beanstalk
AWS CloudFormation

Monitoring

Amazon CloudWatch

Application Platform Services

Content Distribution

Amazon CloudFront

Messaging

Amazon SNS
Amazon SQS
Amazon SES

Search

Amazon CloudSearch

Distributed Computing

Elastic MapReduce
Amazon SWF

Libraries & SDKs

Java, PHP, Python,
Ruby, .NET

Foundation Services

Compute

Amazon EC2
Auto Scaling

Storage

Amazon S3
Amazon EBS
AWS Storage Gateway

Database

Amazon RDS
Amazon DynamoDB
Amazon SimpleDB
Amazon ElastiCache

Networking

Amazon VPC
Elastic Load Balancing
Amazon Route 53
AWS Direct Connect

AWS Global Infrastructure

Availability Zones

Regions

Edge Locations

Your Applications

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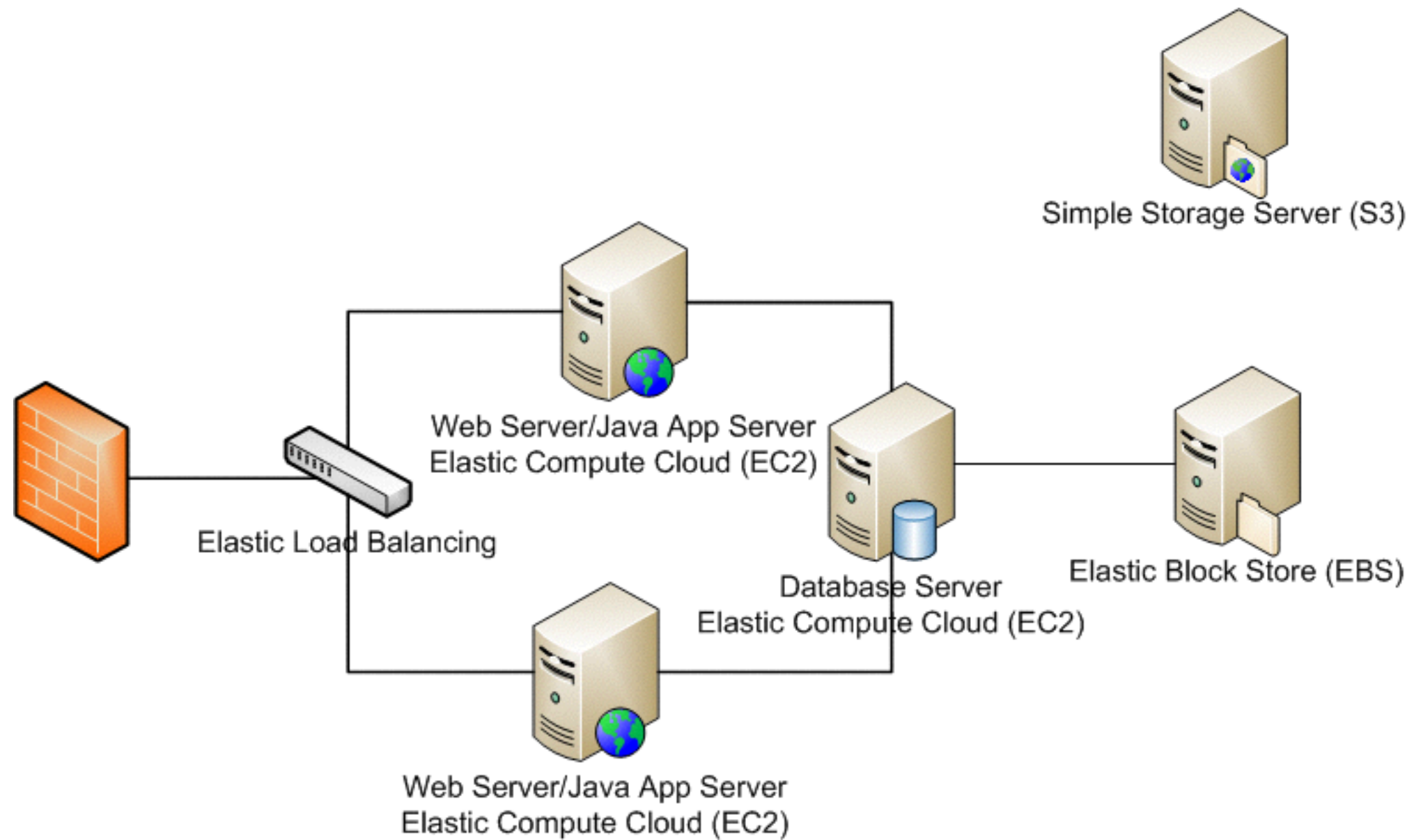
AWS Global Infrastructure

Availability Zones

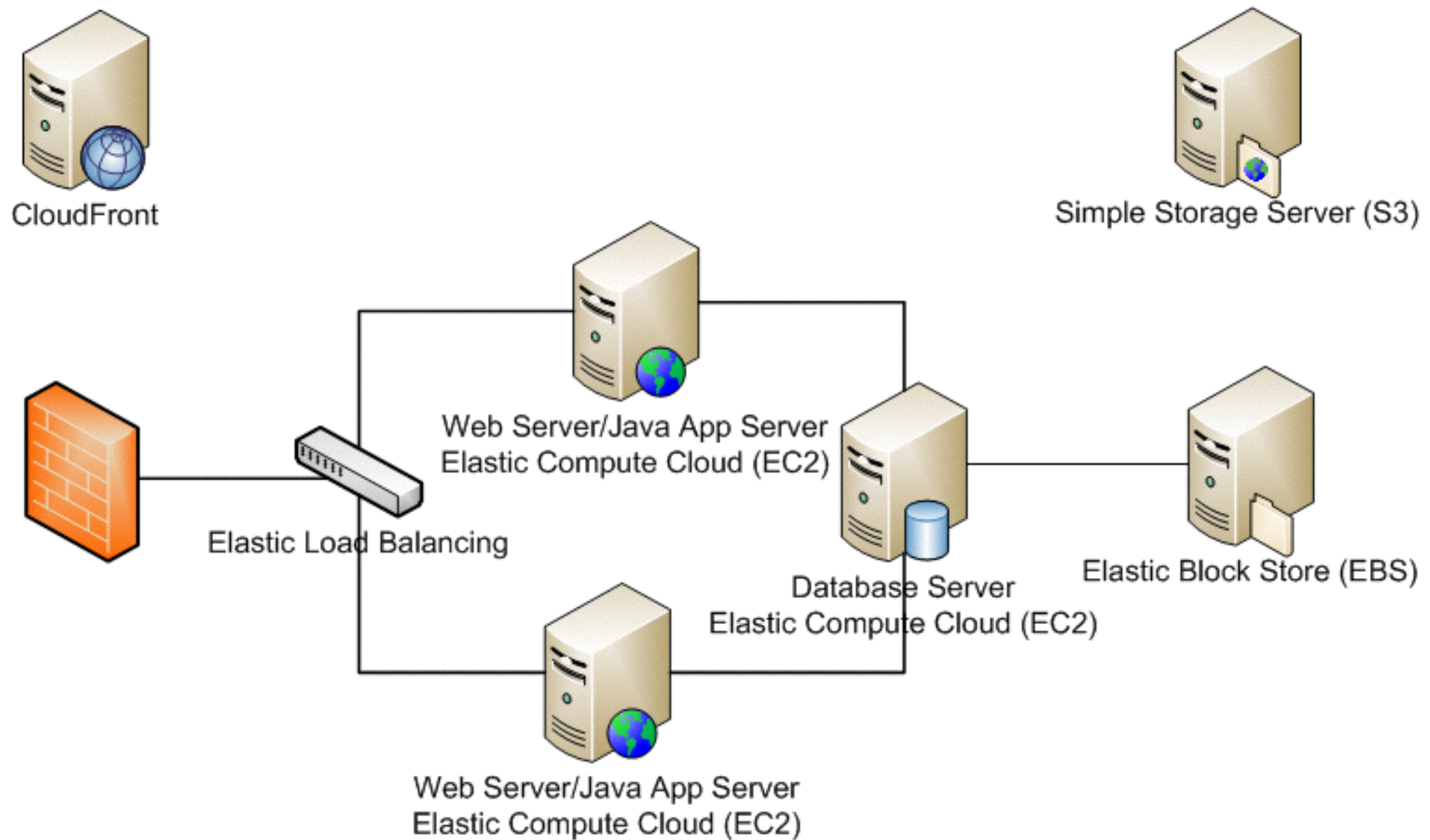
Regions

Edge Locations

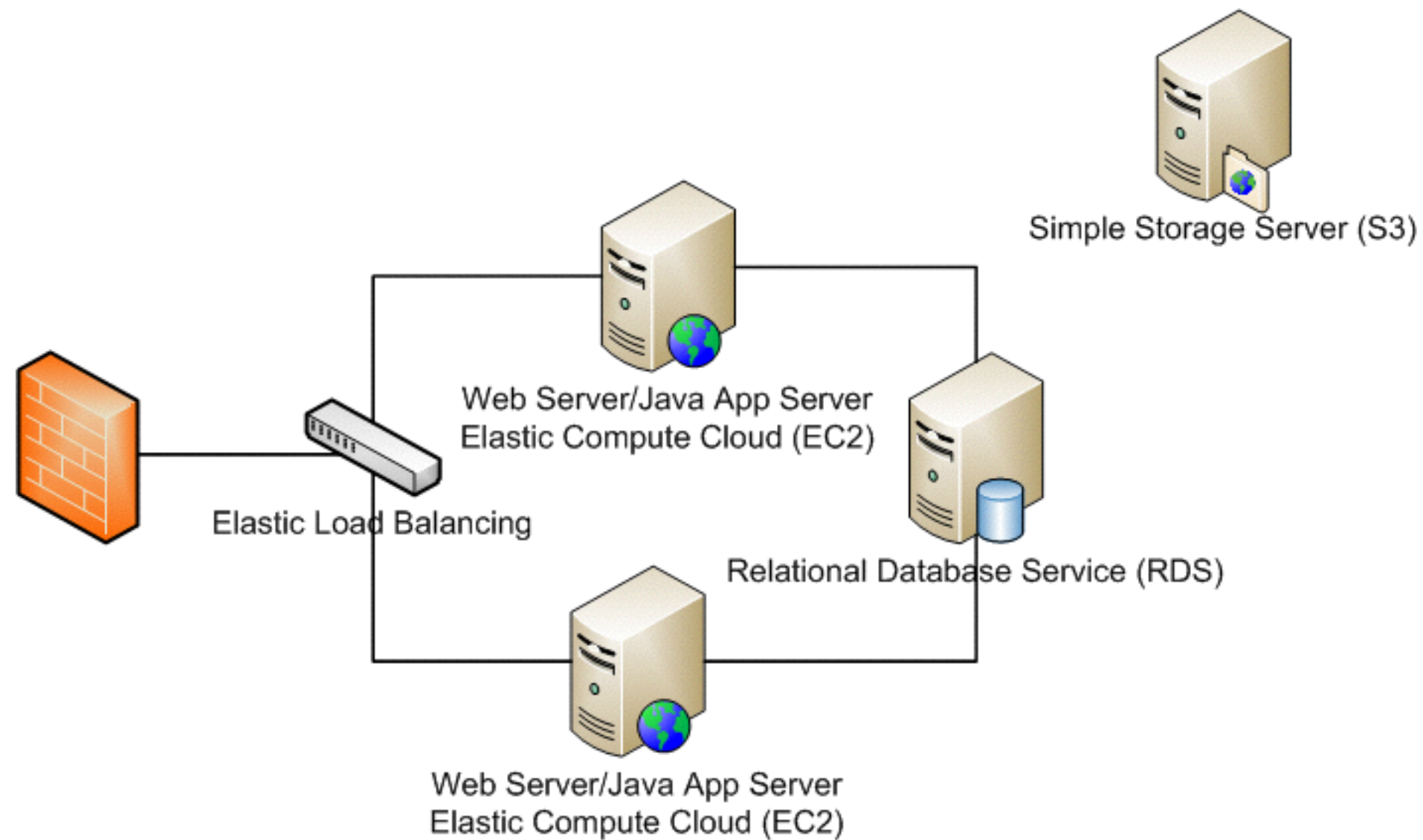
AWS architecture



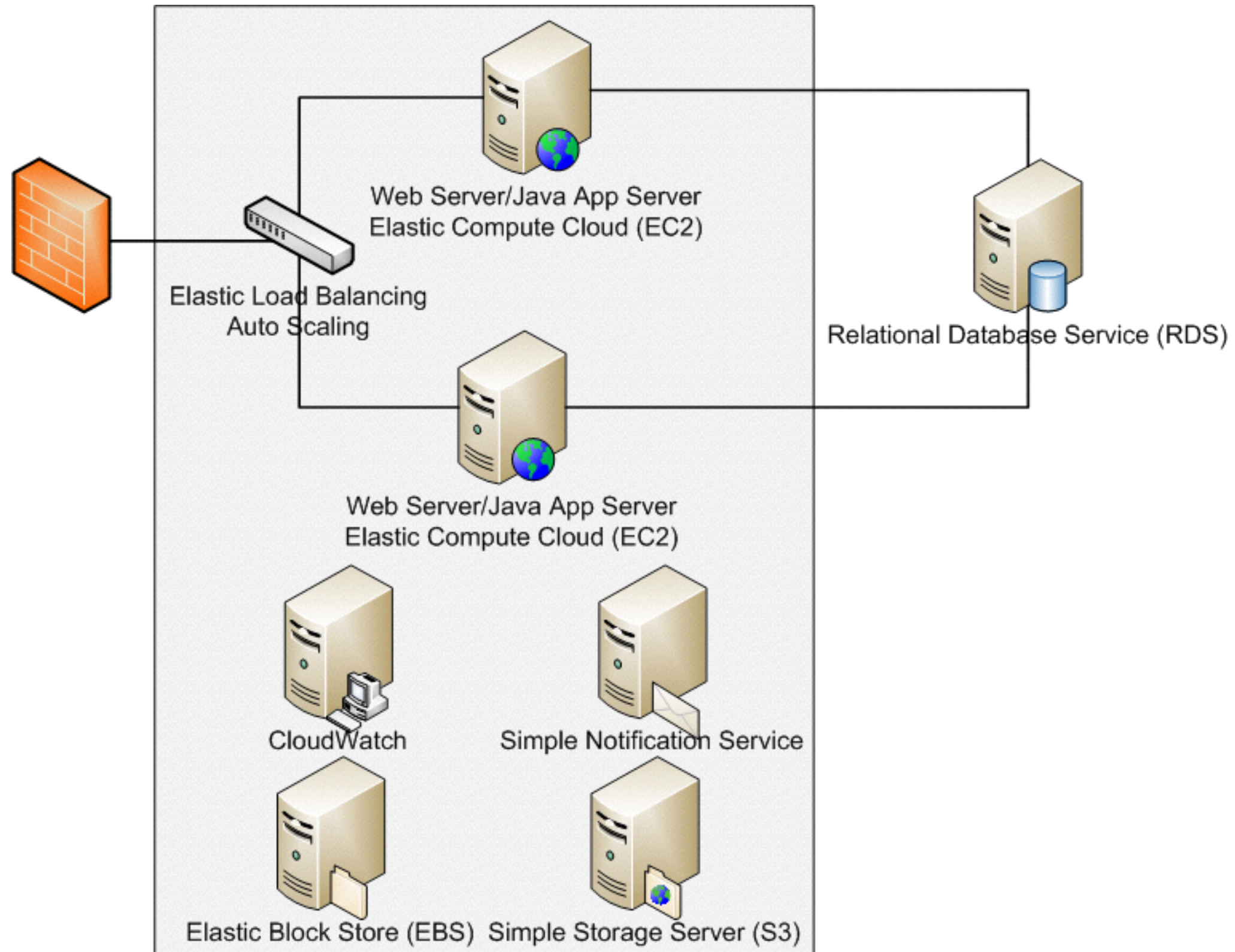
AWS architecture



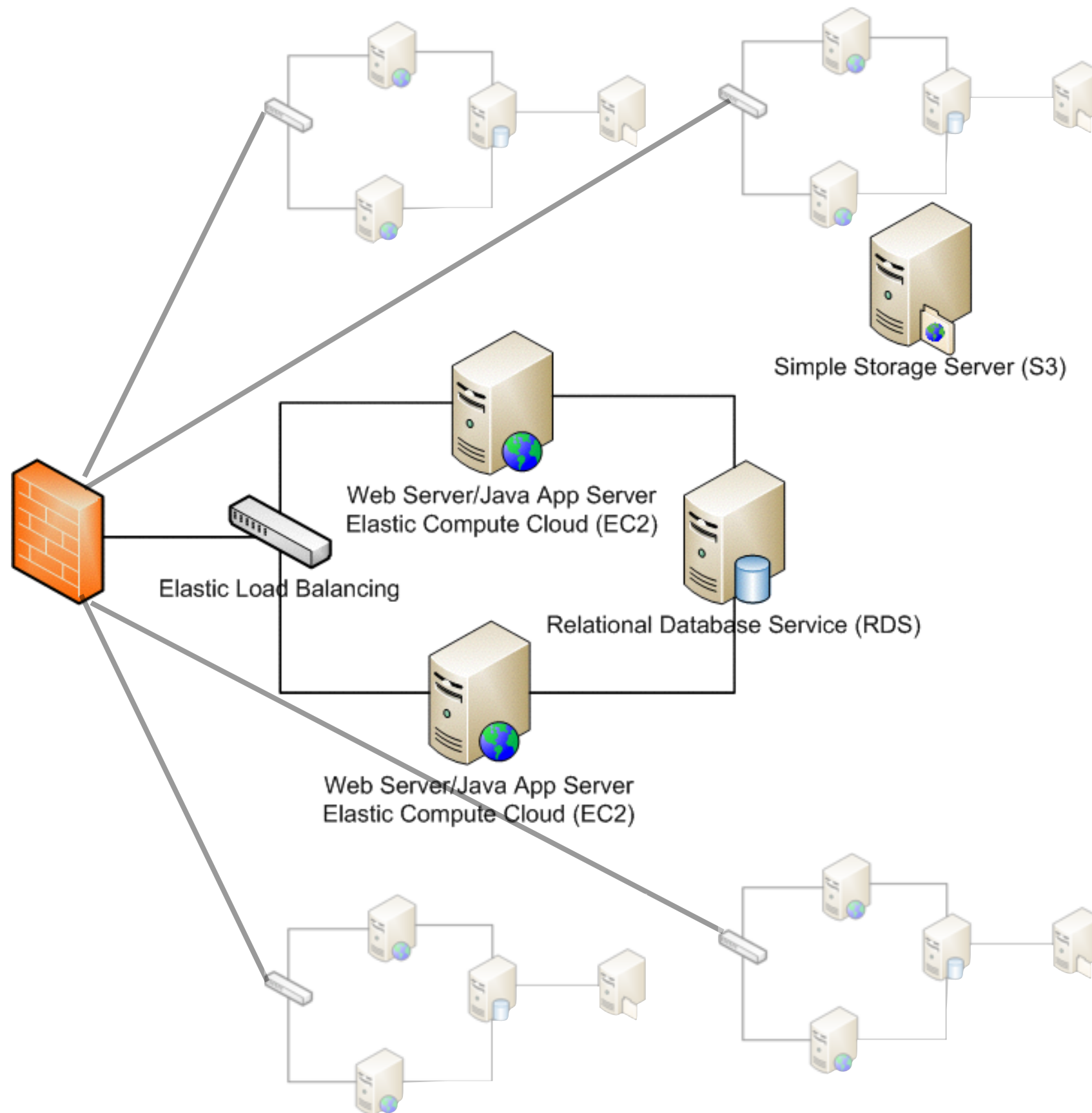
AWS architecture



AWS Elastic Beanstalk architecture

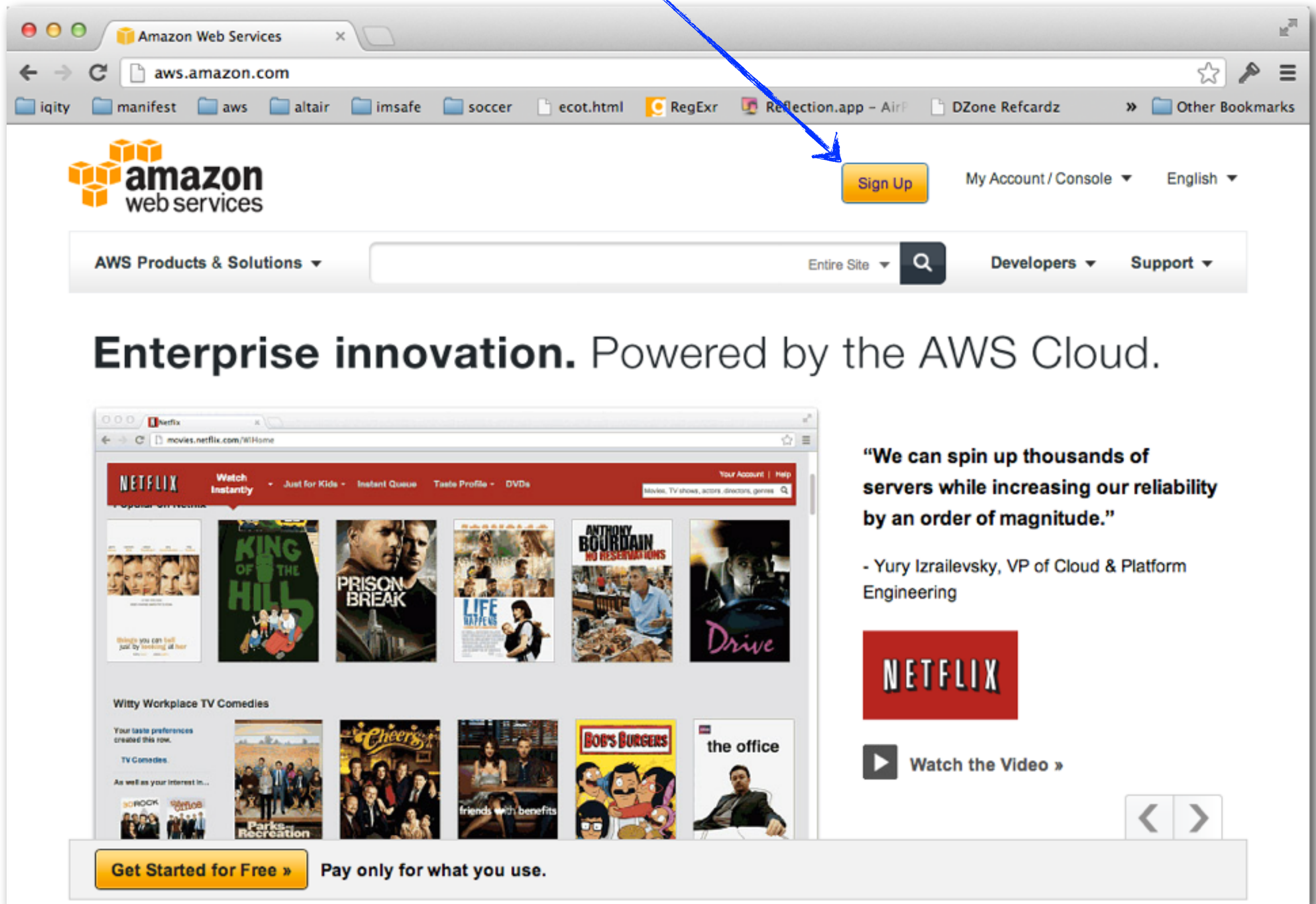


AWS architecture



REGISTRATION

start here



The image shows a screenshot of a web browser displaying the Amazon Web Services (AWS) homepage. A blue arrow points from the text "start here" to the "Sign Up" button. The browser's address bar shows "aws.amazon.com". The page features the AWS logo, a navigation bar with links like "AWS Products & Solutions", "Entire Site", "Developers", and "Support", and a large headline: "Enterprise innovation. Powered by the AWS Cloud." Below this, there is an inset image of the Netflix homepage, which includes a "Get Started for Free" button and the text "Pay only for what you use." To the right of the Netflix inset, there is a quote from Yury Izrailevsky, VP of Cloud & Platform Engineering, and a "Watch the Video" button.

Amazon Web Services

aws.amazon.com

Sign Up

My Account / Console

English

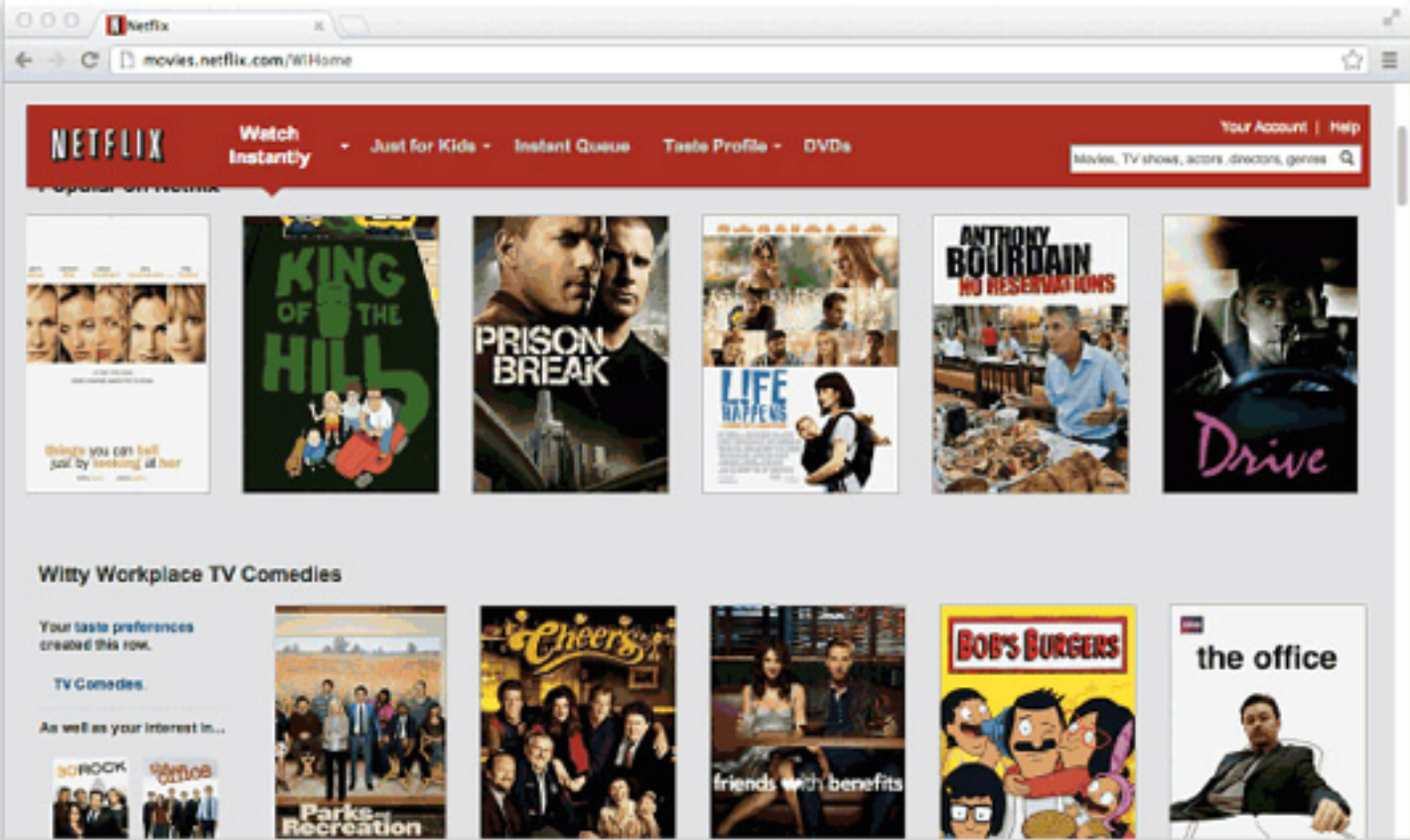
AWS Products & Solutions

Entire Site

Developers

Support

Enterprise innovation. Powered by the AWS Cloud.



NETFLIX

Watch Instantly

Just for Kids

Instant Queue

Taste Profile

DVDs

Your Account | Help

Popular on Netflix

Things you can tell just by looking at her

KING OF THE HILL

PRISON BREAK

LIFE HAPPENS

ANTHONY BOURDAIN NO RESERVATIONS

Drive

Witty Workplace TV Comedies

Your taste preferences created this row.

TV Comedies

As well as your interest in...

Parks Recreation

Cheers

friends with benefits

BOB'S BURGERS

the office

Get Started for Free »

Pay only for what you use.

"We can spin up thousands of servers while increasing our reliability by an order of magnitude."

- Yury Izrailevsky, VP of Cloud & Platform Engineering

NETFLIX

Watch the Video »

<http://aws.amazon.com/>



Sign In or Create an AWS Account

You may sign in using your existing Amazon.com account or you can create a new account by selecting "I am a new user."

My e-mail address is:

- ☒ I am a new user.
- ☐ I am a returning user
and my password is:

Sign in using our secure server 

[Forgot your password?](#)

[Has your e-mail address changed?](#)

Learn more about [AWS Identity and Access Management](#) and [AWS Multi-Factor Authentication](#), features that provide additional security for your AWS Account.

need a valid email address



Login Credentials

Use the form below to create login credentials that can be used for AWS as well as Amazon.com.

My name is:

My e-mail address is:

Type it again:

note: this is the e-mail address that we
will use to contact you about your
account

Enter a new password:

Type it again:

[Continue](#)

About Amazon.com Sign In

Amazon Web Services uses information from your Amazon.com account to identify you and allow access to Amazon Web Services. Your use of this site is governed by our [Terms of Use](#) and [Privacy Policy](#) linked below.

[Terms of Use](#) | [Privacy Policy](#) © 1996-2012, Amazon.com, Inc. or its affiliates

An .com company

Contact Information

* required fields

Full Name*: Christopher Judd

Company Name: Judd Solutions

Country*: United States

Address Line 1*: 685 Farrington Dr.

Street address, P.O. box, company name, c/o

Address Line 2:

Apartment, suite, unit, building, floor, etc.

City*: Worthington

State, Province or Region*: OH

ZIP or Postal Code*: 43085

Phone number*: 6143784119

Security Check

Image:

[Try a different image](#)

F98MBA

[Why do we ask you to type these characters?](#)

Type the characters in the above image*:

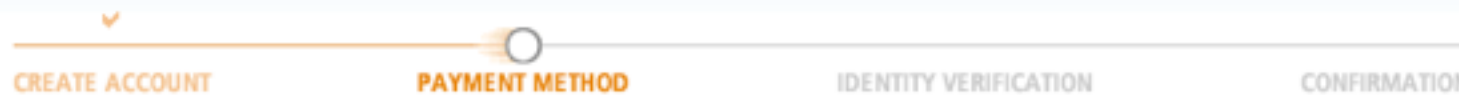
F98MBA

[Having Trouble? Contact us.](#)

AWS Customer Agreement

Check here to indicate that you have read and agree to the terms of the [Amazon Web Services Customer Agreement](#).

Create Account and Continue



Your AWS account credentials have been created, but in order to begin using any of the services, you will need to provide your payment information and continue. There is no fee to sign up and you only pay for what you use.

Enter Your Payment Information Below

Your credit card will not be charged until you begin using AWS, and many of your applications and uses of AWS may be able to operate within the AWS free usage tier. If your monthly usage goes beyond the free tier, your AWS service charges will be billed to the credit card you provide below. [View detailed service pricing](#)

* required fields

Credit Card*:

Card Number*:

Cardholder's Name*:

Expiration Date*:

Enter Your Billing Address

Select the billing address associated with your credit card.

- ☒ Use my contact address as my billing address
(685 Farrington Dr., WORTHINGTON, Ohio 43085, US, (614) 378-4119)
- ☐ Enter a new address

Continue 



In order to complete the sign up process, we will need to verify your identity.

Identity Verification by Telephone

After you provide a telephone number where you can be reached below, you will then be called immediately by an automated system and prompted to enter the PIN number over the phone. Once completed, you'll be able to proceed to review your account details. Please follow the 3 simple steps below.

1. Provide a telephone number

Please enter your information below and click the "Call Me Now" button.

Country Code: Phone number: ext:

Call Me Now

2. Call in progress

3. Identity verification complete



In order to complete the sign up process, we will need to verify your identity.

Identity Verification by Telephone

After you provide a telephone number where you can be reached below, you will then be called immediately by an automated system and prompted to enter the PIN number over the phone. Once completed, you'll be able to proceed to review your account details. Please follow the 3 simple steps below.

✓ Provide a telephone number

✓ Call to 1 (614) 378-4119

3. Identity verification complete

Your identity has been verified successfully

Continue 



Activating your account...

We are in the process of activating your account so that you can begin using AWS.

We will notify you by e-mail at **aws@juddsolutions.com** once the verification is complete. You will then be able to begin using all AWS Infrastructure Services. For most customers, this process only takes a couple of minutes (but can sometimes take a few hours if additional account verification is required). As part of the account activation process, a \$1 authorization will be placed on the payment method (normally, a Debit or Credit Card) to make sure your payment method is valid. **This authorization is not a charge**, but your bank may hold the authorized funds as unavailable until the authorization expires.

Start Exploring Amazon Web Services

- [Products & Services](#)
- [Detailed Service Pricing](#)
- [Documentation](#)
- [FAQs](#)
- [Discussion Forums](#)

Protect your account with AWS Multi-Factor authentication (MFA)

AWS MFA is a feature that is available at no extra cost that greatly enhances your account's security. In addition to your username and password, AWS MFA requires a one-time code from your MFA device when signing in to AWS web properties.

[Activate MFA](#)  [> Learn more](#)

Sign Up For AWS Support

AWS Support is a one-on-one, fast response support channel to help you build and run applications on AWS. With pay-by-the-month pricing and an unlimited number of support cases, you are not constrained by long-term support contracts or limited support privileges.

[Sign Up Now](#)  [> Learn more](#)

AWS Account 💰

admins



developers



ops



user/group based security



563700736850 \$

developers



cmj



njz



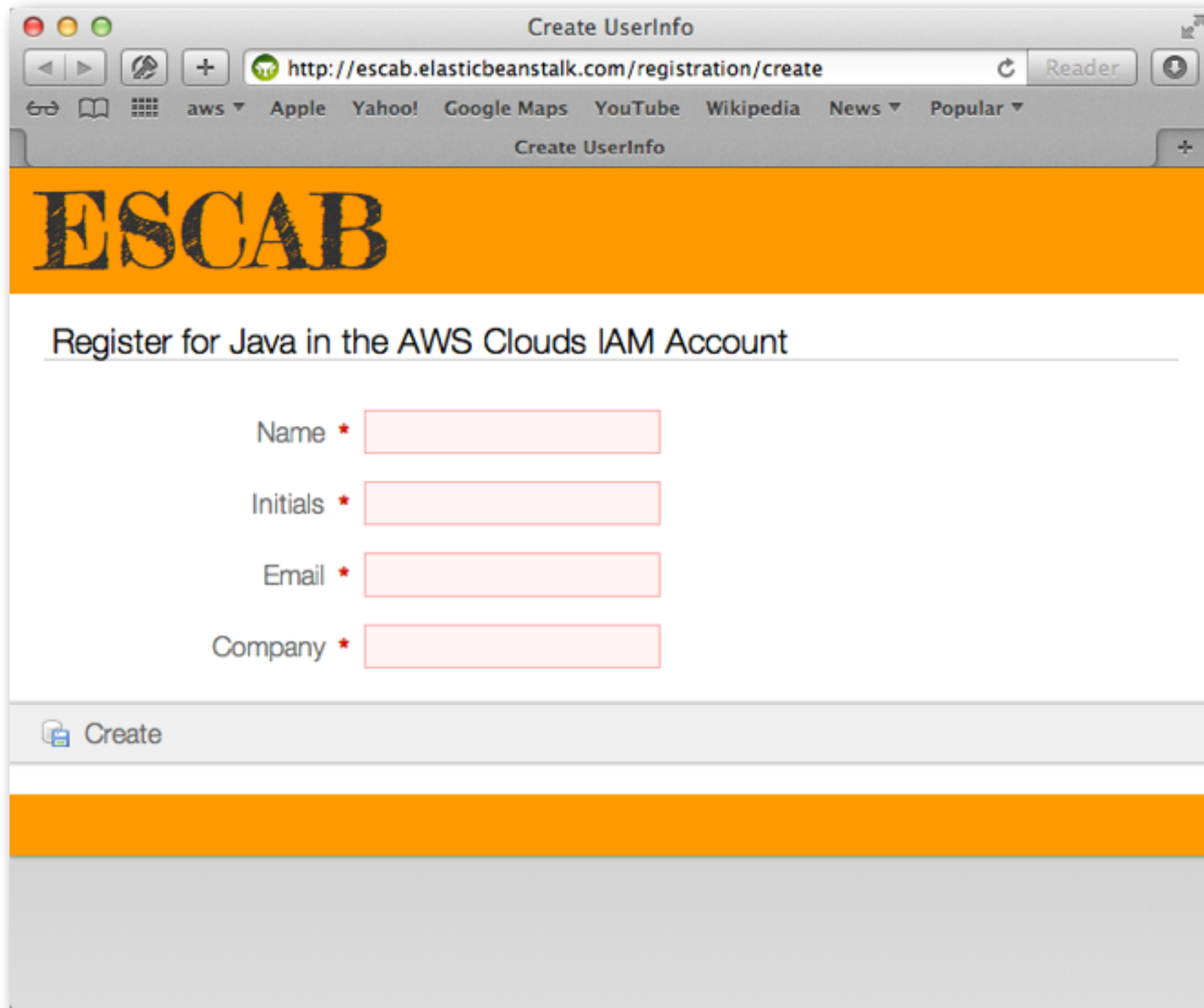
jjs



cmj0

* all accounts will be removed in a month

Register for your user account



The screenshot shows a web browser window titled "Create UserInfo". The address bar displays the URL <http://escab.elasticbeanstalk.com/registration/create>. The browser's search bar contains "aws", and the bookmarks bar lists "Apple", "Yahoo!", "Google Maps", "YouTube", "Wikipedia", "News", and "Popular". The page features an orange header with the "ESCAB" logo. Below the header, the text "Register for Java in the AWS Clouds IAM Account" is displayed. The registration form includes four fields, each with a red asterisk indicating a required field: "Name", "Initials", "Email", and "Company". A "Create" button is located at the bottom of the form. The page has a white background with orange and grey horizontal bars at the top and bottom.

<http://escab.elasticbeanstalk.com>

You AWS Credentials will be emailed to you. If you don't see it
check your spam folder.

zendern/escab · GitHub

GitHub, Inc. [github.com/zendern/escab](#) Reader

aws Apple Yahoo! Google Maps YouTube Wikipedia News Popular

zendern/escab · GitHub

github Explore GitHub Search Features Blog Sign up for free Sign in

PUBLIC zendern / escab Star 0 Fork 0

Code Network Pull Requests 0 Issues 0 Graphs

Java in the Amazon Cloud - Registration Application

Clone in Mac ZIP HTTP SSH Git Read-Only <https://github.com/zendern/escab.git> Read-Only access

branch: master Files Commits Branches 1 Tags

escab / 9 commits

Instead of using SES just going to use local SMTP server for now sinc... ...

Nathan Zender authored 10 hours ago latest commit b8243a9944

grails-app	10 hours ago	Instead of using SES just going to use local SMTP server for now sinc... [Nathan Zender]
src	21 hours ago	Adding the ability to create users in IAM from the grails application... [Nathan Zender]
test	18 hours ago	Adding that ability to create a IAM user on aws and updating screens ... [Nathan Zender]
web-app	18 hours ago	Since the list page did not show the data as it should have so added ... [Nathan Zender]
.gitignore	18 hours ago	Adding that ability to create a IAM user on aws and updating screens ... [Nathan Zender]
application.properties	10 hours ago	Instead of using SES just going to use local SMTP server for now sinc... [Nathan Zender]

<https://github.com/zendern/escab>



aws@juddsolutions.com

1:35 PM (0 minutes ago) ☆



to me ▾

Console Url : <https://563700736850.signin.aws.amazon.com/console>

Username : tst

Password : codemash

Secret Key : CsOPQsnWe+3MYiwZ63BPET/7dkkbnRXLg1ouXUV0

Access Key Id : AKIAIX6LH4GS2UHIGCRA



Amazon Web Services Sign In

Please enter the AWS Identity & Access Management (IAM) User name and password assigned by your system administrator to sign in.

AWS Account: 563700736850

User Name: cmj

Password:

Sign in using our secure server

Please contact your system administrator if you have forgotten your user credentials.

[Sign in using AWS Account credentials](#)

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An **amazon.com** company



aws@juddsolutions.com

1:35 PM (0 minutes ago) ☆



to me ▾

Console Url : <https://563700736850.signin.aws.amazon.com/console>

Username : tst

Password : codemash

Secret Key : CsOPQsnWe+3MYiwZ63BPdT/7dkkbnRXLg1ouXUV0

Access Key Id : AKIAIX6LH4GS2UHIGCRA

<https://563700736850.signin.aws.amazon.com/console>



Welcome

The AWS Management Console provides a graphical interface to Amazon Web Services. Learn more about how to use our services to meet your needs, or get started by selecting a service.

[Getting started guides](#)

[Reference architectures](#)

[Free Usage Tier](#)

Set Start Page

Console Home ▾



AWS Marketplace

Find & buy software, launch with 1-Click and pay by the hour.

Amazon Web Services

Compute & Networking

- Direct Connect**
Dedicated Network Connection to AWS
- EC2**
Virtual Servers in the Cloud
- Elastic MapReduce**
Managed Hadoop Framework
- Route 53**
Scalable Domain Name System
- VPC**
Isolated Cloud Resources

Storage & Content Delivery

- CloudFront**
Global Content Delivery Network
- Glacier**
Archive Storage in the Cloud
- S3**
Scalable Storage in the Cloud
- Storage Gateway**
Integrates on-premises IT environments with Cloud storage

Database

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- RDS**
Managed Relational Database Service

Deployment & Management

- CloudFormation**
Templated AWS Resource Creation
- CloudWatch**
Resource & Application Monitoring
- Data Pipeline** NEW
Orchestration for data-driven workflows
- Elastic Beanstalk**
AWS Application Container
- IAM**
Secure AWS Access Control

App Services

- CloudSearch**
Managed Search Service
- SES**
Email Sending Service
- SNS**
Push Notification Service
- SQS**
Message Queue Service
- SWF**
Workflow Service for Coordinating Application Components

Announcements

[AWS Management Console Announces Tablet and Mobile Support](#)

[Amazon ElastiCache Announces Auto Discovery Client For PHP](#)

[Root Domain Support on Amazon S3 Hosted Websites](#)

[More...](#)


Service Health [Edit](#)

Click [Edit](#) to add at least one service and at least one region to monitor.

[Service Health Dashboard](#)

INTERFACES

Web Console



Services ▾

Edit ▾

Christopher Judd ▾Global ▾Help ▾

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Command-line

```
$ aws --output text --region us-west-2 ec2 describe-instances
RESERVATIONS 563700736850 226008221399 r-07872030
GROUPS sg-54675664 awseb-e-udfqj5hwba-stack-AWSEBSecurityGroup-11CG99AR8KVT0
INSTANCES 0 x86_64 cb9cf312-5ab8-45ab-8da7-7758db9aae10_us-west-2a_1 False xen ami-d03ea1e0 i-bccb9a88 t1.micro aki-fc37bacc escab-key
2013-12-04T16:52:55.000Z ip-10-251-47-132.us-west-2.compute.internal 10.251.47.132 ec2-54-203-22-211.us-west-2.compute.amazonaws.com 54.203.22.211 /dev/
sda1 ebs None paravirtual
BLOCKDEVICEMAPPINGS /dev/sda1
EBS 2013-12-04T16:52:58.000Z True attached vol-6116d449
IAMINSTANCEPROFILE arn:aws:iam::563700736850:instance-profile/aws-elasticbeanstalk-ec2-role AIPAIGCYITWRPOQIEXSKQ
MONITORING disabled
PLACEMENT us-west-2a None default
SECURITYGROUPS sg-54675664 awseb-e-udfqj5hwba-stack-AWSEBSecurityGroup-11CG99AR8KVT0
STATE 16 running
TAGS aws:cloudformation:stack-id arn:aws:cloudformation:us-west-2:563700736850:stack/awseb-e-udfqj5hwba-stack/57fe9000-5d04-11e3-abea-50e2414b0a18
TAGS Name escab
TAGS aws:cloudformation:stack-name awseb-e-udfqj5hwba-stack
TAGS aws:cloudformation:logical-id AWSEBAutoScalingGroup
TAGS elasticbeanstalk:environment-name escab
TAGS elasticbeanstalk:environment-id e-udfqj5hwba
TAGS aws:autoscaling:groupName awseb-e-udfqj5hwba-stack-AWSEBAutoScalingGroup-1MNNRZ3V9ALOG
```

SDK Language Support



<http://aws.amazon.com/tools/>

EC2

A **virtual machine (VM)** is a software implementation of a machine (i.e. a computer) that executes programs like a physical machine. Virtual machines are separated into two major categories, based on their use and degree of correspondence to any real machine. A system virtual machine provides a complete [system platform](#) which supports the execution of a complete [operating system](#) (OS). In contrast, a process virtual machine is designed to run a single [program](#), which means that it supports a single [process](#). An essential characteristic of a virtual machine is that the software running inside is limited to the resources and abstractions provided by the virtual machine—it cannot break out of its virtual world.



Amazon Elastic Compute Cloud (Amazon EC2)
is a web service that provides resizable compute capacity in the cloud. It is designed to make web-scale computing easier for developers.

- Elastic
- Completely Controlled
- Flexible
- Reliable

AMIs (Amazon Machine Images)



Public AMIs

8180 of them and counting

Quick Start

My AMIs

AWS Marketplace

Community AMIs

▼ Operating system

- ☒ Amazon Linux
- ☐ Cent OS
- ☐ Debian
- ☐ Fedora
- ☐ Gentoo
- ☐ OpenSUSE
- ☐ Other Linux
- ☐ Red Hat
- ☐ SUSE Linux
- ☐ Ubuntu
- ☐ Windows

▼ Architecture

- ☐ 32-bit
- ☒ 64-bit

▼ Root device type

- ☒ EBS
- ☐ Instance store

Search community AMIs

1 to 25 of 114 AMIs

	ElasticBeanstalk-Tomcat6-64bit-20110322-2041 - ami-005daf69	Select
	Elastic Beanstalk Tomcat 6 64-bit	64-bit
	Root device type: ebs Virtualization type: paravirtual	
	CloudFormation-insoshi_1.0.0_2.0_8e1fece7-64bit-20110727-1654 - ami-01965068	Select
	CloudFormation Sample AMI	64-bit
	Root device type: ebs Virtualization type: paravirtual	
	amzn-ami-gpu-hvm-2012.09.0.x86_64-ebs - ami-02f54a6b	Select
	Amazon Linux AMI x86_64 GPU EBS	64-bit
	Root device type: ebs Virtualization type: hvm	
	amzn-ami-pv-2013.03.1.x86_64-ebs - ami-05355a6c	Select
	Amazon Linux AMI x86_64 PV EBS	64-bit
	Root device type: ebs Virtualization type: paravirtual	
	ElasticBeanstalk-Tomcat6-64bit-20110802-1514 - ami-0737f16e	Select
	Elastic Beanstalk Tomcat 6 64-bit	64-bit
	Root device type: ebs Virtualization type: paravirtual	
	amzn-ami-hvm-2012.09.0.x86_64-ebs - ami-08249861	Select
	Amazon Linux AMI x86_64 HVM EBS	64-bit
	Root device type: ebs Virtualization type: hvm	
	CloudFormer 0.25 - ami-09055560	Select
	CloudFormer Utility for creating AWS CloudFormation templates	64-bit
	Root device type: ebs Virtualization type: paravirtual	
	amzn-ami-0.9.7-beta.x86_64-ebs - ami-0af30663	Select

<http://aws.amazon.com/amis>

Welcome to AWS Marketplace! Discover popular software products pre-configured to launch as an Amazon Machine Image (AMI) on AWS. [Learn more >>](#)

aws marketplace [Amazon Web Services Home](#)

[Sign in or Create a new account](#) [Your Account](#) | [Help](#) | [Sell on AWS Marketplace](#)

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Software Infrastructure

- Application Development
- Application Servers
- Application Stacks
- Big Data
- Databases & Caching
- Network Infrastructure
- Operating Systems
- Security

Developer Tools

- Issue & Bug Tracking
- Monitoring
- Source Control
- Testing

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- Business Intelligence
- Collaboration
- Content Management
- CRM
- eCommerce
- High Performance Computing
- Media
- Project Management
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 Intel® Cloud Edition for Lustre® Soft... Intel \$0.00/hr for software	 Cognizant TrailDigest (Lite) - Log Ex... Cognizant Technology S... \$0.00/hr for software	 Fortinet FortiManager-VM Fortinet Inc. Bring Your Own License
--	--	--

Operating Systems


 CentOS Free Tier Eligible CentOS 6.4 (i386) - Release Media CentOS.org \$0.00/hr for software	 Debian GNU/Linux Debian \$0.00/hr for software
---	---

Popular Products

 Wordpress Blogging System provided by... JumpBox \$0.01 to \$0.05/hr for software	 MongoDB 2.4 with 1000 IOPS MongoDB \$0.00/hr for software	 Free Tier Eligible Ruby Stack powered by BitNami BitNami \$0.00/hr for software
--	--	--

Product Demos

[AWS Test Drive](#)

 **Free Tier Eligible**
Microsoft Windows

<https://aws.amazon.com/marketplace/>

That's awesome....

All I have to do is find what I need and off I go.
Someone else created it, maintains it....










But there could be some issues with using these.....



ssdpapi.dll	WINDOWS\system32	34816
ssdpsrv.dll	WINDOWS\system32	71680
ssflwbox.scr	WINDOWS\system32	393216
ssmarque.scr	WINDOWS\system32	20992
ssmypics.scr	WINDOWS\system32	47104
ssmyst.scr	WINDOWS\system32	18944
sspipes.scr	WINDOWS\system32	610304
sssplt30.ocx	WINDOWS\system32	177608
ssstars.scr	WINDOWS\system32	14336
sstext3d.scr	WINDOWS\system32	679936
Status.MPF	WINDOWS\system32	63296
stclient.dll	WINDOWS\system32	59392
stdole32.tlb	WINDOWS\system32	7168
sti.dll	WINDOWS\system32	68096
sti_ci.dll	WINDOWS\system32	136704
stimon.exe	WINDOWS\system32	14848
stobject.dll	WINDOWS\system32	121856
storage.dll	WINDOWS\system32	4208
storprop.dll	WINDOWS\system32	74752
streamci.dll	WINDOWS\system32	8192
strmdll.dll	WINDOWS\system32	

AskSolRankin.com

AWS AMIs

 Amazon Linux Free tier eligible	Amazon Linux AMI 2013.09.1 - ami-83e4bcea (64-bit) / ami-cde4bca4 (32-bit) The Amazon Linux AMI is an EBS-backed, PV-GRUB image. It includes Linux 3.4, AWS tools, and repository access to multiple versions of MySQL, PostgreSQL, Python, Ruby, and Tomcat. Root device type: ebs Virtualization type: paravirtual	Select <input checked="" type="radio"/> 64-bit <input type="radio"/> 32-bit
 Red Hat Free tier eligible	Red Hat Enterprise Linux 6.4 - ami-a25415cb (64-bit) / ami-7e175617 (32-bit) Red Hat Enterprise Linux version 6.4, EBS-boot. Root device type: ebs Virtualization type: paravirtual	Select <input checked="" type="radio"/> 64-bit <input type="radio"/> 32-bit
 SUSE Linux Free tier eligible	SUSE Linux Enterprise Server 11 - ami-e8084981 (64-bit) / ami-b60948df (32-bit) SUSE Linux Enterprise Server 11 Service Pack 3 basic install, EBS boot with Amazon EC2 AMI Tools preinstalled; Apache 2.2, MySQL 5.5, PHP 5.3, and Ruby 1.8.7 available Root device type: ebs Virtualization type: paravirtual	Select <input checked="" type="radio"/> 64-bit <input type="radio"/> 32-bit
 Ubuntu Free tier eligible	Ubuntu Server 12.04.3 LTS - ami-a73264ce (64-bit) / ami-a53264cc (32-bit) Ubuntu Server 12.04.3 LTS with support available from Canonical (http://www.ubuntu.com/cloud/services). Root device type: ebs Virtualization type: paravirtual	Select <input checked="" type="radio"/> 64-bit <input type="radio"/> 32-bit
 Ubuntu Free tier eligible	Ubuntu Server 13.10 - ami-ad184ac4 (64-bit) / ami-a9184ac0 (32-bit) Ubuntu Server 13.10: Ubuntu Server version 13.10, with support available from Canonical (http://www.ubuntu.com/cloud/services). Root device type: ebs Virtualization type: paravirtual	Select <input checked="" type="radio"/> 64-bit <input type="radio"/> 32-bit
 Amazon Linux	Amazon Linux AMI (HVM) 2013.09.1 - ami-d1bfe4b8 The Amazon Linux AMI is an EBS-backed, HVM image. It includes Linux 3.4, AWS tools, and repository access to multiple versions of MySQL, PostgreSQL, Python, Ruby, and Tomcat. Root device type: ebs Virtualization type: hvm	Select 64-bit
 Red Hat	Red Hat Enterprise Linux 6.4 for Cluster Instances - ami-3218595b Red Hat Enterprise Linux version 6.4 is an EBS-backed, HVM image for use with Amazon EC2 Cluster Instances. Root device type: ebs Virtualization type: hvm	Select 64-bit

Don't be discouraged....

<http://cloud.ubuntu.com/ami/>

http://fedoraproject.org/wiki/Cloud_images

<http://blog.susestudio.com/2011/03/opensuse-114-for-amazon-ec2.html>



EC2 Instance Types

- Micro
- M1 Small
- M1 Medium
- M1 Large
- M1 Extra Large
- M3 Extra Large
- M3 Double Extra Large
- High Memory Extra Large
- High Memory Double Extra Large
- High Memory Quadruple Extra Large
- High CPU Medium
- High CPU Extra Large
- Cluster Compute Eight Extra Large
- Cluster GPU Quadruple Extra Large
- High I/O Quadruple Extra Large
- High Storage

Cost for On Demand

Linux RHEL SLES Windows Windows with SQL Standard Windows with SQL Web	
On-Demand Instance Prices	
Region: <input type="text" value="US East (N. Virginia)"/>	
Linux/UNIX Usage	
General Purpose - Current Generation	
m3.xlarge	\$0.450 per Hour
m3.2xlarge	\$0.900 per Hour
General Purpose - Previous Generation	
m1.small	\$0.060 per Hour
m1.medium	\$0.120 per Hour
m1.large	\$0.240 per Hour
m1.xlarge	\$0.480 per Hour
Compute Optimized - Current Generation	
c3.large	\$0.150 per Hour
c3.xlarge	\$0.300 per Hour
c3.2xlarge	\$0.600 per Hour
c3.4xlarge	\$1.200 per Hour
c3.8xlarge	\$2.400 per Hour
Compute Optimized - Previous Generation	
c1.medium	\$0.145 per Hour
c1.xlarge	\$0.580 per Hour
cc2.8xlarge	\$2.400 per Hour
GPU Instances - Current Generation	
g2.2xlarge	\$0.650 per Hour
GPU Instances - Previous Generation	
cg1.4xlarge	\$2.100 per Hour
Memory Optimized - Current Generation	
m2.xlarge	\$0.410 per Hour
m2.2xlarge	\$0.820 per Hour
m2.4xlarge	\$1.640 per Hour
cr1.8xlarge	\$3.500 per Hour
Storage Optimized - Current Generation	
hi1.4xlarge	\$3.100 per Hour
hs1.8xlarge	\$4.600 per Hour
Micro Instances	
t1.micro	\$0.020 per Hour

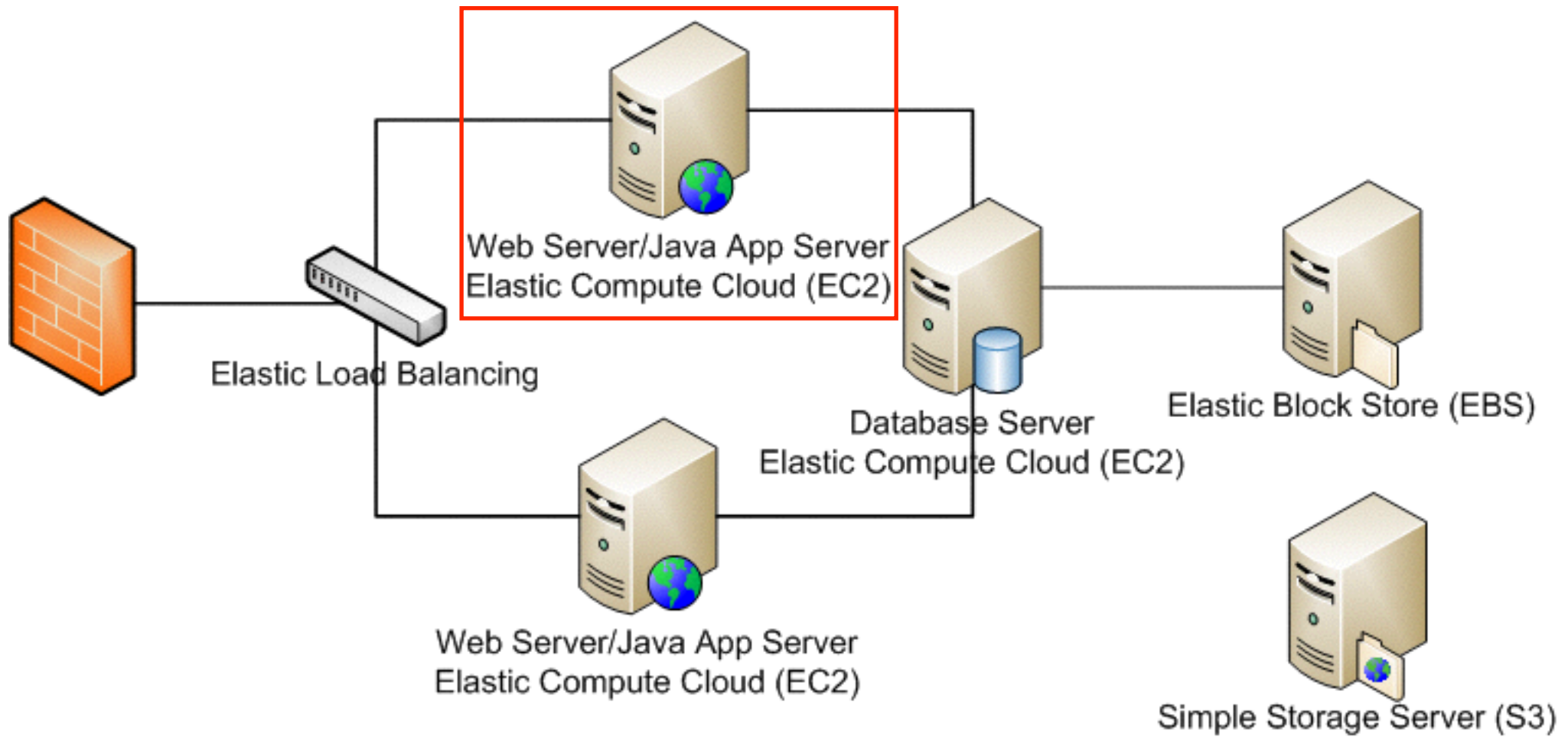
Cost for Reserved Instances

Linux	RHEL	SLES	Windows	Windows with SQL Standard	Windows with SQL Web
Heavy Utilization Reserved Instances					
Region: <div>US East (N. Virginia)</div>					
1 yr Term			3 yr Term		
Upfront		Hourly	Upfront		Hourly
General Purpose - Current Generation					
m3.xlarge	\$1266	\$0.105 per Hour	\$1922	\$0.086 per Hour	
m3.2xlarge	\$2531	\$0.209 per Hour	\$3844	\$0.172 per Hour	
General Purpose - Previous Generation					
m1.small	\$169	\$0.014 per Hour	\$257	\$0.012 per Hour	
m1.medium	\$338	\$0.028 per Hour	\$514	\$0.023 per Hour	
m1.large	\$676	\$0.056 per Hour	\$1028	\$0.046 per Hour	
m1.xlarge	\$1352	\$0.112 per Hour	\$2056	\$0.092 per Hour	
Compute Optimized - Current Generation					
c3.large	\$466	\$0.037 per Hour	\$726	\$0.032 per Hour	
c3.xlarge	\$932	\$0.075 per Hour	\$1451	\$0.064 per Hour	
c3.2xlarge	\$1863	\$0.149 per Hour	\$2902	\$0.128 per Hour	
c3.4xlarge	\$3726	\$0.298 per Hour	\$5804	\$0.257 per Hour	
c3.8xlarge	\$7452	\$0.596 per Hour	\$11609	\$0.513 per Hour	
Compute Optimized - Previous Generation					
c1.medium	\$450	\$0.036 per Hour	\$701	\$0.031 per Hour	
c1.xlarge	\$1800	\$0.144 per Hour	\$2804	\$0.124 per Hour	
cc2.8xlarge	\$5000	\$0.361 per Hour	\$7670	\$0.361 per Hour	
GPU Instances - Current Generation					
g2.2xlarge	\$2129	\$0.162 per Hour	\$3942	\$0.15 per Hour	
Memory Optimized - Current Generation					
m2.xlarge	\$789	\$0.068 per Hour	\$1198	\$0.053 per Hour	
m2.2xlarge	\$1578	\$0.136 per Hour	\$2396	\$0.106 per Hour	
m2.4xlarge	\$3156	\$0.272 per Hour	\$4792	\$0.212 per Hour	
cr1.8xlarge	\$7220	\$0.62 per Hour	\$10880	\$0.49 per Hour	
Storage Optimized - Current Generation					
hs1.8xlarge	\$11213	\$0.92 per Hour	\$16924	\$0.76 per Hour	
hi1.4xlarge	\$7280	\$0.621 per Hour	\$10960	\$0.482 per Hour	
Micro Instances					
t1.micro	\$62	\$0.005 per Hour	\$100	\$0.005 per Hour	

Bandwidth Pricing

Region: US East (N. Virginia)	
Pricing	
Data Transfer IN To Amazon EC2 From	
Internet	\$0.00 per GB
Another AWS Region (from any AWS Service)	\$0.00 per GB
Amazon S3, Amazon Glacier, Amazon DynamoDB, Amazon SQS, or Amazon SimpleDB in the same AWS Region	\$0.00 per GB
Amazon EC2, Amazon RDS and Amazon ElastiCache instances or Elastic Network Interfaces in the same Availability Zone	
Using a private IP address	\$0.00 per GB
Using a public or Elastic IP address	\$0.01 per GB
Amazon EC2, Amazon RDS and Amazon ElastiCache instances or Elastic Network Interfaces in another Availability Zone in the same AWS Region	\$0.01 per GB
Data Transfer OUT From Amazon EC2 To	
Amazon S3, Amazon Glacier, Amazon DynamoDB, Amazon SQS, Amazon SimpleDB in the same AWS Region	\$0.00 per GB
Amazon EC2, Amazon RDS, or Amazon ElastiCache instances, Amazon Elastic Load Balancing, or Elastic Network Interfaces in the same Availability Zone	
Using a private IP address	\$0.00 per GB
Using a public or Elastic IP address	\$0.01 per GB
Amazon EC2, Amazon RDS or Amazon ElastiCache instances, Amazon Elastic Load Balancing, or Elastic Network Interfaces in another Availability Zone in the same AWS Region	\$0.01 per GB
Another AWS Region or Amazon CloudFront	\$0.02 per GB
Data Transfer OUT From Amazon EC2 To Internet	
First 1 GB / month	\$0.00 per GB
Up to 10 TB / month	\$0.12 per GB
Next 40 TB / month	\$0.09 per GB
Next 100 TB / month	\$0.07 per GB
Next 350 TB / month	\$0.05 per GB
Next 524 TB / month	Contact Us
Next 4 PB / month	Contact Us
Greater than 5 PB / month	Contact Us

EC2 WITH WEB CONSOLE





start here

Welcome

The AWS Management Console provides a graphical interface to Amazon Web Services. Learn more about how to use our services to meet your needs, or get started by selecting a service.

[Getting started guides](#)[Reference architectures](#)[Free Usage Tier](#)

Set Start Page

[Console Home](#) ▾

AWS Marketplace

Find & buy software, launch with 1-Click and pay by the hour.

Amazon Web Services

Compute & Networking



Direct Connect

Dedicated Network Connection to AWS



EC2

Virtual Servers in the Cloud



Elastic MapReduce

Managed Hadoop Framework



Route 53

Scalable Domain Name System



VPC

Isolated Cloud Resources

Storage & Content Delivery



CloudFront

Global Content Delivery Network



Glacier

Archive Storage in the Cloud



S3

Scalable Storage in the Cloud



Storage Gateway

Integrates on-premises IT environments with Cloud storage

Database



DynamoDB

Predictable and Scalable NoSQL Data Store



ElastiCache

In-Memory Cache



RDS

Managed Relational Database Service

Deployment & Management



CloudFormation

Templated AWS Resource Creation



CloudWatch

Resource & Application Monitoring



Data Pipeline **NEW**

Orchestration for data-driven workflows



Elastic Beanstalk

AWS Application Container



IAM

Secure AWS Access Control

App Services



CloudSearch

Managed Search Service



SES

Email Sending Service



SNS

Push Notification Service



SQS

Message Queue Service



SWF

Workflow Service for Coordinating Application Components

Announcements

Use Amazon CloudWatch to Detect and Shut Down Unused Amazon EC2 Instances

[AWS Management Console Announces Tablet and Mobile Support](#)

[Amazon ElastiCache Announces Auto Discovery Client For PHP](#)


[More...](#)

Service Health [Edit](#)

Click [Edit](#) to add at least one service and at least one region to monitor.

[Service Health Dashboard](#)

then here or here



Services ▾ Edit ▾

tst @ 563700736850 ▾ N. Virginia ▾ Help ▾

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:

0 Running Instances	0 Elastic IPs
0 Volumes	2 Snapshots
0 Key Pairs	0 Load Balancers
0 Placement Groups	1 Security Group

 Optimize your resources' cost, performance and security with [AWS Trusted Advisor](#) [Hide](#)

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

Account Attributes

Supported Platforms

EC2
VPC

Additional Information

[Getting Started Guide](#)
[Documentation](#)
[All EC2 Resources](#)
[Forums](#)
[Pricing](#)
[Contact Us](#)

Popular AMIs on AWS Marketplace

[CentOS 6.4 \(i386\) - Release Media](#)
Provided by CentOS.org
Rating ★★★★★
Free Software, pay only for AWS usage
[View all Operating Systems](#)

[Couchbase Server - Community Edition](#)
Provided by Couchbase
Rating ★★★★★
Free Software, pay only for AWS usage
[View all Databases](#)

[LAMP Stack powered by Bitnami](#)
Provided by BitNami
Rating ★★★★★

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Feedback

launch here

The screenshot displays the AWS Management Console interface for the EC2 service. The top navigation bar includes the AWS logo, 'Services' dropdown, 'Edit' dropdown, and user information 'tst @ 563700736850' in the 'N. Virginia' region with a 'Help' link. The left sidebar contains a navigation menu with categories: EC2 Dashboard, Events, Tags, INSTANCES (highlighted), IMAGES, ELASTIC BLOCK STORE, and NETWORK & SECURITY. The 'INSTANCES' section is expanded, showing 'Instances' (selected), 'Spot Requests', and 'Reserved Instances'. The main content area shows a 'Launch Instance' button, a 'Connect' button, and an 'Actions' dropdown. Below these is a filter bar with 'Filter: All instances' and 'All instance types', a search bar 'Search Instances', and a status indicator 'No Instances'. The main content area displays a message: 'You do not have any running instances in this region. First time using EC2? Check out the [Getting Started Guide](#). Click the Launch Instance button to start your own server.' Below this message is a 'Launch Instance' button. A blue arrow points from the text 'launch here' to this button. At the bottom, there is a footer with copyright information '© 2008 - 2013, Amazon Web Services, Inc. or its affiliates. All rights reserved.', links for 'Privacy Policy' and 'Terms of Use', and a 'Feedback' button.

Services ▾ Edit ▾ tst @ 563700736850 ▾ N. Virginia ▾ Help ▾

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

Launch Instance Connect Actions ▾

Filter: All instances ▾ All instance types ▾ Search Instances X |< < No Instances > >|

You do not have any running instances in this region.
First time using EC2? Check out the [Getting Started Guide](#).
Click the Launch Instance button to start your own server.

Launch Instance

Select an instance above

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Step 1: Choose an Amazon Machine Image (AMI)

[Cancel and Exit](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Quick Start

My AMIs

AWS Marketplace

Community AMIs

☐ Free tier only ⓘ

Amazon Linux

Free tier eligible

Amazon Linux AMI 2013.09.1 - ami-83e4bcea (64-bit) / ami-cde4bca4 (32-bit)

The Amazon Linux AMI is an EBS-backed, PV-GRUB image. It includes Linux 3.4, AWS tools, and repository access to multiple versions of MySQL, PostgreSQL, Python, Ruby, and Tomcat.

Root device type: ebs Virtualization type: paravirtual

[Select](#)☒ 64-bit ☐ 32-bit

Red Hat

Free tier eligible

Red Hat Enterprise Linux 6.4 - ami-a25415cb (64-bit) / ami-7e175617 (32-bit)

Red Hat Enterprise Linux version 6.4, EBS-boot.

Root device type: ebs Virtualization type: paravirtual

[Select](#)☒ 64-bit ☐ 32-bit

SUSE Linux

Free tier eligible

SUSE Linux Enterprise Server 11 - ami-e8084981 (64-bit) / ami-b60948df (32-bit)

SUSE Linux Enterprise Server 11 Service Pack 3 basic install, EBS boot with Amazon EC2 AMI Tools preinstalled; Apache 2.2, MySQL 5.5, PHP 5.3, and Ruby 1.8.7 available

Root device type: ebs Virtualization type: paravirtual

[Select](#)☒ 64-bit ☐ 32-bit

Ubuntu

Free tier eligible

Ubuntu Server 12.04.3 LTS - ami-a73264ce (64-bit) / ami-a53264cc (32-bit)

Ubuntu Server 12.04.3 LTS with support available from Canonical (<http://www.ubuntu.com/cloud/services>).

Root device type: ebs Virtualization type: paravirtual

[Select](#)☒ 64-bit ☐ 32-bit

Ubuntu

Free tier eligible


Ubuntu Server 13.10 - ami-ad184ac4 (64-bit) / ami-a9184ac0 (32-bit)

Ubuntu Server 13.10: Ubuntu Server version 13.10, with support available from Canonical (<http://www.ubuntu.com/cloud/services>).

Root device type: ebs Virtualization type: paravirtual

[Select](#)☒ 64-bit ☐ 32-bit

select aws-tutorial-webapp AMI

 **Services** ▼ **Edit** ▼ cmj @ 563700736850 N. Virginia Help ▼

1. Choose AMI

2. Choose Instance Type

3. Configure Instance

4. Add Storage

5. Tag Instance

6. Configure Security Group

7. Review

Step 1: Choose an Amazon Machine Image (AMI)

[Cancel and Exit](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Quick Start

My AMIs

AWS Marketplace




Community AMIs

▼ Ownership
☒ Owned by me
☐ Shared with me

▼ Architecture
☐ 32-bit
☐ 64-bit

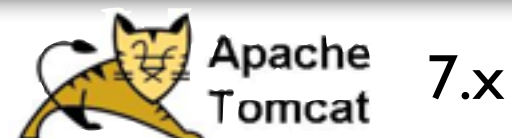
▼ Root device type
☐ EBS
☐ Instance store

<< < 1 to 3 of 3 AMIs > >>

	CloudDevelop-JavaWebServer - ami-290f4340 Cloud Develop Conference AMI with Tomcat Root device type: ebs Virtualization type: paravirtual Owner: 563700736850	<div>Select</div> <div>64-bit</div>
	CloudDevelop-MysqlServer - ami-69084400 Cloud Develop Conference MySQL Server Root device type: ebs Virtualization type: paravirtual Owner: 563700736850	<div>Select</div> <div>64-bit</div>
	aws-tutorial-webapp - ami-71d7f518 AWS tutorial web application server with Tomcat. Root device type: ebs Virtualization type: paravirtual Owner: 563700736850	<div>Select</div> <div>64-bit</div>

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[Feedback](#)



aws-tutorial-webapp AMI



```
sudo yum update
```

```
sudo yum install java-1.7.0-openjdk.x86_64
```

```
sudo yum install java-1.7.0-openjdk-devel.x86_64
```

```
sudo alternatives --config java
```

```
sudo yum install tomcat7.noarch
```

```
sudo yum install tomcat7-webapps.noarch
```

```
sudo yum install tomcat7-admin-webapps.noarch
```

```
sudo service tomcat7 start
```

```
sudo chkconfig --level 345 tomcat7 on
```

```
sudo yum install git.x86_64
```

```
git clone https://github.com/zendern/nuez.git
```


```
wget http://dist.springframework.org.s3.amazonaws.com/release/GRAILS/grails-2.0.0.zip
```

```
unzip grails-2.0.0.zip
```

```
export GRAILS_HOME=~/.grails-2.0.0
```

```
export PATH=$PATH:$GRAILS_HOME/bin
```


select m1.small type

 **Services** ▾ **Edit** ▾ cmj @ 563700736850 ▾ N. Virginia ▾ Help ▾

[1. Choose AMI](#) [2. Choose Instance Type](#) [3. Configure Instance](#) [4. Add Storage](#) [5. Tag Instance](#) [6. Configure Security Group](#) [7. Review](#)

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Currently selected: m1.small (1 ECUs, 1 vCPUs, 1.7 GiB memory, 1 x 160 GiB Storage Capacity)

All instance types

Micro instances

General purpose

Memory optimized

Storage optimized

Compute optimized

All instances

Select an instance type to suit your requirements

Size	ECUs ⓘ	vCPUs ⓘ	Memory (GiB)	Instance Storage (GiB) ⓘ	EBS-Optimized Available ⓘ	Network Performance ⓘ
t1.micro	up to 2	1	0.613	EBS only	-	Very Low
m1.small	1	1	1.7	1 x 160	-	Low
m1.medium	2	1	3.7	1 x 410	-	Moderate
m1.large	4	2	7.5	2 x 420	Yes	Moderate
m1.xlarge	8	4	15	4 x 420	Yes	High
m3.xlarge	13	4	15	EBS only	Yes	Moderate
m3.2xlarge	26	8	30	EBS only	Yes	High
m2.xlarge	6.5	2	17.1	1 x 420	-	Moderate
m2.2xlarge	13	4	34.2	1 x 850	Yes	Moderate
m2.4xlarge	26	8	68.4	2 x 840	Yes	High

[Cancel](#)

[Previous](#)

[Review and Launch](#)

[Next: Configure Instance Details](#)

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[Feedback](#)



Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot Instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances**Purchasing option**☐ Request Spot Instances**Network**[Create new VPC](#)**Availability Zone****IAM role****Shutdown behavior****Enable termination protection**☐ Protect against accidental termination**Monitoring**☐ Enable CloudWatch detailed monitoring[Additional charges apply.](#)

► Advanced Details

[Cancel](#)[Previous](#)[Review and Launch](#)[Next: Add Storage](#)



Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.


Type ⓘ	Device ⓘ	Snapshot ⓘ	Size (GB) ⓘ	Volume Type ⓘ	IOPS ⓘ	Delete on Termination ⓘ
Root	/dev/sda1	snap-33d50829	8	Standard ▾	N/A	<input checked="" type="checkbox"/>

[Add New Volume](#)

Free tier eligible customers can get up to 30 GB of EBS storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

[Cancel](#)[Previous](#)[Review and Launch](#)[Next: Tag Instance](#)


name instance with naming convention

 **Services** ▾ **Edit** ▾ cmj @ 563700736850 ▾ N. Virginia ▾ Help ▾

[1. Choose AMI](#) [2. Choose Instance Type](#) [3. Configure Instance](#) [4. Add Storage](#) **[5. Tag Instance](#)** [6. Configure Security Group](#) [7. Review](#)

Step 5: Tag Instance

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. [Learn more](#) about tagging your Amazon EC2 resources.


Key (127 characters maximum)	Value (255 characters maximum)
<input type="text" value="Name"/>	<input type="text" value="cmj-webapp-01"/> 

Create Tag (Up to 10 tags maximum)

[Cancel](#) [Previous](#) **[Review and Launch](#)** [Next: Configure Security Group](#)

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name group with naming convention

 **Services** ▾ **Edit** ▾ cmj @ 563700736850 ▾ N. Virginia ▾ Help ▾

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Tag Instance 6. Configure Security Group 7. Review





Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.


Assign a security group: ☒ Create a new security group ☐ Select an existing security group

Security group name:

Description:

Protocol 	Type 	Port Range (Code) 	Source 	
SSH ▾	TCP	22	Anywhere ▾ 0.0.0.0/0	✕
Custom TCP Rule ▾	TCP	8080	Anywhere ▾ 0.0.0.0/0	✕

Add Rule

 **Warning**
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel **Previous** **Review and Launch**

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Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.



Improve your instance's security. Your security group, cmj-webapp-sg, is open to the world.

Your instance may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only.

You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers.

[Edit security groups](#)



Your instance configuration is not eligible for the free usage tier

To launch an instance that's eligible for the free usage tier, check your AMI selection, instance type, configuration options, or storage devices. Learn more about [free usage tier](#) eligibility and usage restrictions.

[Don't show me this again](#)

▼ AMI Details

[Edit AMI](#)



aws-tutorial-webapp - ami-71d7f518

AWS tutorial web application server with Tomcat.

Root Device Type: ebs Virtualization type: paravirtual

▼ Instance Type

[Edit instance type](#)

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GiB)	EBS-Optimized Available	Network Performance
m1.small	1	1	1.7	1 x 160	-	Low

▼ Security Groups

[Edit security groups](#)

[Cancel](#)

[Previous](#)

[Launch](#)



name key with naming convention

The screenshot shows the AWS Management Console during the 'Step 7: Review Instance Launch' process. A modal titled 'Select an existing key pair or create a new key pair' is open in the center. The modal contains a dropdown menu set to 'Create a new key pair', a text input field for 'Key pair name' containing 'cmj-key', a 'Download Key Pair' button, and a 'Launch Instances' button at the bottom right. A blue arrow points from the top text 'name key with naming convention' to the 'cmj-key' text in the input field. Another blue arrow points from the 'Launch Instances' button in the modal to the 'Launch' button at the bottom right of the console page. The background shows the instance configuration steps: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Tag Instance, 6. Configure Security Group, and 7. Review. The 'Instance Type' is set to 'm1.small' and the 'Security Groups' section is visible on the left.

Services Edit cmj @ 563700736850 N. Virginia Help

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Tag Instance 6. Configure Security Group 7. Review

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

Improve your instance's security. Your security group, cmj-webapp-sg, is open to the world.

Your instance may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open up access to specific IP addresses. [Edit security group](#)

Your instance can't be accessed without a key pair.

To launch an instance, you must provide a key pair. For more information, see [Key Pairs](#). [Learn more about free usage tier](#)

Key pair name

cmj-key

Download Key Pair

You have to download the **private key file** (*.pem file) before you can continue. **Store it in a secure and accessible location.** You will not be able to download the file again after it's created.

Cancel Launch Instances

Cancel Previous Launch

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Launch Status



Your instance is now launching

The following instance launch has been initiated: [i-25054a5d](#) [View launch log](#)



Get notified of estimated charges

[Create billing alerts](#) to get an email notification when estimated charges on your AWS bill exceed \$0.0 (in other words, when you have exceeded the free usage tier).

How to connect to your instance

Your instance is launching, and it may take a few minutes until it is in the **running** state, when it will be ready for you to use. Usage hours on your new instance will start immediately and continue to accrue until you stop or terminate your instance.

Click **View Instances** to monitor your instance's status. Once your instance is in the **running** state, you can **connect** to it from the Instances screen. [Find out](#) how to connect to your instance.

▼ Here are some helpful resources to get you started

- [How to connect to your Linux instance](#)
- [Amazon EC2: User Guide](#)
- [Learn about AWS Free Usage Tier](#)
- [Amazon EC2: Discussion Forum](#)

While your instances are launching you can also

[Create status check alarms](#) to be notified when these instances fail status checks. (Additional charges may apply)

[Create and attach additional EBS volumes](#) (Additional charges may apply)

[Manage security groups](#)

[View Instances](#)



Services

Edit

cmj @ 563700736850

N. Virginia

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Network Interfaces

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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
<input checked="" type="checkbox"/>	cmj-webapp-01	i-25054a5d	m1.small	us-east-1b	running	2/2 check...	None

Instance: i-25054a5d (cmj-webapp-01)

Public DNS: ec2-54-221-1-247.compute-1.amazonaws.com

Description

Status Checks

Monitoring

Tags

Instance ID	i-25054a5d	Public DNS	ec2-54-221-1-247.compute-1.amazonaws.com
Instance state	running	Public IP	54.221.1.247
Instance type	m1.small	Elastic IP	-
Private DNS	ip-10-34-141-132.ec2.internal	Availability zone	us-east-1b
Private IPs	10.34.141.132	Security groups	cmj-webapp-sg. view rules
Secondary private IPs	-	Scheduled events	No scheduled events
VPC ID	-	AMI ID	aws-tutorial-webapp (ami-71d7f518)
Subnet ID	-	Platform	-
Network interfaces	-	IAM role	-
Source/dest. check	False	Key pair name	cmj-key
		Owner	563700736850

your new instance

server name

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Feedback


Apache Tomcat/7.0.42

ec2-54-221-1-247.compute-1.amazonaws.com:8080

Home Documentation **Configuration** Examples Wiki Mailing Lists

Apache Tomcat/7.0.42

If you're seeing this, you've successfully installed Tomcat. Congrats!



Recommended Reading:

- [Security Considerations HOW-TO](#)
- [Manager Application HOW-TO](#)
- [Clustering/Session Replication HOW-TO](#)

cmj @ 563700736850 N. Virginia Help

Instances

1 to 1 of 1 Instances

Availability Zone	Instance State	Status Checks	Alarm
us-east-1b	running	2/2 check...	None

ELASTIC BLOCK STORE

- Volumes
- Snapshots

NETWORK & SECURITY

- Security Groups
- Elastic IPs
- Placement Groups
- Load Balancers
- Key Pairs
- Network Interfaces

Instance: i-25054a5d (cmj-webapp-01) Public DNS: ec2-54-221-1-247.compute-1.amazonaws.com

Description Status Checks Monitoring Tags

Instance ID	i-25054a5d	Public DNS	ec2-54-221-1-247.compute-1.amazonaws.com
Instance state	running	Public IP	54.221.1.247
Instance type	m1.small	Elastic IP	-
Private DNS	ip-10-34-141-132.ec2.internal	Availability zone	us-east-1b
Private IPs	10.34.141.132	Security groups	cmj-webapp-sg. view rules
Secondary private IPs	-	Scheduled events	No scheduled events
VPC ID	-	AMI ID	aws-tutorial-webapp (ami-71d7f518)
Subnet ID	-	Platform	-
Network interfaces	-	IAM role	-
Source/dest. check	False	Key pair name	cmj-key
		Owner	563700736850

Remote access to your EC2 instance

key downloaded earlier



login as ec2-user



server name



```
$ ssh -i ~/.ssh/your-key-pair.pem ec2-user@ec2-54-221-1-247.compute-1.amazonaws.com
```

```
The authenticity of host 'ec2-54-221-1-247.compute-1.amazonaws.com (54.221.1.247)' can't be established.
```

```
RSA key fingerprint is 0b:c1:e1:b4:50:ec:cf:e7:a5:cb:20:4f:74:34:c5:29.
```

```
Are you sure you want to continue connecting (yes/no)? yes
```

```
Warning: Permanently added 'ec2-54-221-1-247.compute-1.amazonaws.com,54.221.1.247' (RSA) to the list of known hosts.
```

```
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
@                WARNING: UNPROTECTED PRIVATE KEY FILE!                @
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
Permissions 0644 for '~/.ssh/your-key-pair.pem' are too open.
It is recommended that your private key files are NOT accessible by others.
This private key will be ignored.
bad permissions: ignore key: ~/.ssh/your-key-pair.pem
Permission denied (publickey).
```

don't panic

```
$ chmod 400 ~/.ssh/your-key-pair.pem
```




```
$ssh -i ~/.ssh/your-key-pair.pem ec2-user@ec2-54-221-1-247.compute-1.amazonaws.com
Last login: Thu Dec 29 13:47:16 2011 from 70.60.135.250
```

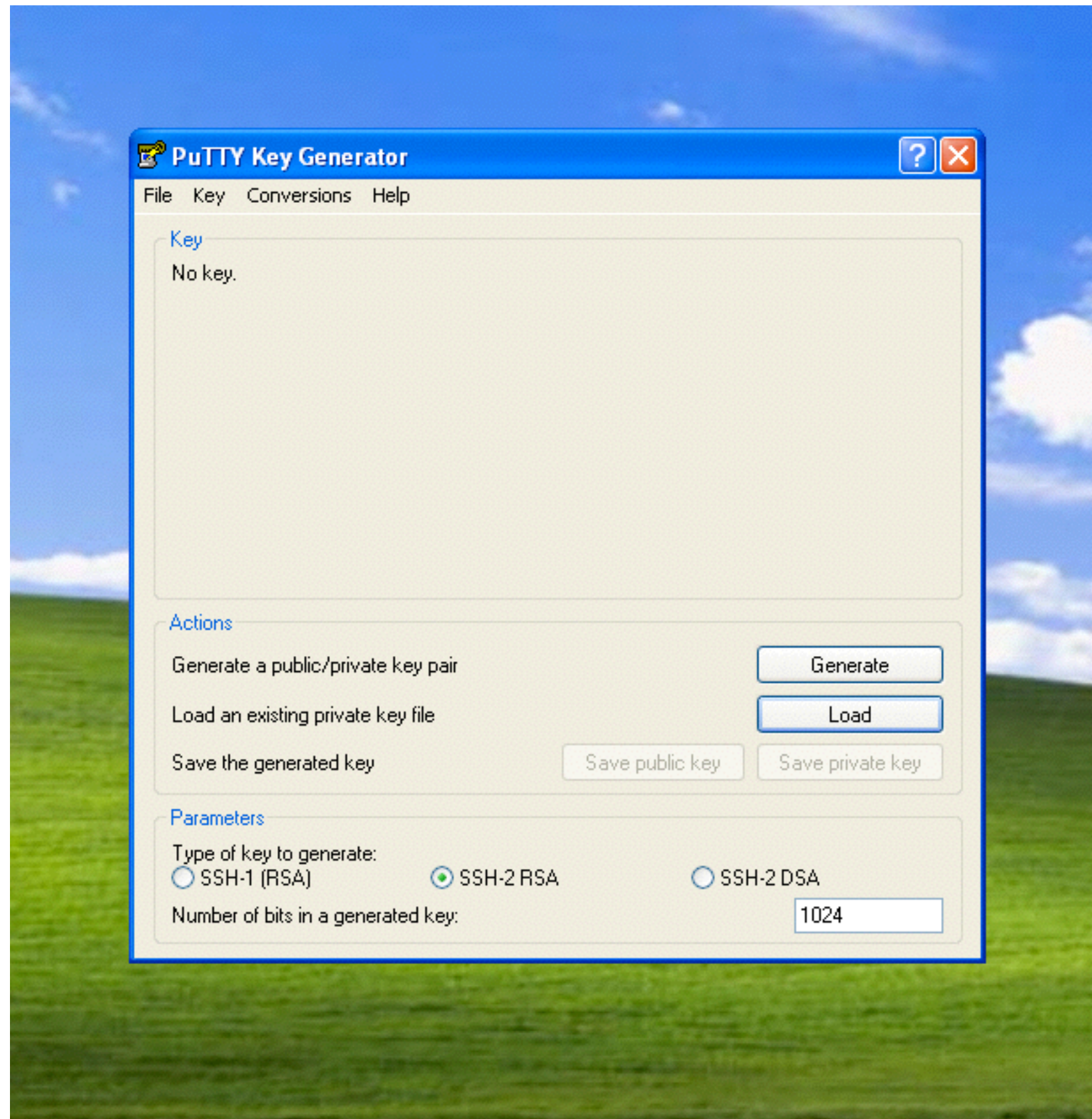
```
 _ | _ | _ )
 _| ( _ /   Amazon Linux AMI
 _|\_ | _|
```

```
See /usr/share/doc/system-release/ for latest release notes.
There are 3 security update(s) out of 4 total update(s) available
-bash: EXPORT: command not found
[ec2-user@ip-10-245-202-126 ~]$
```

your in, now you can:

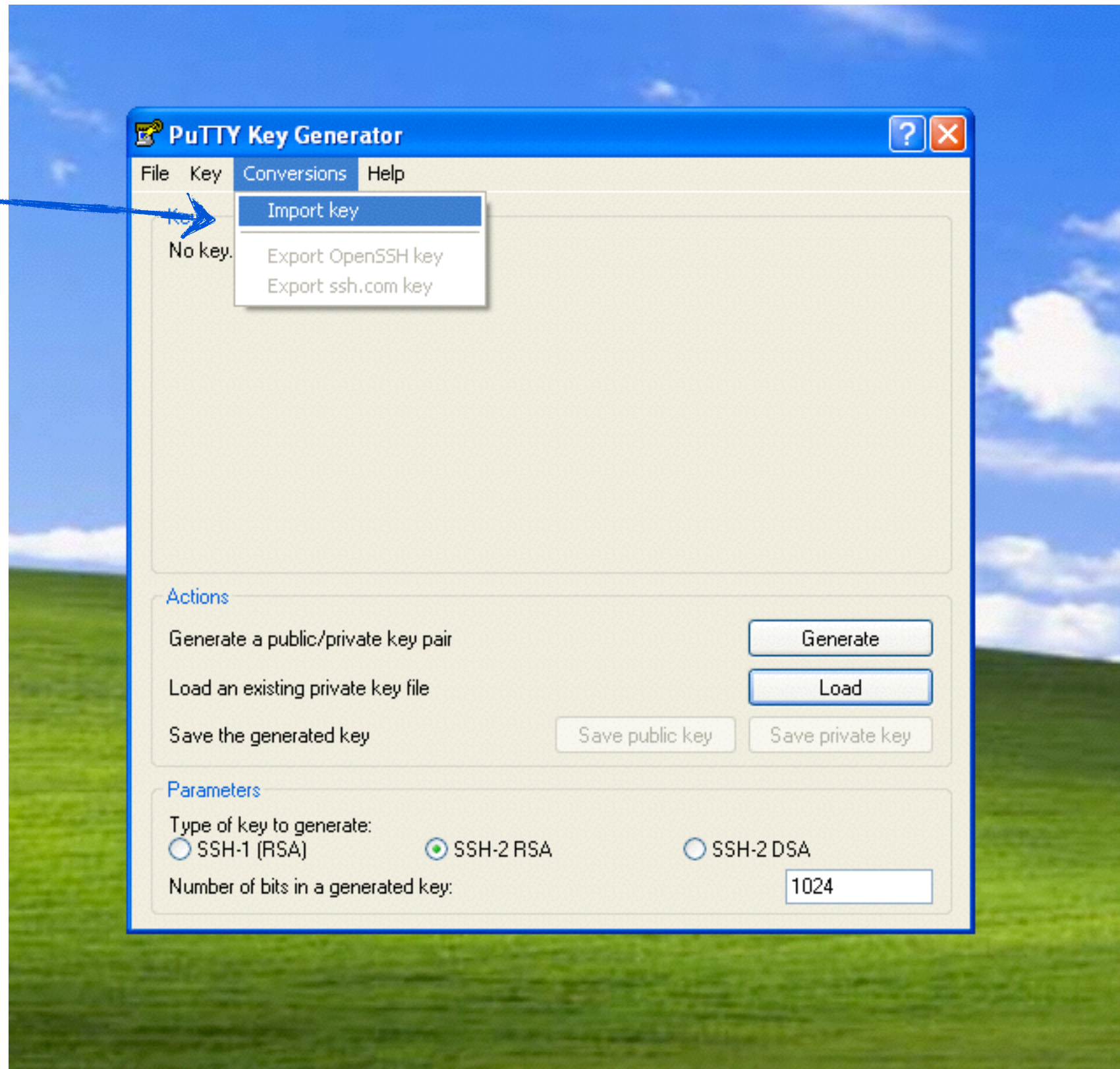
-  install software
-  start services

SSHing using Putty

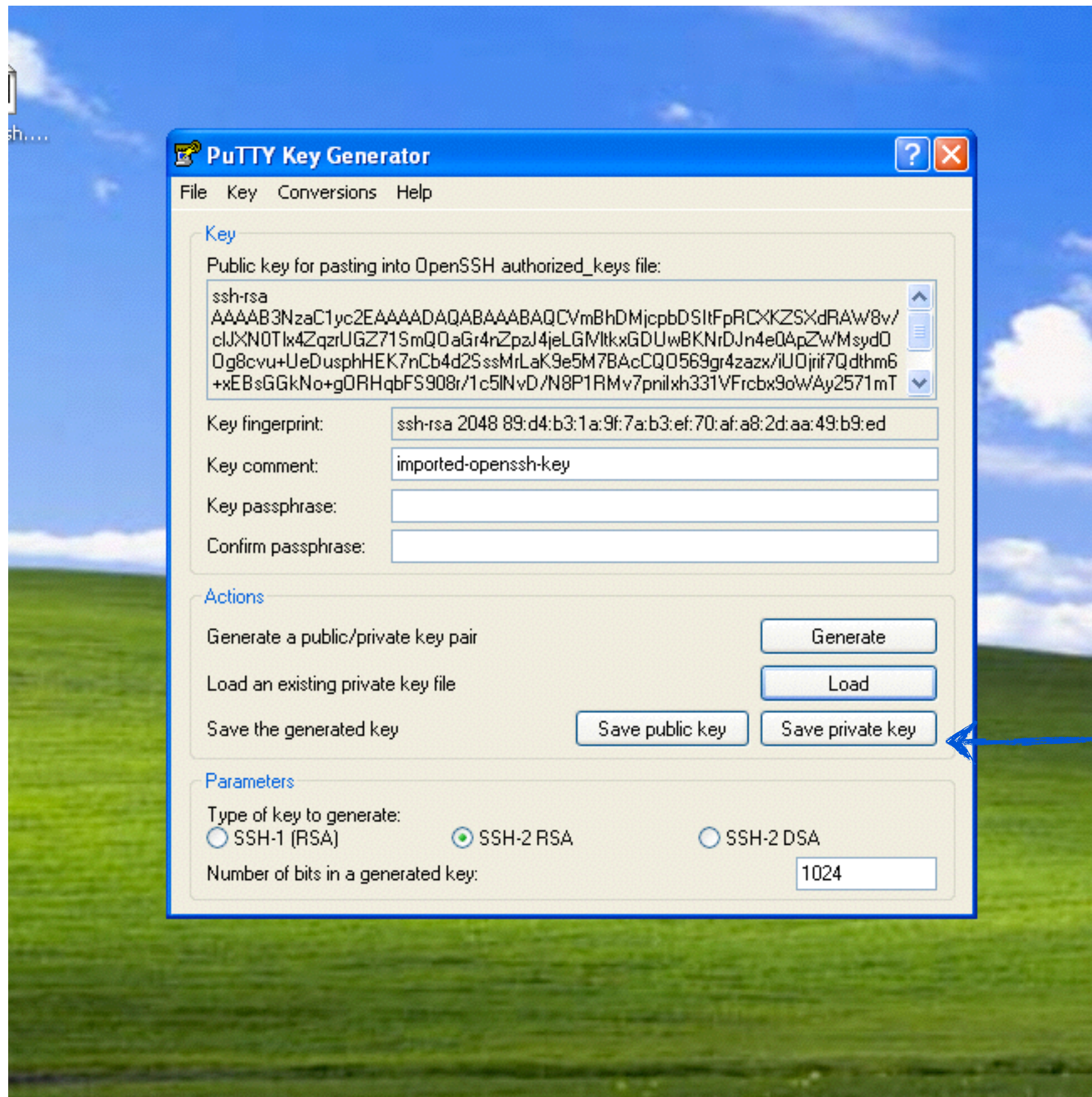


Importing the PEM file

Import PEM file
for conversion

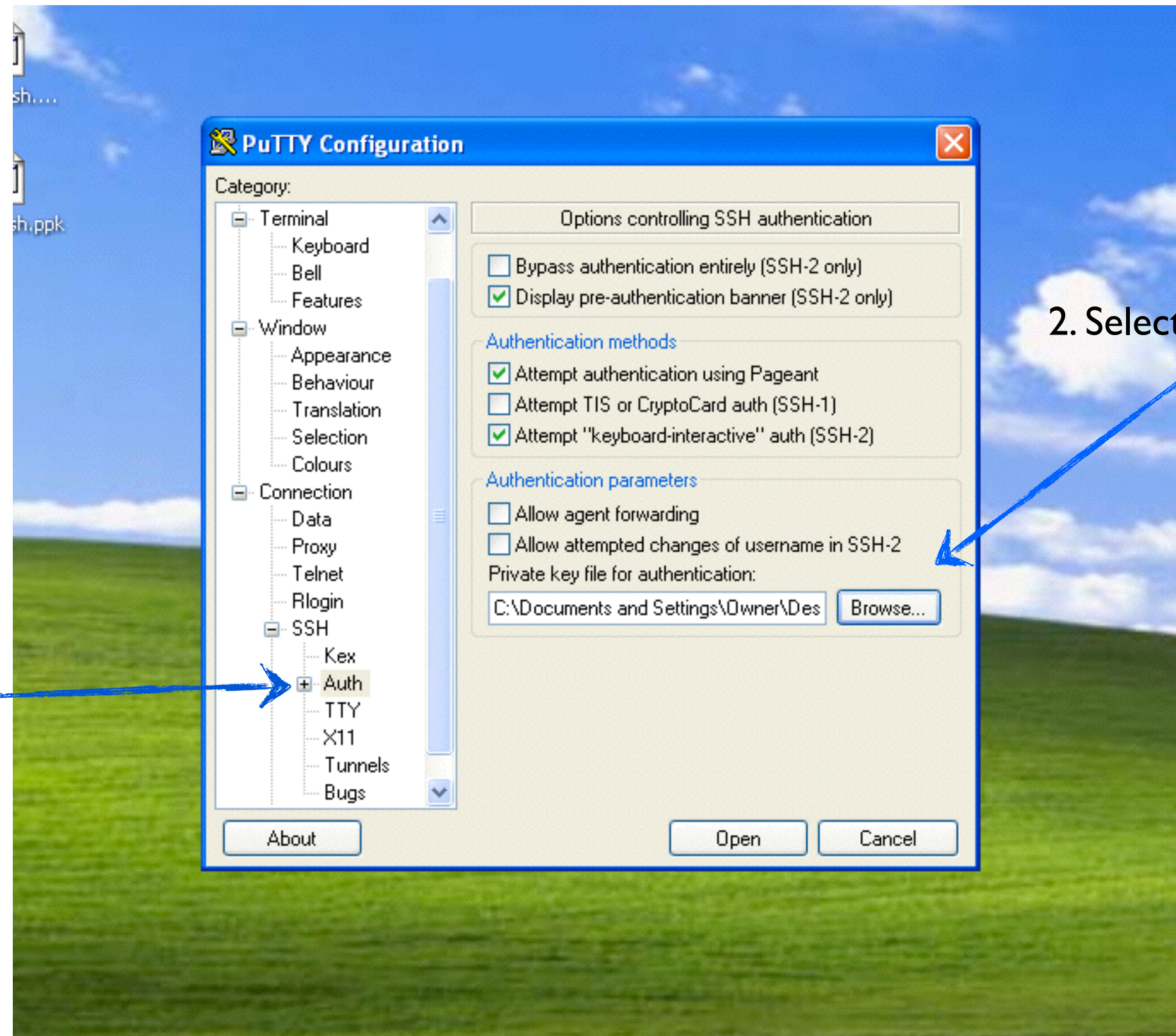


Conversion of Pem to PPK



Save private key
(ppk)

Setting up PuTTY to use PPK

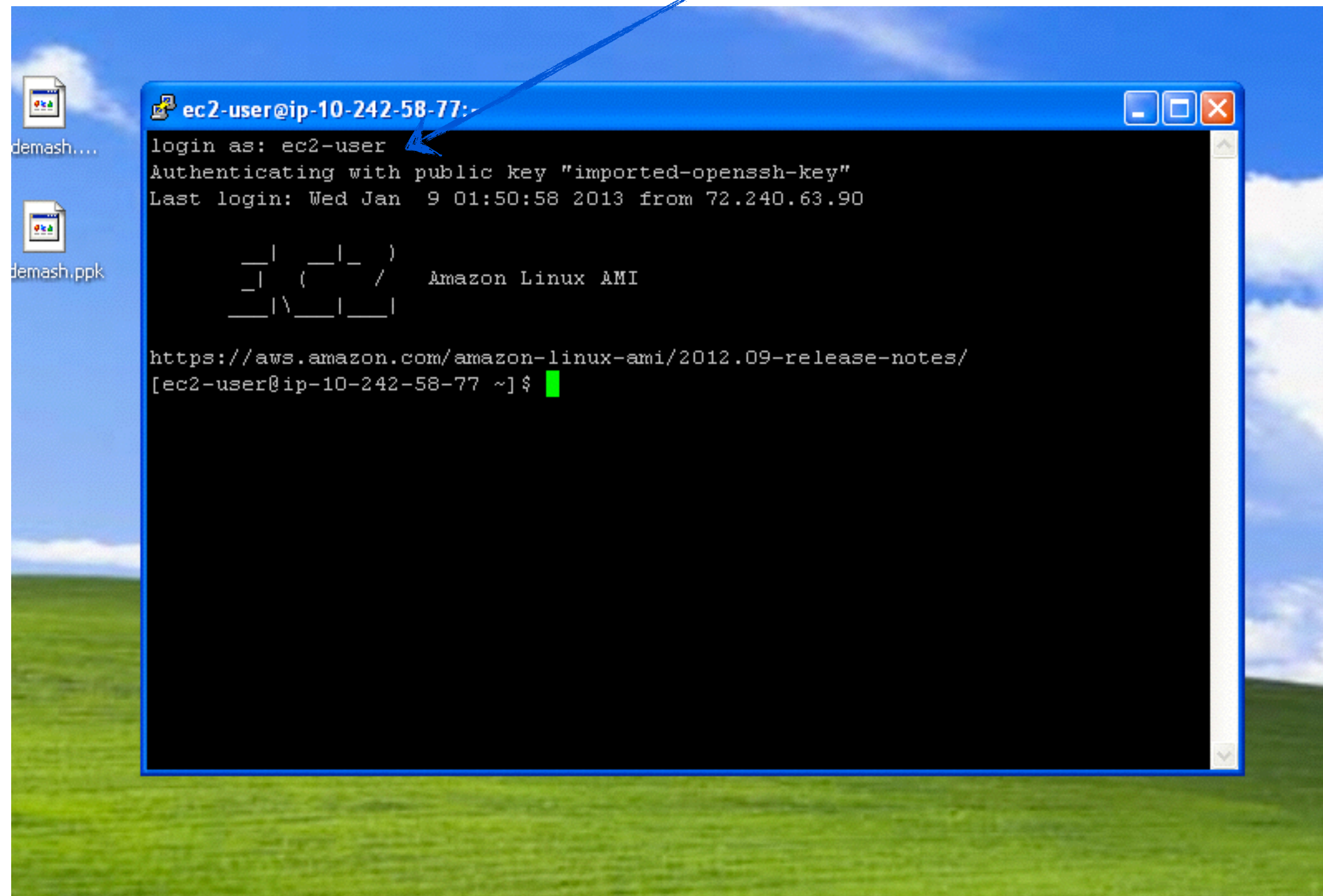



I. Navigate to
Connection > SSH
> Auth

2. Select ppk file here

Log in via Putty

When prompted for login enter *ec2-user*





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cmj @ 563700736850 ▾

N. Virginia ▾

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Filter: All instances ▾ All instance types ▾

Search Instances

1 to 1 of 1 Instances

	Name	Instance ID	Availability Zone	Instance State	Status Checks	Alarm
<input checked="" type="checkbox"/>	cmj-webapp-01	i-25054a5d	us-east-1b	running	2/2 check...	None

Instance: i-25054a5d (cmj-webapp-01)

Description

Status Checks

Instance ID

Instance state

Instance type

Private DNS

Private IPs

Secondary private IPs

VPC ID

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

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Detach Network Interface

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Change Source/Dest. Check

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Start

CloudWatch Monitoring

Enable Detailed Monitoring

Disable Detailed Monitoring

Add/Edit Alarms

compute-1.amazonaws.com

Public DNS

Public IP

Elastic IP

Availability zone

Security groups

Scheduled events

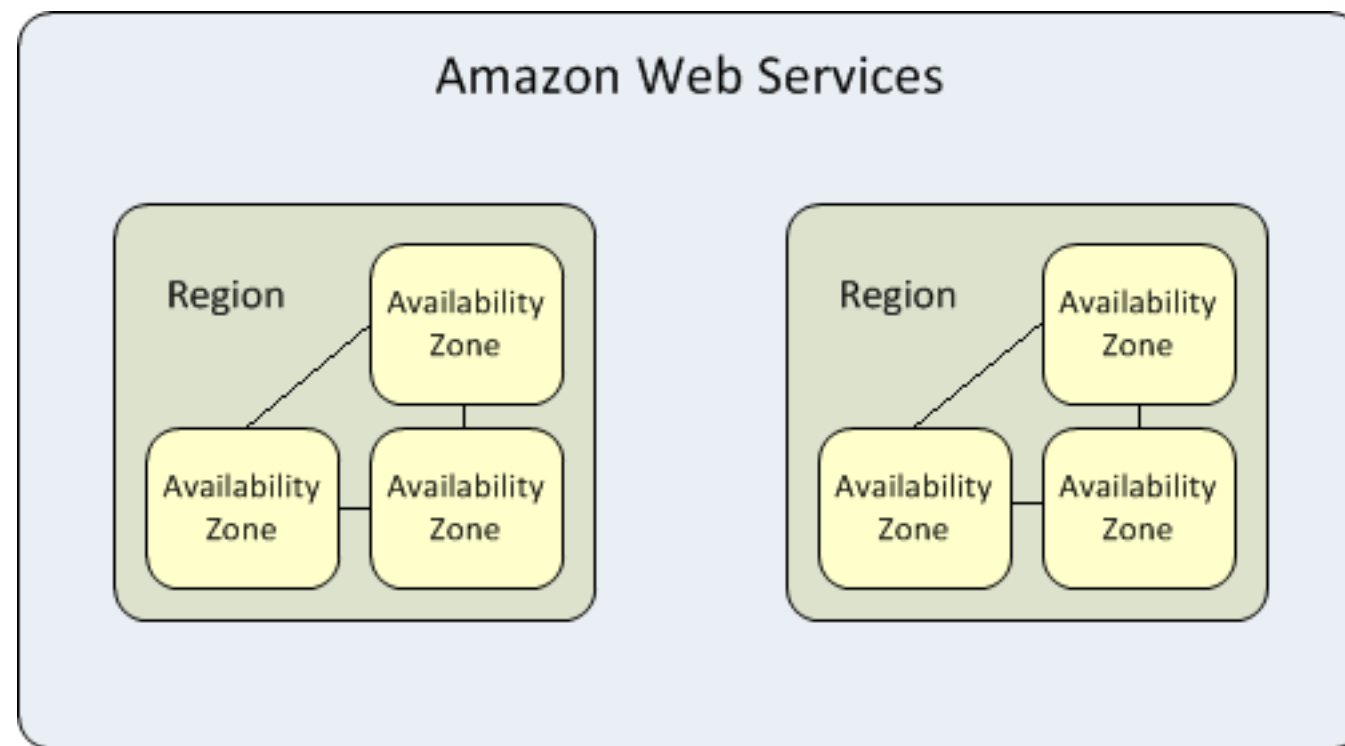
AMI ID

Feedback

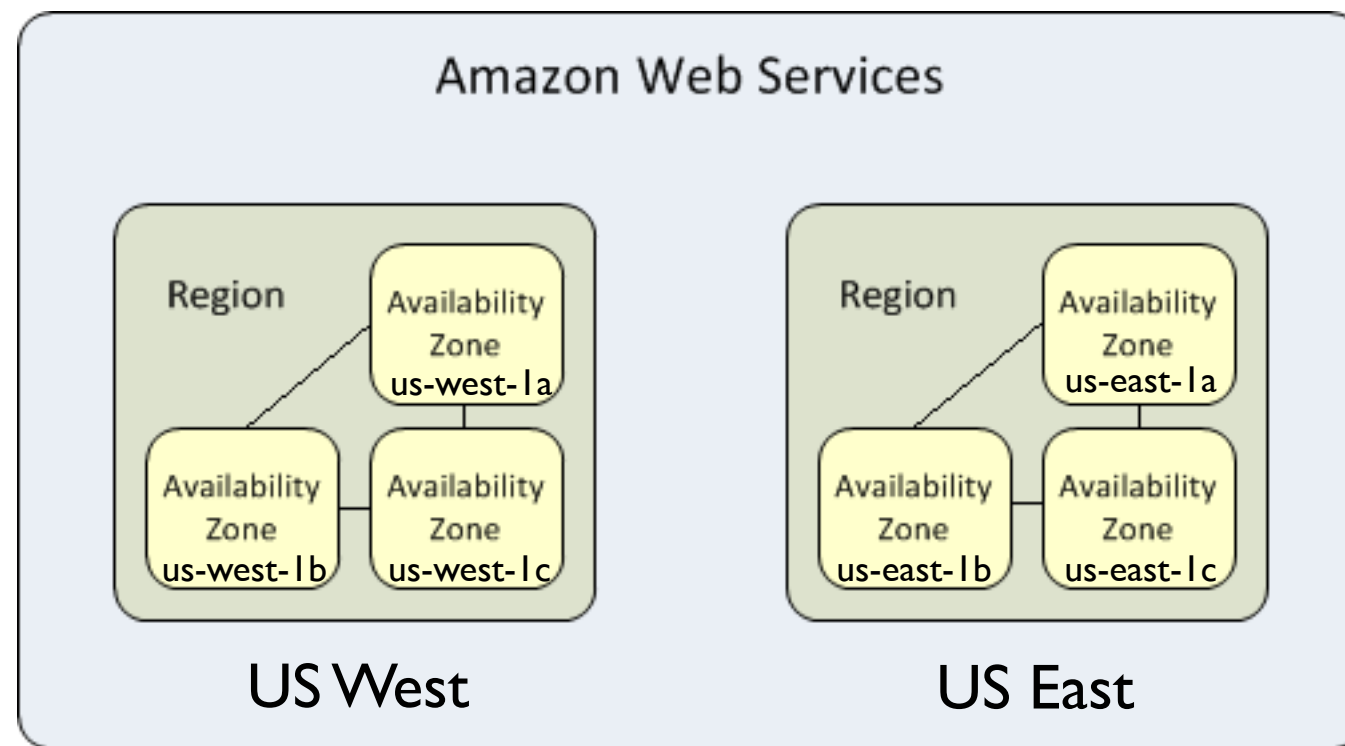
you can create an AMI

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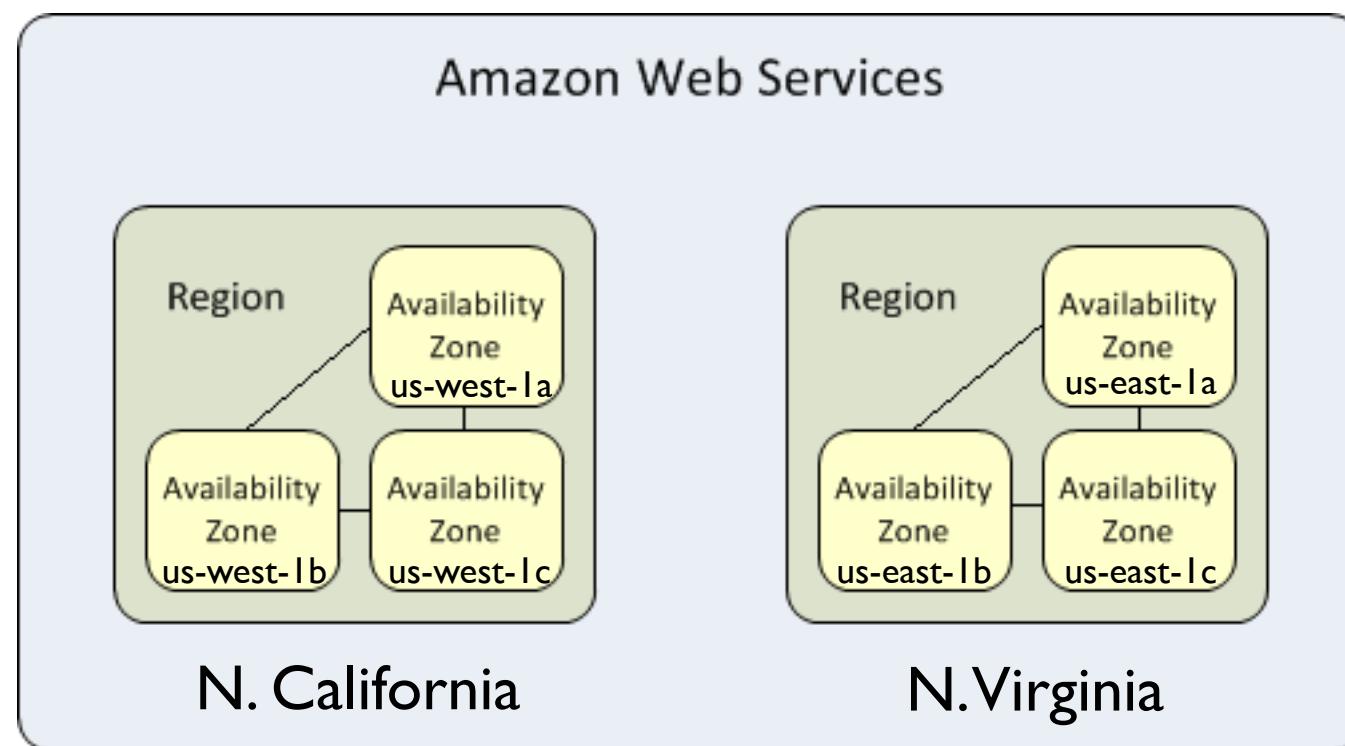
Regions and Availability Zones



Regions and Availability Zones



Regions and Availability Zones




N. Virginia ^

- US East (N. Virginia)
- US West (Oregon)
- US West (N. California)
- EU (Ireland)
- Asia Pacific (Singapore)
- Asia Pacific (Tokyo)
- Asia Pacific (Sydney)
- South America (São Paulo)

Products and Services by Region

Services offered:	N. Virginia	Oregon	N. California	Ireland	Singapore	Tokyo	Sydney	São Paulo	GovCloud
Amazon Elastic Compute Cloud (EC2)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Amazon CloudWatch	✓	✓	✓	✓	✓	✓	✓	✓	✓
Amazon Virtual Private Cloud (VPC)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Amazon Simple Storage Service (S3)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Amazon Elastic Block Store (EBS)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Auto Scaling	✓	✓	✓	✓	✓	✓	✓	✓	✓
Amazon Simple Queue Service (SQS)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Amazon Simple Notification Service (SNS)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Elastic Load Balancing	✓	✓	✓	✓	✓	✓	✓	✓	✓
AWS Support	✓	✓	✓	✓	✓	✓	✓	✓	✓
Amazon DynamoDB	✓	✓	✓	✓	✓	✓	✓	✓	✓
Amazon Relational Database Service (RDS)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Amazon Elastic MapReduce	✓	✓	✓	✓	✓	✓	✓	✓	
VM Import/Export	✓	✓	✓	✓	✓	✓	✓	✓	
AWS CloudFormation	✓	✓	✓	✓	✓	✓	✓	✓	
AWS Elastic Beanstalk	✓	✓	✓	✓	✓	✓	✓	✓	
AWS Storage Gateway	✓	✓	✓	✓	✓	✓	✓	✓	
Amazon SimpleDB	✓	✓	✓	✓	✓	✓	✓	✓	
Amazon ElastiCache	✓	✓	✓	✓	✓	✓		✓	
AWS Direct Connect	✓		✓	✓	✓	✓	✓	✓	
AWS Import/Export	✓	✓	✓	✓	✓				
Amazon Glacier	✓	✓	✓	✓		✓			
High Performance Computing	✓	✓		✓					✓
Amazon Simple Email Service (SES)	✓								
Amazon CloudSearch	✓								
Amazon Simple Workflow Service (SWF)	✓								
AWS Data Pipeline	✓								

change region here

 **Services** ▾ **Edit** ▾ cmj @ 563700736850 ▾ **N. Virginia** ▲ **Help** ▾

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Filter: **All instances** ▾ **All instance types** ▾

<input type="checkbox"/>	Name	Instance ID	Instance Type	Availability Zone
<input type="checkbox"/>	cmj-webapp-01	i-25054a5d	m1.small	us-east-1b

Instance: i-25054a5d (cmj-webapp-01)

Public DNS: ec2-54-221-1-247.compute-1.amazonaws.com

Description

Status Checks

Monitoring

Tags

Instance ID	i-25054a5d	Public DNS	ec2-54-221-1-247.compute-1.amazonaws.com
Instance state	running	Public IP	54.221.1.247
Instance type	m1.small	Elastic IP	-
Private DNS	ip-10-34-141-132.ec2.internal	Availability zone	us-east-1b
Private IPs	10.34.141.132	Security groups	cmj-webapp-sg. view rules
Secondary private IPs	-	Scheduled events	No scheduled events
VPC ID	-	AMI ID	aws-tutorial-webapp

US East (N. Virginia)

US West (Oregon)

US West (N. California)

EU (Ireland)

Asia Pacific (Singapore)

Asia Pacific (Tokyo)

Asia Pacific (Sydney)

South America (São Paulo)

es > >|

s ▾ Alarm

K... None

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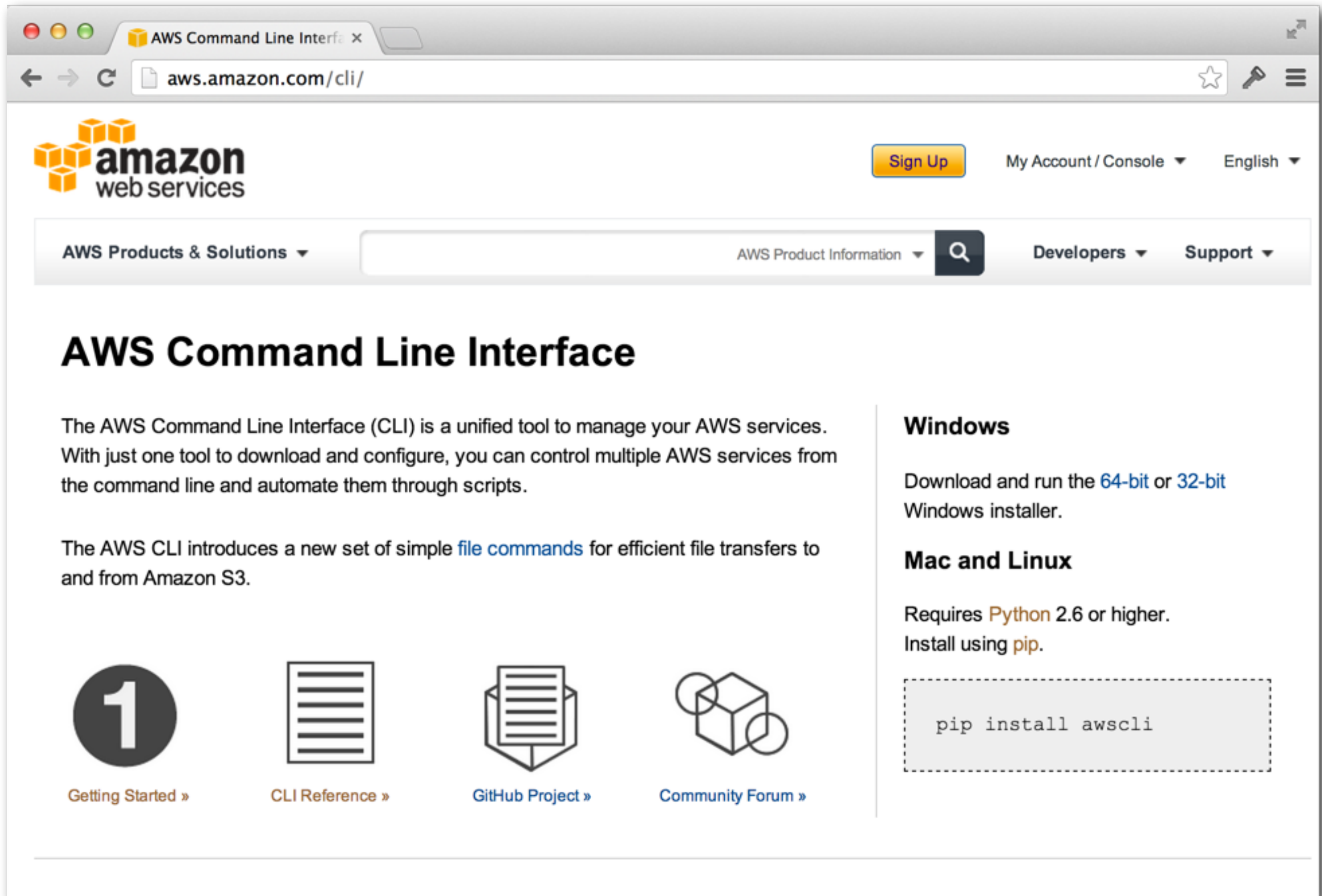
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Feedback

EC2
WITH
COMMAND LINE

Console Environment Setup



The screenshot shows a web browser window with the URL `aws.amazon.com/cli/`. The page features the Amazon Web Services logo, a 'Sign Up' button, and navigation links for 'My Account / Console' and 'English'. Below the header, there is a search bar and links for 'AWS Products & Solutions', 'AWS Product Information', 'Developers', and 'Support'. The main heading is 'AWS Command Line Interface'. The text describes the CLI as a unified tool to manage AWS services. It also mentions a new set of simple file commands for efficient file transfers to and from Amazon S3. On the right side, there are sections for 'Windows' and 'Mac and Linux' with instructions on how to download and run the CLI. At the bottom, there are four icons representing 'Getting Started', 'CLI Reference', 'GitHub Project', and 'Community Forum'.

AWS Command Line Interface

The AWS Command Line Interface (CLI) is a unified tool to manage your AWS services. With just one tool to download and configure, you can control multiple AWS services from the command line and automate them through scripts.

The AWS CLI introduces a new set of simple [file commands](#) for efficient file transfers to and from Amazon S3.

Windows

Download and run the [64-bit](#) or [32-bit](#) Windows installer.

Mac and Linux

Requires [Python](#) 2.6 or higher.
Install using [pip](#).

```
pip install awscli
```

Getting Started » **CLI Reference »** **GitHub Project »** **Community Forum »**

<http://aws.amazon.com/cli/>

Console Environment Setup

```
sudo python ez_setup.py
sudo python get-pip.py
sudo pip install awscli
aws configure
AWS Access Key ID [None]: AKIAI6ZZCGHYRQGEAYJQ
AWS Secret Access Key [None]: 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
Default region name [None]: us-east-1
Default output format [None]:
```

Console Usage

```
aws [options] <command> <subcommand> [parameters]
aws ec2 describe-images --owner self
aws ec2 run-instance --image-id <image id>
                        --key-name <key name>
                        --security-group-ids <security group id>
aws ec2 describe-instances
ssh -i <key-pair-pem-file> ec2-user@<server name>
aws ec2 stop-instance <instance id>
aws ec2 terminate-instance <instance id>
```

EC2 WITH JAVA SDK

Letting AWS know who you are

Using Java SDK

```
//SETUP CREDENTIALS
AWSCredentials creds = new
PropertiesCredentials(this.getClass().getResourceAsStream("/awsCredentials.properties"));

//CREATING EC2 CLIENT
AmazonEC2 ec2 = new AmazonEC2Client(creds);
```

Creating a New Key Pair

Using Java SDK

```
CreateKeyPairRequest createKeyPairRequest = new CreateKeyPairRequest();

String keyName = "testKeyPair-fromjava";
createKeyPairRequest.withKeyName(keyName);

CreateKeyPairResult createKeyPairResult = ec2.createKeyPair(createKeyPairRequest);

KeyPair keyPair = createKeyPairResult.getKeyPair();
File pemFile = new File(keyName + ".pem");

BufferedWriter out = new BufferedWriter(new FileWriter(pemFile));
out.write(keyPair.getKeyMaterial());
out.close();
```

Creating a Security Group

Using the Java SDK

```
CreateSecurityGroupRequest r1 = new CreateSecurityGroupRequest("webserver-group", "Sec  
Group for My Web Servers");  
ec2.createSecurityGroup(r1);  
  
AuthorizeSecurityGroupIngressRequest r2 = new AuthorizeSecurityGroupIngressRequest();  
r2.setGroupName("webserver-group");  
IpPermission permission = new IpPermission();  
permission.setIpProtocol("tcp");  
permission.setFromPort(80);  
permission.setToPort(80);  
List ipRanges = new ArrayList();  
  
//use CIDR notation, see http://en.wikipedia.org/wiki/CIDR\_notation  
ipRanges.add("0.0.0.0/0"); permission.setIpRanges(ipRanges);  
  
List permissions = new ArrayList();  
permissions.add(permission);  
r2.setIpPermissions(permissions);  
ec2.authorizeSecurityGroupIngress(r2);
```

Creating the EC2 Instance

Using the Java SDK

```
// CREATE EC2 INSTANCES
RunInstancesRequest runInstancesRequest = new RunInstancesRequest()
    .withInstanceType("micro")
    .withImageId("ami-4bb96d22")
    .withMinCount(1)
    .withMaxCount(1)
    .withSecurityGroupIds("webserver-group")
    .withKeyName("testKeyPair-fromjava");

RunInstancesResult runInstances = ec2.runInstances(runInstancesRequest);
```


Giving the Instance Metadata

```
// TAG EC2 INSTANCES WITH USER METADATA
List<Instance> instances = runInstances.getReservation().getInstances();
for (Instance instance : instances) {
    CreateTagsRequest createTagsRequest = new CreateTagsRequest();
    createTagsRequest.withResources(instance.getInstanceId())
        .withTags(new Tag("Name", "MyFirstEC2Instance"));
    ec2.createTags(createTagsRequest);
}
```

Stopping/Terminating EC2 Instance

```
StopInstancesRequest stopInstanceRequest =  
    new StopInstancesRequest().withInstanceIds(instanceIds);  
ec2.terminateInstances(stopInstanceRequest);
```

```
TerminateInstancesRequest terminateInstanceRequest =  
    new TerminateInstancesRequest().withInstanceIds(instanceIds);  
ec2.terminateInstances(terminateInstanceRequest);
```

Infrastructure Automation



AWS CloudFormation

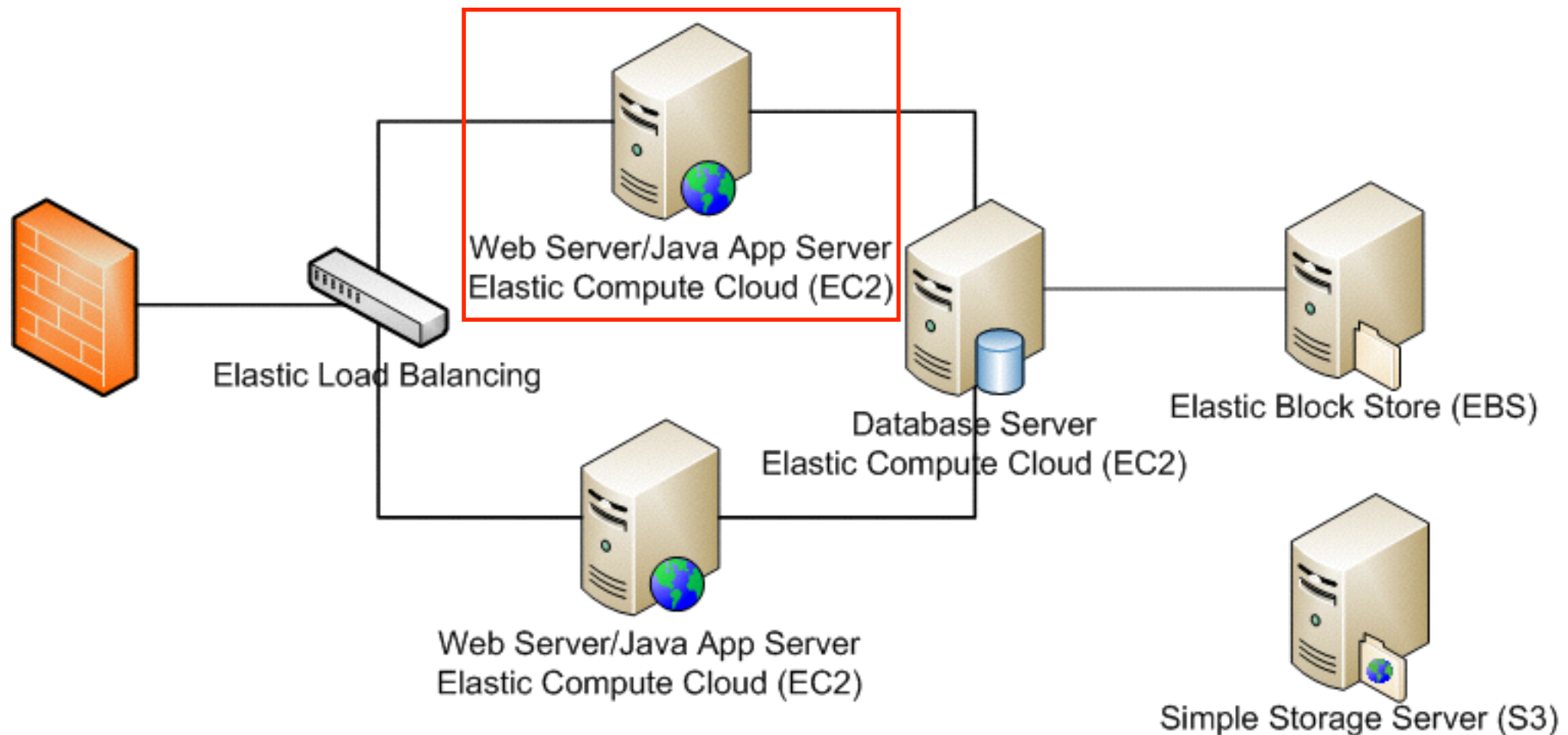
<http://puppetlabs.com/>

<http://www.opscode.com/chef/>

<http://aws.amazon.com/cloudformation/>

Lab I

1. Start instance of aws-tutorial-webapp
2. Verify Tomcat is running accessible
3. ssh to new server instance
4. Stop new server instance
5. Restart new server instance








STORAGE

Storage Options

- Structured Data
 - Amazon DynamoDB - NoSQL DB
 - Relational Databases (in EC2 and EBS)
 - Amazon RDS - Managed databases like mysql
 - Amazon ElasticCache - in-memory cache
 - Amazon Redshift - petabyte-scale data warehouse
- Unstructured Data
 - Amazon EC2 Instance Storage - local filesystem
 - Amazon EBS Volumes - remote mounted filesystem
 - Amazon S3 - bucket storage
 - Amazon Glacier - archiving and backup

mysql

1 to 25 of 286 AMIs

	- ami-225fba4b	Root device type: instance-store	Virtualization type: paravirtual	Select	32-bit
	- ami-22b6534b	Root device type: instance-store	Virtualization type: paravirtual	Select	32-bit
	- ami-255fba4c	Root device type: instance-store	Virtualization type: paravirtual	Select	32-bit
	- ami-25b6534c	Root device type: instance-store	Virtualization type: paravirtual	Select	32-bit
	ShreeKrishnaTravels - ami-00a2d869	CRM APPLICATION SETUP - APACHE, UBUNTU, MYSQL		Select	64-bit
		Root device type: ebs	Virtualization type: paravirtual		

instance

EBS

	Unstructured Data			Structured Data		
	Amazon EC2 Instance Storage	Amazon EBS Volumes	Amazon S3	Amazon SimpleDB	Other Relational DB (on EC2 and EBS)	Amazon RDS
Performance	High	High	Moderate (single thread) to Very High (multiple threads)	Moderate to High (batched Puts / Gets)	High	High
Durability	Low	Moderate	High	High	High	Moderate
Cost	Included in EC2 cost	Provisioned per GB/Month	Stored per GB/Month	Provisioned First GB free, then per GB/Month	Provisioned (same as EBS)	Provisioned per GB/Month (5 GB minimum)
Availability	Low	Moderate to High (using EBS snapshots)	High	High	Moderate to High	High
Elasticity / Scalability	No	Manual (adding more volumes)	Automatic	Automatic	Manual	Manual (one command to modify DB Instance)
Size Limits	160 GB to 1.6 TB (larger instances have both larger volumes and more volumes)	1 GB to 1 TB per volume (can use multiple volumes or striping for larger capacities)	Effectively Unlimited (5 TB per object, unlimited objects per bucket)	10 GB/domain 100 domains (more domains available upon request)	(same as EBS)	5 GB to 1 TB per DB Instance
Persistence Across Instantiations	No	Yes	Yes	Yes	Yes	Yes
Interfaces	Block Device, access via OS / file system on EC2	N/A, access through EC2 OS / file system	HTTP, REST or SOAP	REST or SOAP	MySQL or JDBC libraries	MySQL or JDBC libraries
Security (encryption at-rest)	Run Encrypted FS	Run Encrypted FS	Encrypt using 256-bit AES	Encrypt using 256-bit AES		
Security (encryption in-transit)	N/A	N/A	SSL (HTTPS)	SSL (HTTPS)	SSL (HTTPS)	SSL (HTTPS)
RDBMS Platforms Supported	MySQL, SQL Server, Oracle, DB2, etc.	MySQL, SQL Server, Oracle, DB2, etc.	N/A	N/A	MySQL, SQL Server, Oracle, DB2 etc.	MySQL 5.1
Model (relational or otherwise)	Block	Block	Object	Non-relational, flexible schema, entity store	Relational	Relational
Degree of Automation	None	Auto-mirroring	Auto-replication, Versioning	Indexing, replication, provisioning, patching	Depends on DB	Automated backups, software
Degree of Redundancy	Not redundant	Redundant within an Availability Zone	Highly redundant across multiple data centers	Maintain multiple, geographically diverse copies of all user data	None (asynchronous replication available)	Offer both single DB Instance (one AZ) and Multi-AZ options
Cross-Instance Access (i.e., shareability)	No	No	Yes	Yes	Yes	Yes
Management and Administration	Manual	Manual	Auto	Auto	Manual	Auto

S3 Pricing

Storage Pricing

Region:	US Standard		
	Standard Storage	Reduced Redundancy Storage	Glacier Storage
First 1 TB / month	\$0.095 per GB	\$0.076 per GB	\$0.010 per GB
Next 49 TB / month	\$0.080 per GB	\$0.064 per GB	\$0.010 per GB
Next 450 TB / month	\$0.070 per GB	\$0.056 per GB	\$0.010 per GB
Next 500 TB / month	\$0.065 per GB	\$0.052 per GB	\$0.010 per GB
Next 4000 TB / month	\$0.060 per GB	\$0.048 per GB	\$0.010 per GB
Over 5000 TB / month	\$0.055 per GB	\$0.037 per GB	\$0.010 per GB

Request Pricing

Region: US Standard

Pricing	
PUT, COPY, POST, or LIST Requests	\$0.005 per 1,000 requests
Glacier Archive and Restore Requests	\$0.05 per 1,000 requests
Delete Requests	Free †
GET and all other Requests	\$0.004 per 10,000 requests
Glacier Data Restores	Free ††
† No charge for delete requests of Standard or RRS objects. For objects that are archived to Glacier, there is a pro-rated charge of \$0.03 per gigabyte for objects deleted prior to 90 days. Learn more.	
†† Glacier is designed with the expectation that restores are infrequent and unusual, and data will be stored for extended periods of time. You can restore up to 5% of your average monthly Glacier storage (pro-rated daily) for free each month. If you choose to restore more than this amount of data in a month, you are charged a restore fee starting at \$0.01 per gigabyte. Learn more.	

Data Transfer Pricing

The pricing below is based on data transferred "in" to and "out" of Amazon S3.

Region:	US Standard	:
		Pricing
Data Transfer IN To Amazon S3		
All data transfer in		\$0.000 per GB
Data Transfer OUT From Amazon S3 To		
Amazon EC2 in the Northern Virginia Region		\$0.000 per GB
Another AWS Region or Amazon CloudFront		\$0.020 per GB

EBS Pricing

Region:

Amazon EBS Standard volumes

- \$0.10 per GB-month of provisioned storage
- \$0.10 per 1 million I/O requests

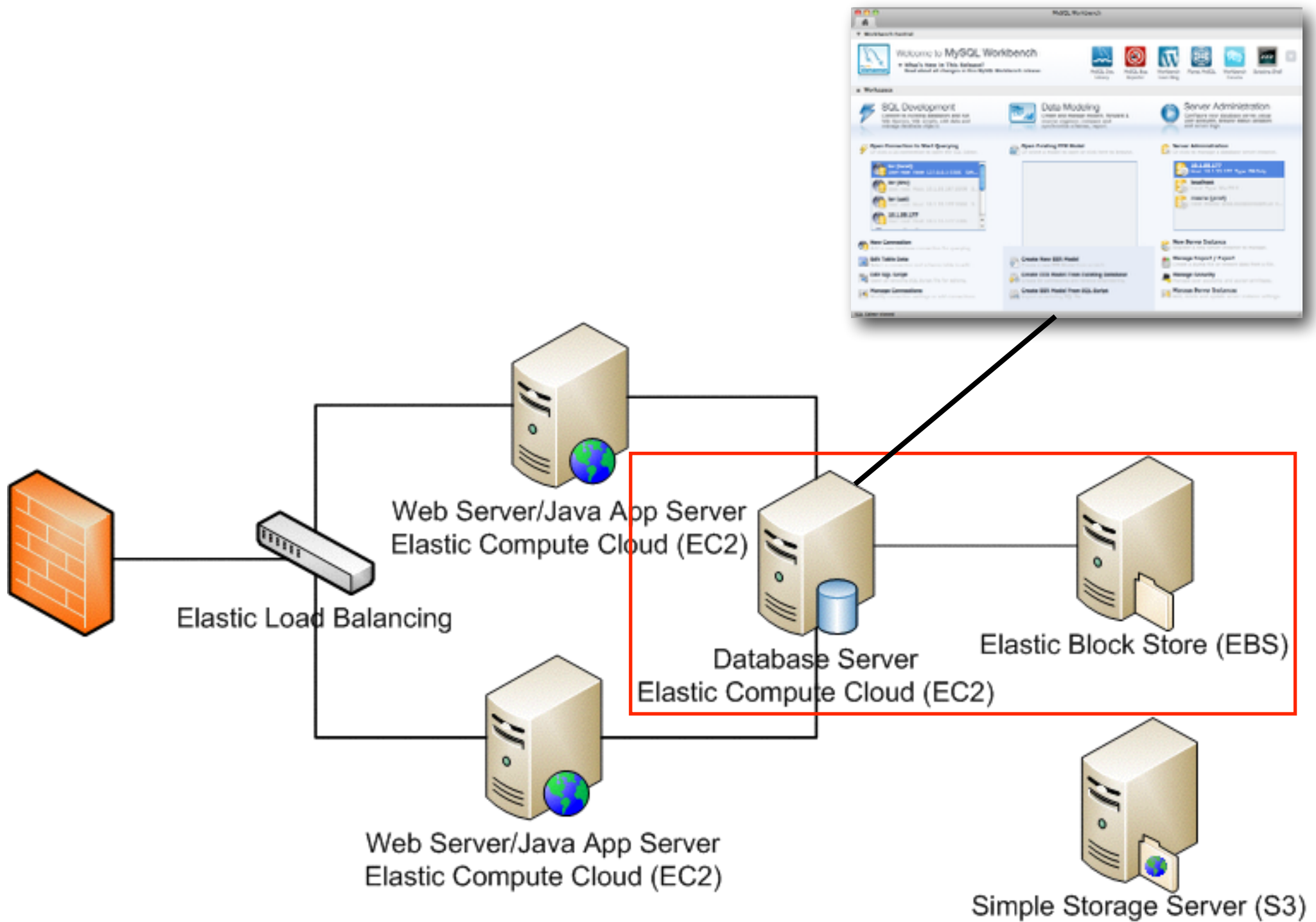
Amazon EBS Provisioned IOPS volumes

- \$0.125 per GB-month of provisioned storage
- \$0.10 per provisioned IOPS-month

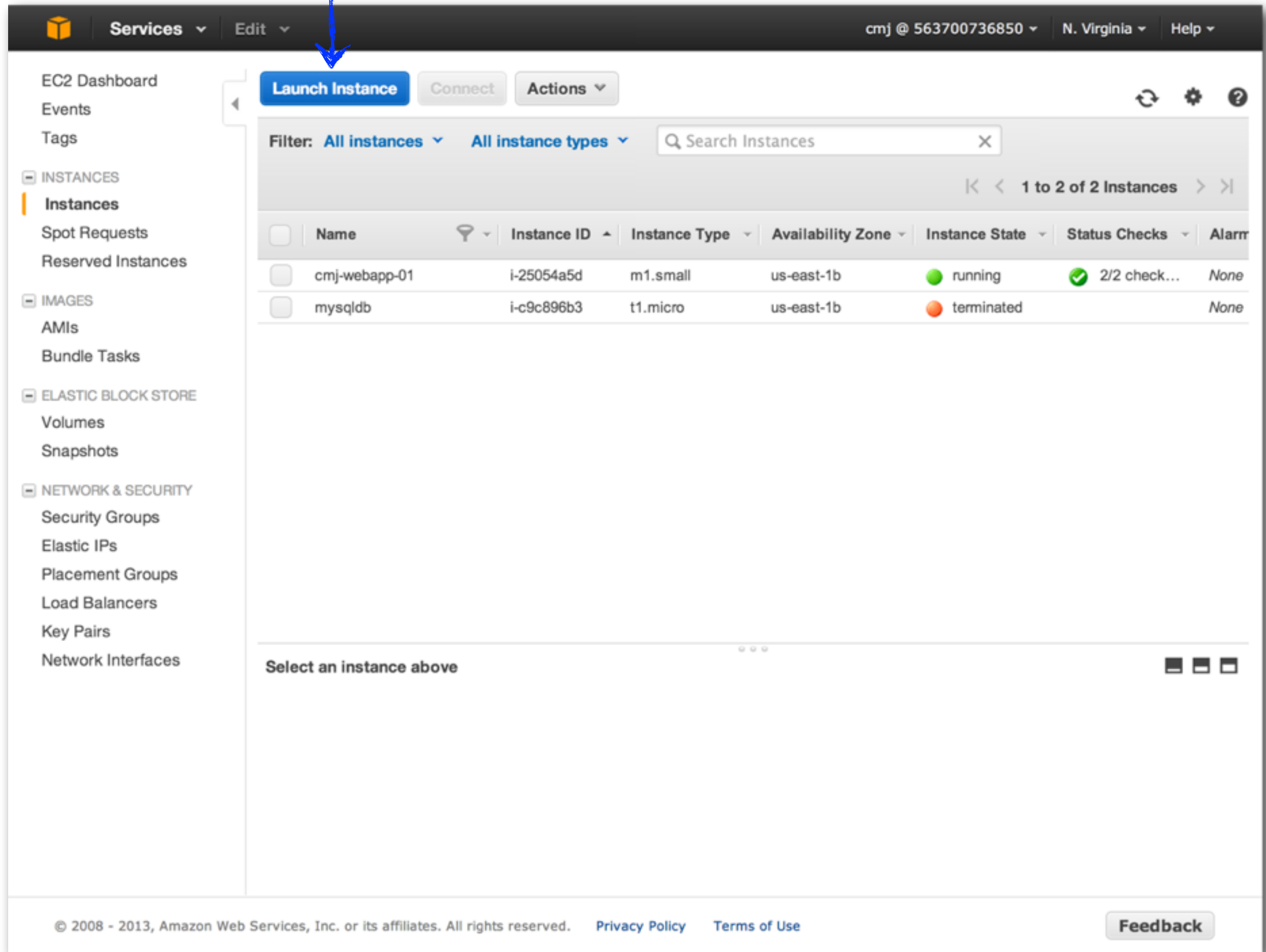
Amazon EBS Snapshots to Amazon S3

- \$0.095 per GB-month of data stored

DATABASE



launch new mysql server instance



The screenshot shows the AWS Management Console interface for the EC2 service. The top navigation bar includes the AWS logo, 'Services', 'Edit', and user information. The left sidebar contains a navigation menu with categories like INSTANCES, IMAGES, ELASTIC BLOCK STORE, and NETWORK & SECURITY. The main content area displays the 'Launch Instance' button, which is highlighted by a blue arrow. Below this, there's a filter section and a table of instances.

Filter: All instances ▾ All instance types ▾ Search Instances

1 to 2 of 2 Instances

<input type="checkbox"/>	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm
<input type="checkbox"/>	cmj-webapp-01	i-25054a5d	m1.small	us-east-1b	running	2/2 check...	None
<input type="checkbox"/>	mysqldb	i-c9c896b3	t1.micro	us-east-1b	terminated		None

Select an instance above

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Step 1: Choose an Amazon Machine Image (AMI)

[Cancel and Exit](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Quick Start

My AMIs

AWS Marketplace

Community AMIs

☐ Free tier only ⓘ

Amazon Linux

Free tier eligible

Amazon Linux AMI 2013.09.1 - ami-83e4bcea (64-bit) / ami-cde4bca4 (32-bit)

The Amazon Linux AMI is an EBS-backed, PV-GRUB image. It includes Linux 3.4, AWS tools, and repository access to multiple versions of MySQL, PostgreSQL, Python, Ruby, and Tomcat.

Root device type: ebs Virtualization type: paravirtual

[Select](#)☒ 64-bit ☐ 32-bit

Red Hat

Free tier eligible

Red Hat Enterprise Linux 6.4 - ami-a25415cb (64-bit) / ami-7e175617 (32-bit)

Red Hat Enterprise Linux version 6.4, EBS-boot.

Root device type: ebs Virtualization type: paravirtual

[Select](#)☒ 64-bit ☐ 32-bit

SUSE Linux

Free tier eligible

SUSE Linux Enterprise Server 11 - ami-e8084981 (64-bit) / ami-b60948df (32-bit)

SUSE Linux Enterprise Server 11 Service Pack 3 basic install, EBS boot with Amazon EC2 AMI Tools preinstalled; Apache 2.2, MySQL 5.5, PHP 5.3, and Ruby 1.8.7 available

Root device type: ebs Virtualization type: paravirtual

[Select](#)☒ 64-bit ☐ 32-bit

Ubuntu

Free tier eligible

Ubuntu Server 12.04.3 LTS - ami-a73264ce (64-bit) / ami-a53264cc (32-bit)

Ubuntu Server 12.04.3 LTS with support available from Canonical (<http://www.ubuntu.com/cloud/services>).

Root device type: ebs Virtualization type: paravirtual

[Select](#)☒ 64-bit ☐ 32-bit

Ubuntu

Free tier eligible




Ubuntu Server 13.10 - ami-ad184ac4 (64-bit) / ami-a9184ac0 (32-bit)




Ubuntu Server 13.10: Ubuntu Server version 13.10, with support available from Canonical (<http://www.ubuntu.com/cloud/services>).

Root device type: ebs Virtualization type: paravirtual

[Select](#)☒ 64-bit ☐ 32-bit

select aws-tutorial-mysql AMI

 **Services**  **Edit** 

cmj @ 563700736850  N. Virginia  Help 

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Tag Instance 6. Configure Security Group 7. Review

Step 1: Choose an Amazon Machine Image (AMI)

[Cancel and Exit](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Quick Start

My AMIs

AWS Marketplace

Community AMIs

▼ Ownership

☒ Owned by me

☐ Shared with me

▼ Architecture

☐ 32-bit

☐ 64-bit

▼ Root device type

☐ EBS

☐ Instance store

< 1 to 4 of 4 AMIs > >>

	CloudDevelop-JavaWebServer - ami-290f4340 Cloud Develop Conference AMI with Tomcat Root device type: ebs Virtualization type: paravirtual Owner: 563700736850	<div>Select</div> <div>64-bit</div>
	CloudDevelop-MysqlServer - ami-69084400 Cloud Develop Conference MySQL Server Root device type: ebs Virtualization type: paravirtual Owner: 563700736850	<div>Select</div> <div>64-bit</div>
	aws-tutorial-webapp - ami-71d7f518 AWS tutorial web application server with Tomcat. Root device type: ebs Virtualization type: paravirtual Owner: 563700736850	<div>Select</div> <div>64-bit</div>
	aws-tutorial-mysql - ami-7da38114 AWS tutorial mysql server. Root device type: ebs Virtualization type: paravirtual Owner: 563700736850	<div>Select</div> <div>64-bit</div>

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Feedback

aws-tutorial-mysql AMI



```
sudo yum update
sudo yum install mysql55.x86_64
sudo yum install mysql55-server.x86_64
sudo service mysqld start
mysql -u root -e "create database nuez;"
mysql -u root -e "CREATE USER 'codemash'@'%' IDENTIFIED BY 'codemash';"
mysql -u root -e "GRANT ALL PRIVILEGES ON *.* TO 'codemash'@'%'
sudo chkconfig --level 345 mysqld on
```

select t1.micro

 **Services** ▾ **Edit** ▾ cmj @ 563700736850 ▾ N. Virginia ▾ Help ▾

[1. Choose AMI](#) [2. Choose Instance Type](#) [3. Configure Instance](#) [4. Add Storage](#) [5. Tag Instance](#) [6. Configure Security Group](#) [7. Review](#)

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

All instance types

Micro instances

General purpose

Memory optimized

Storage optimized

Compute optimized

Currently selected: t1.micro (up to 2 ECUs, 1 vCPUs, 0.613 GiB memory, EBS only)

Micro instances

Micro instances are a low-cost instance option, providing a small amount of CPU resources. They are suited for lower throughput applications, and websites that require additional compute cycles periodically, but are not appropriate for applications that require sustained CPU performance. Popular uses for micro instances include low traffic websites or blogs, small administrative applications, bastion hosts, and free trials to explore EC2 functionality.

Size	ECUs <small>i</small>	vCPUs <small>i</small>	Memory (GiB)	Instance Storage (GiB) <small>i</small>	EBS-Optimized Available <small>i</small>	Network Performance <small>i</small>
t1.micro	up to 2	1	0.613	EBS only	-	Very Low

Micro instances are eligible for the AWS free usage tier. For the first 12 months following your AWS sign-up date, you get up to 750 hours of micro instances each month. When your free usage tier expires or if your usage exceeds the free tier restrictions, you pay standard, pay-as-you-go service rates.

[Learn more](#) about free usage tier eligibility and restrictions

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Instance Details](#)

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[1. Choose AMI](#)[2. Choose Instance Type](#)[3. Configure Instance](#)[4. Add Storage](#)[5. Tag Instance](#)[6. Configure Security Group](#)[7. Review](#)

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot Instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances ⓘ

Purchasing option ⓘ

☐ Request Spot Instances

Network ⓘ

[Create new VPC](#)

Availability Zone ⓘ

IAM role ⓘ

Shutdown behavior ⓘ

Enable termination protection ⓘ

☐ Protect against accidental termination

Monitoring ⓘ

☐ Enable CloudWatch detailed monitoring[Additional charges apply.](#)[▶ Advanced Details](#)[Cancel](#)[Previous](#)[Review and Launch](#)[Next: Add Storage](#)

[1. Choose AMI](#)[2. Choose Instance Type](#)[3. Configure Instance](#)[4. Add Storage](#)[5. Tag Instance](#)[6. Configure Security Group](#)[7. Review](#)

Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Type ⓘ	Device ⓘ	Snapshot ⓘ	Size (GB) ⓘ	Volume Type ⓘ	IOPS ⓘ	Delete on Termination ⓘ
Root	/dev/sda1	snap-425a8358	8	Standard ▾	N/A	<input checked="" type="checkbox"/>

[Add New Volume](#)

Free tier eligible customers can get up to 30 GB of EBS storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

[Cancel](#)[Previous](#)[Review and Launch](#)[Next: Tag Instance](#)

name instance with naming convention

The screenshot shows the AWS Management Console interface for the 'Step 5: Tag Instance' step. The top navigation bar includes the AWS logo, 'Services' dropdown, 'Edit' dropdown, and user information 'cmj @ 563700736850' in 'N. Virginia' with a 'Help' link. The progress bar shows seven steps: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Tag Instance (active), 6. Configure Security Group, and 7. Review.

Step 5: Tag Instance

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. [Learn more](#) about tagging your Amazon EC2 resources.

Key (127 characters maximum)	Value (255 characters maximum)
Name	cmj-db-master

Create Tag (Up to 10 tags maximum)

At the bottom, there are navigation buttons: 'Cancel', 'Previous', 'Review and Launch', and 'Next: Configure Security Group'. A 'Feedback' button is located at the bottom right.

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Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☒ Create a **new** security group
☐ Select an **existing** security group

Security group name:

cmj-db-sg

Description:

cmj Mysql database security group

web application security group

Protocol <small>i</small>	Type <small>i</small>	Port Range (Code) <small>i</small>	Source <small>i</small>	
SSH ▾	TCP	22	Anywhere ▾ 0.0.0.0/0	✕
MYSQL ▾	TCP	3306	Custom IP ▾ sg-0dffa666	✕
MYSQL ▾	TCP	3306	My IP ▾ 64.135.17.66/32	✕

Add Rule



Warning

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

developer's machine

Cancel

Previous

Review and Launch



Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.



Improve your instance's security. Your security group, cmj-db-sg, is open to the world.

Your instance may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only.

You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers.

[Edit security groups](#)

AMI Details

[Edit AMI](#)

aws-tutorial-mysql - ami-7da38114

AWS tutorial mysql server.

Root Device Type: ebs Virtualization type: paravirtual

Instance Type

[Edit instance type](#)

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GiB)	EBS-Optimized Available	Network Performance
t1.micro	up to 2	1	0.613	EBS only	-	Very Low

Security Groups

[Edit security groups](#)

Security group name

cmj-db-sg

Description

cmj Mysql database security group

Protocol ⓘ	Type ⓘ	Port Range (Code) ⓘ	Source ⓘ
SSH	TCP	22	0.0.0.0/0

[Cancel](#)[Previous](#)[Launch](#)



Services ▾

Edit ▾

cmj @ 563700736850 ▾

N. Virginia ▾

Help ▾

1. Choose AMI

2. Choose Instance Type

3. Configure Instance

4. Add Storage

5. Tag Instance

6. Configure Security Group

7. Review

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.



Improve your instance's security. Your security group, cmj-db-sg, is open to the world.

Your instance may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only.

You can also open

[Edit security group](#)

TP (80) for web servers.

AMI Details



aws-tutori

AWS tutorial

Root Device Ty

Instance Type

Instance Type

t1.micro

Security Groups

Security group name

cmj-db-sg

Description

cmj Mysql database security group

[Edit AMI](#)

[Edit instance type](#)

Network Performance

Very Low

[Edit security groups](#)

Select an existing key pair or create a new key pair



A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Choose an existing key pair

Select a key pair

cmj-key

☒ I acknowledge that I have access to the selected private key file (cmj-key.pem), and that without this file, I won't be able to log into my instance.

[Cancel](#)

[Launch Instances](#)

Protocol ⓘ

Type ⓘ

Port Range (Code) ⓘ

Source ⓘ

SSH

TCP

22

0.0.0.0/0

[Cancel](#)

[Previous](#)

[Launch](#)



Launch Status



Your instance is now launching

The following instance launch has been initiated: [i-bc83d5da](#) [View launch log](#)



Get notified of estimated charges

[Create billing alerts](#) to get an email notification when estimated charges on your AWS bill exceed \$0.0 (in other words, when you have exceeded the free usage tier).

How to connect to your instance

Your instance is launching, and it may take a few minutes until it is in the **running** state, when it will be ready for you to use. Usage hours on your new instance will start immediately and continue to accrue until you stop or terminate your instance.

Click **View Instances** to monitor your instance's status. Once your instance is in the **running** state, you can **connect** to it from the Instances screen. [Find out](#) how to connect to your instance.

▼ Here are some helpful resources to get you started

- [How to connect to your Linux instance](#)
- [Amazon EC2: User Guide](#)
- [Learn about AWS Free Usage Tier](#)
- [Amazon EC2: Discussion Forum](#)

While your instances are launching you can also

[Create status check alarms](#) to be notified when these instances fail status checks. (Additional charges may apply)

[Create and attach additional EBS volumes](#) (Additional charges may apply)

[Manage security groups](#)

[View Instances](#)

```
$ mysql -h ec2-54-211-15-127.compute-1.amazonaws.com -u codemash -p nuev
```


Manage DB Connections

Stored Connections

lor (local)
lor (dev)
lor (uat)
10.1.55.177
mgvs (local)
msecw (prod)
moodle (uat dev)
lms (dev01)
nuez

Connection Name: nuev

Connection Method: Standard (TCP/IP)

Parameters

Advanced

Hostname: ec2-184-72-144-98.co

Port: 3306

Name or IP address of the server host - TCP/IP port

Username: codemash

Name of the user to connect with.

Password:

Store in Keychain ...

Clear

The user's password.

Default Schema:

The schema that will be used as default schema

New

Delete

Duplicate

Move Up

Move Down

Test Connection

Close

user = codemash

password = codemash

Elastic IPs
Placement Groups
Load Balancers
Key Pairs
Network Interfaces

Instance: i-3b226e43 (cmj-db-master) Public DNS: ec2-54-211-15-127.compute-1.amazonaws.com

Description

Status Checks

Monitoring

Tags

Instance ID	i-3b226e43	Public DNS	ec2-54-211-15-127.compute-1.amazonaws.com
Instance state	running	Public IP	54.211.15.127
Instance type	t1.micro	Elastic IP	-
Private DNS	ip-10-164-106-11.ec2.internal	Availability zone	us-east-1b

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Feedback

```

// environment specific settings
environments {
    development {
        dataSource {
            dbCreate = "update"
            url = "jdbc:h2:mem:devDb;MVCC=TRUE"
        }
    }
    test {
        dataSource {
            dbCreate = "update"
            url = "jdbc:h2:mem:testDb;MVCC=TRUE"
        }
    }
    production {
        dataSource {
            driverClassName = "com.mysql.jdbc.Driver"
            dialect = "org.hibernate.dialect.MySQL5Dialect"
            username = "codemash"
            password = "codemash"
            dbCreate = "update"
            url = "jdbc:mysql://ec2-54-211-15-127.compute-1.amazonaws.com:3306/nuez"
            pooled = true
            properties {
                maxActive = -1
                minEvictableIdleTimeMillis = 1800000
                timeBetweenEvictionRunsMillis = 1800000
                numTestsPerEvictionRun = 3
                testOnBorrow = true
                testWhileIdle = true
                testOnReturn = true
                validationQuery = "SELECT 1"
            }
        }
    }
}

```

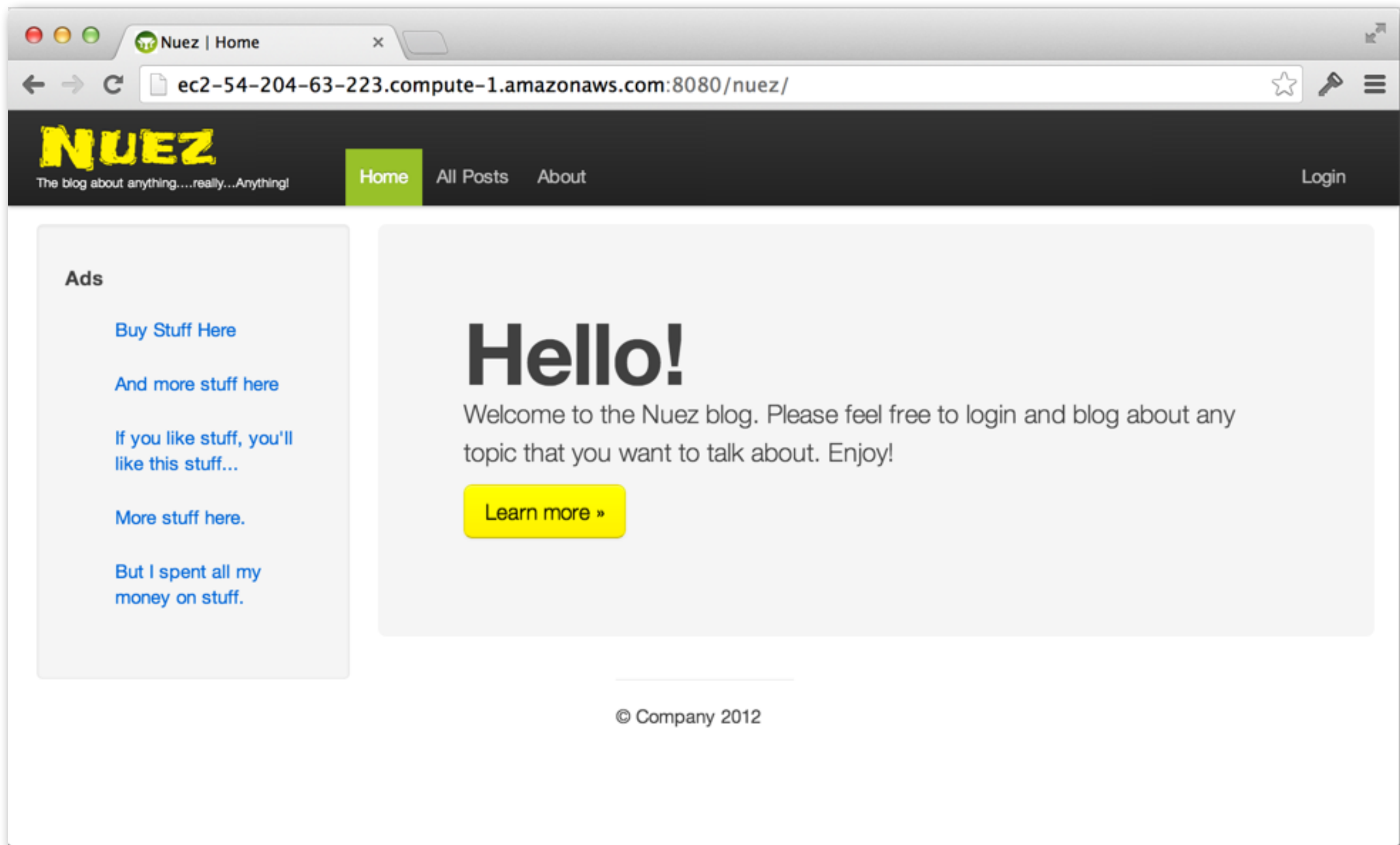
← username/password

← mysql instance url

grails war

```
export GRAILS_HOME=~/.grails-2.0.0
export PATH=$PATH:$GRAILS_HOME/bin
```

```
sudo cp target/nuez-0.1.war /usr/share/tomcat7/webapps/nuez.war
```



<http://ec2-54-204-63-223.compute-1.amazonaws.com:8080/nuez/>

Please Login

Username:

Password:

☐ Remember me

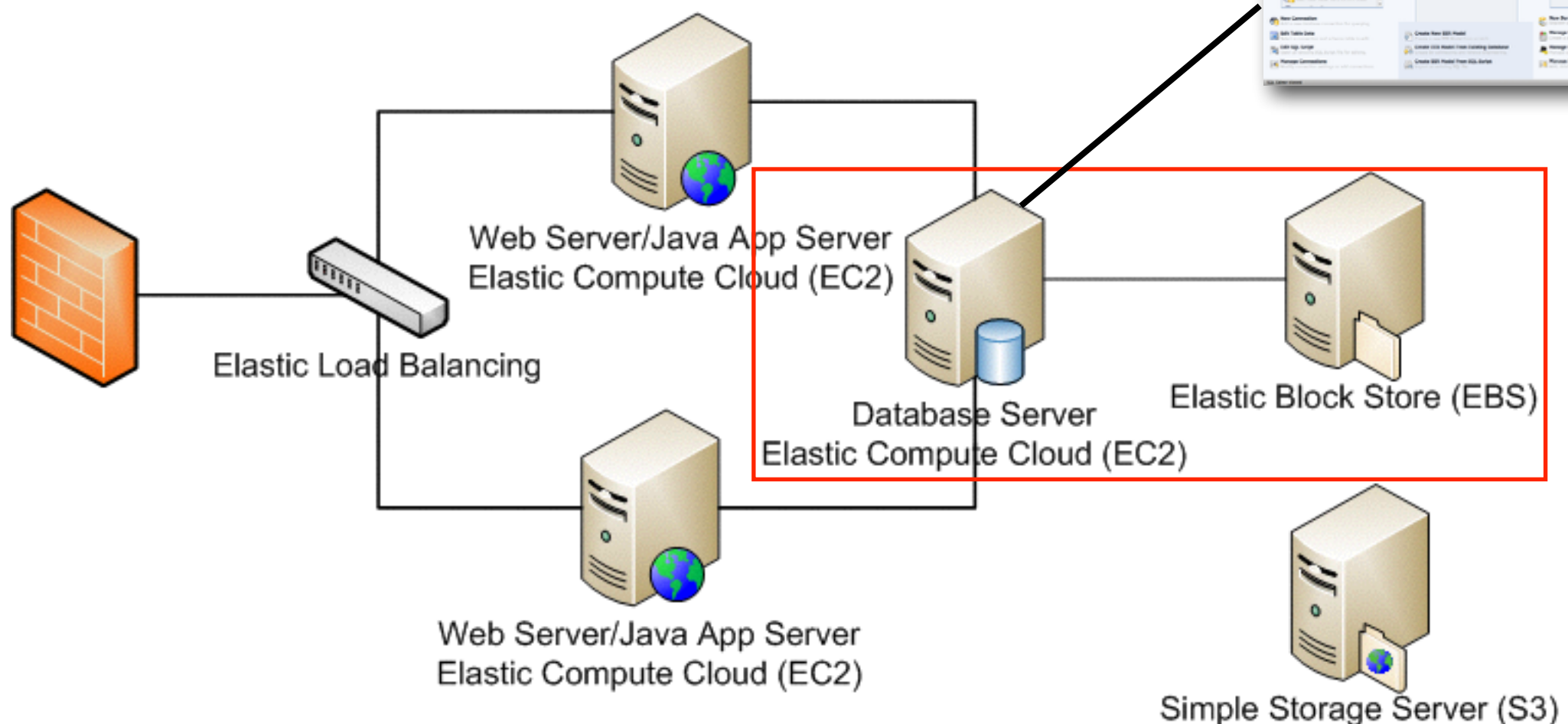
Login

blogger

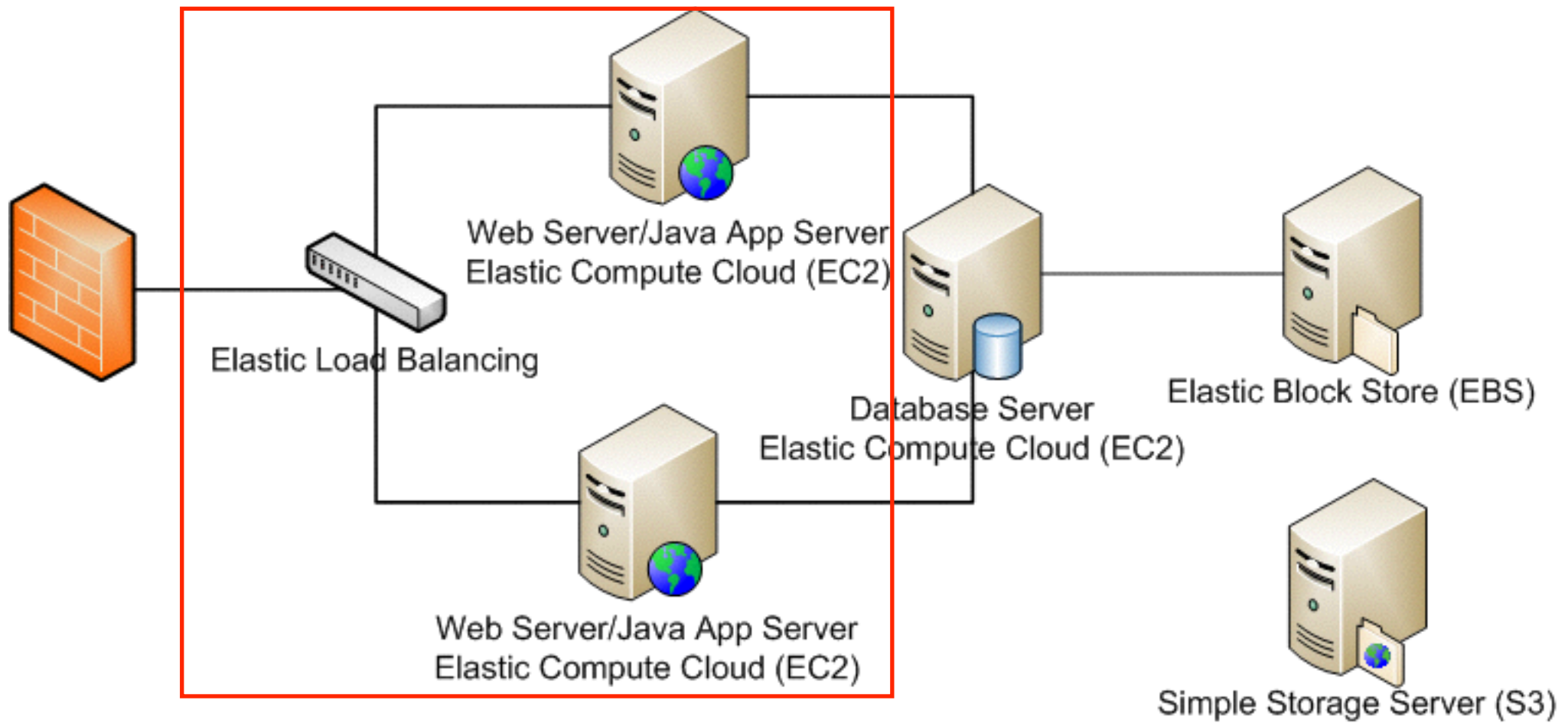
1234abcd

Lab 2

1. Start instance of aws-tutorial-mysql instance
2. Connect with mysql tool or ssh to instance
3. Change nuev application database string
4. Deploy nuev application
5. Test nuev application



LOAD BALANCING



Services Edit

cmj @ 563700736850 N. Virginia Help

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

Launch Instance Connect Actions

Filter: All instances All instance types Search Instances

1 to 4 of 4 Instances

	Name	Instance ID	Availability Zone	Instance State	Status Checks	Alarm
<input checked="" type="checkbox"/>	cmj-webapp-01	i-25054a5d	us-east-1b	running	2/2 check...	None
<input type="checkbox"/>	cmj-db-master	i-3b...	us-east-1b	running	2/2 check...	None
<input type="checkbox"/>	cmj-db-master-old	i-b...	us-east-1b	terminated		None
<input type="checkbox"/>	mysqladb	i-c9...	us-east-1b	terminated		None

Instance: i-25054a5d (cmj-webapp-01)

DescriptionStatus Checks

Instance ID

Instance state

Instance type

Private DNS

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

Public DNS

Public IP

Elastic IP

Availability zone

ec2-54-204-63-223.compute-1.amazonaws.com

54.204.63.223

-

us-east-1b

Feedback

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Launch another one just like it.


```
scp -i cmj-key.pem cmj-key.pem ec2-user@ec2-54-204-63-223.compute-1.amazonaws.com:~/ssh/
```

```
scp -i ~/.ssh/cmj-key.pem target/nuez-0.1.war ec2-user@ec2-54-227-224-140.compute-1.amazonaws.com:~
```

```
sudo mv nuev-0.1.war /usr/share/tomcat7/webapps/nuez.war
```



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

Create Load Balancer

Delete



Viewing: All Load Balancers ▾

Search



No Items



You do not have any load balancers in this region.
Click the button below to create a load balancer for distributing traffic across your instances.

Create Load Balancer

name load balancer based on naming convention

Services Edit

cmj @ 563700736850 N. Virginia Help

EC2 Dashboard

Create Load Balancer Delete

Create a New Load Balancer

Cancel

This wizard will walk you through setting up a new load balancer. Begin by giving your new load balancer a unique name so that you can identify it from other load balancers you might create. You will also need to configure ports and protocols for your load balancer. Traffic from your clients can be routed from any load balancer port to any port on your EC2 instances. By default, we've configured your load balancer with a standard web server on port 80.

Load Balancer Name: cmj-nuez-lb

Create LB inside: EC2

Create an internal load balancer: ☐ (what's this?)

Listener Configuration:

Load Balancer Protocol	Load Balancer Port	Instance Protocol	Instance Port	Actions
HTTP	80	HTTP	8080	<div>Remove</div>
<div>HTTP</div>	<div></div>	<div>HTTP</div>	<div></div>	<div>Save</div>

Continue

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Feedback



EC2 Dashboard

Create Load Balancer

Delete



Events

Tags

[-] INSTANCES

Instances

Spot Req

Reserved

[-] IMAGES

AMIs

Bundle Ta

[-] ELASTIC B

Volumes

Snapshot

[-] NETWORK

Security G

Elastic IP

Placemer

Load Bal

Key Pairs

Network

No Items



Create a New Load Balancer

Cancel

DEFINE LOAD
BALANCERADD EC2
INSTANCES

REVIEW

Your load balancer will automatically perform health checks on your EC2 instances and only route traffic to instances that pass the health check. If an instance fails the health check, it is automatically removed from the load balancer. Customize the health check to meet your specific needs.

Configuration Options:

Ping Protocol: HTTP ▾

Ping Port: 8080

Ping Path: /nuez/about/index

health check



Advanced Options:

Response Timeout: 5 Seconds

Health Check Interval: 0.5 Minutes

Unhealthy Threshold: 2 ▾

Healthy Threshold: 10 ▾

Time to wait when receiving a response from the health check (2 sec - 60 sec).

Amount of time between health checks (0.1 min - 5 min)

Number of consecutive health check failures before declaring an EC2 instance unhealthy.

Number of consecutive health check successes before declaring an EC2 instance healthy.

< Back

Continue





EC2 Dashboard

Create Load Balancer

Delete



Events

Tags

[-] INSTANCES

Instances

Spot Req

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[-] ELASTIC B

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Security G

Elastic IP

Placemer

Load Bal

Key Pairs

Network

No Items > >>

Create a New Load Balancer

Cancel

DEFINE LOAD
BALANCERCONFIGURE
HEALTH CHECKADD EC2
INSTANCES

REVIEW

The table below lists all your running EC2 Instances that are not already behind another load balancer or part of an auto-scaling capacity group. Check the boxes in the Select column to add those instances to this load balancer.

Manually Add Instances to Load Balancer:

Select	Instance	Name	State	Security Groups	Availability Zone
<input type="checkbox"/>	i-3b226e43	cmj-db-master	running	cmj-db-sg	us-east-1b
<input checked="" type="checkbox"/>	i-25054a5d	cmj-webapp-01	running	cmj-webapp-sg	us-east-1b
<input checked="" type="checkbox"/>	i-93345bf4	cmj-webapp-02	running	cmj-webapp-sg	us-east-1b

[select all](#) | [select none](#)

Availability Zone Distribution:

2 instances in us-east-1b[< Back](#)

Continue





EC2 Dashboard

Create Load Balancer

Delete



Events

Tags

[-] INSTANCES

Instances

Spot Req

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[-] ELASTIC B

Volumes

Snapshot

[-] NETWORK

Security G

Elastic IP

Placemer

Load Bal

Key Pairs

Network I

Create a New Load Balancer

Cancel

DEFINING
LOAD
BALANCERCONFIGURING
HEALTH
CHECKADDING
EC2
INSTANCES

REVIEW

DEFINE LOAD BALANCER

Load Balancer Name: cmj-nuez-lb
Scheme: internet-facing
Port Configuration: 80 (HTTP) forwarding to 8080 (HTTP)

[Edit Load Balancer Definition](#)

CONFIGURE HEALTH CHECK

Ping Target: HTTP:8080:/index.html
Timeout: 5
Interval: 0.5

Unhealthy Threshold: 2
Healthy Threshold: 10

[Edit Health Check](#)

ADD EC2 INSTANCES

EC2 Instances: i-25054a5d, i-93345bf4

[Edit EC2 Instance Selection](#)

VPC INFORMATION

VPC:
Subnets:

[< Back](#)

Create



Please review your selections on this page.
Clicking "Create" will launch your load balancer.
Check the Amazon EC2 product page for load
balancer pricing info



EC2 Dashboard

Create Load Balancer

Delete



Events

Tags

[-] INSTANCES

Instances

Spot Req

Reserved

[-] IMAGES

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Bundle Ta

[-] ELASTIC B

Volumes

Snapshot

[-] NETWORK

Security G

Elastic IP

Placemer

Load Bal

Key Pairs

Network I

1 Items



Availability Zones

East-1b

**Create a New Load Balancer**

Cancel

Your load balancer has been created.

Note: It may take a few minutes for your instances to become active in the new load balancer.

> [View my load balancers and check their status.](#)< [Back](#)

Close





EC2 Dashboard

Events

Tags

▢ INSTANCES

Instances

Spot Requests

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Load Balancers

Key Pairs

Network Interfaces

Create Load Balancer

Delete



Viewing: All Load Balancers ▾

Search

1 to 1 of 1 Items

<input checked="" type="checkbox"/>	Load Balancer Name	DNS Name	Port Configuration	Availability Zones
<input checked="" type="checkbox"/>	cmj-nuez-lb	cmj-nuez-lb-420752541.us-east-1.elb.amazona	80 (HTTP) forwarding to 8080 (HTTP)	us-east-1b

Here is the base url
to access the load
balancer

1 Load Balancer selected



Load Balancer: cmj-nuez-lb



Description

Instances

Health Check

Monitoring

Security

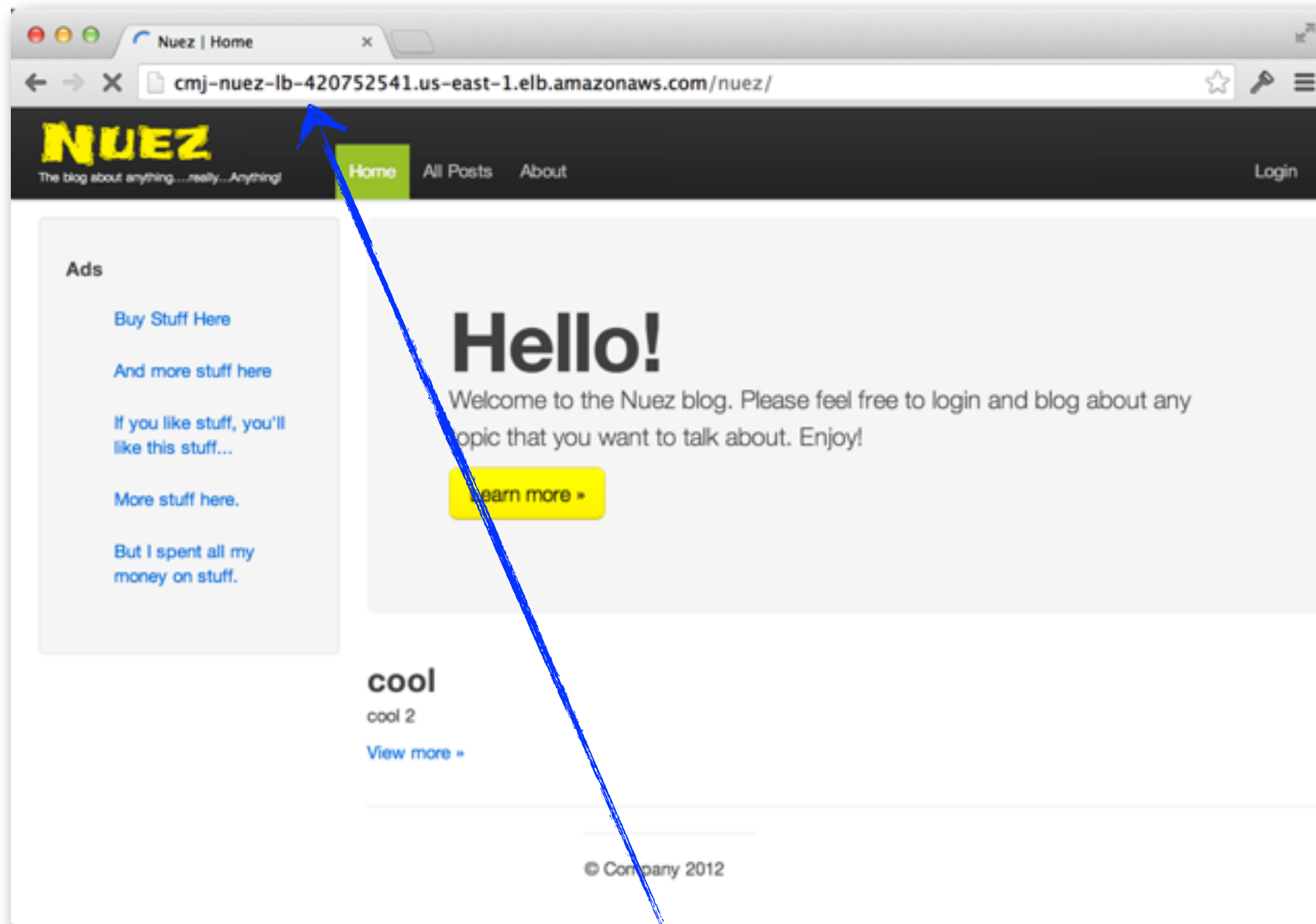
Listeners

DNS Name:

cmj-nuez-lb-420752541.us-east-1.elb.amazonaws.com (A Record)
ipv6.cmj-nuez-lb-420752541.us-east-1.elb.amazonaws.com (AAAA Record)
dualstack.cmj-nuez-lb-420752541.us-east-1.elb.amazonaws.com (A or AAAA Record)

Note: Because the set of IP addresses associated with a LoadBalancer can change over time, you should never create an "A" record with any specific IP address. If you want to use a friendly DNS name for your LoadBalancer instead of the name generated by the Elastic Load Balancing service, you should create a CNAME record for the LoadBalancer DNS name, or use Amazon Route 53 to create a hosted zone. For more information, see the [Using Domain Names With Elastic Load Balancing](#)


Scheme: internet-facing**Status:** 0 of 2 instances in service**Port Configuration:** 80 (HTTP) forwarding to 8080 (HTTP)
Stickiness: Disabled [\(edit\)](#)**Availability Zones:** us-east-1b





cmj @ 563700736850 ▾


N. Virginia ▾


Help ▾















1 to 1 of 1 Items






Port Configuration	Availability Zones
80 (HTTP) forwarding to 8080 (HTTP)	us-east-1b







Listeners

Elastic IPs

Placement Groups

Load Balancers

Key Pairs

Network Interfaces

DNS Name:

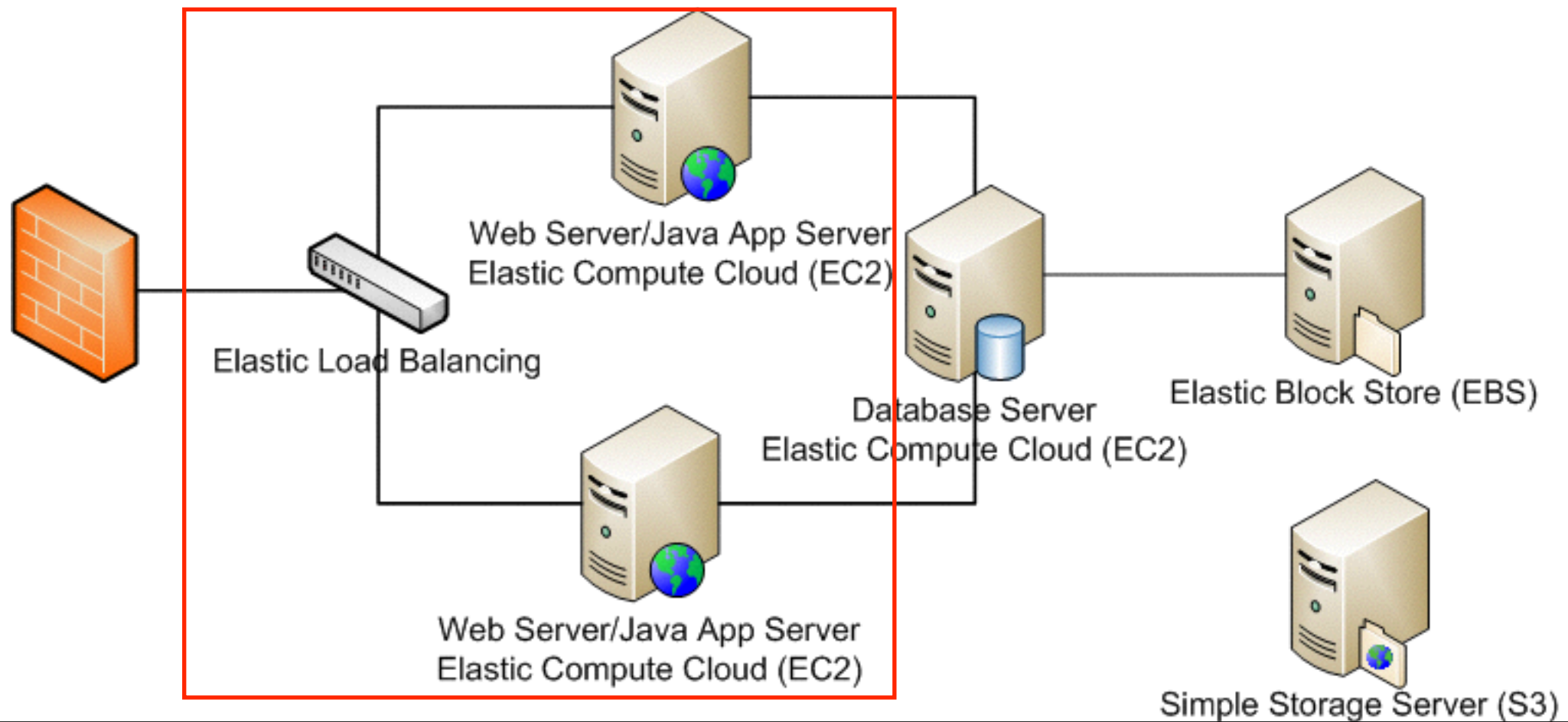
cmj-nuez-lb-420752541.us-east-1.elb.amazonaws.com (A Record)
ipv6.cmj-nuez-lb-420752541.us-east-1.elb.amazonaws.com (AAAA Record)
dualstack.cmj-nuez-lb-420752541.us-east-1.elb.amazonaws.com (A or AAAA Record)

Note: Because the set of IP addresses associated with a LoadBalancer can change over time, you should never create an "A" record with any specific IP address. If you want to use a friendly DNS name for your LoadBalancer instead of the name generated by the Elastic Load Balancing service, you should create a CNAME record for the LoadBalancer DNS name, or use Amazon Route 53 to create a hosted zone. For more information, see the [Using Domain Names With Elastic Load Balancing](#)

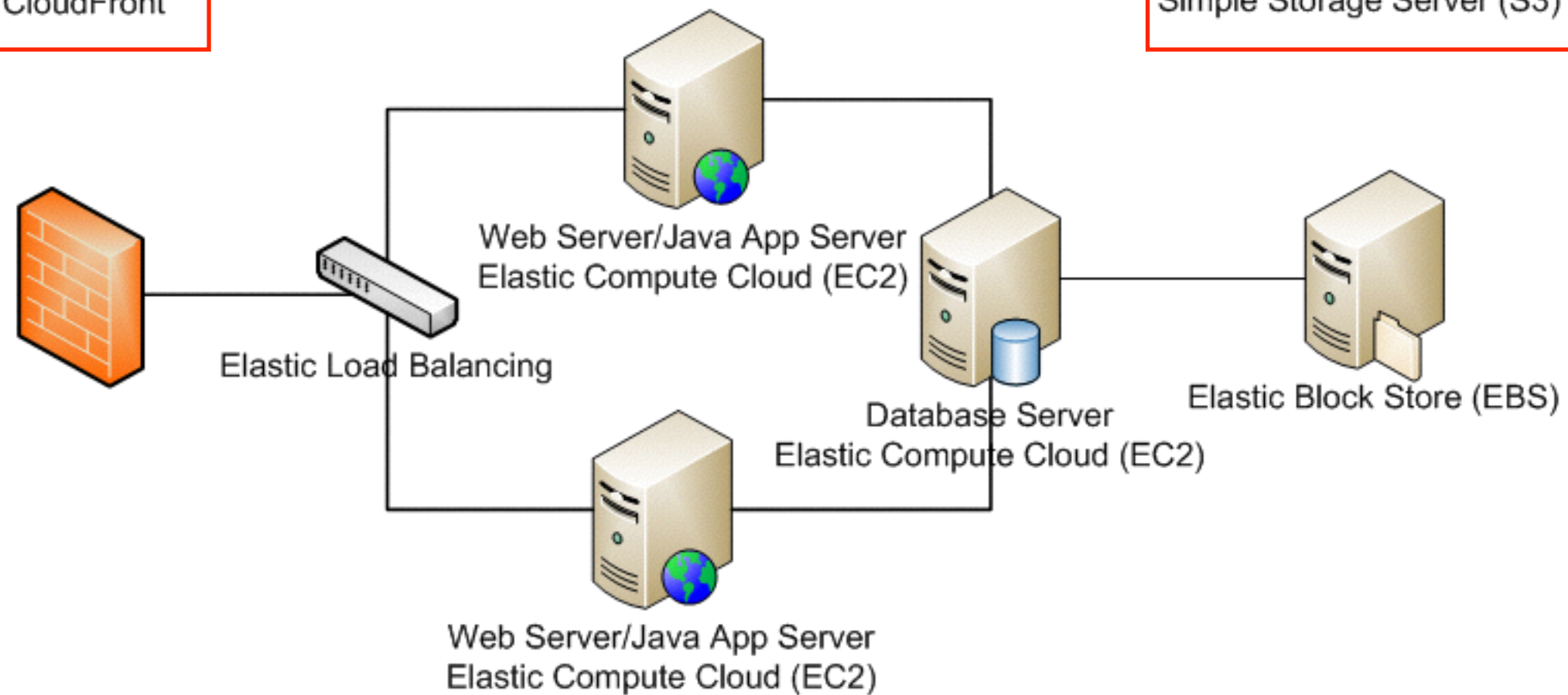
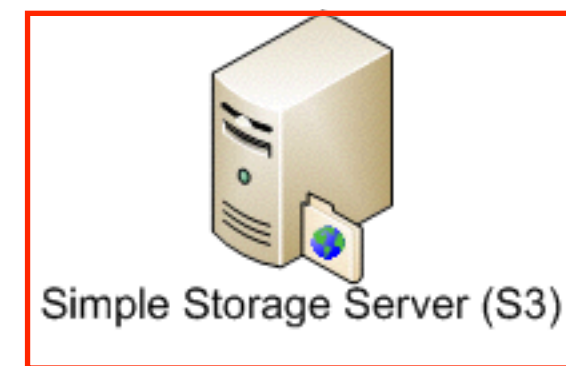
Scheme:	internet-facing
Status:	0 of 2 instances in service
Port Configuration:	80 (HTTP) forwarding to 8080 (HTTP) Stickiness: Disabled (edit)
Availability Zones:	us-east-1b

Lab 3

1. Create/start another instance of aws-tutorial-webapp
2. Create a new load balancer
3. Add both aws-tutorial-webapp EC2 instances to load balancer



CDN



CloudFront Pricing

On-Demand Pricing

Regional Data Transfer Out (per GB)

	United States	Europe	Hong Kong & Singapore	Japan	South America	Australia	Reserved Capacity Pricing
First 10 TB / month	\$0.120	\$0.120	\$0.190	\$0.201	\$0.250	\$0.190	contact us
Next 40 TB / month	\$0.080	\$0.080	\$0.140	\$0.148	\$0.200	\$0.140	contact us
Next 100 TB / month	\$0.060	\$0.060	\$0.120	\$0.127	\$0.180	\$0.120	contact us
Next 350 TB / month	\$0.040	\$0.040	\$0.100	\$0.106	\$0.160	\$0.100	contact us
Next 524 TB / month	\$0.030	\$0.030	\$0.080	\$0.085	\$0.140	\$0.095	contact us
Next 4 PB / month	\$0.025	\$0.025	\$0.070	\$0.075	\$0.130	\$0.090	contact us
Over 5 PB / month	\$0.020	\$0.020	\$0.060	\$0.065	\$0.125	\$0.085	contact us

Request Pricing (per 10,000)

	United States	Europe	Hong Kong & Singapore	Japan	South America	Australia	Reserved Capacity Pricing
HTTP requests	\$0.0075	\$0.0090	\$0.0090	\$0.0095	\$0.0160	\$0.0090	contact us
HTTPS requests	\$0.0100	\$0.0120	\$0.0120	\$0.0130	\$0.0220	\$0.0125	contact us

[Create Bucket](#)

Actions ▾

None

Properties

Transfers



All Buckets

	Name
	elasticbeanstalk-us-east-1-563700736850
	elasticbeanstalk-us-west-2-563700736850

**S3 Console**

Let us know what you think, with the Feedback button at the bottom of the page.

create bucket name with naming convention

The screenshot shows the Amazon S3 console interface. At the top, there's a navigation bar with 'Services' and 'Edit' dropdowns, and a user profile 'cmj @ 563700736850'. Below this, a 'Create Bucket' button is visible. A modal dialog titled 'Create a Bucket - Select a Bucket Name and Region' is open in the center. The dialog contains a text input for 'Bucket Name' with the value 'cmj-static-resources' and a dropdown for 'Region' set to 'US Standard'. At the bottom of the dialog are buttons for 'Set Up Logging >', 'Create', and 'Cancel'. A blue arrow originates from the 'Create Bucket' button in the top left and points to the 'Bucket Name' input field. Another blue arrow points from the 'Create' button in the dialog box to the bottom right.

Services Edit cmj @ 563700736850 Global Help

Create Bucket Actions

All Buckets

Name
elasticbeanstalk-us-east-1-563700736850
elasticbeanstalk-us-west-2-563700736850

S3 Console

Create a Bucket - Select a Bucket Name and Region Cancel

A bucket is a container for objects stored in Amazon S3. When creating a bucket, you can choose a Region to optimize for latency, minimize costs, or address regulatory requirements. For more information regarding bucket naming conventions, please visit the [Amazon S3 documentation](#).

Bucket Name: cmj-static-resources

Region: US Standard

Set Up Logging > Create Cancel

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Upload

Create Folder

Actions 



None

Properties

Transfers



All Buckets / cmj-static-resources

	Name	Storage Class	Size	Last Modified
	<input type="text" value="static"/>	 		

The bucket 'cmj-static-resources' is empty



Services ▾

Edit ▾

cmj @ 563700736850 ▾

Global ▾

Help ▾

Upload

Create Folder

Actions ▾

None

Properties

Transfers



All Buckets / cmj-static-resources / static

	Name	Storage Class	Size	Last Modified
<input type="checkbox"/>	 css	--	--	--
<input type="checkbox"/>	 images	--	--	--
<input type="checkbox"/>	 js	--	--	--



Services ▾

Edit ▾

cmj @ 563700736850 ▾

Global ▾

Help ▾

Upload

Create Folder

Actions ▾

None

Properties

Transfers



All Buckets / cmj-static-resources / static / css



Name

Storage Class

Size

Last Modified

The folder 'css' is empty

Transfers



☐ Automatically clear finished transfers

✓ Done

✗ Delete: Deleting js from static

✓ Done

📡 Make Public: Making static public in cmj-static-resources

✓ Done

⬆ Upload: Uploading 4 items to cmj-static-resources

✓ Done

✗ Delete: Deleting 4 objects from css



Services ▾

Edit ▾

cmj @ 563700736850 ▾

Global ▾

Help ▾

Upload

Create Folder

Actions ▾

None

Properties

Transfers



All Buckets / cmj-static-resources / static / css

Name

Upload - Select Files

Cancel X

Upload to: All Buckets / cmj-static-resources / static / css

To upload files (up to 5 TB each) to Amazon S3, click **Add Files**. To upload whole folders to Amazon S3, click **Enable Enhanced Uploader (BETA)**, which can take up to 2 minutes as it downloads a Java™ Applet (requires [Java SE 6 Update 10 or later](#)). To remove files already selected, click the **X** to the far right of the file name.

No files added...



Add Files



Remove Selected Files



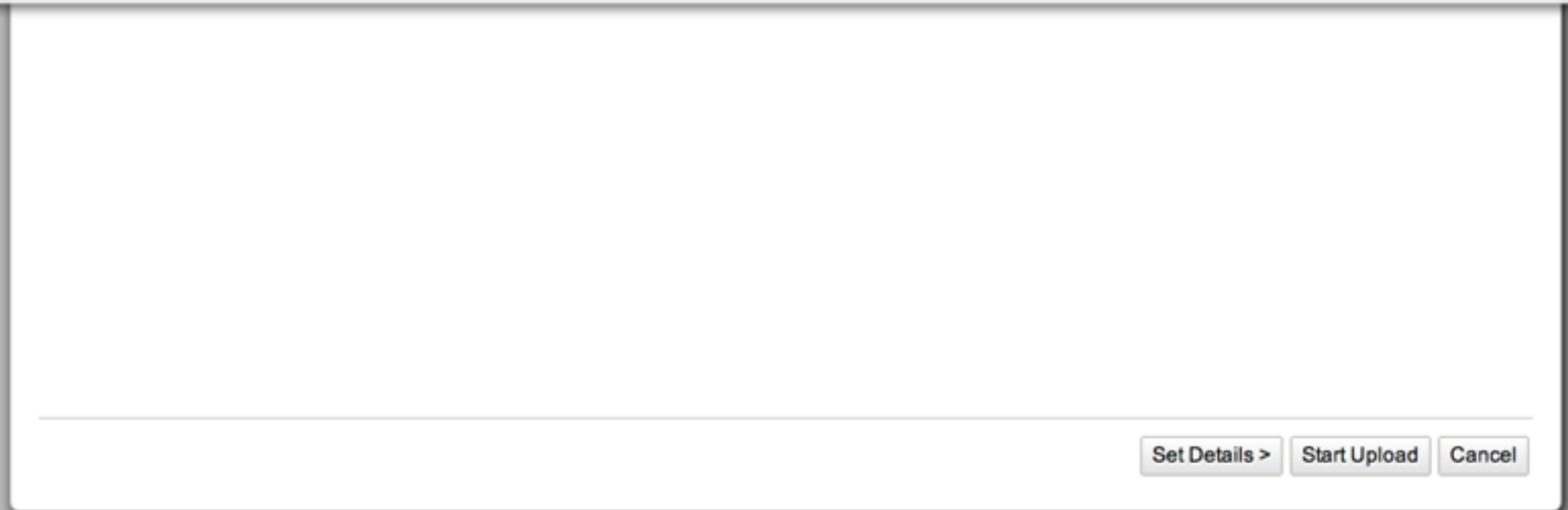
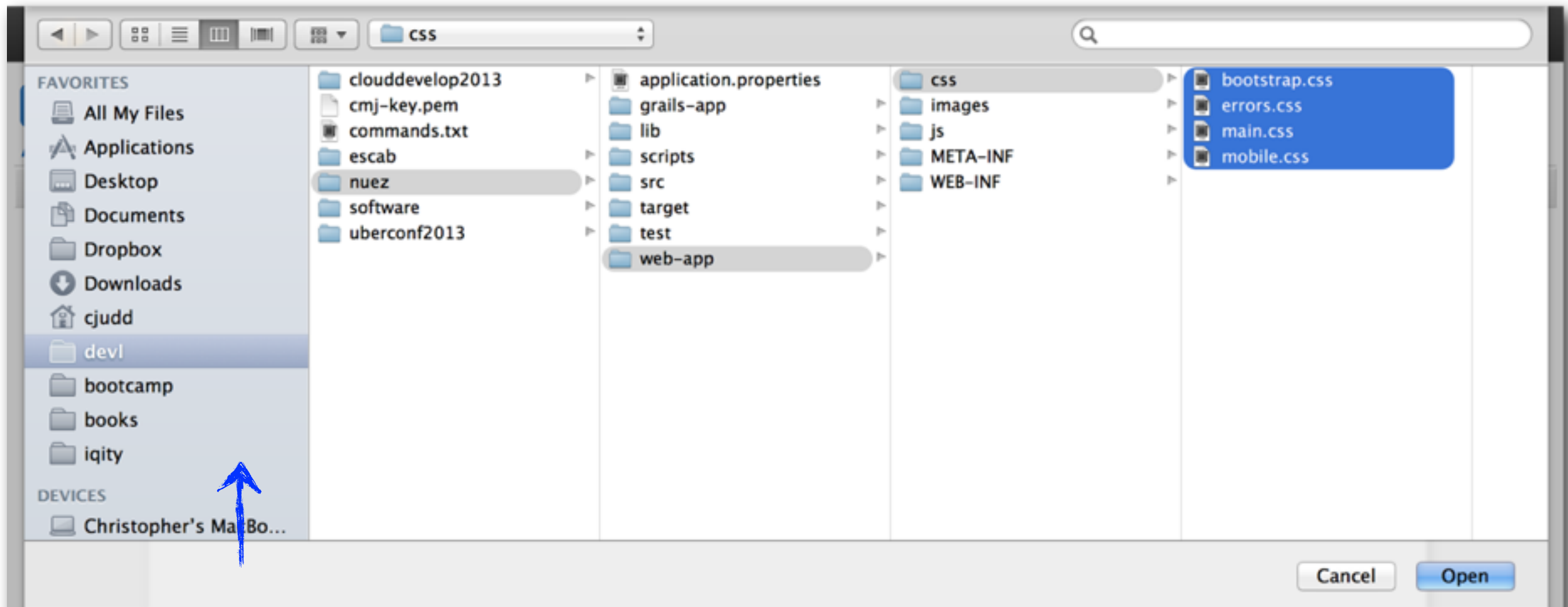
Enable Enhanced Uploader (BETA)

Number of files: 0 Total upload size: 0 bytes

Set Details >

Start Upload

Cancel





Upload

Create Folder

Actions ▾

None

Properties

Transfers



All Buckets / cmj-static-resources / static / css

Name


Upload - Select Files

Cancel X

Upload to: All Buckets / cmj-static-resources / static / css

To upload files (up to 5 TB each) to Amazon S3, click **Add Files**. To upload whole folders to Amazon S3, click **Enable Enhanced Uploader (BETA)**, which can take up to 2 minutes as it downloads a Java™ Applet (requires [Java SE 6 Update 10 or later](#)). To remove files already selected, click the **X** to the far right of the file name.

 bootstrap.css (58.8 KB)	X
 errors.css (1.6 KB)	X
 main.css (10.9 KB)	X
 mobile.css (1.3 KB)	X

 Add Files Remove Selected Files Enable Enhanced Uploader (BETA)

Number of files: 4 Total upload size: 72.9 KB

Set Details >

Start Upload

Cancel





Services ▾

Edit ▾

cmj @ 563700736850 ▾

Global ▾

Help ▾

Upload

Create Folder

Actions ▾


None

Properties

Transfers



All Buckets / cmj-static-resources

	Name	Storage Class	Size	Last Modified
<input checked="" type="checkbox"/>	 static	--	--	--

Open

Make Public

Delete

Initiate Restore

Cut

Copy

Paste Into

Properties



Navigation

> **Distribution**

[-] Private Content

[How-To Guide](#)[Origin Access Identity](#)

CloudFront: Distributions



Create Distribution



Distribution Settings



Delete



Enable



Disable



Show/Hide



Refresh



Help

Amazon CloudFront Getting Started

Either your search returned no results, or you do not have any distributions. Click the button below to create a new CloudFront distribution. A distribution allows you to distribute content using a worldwide network of edge locations that provide low latency and high data transfer speeds ([learn more](#))



Create Distribution



CloudFront > Create Distribution

Step 1: Select delivery method

Step 2: Create distribution

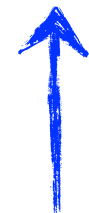
Select a delivery method for your content. [Learn More](#)

☒ Web☐ RTMP

Create a web distribution if you want to:

- Speed up distribution of static and dynamic content, for example, .html, .css, .php, and graphics files.
- Distribute media files using HTTP or HTTPS.
- Add, update, or delete objects, and submit data from web forms.
- Use live streaming to stream an event in real time.

You store your files in an origin — either an Amazon S3 bucket or a web server. After you create the distribution, you can add more origins to the distribution.

[Cancel](#)[Continue](#)



CloudFront > Create Distribution

Step 1: Select delivery method

Step 2: Create distribution

Origin Settings

Origin Domain Name

Origin ID

Restrict Bucket Access ☐ Yes ☒ No

Default Cache Behavior Settings

Path Pattern

Viewer Protocol Policy ☒ HTTP and HTTPS ☐ HTTPS Only

Allowed HTTP Methods ☒ GET, HEAD ☐ GET, HEAD, PUT, POST, PATCH, DELETE, OPTIONS

Object Caching ☒ Use Origin Cache Headers ☐ Customize

Minimum TTL

Forward Cookies

Whitelist Cookies

Forward Query Strings ☐ Yes

Grails Resource Change to Support CDN url

```
<link rel="shortcut icon" href="${grailsApplication.config.cloudfront.cdn.url}  
${resource(dir: 'images', file: 'favicon.ico')}" type="image/x-icon">
```

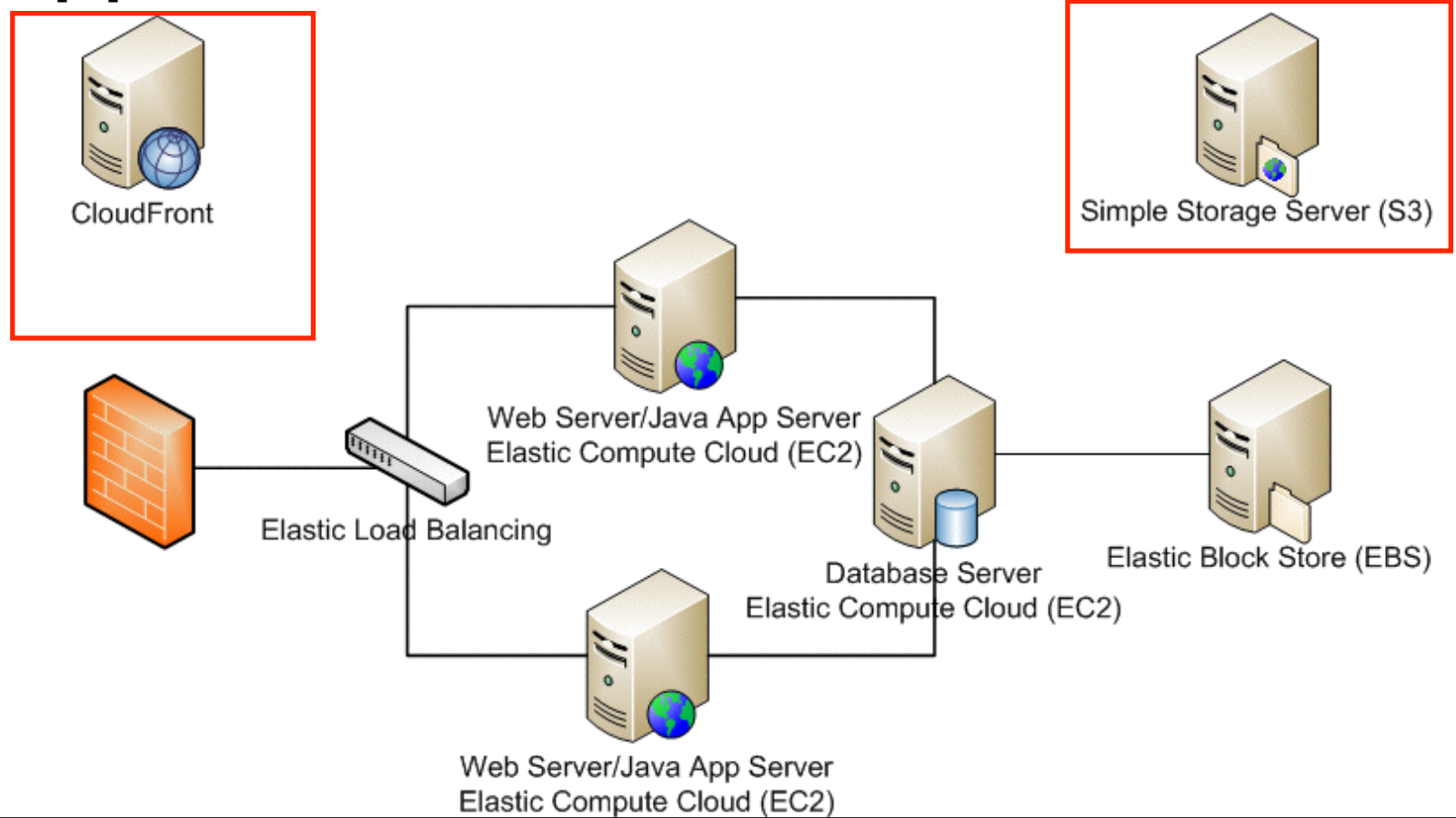
Configure Web App

Config.groovy

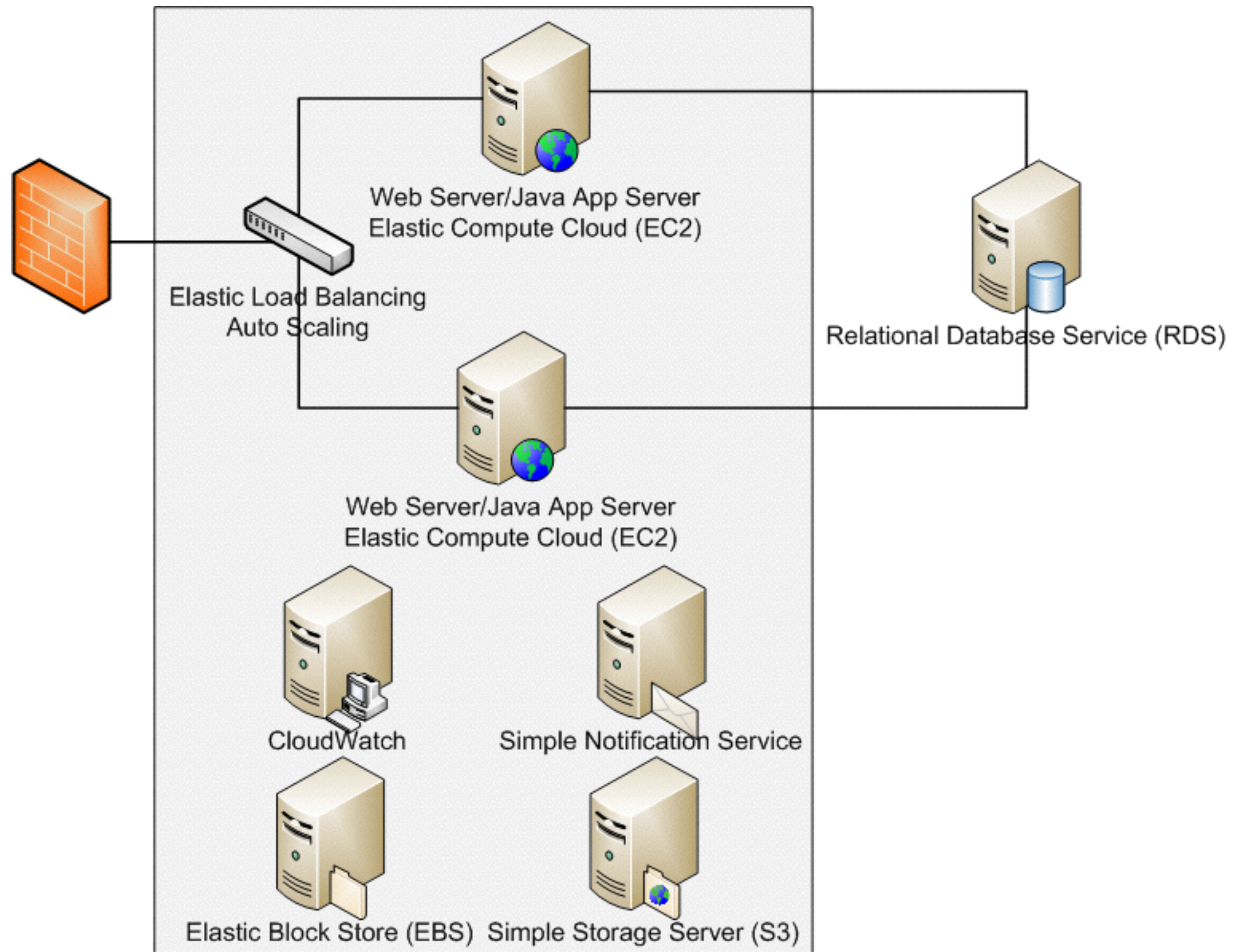
```
environments {  
    development {  
        grails.logging.jul.usebridge = true  
        cloudfront.cdn.url = ""  
    }  
    production {  
        grails.logging.jul.usebridge = false  
        cloudfront.cdn.url = "http://your.cloudfront.net"  
    }  
}
```

Lab 4

1. Create new S3 bucket
2. Create directory structure in S3
3. Upload all static content to S3 in the appropriate directories
4. Create new CloudFront distribution
5. Update nuev to use CloudFront distribution url
6. Redeploy nuev web app
7. Test



ELASTIC BEANSTALK





Services ▾

Edit ▾

cmj @ 563700736850 ▾

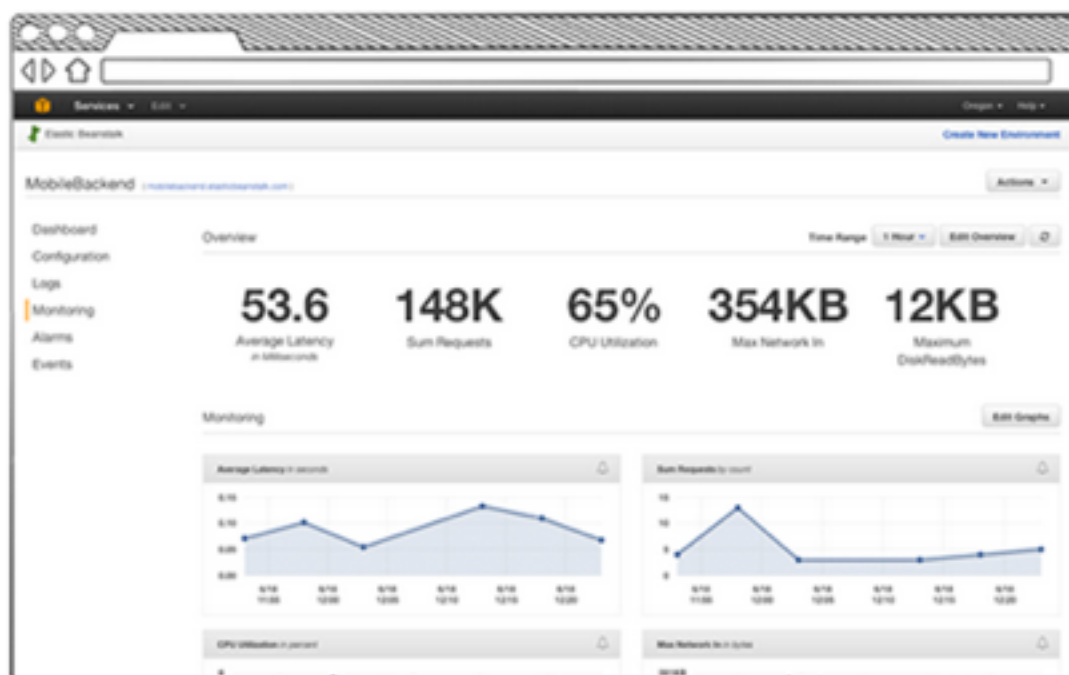
N. Virginia ▾

Help ▾



Elastic Beanstalk

[Create New Application](#)



Welcome to AWS Elastic Beanstalk

Elastic Beanstalk allows you to **deploy**, **monitor**, and **grow** your application quickly and easily. Let us do the heavy lifting so you can focus on your business.

Select a Platform ▾

[Get Started](#)

Get Started in Three Easy Steps



Select a Platform



Upload an Application or Use a Sample



Run it!

Start Now by Selecting Your Platform

**Application Info**

Environment Type

Application Version

Environment Info

Additional Resources

Configuration Details

Review Information

Application Information

To create a new application, enter the details of your application. [Learn more.](#)

Application name:

Must be less than 100 characters and cannot contain a /

Description:

Optional.

[Cancel](#)[Create](#)

[Application Info](#)**Environment Type**[Application Version](#)[Environment Info](#)[Additional Resources](#)[Configuration Details](#)[Review Information](#)

Environment Type

Choose whether to launch an environment and if so what kind.

☒ Launch a new environment running this application

Predefined configuration:

Tomcat



Elastic Beanstalk will create an environment running Tomcat 7 Java 7 on 64bit Amazon Linux 2013.09.

[Change Defaults](#)

Environment type:

Load balancing, autoscaling

[Learn more](#)

Cancel

Continue



[Application Info](#)[Environment Type](#)**[Application Version](#)**[Environment Info](#)[Additional Resources](#)[Configuration Details](#)[Review Information](#)

Application Version

Select a source for your application version.

Source: ☐ Sample application
☒ Upload your own
 nuez-0.1.war

[Cancel](#)[Back](#)[Continue](#)

[Application Info](#)[Environment Type](#)[Application Version](#)**[Environment Info](#)**[Additional Resources](#)[Configuration Details](#)[Review Information](#)

Environment Information

Enter your environment information. [Learn more.](#)

Environment name:

Environment URL:

Description:

Optional: 200 character maximum

[Application Info](#)[Environment Type](#)[Application Version](#)[Environment Info](#)**Additional
Resources**[Configuration Details](#)[RDS Configuration](#)[Review Information](#)

Additional Resources



Select additional resources for this environment.

- ☒ Create an RDS DB Instance with this environment [Learn more](#)
- ☐ Create this environment inside a VPC [Learn more](#)

[Cancel](#)[Back](#)[Continue](#)

[Application Info](#)[Environment Type](#)[Application Version](#)[Environment Info](#)[Additional Resources](#)**Configuration****Details**[RDS Configuration](#)[Review Information](#)

Configuration Details

Modify the following settings or click Continue to accept the default configuration. [Learn more.](#)



Instance type:   **m1.small**
Determines the processing power of the servers in your environment.

EC2 key pair:  [Refresh](#)  

Email address: 
Optional: Get notified about any major changes to your environment.

Application health check URL: 
Enter the relative URL that ELB continually monitors to ensure your application is available.

Enable rolling updates: ☐ Lets you control how changes to the environment's instances are propagated. [Learn more.](#)

Instance profile:  [Refresh](#) 
Your instance profile list could not be displayed. Select "Create a default instance profile" to create your environment with a default instance profile. Error message: User: arn:aws:iam::563700736850:user/cmj is not authorized to perform: iam:ListInstanceProfiles on resource: arn:aws:iam::563700736850:instance-profile/
Grants your environment specific permissions under your AWS account. [Learn more.](#)

[Cancel](#)[Back](#)[Continue](#) 

[Application Info](#)[Environment Type](#)[Application Version](#)[Environment Info](#)[Additional Resources](#)[Configuration Details](#)**[RDS Configuration](#)**[Review Information](#)

RDS Configuration

Specify your RDS settings. [Learn more.](#)

Snapshot: Refresh

DB engine: Refresh

Instance class: Refresh

Allocated storage:
You must specify a value from 5 GB to 1024 GB.

Username:

Password:

Retention setting:
Your RDS DB instance will be deleted if you terminate the environment. Choose create snapshot to save your data.

Availability:

[Cancel](#)[Back](#)[Continue](#)

[Application Info](#)[Environment Type](#)[Application Version](#)[Environment Info](#)[Additional Resources](#)[Configuration Details](#)[RDS Configuration](#)[Review Information](#)

Review

Review the following information. Then click Create.

Application Info

Application name	nuez
Description	nuez application

Environment Type

Container type	64bit Amazon Linux 2013.09 running Tomcat 7 Java 7
Environment type	Load balancing, autoscaling

Application Version

Application source	C:\fakepath\nuez-0.1.war
--------------------	--------------------------

Environment Info

Environment name	nuez
Environment URL	http://nuez.elasticbeanstalk.com

Configuration Details

Instance type	t1.micro
---------------	----------



Services ▾

Edit ▾

cmj @ 563700736850 ▾

N. Virginia ▾

Help ▾



Elastic Beanstalk

nuez ▾

[Create New Environment](#)

Info



Elastic Beanstalk is now creating your environment. When it has finished it will be running First Release.

[nuez](#) ▸ [nuez](#) ([nuez.elasticbeanstalk.com](#))

Actions ▾

Dashboard

Configuration

Logs

Monitoring

Alarms

Events

Overview

Refresh



Health

Red

Monitor

Running Version

First Release

Upload and Deploy



Configuration

Tomcat 7 Java 7

Edit

Recent Events

Show All

Time	Type	Details
2013-12-04 23:52:41 UTC-0500	WARN	Environment health has been set to RED
2013-12-04 23:52:36 UTC-0500	INFO	Successfully launched environment: nuez
2013-12-04 23:52:28 UTC-0500	INFO	Adding instance 'i-ecaa3891' to your environment.
2013-12-04 23:51:35 UTC-0500	INFO	Added EC2 instance 'i-ecaa3891' to Auto Scaling Group 'awseb-e-ih8gf4j7gh-stack-AWSEBAutoScalingGroup-ZMLNHDM8CJUY'.
2013-12-04 23:50:21 UTC-0500	INFO	Created CloudWatch alarm named: awseb-e-ih8gf4j7gh-stack-

nuez ▸ nuez (nuez.elasticbeanstalk.com)

Actions ▾

[Dashboard](#)[Configuration](#)[Logs](#)[Monitoring](#)[Alarms](#)[Events](#)**Elastic Beanstalk is updating your environment. Additional edits can't be made at this time.**[View Events](#)

RDS Database

You can access connectivity information for this RDS DB Instance through environment variables. [Learn more.](#)

Connectivity Information

DB endpoint: aapxsrh0evox2.c5txmmp6pqt.us-east-1.rds.amazonaws.com**Port:** 3306**Master username:** codemash

Configuration Information

DB engine: mysql**Engine version:** 5.5**Allocated storage:** 5**Instance class:** db.t1.micro**Multi Availability Zone:** false**Deletion policy:** Delete**Unable to modify environments in transition.**[Cancel](#)[Save](#)



RDS Dashboard

Database

Instances

Reserved Purchases

Snapshots

Security Groups

Parameter Groups

Option Groups

Subnet Groups

Events

Event Subscriptions

DB Security Groups > awseb-e-ih8gf4j7gh-stack-awsebrdsdbsecuritygroup-1h7vqw7jq87zb

▼ Security Group Details

Connection Type	Details	Status	Actions
CIDR/IP	CIDR/IP: 0.0.0.0/0	authorized	Remove
EC2 Security Group	AWS Account ID: 563700736850 EC2 Security Group: awseb-e-ih8gf4j7gh-stack-awsebsecuritygroup-11az2ue3dwpq7	authorized	Remove
<div>CIDR/IP ▾</div>	CIDR: <input type="text"/> Our best estimate for the CIDR of your current machine is 64.135.17.66/32 . However, if your machine is behind a proxy/firewall, this estimate may be inaccurate and you may need to contact your network administrator.		Add

[↻ Refresh Security Groups](#)

▼ Recent Events

Most Recent Events



Time	Source	System Notes
December 5, 2013 12:06:20 AM UTC-5	awseb-e-ih8gf4j7gh-stack-awsebrdsdbsecuritygroup-1h7vqw7jq87zb	Applied change to security group
December 4, 2013 11:41:40 PM UTC-5	awseb-e-ih8gf4j7gh-stack-awsebrdsdbsecuritygroup-1h7vqw7jq87zb	Applied change to security group

[see more events](#)

▼ Tags

Add tags to your RDS resources to organize and track your Amazon RDS costs. Tags represent your business dimensions, consist of a case-sensitive key/value pair, are stored in the cloud and are private to your account. As an example, you could define a tag with key = Staging and value = LocationDB. You can add up to 10 unique keys to each resource along with an optional value for each key. For more information, go to [Using Tags](#) in the RDS User Guide.

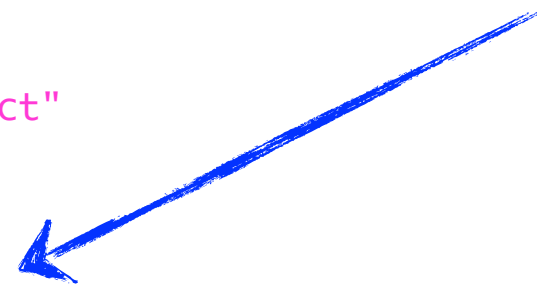
```
mysql -h aapxsrh0evoux2.c5txmmp6pqtb.us-east-1.rds.amazonaws.com -u codemash -pcodemash  
create database nuev;
```

Update Nuez with RDS Connection

// environment specific settings

```
environments {  
  development {  
    dataSource {  
      dbCreate = "update"  
      url = "jdbc:h2:mem:devDb;MVCC=TRUE"  
    }  
  }  
  test {  
    dataSource {  
      dbCreate = "update"  
      url = "jdbc:h2:mem:testDb;MVCC=TRUE"  
    }  
  }  
  production {  
    dataSource {  
      driverClassName = "com.mysql.jdbc.Driver"  
      dialect = "org.hibernate.dialect.MySQL5Dialect"  
      username = "codemash"  
      password = "codemash"  
      dbCreate = "update"  
      url = "jdbc:mysql://aapxsrh0evox2.c5txmmp6pqt.us-east-1.rds.amazonaws.com:3306/ebdb"  
      pooled = true  
      properties {  
        maxActive = -1  
        minEvictableIdleTimeMillis = 1800000  
        timeBetweenEvictionRunsMillis = 1800000  
        numTestsPerEvictionRun = 3  
        testOnBorrow = true  
        testWhileIdle = true  
        testOnReturn = true  
        validationQuery = "SELECT 1"  
      }  
    }  
  }  
}
```

rds url



[Dashboard](#)[Configuration](#)[Logs](#)[Monitoring](#)[Alarms](#)[Events](#)

Container Options

The following settings control container behavior and let you pass key-value pairs in as OS environment variables. [Learn more.](#)

Initial JVM heap size:

Specify the initial size of the memory allocation pool. This value must be a multiple of 1024 greater than 1MB. Use k or K for kilobytes, or m or M for megabytes. The default is 256m.

Maximum JVM heap

size:

Specify the maximum size of the memory allocation pool. This value must be a multiple of 1024 greater than 2MB. Use k or K for kilobytes, or m or M for megabytes. The default is 256m.

Maximum JVM
permanent generation
size:

Size of the permanent generation. The default is 64m.

JVM command line
options:

Arbitrary JVM options string.

Log Options

The following settings control the log publication behavior.

Instance profile:

User: [arn:aws:iam::563700736850:user/cmj](#) is not authorized to perform: [iam:ListInstanceProfiles](#) on resource: [arn:aws:iam::563700736850:instance-profile/](#)

The instance profile grants your environment specific permissions under your AWS account. [Learn More.](#)

☐ Enable log file rotation to Amazon S3. If checked, service logs are published to S3.

Services Edit

cmj @ 563700736850 N. Virginia Help

Elastic Beanstalknuez

Create New Environment

nuez ▶ nuez (nuez.elasticbeanstalk.com)

Dashboard

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Configuration

Tomcat 7 Java 7

Edit

Show All

Upload and Deploy

Upload application: Choose File nuez-0.1.war

Version label: nuez-0.1

To redeploy an existing version, go to [All Versions](#).

CancelDeploy

Recent Events

Time	Type	Details
2013-12-05 00:13:03 UTC-0500	INFO	Environment update completed successfully.
2013-12-05 00:13:03 UTC-0500	INFO	Successfully deployed new configuration to environment.
2013-12-05 00:11:40 UTC-0500	INFO	Updating environment nuez's configuration settings.
2013-12-05 00:11:31 UTC-0500	INFO	Environment update is starting.
2013-12-04 23:52:41 UTC-0500	WARN	Environment health has been set to RED

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Feedback



The blog about anything.....really....Anything!

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[And more stuff here](#)

[If you like stuff, you'll like this stuff...](#)

[More stuff here.](#)

[But I spent all my money on stuff.](#)

Hello!

Welcome to the Nuez blog. Please feel free to login and blog about any topic that you want to

[Learn more »](#)

PRICING

pay as you use

use small EC2 instance for one hour and pay \$0.065

- On-Demand - pay by hour no long-term commitment
- Reserved - one-time payment and discounted hourly rate
- Spot - bid for unused capacity

Example:

On-Demand - \$569.40 (\$0.065/hr)

Light Reserved - \$410.64 (\$0.039/hr + \$69)

Medium Reserved - \$370.24 (\$0.024/hr + \$160)

Heavy Reserved - \$335.16 (\$0.016/hr + \$195)

* small instance for one year



EC2 Dashboard

Events

Request Spot Instances

Cancel

Pricing History



Viewing:

All Requests ▾

Search



Spot Instance Pricing History

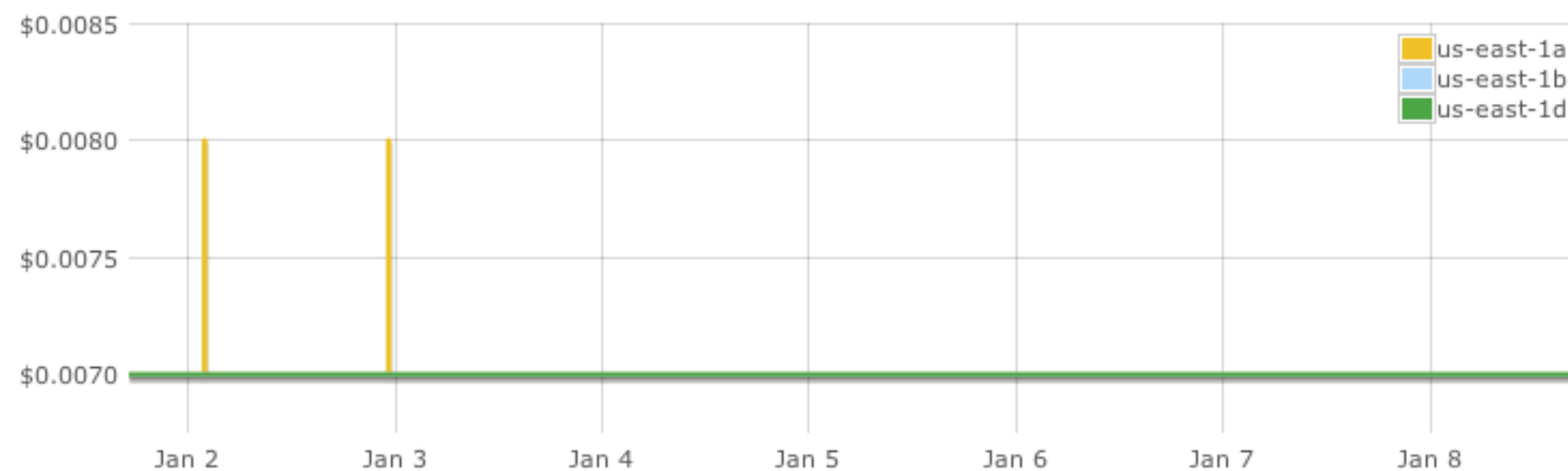
Cancel ✕

Product: Linux/UNIX ▾

Instance Type: m1.small ▾

Date Range: 1 week ▾

Zone: All zones ▾



Close

Load Balancers

Key Pairs

Network Interfaces

NEW! - [AWS lowers its pricing again! - Amazon S3 reduces storage price by 25% in all regions](#)

FREE USAGE TIER: New Customers get free usage tier for first 12 months ☒

Language:

English

Services

Estimate of your Monthly Bill (\$ 0.00)

Choose region:

US-East (Northern Virginia) & US-West (Oregon)

Inbound Data Transfer is Free and Outbound Data Transfer is 1 GB free per region per month



Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides resizable compute capacity in the cloud. It is designed to make web-scale computing easier for developers. Amazon Elastic Block Store (EBS) provides persistent storage to Amazon EC2 instances.

Clear Form

+ Compute: Amazon EC2 On-Demand Instances:

	Instances	Description	Operating System	Instance Type	Usage	Detailed Monitoring
	0		Linux	Micro	0 Hours/Mon	<input type="checkbox"/>

+ Compute: Amazon EC2 Reserved Instances:

	Instances	Description	Operating System	Instance Type	Offering Type	Term	Usage
	0		Linux	Small	Medium Utiliza	3 yr t	0 Hours/Mon

+ Storage: Amazon EBS Volumes:

	Volumes	Description	Volume Type	Storage	IOPS	Snapshot Storage
	0		Standard	0 GB	0	0 GB-month of Storage

Elastic IP:

Number of Additional Elastic IPs:

Elastic IP Non-attached Time: Hours/Mon

Number of Elastic IP Remaps: Per Month

Amazon EC2 Data Transfer:

Data Transfer In: GB/Month

Data Transfer Out: GB/Month

Regional Data Transfer: GB/Month

Public IP/Elastic IP Data Transfer: GB/Month

Elastic Load Balancing:

Number of Elastic LBs:

Total Data Processed by all ELBs: GB/Month

Common Customer Samples

Reset All

Free Website on AWS

AWS Elastic Beanstalk Default

Marketing Web Site

Web Application

Media Application

HPC Cluster

Disaster Recovery and Backup

European Web Application

We are currently Beta testing the AWS Simple Monthly Calculator. This Calculator provides an estimate of usage charges for AWS services based on certain information you provide. Monthly charges will be based on your actual usage of AWS services, and may vary from the estimates the Calculator has provided. [Give us your feedback](#) on our Developer Center Feedback forum.

<http://aws.amazon.com/calculator>

AWS Free Usage Tier (Per Month):

Elastic Compute Cloud (EC2)

- 750 hours of [Amazon EC2](#) Linux/UNIX or [RHEL](#)† Micro Instance usage (613 MB of memory and 32-bit and 64-bit platform support) – enough hours to run continuously each month*
- 750 hours of [Amazon EC2](#) Microsoft Windows Server‡ Micro Instance usage (613 MB of memory and 32-bit and 64-bit platform support) – enough hours to run continuously each month*
- 750 hours of an [Elastic Load Balancer](#) plus 15 GB data processing*
- 30 GB of [Amazon Elastic Block Storage](#), plus 2 million I/Os and 1 GB of snapshot storage*

Simple Storage Service (S3)

- 5 GB of [Amazon S3](#) standard storage, 20,000 Get Requests, and 2,000 Put Requests*

DynamoDB

- 100 MB of storage, 5 units of write capacity, and 10 units of read capacity for [Amazon DynamoDB](#).**

Relational Database Service (RDS)

- 750 hours of [Amazon RDS](#) Single-AZ Micro DB Instances, for running MySQL, Oracle BYOL or SQL Server (running SQL Server Express Edition) – enough hours to run a DB Instance continuously each month*
- 20 GB of database storage
- 10 million I/Os
- 20 GB of backup storage for your automated database backups and any user-initiated DB Snapshots

Simple Workflow (SWF)

- 1,000 [Amazon SWF](#) workflow executions can be initiated for free. A total of 10,000 activity tasks, signals, timers and markers, and 30,000 workflow-days can also be used for free**

Simple Queue Service (SQS) and Simple Notification Service (SNS)

- 1,000,000 Requests of [Amazon Simple Queue Service](#)**
- 1,000,000 Requests, 100,000 HTTP notifications and 1,000 email notifications for [Amazon Simple Notification Service](#)**

Amazon Elastic Transcoder

- 20 minutes of SD transcoding or 10 minutes of HD transcoding**

CloudWatch

- 10 [Amazon Cloudwatch](#) metrics, 10 alarms, and 1,000,000 API requests**

Data Transfer

- 15 GB of bandwidth out aggregated across all AWS services*

Data Pipeline

- 3 low frequency preconditions running on AWS per month*
- 5 low frequency activities running on AWS per month*

ElastiCache

- 750 hours of [Amazon ElastiCache](#) - enough hours to run a Cache Node continuously each month.*

RESOURCES

Products & Services

Compute

Amazon Elastic Compute Cloud (EC2)

Amazon Elastic MapReduce

Auto Scaling

Content Delivery

Amazon CloudFront

Database

Amazon SimpleDB

Amazon Relational Database Service (RDS)

Amazon ElastiCache

Deployment & Management

AWS Elastic Beanstalk

AWS CloudFormation

E-Commerce

Amazon Fulfillment Web Service (FWS)

Industry-specific Clouds

AWS GovCloud (US)

Messaging

Amazon Simple Queue Service (SQS)

Amazon Simple Notification Service (SNS)

Amazon Simple Email Service (SES)

Monitoring

Amazon CloudWatch

Networking

Amazon Route 53

Amazon Virtual Private Cloud (VPC)

Elastic Load Balancing

AWS Direct Connect

Payments & Billing

Amazon Flexible Payments Service (FPS)

Amazon DevPay

Storage

Amazon Simple Storage Service (S3)

Amazon Elastic Block Store (EBS)

AWS Import/Export

Support

AWS Premium Support

Web Traffic

Alexa Web Information Service

Alexa Top Sites






Workforce

Amazon Mechanical Turk

Products & Services

Amazon Web Services




Compute & Networking

-  **Direct Connect**
Dedicated Network Connection to AWS
-  **EC2**
Virtual Servers in the Cloud
-  **Elastic MapReduce**
Managed Hadoop Framework
-  **Route 53**
Scalable Domain Name System
-  **VPC**
Isolated Cloud Resources






Storage & Content Delivery

-  **CloudFront**
Global Content Delivery Network
-  **Glacier**
Archive Storage in the Cloud
-  **S3**
Scalable Storage in the Cloud
-  **Storage Gateway**
Integrates on-premises IT environments with Cloud storage






Database

-  **DynamoDB**
Predictable and Scalable NoSQL Data Store
-  **ElastiCache**
In-Memory Cache
-  **RDS**
Managed Relational Database Service

Deployment & Management

-  **CloudFormation**
Templated AWS Resource Creation
-  **CloudWatch**
Resource & Application Monitoring
-  **Data Pipeline** **NEW**
Orchestration for data-driven workflows
-  **Elastic Beanstalk**
AWS Application Container
-  **IAM**
Secure AWS Access Control

App Services

-  **CloudSearch**
Managed Search Service
-  **SES**
Email Sending Service
-  **SNS**
Push Notification Service
-  **SQS**
Message Queue Service
-  **SWF**
Workflow Service for Coordinating Application Components

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Architecture Center

- [Overview](#)
- [AWS Simple Icons](#)

Related Resources

- [AWS Economics Center](#)
- [Security & Compliance](#)
- [AWS Products & Services](#)
- [AWS Solutions](#)
- [Case Studies](#)

AWS Support

Please visit [AWS Support](#) for more details on getting one on one support for your architecture questions.

AWS Architecture Center

The AWS Architecture Center is designed to provide you with the necessary guidance and best practices to build highly scalable and reliable applications in the AWS Cloud. These resources will help you understand the AWS platform, its services and features, and will provide architectural guidance for design and implementation of systems that run on the AWS infrastructure.

Featured



Reference Implementation: Deploy a Microsoft SharePoint 2010 Server Farm in the AWS Cloud in 6 Simple Steps

Read Shaw Media Case Study "Our average uptime increased rapidly from 98.8% to 99.9% without re-architecting applications"



AWS Reference Architectures

The flexibility of AWS allows you to design your application architectures the way you like. AWS Reference Architecture Datasheets provide you with the architectural guidance you need in order to build an application that takes full advantage of the AWS cloud. Each datasheet includes a visual representation of the architecture and basic description of how each service is used.



Large Scale Processing and Huge Data sets
Build high-performance computing systems that involve Big Data ([PDF](#))



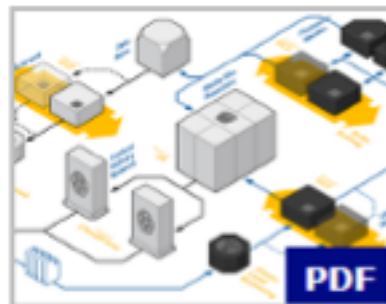
Ad Serving
Build highly-scalable online ad serving solutions ([PDF](#))



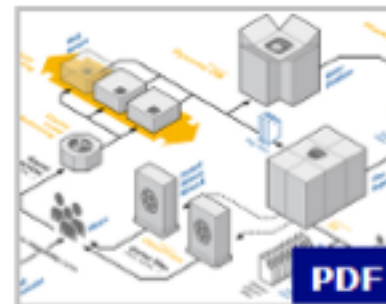
Disaster Recovery for Local Applications
Build cost-effective Disaster Recovery solutions for on-premises applications ([PDF](#))



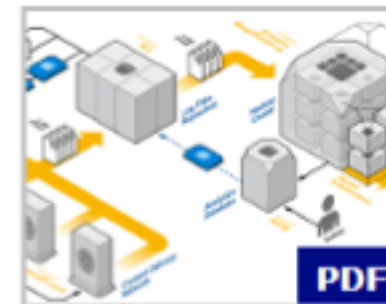
File Synchronization
Build simple file synchronization service ([PDF](#))



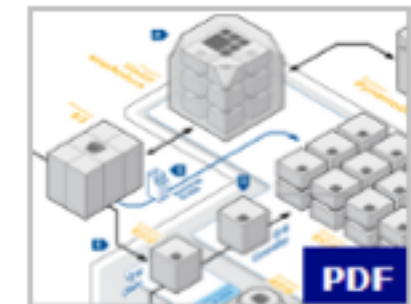
Media Sharing
Cloud-powered Media Sharing Framework ([PDF](#))



Online Games
Build powerful online games ([PDF](#))



Log Analysis
Analyze massive volumes of log data in the cloud ([PDF](#))



Financial Services Grid Computing
Build highly scalable and elastic grids for the Financial Services Sector ([PDF](#))



E-Commerce Website Part 1: Web Frontend
Build elastic Web Frontends for an e-Commerce website ([PDF](#))



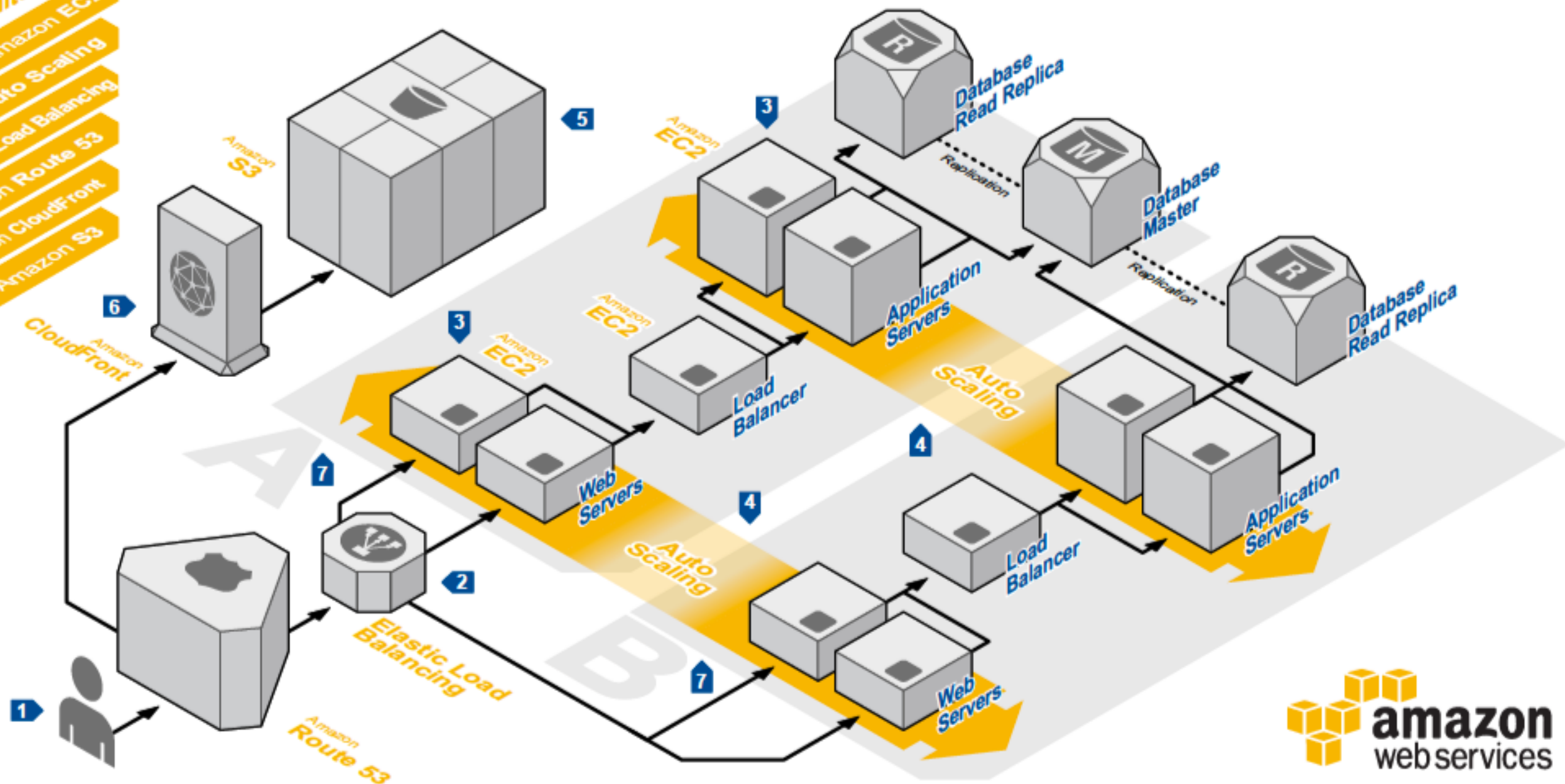
E-Commerce Website Part 2: Checkout Pipeline
Build highly scalable checkout pipeline for an e-Commerce website ([PDF](#))



E-Commerce Website Part 3: Marketing and Recommendations
Build highly scalable recommendation engine for an e-Commerce website ([PDF](#))

WEB APPLICATION HOSTING

Highly available and scalable web hosting can be complex and expensive. Dense peak periods and wild swings in traffic patterns result in low utilization rates of expensive hardware. Amazon Web Services provides the reliable, scalable, secure, and high-performance infrastructure required for web applications while enabling an elastic, scale out and scale down infrastructure to match IT costs in real time as customer traffic fluctuates.



System Overview

- 1** The user's DNS requests are served by Amazon Route 53, a highly available Domain Name System (DNS) service. Network traffic is routed to infrastructure running in Amazon Web Services.
- 2** HTTP requests are first handled by Elastic Load Balancing, which automatically distributes incoming application traffic across multiple Amazon Elastic Compute Cloud (EC2) instances across Availability Zones (AZs). It enables even greater fault tolerance in your applications, seamlessly providing the amount of load balancing capacity needed in response to incoming application traffic.

- 3** Web servers and application servers are deployed on Amazon EC2 instances. Most organizations will select an Amazon Machine Image (AMI) and then customize it to their needs. This custom AMI will then be used as the starting point for future web development.
- 4** Web servers and application servers are deployed in an Auto Scaling group. Auto Scaling automatically adjusts your capacity up or down according to conditions you define. With Auto Scaling, you can ensure that the number of Amazon EC2 instances you're using increases seamlessly during demand spikes to maintain performance and decreases automatically during demand lulls to minimize costs.

- 5** Resources and static content used by the web application are stored on Amazon Simple Storage Service (S3), a highly durable storage infrastructure designed for mission-critical and primary data storage.
- 6** Static and streaming content is delivered by Amazon CloudFront, a global network of edge locations. Requests are automatically routed to the nearest edge location, so content is delivered with the best possible performance.
- 7** Availability zones (AZs) are distinct geographic locations that are engineered to insulate against failures in other AZs. Multiple AZs are combined into a region. Here, the entire web application is deployed in two different AZs for high availability.

Presentation
My Bookmarks

Netflix in the Cloud

Recorded at: **QCon**

Presented by **Adrian Cockcroft** on Dec 21, 2010 Length 01:01:52 Download: [MP3](#)

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Summary
Adrian Cockcroft discusses the advantages of running Netflix services in Amazon's cloud, comparing the old data center solution against the new cloud architecture implemented to offer faster, more scalable, more available, and more productive services across the enterprise.

Bio
Adrian Cockcroft is an architect at Netflix leading the Cloud Systems group. He authored Sun Performance and Tuning, Resource Management and Capacity Planning for Web Services while being a Distinguished Engineer at

Netflix in the Cloud

Nov 3, 2010
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- Agile Development: A Manager's Roadmap for Success



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