

aws
okc

Lab: Build a Redundant WordPress Stack in AWS

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[SYMPHONY TALENT]

Lab:

Build a Redundant WordPress Stack in AWS

Intent:

- Get hands on with AWS services with a realistic use case
- Gain confidence to jump in and play with AWS services
- Stay on track to get through the lab (Exposure ≠ Training)



= Warning – Cost Associated!!!

Acknowledgement



Lab Taken from:

A Cloud Guru's "AWS Certified Solutions Architect Associate" course

<https://acloud.guru/learn/aws-certified-solutions-architect-associate>



Prerequisites



- AWS Free Tier Account: aws.amazon.com/free

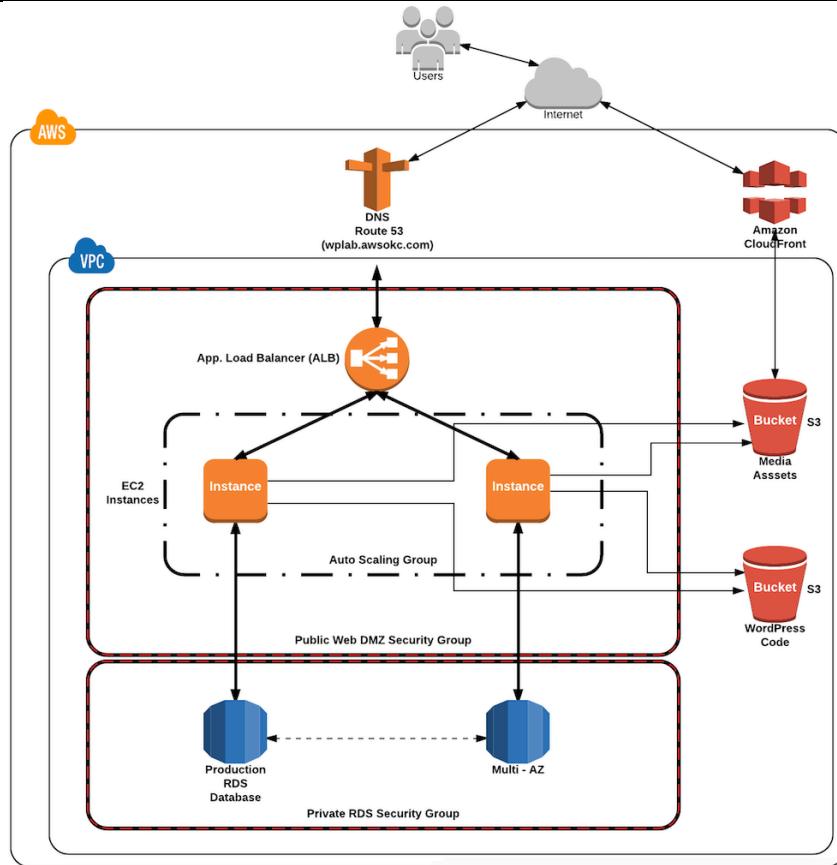


The screenshot shows the AWS Free Tier landing page. At the top, there's a navigation bar with links for Menu, Products, Solutions, Pricing, Resources, More, English, My Account, and Sign In to the Console. Below the navigation is a large banner with a purple-to-orange gradient background. It features the text "AWS Free Tier" and a subtext: "The AWS Free Tier enables you to gain free, hands-on experience with the AWS platform, products, and services." A yellow "Create a Free Account" button is centered in the banner. Below the banner, there are three buttons: "Free Tier Details", "Get Started", and "Free Tier Software". The main content area is titled "AWS Free Tier Details" and includes filters for "FEATURED", "12 MONTHS FREE", "ALWAYS FREE", "PRODUCT CATEGORIES", and "ALL". It highlights several free products: "Amazon EC2" (750 Hours per month), "Amazon QuickSight" (1 GB of SPICE capacity), and "12 months free and always free products". A note at the bottom states: "AWS Free Tier includes offers that expire 12 months following sign-up and others that...".

Prerequisites

- Download Resources from:
 - <https://github.com/awsokc/wplab>

What are we going to build?



Step 1 – Set Region



- Set Region = US East (N. Virginia) (Some of the scripts in this lab won't work in other regions)

A screenshot of a dropdown menu from the AWS console. The menu is titled "Region" and shows a list of AWS Regions. The "US East (N. Virginia)" region is highlighted with a yellow background and orange border. Other regions listed include US East (Ohio), US West (N. California), US West (Oregon), Canada (Central), EU (Ireland), EU (Frankfurt), EU (London), Asia Pacific (Singapore), Asia Pacific (Sydney), Asia Pacific (Seoul), Asia Pacific (Tokyo), Asia Pacific (Mumbai), and South America (São Paulo).

- US East (N. Virginia)
- US East (Ohio)
- US West (N. California)
- US West (Oregon)
- Canada (Central)
- EU (Ireland)
- EU (Frankfurt)
- EU (London)
- Asia Pacific (Singapore)
- Asia Pacific (Sydney)
- Asia Pacific (Seoul)
- Asia Pacific (Tokyo)
- Asia Pacific (Mumbai)
- South America (São Paulo)

Step 2 – Register Domain (Optional)



- Route53 – Add a domain

A screenshot of the AWS Route 53 console. On the left, a sidebar menu shows "Networking & Content Delivery" with "Route 53" highlighted by a red box. Other options include VPC, CloudFront, Direct Connect, and Route 53. Below the sidebar is a navigation bar with "Services", "Resource Groups", and a user profile. The main content area shows a search bar with "symtdev.net" and a table of hosted zones. The table has columns for "Domain Name", "Type", "Record Set Count", and "Comment". One entry is visible: "symtdev.net." (Type: Public, Record Set Count: 3, Comment: HostedZone created by Route53 Registrar).

Domain Name	Type	Record Set Count	Comment
symtdev.net.	Public	3	HostedZone created by Route53 Registrar

A yellow warning sign icon with a dollar sign (\$) is positioned in the bottom-left corner of the slide.

Step 3 – Setup S3 IAM Role



The screenshot shows the AWS IAM "Create role" wizard at Step 3: Attach policy. On the left, a sidebar lists "Security, Identity & Compliance" (key icon), "IAM" (selected and highlighted with a red box), "Inspector", "Certificate Manager", "Directory Service", and "WAF & Shield". The main area displays the "Select role type" step, where "AWS Service Role" is selected. It lists two options: "Amazon EC2" and "AWS Directory Service", each with a "Select" button. Below this, the "Attach Policy" step is shown, which allows selecting up to 10 policies. A search bar filters results by "Policy Type" (set to "s3") and shows 4 results. The table lists three policies:

	Policy Name	Attached Entities	Creation Time	Edited Time
<input checked="" type="checkbox"/>	AmazonS3FullAccess	4	2015-02-06 12:40 CDT	2015-02-06 12:40 CDT
<input type="checkbox"/>	AmazonDMSRedshiftS3Role	0	2016-04-20 12:05 CDT	2016-04-20 12:05 CDT
<input type="checkbox"/>	AmazonS3ReadOnlyAccess	0	2015-02-06 12:40 CDT	2015-02-06 12:40 CDT

Step 3 – Setup S3 IAM Role



Screenshot of the AWS IAM "Create role" wizard, Step 4: Set role name and review.

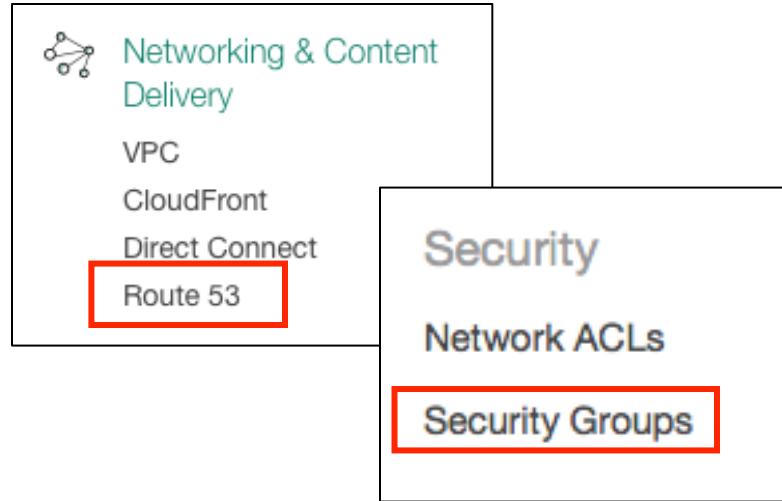
The left sidebar shows the progress: Create role, Step 1 : Select role type, Step 2 : Establish trust, Step 3 : Attach policy, and Step 4 : Set role name and review.

The main content area is titled "Set role name and review". It contains the following fields:

- Role name:** S3-Admin-Access (highlighted in blue)
- Maximum 64 characters. Use alphanumeric and '+,-,@,_' characters
- Role description:** Allows EC2 instances to call AWS services on your behalf.
- Maximum 1000 characters.
- Trusted entities:** The identity provider(s) ec2.amazonaws.com
- Policies:** arn:aws:iam::aws:policy/AmazonS3FullAccess
- [Change policies](#)

At the bottom right are buttons: [Cancel](#), [Previous](#), and a large [Create role](#) button (highlighted in blue).

Step 4 – Create EC2 Sec Groups



The 'Create Security Group' dialog box. It contains fields for Name tag (Web-DMZ), Group name (Web-DMZ), Description (Web-DMZ), and VPC (vpc-9aaef8fe). At the bottom right are 'Cancel' and 'Yes, Create' buttons.

Create Security Group

Name tag: Web-DMZ

Group name: Web-DMZ

Description: Web-DMZ

VPC: vpc-9aaef8fe

Cancel Yes, Create

The 'Create Security Group' dialog box, identical to the one above it, showing the same fields and values. It is overlaid on the first dialog.

Create Security Group

Name tag: RDS-SG

Group name: RDS-SG

Description: RDS-SG

VPC: vpc-9aaef8fe

Cancel Yes, Create

Step 4 – Create EC2 Sec Groups



Create Security Group Security Group Actions ▾

Filter All security groups ▾ X

	Name tag	Group ID	Group Name	VPC	Description
<input checked="" type="checkbox"/>	Web-DMZ	sg-e3a4ea93	Web-DMZ	vpc-9aaef8fe	Web-DMZ

sg-e3a4ea93 | Web-DMZ

Summary Inbound Rules Outbound Rules Tags

[Cancel](#) [Save](#)

Type	Protocol	Port Range	Source	Remove
HTTP (80)	TCP (6)	80	0.0.0.0/0	i x
SSH (22)	TCP (6)	22	0.0.0.0/0	i x

[Add another rule](#)

Step 4 – Create EC2 Sec Groups



Screenshot of the AWS Security Groups console showing the creation of a new security group named "RDS-SG".

The search bar at the top shows the filter "RDS-SG".

The main table lists one security group:

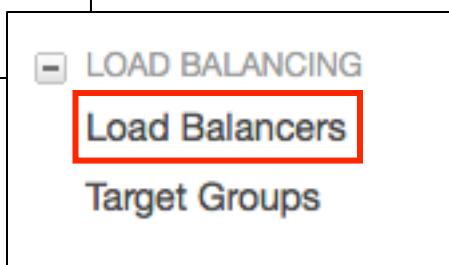
Name tag	Group ID	Group Name	VPC	Description
RDS-SG	sg-22abe552	RDS-SG	vpc-9aaef8fe	RDS-SG

The "Inbound Rules" tab is selected. A dropdown menu shows the current rule configuration: "MySQL/Aurora (3306)" for Type, "TCP (6)" for Protocol, and port "3306".

A modal window displays a list of available security groups to select from:

- sg-16349a6c
- sg-1c2ee964 | redshift
- sg-22abe552 | RDS-SG
- sg-284d2354
- sg-28f98452
- sg-33c41a4f
- sg-34bd8245
- sg-44d3c43e
- sg-845326f8
- sg-a4dfbdde
- sg-a9b768d9
- sg-b63799cc | p2-env
- sg-c21cf0ba
- sg-cd563bb1
- sg-ce14f9b4 | symmetriccds
- sg-dc70b9a1
- sg-df70b9a2
- sg-e3a4ea93 | Web-DMZ**
- sg-f1c2fd80

Step 5 – Create ALB (ELB)



Welcome to Elastic Load Balancing
Select load balancer type

Elastic Load Balancing supports two types of load balancers: Application Load Balancers (new) and Classic Load Balancers. Choose the load balancer type that meets your needs.

Application Load Balancer Classic Load Balancer

Application Load Balancer

Preferred for HTTP/HTTPS

An Application Load Balancer makes routing decisions at the application layer (HTTP/HTTPS), supports path-based routing, and can route requests to one or more ports on each EC2 instance or container instance in your VPC.

Classic Load Balancer

A Classic Load Balancer makes routing decisions at either the transport layer (TCP/SSL) or the application layer (HTTP/HTTPS), and supports either EC2-Classic or a VPC.

Step 5 – Create ALB (ELB)



Screenshot of the AWS CloudFormation console showing the configuration of a new Application Load Balancer (ALB). The steps are numbered 1 through 6, with Step 1 currently active.

Step 1: Configure Load Balancer

Basic Configuration

To configure your load balancer, provide a name, select a scheme, specify one or more listeners, and select a network. The default configuration is an Internet-facing load balancer in the selected network with a listener that receives HTTP traffic on port 80.

Name: My-ALB

Scheme: Internet-facing

IP address type: ipv4

Listeners

A listener is a process that checks for connection requests, using the protocol and port that you configured.

Load Balancer Protocol	Load Balancer Port
HTTP	80

Add listener

Availability Zones

Specify the Availability Zones to enable for your load balancer. The load balancer routes traffic to the targets in these Availability Zones only. You can specify only one subnet per Availability Zone. You must specify subnets from at least two Availability Zones to increase the availability of your load balancer.

VPC	Availability Zone	Subnet ID	Subnet IPv4 CIDR	Name
vpc-9aaef8fe (172.31.0.0/16) (default)	us-east-1a	subnet-43b37b69	172.31.48.0/20	
	us-east-1b	subnet-5955ee2f	172.31.0.0/20	
	us-east-1c	subnet-2cd60b74	172.31.16.0/20	

Next: Configure Security Settings

Step 5 – Create ALB (ELB)



Screenshot of the AWS CloudFormation console showing the configuration of a new security group for an Application Load Balancer (ALB). The page is titled "Step 3: Configure Security Groups".

The "Assign a security group:" section shows the "Select an existing security group" option selected.

The table lists existing VPC security groups:

Security	Name	Description
sg-b63799cc	awseb-e-imusstpmeg-stack-AWSEBSecurityGroup-1Y1UU7UMXPB7D	SecurityGroup for ElasticBeanstalk environment
sg-845326f8	CodeDeploySampleStack-2dw6722807qfwltsm7vi-SecurityGroup-1C62RDO7806MK	Enable HTTP access via port 80 and SSH access
sg-c21c0ba	default	default VPC security group
sg-dc70b9a1	ElasticMapReduce-master	Master group for Elastic MapReduce created on 2016-09-21T13:17:17.7
sg-df70b9a2	ElasticMapReduce-slave	Slave group for Elastic MapReduce created on 2016-09-21T13:17:17.7
sg-28f98452	launch-wizard-1	launch-wizard-1 created 2016-09-21T13:17:17.7
sg-44d3c43e	launch-wizard-2	launch-wizard-2 created 2016-10-18T19:56:08.6
sg-33c41a4f	launch-wizard-3	launch-wizard-3 created 2017-01-19T18:34:32.9
sg-cd563bb1	launch-wizard-4	launch-wizard-4 created 2017-02-06T23:08:26.6
sg-34bd8245	launch-wizard-5	launch-wizard-5 created 2017-07-26T15:07:24.4
sg-f1c2fd80	launch-wizard-6	launch-wizard-6 created 2017-07-26T15:15:03.3
sg-a9b768d9	launch-wizard-7	launch-wizard-7 created 2017-08-14T12:11:53.3
sg-16349a6c	rds-awseb-e-imusstpmeg-stack-awsebrdsdbsecuritygroup-1udrb80khgap-lzjr	Security group for RDS DB Security Group awseb-e-imusstpmeg-stack-awsebrdsdbsecuritygroup-1udrb80khgap-lzjr
sg-a4dfbdde	rds-launch-wizard	Created from the RDS Management Console
sg-284d2354	rds-launch-wizard-1	Created from the RDS Management Console
sg-22abe552	RDS-SG	RDS-SG
sg-1c2ee964	smartpostrs	slemma
sg-ce14fb94	symmetricids-aurora	SymmetricIDS Aurora
sg-e3a4ea93	Web-DMZ	Web-DMZ

At the bottom, there are navigation buttons: "Cancel", "Previous", and "Next: Configure Routing".

Step 5 – Create ALB (ELB)



Screenshot of the AWS CloudFormation console showing the configuration of an Application Load Balancer (ALB). The page is titled "Step 4: Configure Routing".

The navigation bar at the top includes "Services", "Resource Groups", "nathan.aker@hodes.com @ ho...", "N. Virginia", and "Support". Below the navigation bar, a progress bar shows steps 1 through 6: 1. Configure Load Balancer, 2. Configure Security Settings, 3. Configure Security Groups, 4. Configure Routing (the current step), 5. Register Targets, and 6. Review.

Step 4: Configure Routing

Your load balancer routes requests to the targets in this target group using the protocol and port that you specify, and performs health checks on the targets using these health check settings. Note that each target group can be associated with only one load balancer.

Target group

Target group: New target group
Name: MyWebServers
Protocol: HTTP
Port: 80

Health checks

Protocol: HTTP
Path: /healthy.html

[Advanced health check settings](#)

At the bottom right are buttons for "Cancel", "Previous", and "Next: Register Targets".

Step 5 – Create ALB (ELB)



Screenshot of the AWS CloudFormation console showing the "Step 5: Register Targets" step of creating an Application Load Balancer (ALB). The page title is "Step 5: Register Targets". The sub-step "5. Register Targets" is highlighted in blue. The steps are numbered 1 through 6: 1. Configure Load Balancer, 2. Configure Security Settings, 3. Configure Security Groups, 4. Configure Routing, 5. Register Targets, and 6. Review.

Step 5: Register Targets
Register targets with your target group. If you register an instance running in an enabled Availability Zone, the load balancer starts routing requests to the instance as soon as the registration process completes and the instance passes the initial health checks.

Registered instances
To deregister instances, select one or more registered instances and then click Remove.

Instances
To register additional instances, select one or more running instances, specify a port, and then click Add. The default port is the port specified for the target group. If the instance is already registered on the specified port, you must specify a different port.

Add to registered on port 80

Search Instances

Cancel **Previous** **Next: Review**

The screenshot shows two tables. The first table under "Registered instances" has columns: Instance, Name, Port, State, Security groups, and Zone. It displays the message "No instances available." The second table under "Instances" has columns: Instance, Name, State, Security groups, Zone, Subnet ID, and Subnet CIDR. It also displays the message "No instances available."

Step 5 – Create ALB (ELB)



Screenshot of the AWS CloudFormation console showing the "Review" step of creating an Application Load Balancer (ALB).

The navigation bar at the top includes "Services", "Resource Groups", "nathan.aker@hodes.com @ home", "N. Virginia", and "Support".

The progress bar shows steps 1 through 6: 1. Configure Load Balancer, 2. Configure Security Settings, 3. Configure Security Groups, 4. Configure Routing, 5. Register Targets, and 6. Review (which is currently selected).

Step 6: Review
Please review the load balancer details before continuing.

Load balancer (Edit)
Name: My-ALB
Scheme: internet-facing
Listeners: Port:80 - Protocol:HTTP
IP address type: ipv4
VPC: vpc-9aaef8fe
Subnets: subnet-43b37b69, subnet-5955ee2f, subnet-2cd60b74, subnet-11ef7b74, subnet-7362054e, subnet-6ab70966
Tags

Security settings (Edit)
Certificate name:
Security policy name:

Security groups (Edit)
Security groups: sg-c21cf0ba

Routing (Edit)
Target group: New target group
Target group name: MyWebServers
Port: 80
Protocol: HTTP
Health check protocol: HTTP
Path: /healthy.html
Health check port: traffic port
Healthy threshold: 5
Unhealthy threshold: 2
Timeout: 5
Interval: 30
Success codes: 200

Targets (Edit)

At the bottom right are buttons for "Cancel", "Previous", and "Create".

Step 6 – Create S3 Bucket for Code



A screenshot of the AWS Storage console. On the left, there's a sidebar with "Storage" at the top, followed by "S3" (which is highlighted with a red box), "EFS", "Glacier", and "Storage Gateway".

A screenshot of the Amazon S3 service page. It features a red puzzle piece icon and the text "Amazon S3". Below that is a search bar with the placeholder "Search for buckets". At the bottom, there are two buttons: a large blue "+ Create bucket" button (highlighted with a red box) and a smaller "Delete buc" button.

A screenshot of the "Create bucket" wizard, Step 1: Name and region. The title is "Create bucket". There are four tabs at the top: 1. Name and region (selected), 2. Set properties, 3. Set permissions, and 4. Review. The main area shows "Bucket name" with the value "awsokc-wpcode" and "Region" set to "US East (N. Virginia)". Below that is a section for "Copy settings from an existing bucket" with a dropdown menu showing "Select bucket (optional)" and "98 Buckets". At the bottom are "Create", "Cancel", and "Next" buttons.

Step 7 – Create S3 Bucket for Media



A screenshot of the AWS Storage console. On the left, there's a sidebar with "Storage" at the top, followed by "S3" (which is highlighted with a red box), "EFS", "Glacier", and "Storage Gateway".

A screenshot of the Amazon S3 service page. It features a red puzzle piece icon and the text "Amazon S3". Below that is a search bar labeled "Search for buckets". At the bottom, there are two buttons: a blue "+ Create bucket" button (which is highlighted with a red box) and a "Delete buc" button.

A screenshot of the "Create bucket" wizard, Step 1: Name and region. The wizard has four steps: 1. Name and region, 2. Set properties, 3. Set permissions, 4. Review. The "Bucket name" field contains "awsokc-wpmedia". The "Region" dropdown is set to "US East (N. Virginia)". Below these fields is a section for "Copy settings from an existing bucket" with a dropdown menu showing "Select bucket (optional)" and "99 Buckets". At the bottom are "Create", "Cancel", and "Next" buttons.

Step 8 – Create CloudFront Distro

A screenshot of the AWS CloudFront Distributions page. On the left, there's a sidebar with icons for Networking & Content Delivery, VPC, CloudFront (which is highlighted with a red box), Direct Connect, and Route 53. The main area shows a table titled "CloudFront Distributions" with columns for "Delivery Method" and "ID". At the top of this area are buttons for "Create Distribution" and "Distribution Settings". Below the table are filters for "Viewing : Any Delivery Method" and "Any State".

Delivery Method	ID
Web	12345678901234567890123456789012

Select a delivery method for your content.

Web

Create a web distribution if you want to:

- Speed up distribution of static and dynamic content, for example, .html, .css, .php, and gr
- 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.

[Get Started](#)

Step 8 – Create CloudFront Distro



Origin Settings

Origin Domain Name ⓘ

Origin Path ⓘ

Origin ID ⓘ

Create Distribution

Origin Settings

Origin Domain Name ⓘ

Origin Path ⓘ

Origin ID ⓘ

Restrict Bucket Access Yes No ⓘ

Origin Access Identity Create a New Identity Use an Existing Identity ⓘ

Comment ⓘ

Grant Read Permissions on Bucket Yes, Update Bucket Policy No, I Will Update Permissions ⓘ

Origin Custom Headers

Header Name	Value
<input type="text"/>	<input type="text"/> ⓘ

Cancel

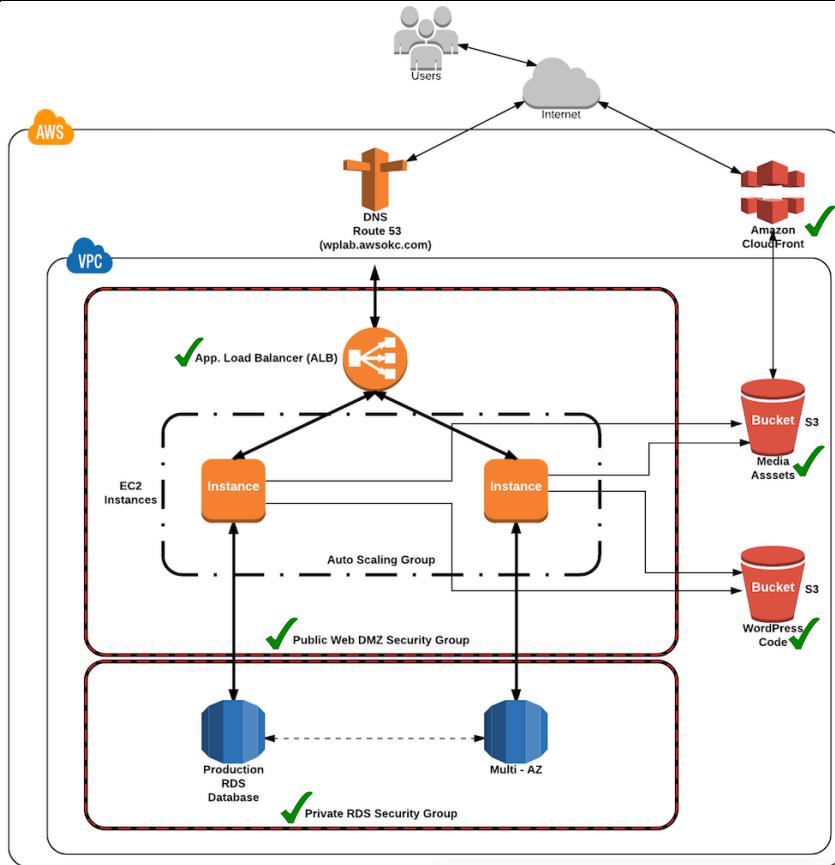
Back

Create Distribution

Status

In Progress

Status Check



Step 9 – Create RDS Instance



A screenshot of the AWS navigation bar under the 'Database' section. It includes links for RDS (which is highlighted with a red box), DynamoDB, ElastiCache, and Amazon Redshift. The RDS link is the primary focus of this step.

A screenshot of the 'Create Instance' wizard. It shows the title 'Create Instance' and a brief description: 'Amazon Relational Database Service (RDS) is a relational database in the cloud.' Below this is a large blue button labeled 'Launch a DB Instance'. A note at the bottom states: 'Note: Your DB Instances will launch in minutes.'

A screenshot of the 'Select Engine' page. It displays a list of database engines: Amazon Aurora, MySQL Community Edition, MySQL, MariaDB, and PostgreSQL. The MySQL Community Edition option is selected. To the right of the MySQL section is a blue 'Select' button. Below the MySQL section, there is descriptive text and a bulleted list of features. The descriptive text reads: 'MySQL is the most popular open source database in the world. MySQL on RDS offers the rich features of the MySQL community edition with the flexibility to easily scale compute resources or storage capacity for your database.' The bullet points list: • Supports database size up to 6 TB. • Instances offer up to 32 vCPUs and 244 GiB Memory. • Supports automated backup and point-in-time recovery. • Supports cross-region read replicas. • Free tier eligible.

Step 9 – Create RDS Instance



Do you plan to use this database for production purposes?

Production



MySQL

Use [Multi-AZ Deployment](#) and [Provisioned IOPS](#) [Storage](#) as defaults for high availability and fast, consistent performance.

Dev/Test

MySQL

This instance is intended for use outside of production or under the [RDS Free Usage Tier](#).

Billing is based on [RDS pricing](#).

[Cancel](#)

[Previous](#)

[Next Step](#)



Step 9 – Create RDS Instance



Services ▾ Resource Groups ▾

nathan.aker@hodes.com @ ho... N. Virginia

Step 1: Select Engine

Step 2: Production?

Step 3: Specify DB Details

Step 4: Configure Advanced Settings

Estimated monthly costs for your instance are as follows:

DB Instance	24.82 USD
Storage	1.15 USD
Total	25.97 USD

Billing estimate is based on on-demand usage as described in [Amazon RDS Pricing](#). Estimate does not include costs for backup storage, I/Os (if applicable), or data transfer.

The following selections disqualify the instance from being eligible for the free tier:

- Multi-AZ Deployment

You can receive a significant savings over on-demand instance costs with [Reserved Instances](#).

Estimate your monthly costs for the DB Instance using the [AWS Simple Monthly Calculator](#).

Specify DB Details

Instance Specifications

DB Engine: mysql
License Model: general-public-license
DB Engine Version: MySQL 5.6.35

Review the [Known Issues/Limitations](#) to learn about potential compatibility issues with specific database versions.

DB Instance Class: db.t2.micro — 1 vCPU, 1 GiB RAM
Multi-AZ Deployment: Yes
Storage Type: General Purpose (SSD)
Allocated Storage*: 5 GB

Provisioning less than 100 GB of General Purpose (SSD) storage for high throughput workloads could result in higher latencies upon exhaustion of the initial General Purpose (SSD) IO credit balance.

[Click here](#) for more details.

Settings

DB Instance Identifier*: awsokc2012
Master Username*: awsokc2012
Master Password*:
Confirm Password*:

Retype the value you specified for Master Password.

* Required

Cancel Previous Next Step

Step 9 – Create RDS Instance



Services ▾ Resource Groups ▾

nathan.aker@hodes.com @ ho... N. Virginia Support

Step 1: Select Engine

Step 2: Production?

Step 3: Specify DB Details

Step 4: Configure Advanced Settings

Configure Advanced Settings

Network & Security

VPC* Default VPC (vpc-9aaef8fe)

Subnet Group default

Publicly Accessible No

Availability Zone No Preference

VPC Security Group(s) Elastic Map Reduce Slave (VPC)

RDS-SG (VPC)

WED-DMZ (VPC)

awseb-e-imusstpmeg-stack-AWSEBS

Database Options

Database Name awsockc2017

Note: if no database name is specified then no initial MySQL database will be created on the DB instance.

Database Port 3306

DB Parameter Group default:mysql5.6

Option Group default:mysql-5-6

Copy Tags To Snapshots

Enable IAM DB Authentication No Preference

Enable Encryption No

Backup

Please note that automated backups are currently supported for InnoDB storage engine only. If you are using MyISAM, refer to detail [here](#).

Backup Retention Period 7 days

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

Step 9 – Create RDS Instance



Your DB Instance is being created.

Note: Your instance may take a few minutes to launch.

Connecting to your DB Instance

Once Amazon RDS finishes provisioning your DB instance, you can use a SQL client application or utility to connect to the instance.

[Learn about connecting to your DB instance](#)

Usage Charges

The following selections disqualify the instance from being eligible for the free tier:

- Multi-AZ Deployment

You will be charged normal RDS Prices. [Learn More](#).

Estimate your monthly costs for the DB Instance using the [AWS Simple Monthly Calculator](#).

[View Your DB Instances](#)

Step 10 – Point DNS at ALB (Optional)



The screenshot shows the AWS Route 53 service interface. On the left navigation bar, the 'Route 53' option is highlighted with a red box. The main pane displays 'DNS management' with a count of 2 hosted zones. A search bar at the top of the list results shows 'aws'. Below the search bar, the first result is a table row for the domain 'awsokc.com.' with a 'Public' status and a 'Record Set Count' of 2. To the right of the table, there are two buttons: 'Back to Hosted Zones' and a prominent blue 'Create Record Set' button, which is also highlighted with a red box.

Step 10 – Point DNS at ALB (Optional)



Create Record Set

Name: wplab.awsokc.com.

Type: A – IPv4 address

Alias: Yes No

Alias Target: dualstack.My-ALB-1875512641.us-east-1.elb.amazonaws.com

Alias Hosted Zone ID: Z35SXDOTRQ7X7K

You can also type the domain name for the resource. Examples:

- CloudFront distribution domain name: d111111abcdef8.cloudfront.net
- Elastic Beanstalk environment CNAME: example.elasticbeanstalk.com
- ELB load balancer DNS name: example-1.us-east-1.elb.amazonaws.com
- S3 website endpoint: s3-website.us-east-2.amazonaws.com
- Resource record set in this hosted zone: www.example.com

[Learn More](#)

Routing Policy: Simple

Route 53 responds to queries based only on the values in this record. [Learn More](#)

Evaluate Target Health: Yes No

Create

Step 11 – Create EC2 Instances



The screenshot shows the AWS Compute navigation menu on the left. The "Compute" icon is at the top, followed by a list of services: EC2 (which is highlighted with a red box), EC2 Container Service, Lightsail, Elastic Beanstalk, Lambda, and Batch.

Create Instance

To start using Amazon EC2 you will need to choose an AMI, instance type, and other configuration options.

Launch Instance

Note: Your instance will be charged to your AWS account.

Step 1: Choose an Amazon Machine Image (AMI)

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 or our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Quick Start

My AMIs

Amazon Linux **Amazon Linux AMI 2017.03.1 (HVM), SSD Volume Type - ami-4fffc834** **Select**

Amazon Linux is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages.

Free tier eligible

Root device type: ebs Virtualization type: hvm

Cancel and Exit

< < 1 to 33 of 33 AMIs > >

Step 11 – Create EC2 Instances



1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 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.

Filter by: [All instance types](#) [Current generation](#) [Show/Hide Columns](#)

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro <small>Free tier eligible</small>	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	m4.large	2	8	EBS only	Yes	Moderate	Yes
<input type="checkbox"/>	General purpose	m4.xlarge	4	16	EBS only	Yes	High	Yes
<input type="checkbox"/>	General purpose	m4.2xlarge	8	32	EBS only	Yes	High	Yes
<input type="checkbox"/>	General purpose	m4.4xlarge	16	64	EBS only	Yes	High	Yes

[Cancel](#)

[Previous](#)

[Review and Launch](#)

[Next: Configure Instance Details](#)

Step 11 – Create EC2 Instances



Services ▾ Resource Groups ▾ 🔔 nathan.aker@hodes.com @ ho... ▾ N. Virginia ▾ Support ▾

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 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 Launch into Auto Scaling Group [ⓘ](#)

Purchasing option Request Spot instances

Network [ⓘ](#) [Create new VPC](#)

Subnet [ⓘ](#) [Create new subnet](#)

Auto-assign Public IP [ⓘ](#)

IAM role [ⓘ](#) [Create new IAM role](#)

Shutdown behavior [ⓘ](#)

Enable termination protection Protect against accidental termination

Monitoring Enable CloudWatch detailed monitoring
Additional charges apply.

Tenancy [ⓘ](#)
Additional charges will apply for dedicated tenancy.

Advanced Details

User data As text As file Input is already base64 encoded
(Optional)

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

Step 11 – Create EC2 Instances



A screenshot of a terminal window titled "bash_wp_bootstrap.sh". The window has a dark background and light-colored text. It displays a shell script with numbered lines from 1 to 18. The script installs various packages, copies configuration files, downloads and extracts WordPress, and starts the Apache service. The terminal also shows the status bar at the bottom with "Line 1, Column 1", "Tab Size: 4", and "Shell Script (Bash)".

```
1 #!/bin/bash
2  yum update -y
3  yum install httpd php php-mysql stress -y
4  cd /etc/httpd/conf
5  cp httpd.conf httpdconfbackup.conf
6  rm -rf httpd.conf
7  wget https://s3-eu-west-1.amazonaws.com/acloudguru-wp/httpd.conf
8  cd /var/www/html
9  echo "healthy" > healthy.html
10 wget https://wordpress.org/latest.tar.gz
11 tar -xzf latest.tar.gz
12 cp -r wordpress/* /var/www/html/
13 rm -rf wordpress
14 rm -rf latest.tar.gz
15 chmod -R 755 wp-content
16 chown -R apache:apache wp-content
17 service httpd start
18 chkconfig httpd on
```

Step 11 – Create EC2 Instances



Screenshot of the AWS EC2 Instance Creation Wizard - Step 3: Configure Instance Details.

The screenshot shows the configuration options for launching a single instance (1 instance). The "Number of instances" is set to 1. The "Purchasing option" includes a checkbox for "Request Spot instances". The "Network" section shows "vpc-9aaef8fe (default)" selected. The "Subnet" section shows "No preference (default subnet in any Availability Zone)". The "Auto-assign Public IP" section shows "Use subnet setting (Enable)". The "IAM role" section shows "S3-Admin-Access". The "Shutdown behavior" section shows "Stop". The "Enable termination protection" section has an unchecked checkbox for "Protect against accidental termination". The "Monitoring" section has an unchecked checkbox for "Enable CloudWatch detailed monitoring" with a note "Additional charges apply.". The "Tenancy" section shows "Shared - Run a shared hardware instance".

A red box highlights the "Advanced Details" section, which contains a "User data" field. The user data script is:

```
rm -rf latest.tar.gz  
chmod -R 755 wp-content  
chown -R apache:apache wp-content  
service httpd start  
chkconfig httpd on
```

At the bottom, there are "Cancel", "Previous", "Review and Launch" (highlighted in blue), and "Next: Add Storage" buttons.

Step 11 – Create EC2 Instances



Screenshot of the AWS CloudFormation console showing the "Step 4: Add Storage" configuration screen for creating an EC2 instance.

The top navigation bar shows "Services", "Resource Groups", a user icon, "nathan.aker@hodes.com @ ho...", "N. Virginia", and "Support". Below the navigation is a progress bar with steps: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage (highlighted in blue), 5. Add Tags, 6. Configure Security Group, and 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.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encrypted
Root	/dev/xvda	snap-083018866ac6b06eb	8	General Purpose SSD (GP2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

[Add New Volume](#)

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

At the bottom right, there are buttons: "Cancel", "Previous", "Review and Launch" (highlighted in blue), and "Next: Add Tags" (with a red box around it).

Step 11 – Create EC2 Instances



Screenshot of the AWS EC2 Instance Creation Wizard - Step 5: Add Tags

The screenshot shows the "Add Tags" step of the EC2 instance creation process. The top navigation bar includes "Services", "Resource Groups", a user icon, "nathan.aker@hodes.com @ ho...", "N. Virginia", and "Support". Below the navigation, a progress bar shows steps 1 through 7: Choose AMI, Choose Instance Type, Configure Instance, Add Storage, Add Tags (the current step), Configure Security Group, and Review.

Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.

A copy of a tag can be applied to volumes, instances or both.

Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

The main interface shows a table for adding tags:

Key	(127 characters maximum)	Value	(255 characters maximum)	Instances	Volumes	
Name		MyEC2WebServer		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X

Add another tag (Up to 50 tags maximum)

At the bottom are buttons for "Cancel", "Previous", "Review and Launch" (highlighted in blue), and "Next: Configure Security Group".

Step 11 – Create EC2 Instances



Screenshot of the AWS EC2 Instance Creation Wizard - Step 6: Configure Security Group.

The navigation bar shows the current step: 6. Configure Security Group.

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	Name	Description
<input checked="" type="checkbox"/>	sg-e3a4ea93Web-DMZ	Web-DMZ

Inbound rules for sg-e3a4ea93 (Selected security groups: sg-e3a4ea93)

Type	Protocol	Port Range	Source
HTTP	TCP	80	0.0.0.0/0
SSH	TCP	22	0.0.0.0/0

Buttons at the bottom: Cancel, Previous, Review and Launch

Step 11 – Create EC2 Instances



Screenshot of the AWS CloudFormation Step Functions interface showing Step 7: Review Instance Launch.

The navigation bar includes: Services, Resource Groups, nathan.aker@hodes.com @ home, N. Virginia, Support.

The step progress bar shows: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Add Tags, 6. Configure Security Group, 7. Review (highlighted).

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.

AMI Details

Amazon Linux AMI 2017.03.1 (HVM), SSD Volume Type - ami-4fffc834
Free tier eligible

The Amazon Linux AMI is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages.

Root Device Type: ebs Virtualization type: hvm

Instance Type

Edit instance type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

Security Groups

Edit security groups

Security Group ID	Name	Description
sg-e3a4ea93	Web-DMZ	Web-DMZ

All selected security groups inbound rules

Type	Protocol	Port Range	Source
HTTP	TCP	80	0.0.0.0/0
SSH	TCP	22	0.0.0.0/0

Cancel **Previous** **Launch**

Step 11 – Create EC2 Instances



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.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Create a new key pair

Key pair name
MyEC2-VirginiaKey

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

Download Key Pair

Cancel Launch Instances

Step 11 – Create EC2 Instances



Servic... Resource Groups ... nathan.aker@hodes.com @ ho... N. Virginia Support

Launch Status

✓ Your instances are now launching

The following instance launches have been initiated: i-0f4a5927af34cbfdc [View launch log](#)

ℹ Get notified of estimated charges

Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).

How to connect to your instances

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

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

▼ 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](#)

Step 11 – Create EC2 Instances



Screenshot of the AWS EC2 Instances page showing a single running instance named "MyEC2Web...".

EC2 Dashboard

Instances (selected)

- Spot Requests
- Reserved Instances
- Scheduled Instances
- Dedicated Hosts

Images

- AMIs
- Bundle Tasks

Elastic Block Store

- Volumes
- Snapshots

Network & Security

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

Actions

- Launch Instance
- Connect

Search bar: search : MyEc2

Table Headers: Name, Instance ID, Instance Type, Availability Zone, Instance State, Status Checks, Alarm Status, Public DNS (IP)

Table Data:

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IP)
MyEC2Web...	i-0f4a5927af34cbfdc	t2.micro	us-east-1b	running	Initializing	None	ec2-107-20-14-1

Status Checks: Initializing, None

Instance State: running, 2/2 checks ..., None

Public DNS: ec2-107-20-14-1.compute-1.amazonaws.com

Description Tab: Description, Status Checks, Monitoring, Tags

Step 12 – Test EC2



Screenshot of the AWS Management Console showing the EC2 Instances page and a browser window displaying the WordPress setup configuration file.

EC2 Instances Page:

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs
MyEC2Web...	i-0f4a5927af34cbfdc	t2.micro	us-east-1b	running	2/2 checks ...	None	ec2-107-20-14-1.comp...	107.20.14.1	-

Browser Window (WordPress Setup Configuration File):

Welcome to WordPress. Before getting started, we need some information on the database. You will need to know the following items before proceeding.

1. Database name
2. Database username
3. Database password
4. Database host
5. Table prefix (if you want to run more than one WordPress in a single database)

We're going to use this information to create a `wp-config.php` file. If for any reason this automatic file creation doesn't work, don't worry. All this does is fill in the database information to a configuration file. You may also simply open `wp-config-sample.php` in a text editor, fill in your information, and save it as `wp-config.php`. Need more help? [We got it.](#)

In all likelihood, these items were supplied to you by your Web Host. If you don't have this information, then you will need to contact them before you can continue. If you're all ready...

[Let's go!](#)

Step 13 – Configure ALB



Compute

EC2

EC2 Container Service

Lightsail

Elastic Beanstalk

Lambda

Batch

LOAD BALANCING

Load Balancers

Target Groups

Load Balancers

Target Groups

Services

Resource Groups

EC2 Dashboard

Events

Tags

Reports

Limits

INSTANCES

Instances

Spot Requests

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Dedicated Hosts

IMAGES

AMIs

Bundle Tasks

ELASTIC BLOCK STORE

Volumes

Snapshots

NETWORK & SECURITY

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Network Interfaces

LOAD BALANCING

Load Balancers

Target Groups

AUTO SCALING

Create Load Balancer Actions

Filter: Search

Name: My-ALB DNS name: My-ALB-1875512641.us-eas... State: active VPC ID: vpc-9aaef8fe

Load balancer: My-ALB

Description Listeners Monitoring Tags

A listener checks for connection requests using its configured protocol and port, and the load balancer uses the listener rules to route requests to targets. You can add, remove, or update listeners and listener rules.

Add listener Actions

Listener ID	Security policy	SSL Certificate	Default action	Rules
HTTP : 80	N/A	N/A	Forward to MyWebServers	View/edit rules

Step 13 – Configure ALB



Screenshot of the AWS Management Console showing the configuration of a Target Group named "MyWebServers".

The main interface shows the target group details:

- Name:** MyWebServers
- Port:** 80
- Protocol:** HTTP
- VPC ID:** vpc-9aaef8fe

The "Health checks" tab is selected, showing the current configuration:

- Protocol:** HTTP
- Path:** /healthy.html
- Port:** traffic port
- Healthy threshold:** 5
- Unhealthy threshold:** 2
- Timeout:** 5 seconds
- Interval:** 30 seconds
- Success codes:** 200

A modal window titled "Edit target group" is open, allowing modification of the health check settings. The "Advanced health check settings" section is expanded, showing the same configuration options with their current values.

Buttons at the bottom right of the modal include "Cancel" and "Save".

Step 13 – Configure ALB



Screenshot of the AWS Management Console showing the configuration of a Target Group named "MyWebServers".

The left sidebar shows the navigation menu with the "Target Groups" option selected under "LOAD BALANCING".

The main content area displays the target group details:

- Target group:** MyWebServers
- Description:** The load balancer starts routing requests to a newly registered target as soon as the registration process completes and the target passes the initial health checks. If demand on your targets increases, you can register additional targets. If demand on your targets decreases, you can deregister targets.
- Targets:** (Edit) - No targets registered.
- Health checks:** (Edit) - No targets registered.
- Monitoring:** (Edit) - No targets registered.
- Tags:** (Edit) - No tags assigned.

Registered targets: There are no targets registered to this target group.

Availability Zones: There are no targets registered to this target group.

Step 13 – Configure ALB



Register and deregister targets

Registered targets
To deregister instances, select one or more registered instances and then click Remove.

Remove

	Instance	Name	Port	State	Security groups	Zone
<input type="checkbox"/>	i-0f4a5927af34cbfdc	MyEC2WebSer...	80	● running	Web-DMZ	us-east-1b

Instances
To register additional instances, select one or more running instances, specify a port, and then click Add. The default port is the port specified for the target group. If the instance is already registered on the specified port, you must specify a different port.

Add to registered on port 80

My

	Instance	Name	State	Security	Zone	Subnet ID	Subnet CIDR
<input checked="" type="checkbox"/>	i-0f4a5927a...	MyEC2Web...	● running	Web-DMZ	us-east-1b	subnet-5955ee2f	172.31.0.0/20

Cancel **Save**

Step 13 – Configure ALB



None of these Availability Zones contains a healthy target. Requests are being routed to all targets.

Registered targets

Instance ID	Name	Port	Availability Zone	Status
i-0f4a5927af34cbfdc	MyEC2WebServer	80	us-east-1b	initial ⓘ

Availability Zones

Availability Zone	Target count	Healthy?
us-east-1b	1	

Edit

Registered targets

Instance ID	Name	Port	Availability Zone	Status
i-0f4a5927af34cbfdc	MyEC2WebServer	80	us-east-1b	healthy ⓘ

Availability Zones

Step 14 – Validate Site



Description Listeners Monitoring Tags

Basic Configuration

Name:	My-ALB	Creation time:	August 1, 2018
ARN:	arn:aws:elasticloadbalancing:us-east-1:534106927381:loadbalancer/app/My-ALB/9e41c64b65e18822	Hosted zone:	Z35SXD
DNS name:	My-ALB-1875512641.us-east-1.elb.amazonaws.com (A Record)	State:	active
Scheme:	internet-facing	VPC:	vpc-9aa
Type:	application	IP address type:	ipv4

The image shows two side-by-side screenshots of a WordPress setup configuration page. Both screenshots feature a large blue 'W' logo at the top center.

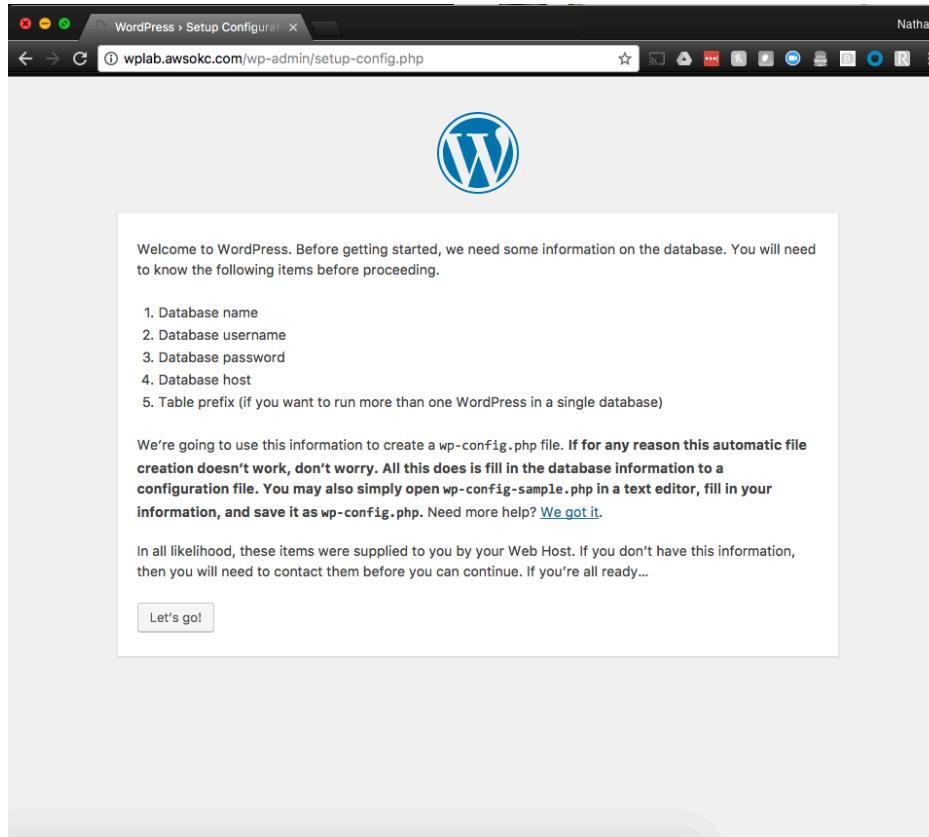
Left Screenshot: The URL in the browser is `my-alb-1875512641.us-east-1.elb.amazonaws.com`. The page content includes:

- Welcome message: "Welcome to WordPress. Before getting started, we need some information on the database. You will need to know the following items before proceeding."
- A numbered list: 1. Database name, 2. Database username, 3. Database password, 4. Database host.

Right Screenshot: The URL in the browser is `wplab.awsokc.com/wp-admin/setup-config.php`. The page content is identical to the left screenshot:

- Welcome message: "Welcome to WordPress. Before getting started, we need some information on the database. You will need to know the following items before proceeding."
- A numbered list: 1. Database name, 2. Database username, 3. Database password, 4. Database host, 5. Table prefix (if you want to run more than one WordPress in a single database).

Step 15 – Configure WordPress



The screenshot shows a web browser window titled "WordPress > Setup Configuration". The URL in the address bar is "wplab.awsokc.com/wp-admin/setup-config.php". The page itself has a large blue "W" logo at the top. Below it, a message reads: "Welcome to WordPress. Before getting started, we need some information on the database. You will need to know the following items before proceeding." A numbered list follows: 1. Database name, 2. Database username, 3. Database password, 4. Database host, 5. Table prefix (if you want to run more than one WordPress in a single database). A note below states: "We're going to use this information to create a wp-config.php file. If for any reason this automatic file creation doesn't work, don't worry. All this does is fill in the database information to a configuration file. You may also simply open wp-config-sample.php in a text editor, fill in your information, and save it as wp-config.php. Need more help? [We got it.](#)". Another note below says: "In all likelihood, these items were supplied to you by your Web Host. If you don't have this information, then you will need to contact them before you can continue. If you're all ready...". At the bottom is a "Let's go!" button.

Step 15 – Configure WordPress



WordPress > Setup Configuration Nathan

wplab.awsokc.com/wp-admin/setup-config.php?step=1

Below you should enter your database connection details. If you're not sure about these, contact your host.

Database Name awsokc2017 The name of the database you want to use with WordPress.

Username awsokc2017 Your database username.

Password awsokc2017 Your database password.

Database Host awsokc2017.cz3pyywzhx5m. You should be able to get this info from your web host, if localhost doesn't work.

Table Prefix wp_ If you want to run multiple WordPress installations in a single database, change this.

Submit

Services Resource Groups

RDS Dashboard

Instances Clusters Reserved Instances Snapshots Parameter Groups External Licenses Option Groups Subnet Groups Events Event Subscriptions Notifications

Launch DB Instance Show Monitoring Instance Actions

Filter: All Instances Search DB Instances... Viewing

	Engine	DB Instance	Status	CPU	Current Activity	Maintenance	Class
✓	Aurora (MySQL)	[REDACTED]	available	4.67%	5 Selects/sec	None	db.r3.large
✗	MySQL	awsokc2017	available	2.13%	0 Connections	None	db.t2.micro

Endpoint: awsokc2017.cz3pyywzhx5m.us-east-1.rds.amazonaws.com:3306 { authorized }

Alarms and Recent Events

TIME (UTC-5)	EVENT
Aug 30 7:15 PM	Finished DB Instance backup
Aug 30 7:12 PM	Backing up DB instance
Aug 30 7:12 PM	Finished applying modification to convert to a Multi-AZ DB Instance
Aug 30 7:02 PM	Applying modification to convert to a Multi-AZ DB Instance
Aug 30 7:02 PM	DB instance created
Aug 30 7:02 PM	DB instance restarted

Monitoring

CURRENT VALUE	THRESHOLD	LAST HOUR	
2.13%			Read IOPS
519 MB			Write IOPS
4,530 MB			Swap Usage

Instance Actions Tags Logs

MySQL available 0.98% 0 Connections None db.t2.micro

Step 15 – Configure WordPress



WordPress > Setup Configuration Nathan

wplab.awsokc.com/wp-admin/setup-config.php?step=2

Sorry, but I can't write the wp-config.php file.

You can create the wp-config.php manually and paste the following text into it.

```
<?php  
/**  
 * The base configuration for WordPress  
 *  
 * The wp-config.php creation script uses this file during the  
 * installation. You don't have to use the web site, you can  
 * copy this file to "wp-config.php" and fill in the values.  
 *  
 * This file contains the following configurations:  
 *  
 * * MySQL settings  
 * * Secret keys  
 * * Database table prefix  
 * * ABSPATH  
 *  
 */
```

After you've done that, click "Run the install."

Run the install

Step 15 – Configure WordPress



Compute

EC2

EC2 Container Service

Lightsail

Elastic Beanstalk

Lambda

Batch

Services

Resource Groups

Launch Instance

Connect

Actions

search : MyEc2 Add filter

Name Instance ID Instance Type Availability Zone Instance State Status Checks Alarm Status Public DNS (IPv4)

MyEC2Web... i-0f4a5927af34cbfdc t2.micro us-east-1b running 2/2 checks ... None ec2-107-20-14-1.compute-1.amazonaws.com

Instances

Instances

Spot Requests

Reserved Instances

Scheduled Instances

Dedicated Hosts

Images

AMIs

Bundle Tasks

Elastic Block Store

Volumes

Snapshots

Network & Security

Security Groups

Elastic IPs

Instance: i-0f4a5927af34cbfdc (MyEC2WebServer) Public DNS: ec2-107-20-14-1.compute-1.amazonaws.com

Description Status Checks Monitoring Tags

Instance ID	i-0f4a5927af34cbfdc	Public DNS (IPv4)	ec2-107-20-14-1.compute-1.amazonaws.com
Instance state	running	IPv4 Public IP	107.20.14.1
Instance type	t2.micro	IPv6 IPs	-
Elastic IPs		Private DNS	ip-172-31-13-123.ec2.internal
Availability zone	us-east-1b	Private IPs	172.31.13.123
Security groups	Web-DMZ, view inbound rules	Secondary private IPs	
Scheduled events	No scheduled events	VPC ID	vpc-9aaef8fe
AMI ID	amzn-ami-hvm-2017.03.1.20170812-x86_64-gp2 (ami-4fffc834)	Subnet ID	subnet-5955ee2f
Platform	-	Network interfaces	eth0
IAM role	S3-Admin-Access	Source/dest. check	True
Key pair name	MyEC2-VirginiaKey		

Step 15 – Configure WordPress



```
Downloads — bash — 80x47
[LM-140227:~ nathan$ cd Downloads/
[LM-140227:Downloads nathan$ chmod 400 MyEC2-VirginiaKey.pem.txt
[LM-140227:Downloads nathan$ ssh ec2-user@107.20.14.1 -i MyEC2-VirginiaKey.pem.tx]t

Downloads — ec2-user@ip-172-31-13-123:~ — ssh ec2-user@107.20.14.1 -i MyE...
[LM-140227:~ nathan$ cd Downloads/
[LM-140227:Downloads nathan$ chmod 400 MyEC2-VirginiaKey.pem.txt
[LM-140227:Downloads nathan$ ssh ec2-user@107.20.14.1 -i MyEC2-VirginiaKey.pem.tx]t
The authenticity of host '107.20.14.1 (107.20.14.1)' can't be established.
ECDSA key fingerprint is SHA256:P3Jodv4GYIKuJpt5pSMoG4Wba74JQxDV+zs5zeHg908.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '107.20.14.1' (ECDSA) to the list of known hosts.

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

https://aws.amazon.com/amazon-linux-ami/2017.03-release-notes/
[ec2-user@ip-172-31-13-123 ~]$
```

Step 15 – Configure WordPress



WordPress > Setup Configuration Nathan

Sorry, but I can't write the wp-config.php file.

You can create the wp-config.php manually and paste the following text into it.

```
<?php  
 * The base configuration for WordPress.  
 *  
 * The wp-config.php creation script uses this file during the  
 * installation. You don't have to use the web site, you can  
 * copy this file to 'wp-config.php' and fill in the values.  
 *  
 * This file contains the following configurations:  
 *  
 * * WP_DEBUG  
 * * Secret keys  
 * * Database table prefix  
 * * ABSPATH  
 */
```

After you've done that, click "Run the install."

[Run the install](#)

Downloads — ec2-user@ip-172-31-13-123:/var/www/html — ssh ec2-user@107....

```
[ec2-user@ip-172-31-13-123 ~]$ cd /var/www/html/  
[ec2-user@ip-172-31-13-123 html]$ sudo nano wp-config.php
```

Step 15 – Configure WordPress



```
Downloads — ec2-user@ip-172-31-13-123:~ — ssh ec2-user@107.20.14.1 -i MyE...
GNU nano 2.5.3          File: wp-config.php          Modified

?php
/**
 * The base configuration for WordPress
 *
 * The wp-config.php creation script uses this file during the
 * installation. You don't have to use the web site, you can
 * copy this file to "wp-config.php" and fill in the values.
 *
 * This file contains the following configurations:
 *
 * * MySQL settings
 * * Secret keys
 * * Database table prefix
 * * ABSPATH
 *
 * @link https://codex.wordpress.org/Editing_wp-config.php
 *
 * @package WordPress
 */

// ** MySQL settings - You can get this info from your web host ** //
/** The name of the database for WordPress */
define('DB_NAME', 'awsokc2017');

/** MySQL database username */
define('DB_USER', 'awsokc2017');

/** MySQL database password */
define('DB_PASSWORD', 'awsokc2017');

/** MySQL hostname */
define('DB_HOST', 'awsokc2017.cz3pyywzhx5m.us-east-1.rds.amazonaws.com:3306');

/** Database Charset to use in creating database tables. */
define('DB_CHARSET', 'utf8mb4');

/** The Database Collate type. Don't change this if in doubt. */
define('DB_COLLATE', '');

/*#@+
 * Authentication Unique Keys and Salts.
 *
?G Get Help ?O Write Out ?W Where Is ?K Cut Text ?J Justify ?C Cur Pos
?X Exit ?R Read File ?Replace ?U Uncut Text ?T To Spell ?L Go To Line
```

1. Paste config data from browser
2. CTRL + X (Exit)
3. Y (Save)
4. Enter (Confirm Filename)

Step 15 – Configure WordPress



The screenshot shows a web browser window titled "WordPress > Setup Configuration" with the URL "wplab.awsokc.com/wp-admin/setup-config.php?step=2". The page displays the WordPress logo at the top. Below it, a message states: "Sorry, but I can't write the wp-config.php file. You can create the wp-config.php manually and paste the following text into it." A large text area contains the contents of the wp-config.php file:

```
<?php  
/**  
 * The base configuration for WordPress  
 *  
 * The wp-config.php creation script uses this file during the  
 * installation. You don't have to use the web site, you can  
 * copy this file to "wp-config.php" and fill in the values.  
 *  
 * This file contains the following configurations:  
 *  
 * * MySQL settings  
 * * Secret keys  
 * * Database table prefix  
 * * ABS PATH  
 */
```

Below the code, a note says: "After you've done that, click "Run the install."" A red box highlights the "Run the install" button.

Step 15 – Configure WordPress



WordPress > Installation

wplab.awsokc.com/wp-admin/install.php?language=en_US

Nathan

Welcome

Welcome to the famous five-minute WordPress installation process! Just fill in the information below and you'll be on your way to using the most extendable and powerful personal publishing platform in the world.

Information needed

Please provide the following information. Don't worry, you can always change these settings later.

Site Title: AWSOKC Lab

Username: awsokc2017

Password: awsokc2017 (Very weak)

Confirm Password: Confirm use of weak password

Your Email: nathan@symphonytalent.com

Search Engine Visibility: Discourage search engines from indexing this site

It is up to search engines to honor this request.

Install WordPress

Step 15 – Configure WordPress

A screenshot of a web browser window titled "WordPress > Installation". The address bar shows "wplab.awsokc.com/wp-admin/install.php?step=2". The main content area displays the blue WordPress logo at the top, followed by a "Success!" message in bold. Below it, a line of text reads "WordPress has been installed. Thank you, and enjoy!". Underneath, there are two entries: "Username" followed by "awsokc2017" and "Password" followed by "Your chosen password.". At the bottom left is a "Log In" button.

Success!

WordPress has been installed. Thank you, and enjoy!

Username awsokc2017

Password Your chosen password.

Log In

Step 15 – Configure WordPress



AWSOKC Lab < Log In Not Secure | wplab.awsokc.com/wp-login.php

Username or Email Address
awsokc2017

Password

Remember Me

Lost your password?
[← Back to AWSOKC Lab](#)

Dashboard < AWSOKC Lab — | Nathan

wplab.awsokc.com/wp-admin/ AWSOKC Lab 1 0 + New

Howdy, awsokc2017 Screen Options Help

Dashboard

Welcome to WordPress! We've assembled some links to get you started:

Get Started **Next Steps** **More Actions**

[Customize Your Site](#) [Write your first blog post](#)
or, change your theme completely [Add an About page](#) [View your site](#) [Manage widgets or menus](#)
[Turn comments on or off](#) [Learn more about getting started](#)

At a Glance

1 Post 1 Page
1 Comment

WordPress 4.8.1 running [Twenty Seventeen](#) theme.

Activity

Recently Published
Today, 4:13 am Hello world!

Recent Comments

 From A WordPress Commenter on Hello world!
Hi, this is a comment. To get started with moderating, editing, and deleting

Quick Draft

Title
What's on your mind?

WordPress Events and News

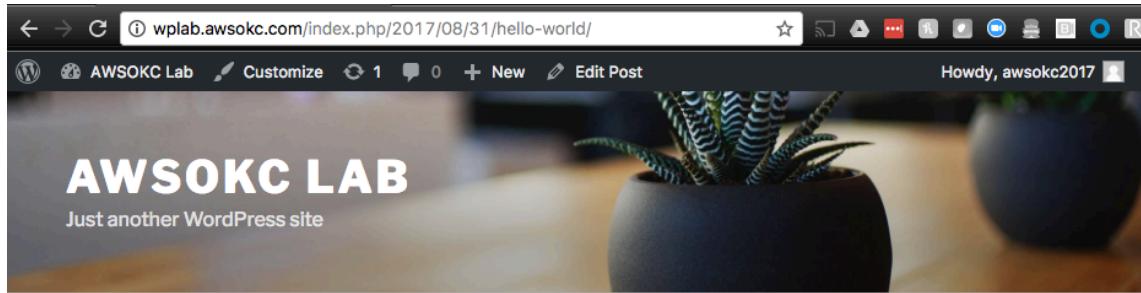
Attend an upcoming event near you.
[HTTPS and WordPress](#) Oklahoma City, USA Thursday, Sep 28, 2017 11:30 am

Step 15 – Configure WordPress



The screenshot shows the WordPress dashboard for the 'AWSOKC Lab' site. On the left, the 'Posts' menu item is highlighted with a red box. The main area displays a list of posts, with the first post titled 'Hello world!' selected and its edit link ('Edit') highlighted with a red box. The right side shows the 'Edit Post' screen for this post, which has the title 'AWSOKC - First Post!'. The post content area contains the text 'I sure hope this lab is working well for you!'. The 'Update' button in the bottom right corner of the editor is also highlighted with a red box.

Step 15 – Configure WordPress



AUGUST 31, 2017 BY AWSOKC2017

AWSOKC – First Post!

I sure hope this lab is working well for you!

Search ...



RECENT POSTS

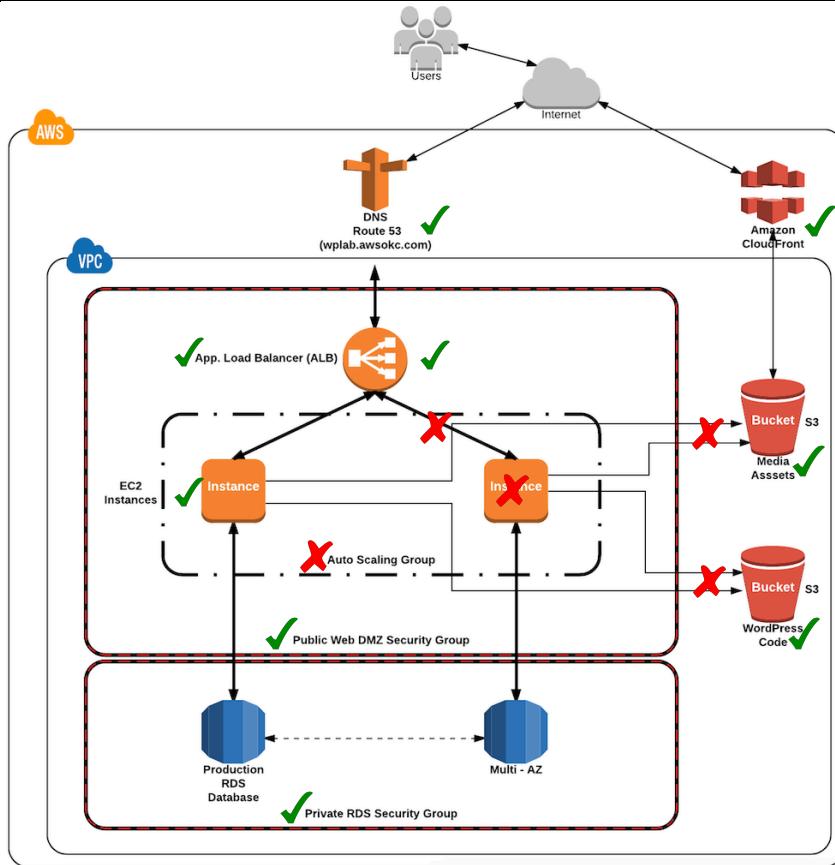
AWSOKC – First Post!

Edit

RECENT COMMENTS

A WordPress Commenter on AWSOKC – First

Recap



Power Down Recommendations:



- Stop your EC2 Instance until our next session.
- Delete your ALB so it does not cost you \$\$ (We will recreate next time)