

# Multi Tier Deployment - AWS

Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity in the Amazon Web Services (AWS) cloud. Using Amazon EC2 eliminates your need to invest in hardware up front so you can develop and deploy applications faster. You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage. Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic. Problem Statement: Company ABC wants to move their product to AWS. They have the following things set up right now:

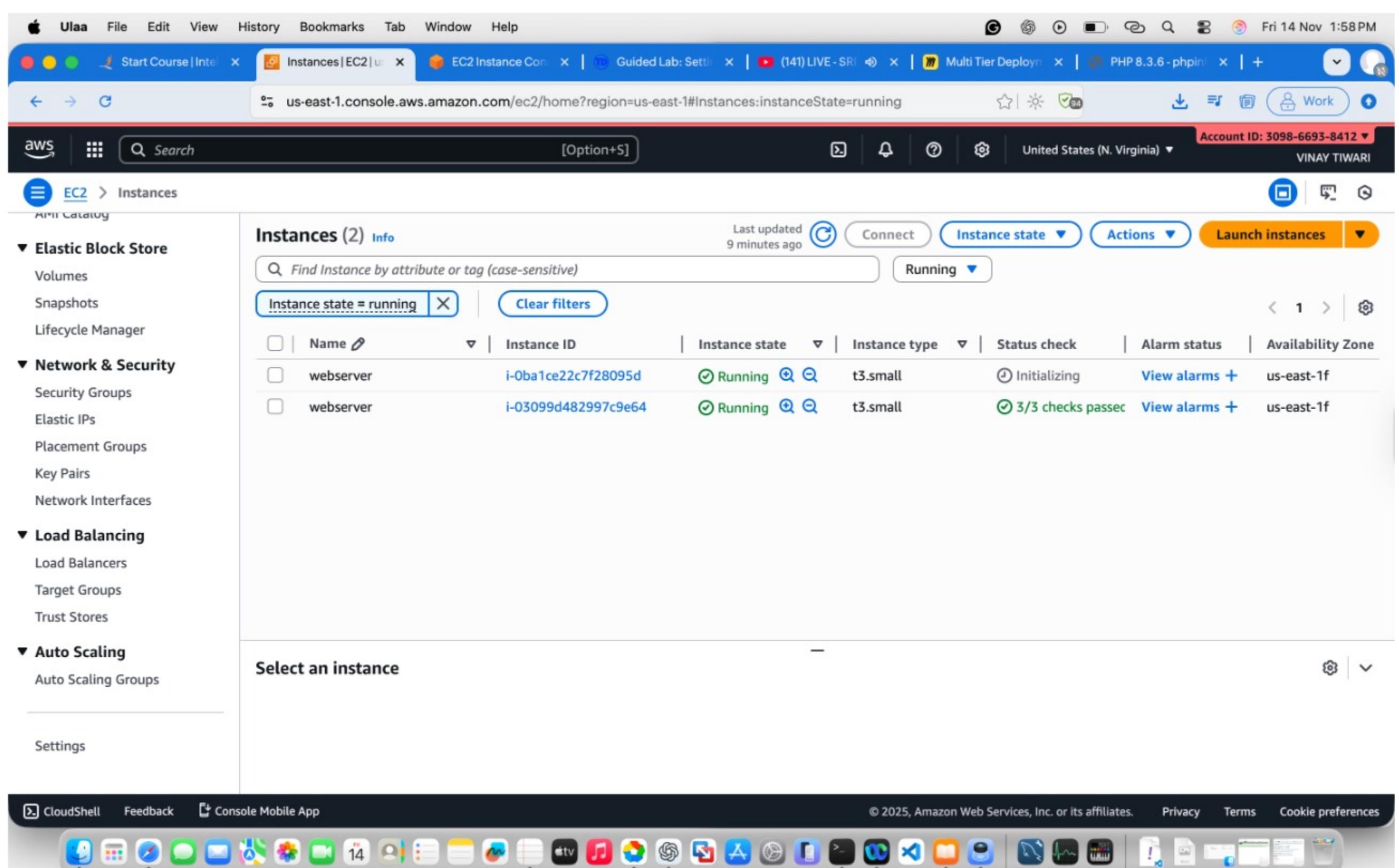
1. MySQL DB
2. Website (PHP) The company wants high availability on this product, therefore wants Auto Scaling to be enabled on this website .

## Project Goal

Deploy a **PHP Website (Frontend) + MySQL RDS (Backend)** With **AutoScaling (min 2 instances)** for high availability.Solutions

## Solutions

### 1. Launch an EC2 Instance

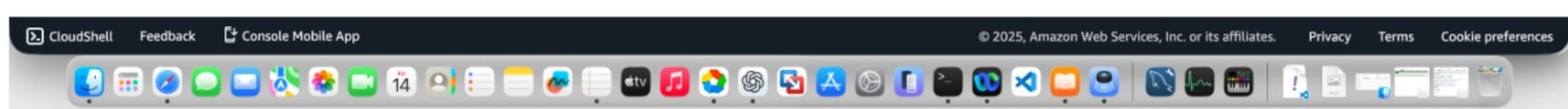


The screenshot shows the AWS EC2 Instances page. On the left, there's a sidebar with navigation links for Elastic Block Store, Network & Security, Load Balancing, and Auto Scaling. The main area displays a table of instances. The table has columns for Name, Instance ID, Instance state, Instance type, Status check, Alarm status, and Availability Zone. There are two entries, both labeled 'webserver'. The first instance (i-0ba1ce22c7f28095d) is in the 'Running' state, t3.small type, Initializing alarm, and located in us-east-1. The second instance (i-03099d482997c9e64) is also in the 'Running' state, t3.small type, with 3/3 checks passed alarm, and located in us-east-1. A search bar at the top allows filtering by instance name or tag. A 'Launch instances' button is visible at the top right of the table.

## 2. Enable Auto Scaling (Minimum 2 Instances)

The screenshot shows the AWS EC2 Auto Scaling groups page. A green success message at the top states "multitier created successfully". Below it, the "Auto Scaling groups (1)" section displays one item: "multitier" (Info). The group uses the "web-lt" launch template, has a desired capacity of 2, and is currently updating its capacity. The status is "Updating capacity...". The "Actions" button is visible, along with a "Create Auto Scaling group" button.

0 Auto Scaling groups selected



php show

The screenshot shows a web browser displaying PHP version 8.3.6 information. The title bar says "Not Secure | 18.205.60.162". The main content is a table titled "PHP Version 8.3.6" with the PHP logo in the top right corner. The table contains various PHP configuration details:

System	Linux ip-172-31-69-169 6.14.0-1015-aws #15~24.04.1-Ubuntu SMP Tue Sep 23 22:44:48 UTC 2025 x86_64
Build Date	Jul 14 2025 18:30:55
Build System	Linux
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/8.3/apache2
Loaded Configuration File	/etc/php/8.3/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/8.3/apache2/conf.d
Additional .ini files parsed	/etc/php/8.3/apache2/conf.d/10-mysqli.ini, /etc/php/8.3/apache2/conf.d/10-opcache.ini, /etc/php/8.3/apache2/conf.d/10-pdo.ini, /etc/php/8.3/apache2/conf.d/20-calendar.ini, /etc/php/8.3/apache2/conf.d/20-ctype.ini, /etc/php/8.3/apache2/conf.d/20-exif.ini, /etc/php/8.3/apache2/conf.d/20-fil.ini, /etc/php/8.3/apache2/conf.d/20-fileinfo.ini, /etc/php/8.3/apache2/conf.d/20-ftp.ini, /etc/php/8.3/apache2/conf.d/20-gettext.ini, /etc/php/8.3/apache2/conf.d/20-iconv.ini, /etc/php/8.3/apache2/conf.d/20-mysqli.ini, /etc/php/8.3/apache2/conf.d/20-pdo_mysql.ini, /etc/php/8.3/apache2/conf.d/20-phar.ini, /etc/php/8.3/apache2/conf.d/20-posix.ini, /etc/php/8.3/apache2/conf.d/20-readline.ini, /etc/php/8.3/apache2/conf.d/20-shmop.ini, /etc/php/8.3/apache2/conf.d/20-sockets.ini, /etc/php/8.3/apache2/conf.d/20-sysvmsg.ini, /etc/php/8.3/apache2/conf.d/20-sysvsem.ini, /etc/php/8.3/apache2/conf.d/20-sysvshm.ini, /etc/php/8.3/apache2/conf.d/20-tokenizer.ini
PHP API	20230831
PHP Extension	20230831
Zend Extension	420230831
Zend Extension Build	API420230831,NTS
PHP Extension Build	API20230831,NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	enabled
Zend Memory Manager	enabled
Zend Multibyte Support	disabled
Zend Max Execution Timers	disabled
IPv6 Support	enabled
DTrace Support	disabled

## 3. Create an RDS Instance (MySQL)

The screenshot shows the AWS RDS console for a database named 'database-1'. The left sidebar has 'Aurora and RDS' selected under 'Databases'. The main area displays the 'Summary' of the database, including its identifier, status (Backing-up), role (Instance), engine (MySQL Community), and region (us-east-1c). Below the summary, there are tabs for 'Connectivity & security', 'Monitoring', 'Logs & events', 'Configuration', 'Zero-ETL integrations', and 'Maintenance & backup'. The 'Connectivity & security' tab is active, showing details like the endpoint (database-1.cg906c68gcte.us-east-1.rds.amazonaws.com) and port (3306). It also lists networking information such as the VPC (vpc-05d3ebfd95b26152c), subnet group (default-vpc-05d3ebfd95b26152c), and subnets. Security details include VPC security groups (default sg-06d7e6fa58725927c, Active), publicly accessible status (No), and certificate authority (rds-ca-rsa2048-g1).

## Connection Successfull DATA BASE

The screenshot shows a web browser window with the URL '18.205.60.162'. The status bar indicates 'Not Secure'. The page content says 'iConnected to RDS successfully!' and 'Welcome to My Website'. The browser's address bar also shows '18.205.60.162'. The bottom of the screen shows the Mac OS X dock with various application icons.