

Scale and Load Balance Your Architecture

1. Create an Amazon Machine Image (AMI) from a running instance

The screenshot shows the AWS EC2 console with the 'AMIs' section selected. A new AMI named 'WebServerAMI' is being created from a running instance. The details page for the AMI shows the following information:

AMI ID	Image type	Platform details	Root device type
ami-02e71aa5520e3382c	machine	Linux/UNIX	EBS
AMI name	Owner account ID	Architecture	Usage operation
WebServerAMI	730335452349	x86_64	RunInstances
Root device name	Status	Source	Virtualization type
/dev/xvda	Pending	730335452349/WebServerAMI	hvm
Boot mode	State reason	Creation date	Kernel ID
uefi-preferred	-	2025-11-17T17:15:22.000Z	-
Description	Product codes	RAM disk ID	Deprecation time
Lab AMI for Web Server	-	-	-
Last launched time	Block devices	Registration protection	Allowed image
Source AMI ID	/dev/xvda1@tnarugn3	Disabled	-
Source AMI Region			

2. Create a Load Balancer

The screenshot shows the AWS ELB console with the 'Target groups' section selected. A new target group named 'LabGroup' is being created. The 'Targets' tab shows the following status summary:

Total targets	Healthy	Unhealthy	Unused	Initial	Draining
0	0	0	0	0	0
	Anomalous				

The 'Registered targets' table is currently empty.

Created target group

Screenshot of the AWS CloudWatch Metrics console showing a log stream for a Lambda function named 'HelloWorld'. The log message indicates a successful execution with a duration of 16ms.

Created Load Balancer

3 Create a Launch Template and an Auto Scaling Group

Screenshot of the AWS EC2 Launch Templates page showing a table of existing launch templates. A new launch template named 'LabConfig' is being created, with its details and version information visible.

Launch Template ID	Launch Template Name	Default Version	Latest Version	Create Time	Created By	Managed	Operator
lt-0ab028945a71a202f	LabConfig	1	1	2025-11-17T17:43:34.000Z	arn:aws:sts::730355452349:assumed-role/vocabs/user4512517:SHAZIL_HAMEED	false	-

Created launch template

The screenshot shows the AWS Auto Scaling Groups page. At the top, there are tabs for 'Launch configurations', 'Launch templates', 'Actions', and 'Create Auto Scaling group'. A search bar is present. The main table has columns for Name, Launch template/configuration, Instances, Status, Desired capacity, Min, Max, Availability Zones, and Creation time. One row is visible for 'Lab Auto Scaling Group'.

Created auto scaling group

The screenshot shows the AWS Instances page. The left sidebar includes sections for Dashboard, EC2 Global View, Events, Instances (selected), Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Capacity Manager, Images, AMIs, AMI Catalog, Elastic Block Store, Volumes, Snapshots, Lifecycle Manager, Network & Security, Security Groups, Elastic IPs, Placement Groups, Key Pairs, Network Interfaces, Load Balancing, Load Balancers, Target Groups, and Trust Stores. The main table lists four instances: 'Lab Instance' (running, t2.micro, us-east-1a, 44.211.87.53), 'Web Server 1' (running, t2.micro, us-east-1a, 44.211.90.235), 'Bastion Host' (running, t2.micro, us-east-1a, -), and another 'Lab Instance' (running, t2.micro, us-east-1b, -).

Verified Load Balancing is Working