# AWS EC2 Interview Questions & Answers

For AWS DevOps Engineer (3–4 Years Experience)

**Q.** What is Amazon EC2 and how is it different from on■prem servers?
**A.** EC2 provides scalable virtual servers in AWS. It removes hardware management and follows a pay■as■you■go model.

**Q.** What factors do you consider before choosing an EC2 instance type?
**A.** CPU, memory, disk I/O, network, workload behavior, and cost.

**Q.** Difference between instance type and instance family?
**A.** Family is category like T or C, type is size like t3.medium.

**Q.** Stop vs Terminate EC2?
**A.** Stop preserves data, terminate deletes the instance permanently.

**Q.** What is an AMI?
**A.** AMI is a template with OS and software used to launch EC2.

**Q.** Difference between EBS and instance store?
**A.** EBS is persistent, instance store is temporary.

**Q.** How do you resize EC2?
**A.** Stop instance, change type, and restart.

**Q.** Vertical vs Horizontal scaling?
**A.** Vertical changes instance size, horizontal adds instances.

**Q.** How do AZs help availability?
**A.** They isolate failures by spreading instances across zones.

**Q.** How do you monitor EC2?
**A.** Using CloudWatch metrics and alarms.

**Q.** General Purpose instances use case?
**A.** Used for web apps and APIs.

**Q.** When to use T series?
**A.** For burstable workloads like dev/test.

**Q.** What are CPU credits?
**A.** They allow short CPU bursts in T series.

**Q.** Why not T series for high CPU?
**A.** Credits exhaust and performance drops.

**Q.** Compute Optimized instances?
**A.** For CPU■intensive workloads.

**Q.** Memory Optimized instances?
**A.** For databases and caching.

**Q.** Best instance for database?
**A.** Memory Optimized due to high RAM needs.

**Q.** Storage Optimized instances?
**A.** For high IOPS workloads like logs.

**Q.** I vs D series difference?
**A.** I focuses on IOPS, D on dense storage.

**Q.** GPU instances usage?
**A.** For ML, AI, and graphics.

**Q.** C vs R series decision?
**A.** C for CPU■bound, R for memory■bound.

**Q.** Wrong instance impact?
**A.** Higher cost and poor performance.

**Q.** How to find over■provisioning?
**A.** Low utilization in CloudWatch.

**Q.** Tools for performance analysis?
**A.** CloudWatch, Compute Optimizer.

**Q.** How to right■size EC2?
**A.** Adjust size based on metrics.

**Q.** Explain On■Demand pricing?
**A.** Pay only for usage.

**Q.** Reserved Instances?
**A.** Discounted pricing for long■term use.

**Q.** Standard vs Convertible RI?
**A.** Standard = more discount, Convertible = flexibility.

**Q.** When not to use RI?
**A.** For short■term workloads.

**Q.** Spot Instances?
**A.** Cheap but interruptible capacity.

**Q.** Why Spot interruptions?
**A.** AWS reclaims capacity.

**Q.** Best Spot workloads?
**A.** Batch and CI jobs.

**Q.** Handling Spot interruption?
**A.** Checkpointing and retries.

**Q.** Savings Plans?
**A.** Flexible long■term savings.

**Q.** Savings vs RI?
**A.** Savings Plans are more flexible.

**Q.** Mix pricing models?
**A.** Yes, based on workload type.

**Q.** How to reduce EC2 cost?
**A.** Right■size and use Savings Plans.

**Q.** Cost optimization services?
**A.** Cost Explorer, Budgets.

**Q.** Billing mistakes?
**A.** Over■provisioning.

**Q.** 24/7 web app pricing?
**A.** Reserved or Savings Plan.

**Q.** Nightly batch job?
**A.** Spot instances.

**Q.** Slow database fix?
**A.** Move to Memory Optimized.

**Q.** CPU >90% always?
**A.** Scale up or auto scale.

**Q.** High memory low CPU?
**A.** Memory■bound workload.

**Q.** AWS bill spike?
**A.** Check Cost Explorer.

**Q.** Auto Scaling benefit?
**A.** Adjusts capacity automatically.

**Q.** Load Balancer role?
**A.** Distributes traffic evenly.

**Q.** Highly available EC2 design?
**A.** Multi■AZ with ASG and ELB.

**Q.** Real EC2 optimization example?
**A.** Used RI for prod and Spot for batch jobs to reduce cost.