

High CPU Usage on EC2

- Your production EC2 instance CPU spiked to 100%.
- Steps:
 - 1. Check CloudWatch CPU metrics
 - 2. SSH and run ``top``, ``df -h``, ``free -m``
 - 3. Restart only affected services
 - 4. Scale instance or enable Auto Scaling
 - 5. Apply long-term optimization

App Running but Not Accessible

- Application works inside EC2 but not in browser.
- Check:
 - - Security Group ports (80/443/8080)
 - - NACL rules
 - - Load Balancer health checks
 - - Web server status (nginx/httpd)
 - - Logs for errors

Jenkins Pipeline Failure

- Pipeline fails in build stage.
- Troubleshooting:
 - - Check console output
 - - Validate Git credentials
 - - Ensure agent/node is online
 - - Clean workspace and rebuild
 - - Check Maven dependencies

Docker Container Running but Not Accessible

- Troubleshooting:
 - - Confirm port mapping ``docker ps``
 - - Use ``docker logs <container>``
 - - Ensure app binds to 0.0.0.0
 - - If in Kubernetes, check Service type and endpoints

Kubernetes CrashLoopBackOff

- Fix:
- - `kubectl describe pod <pod>`
- - `kubectl logs <pod>`
- - Check image tag, env vars, probes, resources
- - Fix and redeploy

Kubernetes Pod Pending

- Root causes:
 - - Insufficient node resources
 - - NodeSelector / Taints issue
 - - PVC StorageClass issue
- Check with ``kubectl describe pod``.

Terraform Showing Changes Unexpectedly

- Reason: State drift.
- Fix:
- - `terraform refresh`
- - Use remote backend (S3 + DynamoDB lock)
- - Avoid manual infra changes.

Blue-Green Deployment

- Two environments: Blue (current) & Green (new).
- Deploy to Green → Test → Switch traffic.
- Rollback is instant by switching back to Blue.

RDS Storage Full

- Fix:
 - - Enable storage autoscaling
 - - Take snapshot
 - - Increase allocated storage
 - - Enable alerts via CloudWatch.

S3 Access Denied

- Check bucket policy and IAM role permissions.
- Ensure `s3:GetObject` allowed.
- Avoid public buckets unless needed.