

# Case Study 2: AWS Cost Optimization for ALIMCO's Inventory & Ticketing Platform

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## Client Overview:

**Client:** Artificial Limbs Manufacturing Corporation of India (ALIMCO)

**Type:** Government-funded assistive services organization

**User Base:** 5 lakh+ service users across India

ALIMCO manages the **repair and distribution of artificial limbs and prosthetic parts** for end-users throughout India. The AWS-hosted digital platform supports:

- **Inventory tracking** of parts and limb components across regional warehouses
- **Customer service portal** for request submission and repair ticket generation
- **Real-time ticket lifecycle management** — from initiation to resolution
- **Technician dashboard** for on-site updates and spare tracking

**Monthly AWS Spend (Before Optimization):** ₹20,000

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## Objective:

Reduce cloud infrastructure costs while maintaining 24/7 uptime for the support ticketing system and real-time inventory accuracy for regional centers.

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## Optimization Actions Taken

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### 1. Right-Sizing EC2 Instances

- Admin and support API servers were running at 15–20% CPU usage.
- Replaced `t3.medium` instances with `t3a.micro` for the web portal and backend.
- Enabled **auto-scheduling** to shut down non-critical instances after 6 PM IST.

**Savings:** ₹5,000/month

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### 2. Database Cost Optimization

- Migrated RDS MySQL to **Graviton-based t4g.micro** instance.
- Purchased a **1-year Reserved Instance** for stable production usage.

**Savings:** ₹1,200/month

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### 3. S3 Tiering for Ticket Uploads

- Enabled **S3 lifecycle rules** to archive uploaded PDFs/images to **Glacier** after 30 days.

**Savings:** ₹800/month

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### 4. Monitoring & Snapshot Automation

- Reduced **CloudWatch Logs** retention from 30 days to 7 days.
- Automated EBS snapshot cleanup for all non-production volumes older than 5 days.

**Savings:** ₹1,000/month

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### Post-Optimization Outcome

| Metric            | Before    | After     | Savings       |
|-------------------|-----------|-----------|---------------|
| Monthly AWS Cost  | ₹20,000   | ₹12,000   | ₹8,000 (~40%) |
| Annual Cloud Cost | ₹2,40,000 | ₹1,44,000 | ₹96,000/year  |

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### Conclusion

Through instance right-sizing, serverless enhancements, storage tiering, and automated cleanup policies, **Quaere Tech** helped **ALIMCO** achieve a **40% reduction in AWS operational costs**, ensuring continued support to hundreds of thousands of beneficiaries while maintaining technical excellence and cost efficiency.