



AWS Migration Case Study



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About Capital One

- Capital One: American bank, HQ in Virginia
- Total assets (2023): \$478.5 billion
- 12 Billion Transaction per day Globally
- 100% cloud-managed since 2020
- Exited 8 on-premises data centers



Pre-Migration Environment



Centralized Infrastructure



Manual Provisioning

Manual processes slowed down release cycles.



On-Premise Data Centers

Operations spanned across 8 physical data centers.



Migration Process



Assessment

Careful evaluation of all workloads.



Upskilling

Trained 11,000+ engineers



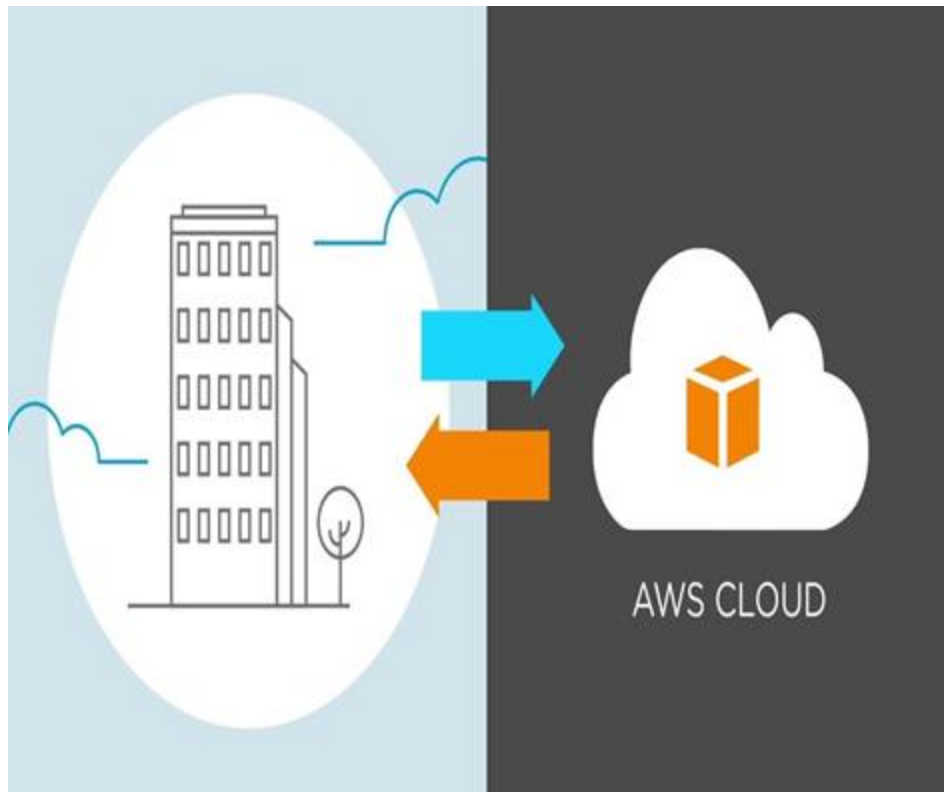
Refactor

80% refactored into cloud-native applications.

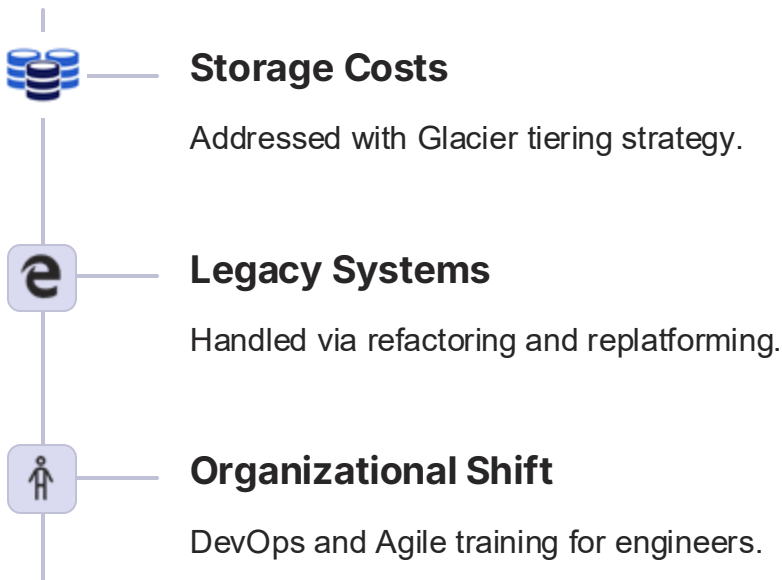


Replatform

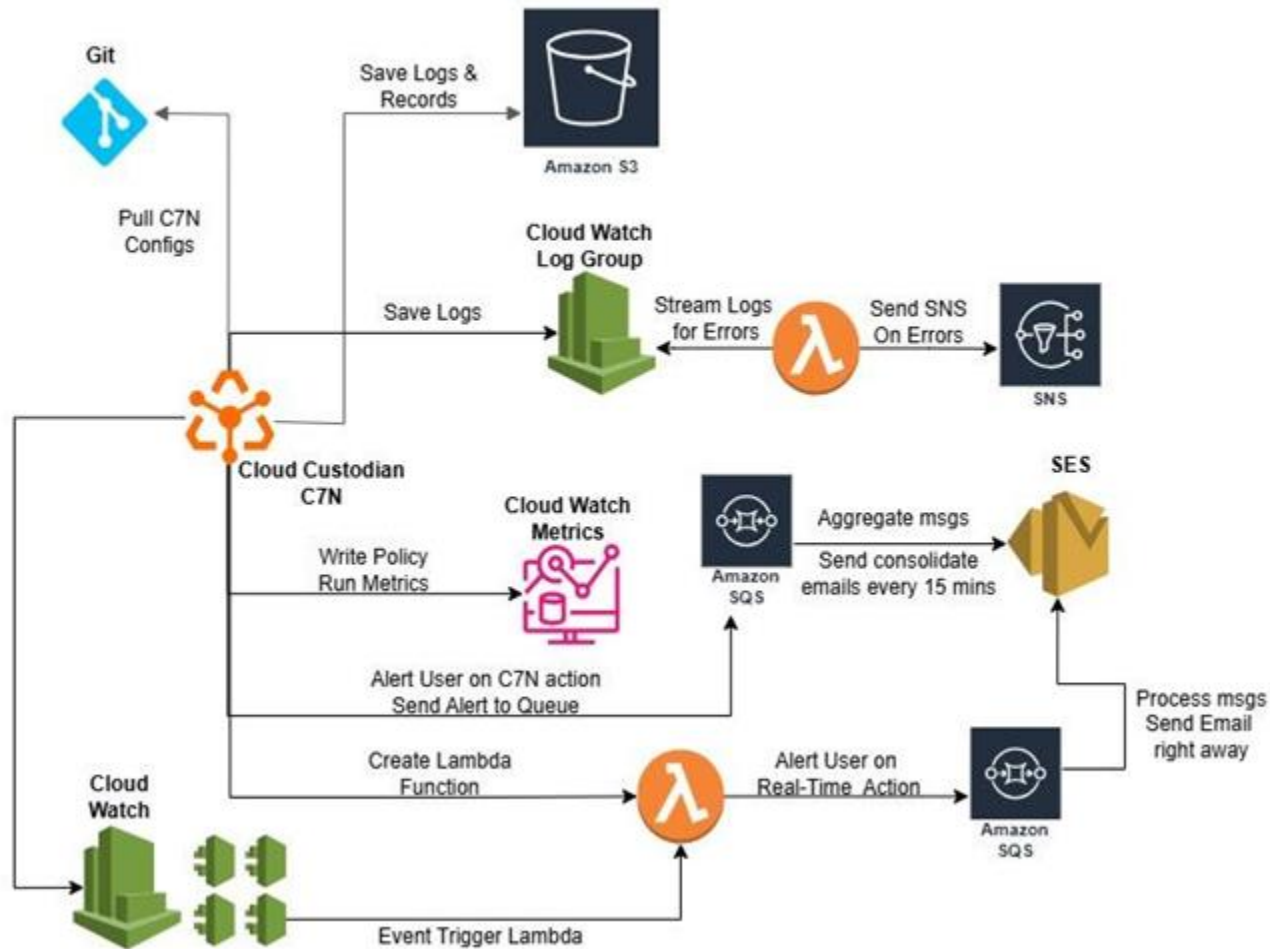
Lower priority applications were replatformed.



Migration Challenges & Solutions



Capital One: AWS Policy Enforcement at Scale with Cloud Custodian



AWS Services Used



Compute



EC2



Lambda



ECS



Storage



S3



S3 Glacier
Deep Archive



Database



RDS



Aurora



Dynamo
DB



Monitoring & Management



CloudWatch



CloudFormation



CI/CD & ML



SageMaker



Code
Pipeline



Security



KMS



IAM

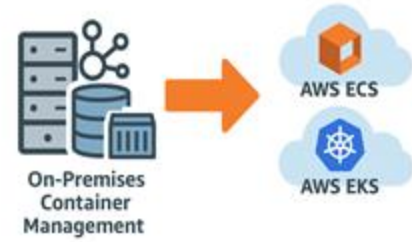


WAF



Shield

Mapping



Post-Migration Benefits



Fully cloud-native infrastructure achieved.



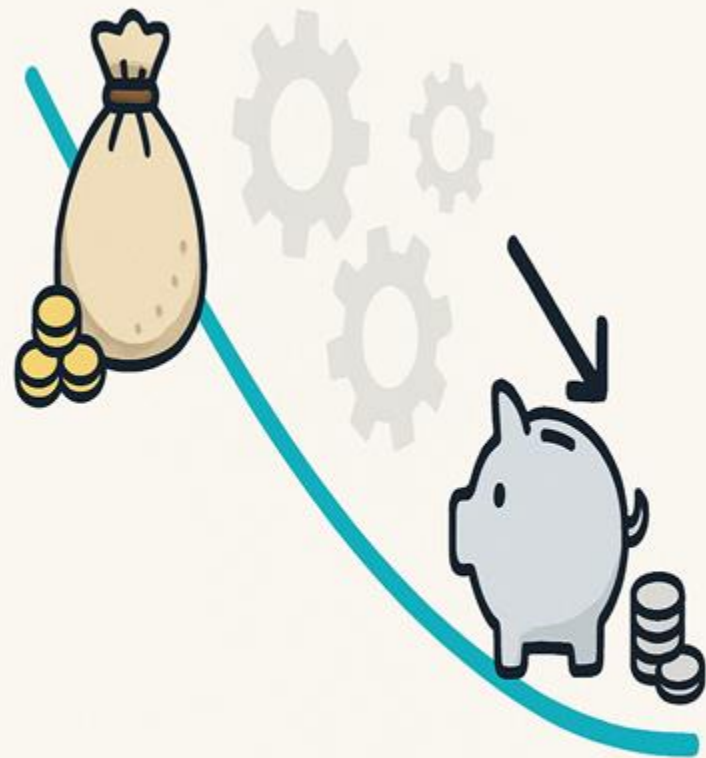
Serverless architecture with real-time data.



Effectively handle increasing demand.
(customer queries, transaction)



- **Infra savings: Closed 8 data centers**
- **Reduced Storage Costs: Glacier tiering**
- **Serverless & on-demand provisioning**



COST OPTIMIZATION

Business Impact

- **Dev setup time: 3 months → Minutes**
- **Disaster recovery improved 70%**
- **Transaction errors down 50%**
- **Incident resolution time cut 50%**
- **Sustainability: 103 tons recycled, 650K LEDs**



THANK YOU

