

Acme Manufacturing Cloud Migration: Detailed Team Roles & Responsibilities

This document outlines the specific roles and responsibilities of each team member for the Acme Manufacturing cloud migration project. It emphasizes the alignment between individual tasks, the AWS console steps, the overall architecture, and security best practices.

Phase 1: Assessment & Planning (Led by Yanga)

- **Yanga (Overall Lead):** Responsible for the overall project management, coordinating all team members, ensuring adherence to timelines, and communication with Acme stakeholders. Specifically:
 - Oversees the discovery and inventory process.
 - Leads the application portfolio analysis, prioritizing applications for migration.
 - Conducts the cloud readiness assessment, identifying gaps and developing mitigation strategies.
 - Defines the overall cloud migration strategy, outlining target architecture, migration approach, timelines, and resource allocation.
 - Develops a comprehensive cost model.
 - Creates the risk assessment and mitigation plans.
 - Develops the project communication plan.
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- **Tsakani (Application Architect):**
 - Analyzes Acme's application portfolio, identifying dependencies and complexities. Recommends migration strategies for individual applications (rehost, refactor, replatform, repurchase, retire).
 - Creates detailed documentation for each application's migration plan.
 - Participates in the cloud readiness assessment.
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- **Bushy (Data Architect):**
 - Performs a thorough assessment of Acme's data, including volume, type, sensitivity, and compliance requirements.
 - Develops a comprehensive data migration plan, outlining procedures and tooling (e.g., AWS DMS, Snowball).
 - Participates in the cloud readiness assessment.
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- **Yamkelani (Performance Engineer):**
 - Participates in the cloud readiness assessment focusing on performance requirements and potential bottlenecks.
 - Provides guidance on choosing optimal instance types and service configurations for performance and cost optimization.
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- **Lusanda (Security Engineer):**
 - Performs a security assessment of Acme's existing infrastructure and identifies potential vulnerabilities and risks.
 - Develops security recommendations and mitigation strategies for the cloud migration.
 - Participates in the cloud readiness assessment.
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Phase 2: Pilot Migration (Led by Yanga, with individual responsibilities outlined below)

1. **Proof of Concept (POC) Setup (Yamkelani & Tsakani):**
 - **Yamkelani:** Configures CloudWatch to monitor the POC application's performance and resource utilization.
 - **Tsakani:** Chooses the appropriate EC2 instance type for the POC application based on its performance requirements.
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3. **Infrastructure Setup (Yanga & Lusanda):**
 - **Yanga:** Sets up the VPC, subnets, security groups, and routing tables.
 - **Lusanda:** Configures IAM roles and policies for the POC, ensuring principle of least privilege. Sets up KMS keys for encryption. Configures AWS Direct Connect (if applicable)
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5. **Application Migration (Tsakani):**
 - **Tsakani:** Migrates the selected application to AWS, documenting all steps.
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7. **Testing & Validation (Tsakani & Yamkelani):**
 - **Tsakani:** Tests the migrated application's functionality.
 - **Yamkelani:** Performs performance testing and identifies areas for optimization.
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9. **Optimization (Yamkelani):** Yamkelani tunes the application's performance and resource allocation based on testing results.
10. **Documentation (Yanga):** Yanga leads the effort to create comprehensive documentation of the POC, including all configurations, results, and lessons learned.

Phase 3: Gradual Migration (Led by Yanga, with individual responsibilities outlined below)

1. **Application Prioritization & Migration Plan (Tsakani & Yanga):**
 - **Tsakani:** Creates detailed migration plans for each application, outlining steps, dependencies, and timelines.
 - **Yanga:** Reviews and approves the application migration plans, ensuring alignment with the overall architecture and project timeline.
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3. **Data Migration (Bushy):** Bushy implements the data migration strategy, using appropriate AWS tools (e.g., DMS, Snowball), and ensures data integrity and compliance.
4. **Infrastructure Scaling (Yanga):** Yanga adapts the AWS infrastructure to accommodate the increasing workload as more applications are migrated. This might involve adding more EC2 instances, increasing EBS storage, or scaling up other services.
5. **Continuous Monitoring & Alerting (Yamkelani):** Yamkelani implements continuous monitoring and alerting using CloudWatch. This enables proactive identification and resolution of issues.
6. **Security & Compliance (Lusanda):** Lusanda implements and monitors security best practices, including IAM access control, data encryption with KMS, and continuous monitoring with GuardDuty. Regular security scans using Inspector are performed.
7. **Ongoing Optimization (Yamkelani):** Yamkelani continues optimizing resource allocation and performance based on the monitoring data.

Phase 4: Optimization & Automation (Led by Yanga, with individual responsibilities outlined below)

1. **Cost Optimization (Yamkelani):** Yamkelani analyzes costs, identifies areas for improvement, and implements cost-saving strategies (e.g., Reserved Instances, Savings Plans).
2. **Automation (Tsakani):** Tsakani implements infrastructure as code using CloudFormation, automating infrastructure provisioning and management.
3. **DevOps Implementation (Tsakani & Yamkelani):** Tsakani and Yamkelani work together to implement CI/CD pipelines, automate testing, and improve application deployment and update processes.
4. **Monitoring & Alerting Enhancement (Yamkelani):** Yamkelani further refines monitoring and alerting, creating more sophisticated alarms and dashboards.
5. **Documentation & Knowledge Transfer (Yanga & all team members):** Yanga, working with the entire team, creates comprehensive documentation of the entire migration process and conducts a detailed knowledge transfer session to Acme's IT team.
6. **Post-Migration Review (Yanga):** Yanga leads a post-migration review to assess the project's success, identify lessons learned, and develop recommendations for future improvements.

Communication & Collaboration:

- Regular team meetings and communication channels (e.g., Slack, Microsoft Teams) should be established.
- All documentation is housed in a centralized repository with version control.
- Each team member is responsible for keeping their assigned documents up-to-date and consistent.

This detailed breakdown ensures that every aspect of the project is covered, maximizing the chance of a successful cloud migration for Acme Manufacturing. Remember, continuous monitoring and optimization are critical even after the migration is complete.