Acme Manufacturing Cloud Migration: Full Migration Phase

This document outlines the procedures for the Full Migration phase of the Acme Manufacturing cloud migration project. This phase involves migrating the remaining applications to AWS, building upon the learnings from the Proof of Concept (POC) and Pilot Migration phases. This is a phased approach, prioritizing applications based on business criticality and dependencies. Always consult official AWS documentation for the most up-to-date information and best practices.

I. Prioritization and Planning:

1. **Application Prioritization:** Prioritize the remaining applications for migration based on business impact, dependencies, complexity, and risk. Applications with minimal dependencies should be migrated first to minimize disruption. A detailed matrix documenting prioritization criteria should be maintained and reviewed regularly.
2. **Migration Sequencing:** Define the sequence in which applications will be migrated. Consider dependencies between applications and potential impact on business operations. A clear dependency diagram should be created and updated regularly.
3. **Resource Allocation:** Allocate the necessary resources (compute, storage, network) for each application migration. Ensure that sufficient capacity is available for each phase of the migration. Consider using AWS Cost Explorer to estimate costs and budget accordingly.
4. **Rollback Planning:** Define rollback plans for each application in case of failure. This plan should detail the steps needed to revert to the pre-migration state with minimal disruption to business operations.

II. Migration Execution:

The migration process will largely follow the procedures established during the POC and Pilot Migration phases, but on a larger scale. Each application will be migrated in a structured and controlled manner, following its specific migration plan.

A. Application Migration (Tsakani):

1. **Application Preparation:** Prepare the application for migration by packaging the application code, dependencies, and configurations.
2. **Environment Setup:** Set up the necessary AWS resources (EC2 instances, ECS clusters, Lambda functions, etc.) for each application.
3. **Migration Execution:** Migrate the application to the AWS environment, following the documented migration plan. This may involve using different migration strategies (rehost, refactor, replatform, repurchase, retire), depending on the application's characteristics.

4. **Testing and Validation:** Thoroughly test each application after migration to ensure that all functionality is working as expected. This includes both functional and performance testing.
5. **Documentation:** Meticulously document all steps, configurations, and test results.

B. Data Migration (Bushy):

1. **Data Extraction:** Extract the data associated with each application.
2. **Data Transformation:** Transform the data, if necessary, to be compatible with the target database or storage in AWS.
3. **Data Migration Execution:** Migrate the data to AWS using appropriate tools (AWS DMS, Snowball, etc.).
4. **Data Validation:** Verify the data integrity after migration.

C. Security and Compliance (Lusanda):

1. **Security Configuration:** Ensure that appropriate security measures (security groups, IAM roles, encryption) are implemented for each application and its associated data.
2. **Vulnerability Management:** Conduct regular vulnerability scans to identify and address potential security vulnerabilities.
3. **Compliance Verification:** Ensure that the migration is compliant with all relevant security regulations and standards.

III. Monitoring and Optimization (Yamkelani):

1. **Performance Monitoring:** Continuously monitor the performance of migrated applications and identify any performance bottlenecks.
2. **Resource Optimization:** Optimize resource allocation to reduce costs and improve efficiency. Tools like AWS Cost Explorer and CloudWatch can be used for this purpose.

IV. Post-Migration Activities:

1. **Final Testing:** Conduct thorough final testing after all applications have been migrated to verify functionality, performance, and security.
2. **Documentation:** Complete the final documentation for the full migration.
3. **Sign-Off:** Obtain sign-off from Acme Manufacturing stakeholders.

This document provides a high-level overview. More detailed instructions will be provided for each application. Always prioritize security and conduct thorough testing at each step. This phase is crucial for the success of the project, and meticulous planning and execution are vital. Remember to refer to the rollback plan for each application in case of unexpected issues.