

Milestone 3: Practical Implementation of LowTech GmbH Webshop in CSP Platform

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Abstract

1 Introduction

1.1 Overview of the Project

Brief recap of previous milestones and progression to current implementation phase

1.2 Objectives of the Cloud Implementation of Webshop

2 Application Design

2.1 Architectural Overview

Detailed description of the three-tier structure with CSP service mapping

Presentation-Tier (Frontend) - User Interface (UI)

Application-Tier (Backend) - Business Logic

Data-Tier (Database) - Databases

2.2 Technology Stack

- Frontend:
- Backend:
- Database:

2.3 System Diagrams

3 Implementation Process

3.1 Cloud Environment Setup

Step-by-step account configuration and resource provisioning

3.2 Service Integration

- Azure Load Balancer configuration
- Database replication setup
- Blob storage integration patterns

3.3 Development Challenges

- State management in scaled environments
- Database connection pooling
- CSP-specific limitations encountered

4 Operational Characteristics

4.1 Performance Metrics

Load testing results and scalability demonstrations

4.2 Security Considerations

- Network security groups configuration
- Database encryption implementation
- Access control mechanisms

5 Critical Analysis

5.1 Cloud Service Evaluation

Cost-benefit analysis of selected Azure services

5.2 Architectural Decisions

Trade-off discussion between containerized vs serverless approaches

6 Repository Documentation

6.1 GitHub Structure

- Branching strategy
- CI/CD pipeline configuration
- Documentation standards

6.2 Contribution Tracking

Commit history analysis and individual contribution breakdown

7 Conclusion

7.1 Project Outcomes

Summary of achieved objectives and demo capabilities

7.2 Future Enhancements

Potential improvements for production readiness

References