Project Plan

Ozmart Retail Group Cloud Migration

Unit: COIT20265

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# Overview

OzMart Retail Group, a medium-sized Australian retail company with 1500 employees across four locations, is experiencing exceptional growth in business. They need to expand their infrastructure and are planning to transition its IT infrastructure to the cloud. This project aims to design a robust, scalable, and secure network architecture that will support OzMart's cloud migration strategy while maintaining connectivity for its legacy systems.

The project will address the following key areas

1. Design a hybrid cloud network architecture
2. Plan the migration of services, applications, and data to the cloud
3. Ensure adequate bandwidth and connectivity between sites and to cloud services
4. Implement strong security measures for both cloud and on-premises components
5. Develop a strong risk management plan and security policies

The primary beneficiaries of this project are OzMart Retail Group's IT department, employees, and customers. The new network design will provide:

1. Improved scalability and flexibility of IT resources
2. Enhanced data security and disaster recovery capabilities
3. Cost savings through optimized resource utilization
4. Better performance of applications

We are group of CQ Master’s graduate, equipped with latest Knowledge, Skills and Abilities. We will conduct thorough research and investigations to determine the best practices for cloud migration for OzMart.

# Tasks

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| **Task** | **Description** | **Deliverable(s)** |
| Requirements Gathering and Analysis | Conduct interviews with key stakeholders, analyse current network infrastructure, and document business requirements | * Requirements document * Current network topology diagram |
| WiFi Network Design | Identify the coverage area and number of APs needed  Protocols & standards to use;  addressing scheme;  recommended AP and client settings. | * Physical map with AP locations * Table of AP settings * Table of client settings * IP address table * Logical network design diagram |
| Cloud Service Selection | Research and compare cloud service providers, considering factors such as cost, services offered, and compatibility with OzMart's needs | * Comparison matrix of cloud providers * Recommendation report |
| Data Migration Planning | Plan the migration of data from on-premises to the cloud, ensuring data integrity and security during the transfer. | Data migration plan, Security measures for data transfer |
| Legacy Network Management | Develop a strategy for managing legacy network components that will not be migrated to the cloud. | Legacy network management plan |
| Bandwidth and Connectivity Planning | Analyze bandwidth requirements for cloud services and inter-site connectivity. Design WAN solutions | * Bandwidth analysis report * WAN design document |
| Security Architecture Design | Design security measures for both cloud and on-premises components, including firewalls, VPNs, and access controls. | * Security architecture diagram * Security controls document |
| Application Migration Planning | Analyse current applications and develop a strategy for migrating or replacing them with cloud-based solutions. | * Application inventory * Application migration roadmap |
| Risk Analysis | Conduct a comprehensive risk analysis and develop a risk management plan. | * Risk analysis report * Risk management plan |
| Network Management and Monitoring | Plan for ongoing management and monitoring of the hybrid cloud network | * Network management architecture diagram * Monitoring and alerting strategy document |
| Prototype Network Development | Implement a portion of the network design as a prototype using cloud services and available equipment | * Prototype network setup * Test results |

# Roles

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| --- | --- | --- |
| **Student Name** | **Role** | **Justification** |
| Navdeep Saini | Network Architect | Responsible for the overall network design, implementation, and management of cloud services. |
| Simarpreet Kaur | Security Specialist | Ensures the security of the network and responsible for developing and implementing security policies |
| Mohmed Amaan Patel | Cloud Solutions Architect | Responsible for cloud component and ensuring best practice implementation |
| Anupa Bodhimaluwa | Data and Application Migration Specialist | Planning and executing the data and application migration strategy and minimizing disruption during the transition |

# Responsibilities

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| **Task** | **Technical Lead** | **Reviewer** |
| Requirements Gathering and Analysis | Navdeep Saini | Simarpreet Kaur |
| WiFi Network Design | Navdeep Saini | Mohmed Amaan Patel |
| Cloud Service Selection | Mohmed Amaan Patel | Navdeep Saini |
| Data Migration Planning | Anupa Bodhimaluwa | Simarpreet Kaur |
| Legacy Network Management | Navdeep Saini | Mohmed Amaan Patel |
| Bandwidth and Connectivity Planning | Mohmed Amaan Patel | Navdeep Saini |
| Security Architecture Design | Simarpreet Kaur | Anupa Bodhimaluwa |
| Application Migration Planning | Anupa Bodhimaluwa | Simarpreet Kaur |
| Risk Analysis | Simarpreet Kaur | Anupa Bodhimaluwa |
| Network Management and Monitoring | Mohmed Amaan Patel | Navdeep Saini |
| Prototype Network Development | Mohmed Amaan Patel | Navdeep Saini |

# Resource Requirements

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| **Resource** | **Justification** | **Cost/License** |
| Wireshark | For network traffic analysis during the assessment phase. | Free, GNU GPL2 |
| Microsoft Azure trial account | For proof-of-concept implementation | Free Tier |
| AWS Free Tier | For comparing cloud service options. | Free Tier |

*Cash*

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| **Resource** | **Justification** | **Cost** |
| Cloud services for PoC | Extended use of Azure or AWS beyond free tier. | $500 |
| Network simulation | Network simulation software license | $300 |
| Nessus Security Assessment | Nessus or equivalent for vulnerability scanning | $500 |

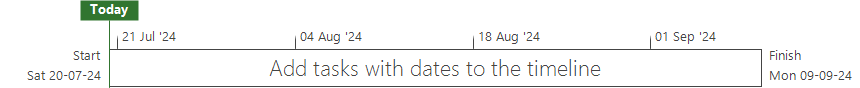
*Personnel*

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| **Resource** | **Justification** | **Cost** |
| Network Architect | Responsible for the overall network design, implementation, and management of cloud services. | 200 hours at $100/hour = $20,000 |
| Security Specialist | Ensures the security of the network and responsible for developing and implementing security policies | 150 hours at $90/hour = $13,500 |
| Cloud Solutions Architect | Responsible for cloud component and ensuring best practice implementation | 180 hours at $110/hour = $19,800 |
| Data and Application Migration Specialist | Planning and executing the data and application migration strategy and minimizing disruption during the transition | 160 hours at $95/hour = $15,200 |
|  |  | $ 68,500 |

# Project Risks and Mitigation

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| **Risk ID** | **Risk** | **Mitigation** |
| R001 | Resistance to change from employees | Implement Change management plan, including training and regular communication |
| R002 | Data security breaches during migration | Implement strong encryption for data in transit and at rest, conduct dress rehearsal of migration with focus on security |
| R003 | compatibility issues between legacy systems and cloud services | Testing in a staged environment before migration, and contingency plans for critical system |
| R004 | Unforeseen issue after migration | Try to solve in production or have a rollback plan if needed. |

# Schedule



A screenshot of a computer

Description automatically generated

# Ethical and Professional Issues

* Data Privacy: Ensuring customer and employee data is handled in compliance with Australian Privacy Principles when migrating to the cloud. Strategy: Conduct a privacy impact assessment, implement data classification and ensure cloud providers meet necessary compliance standards.
* Vendor Lock-in: Becoming overly dependent on a single cloud provider. Strategy: Design the architecture with portability in mind, use container technologies where possible.
* Job Displacement: Potential reduction in IT staff due to cloud migration. Strategy: Focus on retraining and upskilling existing staff for cloud technologies, be transparent about organizational changes.
* Ethical Use of Customer Data: Ensuring that the increased data processing capabilities are not misused for unethical targeted marketing or discrimination. Strategy: Develop clear policies on data usage, implement access controls, and conduct regular audits.