

Terms of Reference

Position Title - Software Engineer

Position Summary

Entity	Maldives Stock Exchange (MSE) / Maldives Securities Depository (MSD)
Department	Business Technology
Employment Type	Full-time, Permanent subject to probation and performance evaluation
Salary	Negotiable, based on qualification, experience, and demonstrated merit
Reporting Line	Reports to Head of Business Technology of MSE or MSD

Position Overview

As a Systems Engineer, you will join the team responsible for building, optimizing, and protecting the engine that underpins Maldivian capital market infrastructure. You will focus on the design and execution of high-throughput, fault-tolerant transaction processing systems where data integrity and zero-downtime resilience are paramount. This role bridges complex corporate logic with high-performance backend architectures

Role Purpose

The Systems Engineer is responsible for designing, developing, optimizing, and protecting the core technology platforms that support Maldivian capital market infrastructure, including systems used by the Maldives Stock Exchange (MSE) and Maldives Securities Depository (MSD). Appointment to this position shall be strictly merit-based and determined through an objective assessment of qualifications, relevant experience, technical capability, competencies, and suitability for the role.

The role focuses on building high-throughput, fault-tolerant transaction processing systems where data integrity, performance, availability, and resilience are critical. The position requires strong backend engineering capability, secure system design, and the ability to translate complex capital market and corporate action logic into reliable, maintainable software solutions. Prior experience working on systems in the financial sector will be considered a significant advantage due to the operational, regulatory, and data-integrity requirements of the role. Selection and continued performance assessment shall be based on demonstrable merit, technical competence, accountability, and delivery against approved role expectations.

The engineer will work as part of the Business Technology team and may be assigned to systems supporting exchange, depository, registry, settlement, participant-facing, and other mission-critical market infrastructure functions.

Key Responsibilities

1. Backend Architecture & Transaction Processing

- Design, develop, test, and maintain backend systems supporting exchange, depository, registry, and transaction processing operations.
- Build scalable and fault-tolerant services capable of handling high-volume, high-integrity market infrastructure workflows.
- Translate complex business, corporate action, and capital market rules into robust application logic.
- Optimize application performance, database interactions, and system throughput to support continuous and reliable operations.

2. System Reliability, Resilience & Availability

- Design and maintain systems with strong fault tolerance, operational resilience, and recovery capability.
- Support zero-downtime or minimal-downtime deployment practices for critical production systems.
- Monitor system health, performance, logs, and transaction flows to identify and resolve issues proactively.
- Contribute to continuity planning, incident response, root-cause analysis, and post-incident improvements.

3. API Integration & System Connectivity

- Design, implement, and maintain secure APIs and system integrations with trading, depository, clearing, settlement, payment, banking, disclosure, and participant-facing platforms.
- Ensure real-time and batch integrations operate accurately, securely, and within defined performance thresholds.
- Implement authentication, authorization, logging, audit trails, and error-handling controls for all integrations.
- Support API versioning, backward compatibility, interface documentation, and controlled release management.

4. Secure Engineering & Data Integrity

- Apply secure coding standards, code review practices, and defensive programming techniques throughout the development lifecycle.
- Safeguard the integrity, confidentiality, and availability of market and investor data handled by assigned systems.
- Identify, assess, and remediate application vulnerabilities, data inconsistencies, and technology risk issues.
- Ensure application changes maintain auditability, traceability, segregation of duties, and regulatory compliance expectations.

5. Documentation, Deployment & Change Management

- Maintain clear technical documentation, including architecture notes, API specifications, data mappings, deployment guides, and configuration records.
- Use version control and release management practices to ensure controlled development, testing, and production deployment.

- Prepare and support deployment plans, rollback procedures, and system update documentation.
- Coordinate with internal teams to ensure system changes are tested, approved, communicated, and implemented with minimal operational disruption.

6. Technical Support, Governance & Continuous Improvement

- Provide technical support for production systems and resolve complex application, integration, and data-related issues.
- Support audits, inspections, and regulatory reviews by providing technical explanations, evidence, and documentation.
- Work with the Head of Business Technology to improve system architecture, reduce technical debt, and strengthen operational resilience.
- Keep systems aligned with internal technology governance, information security, data protection, and business continuity requirements.

Qualifications & Experience

Mandatory Merit Criteria

- Minimum 3 years' relevant experience in software engineering, backend systems development, systems engineering, or similar technology roles.
- Demonstrated experience designing, developing, maintaining, or supporting critical business applications, transaction processing systems, or high-availability production systems.
- Strong practical experience with backend application development, relational databases, data modelling, query optimisation, and transaction integrity.
- Practical experience designing, developing, or maintaining APIs and system integrations, including authentication, authorization, logging, and error-handling controls.
- Working knowledge of secure coding practices, access controls, auditability, vulnerability remediation, and technology risk controls.
- Ability to troubleshoot complex application, database, integration, performance, and production support issues.
- Demonstrable ability to work independently, document technical work clearly, and meet role requirements based on objective merit and performance.

Technical Skills Required

- Backend engineering: Strong capability in designing and developing scalable, secure, and maintainable backend services and transaction processing systems.
- Database systems: Strong working knowledge of relational databases, data modelling, query optimisation, transaction integrity, and data consistency controls.
- API and integration design: Practical experience designing secure APIs, service integrations, authentication, authorization, logging, and error-handling mechanisms.
- System reliability and performance: Understanding of high-availability architecture, fault tolerance, performance optimisation, monitoring, incident analysis, and recovery practices.
- Security and governance: Knowledge of secure coding, access controls, audit trails, vulnerability remediation, and software development controls in regulated environments.
- Deployment and version control: Experience with source control, release management, deployment planning, rollback procedures, and controlled production changes.

- Financial-sector systems advantage: Experience working with systems in banking, payments, securities, capital markets, depository, settlement, trading, or other regulated financial services environments will be considered a significant advantage.

Preferred Merit Criteria

- Degree in Software Engineering, Computer Science, or a related field.
- Experience with modern frontend frameworks, such as React or Angular.
- Familiarity with Linux-based server environments.
- Experience with developing and maintaining distributed Systems using C++
- Experience developing or supporting systems in the financial sector, capital markets, banking, payments, securities, depository, trading, settlement, or other regulated financial services environments will be considered a significant merit-based advantage.
- Experience with developing and maintaining PHP/Laravel applications is a bonus.

Merit-Based Selection

Recruitment, shortlisting, selection, appointment, remuneration consideration, probation confirmation, and performance evaluation for this position shall be conducted strictly on merit. Merit shall be assessed objectively based on the candidate's qualifications, relevant experience, technical knowledge, problem-solving ability, professional conduct, communication skills, and demonstrated ability to meet the requirements of the role. Relevant experience working on systems in the financial sector shall be given strong consideration as a significant advantage where it demonstrates stronger suitability for the position.

Note: shortlisted candidates will be required to complete a second step technical assessment/interview

Skills & Competencies

- Strong analytical and problem-solving skills.
- Ability to write clean, maintainable, and well-documented code.
- Understanding of system reliability, security, and operational risk.
- Ability to work independently with accountability for assigned systems.
- Clear written and verbal communication skills.
- Strong documentation and knowledge-transfer discipline.

Application Details

Interested applicants should email their CV to hr@stockexchange.mv by **26 September 2026**. For more information, please contact +960 330 7878.

Only shortlisted applicants who meet the merit-based eligibility and assessment criteria will be contacted for the next stage of the recruitment process.