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**Government Technology (GovTech) Agency**  
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## **TERMS OF REFERENCE (TOR)**

### **[Component - Recruitment of DevOps Specialists.]**

**Digital Service Operation & Maintenance Division (DSOM), GovTech  
Agency**





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## Table of Contents

<b>1. Introduction.....</b>	<b>3</b>
1.1. Background.....	3
1.2. Purpose.....	3
<b>2. Objectives.....</b>	<b>3</b>
<b>3. Scope of Work.....</b>	<b>3</b>
3.1. Key Responsibilities.....	3
3.2. Additional Areas to Capture.....	6
3.3. Additional Responsibilities.....	7
<b>4. Qualifications and Experience.....</b>	<b>7</b>
4.1. Essential Qualifications.....	7
4.2. Preferred Qualifications.....	8
<b>5. Document submission.....</b>	<b>8</b>
<b>6. Deliverables.....</b>	<b>8</b>
<b>7. Reporting and Communication.....</b>	<b>8</b>
<b>8. Duration of Engagement.....</b>	<b>8</b>
<b>9. Recruitment Process.....</b>	<b>9</b>
9.1. Application Submission.....	9
9.2. Initial Screening.....	9
9.3. Technical Assessment.....	9
9.4. Interview Process.....	9
9.5. Financial Proposal Assessment.....	9
9.6. Final Selection.....	9
<b>10. Selection Criteria.....</b>	<b>9</b>
<b>11. Place of work.....</b>	<b>10</b>
<b>12. Contract Termination.....</b>	<b>10</b>
<b>13. Conclusion.....</b>	<b>11</b>



འབྲུག་གཞུང་འཕུལ་རིག་ལས་ཁྲེེ།  
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## **Terms of Reference (ToR) for Recruitment of DevOps Specialists.**

### 1. Introduction

#### 1.1. Background

The *Digital Services Operation and Maintenance (DSOM)* under the *Department of Digital Transformation (DDT)* at the *Government Technology (GovTech) Agency* is committed to consolidating and containerizing current systems to improve operational efficiency, system reliability, development, and deployment productivity. In line with this commitment, we have formed a DevOps team to enhance existing procedures and IT infrastructures.

#### 1.2. Purpose

The purpose of this Terms of Reference (ToR) is to outline the objectives, scope of work, responsibilities, qualifications, and deliverables expected from the DevOps Specialist.

### 2. Objectives

The primary objective of the DevOps Specialist is to assist the DevOps Team under DSOM in containerizing the identified systems and improving the current infrastructure. The specialist will bridge the gap between development and operations teams, automating and streamlining software development and deployment processes to ensure rapid, reliable, and secure delivery of applications and services.

### 3. Scope of Work

#### 3.1. Key Responsibilities

- ❖ Develop and implement DevOps strategies and practices to streamline software development and deployment processes.
  - Regularly review and refine DevOps strategies to align with organizational goals and industry best practices.
  - Ensure that DevOps strategies support agile methodologies and rapid iterations.
- ❖ Design and manage CI/CD pipelines to automate the build, test, and deployment of applications.
  - Integrate version control systems with CI/CD pipelines to ensure traceability and rollback capabilities.



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- Implement branching strategies to support parallel development and ensure smooth merges.
- ❖ Collaborate with the DevOps Team to containerize the identified systems.
  - Ensure proper version control of container images and related configuration files.
  - Maintain a registry of container images with proper tagging for version control and traceability.
- ❖ Work with development, QA, and operations teams to identify and address bottlenecks in the software delivery process.
  - Use metrics and logging to identify and resolve inefficiencies in the delivery plan.
  - Facilitate regular retrospectives and process improvements initiatives.
- ❖ Implement and manage infrastructure as code (IaC) using tools such as Terraform, Ansible, or CloudFormation.
  - Ensure that all the IaC scripts and templates are version-controlled and reviewed before deployment.
  - Implement testing for IaC to catch errors and ensure consistency across the environments.
- ❖ Monitor system performance, troubleshoot issues, and ensure high availability and reliability of services.
  - Set up alerts and monitoring for critical system components.
  - Implement automated healing mechanisms to reduce downtime of the systems.
- ❖ Implement and manage containerization and orchestration solutions using Docker and Kubernetes.
  - Ensure that Kubernetes configurations are stored in a version-controlled repository.
  - Implement policies and procedures for managing Kubernetes clusters and deployments.



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- ❖ Ensure best practices of security are followed throughout the software development lifecycle.
  - Integrate security checks into the CI/CD pipeline to detect vulnerabilities early.
  - Conduct regular security audits and compliance checks.
- ❖ Stay updated with emerging trends and technologies in DevOps and recommend improvements to current processes.
  - Conduct proof-of-concept projects to evaluate new technologies.
- ❖ Version Control Managements.
  - Establish and enforce version control policies and procedures to ensure code quality and traceability.
  - Implement and manage hooks and integrations with other tools e.g. CI/CD, code review tools.
- ❖ Automation and Scriptings.
  - Develop and maintain automation scripts for repetitive tasks to improve efficiency and reduce errors.
  - Implement/use scripting languages (e.g., Python, Bash, etc..) to create custom solutions for specific problems/ issues.
- ❖ Incident Response and Root Cause Analysis
  - Develop and maintain incident response plans to ensure rapid recovery from outages.
  - Conduct root cause analysis of incidents and implement measures to prevent recurrence.
- ❖ Backup and Disaster Recovery plans.
  - Implement backup and recovery solutions to protect against data loss and ensure business continuity.
  - Regularly test backup and recovery procedures to ensure that they are functioning properly.
  - Develop and test disaster recovery plans to ensure business continuity.



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- Implement redundancy and failover mechanisms to minimize downtime during disasters.
- ❖ Cloud Infrastructure Management:
  - Design, deploy, and manage cloud infrastructure using platforms such as AWS, Azure, or Google Cloud.
  - Ensure that cloud infrastructure is secure, scalable, and cost-effective.
  - Implement cloud cost management and optimization strategies.
- ❖ Microservices Architecture:
  - Develop and maintain microservices architectures to enhance modularity and scalability.
  - Ensure that microservices are independently deployable and scalable.
- ❖ Work off-hour/in holidays for certain tasks upon the instruction from the Chief.

### 3.2. Additional Areas to Capture

- ❖ Performance tuning and Optimizations.
  - Continuously monitor and optimize application and infrastructure performance.
  - Implement caching strategies, database optimization, and other techniques to improve system performance.
- ❖ Environment Management:
  - Manage multiple environments (development, staging, production) and ensure consistency across them.
  - Implement environment-specific configurations and manage environment lifecycles.
- ❖ Compliance and Regulatory Requirements:
  - Ensure all DevOps practices comply with relevant regulatory requirements (e.g., GDPR, HIPAA).
  - Maintain audit trails and documentation for compliance purposes.



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- ❖ Configuration Management:
  - Implement and manage configuration management tools (e.g., Chef, Puppet) to ensure consistency and repeatability.
  - Maintain a centralized configuration repository with version control.
- ❖ Scalability Planning:
  - Design and implement scalable architectures to handle growth and increased load.
  - Plan and execute capacity planning exercises to ensure system scalability.
- ❖ Feedback Loops and Continuous Improvement:
  - Establish feedback loops with development and operations teams to continuously improve processes and practices.
  - Use metrics and data to drive decision-making and improvements.

### 3.3. Additional Responsibilities

- ❖ Provide technical guidance and mentorship to junior team members.
- ❖ Conduct training sessions and workshops to promote DevOps culture within the organization.
- ❖ Document processes, workflows, and configurations for reference and knowledge sharing.

## 4. Qualifications and Experience

### 4.1. Essential Qualifications

- ❖ Bachelor's degree in Computer Science, Information Technology, or a related field.
- ❖ At least 5 years of experience in a DevOps role or similar position.
- ❖ Strong understanding of DevOps principles, practices, and tools.
- ❖ Proficiency in scripting languages such as Python, Bash, or Ruby.
- ❖ Experience with CI/CD tools such as Jenkins, Argo CD, GitLab CI, CircleCI or etc.
- ❖ Hands-on experience with containerization tools like Docker and orchestration platforms like Kubernetes.
- ❖ Knowledge of cloud platforms such as AWS, Azure, or Google Cloud.
- ❖ Familiarity with infrastructure as code tools like Terraform, Ansible, or CloudFormation.



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- ❖ Understanding of monitoring and logging tools such as Prometheus, Grafana, ELK stack, Graylog, or Splunk.
- ❖ Well-versed in both spoken and written English.

#### 4.2. Preferred Qualifications

- ❖ Relevant certifications (e.g., AWS Certified DevOps Engineer, Docker Certified Associate).
- ❖ Experience with microservices architecture and serverless computing.
- ❖ Knowledge of networking, security, and compliance best practices.

#### 5. Document submission

Interested candidates should submit the following document:

- 5.1. A detailed CV/resume.
- 5.2. Training certificate or work experience certificate.
- 5.3. A cover letter outlining their experience and suitability for the role.
- 5.4. References from previous employers or clients.
- 5.5. Financial Proposal with the detailed breakdown of the cost.

#### 6. Deliverables

- ❖ Fully functional and efficient end-to-end CI/CD pipelines for all applications that are under the custodian of GovTech.
- ❖ Automated deployment scripts and infrastructure configurations.
- ❖ Comprehensive documentation of DevOps processes and configurations.
- ❖ Regular reports on system performance, deployment metrics, and incidents.
- ❖ Training materials and sessions conducted for development and operations teams.
- ❖ And any other deliverables of DevOps/DevSecOps not limited to the above.

#### 7. Reporting and Communication

- ❖ The DevOps Specialist will report directly to the Chief of DSOM and Director of DDT.
- ❖ Regular updates and progress reports will be required to ensure alignment with organizational goals and timely delivery of objectives.

#### 8. Duration of Engagement

The initial contract will be for [10 months or 30<sup>th</sup> June 2025], with the possibility of extension based on performance and organizational needs.





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## 9. Recruitment Process

The recruitment process will consist of the following stages:

### 9.1. Application Submission

9.1.1. Candidates will submit their resumes and any relevant project portfolios or GitHub repositories.

### 9.2. Initial Screening

9.2.1. The recruitment team will review applications to shortlist candidates based on the required qualifications and skills.

### 9.3. Technical Assessment

9.3.1. Shortlisted candidates will undergo a technical assessment to evaluate their skills related to DevOps in our current Environment.

### 9.4. Interview Process

9.4.1. Selected candidates will be invited for an interview, which may include technical and behavioral questions, as well as a discussion of their projects and experience.

### 9.5. Financial Proposal Assessment

9.5.1. The financial proposal of the shortlisted candidates will be evaluated, upon which the lowest or the exceptional candidate will be selected.

### 9.6. Final Selection

9.6.1. The final decision will be made based on the candidates' performance in the *Technical Assessment, Interviews* and *Financial Proposal Assessment*. The selected candidate will be offered the position.

## 10. Selection Criteria

The candidates will be selected based on following criteria:

SL. No.	Area	Weightage	Remarks
1	Technical Assessment	45%	Candidates will participate in a practical evaluation involving: <ul style="list-style-type: none"><li>● <b>Provided Materials:</b> Source code and a virtual machine within our current environment.</li><li>● <b>Tasks:</b></li></ul>



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			<ul style="list-style-type: none"><li>○ Implement and manage CI/CD pipelines.</li><li>○ Containerize the source code using appropriate tools.</li></ul> <p>This assessment emphasizes practical skills, problem-solving, and proficiency with DevOps technologies.</p>
2	Relevant qualifications and experiences	30%	The candidate shall submit a Curriculum Vitae (CV) along with academic certificates and/or transcripts; proof of work experience and completed projects; and relevant training and certificates.
3	Viva/ Interview	25%	Candidates will engage in an interview focusing on: <ul style="list-style-type: none"><li>● <b>Key Areas:</b><ul style="list-style-type: none"><li>○ Communication and teamwork skills.</li><li>○ Problem-solving and adaptability.</li><li>○ Leadership qualities and initiative.</li><li>○ Cultural alignment with the organization.</li></ul></li></ul>

Note:

- **Technical Evaluation:** A candidate must achieve a minimum technical score of 80% to qualify.
- **Financial Evaluation:** Only the financial proposals of technically qualified candidates shall be evaluated.

#### 11. Place of work

The workplace will be at the GovTech Office Premise for the duration of the contract.

#### 12. Contract Termination

The contract will be terminated on the following two terms:

- 12.1. If the selected candidate or individual is found to not have the skills that have been mentioned in the CV.
- 12.2. If the selected candidate or individual fails to consistently deliver the work on time as agreed and assigned.



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### 13. Conclusion

This ToR outlines the expectations and requirements for the DevOps Specialist role. The selected candidate will play a critical role in enhancing our IT capabilities and driving the adoption of DevOps practices across the organization. We look forward to welcoming a dedicated professional who is passionate about optimizing and automating our development and deployment processes.