# Oracle Cloud Infrastructure - Application Validation

**ISV:** None  
**Application:** None  
**Statement of Work**  
**Date:** None  
**Version:** None

## Disclaimer

This document, in any form, software or printed matter, contains proprietary information that is the exclusive property of Oracle. Your access to and use of this confidential material is subject to the terms and conditions of the Non-Disclosure Agreement between RedThorn and Oracle Corp. This document and information contained herein may not be disclosed, copied, reproduced, or distributed to anyone outside Oracle without prior written consent of Oracle. This document is not part of your license or services agreement nor can it be incorporated into any contractual agreement with Oracle or its subsidiaries or affiliates. This document is for informational purposes only and is intended solely to assist you in evaluating the Oracle IaaS and/or Paas Public Cloud Services in a non-production context. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle products and services remains at the sole discretion of Oracle. The outcome of Oracle ISV Labs is to enable Redthorn OCI as outlined in this SOW, including any open source-based terraforms and tools/procedures, and it would be available to RedThorn to use freely with no restrictions or time limits and regardless of any NDA obligations.

## Contents

1. [Version History](#version-history)
2. [Current Status and Next Steps](#current-status-and-next-steps)
3. [Project Participants](#project-participants)
4. [Project Summary](#project-summary)
5. [Current Architecture](#current-architecture)
6. [Target Architecture](#target-architecture)
7. [Implementation Details](#implementation-details)
8. [Closing Remarks](#closing-remarks)

## Introduction

# 1. Document Header

* ISV: **TGW**
* Application: **WERX**
* Type: **Statement of Work**
* Date: **2025-07-07**
* Version: **0.1**
* Include Oracle’s standard **Confidentiality Disclaimer**: This document contains confidential information and is protected by copyright law. It may not be reproduced, distributed, or disclosed without the prior written permission of Oracle Corporation.

# 2. SoW Version History Table

|  |  |  |  |
| --- | --- | --- | --- |
| Version # | Date | Revised By | Description of Change |
| 0.1 | 2025-07-07 | John Doe | Initial draft |
| 0.2 | 2025-07-10 | Jane Smith | Added technical specifications for OCI services |
| 0.3 | 2025-07-14 | John Doe | Included security considerations and high availability details |

# 3. Status and NEXT STEPS

* Current project status: *In Progress*
* Next 3 actions required:
  1. **Owner**: Oracle Cloud Architect, **Description**: Complete OCI network setup
  2. **Owner**: TGW Technical Lead, **Description**: Provide access to dev/test environment
  3. **Owner**: Oracle ISV Labs, **Description**: Finalize Terraform code for WERX deployment

# 4. Project Participants Table

Oracle | Name | Role | Email | |———–|——————–|——————–| | John Doe | Cloud Architect | [johndoe@oracle.com](mailto:johndoe@oracle.com) | | Jane Smith| ISV Labs Engineer | [janesmith@oracle.com](mailto:janesmith@oracle.com) |

Client (TGW) | Name | Role | Email | |———–|——————–|——————–| | Michael Brown | Technical Lead | [michaelbrown@tgw.com](mailto:michaelbrown@tgw.com) | | Emily Chen | DevOps Engineer | [emilychen@tgw.com](mailto:emilychen@tgw.com) |

# 5. Project Framework

The collaboration mode between Oracle and TGW will involve regular feedback loops, with Oracle responsible for the technical implementation and TGW providing the necessary resources and access to their dev/test environment. The expected validation duration is approximately 2-3 weeks.

# 6. Required Contribution From Client

TGW must provide: - Technical resources, including access to their dev/test environment - Diagrams or architectural artifacts of their current setup - Information about their application stack and dependencies

# 7. Expected Deliverables From Oracle ISV Labs

Oracle ISV Labs will deliver: - Terraform modules for WERX deployment - Target architecture in OCI, including Openshift Cluster, GPU VM, and Oracle 19c on IaaS - Technical documentation and guides for deployment and management - Examples of CI/CD integration using OCI services

# 8. Cloud Environment Used

The PoC will run in a temporary test tenancy provided by Oracle.

# 9. TGW Company Profile

* Legal Name: TGW Inc.
* Country of Operations: USA
* Company Overview: TGW is a leading provider of technology solutions for various industries.
* Website link: [www.tgw.com](http://www.tgw.com)

# 10. In-Scope Application: WERX

* Application Name: WERX
* General Description: WERX is a comprehensive application stack used for managing and analyzing data.
* Key Technologies: Docker, Helm, PostgreSQL, Java
* Current Hosting: On-prem

# 11. Project Overview

**Validation Summary**: The goal is to successfully validate WERX in a replicated, containerized environment on OCI, ensuring functional compatibility, performance, and readiness for future automation or cloud-native enhancements. This project aims to enable a smooth lift-and-shift migration path for TGW’s customer environments.

Desired outcome: - Validate WERX on OCI - Ensure performance and compatibility - Prepare for future cloud-native enhancements

Scope boundaries: - In-scope: WERX application stack, Openshift Cluster, GPU VM, Oracle 19c on IaaS - Out-of-scope: Production migration, licensing setup, SLA support

Joint goals: - Successful validation of WERX on OCI - Achievement of performance and compatibility targets - Completion of the project within the allocated timeframe

# 12. Scope

**In-Scope Items**: - PostgreSQL setup - Streaming configuration using OCI Streaming - OKE deployment for WERX

**Out-of-Scope Items**: - Production migration - Licensing setup - SLA support

Validation boundaries and limitations: - The validation will focus on the technical aspects of deploying WERX on OCI. - The project scope does not include production migration or ongoing support.

# 13. Major Project Milestones

|  |  |  |  |
| --- | --- | --- | --- |
| Milestone | Target Date | Completed | Comments |
| Kickoff with Cloud Architect | 2025-05-01 |  |  |
| OCI Network Setup | 2025-05-10 |  |  |
| Terraform Code Finalization | 2025-05-15 |  |  |
| Application Deployment in OCI | 2025-05-20 |  |  |
| Final Validation & Review | 2025-05-25 |  |  |

# 14. Acceptance Criteria

|  |  |  |
| --- | --- | --- |
| Capability/Metric | Acceptance Criteria | Status |
| Kubernetes Deployment | WERX runs successfully on OCI OKE | TBD |
| OCI Streaming | Kafka integration tested using OSS workloads | TBD |
| PostgreSQL | DB deployed, configured, accessible | TBD |
| Monitoring | Basic metrics visible in OCI Monitoring dashboard | TBD |
| Security | IAM + NSG + Encryption in Transit & At Rest | TBD |

# 15. Current State Architecture

**Diagram Description**: The current setup consists of on-prem OpenShift clusters, Kafka, PostgreSQL, and Java applications. **Tech Stack**: Docker, Helm, PostgreSQL, Java **Known Issues/Pain Points**: Manual deployments, scaling issues, limited resources

# 16. Target OCI Architecture

The target architecture will utilize the following OCI services: - Openshift Cluster for containerized deployment - GPU VM for compute-intensive tasks - Oracle 19c on IaaS for database management

**Service Mapping**: | Current Service | Target OCI Service | |—————–|——————–| | On-prem OpenShift | Openshift Cluster | | Kafka | OCI Streaming | | PostgreSQL | Oracle 19c on IaaS |

**Component Interaction**: - WERX application will be deployed on Openshift Cluster - GPU VM will be used for compute-intensive tasks - Oracle 19c on IaaS will manage the database

**Diagram Placeholder**: A high-level diagram will be provided, showing the interaction between the components.

# 17. Implementation Details and Configuration Settings

* **Openshift Cluster**: 3 master nodes, 3 worker nodes, with auto-scaling enabled
* **GPU VM**: 2x NVIDIA V100 GPUs, 16 CPU cores, 64 GB RAM
* **Oracle 19c on IaaS**: 2x Oracle Linux 7.9, 16 CPU cores, 64 GB RAM, with Data Guard for production

# 18. Security Considerations

* IAM policies will be used to control access to resources
* NSG configuration will be implemented to restrict inbound and outbound traffic
* Data encryption will be used for data at rest and in transit
* Audit logs will be configured to monitor and analyze security events

# 19. High Availability & Disaster Recovery

* OKE NodePools will be spread across multiple availability domains
* PostgreSQL will be configured for high availability using Oracle RAC
* Object Storage will be used for backups and disaster recovery
* DNS failover will be implemented using OCI Traffic Management

# 20. Closing Feedback

* Oracle: [Insert feedback]
* TGW: [Insert feedback]

# 21. Sign-Off Section

* Client Acceptance: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Oracle Confirmation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Final next steps: [Insert next steps]

## Version tagging: v0.1