	MATJHABENG	
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RFP/02/2024-25

INFRASTRUCTURE TECHNOLOGY REFRESH WITH HYPER-CONVERGED INFRASTRUCTURE AND CENTRALIZED STORAGE INTEGRATION

29 JANUARY 2025

ADDENDUM NO.1 TO THE TENDER DOCUMENT

Please take note of the following amendments to the contract document:

1. **The tender closing date is extended from Friday 31 January 2025 12:00 to Wednesday 12 February 2025 12:00.**
2. **The scope of work within the tender document is replaced by the following scope of work. Please use the following scope of work for your proposal.**

Tender Title: Infrastructure Technology Refresh with Hyper-converged Infrastructure and Centralized Storage Integration
Issuing Entity: Matjhabeng Local Municipality

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1. INTRODUCTION

The Matjhabeng Local Municipality (MLM) invites qualified and experienced bidders to submit proposals for the Infrastructure Technology Refresh project. This project involves implementing a **Hyper-converged Infrastructure (HCI)** with centralized storage integration to modernize MLM's IT environment. The HCI solution will unify compute, storage, and networking within a virtualized management framework, with the addition of centralized storage for scalability and support for mission-critical workloads, including the Solar ERP Billing System.

Business Connexion (BCX), as the provider of MLM's mission-critical **Solar ERP Billing System**, is integral to the successful migration of this billing platform. BCX's involvement is necessary to ensure the faultless migration of the Solar ERP system and other associated systems from the old infrastructure to the new one.

Detailed hardware specifications for each component are provided in **Annexure A** for reference.

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2. SCOPE OF WORK

2.1 Core Deliverables

The successful bidder shall deliver the following:

1. **Procurement and Installation**:

    o **Huawei FusionCube Virtualization Hosts**: 3 Units (**See Annexure A1**).

        ▪ These hosts will form the backbone of the Hyper-converged Infrastructure, integrating compute, storage, and networking capabilities.

    o **HBA's for FusionCube**: 6 Units (**See Annexure A1.1**).

        ▪ These adapters are essential for high-speed connectivity between the hosts and centralized storage.

    o **Huawei OceanStor Dorado 5000 V6 Storage Array**: 1 Unit (**See Annexure A2**).

        ▪ This centralized storage array will complement the HCI by providing high-capacity, scalable storage for mission-critical applications.

    o **Huawei CloudEngine 6800 Top-of-Rack Switches**: 2 Units (**Model: CE6885-48YS8CQ**) (**See Annexure A3**).

        ▪ These switches will ensure high-speed networking within the HCI and centralized storage setup.

    o **Dell Brocade SAN Switches**: 2 Units (**See Annexure A4**).

        ▪ These switches will provide dedicated storage area network connectivity for the centralized storage system.

    o **Dell 40-slot ML3 Tape Library**: 1 Unit (**See Annexure A5**).

        ▪ This library will support data backup and archival needs.

    o **VMware Licenses**: For 8 CPUs to enable virtualization across all hosts (**See Annexure A6**).

2. **System Migration**:

- o Collaborate with BCX to migrate the Solar ERP billing system and other critical workloads to the new infrastructure.

- o Migrate and configure the Solar Enterprise environment without disruption.

- o Ensure end-to-end testing and verification post-migration.

3. **Foundational Systems Reconfiguration**:

- o Reconfigure **Domain Controllers, DNS, DHCP**, and related foundational systems.

- o Audit and update group policies, user directories, and authentication mechanisms.

- o Optimize configurations for scalability, performance, and security.

4. **Installation and Configuration**:

- o Rack, stack, and cable all infrastructure components (**Refer Annexure A for rack and cabling details**).

- o Configure SAN switches (zones, aliases, fabrics).

- o Set up Huawei Dorado 5000 V6 Storage and connect to servers.

- o Install and configure VMware across all hosts.

5. **Testing, Handover, and Documentation**:

- o Conduct comprehensive system tests.

- o Provide detailed handover documentation.

- o Deliver training to designated MLM IT staff.

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3. QUALIFICATION REQUIREMENTS

Bidders must:

1. Demonstrate proven experience in implementing Hyper-converged Infrastructure and hybrid IT solutions.

2. Provide evidence of successful partnerships with BCX or equivalent Tier 1 service providers.

3. Have a certified technical team with expertise in:

- o Hyper-converged solutions (e.g., Huawei FusionCube).

       o VMware virtualization.

       o Enterprise storage and networking solutions.

4. Provide references for at least three similar projects in the past five years.

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4. ANNEXURES

Annexure A: Technical Specifications of Hardware

A1: Huawei FusionCube Virtualization Hosts

- **Quantity**: 3 Units

- **Model**: Hyper-converged Node-DP2220

- **Processor**: 2 Intel Xeon C8462Y+ CPUs per host (32 cores / 64 threads / 2.8GHz clock speed / 60MB cache).

- **Memory (Per Host)**: 24 x 64GB RDIMM Modules (Total: 1.5TB per host; DDR4, ECC).

- **Storage (Minimum Per Host)**:

  - **Disks**: NVMe SSD and SAS drives.

  - **Capacity**: At least 960GB SSD and support for expandable storage configurations.

- **Networking**: Dual 10GbE connections via PCIe adapters.

- **Power Supply**: Redundant 2000W power supplies per host.

- **Chassis**: 12 x 3.5-inch hard disk pass-through slots.

A1.1: HBA's for FusionCube

- **Quantity**: 6 Units

- **Model**: Emulex FC HBA 32Gb/s (LPe32002)

- **Features**:

  - Dual-port Fibre Channel connectivity.

  - Includes multi-mode optical transceivers.

  - PCIe 3.0 x8 interface for high throughput.

A2: Huawei OceanStor Dorado 5000 V6 Storage Array

- **Quantity**: 1 Unit

- **Capacity**: 150TB usable capacity (216TB potential with compression).

- **Controllers**: Dual-controller NVMe configuration.

- **Cache**: 512GB per controller.

- **Connectivity**: 4 x 100Gb RDMA ports.

- **Disks**: 36 x 7.68TB NVMe Palm SSD drives.

- **RAID Support**: Levels 0, 1, 5, 6, 10, 50, 60.

A3: Huawei CloudEngine 6800 Top-of-Rack Switches

- **Quantity**: 2 Units

- **Model**: CE6885-48YS8CQ_4

- **Ports**: 48 x 25GbE SFP28 and 8 x 100GbE QSFP28.

- **Power:** Dual AC power modules.

- **Software**: N1-CloudFabric Advanced SW License.

- **Warranty**: 36 Months.

A4: Dell Brocade SAN Switches

- **Quantity**: 2 Units

- **Model:** Connectrix DS-6610B-L

- **Ports**: 24 x 32Gb SFP ports per switch.

- **Features**: Rear-to-front airflow, rack mountable.

- **Warranty**: 36 Months.

A5: Dell 40-slot ML3 Tape Library

- **Quantity**: 1 Unit

- **Capacity**: 460TB with 2 LTO9 drives and 40 LTO9 media.

- **Media**: Includes cleaning cartridges and barcode labels.

- **Redundancy**: Dual power supplies.

A6: VMware Licenses

- **Scope:** Licenses for 8 CPUs.

- **Edition**: vSphere Standard, 3-year subscription.
- **Capabilities**: Virtualization management, high availability, resource pooling.

5. SUBMISSION REQUIREMENTS

Proposals must include:

1. **Technical Proposal**:
   - Approach and methodology.
   - Project plan with timelines.
   - Details of BCX partnership agreement or intent.

2. **Financial Proposal**:
   - Detailed cost breakdown (equipment, services, migration, support).
   - Payment terms and VAT considerations.

3. **Legal and Compliance Documents**:
   - Company registration certificate.
   - Tax clearance certificate.
   - Proof of insurance.

Addendum approved by: Mr. T Mohorosi

Date of approval   : _____

Capacity   : SCM Manager

Signature   : _____

Acknowledgement of addendum

Date of acknowledgment   : _____

RFP/02/2024-25: INFRASTRUCTURE TECHNOLOGY REFRESH WITH HYPER-CONVERGED INFRASTRUCTURE AND CENTRALIZED STORAGE INTEGRATION

Name(s) & Surname (Appearing on letter of authority)   : _____

Capacity (Appearing on letter of authority)   : _____

Signature   : _____

<u>Please attach it to the tender document upon return</u>