



**SUPPLY, DELIVERY AND INSTALLATION OF HCI  
SOLUTION FOR WASTE MANAGEMENT CORPORATION  
LIMITED**

**WAMCO-PRO/IUL/2022/129**

**Issued on: 22<sup>nd</sup> December 2022**

**Issued by:**

**WASTE MANAGEMENT CORPORATION LIMITED  
MALE', REPPUBLIC OF MALDIVES**

**[www.wamco.com.mv](http://www.wamco.com.mv)**

# SUPPLY, DELIVERY AND INSTALLATION OF HCI SOLUTION FOR WASTE MANAGEMENT CORPORATION

WAMCO-PRO/IUL/2022/129

## 1. Project Details

Waste management Corporation limited invites interested parties to submit proposals for the supply, delivery and installation of HCI solution for Waste Management Corporation Limited.

1. HCI Solution
2. UPS
3. Warranty and licensing for the whole solution
4. Installation, Configuration, Migration and Training

### 1.1. Minimum Technical Specifications

1. HCI solution based on hyper-converged software to deliver enterprise-class storage services using server infrastructure and without dependence on SAN Switches & HBAs.
2. The proposed HCI solution must include the latest VMware vSphere 7.x hypervisor license and VMware vCenter License
3. The proposed HCI solution should be 100% software defined without dependency on any proprietary hardware component
4. The proposed HCI solution should be appliance models and not custom configured
5. The proposed HCI solution must have minimum 2 nodes and a minimum of 8 drives per node
6. Each node must be proposed with a minimum 24 core Intel or AMD processor or higher.
7. The node must support 2 Intel or AMD processors. If the HCI software license is based on the number of processors or cores, then the bidder must propose license for 2 processors or 48 cores per node.
8. If the HCI software license is based on storage capacity or drives, then the bidder must propose the license for the maximum possible storage capacity or drives in the proposed node model.
9. Each node must be proposed with 256 GB minimum 3200 Mhz memory. Each node must have 32 DIMM slots in total
10. The proposed solution must provide a minimum of 20 TB of usable storage capacity.



This capacity must be provided without including capacity benefits achieved using deduplication and compression. The capacity tier shall be based on enterprise class 10K RPM SAS SFF HDD or Mixed-Use SSD only.

11. The proposed HCI solution **must include inline deduplication and inline compression** and these features **must be turned on during the implementation. Necessary licenses for using these features must be included** and proposed by the bidder.

Any additional CPU and memory overheads created by deduplication and compression must be factored in by the bidder.

12. The proposed HCI solution must sustain one node failure and necessary provision for witness/tie-breaker must be proposed by the bidder.
13. The proposed solution should not have any single point of failure
14. Each node must have dedicated cache drive, boot drive and housekeeping drive
15. Each server node must have dedicated redundant hot swap power supplies & cooling fans.
16. Each node must have 10 Gbps or higher speed network ports in a redundant configuration. Each node shall be supplied with minimum 02 nos x PCIe Dual Port 10 GbE NIC
17. All necessary cables and transceivers must be included in the proposal.
18. The solution shall utilize the existing Dell N4032 for core networking.
19. The solution must support one-click non-disruptive rolling upgrades of HCI software and system firmware.
20. The solution must have automated call home and ticketing capability in the event of critical alerts/failures
21. The solution should have a plugin in the Hypervisor for HCI management.  
Administrators should be able to view, provision, manage and monitor HCI solution from the hypervisor's management console.
22. The HCI filesystem should be a scale-out distributed filesystem where the data is striped across multiple nodes where the read and write can happen across all the nodes for any given virtual machine.
23. The HCI software must support native instant, space-optimized, point-in-time snapshots. The GUI must have the capability to schedule snapshots based on various times. If the HCI software does not support native snapshots, then the bidder must include 3rd party

- storage-level snapshot license for a minimum of 50 VMs. Hypervisor-level snapshots must be excluded to avoid any overheads on the guest VMs.
24. The HCI software must support native rapid clones of individual Virtual Machines. If the HCI software does not support native clones, then the bidder must include 3rd party storage-level clone license for a minimum of 50 VMs. Hypervisor-level clones must be excluded to avoid any overheads on the guest VMs.
  25. The HCI software must support asynchronous native replication between 2 sites at the storage level. Necessary licenses must be included in the proposal. If the HCI software does not support native replication, then the bidder must include 3rd party storage-level replication license for a minimum of 50 VMs. Hypervisor-level replication must be excluded to avoid any overheads and performance issues on the guest VMs.
  26. The solution must automatically rebalance data to maintain balanced utilization of storage across the HCI nodes when storage capacity is scaled up or scaled out. The HCI nodes must automatically redistribute data equally across all nodes without migrating VMs.
  27. The vendor shall supply and install 01 nos x APC Easy UPS SRV RM 6000VA 230V with External Battery Pack
  28. The proposed hardware shall include 3-Year manufacturer warranty and 3-Year local technical support
  29. The proposed solution should include management features such as:
    - a. Monitoring of health and inventory status
    - b. Display the support contract status
    - c. Cross launch HW management console and HCI management console
    - d. User customizable views/tiles and searching and tagging of inventory
    - e. Remote management and vKVM
    - f. Rest API
    - g. Initiate service request in the event of critical failure/fault
    - h. Automatically collect the log/support files and attach it to the service ticket
    - i. Automatically raise RMA request in the event of memory failure and drive failure
    - j. Compliance with hardware compatibility list (HCL)
    - k. Centralized and remote firmware management and upgrade
    - l. Server graphic views including live health status



- m. Mobile application for remote monitoring and management. Support for Android and IOS platforms
- n. Role based access control for different administrators
- o. IP level restrictions and whitelisting to limit access from external IP ranges

### 1.2. Installation, Configuration, Migration and Training

1. All professional services shall be delivered by manufacturer certified engineers only.
2. The engineer(s) shall be available onsite for the duration of the service.
3. The engineer(s) shall be available for technical support, 3 months post deployment either remote or onsite.
4. The proposed professional services delivery team engineer(s) shall be certified in Cisco, Vmware and the HCI proposed in the solution
5. The vendor MUST have at minimum the following full time OEM Certified Professional/Engineer under its payroll to provide all professional services. All relevant engineer(s) certificates and supporting documents shall be included with the proposal.

Required certificates of the engineer(s):

- Cisco CCNA Certified for Routing and Switching Certified
  - Cisco CCNA and CCNP Certified for Security Certified
  - VMware Certified
  - HCI Certified for the proposed solution
6. Perform site readiness assessment ensuring environment is ready for project commencement
  7. Shall provide planning, deployment and user acceptance test details
  8. Rack mounting as per manufacturer recommendation(s).
  9. Check and ensure all installation pre-requisites are met
  10. Powerup, network and management cabling as per manufacturer guidelines
  11. Configure service segmentation on existing core network switches
  12. Configure and upgrade VMware vcenter server
  13. Initialize all nodes as per manufacturer best practice and upgrade to latest stable firmware
  14. Install any required licenses or options
  15. Migrate all existing workloads to the new infrastructure (up to 30 VMs)
  16. Role based access control for different administrators



17. Configure VMware vcenter plugin for HCI management
18. Configure centralized remote management
19. OEM Certified Training on the proposed HCI for 03 Technical Engineer
  - Instructor LED classroom training (physical)
  - Official course materials and labs
  - Exam voucher
  - Shall include all expenses for the duration for the training
20. Install and configure UPS
21. On the job training for up to 03 technical person on management and administration of the system
22. Detailed documentation on the configuration and settings of the delivered system shall be provided.

## 2. Instruction to Bidders

### 2.1. Bid language:

English

### 2.2. Bid Currency:

All prices are to be quoted in Maldivian Rufiyaa (MVR)

### 2.3. Period of bid validity.

120 Calendar days from the date of bid submission

### 2.4. Bid Security

Bids Should be accompanied with a bid security of MVR 50,000.00 (Fifty Thousand). The Bid Security should be valid for 45 (forty-five) days beyond the validity of the bid. Bid Security Should be an original bank guarantee letter (or) Bank Guaranteed and stamped Cheque (or) An Insurance Policy from MMA registered insurance company.

Any bid not accompanied by an acceptable bid security shall be rejected as non responsive.

### 2.5. Information Session

Waste Management Corporation Limited (WAMCO)

Male' Waste Transfer Station, Industrial Village

Boduthakurufaanu Magu

Male' Maldives

Date & Time: 28<sup>th</sup> December 2022, 11:00am





## 2.8. Documents to be Submitted

1. Proposal/Quotation (inclusive of the delivery period)
2. Bid Security
3. Form 1 – Bid Form
4. Form 2 – Bidder's Information Form
5. Company profile prepared by company/firm (Bidder)
6. Copy of Business Registration Certificate
7. Copy of Goods and Service Tax (GST) Registration certificate if applicable.
8. Goods and Service Tax clearance report if applicable (last 3 months from the date of bid submission / last quarter) - *If Tax clearance report is not submitted or any due payments in Tax clearance report shall be disqualified during/after evaluation criteria.*
9. Copy of Company Shareholder's Certificate (Ministry of Economic Development).
10. Proof of financial capability: Bank Statement with stamp from bank in the letterhead of respective Bank (last 3 months from the date of bid submission) or other financial proof of capability from a relevant authority.
11. Form 3 – Experience Information Form
12. Proof of experience documents / reference letters (Documents signed by previous clients indicating the project value, duration and completion date corresponding to and supporting the above).
13. Authorized Vendor Certificate
14. Form 4- Technical Compliance Form
15. Ethical Declaration Form

*Note: Failure to submit the above-mentioned documents will be subject to rejection during/after evaluation stage and late submissions of any such documents will not be entertained.*

## 2.9. Liquidated Damages

If the successful bidder fails to deliver any or all of the Goods by the Date(s) of delivery or perform the related services within the period specified in the Contract, 0.5% of the total price as awarded will be deducted per day as a delay damage up to a total of 15% of the total price. Once the maximum is reached, WAMCO may terminate the Contract.



## 2.10. Payments terms

### 2.10.1. Advance payment:

If the successful Bidder wishes, an advance payment less than or equal to 15% of the total bid price could be awarded.

Any required advance payment should **be clearly mentioned in the Proposal.**

Fifteen (15) percent of the Bid Price shall be paid within Fourteen (14) days of signing of the Contract against a proforma invoice and an advance payment guarantee for the equivalent amount and in the form provided in the bidding documents or another form acceptable to WAMCO.

The Advance payment guarantee shall be valid for 30 days beyond the date of delivery and shall be returned following the completion of delivery upon request.

### 2.10.2. Payment Period:

WAMCO shall pay to the consultant within 30 Calendar days after the date of delivery and acceptance by WAMCO and upon completion of the work in accordance with the agreement. Invoice must be submitted by the consultant along with signed Acceptance certificates.

## 2.11. Delivery

- Delivery of Hardware's and licenses to WAMCO within 60 days.
- Installation, configuration and training of the solution within 30 days after delivery.

## 2.12. Bid Evaluation Criteria

Criteria	Points
<b>1. Price</b> $\text{Price} = \frac{\text{Lowest Amount}}{\text{Proposed Amount}} \times 80$	<b>80</b>
<b>2. Experience in similar Works</b> No of similar projects in last five years (each project: value not less than MVR 250,000) $\text{Experience} = \frac{\text{no experience letters by the bidder}}{\text{maximum no of exp letters by a bidder}} \times 20$	<b>20</b>
<b>Total</b>	<b>100</b>

### Experience in Similar Work:

- A valid reference letter with the company letterhead on completion of similar project/works should be provided. In case if a reference letter is not available, purchase order with a delivery note, agreement with delivery note or invoice with delivery note will be accepted.
- \* The works performed should be within the last 5 years.

**Similar works: Supply, delivery and installation of HCI Solution and related works**







Attached are copies of original documents of [check the box(es) of the attached original documents]

- Company Registration Copy
- GST Registration Copy
- National Identification Card (if Individual) Copy
- Shareholder's Certificate provided by Ministry of Economic Development.

**Check List**

#	Document	✓
1	Proposal/Quotation (inclusive of the delivery period)	
2	Bid Security	
3	Form 1 - Bid Form	
4	Form 2 - Bidder's Information Form	
5	Company Profile prepared by the company/firm (Bidder)	
6	Copy of Business Registration Certificate	
7	Copy of Goods and Service Tax (GST) Registration certificates if applicable.	
8	Goods and Service Tax clearance report if applicable (last 3 months from the date of bid submission / last quarter) - <i>If Tax clearance report is not submitted or any due payments in Tax clearance report shall be disqualified during/after evaluation criteria.</i>	
9	Copy of Company Profile Information Sheet / Shareholder's Certificate (From Ministry of Economic Development)	
10	Proof of financial capability: last 3 (three) months Bank statement (with stamp from bank in letter head of the respective Bank) or other financial proof of capability from a relevant authority.	
11	Form 3 - Experience Information Form	
12	Proof of experience documents / reference letters (Documents signed by previous clients indicating the project value, duration and completion date corresponding to and supporting).	
13	Authorize Vendor Certification	
14	Form 04- Technical Compliance Form	
15	Ethical declaration form	





## FORM 3 – EXPERIENCE INFORMATION FORM

### 1. Experience

#### 1.1. Works of similar nature performed over the last 5 years.

(Reference Letters/Proof of experience of the works completed, shall be submitted along with the bid).

*(if the bidder fails to submit reference letters/proof of experience for a particular project that the bidder has listed in the form, it will not be considered during the evaluation stage of the bid and marks will not be given for that particular project.*

Description of Works Done	Name of Client & Contact Person	Year of Completion	Currency & Value of Contract

I/We Hereby confirm that the said documents/relevant paperwork/supporting documents have been attached with the Forms. We agree that failure to submit above mentioned documents will be considered as a failure to submit. Late submissions of any such documents will not be entertained by Waste Management Corporation Limited and this will affect the evaluation of our bid.

Name:	
ID Card Number:	
Company Name and Seal/Stamp:	
Date:	
Signature:	





<b>13</b>	proposed by the bidder.		
<b>14</b>	The proposed solution should not have any single point of failure		
<b>15</b>	Each node must have dedicated cache drive, boot drive and housekeeping drive		
<b>16</b>	Each server node must have dedicated redundant hot swap power supplies & cooling fans.		
<b>17</b>	Each node must have 10 Gbps or higher speed network ports in a redundant configuration. Each node shall be supplied with minimum 02 nos x PCIe Dual Port 10 GbE NIC		
<b>18</b>	All necessary cables and transceivers must be included in the proposal.		
<b>19</b>	The solution shall utilize the existing Dell N4032 for core networking.		
<b>20</b>	The solution must support one-click non-disruptive rolling upgrades of HCI software and system firmware.		
<b>21</b>	The solution must have automated call home and ticketing capability in the event of critical alerts/failures		
<b>22</b>	The solution should have a plugin in the Hypervisor for HCI management. Administrators should be able to view, provision, manage and monitor HCI solution from the hypervisor's management console.		
<b>23</b>	The HCI filesystem should be a scale-out distributed filesystem where the data is striped across multiple nodes where the read and write can happen across all the nodes for any given virtual machine.		
<b>24</b>	The HCI software must support native instant, space-optimized, point-in-time snapshots. The GUI must have the capability to schedule snapshots based on various times. If the HCI software does not support native snapshots, then the bidder must include 3rd party storage-level snapshot license for a minimum of 50 VMs. Hypervisor-level snapshots must be excluded to avoid any overheads on the guest VMs.		
<b>25</b>	The HCI software must support native rapid clones of individual Virtual Machines. If the HCI software does not support native clones, then the bidder must include 3rd party storage-level clone license for a minimum of 50 VMs. Hypervisor-level clones must be excluded to avoid any overheads on the guest VMs.		
<b>26</b>	The HCI software must support asynchronous native replication between 2 sites at the storage level. Necessary licenses must be included in the proposal. If the HCI software does not support native replication, then the bidder must include 3rd party storage-level replication license for a minimum of 50 VMs. Hypervisor-level replication must be excluded to avoid any overheads and performance issues on the guest VMs.		

26	The solution must automatically rebalance data to maintain balanced utilization of storage across the HCI nodes when storage capacity is scaled up or scaled out. The HCI nodes must automatically redistribute data equally across all nodes without migrating VMs.		
27	The vendor shall supply and install 01 nos x APC Easy UPS SRV RM 6000VA 230V with External Battery Pack		
28	The proposed hardware shall include 3-Year manufacturer warranty and 3-Year local technical support		
29	The proposed solution should include management features such as:		
	a. Monitoring of health and inventory status		
	b. Display the support contract status		
	c. Cross launch HW management console and HCI management console		
	d. User customizable views/tiles and searching and tagging of inventory		
	e. Remote management and vKVM		
	f. Rest API		
	g. Initiate service request in the event of critical failure/fault		
	h. Automatically collect the log/support files and attach it to the service ticket		
	i. Automatically raise RMA request in the event of memory failure and drive failure		
	j. Compliance with hardware compatibility list (HCL)		
	k. Centralized and remote firmware management and upgrade		
	l. Server graphic views including live health status		
	m. Mobile application for remote monitoring and management. Support for Android and IOS platforms.		
	n. Role based access control for different administrators		
	o. IP level restrictions and whitelisting to limit access from external IP ranges		









## Bank Guarantee

.....*Bank's name and address of issuing branch or office*<sup>1</sup>.....

**Beneficiary:** .....*Name and address of the employer* .....

**Date:** .....

**Bid Security No.:** .....

We have been informed that . . . . . *name of the bidder* . . . . . (Hereinafter called "the Bidder") has submitted to you its bid dated . . . . . (Hereinafter called "the Bid") for the execution of . . . . . *Name of contract* . . . . . under Invitation for Bids No. . . . . ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we . . . . . *name of Bank* . . . . . hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of . . . . . *amount in words* . . . . . ( . . . . . *amount in figures* . . . . . ) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder

- (a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Letter of Bid; or
- (b) does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB"); or
- (c) having been notified of the acceptance of its Bid by the Employer during the period of bid validity, (i) fails or refuses to execute the Contract Agreement

This guarantee will expire (a) if the Bidder is the successful Bidder, upon our receipt of copies of the Contract Agreement signed by the Bidder or (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful Bidder, or (ii) 45 days after the expiration of the Bidder's bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758.<sup>2</sup>

..... *Authorized signature(s) and bank's seal (where appropriate)* .....

<sup>1</sup> All italicized text is for use in preparing this form and shall be deleted from the final document.



