

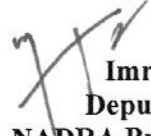
**EVALUATION REPORT**  
**(As Per Rule 35 of PP Rules, 2004)**

1. Name of Procuring Agency: HQ NADRA Islamabad
2. Method of Procurement: Single Stage (02) Envelope Methods
3. Title of Procurement: Procurement of Data Center Backup/ Restore Solution
4. Tender Inquiry No.: NADRA-HQ-RFB-183/2023
5. PPRA Ref. No. (TSE): TSEV47638E
6. Date & Time of Bid Closing: 30<sup>th</sup> October, 2023 At 11:00 hrs.
7. Date & Time of Bid Opening: 30<sup>th</sup> October, 2023 At 11:30 hrs.
8. No of Bids Received: 03x Bids
9. Criteria for Bid Evaluation: As per Eligibility & Technical Evaluation Criteria Mentioned in Tender Documents
10. Details of Bid(s) Evaluation: As under: -

| Name of Bidder   | Mark                      |   | Evaluated Cost            | Rule/Regulation/SBD*/Policy/ Basis for Rejection / Acceptance as per Rule 35 of PP Rules, 2004.   |
|--|---------------------------|---|---------------------------|---|
|  | Technical (If applicable) | Financial (If applicable)                 |                           |   |
| <u>Procurement of Data Center Backup/ Restore Solution</u> |                           |   |                           |   |
| M/s Techaccess   | Qualified                 | Only Technical qualification was required | Rs. 203,879,443.9         | Bids of Three firms i.e. M/s Techaccess, M/s IBL-Unisys and M/s DWP Technologies were received. Bids were opened on 30 <sup>th</sup> October, 2023, and were technically qualified for further process. Financial bids of the technically qualified firm were opened on 14 <sup>th</sup> December, 2023. As per financial evaluation bid of M/s IBL-Unisys was found most advantageous. |
| M/s IBL-Unisys   | Qualified                 | Only Technical qualification was required | <b>Rs. 197,999,126.06</b> |   |
| M/s DWP Technologies                                       | Qualified                 | Only Technical qualification was required | Rs. 242,319,078.3         |   |

**Lowest Evaluated Bidder:** M/s IBL-Unisys

11. Any other additional / supporting information, the procuring agency may like to share. Nil

  
**Imran Hashim**  
Deputy Director  
NADRA Procurement  
Dated 24 February, 2024

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## Technical Evaluation Report for Supply of Data Center Graded Backup Solution

### Tender # NADRA-HQ-RFB-183/2023

1. NDW Directorate has received the bidding documents for technical evaluation from following three (03) firms in response of above-mentioned tender number through ION (NADRA/Proc/183/2023/ dated 1<sup>st</sup> November, 2023 (attached as annexure A) from Procurement department, for supply procurement of Media Wall Screen for ECP Project.

1. M/s Techaccess.
2. M/s IBL Unisys.
3. M/s DWP Technologies.

2. Following board was constituted for the technical evaluation.

- |  |                 |
|--|-----------------|
| (a) Mr. Khurram Shahzad, Director Database, NDW Dte.-      | Board President |
| (b) Mr. Shahid Sardar, Director System, NDW Dte.-          | Member          |
| (c) Mr. M. Javeed Sajid, Dy Director, Networks Dte.-       | Member          |
| (d) Mr. Haroon Hafeez Ahmad, Dy Director, Technology Dte.- | Member          |

3. Considering the RFP and technical proposals of above-mentioned firms, compliance of mandatory requirements, technical marks on basis of evaluation matrix and compliance of BOQ are attached as annexure B, C and D.

4. The board concluded the technical evaluation as under

| S No | Vendor Name          | Marks Obtained | Technical Board Decision |
|------|----------------------|----------------|--------------------------|
| 1    | M/s Techaccess       | 96             | Qualified                |
| 2    | M/s IBL Unisys       | 96             | Qualified                |
| 3    | M/s DWP Technologies | 89             | Qualified                |

Name: Mr. Khurram Shahzad, NDW Dte.

Signature: 

Date: 30-11-2023

(President of Board)

Name: Mr. Shahid Sardar, NDW Dte.

Signature: 

Date: \_\_\_\_\_

(Board Member)


Name: Mr. M. Javeed Sajid, Networks Dte.

Signature: 

Date: \_\_\_\_\_

(Board Member)

Name: Mr. Haroon Hafeez Ahmad,  
Technology Dte.


Signature: 


Date: 30-11-2023


(Board Member)


**Technical Evaluation for Supply of Data Center Graded Backup Solution**  
**Tender No 208/2022**  
**Compliance of Mandatory Requirements**

| S#                                   | Area                        | Mandatory Requirements   | M/s Techaccess | M/s IBL Unisys | M/s DWP Technologies |
|--------------------------------------|-----------------------------|--|----------------|----------------|----------------------|
| 1                                    | Compliance / Not Compliance | I, on behalf of M/s _____ abide by all the terms and conditions as mentioned in the RFP, and proposed solution comply 100% with all Specification as stated in tender documents.<br><b>(Attach Confirmation letter on Company letter head as Annex "E1")</b>   | Yes            | Yes            | Yes                  |
| 2                                    |                             | Bidder has a Valid NTN Registration <b>Annex "E2"</b>  | Yes            | Yes            | Yes                  |
| 3                                    |                             | Bidder has a Valid GST Registration <b>Annex "E3"</b>  | Yes            | Yes            | Yes                  |
| 4                                    |                             | Bidder is active on ATL list of FBR <b>Annex "E4"</b>  | Yes            | Yes            | Yes                  |
| 5                                    |                             | Affidavit for Non-Blacklisting <b>Annex "E5"</b>   | Yes            | Yes            | Yes                  |
| 6                                    |                             | Bidder is authorized partner of OEM/Principal of Backup Solution (software & Appliance) <b>Annex "E6"</b>  | Yes            | Yes            | Yes                  |
| 7                                    |                             | Authorization letter to bidder from OEM / Principal for this specific procurement <b>"Annex "E7"</b>   | Yes            | Yes            | Yes                  |
| 8                                    |                             | Certificate that quoted solution is brand new and Country of origin is not India and Israel. Also, online support is not originating from aforementioned countries. <b>Annex "E8"</b>  | Yes            | Yes            | Yes                  |
| 9                                    |                             | Certificate from OEM / Principal that quoted software / equipment <b>will not be end of sale within next one year and will not be end of support by OEM/Principal within next 6 years. Annex "E9"</b>  | Yes            | Yes            | Yes                  |
| 10                                   |                             | Certificate from OEM / Principal that comprehensive maintenance and support services for the time period mentioned in RFP is <b>fully backed by OEM / Principal</b> , which includes faulty parts replacement and inclusive of all related software / firmware updates and patches. <b>Annex "E10"</b> | Yes            | Yes            | Yes                  |
| 11                                   |                             | Single window Backup Solutions (Backup Software and Backup Appliance must be from same OEM / Principal). <b>Letter from bidder as Annex "E11"</b>  | Yes            | Yes            | Yes                  |
| 12                                   |                             | During the past five (5) years, Bidder/Principal has successfully deployed <b>Minimum One (01) project of Proposed Datacenter Graded Specialize Backup Storage/Appliance</b> (Attach documentary Proof like PO, client reference letter etc. as <b>Annex "F1"</b> )                                    | Yes            | Yes            | Yes                  |
| 13                                   |                             | During the past five (5) years, Bidder / Principal has successfully deployed <b>Minimum One (01) project of Proposed Datacenter Graded Specialize Backup Appliance</b> . (Attach documentary Proof like PO, client reference letter etc. as <b>Annex "F2"</b> )  | Yes            | Yes            | Yes                  |
| 14                                   |                             | Bidder's turnover according to Bank account statement(s) for the period <b>01-07-2022 to 30-06-2023</b> should not be less than <b>Four Hundred (400) million PKR</b> (Attach bank account statement for the period <b>01-07-2022 to 30-06-2023</b> as <b>Annex "F3"</b> )                             | Yes            | Yes            | Yes                  |
| 15                                   |                             | Bidder has at least One (01) Technically Qualified HR with relevant to quoted / proposed Backup & Restore Solution (Attach valid Certificates along with proof of employment as <b>Annex "F4"</b> )  | Yes            | Yes            | Yes                  |
| Compliance of Mandatory Requirements |                             |  | Complied       | Complied       | Complied             |

  
 Mr. Haroon Hafeez Ahmad  
 DD Technology Dte.  
 Member


  
 Mr. M Javeed Sajid  
 DD Networks Dte.  
 Member


  
 Mr. Shahid Sardar  
 Director  
 System NDW Dte.  
 Member


  
 Mr. Khurram Shahzad  
 Director NDW Dte.  
 President

| Technical Evaluation for Supply of Data Center Graded Backup Solution |  |  |           |  |                |                |                      |
|---|--|--|-----------|--|----------------|----------------|----------------------|
| Tender No 183/2023  |  |  |           |  |                |                |                      |
| Technical Marks   |  |  |           |  |                |                |                      |
| S#  | Area                                       | Weightage Matrix   | Max Marks | Marks / Weightage  | M/s Techaccess | M/s IBL Unisys | M/s DWP Technologies |
| 1   | Relevant Experience Backup Software        | During the past five (5) years, how many successful projects of <b>Proposed Datacenter-Graded Backup Software</b> , at comparable scale, were deployed in Pakistan?<br>(Attach documentary Proof like PO, client reference letter etc. as Annex "F1")  | 10        | Equal or more than 7 Projects = <b>10 Marks</b><br>Less than 7 but equal or more than 5 Projects = <b>06 Marks</b><br>Less than 5 but equal or more than 2 Projects = <b>03 Marks</b>  | 10             | 6              | 6                    |
| 2   | Relevant Experience Backup Appliance       | During the past five (5) years, how many successful projects of <b>Proposed Datacenter-Graded Specialized Backup Appliance</b> at comparable scale were deployed in Pakistan?<br>(Attach documentary Proof like PO, client reference letter etc. as Annex "F2")  | 10        | Equal or more than 6 Projects = <b>10 Marks</b><br>Less than 6 but equal or more than 4 Projects = <b>06 Marks</b><br>Less than 4 but equal or more than 1 Projects = <b>03 Marks</b>  | 6              | 10             | 3                    |
| 3   | Financial worth                            | Bidder's turnover according to Bank account statement(s) for the period <b>01-07-2022 to 30-06-2023</b> .<br><br>(Attach bank account statement for the period <b>01-07-2022 to 30-06-2023</b> as Annex "F3")  | 10        | Equal or more than 700 million PKR= <b>10 Marks</b><br>Less than 700 million but equal or more than 500 million PKR= <b>07 Marks</b><br>Less than 500 million but equal or more than 400 million PKR= <b>05 Marks</b>  | 10             | 10             | 10                   |
| 4   | Technical Support Qualification            | Number of Bidder's Technically Qualified HR with relevant to quoted / proposed Backup & Restore solution. (copy of the certification, experienced certificates or training are required to be attached with technical proposal)<br>(Attach valid Certificates along with proof of employment as Annex "F4")  | 10        | Equal or more than 3 = <b>10 Marks</b><br>Equal to 2 = <b>05 Marks</b><br>Equal to 1 = <b>03 Marks</b>   | 10             | 10             | 10                   |
| 5   | Total Cost of Ownership (Backup Software)  | Yearly approximate support cost in percentage (%), after three years, for Backup Software over its <b>quoted price</b> , as mentioned in bidder's financial proposal.<br>(Attach the declaration as Annex "F5")  | 7         | Less than 15% = <b>07 Marks</b><br>Less than 20% but Equal or more than 15% = <b>04 Marks</b><br>More than 20% = <b>02 Marks</b>   | 7              | 7              | 7                    |
| 6   | Total Cost of Ownership (Backup Appliance) | Yearly approximate support cost in percentage (%) after three years, for Backup Appliance over its <b>quoted price</b> , as mentioned in bidder's financial proposal.<br>(Attach the declaration as Annex "F6")  | 7         | Less than 15% = <b>07 Marks</b><br>Less than 20% but Equal or more than 15% = <b>04 Marks</b><br>More than 20% = <b>02 Marks</b>   | 7              | 7              | 7                    |
| 7   | Compliance                                 | Proposed solution must comply all required specifications / features mentioned in the Compliance Sheet / BOQ. Partial Comply or Not-Comply or Blank Spaces shall be considered as Not-Comply<br><b>Column (Document Reference) of Compliance Sheet:</b><br>Vendor must provide OEM / Principal datasheet reference against each required feature and specifications.<br>(Document Name, Section, and page number is mandatory) | 46        | 100% Fully Compliance = <b>46 Marks</b><br><br>Any Single Non-Compliance = <b>Zero (0) Marks</b><br><br>If Vendor fails to provide document reference as required, <b>zero (0) marks</b> will be given for overall compliance sheet ( <b>0x46</b> ) and Vendor will be disqualified directly | 46             | 46             | 46                   |
| Obtained Marks  |  |  |           |  | 96             | 96             | 89                   |
| Minimum passing marks   |  |  |           | 66   |                |                |                      |
| Total Marks   |  |  |           | 100  | Qualified      | Qualified      | Qualified            |

  
Mr. Haroon Hafeez Ahmad  
DD Technology Dte.  
Member

  
Mr. M. Javed Sajid  
DD Networks Dte.  
Member

  
Mr. Shahid Sardar  
Director System NDW Dte.

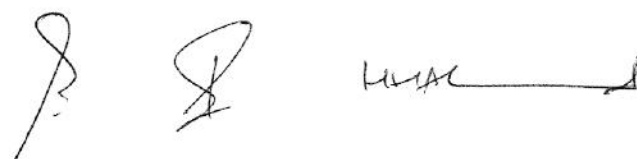
  
Mr. Khurram Shahzad  
Director NDW Dte.  
President

**Technical Evaluation for Supply of Data Center Graded Backup Solution**  
**Tender No 183/2023**  
**Compliance Sheet**

a) Site1: Backup System




(Qty: 1)

| S# | Item            | Details  | M/s Techaccess                | M/s IBL Unisys                | M/s DWP Technologies          |
|----|-----------------|--|-------------------------------|-------------------------------|-------------------------------|
| 1  | Backup Software | 1-- Front-end (FE) Capacity or Back-end (BE) Capacity or Socket based perpetual license is required. Proposed capacity / socket-based license must be sufficient enough to meet uninterrupted Backup / Restore requirements of NADRA systems as mentioned in provided Annex-X (Site1) for next three years. License value could be different for different OEMs/Principals/Vendors to ensure NADRA Backup operations. Vendor will take the full responsibility for smooth uninterrupted backup / restore operations with proposed (FE/BE) capacity / socket license for SLA time period. Proposed licensing model must fulfil both socket and capacity (FE/BE) requirements and must has the ability to absorb the 10% increase in mentioned capacity / sockets (Annex-X). | Complied Reference annexure Y | Complied Reference annexure Y | Complied Reference annexure Y |
|    |                 | 2-- Licensing should include entitlement of unlimited software features, modules and unlimited number of backup clients.   | Complied                      | Complied                      | Complied                      |
|    |                 | 3-- Should provide protection and recovery virtual machines, databases, containers, applications, endpoints and files.   | Complied                      | Complied                      | Complied                      |
|    |                 | 4-- Should Support virtual machine backups at granular level running over (ESX, Hyper-V, etc.)   | Complied                      | Complied                      | Complied                      |
|    |                 | 5-- Should support Backup, restore, Hierarchical storage management (HSM) and archive functions to and from fiber channel connected Tape and Storage devices disk subsystems. Software should support compression too.   | Complied                      | Complied                      | Complied                      |
|    |                 | 6-- Proposed software must be in Leaders Gartner Magic Quadrant "As of June 2023" for Enterprise Backup and Recovery Software Solution.  | Complied                      | Complied                      | Complied                      |
|    |                 | 7-- Should support file restore from IMAGE backup.   | Complied                      | Complied                      | Complied                      |
|    |                 | 8-- Should support Full, incremental and Synthetic backups.  | Complied                      | Complied                      | Complied                      |
|    |                 | 9-- Should support Data Protection of the catalogue, index and database of the backup server, in order to ensure the recovery of the backup environment to its fully functioning state.  | Complied                      | Complied                      | Complied                      |
|    |                 | 10-- Must support Automatic and Manual scheduling of backup jobs on the backup server.   | Complied                      | Complied                      | Complied                      |
|    |                 | 11-- Must have a defined user-friendly and state of the art mechanism to recover backup server / nodes from failure.   | Complied                      | Complied                      | Complied                      |
|    |                 | 12-- Must support backup, recover and restore systems MS-SQL server, Oracle (RAC), Postgres, MongoDB, Cassandra, MYSQL, etc., relevant licenses must be included.  | Complied                      | Complied                      | Complied                      |
|    |                 | 13-- Backup software should support LTR (long-term retention).   | Complied                      | Complied                      | Complied                      |
|    |                 | 14-- Must support backup, recover and restore on Operating Systems (Linux, Unix, AIX, Windows etc.) and Filesystem.  | Complied                      | Complied                      | Complied                      |
|    |                 | 15-- Must support industry leading engineered Systems like EXADATA and others.   | Complied                      | Complied                      | Complied                      |
|    |                 | 16-- Must support backup, recover and restore of virtual machines with instant recovery feature as well.   | Complied                      | Complied                      | Complied                      |
|    |                 | 17-- Must support the copy of backup data directly from backup media to backup media over LAN and WAN including: Tape to disk, Disk to Disk, Disk to Tape.   | Complied                      | Complied                      | Complied                      |
|    |                 | 18-- Must able to take LAN free backups, must able to take NDMP backups as well.   | Complied                      | Complied                      | Complied                      |
|    |                 | 19-- Must support replication of catalogue as well as backups to Site2 Appliance. Not all, only selected backup sets would be replicated to Site2 (see annexure X). Software must have the ability to keep track of replicated copies in order to restore from replica or clone / replicate from the secondary copy when required.   | Complied                      | Complied                      | Complied                      |
|    |                 | 20-- Must provide encryption (at least AES 128) on data at rest (media).   | Complied                      | Complied                      | Complied                      |
|    |                 | 21-- Can verify / analyze the backups residing on disks and tapes.   | Complied                      | Complied                      | Complied                      |
|    |                 | 22-- Support web-based administration completely from single window for Physical & Virtual environments. Also, provide policy and role-based access management.  | Complied                      | Complied                      | Complied                      |
|    |                 | 23-- Both backup software and backup Appliance must be from the same OEM / Principal and 100% compatible with Robotic Tape Library mentioned at Sr#a3.   | Complied                      | Complied                      | Complied                      |
|    |                 | 24-- It includes complete deployment (installation, configuration according to the user environment in separate LAN (FC/IP) environment) of the Backup Software on Backup Servers and integration with Backup Storage/appliance and RTL at Site1 and Site2.  | Complied                      | Complied                      | Complied                      |
|    |                 | 25-- Three (03) years 24/7 direct support from the Principal.  | Complied                      | Complied                      | Complied                      |





|   |                                       |   |                               |                               |                               |
|---|---------------------------------------|---|-------------------------------|-------------------------------|-------------------------------|
| 2   | Specialized Backup Storage /Appliance | 1-- Purpose built disk-based backup Storage/Appliance with native data deduplication capabilities that offer redundancy at critical levels.   | Complied                      | Complied                      | Complied                      |
|   |                                       | 2-- Multi-core Intel Xeon Processor per Controllers/Nodes   | Complied                      | Complied                      | Complied                      |
|   |                                       | 3-- Bidder will propose the Backup Storage/Appliance useable capacity based on the provided Annex-X (Site1) but not less than ~180TB approx. with ±5TB. Proposed useable capacity must be sufficient to fulfill all the requirements, like retention period, number of generations etc. mentioned in provided Annex-X. Usable capacity must be configured excluding the disk and RAID overheads and without considering the deduplication and compression. Proposed model must have upgradation capability (at least 10% of quoted capacity) either by scale-up or scale-out. | Complied Reference annexure Y | Complied Reference annexure Y | Complied Reference annexure Y |
|   |                                       | 4-- Can handle min 20TB/hour or more throughput based on server-side deduplication by using the proposed protocols for boosting.  | Complied                      | Complied                      | Complied                      |
|   |                                       | 5-- Proposed Backup Appliance should provide backup software aware WAN-optimized replication with Site2 Backup Appliance (mentioned at Sr#b2). Only selected backup set would be replicated to Site2 if required (ref: Annex-X).  | Complied                      | Complied                      | Complied                      |
|   |                                       | 6-- Backup Storage/Appliance must have best industry compression and deduplication features for physical and virtual environment with appropriate licenses. Must support instant recovery for VMs as well.  | Complied                      | Complied                      | Complied                      |
|   |                                       | 7-- Should support backup client-side deduplication for network saving and fast backups. Similarly, should support compressed restore of supported DB / applications for fast restore.  | Complied                      | Complied                      | Complied                      |
|   |                                       | 8-- It should support multiple backup protocols (NFS, CIFS, NDMP, source side deduplication and any other recommended proprietary protocol) simultaneously. All protocol licenses must be included.   | Complied                      | Complied                      | Complied                      |
|   |                                       | 9-- It Should support industry standard encryption of data-at-rest / in replication. Required license should be included. Solution must meet compliance standards for data. Solution must support secure-multi-tenancy. Should also support locking the data from deletion and forging to make it immutable.  | Complied                      | Complied                      | Complied                      |
|   |                                       | 10-- Ransomware resiliency: Appliance must provide the capability for WORM/locking the data from deletion and forging in order to protect from bad actors, ransomware / malware and cyber-attacks.  | Complied                      | Complied                      | Complied                      |
|   |                                       | 11-- Must have robust FT and self-healing mechanism. E.g. RAID with hot spare, end-to-end verification without performance degradation, NVRAM, snapshots to protect against physical and logical failures. System should be able to survive double disk failure.  | Complied                      | Complied                      | Complied                      |
|   |                                       | 12-- Should be able to extend to a cyber-recovery solution including isolation, immutability and intelligence (3i).   | Complied                      | Complied                      | Complied                      |
|   |                                       | 13-- Proposed Backup Appliance must not be end of sale within next one year and must not be End of support (EoS) by the OEM / Principal within the next six years after the submission of bidding documents.  | Complied                      | Complied                      | Complied                      |
|   |                                       | 14-- Backup Storage/Appliance must have minimum 2 x 16/32Gbps FC ports, 2 x 10Gb SFP+, 2 x 10GBase-T (optional), 2 x 25Gb SFP28 and support of IPv4 and IPv6 (all ports with matched transceivers). Installed FC switch details: (check Annex-X, SAN-SW1 for compatibility).  | Complied                      | Complied                      | Complied                      |
|   |                                       | 15-- It includes complete deployment (installation, configuration according to the user environment) of the System and integration with other components of Backup Solution at both sites.  | Complied                      | Complied                      | Complied                      |
|   |                                       | 16-- Both backup software and backup Storage/Appliance must be from the same OEM as single-window solution and 100% compatible with Robotic Tape Library mentioned at a3.   | Complied                      | Complied                      | Complied                      |
|   |                                       | 17-- Should have dual hot swappable Power supplies, Universal Rack Mounted Kits with Cable Management Arm.  | Complied                      | Complied                      | Complied                      |
| 18-- Three (03), 24x7 comprehensive direct local on-site support from OEM / Principal with spare parts. Non-Returnable faulty data storage media. | Complied                              | Complied  | Complied                      |                               |                               |
| 3   | Robotic Tape Library                  | 1-- Tape Library with min 2 x LTO9 FC drives.   | Complied                      | Complied                      | Complied                      |
|   |                                       | 2-- Minimum 30 Media slots enabled. Tape library can be scale-able up to 4 FC drives.   | Complied                      | Complied                      | Complied                      |
|   |                                       | 3-- Must enable the media encryption. Required license must be included.  | Complied                      | Complied                      | Complied                      |
|   |                                       | 4-- 20 tape data cartridges & labeled, 5 x Cleaning Cartridges with labels.   | Complied                      | Complied                      | Complied                      |
|   |                                       | 5-- Should have dual hot swappable Power supplies, Universal Rack Mounted Kits with Cable Management Arm.   | Complied                      | Complied                      | Complied                      |
|   |                                       | 6-- 4 x Fiber cables (as per actual)  | Complied                      | Complied                      | Complied                      |
|   |                                       | 7-- 100% compatible with Backup Software and Specialized Backup Appliance mentioned at Sr#a1, a2.   | Complied                      | Complied                      | Complied                      |
|   |                                       | 8-- It includes complete deployment (installation, configuration according to the user requirements) of the System and integration with other components of Backup Solution at Site1.   | Complied                      | Complied                      | Complied                      |
|   |                                       | 9-- Three (03) year, 24x7 comprehensive direct local on-site support from OEM / Principal with spare parts.   | Complied                      | Complied                      | Complied                      |
|   |                                       | 10-- Proposed Robotic Tape Library must not be end of sale within next one year and must not be End of support (EoS) by the OEM / Principal within the next six years after the submission of bidding documents. Attach required documents.   | Complied                      | Complied                      | Complied                      |






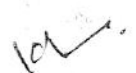
## b) Site2: Backup System

(Qty: 1)

| S# | Item            | Details   | M/s Techaccess                      | M/s IBL Unisys                      | M/s DWP Technologies                |
|----|-----------------|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1  | Backup Software | 1-- Front-end (FE) Capacity or Back-end (BE) Capacity or Socket based perpetual license is required. Proposed capacity / socket-based license must be sufficient enough to meet uninterrupted Backup / Restore requirements of NADRA systems as mentioned in provided Annex-X (Site2) for next three years. License value could be different for different OEMs / Principals / Vendors to ensure NADRA Backup operations. Vendor will take the full responsibility for smooth uninterrupted backup / restore operations with proposed FE/BE capacity / socket license for SLA time period. Proposed licensing model must fulfil both socket and capacity (FE/BE) requirements and must have the ability to absorb the 10% increase in mentioned capacity / sockets (Annex-X). | Complied<br>Reference<br>annexure Y | Complied<br>Reference<br>annexure Y | Complied<br>Reference<br>annexure Y |
|    |                 | 2-- Licensing should include entitlement of unlimited software features, modules and unlimited number of backup clients.  | Complied                            | Complied                            | Complied                            |
|    |                 | 3-- Should provide protection and recovery virtual machines, databases, containers, applications, endpoints and files.  | Complied                            | Complied                            | Complied                            |
|    |                 | 4-- Should Support virtual machine backups at granular level running over (ESX, Hyper-V, etc.)  | Complied                            | Complied                            | Complied                            |
|    |                 | 5-- Should support Backup, restore, Hierarchical storage management (HSM) and archive functions to and from fiber channel connected Tape and Storage devices disk subsystems. Software should support compression too.  | Complied                            | Complied                            | Complied                            |
|    |                 | 6-- Proposed software must be in Leaders Gartner Magic Quadrant "As of June 2023" for Enterprise Backup and Recovery Software Solution.   | Complied                            | Complied                            | Complied                            |
|    |                 | 7-- Should support file restore from IMAGE backup.  | Complied                            | Complied                            | Complied                            |
|    |                 | 8-- Should support Full, incremental and Synthetic backups.   | Complied                            | Complied                            | Complied                            |
|    |                 | 9-- Should support Data Protection of the catalogue, index and database of the backup server, in order to ensure the recovery of the backup environment to its fully functioning state.   | Complied                            | Complied                            | Complied                            |
|    |                 | 10-- Must support Automatic and Manual scheduling of backup jobs on the backup server.  | Complied                            | Complied                            | Complied                            |
|    |                 | 11-- Must have a defined user-friendly and state of the art mechanism to recover backup server / nodes from failure.  | Complied                            | Complied                            | Complied                            |
|    |                 | 12-- Must support backup, recover and restore systems MS-SQL server, Oracle (RAC), Postgres, MongoDB, Cassandra, MYSQL, etc., relevant licenses must be included.   | Complied                            | Complied                            | Complied                            |
|    |                 | 13-- Backup software should support LTR (long-term retention).  | Complied                            | Complied                            | Complied                            |
|    |                 | 14-- Must support backup, recover and restore on Operating Systems (Linux, Unix, AIX, Windows etc.) and Filesystem.   | Complied                            | Complied                            | Complied                            |
|    |                 | 15-- Must support industry leading engineered Systems like EXADATA and others.  | Complied                            | Complied                            | Complied                            |
|    |                 | 16-- Must support backup, recover and restore of virtual machines with instant recovery feature as well.  | Complied                            | Complied                            | Complied                            |
|    |                 | 17-- Must support the copy of backup data directly from backup media to backup media over LAN and WAN including: Tape to disk, Disk to Disk, Disk to Tape.  | Complied                            | Complied                            | Complied                            |
|    |                 | 18-- Must able to take LAN free backups, must able to take NDMP backups as well.  | Complied                            | Complied                            | Complied                            |
|    |                 | 19-- Must support replication of catalogue as well as backups to Site2 Appliance. Not all, only selected backup sets would be replicated to Site 1 (see annexure X). Software must have the ability to keep track of replicated copies in order to restore from replica or clone / replicate from the secondary copy when required.   | Complied                            | Complied                            | Complied                            |
|    |                 | 20-- Must provide encryption (at least AES 128) on data at rest (media).  | Complied                            | Complied                            | Complied                            |
|    |                 | 21-- Can verify / analyze the backups residing on disks and tapes.  | Complied                            | Complied                            | Complied                            |
|    |                 | 22-- Support web-based administration completely from single window for Physical & Virtual environments. Also, provide policy and role-based access management.   | Complied                            | Complied                            | Complied                            |
|    |                 | 23-- Both backup software and backup Appliance must be from the same OEM / Principal and 100% compatible with Robotic Tape Library mentioned at Sr#b3.  | Complied                            | Complied                            | Complied                            |
|    |                 | 24-- It includes complete deployment (installation, configuration according to the user environment in separate LAN (FC/IP) environment) of the Backup Software on Backup Servers and integration with Backup Storage/appliance and RTL at Site1 and Site2 site.  | Complied                            | Complied                            | Complied                            |
|    |                 | 25-- Three (03) years 24/7 direct support from the Principal.   | Complied                            | Complied                            | Complied                            |

|   |  |  |                               |                               |                               |
|---|--|--|-------------------------------|-------------------------------|-------------------------------|
| 2 | Specialized Backup Storage / Appliance | 1-- Purpose built disk-based backup Storage/Appliance with native data deduplication capabilities that offer redundancy at critical levels.  | Complied                      | Complied                      | Complied                      |
|   |  | 2-- Multi-core Intel Xeon Processor per Controllers / Nodes  | Complied                      | Complied                      | Complied                      |
|   |  | 3-- Bidder will propose the Backup Storage/Appliance useable capacity based on the provided Annex-X (Site2) but not less than ~100TB approx. with ±5TB. Proposed useable capacity must be sufficient to fulfill all the requirements, like retention period, number of generation etc. mentioned in provided Annex-X. Usable capacity must be configured excluding the disk and RAID overheads and without considering the deduplication and compression. Proposed model must have upgradation capability (at least 10% of quoted capacity) either by scale-up or scale-out. | Complied Reference annexure Y | Complied Reference annexure Y | Complied Reference annexure Y |
|   |  | 4-- Can handle min 15TB/hour or more throughput based on server-side deduplication by using the proposed protocols for boosting.   | Complied                      | Complied                      | Complied                      |
|   |  | 5-- Proposed Backup Appliance should provide backup software aware WAN-optimized replication with Site1 Backup Appliance (mentioned at Sr#2). Only selected backup set would be replicated to Site1 if required (ref: Annex-X).  | Complied                      | Complied                      | Complied                      |
|   |  | 6-- Backup Storage/Appliance must have best industry compression and deduplication features for physical and virtual environment with appropriate licenses. Must support instant recovery for VMs as well.   | Complied                      | Complied                      | Complied                      |
|   |  | 7-- Should support backup client-side deduplication for network saving and fast backups. Similarly, should support compressed restore of supported DB / applications for fast restore.   | Complied                      | Complied                      | Complied                      |
|   |  | 8-- It should support multiple backup protocols (NFS, CIFS, NDMP, source side deduplication and any other recommended proprietary protocol) simultaneously. All protocol licenses must be included.  | Complied                      | Complied                      | Complied                      |
|   |  | 9-- It Should support industry standard encryption of data-at-rest / in replication. Required license should be included. Solution must meet compliance standards for data. Solution must support secure-multi-tenancy. Should also support locking the data from deletion and forging to make it immutable.   | Complied                      | Complied                      | Complied                      |
|   |  | 10-- Ransomware resiliency: Appliance must provide the capability for WORM / locking the data from deletion and forging in order to protect from bad actors, ransomware / malware and cyber-attacks.   | Complied                      | Complied                      | Complied                      |
|   |  | 11-- Must have robust FT and self-healing mechanism. E.g. RAID with hot spare, end-to-end verification without performance degradation, NVRAM, snapshots to protect against physical and logical failures. System should be able to survive double disk failure.   | Complied                      | Complied                      | Complied                      |
|   |  | 12-- Should be able to extend to a cyber-recovery solution including isolation, immutability and intelligence (3i).  | Complied                      | Complied                      | Complied                      |
|   |  | 13-- Proposed Backup Appliance must not be end of sale within next one year and must not be End of support (EoS) by the OEM / Principal within the next six years after the submission of bidding documents.   | Complied                      | Complied                      | Complied                      |
|   |  | 14-- Backup Storage/Appliance must have minimum 2 x 16/32Gbps FC ports, 2 x 10Gb SFP+, 2 x 10GBase-T (Optional), 2 x 25Gb SFP28 and support of IPv4 and IPv6 (all ports with matched transceivers). Installed FC switch details: (check Annex-X, SAN-SW2 for compatibility)  | Complied                      | Complied                      | Complied                      |
|   |  | 15-- It includes complete deployment (installation, configuration according to the user environment) of the System and integration with other components of Backup Solution at Site2.  | Complied                      | Complied                      | Complied                      |
|   |  | 16-- Both backup software and backup Storage/Appliance must be from the same OEM as single-window solution and 100% compatible with Robotic Tape Library mentioned at b3.  | Complied                      | Complied                      | Complied                      |
|   |  | 17-- Should have dual hot swappable Power supplies, Universal Rack Mounted Kits with Cable Management Arm.   | Complied                      | Complied                      | Complied                      |
|   |  | 18-- Three (03), 24x7 comprehensive direct local on-site support from OEM/Principal with spare parts. Non-Returnable faulty data storage media.  | Complied                      | Complied                      | Complied                      |
| 3 | Robotic Tape Library                   | 1-- Tape Library with min 1 x LTO9 FC drives.  | Complied                      | Complied                      | Complied                      |
|   |  | 2-- Minimum 20 Media slots enabled. Tape library can be scale-able up to 2 FC drives.  | Complied                      | Complied                      | Complied                      |
|   |  | 3-- Must enable the media encryption. Required license must be included.   | Complied                      | Complied                      | Complied                      |
|   |  | 4-- 10 tape data cartridges & labeled, 5 x Cleaning Cartridges with labels.  | Complied                      | Complied                      | Complied                      |
|   |  | 5-- Should have dual hot swappable Power supplies, Universal Rack Mounted Kits with Cable Management Arm.  | Complied                      | Complied                      | Complied                      |
|   |  | 6-- 2 x Fiber cables (as per actual)   | Complied                      | Complied                      | Complied                      |
|   |  | 7-- 100% compatible with Backup Software and Specialized Backup Storage mentioned at Sr#b1, b2.  | Complied                      | Complied                      | Complied                      |
|   |  | 8-- It includes complete deployment (installation, configuration according to the user requirements) of the System and integration with other components of Backup Solution at Site2.  | Complied                      | Complied                      | Complied                      |
|   |  | 9-- Three (03) year, 24x7 comprehensive direct local on-site support from OEM/Principal with spare parts.  | Complied                      | Complied                      | Complied                      |
|   |  | 10-- Proposed Robotic Tape Library must not be end of sale within next one year and must not be End of support (EoS) by the OEM/Principal within the next six years after the submission of bidding documents. Attach required documents.  | Complied                      | Complied                      | Complied                      |



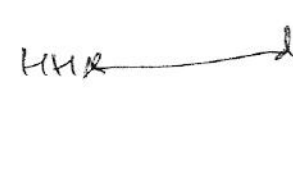








| c) Training |   |  |                |                |                      |
|-------------|---|--|----------------|----------------|----------------------|
| S#          | Item  | Details  | M/s Techaccess | M/s IBL Unisys | M/s DWP Technologies |
| 1           | Backup System Training (Foreign) (6 X NADRA Officials in two batches) | OEM / Principal Certified face-to-face (Classroom) min 5-days training for Design, Installation, Configuration and Operational Requirements of Backup Solution (Software and Backup Appliance). Number of days and training venues should be mentioned in BoQ.<br><br>All expenses covered including boarding lodging along with TA / DA as per NADRA NTL rules. Training dates can be decided after issuance of purchase order as per the convenience of the user-department. | Complied       | Complied       | Complied             |

| d) Backup Server (Qty: 04)  |                                   |  |                |                |                      |
|---|-----------------------------------|--|----------------|----------------|----------------------|
| (Primary, Master, Media, Storage node whatever you call it according to the OEM's best practice, two for each Site) |                                   |  |                |                |                      |
| S#  | Feature                           | Details  | M/s Techaccess | M/s IBL Unisys | M/s DWP Technologies |
| 1   | Processor                         | 2 x Intel Xeon Silver series (equivalent or higher).   | Complied       | Complied       | Complied             |
| 2   | Cores                             | Min 12 core 2.1 GHz or higher  | Complied       | Complied       | Complied             |
| 3   | Cache                             | Min 20 M   | Complied       | Complied       | Complied             |
| 4   | Memory                            | 32x4=128 GB per node (scalable to 3TB) RDIMMDual Rank  | Complied       | Complied       | Complied             |
| 5   | Chassis / Drives                  | 2U, 2 x 480GB (or higher) SSD for mixed-use with RAID1, Hot Swappable.<br>4 x 1.2 TB SAS HDD or higher, 10K RPM, 2.5 inch, Hot Swappable with RAID5.   | Complied       | Complied       | Complied             |
| 6   | Raid Controller                   | Dedicated Raid controller with 4GB cache (NVRAM or Flash cache without need of batteries).   | Complied       | Complied       | Complied             |
| 7   | PFA (Productive failure Analysis) | PFA for processors, memory, disk drives, PCI express slots, expansion cards and system battery and etc.  | Complied       | Complied       | Complied             |
| 8   | Network Interfaces                | 2 x 25 Gb LAN adapter with transceivers and cables, 2 x 10Gb BaseT LAN with 20-M branded cables, 2 x 1Gb BaseT (with branded cables in two colors)   | Complied       | Complied       | Complied             |
| 9   | FC card                           | 2 x single port 32Gb FC HBA (with FC cables) compatible with SAN-SW1 and SAN-SW2 mentioned in Annex-X.   | Complied       | Complied       | Complied             |
| 10  | Misc.                             | Dual Hot-swappable Power Supply with Power cords, Universal Rack mounting Kit with cable Management Arm.   | Complied       | Complied       | Complied             |
| 11  | Warranty / Support                | Three (03) years warranty (Parts and labor), 24/7 back to back OEM / Principal Support. Non-Returnable faulty data storage media.  | Complied       | Complied       | Complied             |
| 12  | End of Life & Support             | Proposed Servers must not be end of sale within next one year and must not be End of support (EoS) by the OEM / Principal within the next six years after the submission of bidding documents.   | Complied       | Complied       | Complied             |
| 13  | Others                            | Proposed Server must support leading Operating Systems and hypervisors including VMWare, Hyper-V, RHEL, Oracle-Linux, CentOS and Microsoft Windows. Provision and laying of cables (Network & FC) till their respective switches are vendor's responsibility according to the customer need. | Complied       | Complied       | Complied             |







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| e) Data Center Graded Network Switches |                                       |  |                |                | (Qty: 2)             |
|--|---------------------------------------|--|----------------|----------------|----------------------|
| S#                                     | Feature                               | Details  | M/s Techaccess | M/s IBL Unisys | M/s DWP Technologies |
| 1                                      | Number of Access Ports in each Switch | Manageable Switch with minimum 32 ports switch, 12 x SFP28 (25 GbE), 12 x SFP+ (10 GbE), 8 x BaseT (10GbE), all ports will come with matched Transceivers and branded cables of length as per user requirements. | Complied       | Complied       | Complied             |
| 2                                      | Number of Uplink Ports in each Switch | Minimum 04 QSFP+ Ports (40Ge) along with matched transceivers plus QSFP+ cables with longer length to reach till NADRA Data Center production environment.   | Complied       | Complied       | Complied             |
| 3                                      | Switching Capacity                    | Switching Capacity 500 Gbps or more  | Complied       | Complied       | Complied             |
| 4                                      | Dual Power Supply                     | Redundant AC Power Supplies (1+1)  | Complied       | Complied       | Complied             |
| 5                                      | VLANs                                 | The switch should support VLAN IDs: 4000. Switches must learn VLANs from uplinked firewalls via trunk port. All switches must support this scenario.   | Complied       | Complied       | Complied             |
| 6                                      | Security                              | IEEE 802.1x, multilevel security on console access to prevent unauthorized users from altering the switch configuration and Port security to secure the access to an access or trunk port based on MAC address   | Complied       | Complied       | Complied             |
| 7                                      | STP                                   | Spanning Tree Protocol. Bridge Protocol Data Unit Guard, Spanning Tree. Spanning Tree Root Guard. Multiple Spanning Tree Protocol (MSTP). Per-VLAN Rapid Spanning Tree (PVRST+)                                  | Complied       | Complied       | Complied             |
| 8                                      | Link Bundling / Uplink                | Allows the creation of Ethernet channel (Static / Dynamic) for Load Balance and redundancy. Ether Channel must support Switch-to-Switch connectivity or Switch-to-Firewall connectivity with Stacking.           | Complied       | Complied       | Complied             |
| 9                                      | Technical Support                     | Three (03) years Operational Support 24 x 7 x 365 Remote Support Direct from Principal.  | Complied       | Complied       | Complied             |
| 10                                     | Installation / Configuration          | Vendor will be responsible for all installations, configurations and integrations with existing NADRA IP network and blade chassis infrastructure by using QSFP+ or Break-out cables.                            | Complied       | Complied       | Complied             |
| 11                                     | End of Life & Support                 | Proposed Network Switches must not be end of sale within next one year and must not be End of support (EoS) by the OEM / Principal within the next six years after the submission of bidding documents.          | Complied       | Complied       | Complied             |
| 12                                     | Warranty / Support                    | Warranty period of Three (03) years for quoted equipment on 24/7 basis with premier support. Faulty Equipment will be replaced within next business day (NBD).   | Complied       | Complied       | Complied             |

| f) IT Racks (to accommodate Backup System) |                    |   |                |                | (Qty: 2)             |
|--|--------------------|---|----------------|----------------|----------------------|
| S#   | Feature            | Details   | M/s Techaccess | M/s IBL Unisys | M/s DWP Technologies |
| 1  | RACK               | Rack 42 U with sides black and Doors  | Complied       | Complied       | Complied             |
| 2  | PDU                | 2 x PDU with min 12x C13 and 6x C19 connectors, equivalent or higher                    | Complied       | Complied       | Complied             |
| 3  | FILLERS            | Empty space should be filled with fillers   | Complied       | Complied       | Complied             |
| 4  | Warranty / Support | Three (03) years warranty (Parts and labor), 24/7 back to back OEM / Principal Support. | Complied       | Complied       | Complied             |

  
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