



مواصفات العطاء رقم (2024/5)  
توريد وتركيب وتشغيل وتدريب نظام نسخ احتياطي برمجيات ومعدات  
(Backup and Recovery Solution)

## Overview

Al al-Bayt University requires a robust Backup & Recovery Solution that adheres to best practices and leverages the advantages of Backup & Recovery solution to create both on-site and off-site backup copies. The solution is aligned with the 3-2-1-1-0 rule, which demands maintaining three copies of data on two different media—one onsite (immutable) and one off-site (offline/tape). Zero Errors be ensure that data is error-free by having Recovery Verification tool so verified backups without errors

The backup plan requires the following: the backup software and backup server, equipped with local storage, serves as the primary backup storage, while the deduplication backup storage (immutable) acts as the secondary backup storage. Additionally, backups will be duplicated to a tape library, with data copied from both the primary and secondary backup storage to tape for added redundancy.

## Technical Specifications (Minimum)

### **Lot 1: Backup and Recovery Software Solution (Subscription license Software maintenance and technical support are included in the price of the subscription)**

- The offer should provide two pricing options for a Subscription license and Support valid for two and three years.
- The activation date of the Backup and Recovery software licenses should begin after a bidder supplying and operating the backup server.

### 1.1 The Backup and Recovery Software Solution must meet the following minimum requirements:

| Item  | Description  | Compliance (Yes/No) |
|---|--|---------------------|
| Worldwide Benchmark                         | The Backup and Recovery Software solution brand must be leader position in related Garter Magic Quadrant last 3 years .  |                     |
| Backup and Recovery                         | <ul style="list-style-type: none"> <li>- The software proposed should offer fast and reliable backup and recovery of virtual, physical, and cloud-based systems, applications, and data. The software should support backup and recovery of entire VMs, individual files, and application objects such as databases and mailboxes</li> <li>- The proposed solution must allow restore even after software Subscription license expiration</li> </ul> |                     |
| Management                                  | Centralized management console for monitoring, reporting, and managing backup and recovery processes and track all activity With Centralized Management Web UI   |                     |
| Notification and Alerts                     | automated reporting and alerting mechanisms to notify administrators of backup statuses and any issues   |                     |
| Automated Backups                           | The ability to schedule automated backups to ensure regular data protection without manual intervention  |                     |
| Physical Infrastructure Support             | all kind of physical (Windows, Linux, Unix Oracle Solaris, SPARC )   |                     |
| Virtualized Infrastructure Support          | all kind of virtual machines (VMware, Nutanix AHV, Hyper-V, KVM )  |                     |
| Enterprise Applications & Databases Support | Backup Software solution provides support for backing up and recovering several applications and databases: Oracle,  |                     |

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|   | Microsoft SQL , SharePoint, Microsoft Active Directory ,Exchange.   |  |
| Backup / Restore Types<br>And methods by Agent-Based Backup | <ul style="list-style-type: none"> <li>- Volume-level backup</li> <li>- File-level backup</li> <li>- Full backups</li> <li>- Incremental backups</li> <li>- Volume-Level Restore</li> <li>- File-Level Restore</li> </ul> |  |
| Immutable backup  | Backup Software Solution must support immutable backup  |  |
| Compliance and Verification                                 | Should offer features for automated backup verification, ensuring recoverability and compliance with data protection regulations  |  |
| Instant Recovery  | Should offer features that allow for instant recovery of data, and Instant VM Recovery enabling quick resumption of business operations and helps reduce downtime   |  |
| Application-aware Backup                                    | Ensure application consistency during backups for critical applications like Microsoft Exchange, Microsoft Active Directory Domain Controllers, SQL Server, SharePoint, and Oracle  |  |
| Data Deduplication and compression                          | should provides mechanisms of data compression and deduplication ,and get faster backup performance by backing up to deduplication storage integration  |  |
| Scalable Backup Storage                                     | Solution should support creating a single virtual pool of backup storage from more than one device with unlimited scalability   |  |
| Backups on disk   | Solution must support backup-to-disk target and Recovery from disk support (DAS, SAN, NAS, and appliances )   |  |
| Backups on tape   | Solution must support Backup to tape with no needed to create new backup it locates already existing backup and copy them from backup disk storage  |  |
| Backup to Cloud   | Solution must support Backup to Cloud by backup copy job  |  |
| Cloud-native backup   | Backup Software Solution support Integration with major Public Clouds and Private/Hybrid Clouds   |  |
| Backup Copy Jobs  | Backup Software Solution support Backup   |  |

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|  | copy jobs for creating multiple copies of a backup file for offsite or archival purposes, without affecting the production environment  |  |
| VM Protection                                | <p>The Backup Software Solution should be optimized to provide advanced protection of virtual environments including VMware and Hyper-V. Features should include:</p> <ul style="list-style-type: none"> <li>- Image, Volume , File level backup with full file / directory level recovery</li> <li>- Auto discovery of new VMs</li> <li>- Synthetic full backups of VMs</li> <li>- Instant VM Recovery</li> <li>- Forward incremental backup</li> <li>- Forever forward incremental backup</li> </ul>  |  |
| Oracle and Microsoft SQL Database Protection | <p>The Backup Software Solution should be optimized to provide advanced Powerful Backup and Recovery for Oracle and Microsoft SQL database .Features should include:</p> <ul style="list-style-type: none"> <li>- Native Control: Direct Oracle RMAN integrations for creating and managing backups.</li> <li>- Instant Recovery: Instant database recovery into production, regardless of size.</li> <li>- Flexible Database Export: Export Oracle and Microsoft SQL database directly from backups.</li> <li>- Create Native application-level backups of Microsoft SQL Server data by integrates with Microsoft SQL Server Management Studio and transfers database backups and transaction log backups to backup target</li> <li>- Ability to perform a table-level recovery of a single SQL Server database</li> </ul> |  |
| Security                                     | - Backup Software Solution Must support protection against  |  |

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|   | <p>ransomware and other malware and data anomaly detection (bidder shall clarify in details all supported and provided features for security).</p> <ul style="list-style-type: none"> <li>- The software should support encryption of backup data, both in transit and at rest, using industry standard algorithms such as AES 256-bit encryption</li> </ul>  |  |
| <p>Monitoring ,Reporting and Analytics (bidder shall clarify in details all supported and provided features )</p> | <p>Backup Software Solution Should offer comprehensive monitoring, reporting, and analytics solution for virtual, physical, and cloud environments. must provides IT administrators with complete visibility and control over their infrastructure, helping them proactively identify and resolve issues with main features:</p> <ul style="list-style-type: none"> <li>• Real-time monitoring and alerting: Monitor the performance and status of virtual machines, hosts, and datastores.</li> <li>• Infrastructure reporting: Generate customizable reports on resource usage, performance, and capacity planning.</li> <li>• Backup and reporting: Track backup jobs, monitor their success, and forecast resource requirements.</li> <li>• Predictive analytics: Detect potential issues and provide recommendations for proactive problem resolution</li> </ul> |  |
| <p>Scalability</p>  | <ul style="list-style-type: none"> <li>- Backup Software Solution should be scalable to accommodate future growth in data volume and complexity. With no additional licensing for added capacity</li> <li>- The Backup software must not have any restrictions on the</li> </ul>  |  |

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|                         | <p>number of drives that can be attached in the tape library. There should be no additional licensing if the number of tape drives is increased</p> <ul style="list-style-type: none"> <li>- Must not have any restrictions on the number of Disk -based storage that can be attached as Backup Target. There should be no additional licensing if the number of Disk -based storage target is increased</li> </ul> |  |
| Support and Maintenance | The Bidders should provide comprehensive technical Vendor and Local support and maintenance services, including Installation, Configuration software updates and patches.   |  |

## 1.2 Backup and Recovery Software license

### 1.2.1 Scope of License

|                            |  |
|----------------------------|--|
| <b>License Type</b>        | Subscription   |
| <b>License Unit</b>        | Instance   |
| <b>Subscription Period</b> | The offer should provide two pricing options for a Subscription license and Support valid for two and three years. |

### 1.2.2 Existing environment

The licenses provided should be enough to cover the following: -

- A- Virtual and Physical server in Existing environment and should be included in offer Backup and Recovery Software license

| Workload Type   | Description                           | QTY |
|-----------------|---------------------------------------|-----|
| Virtual Machine | MS Hyper-V                            | 60  |
| Physical Server | Windows, Linux, Unix Solaris , Oracle | 14  |

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|  | Solaris SPARC |  |
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B- Applications and DBs in Existing environment and should be included in offer Backup and Recovery Software license

| Application and DBs Name                      | QTY |
|---|-----|
| Active Directory                              | 2   |
| SQL DB  | 1   |
| Oracle DB(Oracle RAC) On Oracle Solaris SPARC | 2   |
| SharePoint                                    | 1   |

C- Backup Target (where backup files must be stored) in Existing environment and should be included in offer Backup and Recovery Software license

| Backup Target(Backup directly and copy Backup job) | Description   |
|--|---|
| Backup to Disk -based storage                      | <ul style="list-style-type: none"> <li>- Must not have any restrictions on the number of Disk -based storage that can be attached as Backup Target (support DAS, NAS, SAN)</li> <li>- Included Local storage on backup server as Backup Target</li> </ul> |
| Backup to Deduplicating Storage                    | deduplication storage systems including those that offer immutability   |
| Backup on tape (Copy Backup Job to tape)           | <p>Must not have any restrictions on the number of drives that can be attached in the tape library</p> <p>There should be no additional licensing if the number of tape drives is increased</p>   |

D- Monitoring & Analytics tool for Existing environment should be Included in offer Backup and Recovery Software license

### 1.3 Certified Training

Training Conditions:

- The Bidder should provide comprehensive Certified training of at least 2 admins on the administration operation of the Backup & Recovery software solution for Lot 1
- The training program must contain and focus on the following required topics (configure, install, monitor, management, troubleshooting, analysis, and reporting) for the proffered Backup & Recovery software solution .

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- Bidder must specify the training cost for two people.
- The Bidder should provide a training course that include the required topics, and include in his offer the courses description, guidelines, prerequisites and number of days
- The training program should be delivered by a vendor certified trainer
- The training must be on the university campus

**Lot 2: Backup Server (QTY 1)**

Backup Server with Internal Storage Capacity Compatible with Backup & Recovery Software Solution in Lot 1 with the following Minimum specifications:

| <b>Item</b>             | <b>Description</b>   | <b>Compliance (Yes/No)</b> |
|-------------------------|--|----------------------------|
| <b>Form Factor</b>      | Rack mountable   |                            |
| <b>Processors</b>       | 2 x Processors (16 Core,24M Cache, 2.90 GHz)<br>Number of Processors 2<br>16 Core per Processor Socket<br>32 Thread per Processor Socket<br>24M CPU Cache per Processor Socket<br>2.9 GHZ Processor Base Frequency per Processor Socket<br>support DDR4-3200 memory with a maximum speed of 3200 MHz<br>support Virtualization technology<br>3.50 GHz Boost Frequency per Processor Socket |                            |
| <b>Installed Memory</b> | 128GB ( 4 x 32GB ) DDR4 RDIMM with 3200MT/s Speed, expandable to at least 512 GB   |                            |
| <b>Cooling</b>          | Hot-Plug Redundant fan   |                            |
| <b>Power Supply</b>     | Dual,Hot-plug,Redundant Power Supply   |                            |
| <b>Networking</b>       | - 4 x 10GbE Base-T Ports<br>- 2 x 10Gb SFP+<br>-Additional 2 SFP transceivers that shall be installed in the Data Centre Switch must be  |                            |



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|  | offered.<br>- 2 x 16Gb FC HBA auto negotiation 4 /8/16 Gbps   |  |
| <b>Raid Controller</b>   | RAID 0,1,5,6,10,50  |  |
| <b>Storage</b>   | - OS: 2 x 1.6TB SAS 12GBbs Mixed Use SSD<br>- HDD (Capacity): 6 x 8TB 12GBbs 7.2K RPM Hot Plug      |  |
| <b>Raid Controller Cache</b>   | 4GB   |  |
| <b>Slots/Ports</b>   | 4 USB 2.0 Ports   |  |
| <b>Media Drive</b>   | DVD RW Drive  |  |
| <b>Management</b>  | Integrated Management Port with remote management feature should be included.                       |  |
| <b>Operating System</b>  | Microsoft Windows Server( 2022,2019,2016), RedHat Linux, VMware, Hyper-V.                           |  |
| <b>Accessories</b>   | All needed, cables,fiber cables ,SFPs, and all accessories to be mounted in a standard rack cabinet |  |
| <b>Warranty</b>  | 3 years warranty (parts,labor,onsite support).  |  |
| <p>*The bidder is committed to the following:</p> <ol style="list-style-type: none"> <li>1. Supply, install and operate the server to be ready to install the Backup Software Solution in Lot1 and to be connected to Tape Library when needed and upon request.</li> <li>2. Set up Internal Storage Capacity and create a local storage for Backup Software Solution in Lot1</li> </ol> |   |  |

**Lot 3: Backup Storage (QTY 1)**

Backup storage shall be a purpose-built backup appliance and shall be certified to work with Backup Software Solution in Lot 1 as integrated deduplication Storage appliance with the following Minimum specifications:

| Item            | Description   | Compliance (Yes/No) |
|-----------------|---|---------------------|
| <b>Capacity</b> | Minimum of 50 TB usable capacity (before deduplication and compression) |                     |

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|                                       | Raid 6 or equivalent with hot spare disk, hot-swappable   |  |
| <b>Deduplication</b>                  | Deduplication and compression support on the entire<br>20:1 deduplication   |  |
| <b>Backup and Restore Performance</b> | <ul style="list-style-type: none"> <li>- It should support fast backup speeds, efficient data indexing, and accelerated restore operations for timely data recovery.-</li> <li>- The ability to do parallel backup jobs (job concurrency).</li> <li>- Support of CIFS and NFS as a backup target</li> </ul>   |  |
| <b>Host Interface</b>                 | <ul style="list-style-type: none"> <li>- 2x 10GbE Base-T Ports</li> <li>- 2 x 10Gb SFP+</li> <li>- Additional 2 SFP transceivers shall be installed in the Data Centre switches must be offered.</li> <li>- 2 x 16Gb FC HBA auto negotiation 4 /8/16 Gbps</li> </ul>  |  |
| <b>Transfer rate</b>                  | 20 TB/hr  |  |
| <b>Immutable Storage/Backups</b>      | Backup Storage must support immutability with Backup Software Solution in Lot 1<br>immutability protects data from loss as a result of malware activity or unplanned actions. A software that prevents files from being modified or deleted for a user-defined retention period.                              |  |
| <b>Compatibility</b>                  | <ul style="list-style-type: none"> <li>- Compatible with Backup Software Solution in Lot 1 as integrated Deduplicating Storage Appliances.</li> <li>- should offer advanced deduplication algorithms and compression techniques to minimize storage footprint without compromising data integrity.</li> </ul> |  |
| <b>Connectivity</b>                   | Should work over LAN, and FC network  |  |
| <b>Power Supply and Cooling</b>       | Redundant power supplies, hot-swappable<br>Redundant fan, hot-swappable   |  |
| <b>Security</b>                       | <ul style="list-style-type: none"> <li>- Must support protection against ransomware and other malware (bidder shall clarify in details all supported and provided features for security)</li> <li>- Must support data encryption at rest and in</li> </ul>  |  |

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|                    | transit, ensuring the confidentiality and integrity of our backup data.   |  |
| <b>Accessories</b> | All needed, cables ,fiber cables ,SFPs, and all accessories to be mounted in a standard rack cabinet  |  |
| <b>Management</b>  | <ul style="list-style-type: none"> <li>- Integrated Management Port with remote management feature should be included.</li> <li>- A comprehensive and user-friendly management interface is required for centralized control and monitoring of backup storage.</li> </ul> |  |
| <b>Warranty</b>    | 3 years warranty<br>(parts,labor,onsite,Installation,Configuration,support )  |  |
|                    | <ul style="list-style-type: none"> <li>• The bidder is committed to supplying, installing and operating it to be ready to connect with Backup Software Solution in Lot1 as Deduplicating Backup storage with security setup and configuration.</li> </ul>                 |  |

### • **General Terms and Conditions**

- 1- The Bidders shall represent a Similar or higher projects that they installed/configured.
- 2- Bidders should have a valid partnership with the vendors of product offered. A recent certificate or letter of partnership must be provided.
- 3- Bidder must be in business and a registered company in Jordan for at least 3 years.
- 4- The bidders shall offer a complete system solution inclusive of the design, supply, installation, testing, commissioning and maintenance.
- 5- The Bidder must have enough experience to configure new storage backup with Backup Software Solution with a list of employee's C. V's who have the adequate experience to install and configure all HW and SW, the candidate must be certified by the vendors provided.
- 6- The bidder must install and connect and configure the delivered Backup Software on AABU HW and connect them to the AABU HW (Tape Libraries, NAS, Backup Storage).

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- 7- Bidder shall deliver all the hardware, software, licenses and professional services for all the proposed solution components within the declared timeframe (3 years) which shall guarantee that the implementation of the proposed solution are guaranteed without any additional component(s) (hardware, software, licenses and professional services).
- 8- The offer should include site training for the technical staff of Computer Center. Training must focus on the following:
  - Operation.
  - Problems and fault analysis.
  - Software installation and administration for the associated software modules.
  - Configuration.
  - Management.
  - During installation and configuration, a knowledge transfer, and a detailed elucidation for every step of work must take place by the company team for AABU technical staff
- 9- Any additional fees to guarantee the smooth and well-defined implementation even from the bidder side or any third party will be the responsibilities of the bidder and on his own account.
- 10- The bidder should provide offer for 3 years' product warranty support from Vendor and from local company including any software upgrades for all provided solution components (All devices, hardware, and software components).
- 11- Bidder shall clarify if the backup storage need license independent of hardware so in case after 3 years' product warranty end require new software cost, it shall be quoted separately.
- 12- All required SFP+ transceivers, cabling, connectors, accessories, installing and commissioning are the responsibility of the Supplier
- 13- Bidder shall apply quarterly health check for the proposed solution components.
- 14- Bidders must ensure that the equipment that they are proposing will be new, factory equipped, and that no item is refurbished or used. Al al-Bayt University requests an official letter from the vendor that all supplied items with their serial numbers are specially sold to Al al-Bayt University
- 15- All Microsoft licensing is the responsibility of Al al-Bayt University, any other licensing should be stated clearly in the financial RFP and should be priced for at least three years.

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- 16- Bidders are required to provide a list of employee's C.V's who are candidate to install and configure all devices, the candidate must be certified by the provided vendor. Minimum two Certified Engineers for the whole solution components or partially.
- 17- Prices include supplying installation operation and maintenance of all offered (HW&SW) and knowledge transfer and Certified Training and site training for the technical staff as specified in the specification.
- 18- All bid items from (HW&SW) must be from well-known international brands
- 19- The compatibility of all components of the system with each other is the responsibility of the company.
- 20- The Specifications Checklist sheet must include the required equipment's
- 21- Documents should be provided in separate financial and technical envelopes.
- 22- Bidder shall be responsible to configure the backup solution for all AABU existing and any new system within the timeframe of warranty and support as a part of support services.
- 23- All bidders are welcome for site survey.

#### الشروط الخاصة:-

1. هذا العطاء يشمل ثلاثة بنود وهو قابل للتجزئة.
2. تقدم الأسعار بالدينار الأردني شاملة جميع أنواع الضرائب وشاملة ضريبة المبيعات ومغفأة من الرسوم الجمركية.
3. الأسعار تشمل التوريد والتركيب والتشغيل والتدريب والصيانة والدعم الفني، في المواقع التي تحددها الجامعة.
4. الجامعة غير مقيدة بأقل الأسعار، ولها الحق في تجزئة العطاء أو إلغائه كلياً أو جزئياً إذا اقتضت مصلحة الجامعة ذلك وفي أي مرحلة من مراحل العطاء، دون أن يكون للمناقصين الحق في المطالبة بأية خسارة أو ضرر ناتج عن ذلك.
5. يلتزم المناقص التي يحال عليه العطاء بتقديم كفالة حسن تنفيذ بنسبة (10%) من القيمة الإجمالية للإحالة، سارية المفعول طيلة مدة العقد

6. يلتزم المناقص التي يحال عليه العطاء بتقديم كفالة صيانة بقيمة 5% من قيمة العطاء على شكل كفاله بنكيه او شيك مصدق سارية المفعول طيلة مدة العقد.
7. على المناقص ان يبين في العرض المقدم منه بلد المنشأ للوازم المعروضة واسم الشركة الصانعة ومنشأها والماركة والاسم التجاري او النشرة الخاصة بالوازم المعروضة بشكل واضح ودقيق.
8. تحديد مدة التسليم لبند العطاء المعروضة من قبل الشركات المتقدمة.
9. تقديم كتالوجات لجميع البنود وتعتبر جزء لا يتجزأ من العرض المقدم.
10. تكون جميع الأجهزة جاهزة للعمل حسب المواصفات المطلوبة وتوريد جميع توصيلاتها وملحقاتها اللازمة للعمل.
11. يحق للجامعة إلغاء العطاء في أي وقت ودون إبداء الأسباب.