



شركة الحوسبة الصحية

***Electronic Health Solutions***

***REQUEST FOR PROPOSAL***

**Network Routing Solution  
For Hakeem Program  
RMS**

**RFP Reference Number: RFP-EHS-PROC-16-2024**

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**QF-PRO-01-04**

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# Transmittal Letter

Date: 26-NOV-2024

Dear Sir / Madam,

Electronic Health Solutions “EHS” is in the process of tendering “RFP-EHS-PROC-16-2024” for **Supply, Installation, Configuration, Testing and Implementation of Network Routing Solution for Hakeem Program - RMS.**

Interested companies are encouraged to submit their technical and financial proposals as per the details provided in this RFP. EHS appreciates your timely and accurate response, meanwhile, shall you have any questions please do not hesitate to contact us.

## Procurement Department

Tel: +962 6 580 0461 | Ext. 3050, 3071, 3074 & 3067

Email: [procurement@ehs.com.jo](mailto:procurement@ehs.com.jo)

Yours sincerely,

Electronic Health Solution

## Confidentiality Statement

This Request for Proposal (RFP) contains information proprietary to Electronic Health Solutions, hereafter referred to as "EHS". Each recipient is entrusted to maintain its confidentiality. The information contained in this RFP is provided for the sole purpose of permitting the Bidder to respond to the RFP. This information may not be reproduced in whole or in part without the expressed written permission of EHS.

The recipient shall hereby agree to keep all the information in this RFP confidential and shall not, without prior written permission of EHS, disclose this information to any person other than the employees, agents, subcontractors, and advisors who are required in the course of their duties to execute proposal preparation activities. The recipient shall undertake the responsibility that all such persons are informed of the confidential nature of the information.

No recipient of this RFP shall, without the prior consent of EHS, make any public statements to any third parties in relation to this RFP or the subsequent short-listing of any prospective implementer or the subsequent awarding of any order. Unauthorized release of information or public statements will result in immediate disqualification.

Information provided by each Bidder will be held in confidence and will be used for the sole purpose of evaluating a potential business relationship with the respective Bidder's company. There will be no obligation to maintain the confidentiality of any information that was known to EHS, prior to the receipt of a proposal from the Bidder, or due to becoming publicly known through no fault of EHS, or if received without obligation of confidentiality from a third party owing no obligation of confidentiality to the Bidders.

# Company Abstract

## Company Profile

Electronic Health Solutions (EHS) was founded in 2009 as a non-profit company. EHS is owned by the main stakeholders in health and technology sectors in the Kingdom including Ministry of Health (MoH), Ministry of Information and Communication Technology (MoICT), Royal Medical Services (RMS), King Hussein Cancer Center, King Hussein Institute for Cancer and Biotechnology, Royal Health Awareness Society and Private Hospitals Association.

Hakeem is Jordan's National Electronic Health Records (EHR) initiative by which the healthcare sector will be computerized. The program was inceptioned in October 2009.

The company's mandate is to implement Hakeem in public hospitals, Royal Medical Services sites, Universities Hospitals and King Hussein Cancer Center, in addition to healthcare centers including comprehensive clinics and primary clinics.

## Vision, Mission, Goals, and Objectives

### Vision

Transform and sustain a continuously improving healthcare system in Jordan by leveraging information technology.

### Mission

Provide a secure and accessible platform that enables the storing and sharing of electronic patient health records at all healthcare facilities enrolled in Hakeem.

### Objectives

EHS main objectives are the following:

- 1- Improve Healthcare
- 2- Reduce the Cost of healthcare services.
- 3- Provide Data for Research and Decision Making

### Benefits

- Raising healthcare quality and outcomes by enhancing the accuracy of diagnoses, medication administration, and patient information management;
- Boosting health facilities' efficiency and workflow by saving time and reducing errors in information retrieval;
- Supporting research, scientific studies and, decision-making by supplying the necessary patient data, history and statistics;
- Reducing operating costs by optimizing resource utilization and, preventing lab test repetition.



# 1. Contact Information

Any questions regarding this RFP shall be directed to the following email address in writing:

Name:	Procurement Department
Company:	Electronic Health Solutions
Address:	King Hussein Business Park, King Abdullah the second street. 4408 Amman 11952
Telephone / Fax:	Telephone +962 (6) 5800461 EXT3050, 3071 Fax +962 (6) 5800466
Email:	<a href="mailto:Procurement@ehs.com.jo">Procurement@ehs.com.jo</a>

The bidder should receive a response from the procurement department, if not please call the following number +962 79 668 1595 Or Tel: +962 6 5800461 | Ext: 3050, 3071.

For Review Only NOT FOR

## 2. General Conditions

Upon participation, the bidder agrees to the following:

1. All costs incurred by Bidder in the preparation of this proposal shall be borne by the Bidder.
2. "EHS" will assume that all statements in writing, made by persons submitting Proposals are true, accurate, complete and, not misleading.
3. "EHS" reserves the right to cancel, at any time, this RFP partially or in its entirety. No legal liability on the part of "EHS" for payment of any kind shall arise and in no event will a cause of action lies with any bidder for the recovery of any cost incurred in connection with preparing or submitting a proposal, in response hereto all efforts initiated or undertaken by the bidder shall be done considering and accepting this fact.
4. Bidder's proposals shall be based on full compliance with the terms, conditions and, requirements of this RFP and its future clarifications and/or amendments.
5. "EHS" shall not be under any obligation to return or save either the original or any copies of any Bidder's Proposals (technical and/or financial), and all documents submitted to "EHS", whether originals or copies, shall be kept or disposed of by "EHS".
6. This Request for Proposal doesn't constitute an offer. "EHS" shall not be under obligation to enter into any agreement with any Bidder in connection with this RFP and responses received.
7. The Bidder's proposals (technical and financial) shall comply with the laws and regulations of the Hashemite Kingdome of Jordan.
8. The Bidder's proposals (technical and financial) shall be compatible with international standards and best practices.
9. As a part of the RFP response, the Bidder is requested to fill out the compliance sheet included in this RFP.
10. The bidder must include in his technical proposal a detailed Bill of Quantity "BOQ" for all proposed and priced items and services. Accordingly, this should be reflected and included in the financial offer with itemized quoted prices for all proposed items.
11. The bidder must commit to providing EHS with the same prices and terms for a period of (1) year starting from the Awarding Letter date for the purpose of Variation Orders
12. The quantities requested in this RFP are subject to increase, decrease or, cancellation as per the actual requirements in the awarding date. In case the quantities decrease the vendor is responsible to install the available materials from the EHS warehouse.

في حال أن تعذر على "المناقص الفائز بالعبء" تنفيذ التزاماته التعاقدية و/أو أي جزء منها، بحيث يكون قد تأخر في توريد المواد و/أو الخدمات المحددة لمدة (45) يوم من التاريخ الواجب على "المناقص الفائز بالعبء" خلاله تنفيذ التزاماته، فسيكون في هذه الحالة من حق "شركة الحوسبة الصحية" إلغاء قرار الإحالة والعلاقة التعاقدية التي تجمعهم مباشرة دون الحاجة إلى اشعار و/أو اذار و/أو استصدار حكم قضائي. كما يكون من حق " شركة الحوسبة الصحية " في هذه الحالة شراء ما كان متفق عليه من مورد آخر يراه مناسباً، على أن يتحمل " المناقص الفائز بالعبء " كافة النفقات التي قد تكبتهما " شركة الحوسبة الصحية " جزاء ذلك إلى جانب تعويض " شركة الحوسبة الصحية " عما لحقه من أضرار إثر تعذره عن تنفيذ التزاماته.

### 3. Bidder Qualifications

1. Bidder should be a Company registered under the Jordanian Ministry of Industry and Trade for more than three years or represented by a company abiding by the aforementioned condition; otherwise, any international or regional bidder must present the formal documents which prove the financial capacity of the company in addition to its commercial registration documents at the country of origin
2. Bidder should have at least three references of similar projects preferably in the health care sector and to be accepted by EHS.
3. The Bidder / Vendor shall have at least three enterprise scale live installations for similar solution. The contacts information for such projects must be provided within the bidder's technical proposal in order to be contacted by EHS as part of the technical evaluation.
4. The Bidder shall have specialized and certified engineers with relevant technical certification for at least two engineers.
5. The bidder must submit Up-To-Date official documents of registration issued from the Companies Control Department at the Jordanian Ministry of Industry and Trade.
6. The bidder must be an authorized Partner of the mother company he represents in this bid; the highest two partnership levels are only accepted. The bidder must submit an up-to-date valid official letter/certificate from the mother company as part of the bidder's qualification documents.
7. The bidder shall have at least two certified engineers according to the manufacturer's recommendations on the proposed solution; at least one of them shall be assigned to the project with EHS.
8. All proposed and supplied equipment\solutions\items\services must be original, brand new (not refurbished) and, licensed by the manufacture (mother company) to be supplied and installed for this project at EHS.
9. All proposed and supplied equipment / solution / items / appliances / hardware must be newly manufactured with manufacturer valid warranty and support duration for not less than (7) years from the date of delivery. This implies that supplied products must not be obsolete, phased out of production, out of sales, or out of support.
10. All proposed and supplied equipment\solutions\items\services must be original, brand new (not refurbished) and, licensed by the manufacturer (mother company) to be supplied and installed for this project at EHS.

11. تلتزم الشركة المحال عليها بتحديد نسبة الصيانة و الدعم الفني في العرض المالي للأجهزة المحال عليها للسنوات التي تلي فترة الصيانة المجانية شاملة قطع الغيار و الأيدي العاملة علماً بأن هذا البند سيكون جزء من التقييم المالي للعرض المقدم

The winning bidder is obliged to determine the percentage of maintenance and technical support including spare parts and manpower for the years following the free maintenance duration. This has to be specified clearly in the financial offer for the supplied devices\solutions as per this RFP and will be part of the financial evaluation of the bid.



## 4. RFP Guidelines

### a. RFP Issuance & Submission

Event	Date
1. RFP distribution to vendors	26-NOV-2024
2. Questionnaire Session	N/A
3. Proposal due date Closure Date	18-DEC-2024

### b. Queries and Responses

All inquiries during the questions and answers session (Bidder Conference) if conducted must be documented., Verbal clarifications, inquiries or communication are not permitted, and only written communication is accepted.

### c. RFP Acknowledgement

1. Award of the contract resulting from this RFP will be based upon the most responsive vendor whose offer will be the most advantageous to “EHS” in terms of cost, functionality, and other factors as specified elsewhere in this RFP.
2. Vendor has a period of (5) days to acknowledge and accept the awarding letter with its terms and conditions. Delay of acceptance will yield into consideration of rejection.
3. EHS” reserves the right to:
  - a) Accept other than the lowest-priced offer.
  - b) Award a contract on the basis of initial offers received, without discussions or requests for best and final offers.
  - c) Award the RFP contract on a partial basis (i.e. not all requirements requested from a single vendor.)
  - d) Not declare the name of the winning bidder, and awarding details.

### d. Proposal Format Requirements

1. The financial and technical proposals must be submitted separately. Each proposal must be sent in a separate (PDF) electronic file (PDF). **(If the proposal file document size is bigger than 9 Megabyte (MB), you may send the document through a secured file hosting service and an internet-based computer file transfer service company such as Dropbox, WeTransfer, etc.)**
2. The proposals must be sent to the Procurement Department email namely; ([Procurement@ehs.com.jo](mailto:Procurement@ehs.com.jo)). A password divided into (3) portions and not to be less than (9) nine digits must be set on the financial offer.
3. The passwords must be sent through a text message (SMS) to relevant mobile numbers which will be cellular mobile numbers that will be provided to the bidders at a later stage.
4. Pricing must be per site with a breakdown itemized pricing for each item, component, product and services included in the submitted Financial Proposal.
5. The Financial Proposal must specify clearly the compliance with the (5) five years' warranty duration required in the Technical Specification section.

6. The bidder shall submit only one financial proposal file. The financial proposal must include all of the products or solution options proposed in the Technical Proposal. The financial proposal must be in a format that is easy to read and understand and in compliance and consistent with the pricing and terms and conditions mentioned in this RFP document. The financial proposal must be in English.

The financial proposal must be signed by an authorized representative of the bidder.

If the bidder submits more than one financial proposal file, or if the financial proposal does not include all of the products or solution options proposed in the Technical Proposal, the bidder's proposal may not be considered.

7. The bidder must submit a cover letter in a PDF format as a separate document from the Technical and the Financial Proposal. The cover letter must include the following information:
- The tender reference number.
  - The name of the bidder.
  - The contact information for the bidder.
  - A list of the product(s) and/or solution(s) names that are being proposed, along with the corresponding product and/or solution code.
  - A listing of the proposed product(s)\ solution(s)\service(s) along with their relevant brief description.

The aforementioned information must be filled in the following "Table Template" ( ملخص للمنتجات (ملخص للمنتجات) (والخدمات والحلول المعروضة) and must be consistent and in a total match with the relative names and descriptions included in the financial and technical proposals. The list of product and/or solution names must match those included in the Technical and Financial Proposal. If the bidder does not submit a cover letter, or if the list of product and/or solution names do not match those included in the Technical and Financial Proposal, the bidder's proposal may not be considered.

#### **Table Template (ملخص للمنتجات والخدمات والحلول المعروضة)**

The following table template can be used to list the product and/or solution names that are being proposed:

<b>Option</b>	<b>Product\Solution\Services Name</b>	<b>Product\Solution\Services Description</b>
<b>Option (1)</b>	<b>Product 1</b>	
<b>Option (2)</b>	<b>Solution 1</b>	
<b>Option (3)</b>	<b>Solution 2 &amp; Product 2</b>	

## 5. RFP Terms & Conditions

### a. Evaluation Criteria

1. "EHS" will evaluate each response. Responses will be evaluated on many criteria deemed to be in EHS's best interest, including but not limited to, technical offering, price, warranty, delivery duration, Bidder certification, accreditation, schedule, bidder's capabilities, compliance with bonding, and any other factors that "EHS" determine. The order of these factors does not denote relative importance.
2. "EHS" reserves the right to consider other relevant factors as it deems appropriate in order to obtain the best value.
3. This RFP does not commit "EHS" to select any firm, enter into any agreement, pay any costs incurred in preparing a response or procure or contract for any services or supplies. "EHS" reserves the right to request additional information from the bidders whose response meets "EHS" needs and business objectives without requesting such information from all respondents.

### b. Rejection of Proposals

"EHS" reserves the right to reject any or all offers and discontinue this RFP process without obligation or liability to any potential Vendor.

### c. Proposal Costs and Expenses

No legal liability on the part of "EHS" for payment of any kind shall arise and in no event will a cause of action lie with any bidder for the recovery of any cost incurred in connection with preparing or submitting a proposal. In response hereto all efforts initiated or undertaken by the bidder shall be done considering and accepting this fact.

### d. Bid, Performance, Advance payment, and Warranty Bonds

1. Unconditional Bid Bond valid for (3) three months with an amount of (JoD 3,000.00) Three Thousand Jordanian Dinar to be renewed automatically must be submitted by every participating bidder.
2. Advance payment LG, is to be submitted against any required advanced payment.
3. Unconditional Performance Bond for (10%) of the total amount of the awarded value shall be submitted by the winning bidder and within (5) working days from the date of the award. The Performance bond must remain valid for the total duration of the implementation of the project and until the delivered solution is finally received and accepted by EHS. This Performance Bond will be replaced by the Maintenance LG after items delivered installed and finally accepted duly. The Maintenance Bond will remain valid until the end of the warranty duration. In case the winning bidder fails to submit the performance bond, EHS reserves the right to cancel the contract and liquidate the bid bond without reverting to the bidder.

## e. Penalties

In the event, the bidder fails to deliver according to the agreed time (for either the initial agreed delivery date or any of the subsequent delivery dates). The Bidder must pay EHS a delay penalty of (1%) of the total contract amount for each week of delay. The maximum penalty for delays shall not exceed (10%) of the total contract value. The payment or deduction of such penalty shall not relieve the winning bidder from its obligations to complete the services or from any other obligations and liabilities under this bid.

## f. Payment Terms

### 1- Payment terms:

- 20% Advance Payment against "Advance Payment LG"
- 20% upon items delivery
- 20% upon installation or implementation
- 40% on final EHS acceptance.

In case the winning bidder fails to comply with the "Advance Payment LG" term set for the first payment, hence, the winning bidders will be entitled to receive (40%) of the total contract value after the fulfillment of the delivery and initial receiving conditions "إستلام توريد" set forth in this RFP.

- ### 2- Payment currency shall be in Jordanian Dinar (USD and Euro exchange rate will be calculated at the currencies exchange rate issued by Central Bank of Jordan at the payment date).

## g. Terms of Delivery

- Delivery, Installation, and implementation must be within (8-12) Weeks from the date of issuance of the purchase order. Delivery must be to the warehouse at EHS HQ offices or any of the "Hakeem" Project sites upon coordination and approval of EHS. Final acceptance is required by EHS, and penalties for delays will be imposed as per the condition specified in clause (5.e) of this RFP.
- Any bidder who fails to meet the above named durations for delivery and implementation **may be considered dis-qualified**.
- Weight: The duration of delivery and implementation of projects will be given a high weighting value in the evaluation criteria. Accordingly, the weighting value for the bidder with the shortest proposed duration will receive the highest score.

## h. Offer Expiry Date

The validity of the Proposal shall be no less than (90) days unless clearly mentioned differently.

The prices must remain fixed and valid for (90) days from the date of the invitation for bid closing date and shall be clearly stated in the technical and commercial bids.

## 6. Financial Compliance Sheet

#	Description	Comply (Yes/No)	Reference in the proposal
1	The bidder shall comply with all points included in the general conditions section		
2	The bidder shall comply with all points included in the bidder qualifications section		
3	The bidder shall comply with all points included in the RFP guideline section		
4	The bidder shall comply with all points included in the RFP terms and conditions section		

## 7. RFP Objectives

The objective of this Request for Proposal (RFP) is to invite qualified vendors to submit proposals for the design, supply, installation, configuration, testing, and implementation of a robust and enterprise-level network routing solution. This solution is intended for deployment across both primary and disaster recovery (DR) data centers, as well as the replacement of WAN Edge network security appliances at designated hospitals participating in the Hakeem program.

The selected solution should be designed to meet the critical demands of a healthcare environment, ensuring seamless integration with our comprehensive business requirements. EHS seeks proposals from experienced and reputable bidders to provide an end-to-end solution that ensures high availability, scalability, and resiliency for Royal Medical Services (RMS) data centers.

EHS is looking to procure enterprise-grade edge routers and a network routing solution capable of securely connecting over 300 sites through VPLS-based private WAN links. The proposed solution must support multi-provider connectivity and deliver redundancy to meet the high-performance and uptime requirements of our healthcare infrastructure.

The successful bidder will be responsible for providing a complete turnkey solution, including:

- The delivery of all necessary hardware and software
- Installation and configuration at RMS data centers and hospitals
- Migrating RMS network to the new network routing solution
- Comprehensive testing and validation of the solution's performance
- Seamless implementation across all sites

This initiative is critical for the Hakeem program's operational continuity and security, and we seek proposals that are both technically proficient and commercially competitive.

## 8. Business Requirements

From a business perspective, the new network routing Solution must be delivered as a robust, enterprise-grade turnkey solution meticulously tailored to align with EHS requirements and uphold industry standards. This imperative encompasses a comprehensive approach addressing the following key points:

### **1. High Availability and Redundancy:**

The solution must ensure continuous and reliable connectivity between the 300+ sites and both the main and disaster recovery (DR) data centers, with robust support for failover mechanisms. This ensures that network traffic is automatically rerouted in case of link failure or service provider outages, providing seamless connectivity.

### **2. Scalability:**

The routing solution should be scalable to accommodate future growth, as additional sites or service providers may be incorporated into the network over time. The network must support a large number of routes and ensure stability as the organization expands.

### **3. Network Resilience and Stability:**

The selected solution must provide a stable network environment across all connections, which is especially crucial for healthcare applications that require high reliability. Resilient path selection and route management are key for maintaining network stability.

### **4. Robust Security:**

Given the sensitive nature of healthcare data, securing the network is a top priority. The solution should include robust access controls, route filtering, and other security measures to protect data in transit.

### **5. Seamless Integration with Existing Infrastructure:**

The solution must integrate smoothly with EHS's existing network architecture, including its VPLS-based WAN and associated network components at RMS, without the need for significant infrastructure overhaul.

### **6. Compliance and Regulatory Alignment:**

The solution must adhere to healthcare industry standards and regulatory requirements, including those related to data privacy and network security.

### **7. Site-to-Data Center Connectivity:**

Each site should have dual connections to both the main and DR data centers through separate service providers, with routing protocols managing these connections to optimize traffic and ensure failover.

### **8. Latency and Performance:**

The solution should be capable of supporting low-latency routing suitable for healthcare applications that rely on real-time data transmission, ensuring optimal performance.

### **9. Vendor Support and SLAs:**

Proposals should include robust vendor support and service-level agreements to ensure ongoing support for configuration, troubleshooting, and future scalability.

### **10. Cost-Effectiveness:**

The solution should be commercially competitive, balancing cost with high-quality performance, and should offer a transparent pricing model.



## 9. Technical Proposal Submittals

### **The Submittals within technical proposal:**

1. Technical compliance sheets.
2. Data sheets for all items.
3. Project Implementation plan.
4. Accept Procedure Test (ATP) document.
5. Service level agreement (SLA)
6. Project team details.
7. Detailed BOQ (Item, QTY, and Duration)
8. End of sale / end of life information including product support lifecycle for all the proposed solution components.

For Review Only NOT For Bidding

## 10. Solution High-level Architecture

The proposed solution is envisaged to be seamlessly deployed across Hakeem data center for Royal Medical Services (RMS). RMS has two data centers at King Husain Medical City (KHMC) (Main) and King Talal Military Hospital (KTMH) (DR) data centers. The data centers strategically addressing the imperative for High Availability (HA), and Disaster Recovery (DR). The prospective bidder is expected to intricately design and present a comprehensive solution architecture tailored to meet the unique demands of our main and DR data centers, while diligently accommodating the critical Availability requirements.

This architecture outlines a resilient and scalable network routing solution designed for RMS main and disaster recovery (DR) data centers, designed to operate in active-active mode, using high availability (HA) routers and BGP (Border Gateway Protocol) as the core routing protocol. This solution ensures robust connectivity across 300+ sites, leveraging VPLS-based private WAN links and multiple service providers that should be aggregated by the WAN switches at the two data centers for redundancy and failover. BGP route reflectors will be utilized at both data centers to optimize route distribution and reduce administrative overhead.

This setup enables both data centers to handle traffic simultaneously, providing balanced load distribution and improved resource utilization. The architecture incorporates robust connectivity between each data centers' routers and enterprise edge firewalls, as well as connectivity to multiple VPLS service providers, with centralized monitoring and management tools to simplify network operations.

The proposed architecture comprises key components at both the main and DR data centers, with a focus on redundancy, high availability, and efficient route management.

### Key Components:

#### 1. Active-Active Data Centers:

- Both main and DR data centers are configured to operate in an active-active mode, allowing them to concurrently handle network traffic. This setup maximizes resource utilization and enables seamless failover without disrupting network performance.

## 2. Dual High Availability (HA) Routers:

- Each data center will house a pair of high-availability (HA) routers connected to enterprise edge firewalls, providing 10GB or better redundant connections for enhanced performance and security.
- These routers will manage traffic between the data centers and sites, with redundancy built-in to maintain connectivity even if one router or firewall fails.

## 3. BGP Route Reflectors:

- A pair of BGP route reflectors will be deployed at both the main and DR data centers to simplify BGP route management.
- The route reflectors at the main data center will act as the primary points for route distribution, while those at the DR data center will serve as secondary route reflectors for redundancy.

## 4. Multiple WAN Links with VPLS:

- Each data center will connect to at least four different VPLS service providers, enhancing redundancy and minimizing the risk of network outages due to provider-specific issues.
- BGP will dynamically manage these connections, allowing for failover and load balancing across the multiple service providers to optimize performance and reliability.

## 5. End-to-end visibility

- Leverage deep analytics and applied intelligence for troubleshooting, remediation, and assurance.

As well, this project aims to replace the legacy edge devices at named hospital in order to meet the new architecture and network design requirements.

# 11. Solution Technical Specification

## 11.1 Data Centers Routers

#	Minimum Specification	Comply (yes/No t)	Reference in Proposal / Notes
1.	Interfaces: 12-port 1/10GE		
2.	Performance: Minimum Performance Throughput capacity: 100 Gbps		
3.	Memory : 16 GB RAM		
4.	Features: <ul style="list-style-type: none"> <li>• Must Support all dynamic IPv4 &amp; IPv6 routing protocols (BGP, OSPF, IS-IS, RIP/RIPng , BGPv6 , OSPFv3) with all required licenses.</li> <li>• Support BFD</li> <li>• Supports BGP Policy, Route Reflectors and Confederation.</li> <li>• Support MPLS, MPLS VPN, L2VPN, L3VPN, VPLS, LDP, RSVP, and Segment Routing.</li> <li>• Support VxLAN &amp; EVPN</li> </ul> Provide high availability on the operating system, and support VRRP.		

	<ul style="list-style-type: none"> <li>• Support multicast, IGMPv2/ IGMPv3, IGMPv3 snooping, PIM .</li> <li>• Separate control and forwarding planes.</li> <li>• AI-driven network insights and automation.</li> <li>• Unified monitoring, analytics, and issue resolution capabilities</li> <li>• Support IPv6.</li> </ul>		
5.	<p>Hardware:</p> <ul style="list-style-type: none"> <li>• Rack Mountable</li> <li>• Redundant dual power supplies (1+1 redundancy).field replaceable</li> <li>• AC Power Supplies, Fused UK power cords.</li> <li>• Fan Redundancy</li> </ul>		

## 11.2. Network Perimeter Security Appliance (Large Size Hospital)

#	Minimum Specification	Comply (yes/No t)	Reference in Proposal / Notes
1.	Interfaces: 2 X 10GbE ports. 4 X 1GbE base-T ports, including the transceivers if required		
2.	Shall combine firewalling and routing functions.		
3.	IPS throughput 2 Gbps.		

4.	A high availability feature is mandatory.		
5.	Minimum 4GB RAM.		
6.	Routing table size: 1 million.		
7.	Support the SD-WAN technology.		
8.	Support SSHv2 for management.		
9.	Support link aggregation protocols (LACP/LAG).		
10.	Static, BGP, and OSPF routing including the licenses		
11.	AES/3DES VPN encryption.		
12.	Route and policy-based routing.		
13.	Form factor 1 U rack mountable.		
14.	Internal Dual AC power supply, UK power cords		
15.	Quality of Service: traffic classification, prioritization, and queuing.		

### 11.3. Network Perimeter Security Appliance (Medium Size Hospital)

#	Minimum Specification	Comply (yes/No t)	Reference in Proposal / Notes
1.	Interfaces: 6 X 1GbE base-T ports, including the transceivers if required		
2.	Shall combine firewalling and routing functions.		
3.	IPS throughput 500 Mbps.		
4.	A high availability feature is mandatory.		
5.	Minimum 4GB RAM.		
6.	Routing table size: 1 million.		
7.	Support the SD-WAN technology.		
8.	Support SSHv2 for management.		

9.	Support link aggregation protocols (LACP/LAG).		
10.	Static, BGP, and OSPF routing including the licenses		
11.	AES/3DES VPN encryption.		
12.	Route and policy-based routing.		
13.	Form factor 1 U rack mountable.		
14.	Internal Dual AC power supply, UK power cords		
15.	Quality of Service: traffic classification, prioritization, and queuing.		

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## 11.4 WAN Switches

#	Minimum Specification	Comply (yes/No t)	Reference in Proposal / Notes
1.	Provides a minimum of 8 x 1/10G SFP+ and 12 x 1GE Ethernet ports.		
2.	Support Static Routing.		
3.	Support Link-aggregation control protocol (LACP).		
4.	Support 802.1Q VLAN Tagging		
5.	Support IEEE 802.1d Spanning Tree Protocol		
6.	Support IEEE 802.1w Rapid Spanning Tree Protocol		
7.	Support 802.1s Multiple Spanning Tree Protocol		
8.	Support 802.1p Class of Service		
9.	Support SNMP v2c, and v3		
10.	Support SSH v2 access management.		
11.	Must be stackable switch		
12.	Minimum Switching Capacity: 184 Gbps		
13.	Must have redundant power supplies		
14.	Rack Mountable (must include the rack mount kit)		
15.	AC Power Supply, C14 power cord		



## 12. Scope of Work

The scope for delivering the network routing Solution shall include the following:

1. Project Kickoff:
  - (1) Hold an initial meeting to align project objectives and timelines.
  - (2) Define roles and responsibilities.
  - (3) Develop a Project implementation plan and project schedule. The supplier shall assign a qualified technical project manager to manage the project and to ensure the controls and successful delivery.
2. Solution Components Delivery
  - (1) The delivery of all the solution components to EHS Warehouse and the sites based on EHS requirements and policies, including moving the materials to and within the sites.
3. Pre-Implementation Assessment:
  - (1) Perform preparatory site visits and related activities to ensure the best deployment.
  - (2) Conduct an assessment of the existing IT infrastructure.
  - (3) Identify specific requirements and constraints.
4. Solution Design:
  - (1) Develop a detailed solution design based on the provided business requirements.
  - (2) Include architecture diagrams, component specifications, and migration to the new solution plan.
  - (3) Conduct technical workshops with EHS technical team to develop the solution architecture, HLD, and LLD. The entire project's documentation must be approved by EHS.
  - (4) The solution design must be validated by the vendor
5. Solution Setup and Installation:
  - (1) Deploy necessary hardware and software components.
  - (2) Configure solution's equipment.

- (3) Follow EHS instructions in labeling all equipment and switches and put a description in the network devices configuration.
  - (4) Patching the copper and fiber patch cords cables inside the cabinets.
  - (5) Provide any extra materials or/and services required to deliver a complete turnkey solution.
6. Integration and Compatibility:
- (1) Ensure seamless integration with existing enterprise systems and network devices where needed.
  - (2) Verify compatibility with sites' infrastructure.
7. Configuration and Optimization:
- (1) Configure solution components based on EHS requirements.
  - (2) Optimize performance for scalability and efficiency.
  - (3) Migrate the network circuits and current network routing in place to the new solution.
8. Security Measures:
- (1) Set up access controls and authentication mechanisms according to EHS policies
9. Testing and Validation:
- (1) Conduct thorough testing of implemented solution.
  - (2) Validate high availability and disaster recovery through simulated scenarios.
  - (3) Perform Acceptance Test Procedure (onsite) and any corrective action to collect EHS acceptance.
10. User Training:
- (1) Develop training materials for IT administration staff.
  - (2) Provide training sessions to ensure proper utilization of the data protection solution.

11. Documentation:

- (1) Document the implemented solution comprehensively.
- (2) Include configuration guides, operational manuals, and troubleshooting procedures.

12. Monitoring and Alerting:

- (1) Set up monitoring tools to track the health and performance of the data protection system.
- (2) Configure alerting mechanisms for immediate issue detection.

13. Knowledge Transfer:

- (1) Transfer knowledge to the IT team for ongoing system management.
- (2) Provide guidance on routine maintenance tasks.

14. Post-Implementation Support:

- (1) Offer post-implementation support to address any issues or concerns.
- (2) Conduct periodic reviews to ensure optimal system performance.

### 13. Bill of Quantities

The below is the BOQ for the solution included in the below table, each component sizing and license requirement is based on the below details within this section. **The bidders must provide the exact quantities included in the below table:**

Item	Location	Description	Qty
1.	KHMC Hakeem Datacenter	Data Center Routers	2
2.	KTMH Hakeem Datacenter	Data Center Routers	2
3.	KHMC Hospital	Network Perimeter Security Appliance (Large Size Hospital)	2
4.	Princess Haya Military Hospital	Network Perimeter Security Appliance (Medium Size Hospital)	2
5.	KTMH Hospital	Network Perimeter Security Appliance (Medium Size Hospital)	2
6.	KHMC Hakeem Datacenter	WAN Switch	2
7.	KTMH Hospital	WAN Switch	2

Item	Description	Qty
1.	LC-LC OM4 Multimode fiber patch cord 3 meters	30
2.	LC-LC OM4 Multimode fiber patch cord 5 meters	12
3.	LC-LC OM4 Multimode fiber patch cord 10 meters	10
4.	SC-LC OS3 Single Mode fiber patch cords, 15-meter	6
5.	SC-LC OS3 Single Mode fiber patch cords, 5-meter	6
6.	Stack cables for the proposed WAN switches, 1 meter	4

7.	HA cables for the proposed Network Perimeter Security Appliance, 3 meters	2
8.	SFP+ 10GBASE-SR Transceivers for the routers	32
9.	SFP+ 10GBASE-SR Transceivers for Network Perimeter Security Appliance (Large Size Hospital)	4
10.	SFP+ 10GBASE-SR Transceivers for the WAN Switches	16
11.	SFP 1G LRLH Transceivers for the WAN Switches	12

## 14. Warranty and Support

1. The bidder shall offer minimum of (5) years (8/5) manufacturer warranty and support service with next business day hardware replacement at minimum. Vendor's support contract number / ID shall be provided to EHS.
2. The bidder shall offer minimum of (5) years (24/7) local maintenance and support service; Maintenance and support service shall cover all supplied components and services.
3. The Warranty and support services starting date is the date of the EHS's final acceptations of the completed scope of work.
4. During the warranty period, the supplier shall provide all required spare parts free of charge.
5. The warranty period covers support on site.
6. The bidder shall provide the support approach in the form of a signed and stamped SLA, including the escalation matrix, support contacts, and response time.
7. Perform preventive maintenance for the delivered solution based on four yearly visits during the warranty and support period.

## 15. License

1. Provide all the software and hardware licenses of any/all features that require purchasing a specific license to enable and use from day one. Further, describe how licenses are to be validated or enforced.
2. The bidder shall provide the required licenses to cover all the required capacity according to section "13 Bill of Quantity" from day one without under sizing.
3. All the licenses required for the solution must be perpetual licenses or for five years.
4. The bidder shall provide how solution licensing is deployed.
5. The bidder shall provide EHS the required licenses in the name of EHS to access and use the Software supplied through this RFP.
6. The bidder shall provide the system behavior after the subscription period expire.

## 16. End-of-Life and End-of-Sale Conditions

1. The equipment quoted by the bidder should not be declared as End of Life (EOL) or End of Sale (EOS) by the manufacturer, at the time of bidding. The bidder shall provide the information for End of Life (EOL) and End of Sale (EOS) for all the provided items in the BOQ.
2. The bidder must provide a 5-year lifetime letter of the solution from the vendor.

## 17. Product origin

1. The mother company shall be from the USA, Europe, or Japan.

## 18. Service Level Agreement

### **SLA Scope**

The scope of this SLA agreement covers the provided solution for data centers routing Solution including all hardware and software components. On-site labor and parts must also be included.

### **SLA Duration**

The supplier must provide maintenance and support for hardware and software for a period of five years starting the date of the EHS's final acceptations of the completed scope of work.

### **SLA Terms and conditions**

The supplier response will be measured and monitored using EHS's Service Management tool.

During the Maintenance period, the supplier must provide the following:

- Preventive maintenance program and provide preventive maintenance scheduled visit every three months.
- Health check report after every preventive visit.
- Support methodology and escalation matrix including contacts details.
- Manufacturer support for all components.
- Maintaining spare parts to meet the "availability" target at no additional cost.

- Support, configure and resolve problems whenever needed and/or if requested by EHS.
- Commit to providing quality assurance for any major configuration changes whenever requested by EHS. Any change must be done within the EHS's Change Management process.
- Perform Firmware updates, patches, and new releases according to the manufacturer's recommendation
- Handle all support requests submitted within or outside working hours without extra charges.
- Provide the required assistance to EHS staff for any configuration modification.
- All the solution's components should be covered back-to-back by Vendor support without any exception; the supplier shall provide the approach to validate the support contract with the vendor to EHS.

### **Support Cases Management**

EHS will set the support cases Severity level upon opening each individual support case.

Support cases covered by this agreement are to be treated by supplier according to the ITIL V4 framework incident management process and request fulfillment process, inline with the supplier provided support structure.

### **SLA Severity Levels and Targets**

Severity Level 1: Critical

Definition:

This level represents incidents causing a critical impact to the business, resulting in severe disruption or complete unavailability of a critical system or service.

Examples:

- Complete system outage affecting all users.
- Security breach leading to unauthorized access to sensitive data.
- Data corruption or loss with significant business impact.

Response Time: Immediate response required, typically within 1 hour.

Response Time Schedule: 24/7

Severity Level 2: High

Definition:

Incidents with high impact but not immediately critical, causing significant disruption or degradation in services.

Examples:

1. Major performance degradation affecting a critical business process.



2. Service interruptions affecting a specific department or location.
3. A security vulnerability that requires urgent attention.

Response Time: Response within 2 hours.

Response Time Schedule: 24/7

Severity Level 3: Medium

Definition:

Incidents causing a moderate impact, resulting in disruption or degradation of non-critical services or affecting a limited number of users.

Examples:

- Performance issues affecting non-essential services.
- Application errors causing inconvenience but not critical to operations.
- Limited data loss with backups available for recovery.

Response Time: Response within 4 hours.

Response Time Schedule: Eight business-working hours - 5 Weekdays  
Excluding Holidays

Severity Level 4: Low

Definition:

Incidents causing minor impact, resulting in minimal disruption or inconvenience to users or business operations.

Examples:

- Minor performance issues with no critical impact.
- Non-urgent software or application bugs.
- Requests for information or non-urgent assistance.

Response Time: Response within one business day.

Response Time Schedule: Eight business-working hours - 5 Weekdays  
Excluding Holidays

During the resolution process of any problem, EHS team shall stay informed about the progress of the resolution process.

Following the completion of any service related to incident resolution (Severity Level 1 and Severity Level 2) and after closing the incident, the supplier shall provide an incident report. The report shall include the Root Cause Analysis "RCA" and indicate the exact time at which an intervention began, the components that was serviced or replaced, the corrective measures that were taken, and the amount of time needed for the intervention since the manifestation of the problem until functionality is restored.

**Response time:** is the time it takes a provider to respond to an inquiry or request from a client.

### SLA Availability Target and Penalties

Additional hours exceeding the allowable downtime will be subject to penalty. The minimum accepted system availability is 99.9% yearly uptime.

Throughout the execution of the SLA, vendors should not rely on system redundancy as a **permanent** resolution

**Availability:** the ability of an IT system to perform its agreed function as required.

The bidder will be subject to penalty if he does not meet the "response time". The following table shows all the penalties under this SLA contract. In addition, the "response time" must be met with each Severity Level.

Penalty condition	Penalty amount per hour JoD			
	Severity Level 1	Severity Level 2	Severity Level 3	Severity Level 4
Failed to achieve 99.9% availability target	400	300	0	0
Failed to achieve "response time"	400	300	100	50

## 19. Technical Compliance Sheet

#	Description	Comply (Yes, No)	The reference point in the Proposal
1.	The bidder proposal shall include all the submittals mentioned in the submittal section		
2.	The bidder proposal shall comply all the points in the business requiems section		
3.	The delivered items must match the proposed technical specifications mentioned in the solution technical specifications section.		
4.	The bidder shall propose the quantities based on the BOQ table including part numbers as mentioned in the Bill of quantities section.		
5.	The bidder shall agree to all points mentioned in the scope of work section.		
6.	The bidder shall be committed to all technical terms and conditions mentioned in the technical term and condition section.		
7.	The bidder must be committed to all warranty and support points mentioned in the warranty and support section.		
8.	During the support and warranty period, the bidder shall be committed and meet all parameters mentioned in the service level agreement section		
9.	The mother company shall be from USA, Europe, or Japan.		
10.	The bidder must be committed to all End-of-Life and End-of-Sale Conditions that mentioned in the proposal.		
11.	The bidder must be committed to all requirements that mentioned in the Licenses section.		



شركة الحوسبة الصحية

**Electronic Health Solution**

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