



**MINISTRY OF HEALTH, NUTRITION
& INDIGENOUS MEDICINE**

**Teaching Hospital Peradeniya
National Competitive Bidding**

Procurement of ICT equipment,
Local Area Network and Server maintenance service
for Teaching Hospital Peradeniya

Contract No: THP/AF/07/2024

**Teaching Hospital Peradeniya
Peradeniya**

Invitation for Bids

Procurement of ICT equipment (Computers, Printers, barcoding items and UPS etc.), Local Area Network (Switches, APs and network accessories) and Servers maintenance of Teaching Hospital Peradeniya.

Contract (Bid) Number

1. The Chairman of the procurement committee of the Teaching Hospital Peradeniya now invites sealed bids from eligible and qualified bidders for maintenance service of Network, Server and all ICT equipment of Teaching Hospital Peradeniya.
2. The intended service period is 365 days.
3. Bidding will be conducted through National Competitive Bidding (NCB)
4. Interested eligible bidders may obtain further information from Director of Teaching Hospital Peradeniya, 0812388261 or visiting the official website of the “Teaching Hospital Peradeniya”

A complete set of Bidding Documents may be collected (as a PDF file) by interested bidders from the hospital website given below from **16th December 2024 to 03rd JANUARY 2025**

“www.peradeniya-hospital.health.gov.lk”

5. **Bids must be delivered to Teaching Hospital Peradeniya on or before 03.01.2025 before 10.30 hours. The non-refundable bid fee is Rs. 2,500.00. Receipt of payment of this fee to Shroff of Peradeniya General Hospital or receipt credited to People’s Bank Account No. 057100129025207 in the name of Peradeniya General Hospital should be forwarded along with the bid. Please note that bids that are not submitted with the relevant receipts and late bids will be rejected.** Bids will be opened in the presence of the bidder / representatives who choose to attend in person at the Teaching Hospital Peradeniya 03.01.2025 before 10.30 am.
6. Pre bid meeting will be held on 23.12.2024 at 10.30 am in Conference room of THP
7. The address referred to above is Name of PE

Chairman.

Procurement committee,

Teaching Hospital Peradeniya.

Section 1 - Instructions to Bidders

A. General

1	Scope of bid	<p>1.1. The THP, as defined in the Bidding Data, invites bids for the maintenance services of ICT equipment, Local Area Network and Servers, as described in the section V- Requirement and description of service to the Contract.</p> <p>1.2. The successful bidder will be expected to carry out the service for 365 days after awarding the contract.</p>
2	Qualification and experience of bidder	<p>2.1. All bidders shall provide in Section III, other relevant documents, Forms of bid and qualification and experience information, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.</p> <p>2.2. If stated in the bidding data, all bidders shall include the following information and documents with their bids in Section III:</p> <p>a) List of ICT services performed for each of the last five years; (Priority will be given for the past experiences in Hospitals)</p> <p>b) Experience in ICT services of a similar nature for each of the last three years, and details of services under way or contractually committed; and names and address of clients who may be contacted for further information on those contracts; (Priority will be given for the past experiences in Hospitals)</p> <p>c) Work plan and methodology / Capacity to carry out the work</p> <p>d) Qualifications and experience of key staff proposed for the contract</p>
3	Cost of bidding	<p>3.1. The Bidder shall bear all costs associated with the preparation and submission of his Bid, and the THP will in no case be responsible or liable for those costs.</p>
4	Site visit	<p>4.1. The bidder, at the bidder's own responsibility and risk, is encouraged to visit and examine the site of required services and its surroundings and obtain all information that may be necessary for preparing the bid and entering into a contract for the services. The costs of visiting the site shall be at the bidder's own expense</p>

B. Bidding Documents

5	Contents of bidding document	5.1. The set of bidding documents comprises the documents listed below:
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Section I	Instructions to Bidders
Section II	Bidding Data
Section III	Forms of Bid and Qualification Information
Section IV	Conditions of Contract
Section V	Requirement and description of the Services
Section VI	Price schedule
Section VII	Method of payment schedule
Section VIII	Qualification of staff
Section IX, X	List of Equipment

6	Clarification of bidding documents	6.1. A prospective Bidder requiring any clarification of the bidding documents may notify the Employer in writing at the Employer's address indicated in the invitation to bid.
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C. Preparation of Bids

7	Language of bids	The bid prepared by the bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the THP shall be written in English Language.
8	Document comprising the bid	All related documents (Originals) shall be submitted in sealed envelope. Envelop shall contain the identification of the contract as defined in the contract data. Duplicate / copy may be submitted in a separate envelope. Bidders are requested to provide all documents in digital format through a CD/DVD/USB Drive.
9	Bid price	The contract shall be for the maintenance service of ICT equipment, Local Area Network and Servers as described in the THP's requirements, Section V, based on the priced Activity Schedule submitted by the Bidder. The Bidder shall fill in rates and prices for all items of the Services described in Requirements, Section V. Items for which no rate or price is entered by the Bidder will not be paid for by the THP when executed and shall be deemed covered by the other rates and prices in under the section of proposed cost. All duties, taxes, and other levies payable by the service provider under the contract, or for any other cause, as of the date 28 days prior to the deadline for submission of bids, shall be included in the total bid price submitted by the bidder. However, VAT shall be included separately.
10	Currency of bids and payment	The lump sum price shall be quoted by the bidder shall be in Sri Lankan Rupees.
11	Bid validity	Bids shall be valid for 119 (one hundred and nineteen) days from the deadline for submission of Bids
12	Bid Security	<p>12.1. Bid Security shall be:</p> <p>a) For an amount of 2% of the contract value</p> <p>b) Valid for 119 (one hundred and nineteen) days from the deadline for submission of Bids</p> <p>c) Issued by a Commercial Bank operated in Sri Lanka approved by the Central Bank of Sri Lanka or Insurance Company operated in Sri Lanka approved by the Insurance Board of Sri Lanka, (from time to time)</p> <p>d) Any bid not accompanied by an acceptable bid security shall be rejected by the THP.</p> <p>e) The bid security of unsuccessful bidders will be returned within 28 days of the end of the bid validity period</p> <p>f) The Bid Security of the successful bidder will be discharged when the bidder has signed the agreement and furnish the required performance security.</p> <p>12.2. The Bid Security may be forfeited:</p> <p>g) if the Bidder withdraws the Bid after Bid opening during the period of Bid validity;</p> <p>h) if the Bidder does not accept the correction of the Bid price</p> <p>i) in the case of a successful Bidder, if the Bidder fails within the specified time limit to: Sign the contract or furnish the performance security</p>

D. Submission of Bids

13	Sealing and Marking	Bids shall be marked as: Procurement of ICT equipment, Local Area Network and Server maintenance service for Teaching Hospital Peradeniya
14	Submission of bids	Bids should either be sent by Registered post or deposited in the tender box kept at the Accountant Office of THP, at or before 10.30 a.m. on 03.01.2025. The late bids will be rejected

E. Bid Opening and Evaluation

15	Bid opening	Will be done at the teaching hospital Peradeniya on 10.30 hours 03.01.2025 at the Learning Room 2 of THP
		The bidder's representative who are present shall confirm their attendance by signing the attendance sheet
16	Clarification of bids	To assist in the examination, evaluation, and comparison of bids, the THP may, at the THP's discretion, request any Bidder for clarification of the Bidder's Bid and other information that the Employer may require.
17	Evaluation	The Procurement Entity reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, alternative offers, and other factors that are in excess of the requirements of the Bidding document shall not be taken into account in Bid evaluation.

Award of Contract

18	Award of contract	THP will award the Contract to the most Substantially responsive, lowest possible evaluated bidder
19	Right to accept any bid and to reject any or all bids	THP reserves the right to accept or reject any bid, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the THP's action
20	Performance security	Value of Per performance security is ten percent (10%) of the contract value. Performance security shall be submitted within 14 days after receipt of the letter of acceptance, the successful bidder shall deliver to the employer a performance security in the amount and in the form (Bank Guarantee)

Section II - Bidding Data

Instructions to Bidders Clause Reference

	The Employer	Teaching Hospital Peradeniya The name and identification number of the Contract is Procurement of ICT equipment, Local Area Network and Server maintenance service. Contract (Bid) Number -THP/AF/07/2024
i	Intended duration of the contract	One year from the date of awarding the contract.
ii	Address for submission of Bids	Chairman, Regional procurement committee, Teaching Hospital Peradeniya
iii	Period of bid validity	119 (one hundred and nineteen) days from the deadline for submission of Bids
iv	Amount of bid security	For an amount of 2% of the contract value
vii	Deadline for submission	On or before 10.30 hours on 03.01.2025
viii	Pre -bid meeting	23.12.2024 at 10.00 am of conference room of THP
ix	Bid opening	10.30 hours, 03.01.2025 at the Learning Room 2 of Teaching Hospital Peradeniya

Section III. Forms of bid and qualification information

Form of Bid

Chairman, Procurement Committee.
Teaching Hospital,
Peradeniya.

Having examined the bidding documents, we offer to provide the Services -----

---[name and identification number of Contract] in accordance with the conditions of contract,
employer’s requirements, drawings and activity schedule accompanying this Bid for the Contract Price
of -----[amount in numbers], -----

----[amount in words] or any other sum derived in accordance with the said documents.

This Bid and your written acceptance of it shall constitute a binding Contract between us. We
understand that you are not bound to accept the lowest or any Bid you receive.

We hereby confirm that this Bid complies with the Bid validity required by the bidding documents and
specified in the Bidding Data.

- Authorized Signature :
- Name and Title of Signatory :
- Name of Bidder :
- Address :

Bid Submission Form

[The Bidder shall fill in this Form in accordance with the instructions indicated No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: -----*[insert date (as day, month and year) of Bid Submission]*

No.: -----*[insert number of bidding process]*

To: **Director, Teaching Hospital Peradeniya**

We, the undersigned, declare that:

(a) We have examined and have no reservations to the Bidding Documents, including Addenda No.: -----
-----*[insert the number and issuing date of each Addenda];*

We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods and Related Services related to the procurement of ICT equipment (Computers, Printers, barcoding items and UPS), Local Area Network and Servers maintenance service, of Teaching Hospital Peradeniya

(b) The total price of our Bid without VAT, including any discounts offered is: -----
-----*[insert the total bid price in words and figures];*

(c) The total price of our Bid including VAT, and any discounts offered is: -----
-----*[insert the total bid price in words and figures];*

(d) Our bid shall be valid for the period of time specified in Section II (bidding data), from the date fixed for the bid submission deadline and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(e) If our bid is accepted, we commit to obtain a performance security in accordance with Section IV (Condition of Contract) for the due performance of the Contract;

(f) Our firm, its affiliates or subsidiaries—including any subcontractors or suppliers for any part of the contract—has not been declared blacklisted by the National Procurement Agency;

(g) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.

(h) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Signed: -----*[insert signature of person whose name and capacity are shown]*

In the capacity of -----*[insert legal capacity of person signing the Bid Submission Form]*

Name: -----[insert complete name of person signing
the Bid Submission Form]

Duly authorized to sign the bid for and on behalf of: -----
--[insert complete name of Bidder]

Dated on _____ day of _____, _____ [insert date of signing]

Bid Guarantee

[This Bank Guarantee form shall be filled in accordance with the instructions indicated in brackets]

----- *[insert issuing agency’s name, and address of issuing branch or office]*

Beneficiary: Director, Teaching Hospital Peradeniya

Date: ----- *[insert (by issuing agency) date]*

BID GUARANTEE No.: -----*[insert (by issuing agency) number]*

We have been informed that ----- *[insert (by issuing agency) name of the Bidder; if a joint venture, list complete legal names of partners]* (hereinafter called "the Bidder") has submitted to you its bid dated ----- *[insert (by issuing agency) date]*(hereinafter called "the Bid") for the supply of *[insert name of Supplier]* under Invitation for Bids No. ----- *[insert IFB number]* (“the IFB”).

Furthermore, we understand that, according to your conditions, Bids must be supported by a Bid Guarantee.

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

- (a) Has withdrawn its Bid during the period of bid validity specified; or
- (b) Does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter “the ITB”); or
- (c) having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity, (i) fails or refuses to execute the Contract Form, if required, or (ii) fails or refuses to furnish the Performance Security, in accordance with the ITB.

This Guarantee shall expire: (a) if the Bidder is the successful bidder, upon our receipt of copies of the Contract signed by the Bidder and of the Performance Security issued to you by the Bidder; or (b) if the Bidder is not the successful bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder that the Bidder was unsuccessful, otherwise it will remain in force up to ----- *(insert date)*

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

[Signature(s) of authorized representative(s)]

Qualification information

Schedule A – Experience in ICT assignments last three years (Attach all supportive documents as proof)

Period	Employer	Description of works	Amount (LKR)	Contractor's responsibility
Total				

Schedule B – Details of Staff (attach CVs as proof)

Name	Position	Task

Schedule C – Client’s Reference

Attach certificates given by clients referring on the services executed by bidder

Schedule D- Annual turnover

Year	Turnover (Rs)	Remarks
		Attach certified income statement and balance sheet

Section IV. Conditions of contract

1. General provisions

1.1	Applicable Law	The Contract shall be interpreted in accordance with the laws of the Socialist Democratic Republic of Sri Lanka
1.2	Language	This Contract has been executed in English Language
1.3	Notices	Any notice, request, or consent made pursuant to this contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the party to whom the communication is addressed, or when sent by registered mail, to such party at the address specified in the contract data.
1.4	Sub-contracting	Not allowed

2. Commencement, completion, modification, and termination of contract

2.1	Effectiveness of Contract	This contract shall come into effect on the date the contract is signed by either parties or such other later date as may be stated in the contract data.
2.2	Starting date	The service provider shall start carrying out the services seven (07) days after the date the contract becomes effective, or at such other date as may be specified in the contract data.
2.3	Intended period of the contract	The service provider shall provide services during the contract period as specified in the bidding data. If the service provider fails to provide requested services it shall be liable to pay liquidated damage as indicated.
2.4	Force Majeure	For the purposes of this contract, "Force Majeure" means an event which is beyond the reasonable control of a Party and which makes a Party's performance of its obligations under the contract impossible or so Impractical as to be considered impossible under the circumstances
2.5	No breach of contract	The failure of a party to fulfil any of its obligations under the contract shall not be considered to be a breach of, or default under, this contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.

2.6	Payments under the force Majeure	During the period of their inability to perform the services as a result of an event of Force Majeure, the service provider shall be entitled to continue to be paid under the terms of this contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the services and in reactivating the service after the end of such period
2.7	Termination - by the THP	<p>The THP may terminate this contract, by not less than fourteen (14) days' written notice of termination to the service provider, to be given after the occurrence of any of the events specified in paragraphs (a) through (e) of this Clause 2.7 and twenty eight (28) days' in the case of the event referred to in (f):</p> <p>a) If the service providers do not remedy a failure in the performance of their obligations under the contract, within fourteen (14) days after being notified or within any further period as the Employer may have subsequently approved in writing;</p> <p>b) if the service provider become insolvent or bankrupt;</p> <p>c) if, as the result of Force Majeure, the service provider/s are unable to perform a material portion of the services for a period of not less than thirty (30) days; or</p> <p>d) if the service provider does not maintain a performance security</p> <p>e) If the service provider has delayed the completion of the services by the number of days for which the maximum amount of liquidated damages can be paid in accordance with Sub-Clause 3.8 and the contract data.</p> <p>f) If the Employer, in its sole discretion, decides to terminate this contract.</p>
2.8	Termination - by the service provider	<p>The service provider may terminate this contract, by not less than thirty (30) days ' written notice to the THP, such notice to be given after the occurrence of any of the events specified in paragraphs (a) and (b) of this Clause 2.8</p> <p>a) if the Employer fails to pay any monies due to the service provider pursuant to this contract and not subject to dispute pursuant to Clause 7 within forty-two (42) days after receiving written notice from the service provider that such payment is overdue; or</p> <p>b) If, as the result of Force Majeure, the service providers are unable to perform a material portion of the services for a period of not less than fifty six (56) days.</p>

3. Obligations of the service provider

3.1	General	The service providers shall perform the services in accordance with the THP’s requirements stated in the section V and carry out their obligations with all due diligence, efficiency, and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe methods. The service providers shall always act, in respect of any matter relating to this contract or to the services, as faithful advisers to the THP, and shall at all times support and safeguard the THP’s legitimate interests.
3.2	Confidentiality	The Service Providers shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or confidential information relating to the Project, the Services, this Contract, or the Employer’s business or operations without the prior written consent of the Employer.
3.3	Service providers’ actions requiring THP’s prior approval	<p>The service providers shall obtain the THP’s prior approval in writing before taking any of the following actions:</p> <ul style="list-style-type: none"> a) Appointing members of the personnel not listed by name in section B (“details of staff”) and Section VIII b) Changing the program of activities c) Any other action that may be specified in the contract data.
3.4	Documents prepared by the service providers to be the property of the employer	All plans, drawings, THP’s requirements, designs, reports, and other documents and software submitted by the service providers shall become and remain the property of the THP, and the service providers shall, not later than upon termination or expiration of this contract, deliver all such documents and software to the THP, together with a detailed inventory thereof. The service providers may retain a copy of such documents and software. Restrictions about the future use of these documents, if any, shall be specified in the contract data.
3.5	Liquidated damage	Is failure to provide the specified services within the specified period mentioned under the section V
3.6	Payment of liquidated damages	The service provider shall pay liquidated damages to the THP at the rate per day stated in the contract data for each day that the completion date is later than the intended completion date. The total amount of liquidated damages shall not exceed the amount defined in the contract data. The THP may deduct

		liquidated damages from payments due to the service provider. Payment of liquidated damages shall not affect the service provider's liabilities.
3.7	Correction for over-payment	If the intended completion date is extended after liquidated damages have been paid, the THP shall correct any overpayment of liquidated damages by the service provider by adjusting the next payment certificate. The service provider shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment.
3.8	Performance security	The service provider shall provide the performance security to the THP no later than the date specified in the letter of acceptance. The performance security shall be issued in an amount and form and by a bank or surety acceptable to the THP. The performance security shall be valid until a date 28 days from the completion date of the contract.

4. Service provider's staff

4.1	Description of personnel	The titles, job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the services of the service provider's technical personnel are described in section VIII.
4.2	Removal and/or replacement of personnel	<p>a) Except as the THP may otherwise agree, no changes shall be made in the technical personnel. If, for any reason beyond the reasonable control of the service provider, it becomes necessary to replace any of the technical personnel, the service provider shall provide as a replacement a person of equivalent or better qualifications</p> <p>b) If the THP finds that any of the personnel have (a) committed serious misconduct or have been charged with having committed a criminal action, or (b) have reasonable cause to be dissatisfied with the performance of any of the personnel, then the service provider shall, at the THP's written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the THP.</p> <p>c) The service provider shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of personnel.</p>

5. Obligations of the Teaching Hospital Peradeniya

5.1	General	If, after the date of this contract, there is any change in the applicable law with respect to taxes and duties which increases or decreases the cost of the services rendered by the service provider, then the remuneration and reimbursable expenses otherwise payable to the service provider under this contract shall be increased or decreased accordingly by agreement between the parties
5.2	Services and facilities	Detail of the services and facilities provided by the hospital is listed in the Annex 5

6. Payments to the service provider

6.1	Payment method & condition of payment	Method of payment and details are described in the section VII
6.2	Payment for additional services	This encompasses repair of defective equipment otherwise the cost is not mentioned in this contract. Service provider shall have to abide by the method stated in the Section V - specification and requirement of maintaining and servicing of ICT equipment, Local Area Network and Servers of TH Peradeniya

Section V –Requirement and description of the Services

Procurement of ICT equipment, Local Area Network and Servers maintenance service of Teaching Hospital Peradeniya

Introduction

Teaching hospital Peradeniya utilizes the Local Area Network (built with fiber backbone and cat 6 and 6 A UTP cables) with its peripheral devices (Section X – List of LAN equipment) and ICT equipment (Section IX –List of ICT equipment) to deliver routine patient care services and office work. Hence non-functioning of Network and all ICT equipment and network downtime is a critical factor for the hospital.

Under this service agreement service provider shall provide a comprehensive preventive maintenance service and required curative maintenance services. In additions, service provider shall be able to provide 24 hour end user support for Hospital Information Management System when requested by the end users and the officers of the health information and research unit of the Teaching Hospital Peradeniya. Description of the HIMS has given below.

ICT equipment details and Local Area Network and Server details attached in the Section IX and Section X

Description of HIMS

Hospital Information Management System (HIMS) is a comprehensive software designed to operate in every department of a hospital. Out of several modules following are implemented in the hospital at the moment.

Module	Description
Master Patient Index (MPI)	Used to register all inward patients, OPD and clinic patients. Annually 80,000 inward patients and 350,000 OPD patients and 350,000 clinic patients are catered by this module
Admission, Discharge and Transfer module of Wards	Used for admission, transfer and discharge of patient to wards and other relevant units. It operates in 20 wards, ICU, SBU, Operation theatre and labour room
Laboratory Information Management System (LIMS)	Automate the investigation ordering, processing and result publishing of all wards and units of the hospital
PACS (picture archiving and communication system) system integrated with RIS (Radiology Information System)	Automate the investigation ordering, processing, result publishing, archiving, retracting ALL Radiology investigations in All Radiology of the hospital
MRO Module	Is a computerized system that used to generate the indoor morbidity and mortality statistics of the hospital which is integrated with the eIMMR of the medical statistics unit for data transfer.
OPD system	Is a computerized system that automate all the functions of an OPD. It has facilities for outpatient treatment, which operates in connection with the pharmacy system. OPD system is used for admission of patient for inward treatment. Further it has facilities for referring Pharmacy Module patients for clinics, dressing, physiotherapy, etc.
Pharmacy Module	This module has facilities for complete automation of drug management of all units of the hospital. This module is integrated with MSMIS of the Medical Supplies Division of the Ministry of Health.
Clinic Module	Clinic module is capable of registering, appointment scheduling, handling clinical aspect related to patients, investigation and drug management of clinic patients

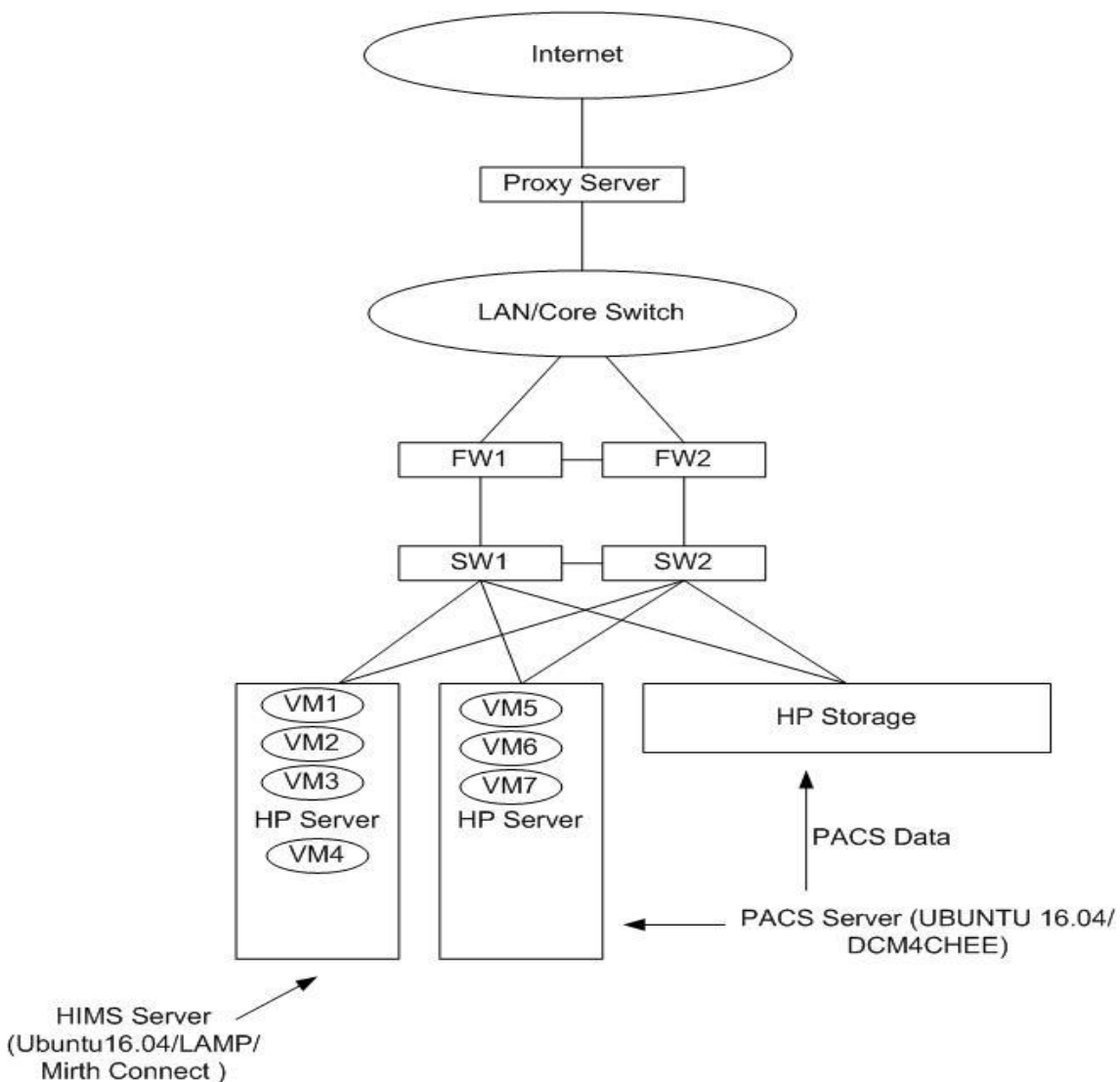
Once a patient is admitted for inward care, patient get registered in the MPI. The MPI can be access from the relevant ward (where the inpatient care is given for that patient) and patient can be admitted to that ward. If investigations are needed for that patient ward staff utilizes LIMS to order and view investigations. Barcodes are generated by the HIMS program at the time of registration of patient in the MPI and when ordering investigation from the point of care. Most of the ward registers (admission, discharge, specimen registers, etc.) are generated through the HIMS program. HIMS program is developed and owned by the Ministry of Health. It is built using PHP and MySQL technologies. HIMS operate in client server model and hosted in the hospital servers.

Description of Network and Server System

Peradeniya Teaching Hospital is using HIMS and PACS solution to provide healthcare services for patients. HIMS software has been locally developed and PACS software is an open-source solution. Both HIMS and PACS software have been installed on HP Servers and running on Ubuntu 16.04 Operating Systems.

HIMS/PACS server system consists of two HP servers and one HP storage server. Vendors are expected to maintain this system providing support for future expansion as well. Vendors should be able to re-install entire system and manage it.

Local Area Network of the hospital consists of HP/Aruba Switches and Two SOPHOS Firewalls. Following diagram shows current system deployment.



- VM1 - HIMS Data Replication Server (Ubuntu 16.04)
- VM2 - System Monitoring VM (Ubuntu 16.04)
- VM3 - Analyser Server (Windows 2012 R2)
- VM4 - AV Update Server (Windows 10)
- VM5 - Test Server (Ubuntu 16.04)
- VM6 - Intranet Server (Ubuntu 16.04)
- VM7 - DMS Server (Ubuntu 16)

Scope of the project

No.	Service Requirement	Other Details
1.	System Installation	Vendors should be able to install entire operating system from the scratch where necessary. with operating systems, high availability software, replication software, database and all web services including PACS software without and support from hospital IT services and without proposing any solution which require additional hardware. Vendor should propose suitable virtualization solution to run virtual machines and a monitoring solution to monitor entire system including network switches, server hardware, operating systems, other services such as MySQL, Mirth Connect for performance and availability. Vendors should clearly demonstrate their ability and experience by providing all necessary documents with their bidding document.
2.	HIMS System Maintenance	HIMS software running on two HP servers configured to provide data replication operation. Vendors should re-install operating system and all other related software in case of server or hardware component replacement due to hardware faults. Vendors should monitor servers for proper operation and take necessary actions to avoid any possible issues related to disk space limitations.
3.	System Change Management	Vendors should provide installation services for software/hardware upgrade or new software/hardware installation whenever necessary with no additional cost.
4.	System Monitoring and Reporting	Entire HIMs & PACS Server system should be monitored for proper operation for 24x7 and daily reports should be provided for entire system and all activities carried out by vendors during each day.

Annex 1 - Specification and requirement of maintaining and servicing of ICT equipment

No	Requirement	Details	Service provider response
1	PM service – monthly	1.1. Run disk clean up and disk fragmentation	
		1.2. Uninstall unwanted software	
		1.3. Service (cleaning & dusting) of main unit, key board, mouse and monitor of computers	
2	Preventive maintenance (PM) service – once a month	2.1. Scan and removal of harmful programs such as viruses, malware, other harmful programs.	
		2.2. Delete temporary files such as internet, windows files, cookies, etc.	
		2.3. Update of operating system	
		2.4. Update of virus guard	
		2.5. Update of web browser, JAVA, flash and other software programme needed for optimal operation	
3	PM service – once in three months	3.1. Service (cleaning & dusting) of printers	
		3.2. Service (cleaning & dusting) of UPS	
4	PM service – once in 6 months	4.1. Dust inside the system unit of the computer	
5	On demand activities	5.1. Reformatting of computers	
		5.2. Troubleshooting of internet connectivity	
		5.3. Replacement of printer ribbon, tonner, ink cartridge, sticker roll and health ID tags (related procurement would be done by THP)	
		5.4. Installation and setting up of new computers, printers and barcoding items	
6	Repair of broken equipment and replacement of parts	6.1. Any defective part or equipment identified during the servicing (preventive maintenance) shall be notified to the THP in written form.	
		6.2. Once the approval granted following part shall be replace by the service provider, 6.2.1. Keyboard, mouse, power unit of desktop computer, UPS batteries	
		6.3. For all other defective parts (cost of such part is not previously disclose in the bidding data) service provider shall require to	

		forward an estimate. Upon the receiving of approval to repair the defect, service provider shall repair the defective part and restore function of the equipment.	
		6.4. Equipment part/s used for replacement or repair shall be the same brand of the machine (where the equipment is not end of life or end of support)	
		6.5. Disposal of defective equipment or its part/s as per ICT equipment and part disposal policy of THP	
		6.6. Replacement of parts shall only be done for the warrantee expired ICT equipment	
7	End user support	Service provider shall provide desktop support to end users on daily operation throughout the day of HIMS and office users when requested. (Description about HIMS has been given above)	

Annex 1 cont'd - Specification and requirement of maintaining and servicing of ICT

No	Requirement	Details	Service provider response
8	Managing Support calls and problem reporting	<p>Central ticket-based system to fault reporting and to handle support calls should be implemented within the month of awarding tender. Hospital Intranet system could be used for this purpose. All faults of ICT equipment need to resolve using this system.</p> <p>Cost of the Central ticketing system shall be state separately</p>	
9	Assessment of ICT equipment	<p>All the ICT related equipment should be assessed, registered in a inventory, tagged with registration number at the beginning of the contract. Then that list should be maintained with support services and warranty agreements. Each Equipment should have a file maintained. Service provider shall use necessary software for this task.</p>	
10	Executing services	8.1. Preventive maintenance activities shall be carried out according to time frame stated in No 1-4	
		8.2. On demand activities shall be attended less than 30 min upon receiving of request	
		8.3. Once the job/s are executed complete and comprehensive report describing all activities carried out shall be furnished to the director or a nominee. The report shall be counter signed by the technician and service requested officer of the unit/ward. Service provider shall furnish the descriptive report and the invoices to the THP for arrangement of the payment	
		8.4. Chemical used for cleaning shall be industry accepted chemical to use in such items	
		8.5. Service provider shall be liaised with the technical staff of the hospital in providing services	
		8.6. Service provider shall utilize the ICT equipment provided by the hospital (backup ICT equipment) for prompt restoration of a defective equipment. Thereafter default equipment shall be repaired and return to the respective unit. See table 2 - ICT equipment provided by THP as backup equipment	
11	Cost	Cost for requested items and services shall be furnish separately	

Table 2 - List of

ICT equipment provided by the hospital as backup's equipment

No	Equipment	Quantity
1	Desktop computer	01
2	Brother QL 800 printer	01
3	650 VA UPS	01

Annex 2– MANDATORY CRITERIA for maintaining and servicing of ICT equipment

(Not being able to fulfill one or more of the mandatory criteria or providing false details for mandatory criteria will reject the bid during the primary evaluation) Documentary evidence need to be submitted with the tender

	MANDATORY Criteria	Response (Yes/No)	Explanatins (If required)
1	Experience of providing ICT infrastructure services or solutions and within the last 5 years. Details of services under way or contractually committed shall be provided		
2	Full details of the staff members (Staff consist of 02 ICT Technicians and 02 HIMS supporters) whom will be assigned to this project with their related Educational Qualifications, Professional Qualifications and Past experiences in related activities shall be furnished (Minimum requirements are attached in section IX for each job category)		
3	At least 02 number of in-house stationary members should have an expert knowledge and experience on ICT support services (barcode printers, barcode printing and barcode related troubleshooting)		
4	The Service provider should be able to attend less than 05 min upon receiving of request for a HIMS and should be able to attend less than 10 min upon receiving of request for any other ICT equipment related problem.		
5	The Service provider must be a registered company in Sri Lanka according to the law of the country and shall submit a certified copy of certificate of business registration		
6	The Service provider shall attach company's certified financial statements for last three years		
8	The Service provider shall be able to cover the all ICT equipment and expansions as requested.		
9	The Service provider shall cover any additional new requirement required by the ICTA (Information and Communication Technology Agency of Sri Lanka), Ministry of Health or Government of Sri Lanka free of charge during the contract period		
10	The Service provider should design and implement a ‘Central Ticket based system’ to fault reporting and to handle support calls should be implemented. Hospital Intranet system could be used for this purpose.		

	MANDATORY Criteria	Response (Yes/No)	Explanations (If required)
11	<p>The selected bidder shall assess all the ICT related equipment of the Hospital prepare a comprehensive inventory of the ICT equipment, register them in a local system, tag each equipment with a registration number at the start of the contract. Then that list should be maintained with support services and warranty agreements. Each Equipment should have a file maintained. Can use necessary software for this task. Health Information and Research unit of TH Peradeniya will supply required assistant. This list of equipment will be used for the contract activities.</p> <p>Cost of the setting up Inventory Management System shall be stated separately</p>		
12	<p>The Service provider shall supply, set up and configure and update (regularly as warrants by the present-day security threats) end point security solution (Antivirus software) for all necessary computers.</p> <p>The proposed end point solution shall be one of the top 3 end point solutions in the market.</p> <p>(Name and the price of the Virus guard/ End point solution shall state separately)</p>		
13	<p>The Service provider shall establish a Windows Update server to be used for . Windows Updates in order to prevent bandwidth overages.</p>		
14	<p>The bidder shall have minimum of two-years' experience of providing end user support for module of HIMS and evidence shall be furnished with the tender.</p>		
15	<p>The bidder shall have minimum of two-years' experience of installing /Trouble Shooting PAC Systems and DICOM Viewer in Hospitals.</p>		
16	<p>The bidder shall have experience in audio visual broadcasting and audio-visual device configuration with necessary medical equipments.</p> <p>Ex - Endoscopy machines, X-ray machines</p> <p>(Attach evidence documents/Videos)</p>		
17	<p>Bidder shall have experience in broadcasting, video-audio mixing, Technical support for teaching workshops and events.</p>		
18	<p>The bidder shall have minimum of two-years' experience of providing CCTV IP camera maintaining and system configuration.</p>		

Annex 3 - Requirement of maintaining and servicing of Local Area Network, Servers and other network related equipment

No	Requirement	Details	Agree (Yes/No)	If no, response
1	Daily Requirement	<p>1.1 Complete comprehensive software, hardware and operational maintenance</p> <p>a. All physical servers and all virtual servers</p> <p>1.2 Complete comprehensive software, hardware and operational maintenance of firewall solutions</p> <p>1.3 Complete work related with network expansions</p> <p>a. All the basic network expansion works</p> <p>b. All work (installation and configuration) related to new network active and passive devices (Hardware will be supplied by THP)</p> <p>1.4 Network Monitoring (Bidder shall use a licensed network monitoring software for this processes) Name and the price of the software need to be mentioned separately.</p> <p>1.5 Management of wireless network (of set 1 – refer section IX) including the hardware devices</p> <p>1.6 Complete comprehensive hardware, software and operational maintenance of the switches, fibre backbone, UPS (of switches and servers) and all other network related accessories.</p> <p>1.7 Service provider shall automate the above works</p> <p>1.8 Detail report pertaining to above work shall be generated and furnished (electronically) to the designated officer in the Health Information and Research Unit of the THP in daily basis. Failure to monitor and furnish the report daily will result in penalty of Rs. 1,000.00 per one day and will be deducted from the contract value.</p>		

2	Preventive maintenance activities	Preventive maintenance shall include the replacement of components, which are defective and service, cleaning, adjustment, configuration, update, etc. necessary to ensure that the all equipment shall continue to remain in satisfactory working order.		
		Within one year duration the service provider shall undertake to provide not less than four preventive maintenance visits per year in respect of all equipment scheduled of this agreement, there being an elapsed period of not less than two calendar months and not more than four calendar months between consecutive preventive maintenance services.		
		The service provider shall, upon completion of each preventive maintenance visit, supply a complete and comprehensive description of all activities carried out during the preventive maintenance visit to the Director of the Hospital or his authorised nominee by email and hard copies. Such a report shall also include details of any defect in the equipment and what action is being taken in respect of the repair of the same		
		Service provider shall keep at least one active devices related to the LAN as backup in the Computer maintenance unit and these equipment shall be used for prompt restoration of network failure.		
		All ancillary services provided in the course of preventive maintenance visits shall be at the cost of supplier and the hospital shall not be liable for payment.		
		All components removed during the preventive and curative maintenance are properties of the hospital.		
		The supplier shall have free access to the equipment during normal working hours on working days for the purpose of providing preventive maintenance, access at other times being possible only at the sole discretion of the officer in charge of the equipment at the site.		

3	Corrective maintenance	Corrective maintenance shall constitute the repair and restoration to satisfactory working order of equipment brought to notice of the Supplier as being defective or found by the Supplier to be defective during a corrective maintenance visit and preventive maintenance visit.		
		The customer shall notify the service provider in email and/or telephone call of any equipment deemed to be in need of corrective maintenance. Such notification shall be deemed to have taken place upon the date of receipt of such notification by the service provider.		
		The service provider shall, at the completion of each corrective maintenance visit, supply a complete and comprehensive description of all activities carried out during the corrective maintenance visit to Director of the hospital or his authorised nominee. Such a report shall also include details of any defective equipment, and action is being taken in respect of the repair of the same.		
		Cost of part replaced during the corrective maintenance shall be pre agreed with the hospital by following the due procedure. Cost of the equipment list shall be forwarded with the tender		
		Equipment part/s used for replacement or repair shall be the same brand of the equipment.		
4	On demand activities	Service provider shall provide required configuration, operating system software installation which required to run information system of the hospital in servers of the hospital LAN system when requested by the Hospital authorised person.		

Annex 4 – MANDATORY CRITERIA for maintaining and servicing of Local Area Network, Servers and other network related equipment

(Not being able to fulfill one or more of the mandatory criteria or providing false details for mandatory criteria will reject the bid during the primary evaluation)

	Requirement and criteria	Agree (Yes/No)	If no, response
1	Experience of complete comprehensive maintenance of servers, switches, and other network accessories in Hospitals or other institutes with similar complexity in last 3 years. Details of services under way or contractually committed shall be provided. Bidder past experience shall be stated in annex 6		
2	Full details of the staff members whom will be assigned to this project with their related Educational Qualifications, Professional Qualifications and Past experiences in related activities shall be furnished		
3	Maintenance crew consists of,		
	a. Network Engineer - not less than 01		
	b. System Administrator – not less than 01		
	c. Network Technicians – not less than 01		
	Contact details of the above staff shall be furnished with the tender		
4	The bidder should be able to provide services 24 hours in 365 days and identified network and server hardware issue rectified then and there. When a network or server issue is notified by the responsible officer in the hospital it shall be attended within 2 hours, rectified at earliest possible time (Maximally rectified within 10 hours). Failure to restore the system as stated will result in penalty of Rs. 5000.00 per hour after the 10 hours from the contract value.		
5	Bidder must be a registered company in Sri Lanka according to the law of the country and shall submit a certified copy of certificate of business registration		
6	Bidder must provide documentary evidence on their financial capacity to import, to supply, to install, to commission and to carry out curative and preventive maintenance for at least 3 years.		
7	Bidder shall attach company's certified financial statements for last three years		
8	Ability to cover the all-Local Area Network expansions as requested		
9	Cost of the relevant required licenses shall be furnished separately. if applicable		
10	Service provider shall cover any additional new requirements requested by the ICTA (Information and Communication Technology Agency of Sri Lanka), Ministry of Health or Government of Sri Lanka free of charge during the contract period		

11	Bidder shall perform the internet access restrictions when necessary as instructed by the Hospital with load balancing to ensure High uptime. Health Information and Research unit of TH Peradeniya will provide necessary instructions.		
12	Service provider shall acknowledge in written that the system may contain confidential data/information. Therefore, the service provider shall ensure maximum security with confidentiality, integrity and availability of the data/information handled.		
13	Service provider shall sign a non-disclosure agreement (including passwords) with the hospital at the beginning of contract		
14	When service provider shall access the servers and the active devices remotely, it shall be carried out using a VPN. Service provider shall establish the VPN for this purpose at the beginning of the contract.		

Annex 5 – Services and facilities provided by the Employer

1	Equipment room	Hospital shall provide a dedicated room for the technical officer and to store backup ICT equipment.
2	Network, server and all ICT equipment details	Detail list of Network and servers and detail list of ICT equipment (with identification number, serial number, location, etc.) will be provided by THP. Bidders can inspect the ICT equipment, network and server before finalizing the bids. Detail list of equipment shall be prepared by the bidders in consultation with the nominated officers of HIRU of THP
3	Technical personnel	Health Information and Research Unit has been nominated for coordination of inspection of equipment and carrying out the maintenance services during the contract period
4	Other resources provided by the employer	Hospital will provide backup ICT equipment. See table 2- List of ICT equipment provided by the hospital as backup's equipment
		Detail list of ICT equipment (with identification number, serial number, location, etc.) will be provided by THP. Bidders can inspect the ICT equipment before finalizing the bids. Detail list of equipment shall compile by the service provide with the assistance of the nominated officer of the HIRU THP
		Printer ribbon, tonner, ink cartridge, sticker roll and health ID tags according to the requirement shall be provided by Unit in charge (who owns the ICT equipment)
5	Other	The supplier shall have free access to the equipment as specified in Section IX and X of these presents for the purpose of providing preventive maintenance, in accordance with the terms of Section V.

Annex 6

Bidder past experience

Item No	Company	Name & Contact	Details of the experience
1			
2			
3			
4			
5			
6			
7			

Section VI - Price schedule

Price schedule - ICT equipment maintenance

Item	Unit price	Qty.	Cost
Servicing of desktop computer/ All in one computer			
Servicing of laptop computer			
Servicing of dot matrix printer			
Servicing of laser printer			
Servicing of ink tank printer			
Servicing of thermal sticker printer			
Servicing of thermal transfer printer			
Any other cost –specify the details			
Total cost for the servicing of all ICT equipment of THP			

Additions of new ICT equipment with the contract period shall be covered FOC

Service	Cost
Set up Central Ticketing System with Inventory management	
Set up and update end point security solution	
Network Monitoring system	

Price schedule - Local Area Network, Servers and other network related equipment

Service	Cost
Complete comprehensive maintenance of servers, switches, and other network accessories	
a. Hardware (switches, AP, servers and all other network accessories) maintenance	
b. Software (switches, AP, servers and all other network accessories) maintenance	
c. Operational (switches, AP, servers and all other network accessories) maintenance	
Total	

Cost of ICT equipment parts

Item	Brand/ Model	Unit price
USB Mouse		
USB Keyboard		
UPS batteries (of 650 VA)		
UPS batteries (of 3 KVA)		
Power cable (Desktop PC & Printers)		
VGA cable of Desktop monitors		
RAM DDR 3/ DDR 4 – (4 GB)		
Hard Disk – 500 GB		
USB Printer Cable (2 m)		
Data cable of printer		
Cat 6 patch cable (2 m)		
Cat 6 Keystone and face plate		
Cat 6 Network cable 1 m		
ATX Power unit of desktop computer		
Universal Power adapter for Laptop computer		
USB extensions – Type A		
USB extensions – Type C		
USB Wi-Fi Adapters		

* In addition to above items/materials, if the selected bidder has to complete necessary jobs using another materials**, payments for those jobs will be proceeded under the Technical Officer's (CECB) estimation.

** Ex - PVC Casing, Conduit, Sunk box, Wall plug and screw, Flexible Hose, Cable Tie etc.

Section VII - Method of payment

1	Method of payment	<p>The total amount payable to this contract (fee) by the Teaching Hospital Peradeniya to the service will be paid in four trenches as stated below,</p> <p>One quarter (twenty five per centum) of the total fees shall be paid to the service provider by the THP after the 1st quarter following the date of commencement of this agreement.</p> <p>One quarter (twenty five per centum) of the total fees shall be paid to the service provider by the THP 2nd quarter following the date of commencement of this agreement.</p> <p>One quarter (twenty five per centum) of the total annual fees shall be paid to Supplier on or before the hundred and eightieth (180th) day following the date of commencement of this agreement.</p> <p>One quarter (twenty five per centum) of the total annual fees shall be paid to Supplier on or before the two hundred and seventieth (270th) day following the date of commencement of this agreement.</p>
2	Requirement for the payment	<p>Log book related to execution of the stated services and other related document shall be furnish by the service provider for scrutiny to the Teaching Hospital Peradeniya. Payment of the fees for this contract will take into account the above information.</p>

Section VIII - Qualification of staff

Service provider shall possess adequate number of staffs to provide the requested services. These staff shall possess the necessary qualification, skills and experience to perform the ICT equipment, Local Area Network and Servers maintenance service. Staff details shall be furnished with the tender.

Network Engineer or equivalent

Help lead the delivery of state-of-the-art network security services at Teaching Hospital Peradeniya. At our local site, you will help install, configure and maintain key systems and technologies, from core and distribution to access and beyond. Today is your opportunity to drive continuous improvement that directly impacts our patients every day.

Work with the latest technology in an ever-evolving environment that challenges you to grow and develop your skills, while receiving unmatched training and support. Here, you will build a strong foundation to advance your career while thriving on a close-knit team. Your resourcefulness will help establish specific implementation plans and schedules for each project. And your recommendations will enhance our network performance, increase our capacity and decrease issue response times.

Responsibilities will include:

- Design and implement our new Next Generation Networks
- Analyze networks and define solutions in detail
- Work with other technicians and users to deliver excellent services
- Keep up to date with network technology
- Help build a world class team to upgrade our networks

Education:

Bachelor's degree in related field required Or at least 05 years' experience

Experience/ Job Qualifications:

1. A solid understanding of LAN/WAN networking
2. Active Directory/LDAP user and group administration
3. Has a solid understanding of virtual servers and VMWare
4. Demonstrated leadership experience with specific goal performance record.
5. Ability to successfully perform all aspects of managing a diverse project.
6. Excellent written and oral communication skills.
7. Ability to manage multiple initiatives.
8. Demonstrated knowledge and proficiency in all phases of project development and design.
9. Understanding of regulatory and security matters related to all phases of project.
10. Demonstrated ability to establish and maintain excellent Hospital management, board, and professional staff relationship
11. Must be positive, self-motivated individual who is a team player.

Skills

- Candidates with Juniper Certifications are highly encouraged.
- Previous Network Engineer experience at a global enterprise
- Financial services experience a huge plus
- 5+ years of proven experience working within high performing Network Operations/ Data Centre teams
- Strong Technical Experience in the following areas is required a natural ability to solve complex issues
- Worked with modern network technologies. that include Juniper, McAfee, ADVA, Aruba, Citrix and Infoblox
- Familiarity with JUNOS Space and Other Enterprise Level Management Tools.
- Experience in Data Storage management, NAS Systems
- The ability to work unsupervised in a fast paced, high pressure environment.
- Excellent time-management, interpersonal & communication skills.
- Degree qualification in computer technology and networking or equivalent experience.
- Cisco Certified CCIE preferred.

System Administrator or equivalent

The System Administrator is responsible for maintaining complex infrastructures and will be required to deliver world-class technical support. He/she will work in a wide range of areas including Microsoft Active Directory, Group Policy, Linux, Windows administration (2003/2008/2012/7), VMware Citrix, MS Exchange, and SQL servers. The System Administrator should be able to communicate and work with a group, deliver exceptional customer service to our clients, and will be asked to interact with all levels of the organization and the department to assist in making informed decisions. The position provides an exciting mix of implementing new technologies in addition to maintaining the existing infrastructure.

Responsibilities:

- System administration for **both Linux and Windows Server administration R2/2012**
- Install, maintain and upgrades network/server hardware and software
- Troubleshoots, diagnose and resolves network/server issues
- Network management including VPN, LAN, VLAN and firewall rules
- Maintain and control user accounts and passwords using Active Directory and file permissions
- He/she will manage our team of Network Engineers and provide daily guidance and escalation support for lower level techs
- Proactively monitor, manage, and maintain all client servers, desktops and networking equipment.
- Responsible for analyzing network improvement opportunities, presenting a plan, and successfully implementing the necessary changes
- Hands-on technical lead in design, installation, operations, maintenance and troubleshooting of the Network infrastructure for offices, manufacturing plants and the data-centers to ensure 24x7 network operations
- Design network and unified communications solutions for complex network environments that meet business operation requirements
- Resolve operational issues in a multi-protocol routing and switched infrastructure and drive solutions under high pressure
- Use network tools to enhance the network infrastructure security, reliability and performance
- Maintain up-to-date network documentation for change management processes
- Provide guidance and mentorship to network technicians and contractors

Education:

- Minimum of a recognized Higher Diploma or Bachelor's Degree in Information Technology

Skills

- Ideal candidate should have at least 5 years of related server experience, networks with routing and switching in an enterprise environment including network security systems
- Experience configuring, implementing, and supporting network operating systems: Linux and Windows
- Experience configuring, implementing, and supporting Citrix Presentation Server/XenApp at the client and network level
- Thorough understanding in networking, firewall, TCP/IP, routing, and DNS
- Excellent technical knowledge on LAN and WAN technologies, including WLAN and VPN services
- Working experience in handling enterprise Network Management Systems and network analysis tools
- In-depth knowledge in deploying and configuring network security technologies
- Excellent technical documentation skills

Network Technician**Position Summary:**

Provide basic hardware, software, and applications support for all department which may have multiple locations and/or a complex technical environment including specialized technologies or systems that must interface with the network. Monitor and oversee the unit's local area networks (LANs), which requires an operational understanding of the unique systems or applications of the unit and their implications/requirements for the technical infrastructure.

Qualifications:

1. Technical degree related to networking is preferred
2. Higher diploma in related field is acceptable
3. Certification of Cisco, HP and Microsoft will be added qualification

Experience

1. Three years' experience on working network technician
2. Knowledge on specialized software, systems or technologies is preferred.
3. Experience providing technology support to a hospital setting is required

Skills

- Operating system such as Windows and Linux
- Networking – LAN, WAN, Wireless
- Active Directory/LDAP
- Network Security
- Troubleshooting all facets network issues

ICT Technician

Position Summary: Provide basic hardware, software, and support which may have multiple locations and/or a complex technical environment.

Education qualification- Diploma or equivalent with adequate technical training in the related field

Experience- Three years or more performing technical support functions a must.

Skills:

- Understanding and ability work with Windows and Linux Operating systems.
- Understanding and ability ensure security for computers
- Understanding and ability perform Software and Hardware Installation
- Understanding and ability to troubleshoot all facets of desktop issues
- Understanding and ability to troubleshoot Printers and barcoding items

ICT end user support officer

1. At least NVQ (ICT) level 4 or higher
2. At least 6 months experience with end user support
3. Understanding and ability work with Windows and Linux Operating systems
4. Understanding and ability to troubleshoot computers printers and barcoding items
5. Strong interpersonal and communication skills

Section IX – List of ICT equipment

No	Equipment	Number	Under warrantee	Warrantee expired
1	Desktop/ AIO computers	211	26	185
2	Laptop computers	84	20	64
3	Dot matrix printers – LQ 310	64	-	64
	Dot matrix printers – LQ 2180	3	1	2
4	Ink tank printers – L 110	2	-	2
	Ink tank printers – M 100	26	-	26
	Ink tank printers – M 1170	18	18	-
	Ink tank printers – L6190	1	-	1
	Ink tank printers – L130	1	-	1
5	KIOSK	2	-	2
6	Laser printers	20	-	20
7	Thermal transfer sticker printer	15	-	15
8	Direct thermal sticker printers	33	-	33
9	Barcode Readers	79	18	61
10	UPS 650 VA	156	20	136
	UPS 2 KVA	7	1	6
	UPS 3 KVA	13	-	13

Section X – List of Local Area Network and Server Equipment

Set 1

Device name	Model	Serial
Servers 1	HP ProLiant DL380p Gen 8	SGH450X44V
Servers 1	HP ProLiant DL380p Gen 8	SGH450X44W
NAS	HP Store Easy 1640	CN74510CNN
Core switch	HP 5500	CN40B9R117
Access switch Non POE	HP1910	CN47BX20VI
Access switch Non POE	HP1910	CN47BX22BH
Access switch Non POE	HP1910	CN49BX22LF
Access switch Non POE	HP1910	CN48BX113K
Access switch Non POE	HP1910	CN49BX22J9
Access switch Non POE	HP1910	CN48BX1157
Access switch Non POE	HP1910	CN40BX200P
Access switch Non POE	HP1910	CN49BX21PT
Access switch Non POE	HP1910	CN49BX22MC
Access switch Non POE	HP1910	CN48BX115T
Access switch Non POE	HP1910	CN49BX21RS
Access switch Non POE	HP1910	CN40BX20IT
Access switch Non POE	HP1910	CN47BX228Q
Wireless access point	HP MSM410	TW36G424NW
Wireless access point	HP MSM410	TW36G424P7
Wireless access point	HP MSM410	TW36G424P5
Wireless access point	HP MSM410	TW36G424P1
Wireless access point	HP MSM410	TW36G424NZ
Wireless access point	HP MSM410	TW36G424NX
Wireless access point	HP MSM410	TW36G424NT
Wireless access point	HP MSM410	TW36G424NQ
Wireless access point	HP MSM410	TW36G424PD
Wireless access point	HP MSM410	TW36G424PF
Wireless access point	HP MSM410	TW36G424PO
Wireless access point	HP MSM410	TW36G424P2
UPS – 6 KVA	Riello SDL 6000 A4	ME27UT151270011

Set 2

Equipment	No.	Make	Model
Core switch (L3)	02	HP Aruba (5406 R)	J9821A
Switch 24 Port POE (L2)	06	HP Aruba (2530 series)	J9773A
Switch 48 Port POE (L2)	05	HP Aruba (2530 series)	J9772A
Switch 24 Port Non POE (L2)	02	HP Aruba (2530 series)	J 9976 A
Firewall of servers	02	Sophos	XG 310
Firewall of internet including PC	01	NA	NA
Wireless access point	48	HP Aruba (303)	J2320 A
KVM switch	01	HPE	HPE LCD 8500
UPS – 6 KVA	01	Techfine	CE 6KS
UPS – 1 KVA	11	Techfine	CE 1KS
Power distribution unit	02	AUSTIN HUGHES	V12C13-16A W/F-EN/3B-1