# Bank of Bhutan Ltd

Thimphu: Bhutan





Request for Proposal for Supply, Delivery, Installation, Configuration, Commissioning and Maintenance of Network Equipment and Licenses in TCO (Total Cost of Ownership) over a 7 year basis for DC



[Tender No.: 000/BoB/Tender/2018/017] [08<sup>th</sup> September 2018]

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#### **SALIENT FEATURES OF THE BID**

SL#	Item	Remark
1	Tender No. & date	000/BoB/Tender/2018/017 dated 08/09/2018
2	Item Descriptions	Request for Proposal for Supply, Delivery, Installation, configuration, commissioning and maintenance of Network Equipment and Licenses in TCO (Total Cost of Ownership) over a 7 year basis for DC
	Bid Details:	
	Issue of Bid Document:	On 08 <sup>th</sup> September 2018
	Cost of document:	Nu. 2,000.00 (Non-refundable) payable during registration. International firms bidding for this RFP should register with the procurement division through their local partner/agent.
3	Place of sale:	Procurement Office , Bank of Bhutan Ltd, Babesa, Thimphu: Bhutan or download from www.bob.bt
	Last Date of Bid submission:	03 <sup>rd</sup> October 2018 at 1430 hours.
	Place of Bid submission:	Procurement Office, Bank of Bhutan Ltd, Babesa, Thimphu: Bhutan.
	Bid Opening Date:	03 <sup>rd</sup> October 2018 at 1500 hours.
	Place of Opening:	Conference Hall, BOBL, Corporate Office, Babesa, Thimphu.
4	Earnest Money Deposit	2% of the quoted price.
5	Bid Validity Period	60 days starting from the date of tender opening.
6	Method of procurement	Quality and Cost based selection (QBS)

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#### **CHECKLIST FOR BID SUBMISSION**

SL#	PARTICULARS	Require ment	Submitted*
I	TECHNICAL BID		
1	Valid trade licence	Yes	
2	Tax Clearance Certificate	Yes	
3	Audited financial certificate for three years	Yes	
4	Power of attorney	Yes	
5	Earnest Money Deposit (EMD)	Yes	
6	Dealer authorization by OEM (MAF)	Yes	
7	Signed & Stamped technical specification	Yes	
8	Signed Integrity Pact Statement	Yes	
II	COMMERCIAL BID		
1	Signed, Stamped & dated bid forms	Yes	
2	Signed and Stamped Price Schedule	Yes	

Signature of the Bidder with seal



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<sup>\*</sup> Please tick (V) whether submitted or not.

### Section I

### **Instructions to Bidders**



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#### Section I **Instructions to Bidders**

#### A. GENERAL

#### 1. Scope of Bid

The Bank of Bhutan Limited, Thimphu (hereinafter referred to as "the Client") wishes to receive bids for Supply, Delivery, Installation, Configuration, Commissioning and maintenance of Network equipment and licenses described in Section 4 of Special Conditions of Instruction of Bidder & Special Conditions of Contract hereof (hereinafter referred to as "the Goods").

All bids are to be completed and returned to the Client in accordance with the "Instructions to Bidders".

#### 2. Eligible Bidders

The Invitation to bid is open to all suppliers and authorized IT equipment dealers who hold a valid Ministry of Economic Affairs License, Royal Government of Bhutan (RGoB) or Indian and International firms having legal status to provide such services in Bhutan. Bids which are unaccompanied by such license will be liable for rejection. The Bidder shall furnish the following documentary evidence:

- i. Preference will be given to the OEM who are the leaders in the latest magic quadrant of Gartner's report (Data Center Networking and Wired and Wireless LAN Gartner's magic quadrant). However only one bidder will be selected for the entire solution on a turnkey basis.
- ii. All equipment listed by the bidder must be from single OEM only. A bidder bidding for 2 different components in a single bid with two different OEM will be rejected.
- iii. A profile of the firm.
- iv. Valid trade Licence or other documents to prove the legal status and place of registration of the business.
- The firm should be well-established with minimum of 10 years. ٧.
- vi. Audited financial statements for the last 3 years
- Minimum financial turnover of Nu. 50 million per annum (Average of last 3 Years). vii.
- The bidder should have a record of similar assignments carried out by the firm in viii.
- the last 3 years.

  Bidder should have certified network engineer for the proposed network OEM equipment in their payroll.
- Bidders should submit Manufacturer Authorization (MAF) Letter from OEM, brochures and data sheets along with the proposal.
- Failing to submit the required documents with the tender documents will be treated as non-responsive and hence will be rejected.

Bidders, as a condition of eligibility, should execute and attach to their bids an Integrity Pact Statement in the form provided in Annexure A9. Failure to provide a duly executed Integrity Pact Statement may result in disqualification of the Bid.

#### 3. Cost of Bidding

The Bidder shall bear all costs associated with the preparation and delivery of its bid and the Client will in no case be responsible or liable for those costs.

#### 4. Joint Bids

Joint Bids shall not be allowed with shared liability jointly and severally. The Joint Bids include bids by joint ventures, collaborations and consortiums.

While it is not mandatory to have a legal joint venture entity, Bhutanese firms are encouraged to form a reliable and long-term relationship with reputed regional/international manufacturers/vendors for this project and international firms are encouraged to partner with a local Bhutanese entity.

#### **B.** The Bidding Documents

#### 5. Bidding Documents

- 5.1 The goods required, bidding procedures and Contract terms are prescribed in the Bidding Documents. In addition to the Notice Inviting Quotations, the Bidding Documents include:
  - i. Instructions to Bidders
  - ii. Conditions of Contract
  - iii. Special Conditions of Contract
  - iv. Bid Form and Price Schedules
  - v. Sample Forms
    - a. Bid Security Form
    - b. Contract Form

Performance Security Form

Power-of-attorney form (if applicable)



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The Bidder is expected to examine the Bidding Documents, including all instructions, forms, terms and specifications. Failure to furnish all information required by the Bidding Documents or submission of a bid not substantially responsive to the Bidding Documents in every respect, would result in the rejection of that Bid.

#### 6. Clarification of Bidding Documents

6.1 Prospective Bidders requiring any further information or clarification of the Bidding Documents may notify the Client in writing or by fax at the Client's mailing address indicated below:

Bid Clarification	Technical Clarification
Cheten Dorji	Sangum Chhetri
Procurement Manager	IT Officer,
Bank of Bhutan Limited,	Bank of Bhutan Limited,
P.O Box No. 102,	Data Center, Phuentsholing,
Thimphu Bhutan.	Chhukha, Bhutan
<b>PABX:</b> +975- 02- 334333 (Ext – 0023)	<b>PABX:</b> +975- 02- 334333 (Ext -
Email: cheten.dorji@bob.bt	0120/0127)
cc: bharat.gurung@bob.bt	Email: sangum.chhetri@bob.bt
	cc: bharat.gurung@bob.bt

The Client will respond in writing by email to any request for information or clarification of the Bidding Documents, which it receives not later than 10 (Ten) days prior to the deadline for the submission of Bids prescribed by the Client. The Client's response (including an explanation of the query) will be sent in writing by email to all prospective Bidders who have purchased the Bidding Documents.

#### 7 Amendment of Bidding Documents

7.1 At any time prior to the deadline for submission of bids, the Client may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by addendum.



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- 7.2 The amendment shall be part of the Bidding Documents, pursuant to Clause 5 above and it will be notified by email to all prospective Bidders who have received the Bidding Documents, and will be binding on them.
- 7.3 In order to afford prospective Bidders reasonable time to take the amendment into account in preparing their Bids, the Client may, at its discretion, extend the deadline for the submission of Bids.

#### **C** Preparation of Bids

#### 8 Language of Bid

8.1 The Bid prepared by the Bidder, and all correspondence and documents relating to the Bid exchanged between the Bidder and the Client, shall be in English. Any printed literature furnished by the Bidder may be in any other language, provided that this literature is accompanied by an English translation, in which case, for purposes of interpretation of the Bid, the English translation shall govern.

#### 9 Documents Comprising the Bid

- 9.1 The Bid prepared by the Bidder shall comprise the following components:
  - (a) Bid Form and Price Schedules completed in accordance with Clauses 10, 11 and 12,
  - (b) Documentary evidence establishing, in accordance with Clause 13, that the Bidder is eligible to bid,
  - (c) Documentary evidence establishing, in accordance with Clause 14, that the Bidder is qualified to perform the Contract if its Bid is accepted,
  - (d) Documentary evidence establishing the compliance of the technical specification in accordance to Annexure A2.
  - (e) Bid security furnished in accordance with Clause 15,
  - (f) Statement of agreement (or exceptions if any) with terms and conditions stated in Section III, Subsection 3,
  - (g) Overall description of your approach to meeting the Client's requirements,
  - (h) Details of Key Contact Persons as required in Section III Subsection 3.20,
  - (i) Any other important/critical factors,
  - (j) Integrated Cost Sheet covering all bid areas,

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a	pects, mentioned above on this page, unconditionally,	

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- (k) Information on annual turnover of the Bidder,
- (I) Check list of main documents (EMD, Trade License, dealer authorization by the OEM, Tax Clearance Certificate, Power of Attorney, Signed, Stamped and dated bid forms, Signed and Stamped Price Schedule, Signed & Stamped technical specification).

#### 10 Bid Form

10.1 The Bidder shall complete & submit an original and one copy of the Bid Form and the appropriate Price Schedules furnished in the Bidding Documents.

#### 11 Bid Prices

- 11.1 The Bidder shall complete the appropriate Price Schedules included herein, stating the unit prices, total price per item, the total amount and the expected countries of origin of the Goods to be supplied under the Contract. Price should be for locations specified (Data Centre at Thimphu and Disaster Recovery Site at Phuentsholing) inclusive of all taxes and duties and should be firm for the period of the bid validity.
- 11.2 The bidder at its discretion may propose for at least the minimum requirement or may propose the higher model provided as per the technical specification in the annexure A2.
- 11.3 Summary of the entire BOQ (Both HW and the required software) is specified in Annexure A1.
- 11.4 The bidders may quote as per the minimum specifications provided in Annexure A2 along with the other related component viz licenses and support as per the specification provided in Annexure A2.
- 11.5 Details of goods are provided in Annexure A1 through A2 BoQ and Technical Specifications.
- 11.6 The bidders are required to quote the entire BOQ (Both HW and the required software) as specified in the annexure A1 as per the Bid Form and Price Schedule as specified in Annexure A6. Failing to quote for the entire BOQ listed in the Annexure A1 will be treated as non-responsive and hence will be rejected.

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Bid evaluation shall be carried out based on Total Cost of Ownership (TCO) over a period of 7 years from the date of installation/commissioning for the whole project. Only one Bidder shall be selected for the entire work.

Should the selected supplier fail to accept the contract despite a valid bid accepted by the Client, the EMD shall be forfeited and tender awarded to the next selected Bidder.

Prices quoted by the Bidder shall remain fixed and valid for 60 (SIXTY) days from the date of bid opening and will not be subject to variation on any account except as provided for in Sub-Clause 16.2 of Instructions to Bidders. A bid submitted with price adjustment conditions, will be treated as non-responsive and will be rejected.

#### 12 Bid Currencies:

12.1 Prices shall be quoted in Ngultrum (BTN) or Indian Rupee (INR) or US Dollar (USD). The Bank of Bhutan Ltd's TT selling rate on the date of bid opening shall be used for evaluation purpose for bids quoted in USD.

#### 13 Documents Establishing Eligibility of the Bidder

13.1 The Bidder shall furnish, as part of its Bid, certification establishing the Bidder's eligibility to bid pursuant to Clause 2 of Instructions to Bidders.

#### 14 Documents Establishing the Bidder's Qualification to Perform the Contract

- 14.1 The documentary evidence of a Bidder's Qualification to Perform the Contract, if its bid is accepted, shall establish to the Client's satisfaction prior to award of Contract:
  - (a) That the Bidder has carried out similar contracts in the past with other Government organisations or corporations.
  - (b) All equipment listed by the bidder must be from single OEM only. A bidder bidding for 2 different components in a single bid will be rejected.
  - (c) That the Bidder has the financial capability to perform the contract, supported by audited financial statements for last three financial years.
  - (d) That all the equipment's offered by the Bidder shall meet the technical specification and also be fully compatible with the requirement by the client.

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- (e) That the Bidder must provide highly competitive pricing pricing reserved for their largest and most important accounts both at the outset of the relationship and on an ongoing basis. The Client expects its Bidders to assist in identifying opportunities to reduce the cost of these services
- (f) That the Bidder has the capacity to deliver the required equipment/solution(s) in good time.
- (g) That the Bidder's production capability necessary to perform the Contract is adequate, in addition to satisfying all the conditions mentioned in (a) through (e).

#### **15** Bid Security

- 15.1 The Bidder shall furnish 2% of the quoted price as Earnest Money Deposit (EMD), which is refundable. The EMD should be enclosed in the same sealed envelope as the Technical Bid. Any bid not accompanied by the EMD shall be rejected.
- 15.2 The Bid security shall be valid for 30 (thirty) days beyond the validity of the Bid and shall be in the form of Demand Draft/Cash Warrant issued by the Bank of Bhutan or any other commercial bank in Bhutan.
- 15.3 Any bid not secured in accordance with Sub-Clause 15.1 and 15.2 above shall be rejected by the Client as non-responsive during bid evaluation, pursuant to Clause 26 Preliminary examination of bids.
- 15.4 An unsuccessful Bidder's bid security will be discharged/returned as promptly as possible upon award of Contract, but in any event not later than thirty (30) days after the expiration of the period of bid validity prescribed by the Client, pursuant to Clause 16 of Instructions to Bidders.
- 15.5 The successful Bidder's bid security will be discharged/returned upon furnishing the performance security, pursuant to Clause 34 and the Bidder's executing the Contract, pursuant to Clause 33 of Instructions to Bidders.
- 15.6 The bid security may be forfeited:

/	The abidder withdraws its Bid during the period of bid validity specified	oy the
	Bidder on the Bid Form; or	.,
	In the case of a successful Bidder, if the Bidder fails	
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Signature & Seal(A	Authorized Signatory)
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- a) To sign the Contract in accordance with Clause 33 of Instructions to Bidders; or
- b) To furnish the Performance Security in accordance with Clause 34 of Instructions to Bidders.

#### 16 Period of Validity of Bids

- 16.1 Bids shall remain valid for 60 (SIXTY) days from the date of bid opening prescribed by the Client, pursuant to Clause 23 of Instructions to Bidders.
- 16.2 Notwithstanding Sub-Clause 16.1 above, the Client may solicit Bidder's consent to an extension of the period of bid validity. The request and the responses thereto shall be made in writing by email. If the Bidder agrees to the extension request, the validity of the bid security provided under Clause 15 above shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. Bidders granting the request will not be required or permitted to modify its Bid.

#### 17 Formats and Signing of Bid

- 17.1 The original Bid Form and accompanying documents (as specified in Clause 9 of Instructions to Bidders), clearly marked "Original Bid" must be received by the Client at the date, time and place specified pursuant to Clauses 18 and 19 of Instructions to Bidders. The original bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person(s) duly authorized to sign on behalf of the Bidder. Written power-of-attorney accompanying the Bid shall indicate such authorization. The person or persons signing the Bid shall initial all pages of the Bid, except for unamended printed literature. The name and position held by each person signing must be typed or printed below the signature.
- 17.2 The Bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such correction shall be initialled by the person or persons signing the Bid.



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#### D. Submission of Bids

#### 18 Sealing and Marking of Bids

- 18.1 Alternative Bids for the same platform from the same Bidder shall not be permitted; however the Bidder may submit independent bids for different platforms with separate TECHNICAL and COMMERCIAL BIDS for each option. Bid for each platform should independently comply with all the RFP requirements, including separate EMDs.
- 18.2 The Bidders shall duly complete the formats of Technical Bid and Commercial Bid and the same will be submitted through hard copy in a sealed envelope in person or through registered post at Bank of Bhutan Ltd, Corporate Office.
- 18.3 Bids shall be delivered by hand, couriered or sent by registered post. The Bidder shall seal the original of the Technical and Commercial Bids in separate inner envelopes contained within one outer envelope. The COMMERCIAL BID envelope shall contain only the price schedule as per format provided. All envelopes shall be sealed with adhesive or other sealant to prevent reopening.

The inner envelopes shall:

- a) bear the name of the bidder and identification number of the Tender as defined;
- b) be signed across their seals by the person authorized to sign the Bid on behalf of the Bidder,
- c) be marked "ORIGINAL" and
- d) be marked "TECHNICAL BID" and "COMMERCIAL BID" as the case may be.

The outer envelope shall:

- a) be marked "Confidential";
- b) be addressed to the Purchaser at the address below:

	Procurement Manger,
COM Missoures	Procurement Manager
130 1 JON 12	Bank of Bhutan Limited
DAD	P.O Box No. 102,
DUD	50
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Thimphu Bhutan.

PABX: +975- 02- 334333 (Ext - 0023)

(Attn: Cheten Dorji, Procurement Manager)

c) Provide a warning not to open before the specified time and date for Bid Opening as defined.

In addition to the identification required above, the inner envelopes shall indicate the name and address of the Bidder, to enable the Bid to be returned unopened in case it is declared late.

If the outer envelope is not sealed and marked as above, the Client shall assume no responsibility for the misplacement or premature opening of the Bid.

Bidders are required to submit both the technical bid and the commercials in separate envelops clearly marked as "TECHNICAL BID" and "COMMERCIAL BID" within an outer envelope. The commercial bid shall only be opened if the Bidder meets the eligibility criteria and fulfils the technical requirements of the RFP. The commercial bid shall be returned unopened if the technical bid is deemed to be unresponsive.

A **softcopy** of the Technical Bid (only) must also be submitted in a CD-ROM / removable media enclosed in a sealed envelope along with the hard copy of the Technical Bid to the address indicated under information contacts section. The file should be named as follows: [Client\_RFP-(your\_company\_name)]. The soft copy of the response must be in one of the Office Suite formats (Microsoft® Excel or Word), and Adobe® Acrobat.

#### 19 Deadline for submission of Bids

- 19.1 The original Bids must be received by the Client at the address specified in Sub-Clause 18 above not later than "1430 hours (BST) on 03<sup>rd</sup> October 2018".
- 19.2 The Client may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Documents in accordance with Clause 7 above, in which case all right and obligations of the Client and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.



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#### 20 One Bid per Platform per Bidder

20.1 Each Bidder shall submit only one Bid per platform either by itself, or as a responsible officer in the management of the company. A Bidder who submits or participates in more than one Bid per platform will be disqualified. Any bidder submitting alternative bids must comply with clause 18.1 above.

#### 21 Late Bids

21.1 Any Bid received by the Client after the deadline for submission of Bids prescribed by the Client, pursuant to Clause 19 above, will be declared "Late" and rejected and returned unopened to the Bidder.

#### 22 Modification and withdrawal of Bids

- 22.1 The Bidder may modify or withdraw its Bid after the Bid's submission, provided that written notice of the modification or withdrawal is received by the Client prior to the deadline prescribed for submission of Bids.
- 22.2 The Bidder's modification or withdrawal notice shall be prepared, sealed, stamped, marked and dispatched in accordance with provisions of Clause 18. A withdrawal notice may also be sent as a scanned document by email but must be followed by a signed confirmation copy.
- 22.3 No Bid shall be modified/withdrawn after the deadline for submission of Bids.
- 22.4 No Bid shall be withdrawn in the interval between the deadline for submission of Bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form.

#### E. Bid Opening and Evaluation

### 23 Opening of Bids by Client

23.1 The Glient will open Bids, in the prese	ence of Bidders' representatives who choose to
	ctober 2018 at the following location:
BOB	
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	a/ accept all terms/ conditions/ criteria / other
aspects, mentioned above on this page, unco	onditionally,
Signatura & Saal	(Authorized Signatory)

Conference Hall, Corporate Office, Bank of Bhutan Limited, Babesa, Thimphu Bhutan

- 23.2 The Bidders' representatives who are present shall sign a register/Bidders attendance sheet evidencing their attendance.
- 23.3 Only the Technical Bids will be opened and scrutinized only for requirements as per the checklist for bid submission.
- 23.4 The Bidders' names, modifications and bid withdrawals, and the presence or absence of the requisite bid security, and such other details as the Client, at its discretion, may consider appropriate will be announced and recorded at bid opening.
- 23.5 Thereafter the Client may invite the bidders to present their Technical Bids in detail and reply to the Client's queries on the Technical Bids submitted. Based on an assessment of the Technical Bids, the Client may reject bids that do not meet the Client's technical requirements. This will be completed by 1400 Hours on 24<sup>th</sup> October 2018.
- 23.6 Commercial Bids shall be opened on 24th October 2018 at 1400 hours at a venue to be advised by the Client, in the presence of Bidders' representatives who choose to attend. However in the event the technical bid evaluation is completed before the stipulated time the client may pre-pond the date for opening of the commercial bids. The client shall notify the bidder regarding the changes.
- 23.7 The Commercial Bids of only those Bidders who have fulfilled the technical requirements shall be opened. The Commercial Bids of Bidders who have not fulfilled the technical requirements shall be returned unopened.
- 23.8 The Client shall prepare Minutes of the Bid opening, including the information disclosed to those present in accordance with ITB Sub- Clause 23.3

23	3.9 The Minutes shall include, as a minimum:	
1	a. The Contract title and reference number;	
ı	b. The Bid number;	
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I	have read and hereby correctly state data/ accept all te	rms/ conditions/ criteria / other
as	pects, mentioned above on this page, unconditionally,	

- c. The Bid deadline date and time;
- d. The date, time and place of Bid opening:
- e. Bid prices, per lot if applicable, offered by the Bidders, including any discounts and alternative offers;
- f. The presence or absence of Bid security and, if present, its amount and validity;
- g. Name and nationality of each Bidder, and whether there is a withdrawal, substitution or modification;
- h. The names of attendees at the Bid opening, and of the Bidders they represent (if any);
- Details of any complaints or other comments made by attendees/representatives attending the Bid opening, including the names and signatures of the attendees/representatives making the complaint(s) and/or comment(s); and
- j. The names, designations and signatures of the members of the Bid Opening Committee.
- 23.10 The Bidders' representatives and attendees who are present shall be requested to sign the record. The omission of a Bidder's or other attendee's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.
- 23.11 The prices of bids, all discounts offered will be announced and recorded at Commercial Bids opening. Any discount which is not read out and recorded at bid opening will not be taken into account in bid evaluation. Announcement of the Commercial Bids will however not tantamount to award of the contract to the lowest announced bid at the opening of the Commercial Bids.
- 23.12 The award of the tender/contract will be announced only after the Commercial Bids are thoroughly evaluated, validated and combined with the technical bid.

#### 24 Process to be confidential

Bids and recommendations for the award of a co	ontract shall not be disclosed to
Bidders or any other persons not officially concern	ed with such process. Any effort
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I have read and hereby correctly state data/ accept all to	erms/ conditions/ criteria / other
aspects, mentioned above on this page, unconditionally,	
Signature & Seal	(Authorized Signatory)

24.1 Information relating to the examination, clarification, evaluation and comparison of

by a Bidder to influence the Client's processing of Bids or award decisions may result in the rejection of the Bidder's Bids.

#### 25 Clarifications of Bids

- 25.1 To assist in the examination, evaluation and comparison of Bids, the Client may, at its discretion, ask the Bidder for a clarification of its Bid. All responses to requests for clarification shall be in writing, and no change in the price or substances of the Bid shall be sought, offered or permitted.
- 25.2 Failing to respond to the clarifications sought by the client within 2 working days will be treated as non-responsive and hence will be rejected.

#### 26 Preliminary examination of Bids

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- 26.1 The Client will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether the documents have been properly signed, and whether the Bids are generally in order.
- 26.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price per item that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price per item will be corrected. If there is a discrepancy between the Total Amount and the sum of the Total price per item, the sum of the total price per item shall prevail and the Total Amount will be corrected.
- 26.3 Prior to the detailed evaluation, pursuant to Clause 27, the Client will determine substantial responsiveness of each Bid to the Bidding Documents. A substantially responsive Bid is one, which conforms to all the terms and conditions of the Bidding Documents without material deviation or reservation. A material deviation or reservation is one
  - a) which effects in any substantial way the scope, quality or performance of the Goods;
  - b) which limits in any substantial way, inconsistent with the provisions of the Bidding Documents, the Client's rights or the Bidder's obligations under the Contract;

Whose rectification would affect unfairly the competitive position of other Bidders presenting substantially responsive bids.

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A Bid determined as not substantially responsive will be rejected by the Client and 26.4 may not subsequently be made responsive by the Bidder by correction of the nonconformity.

#### 27 Evaluation and comparison of Bids

- 27.1 The Client will evaluate and compare the Bids previously determined to be substantially responsive pursuant to Clause 26 above.
- 27.2 The Client's evaluation of a Bid will exclude and not take into account any allowance for price adjustment during the period of execution of the contract, if provided in the bid. (Refer Special Conditions of Contract, Section 3, Sub Section 3.12)
- 27.3 No credit will be given for earlier completion. Bids offering Late Delivery Schedules (LDS) will NOT be accepted.
- 27.4 No conditional offer(s) will be accepted. A bid with conditional offers shall be rejected.
- 27.5 The Client's evaluation of a Bid will take into account, in addition to the bid price, the following factors, in the manner and to the extent indicated in this clause.
  - a) Contractual and Commercial Deviations: The cost of all-quantifiable deviations and omissions from the contractual and commercial conditions shall be evaluated. The Client will make its own assessment of the cost of any deviations for the purpose of ensuring fair comparison of Bids. The deviation schedule is as per Annexure A6.
- 27.6 The technical evaluation will be carried out as per the table below

Particulars	% Breakup	Total %	Description
Establishment of Firm	1%		10 years
	3%	5%	11 - 15 years
	5%		15 years and above
Financial Capacity	1%	5%	50 Million
Annual Turnover -	3%	3/0	51 to 75 millions
	Establishment of Firm	Establishment of Firm 3% 5% Financial Capacity 1%	Establishment of Firm 3% 5% 5% Financial Capacity 1% 5%

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	Average of last three years)	5%		More than 75 million
	Experience and Technical Capacity	5%	10%	Record of similar task carried out by the firm *.
3		3%		OEM Training Certification**
		2%		After Sales Support***
4	Technical	40%	40%	Technical Compliance (Will be further evaluated as per 27.7)
	Total		60%	

### The minimum score required for the opening of the financial bid from the above calculation is 80% (i.e 48 % in 60%)

	Details	Points
*	one Task	1
	Two Tasks	3
	Three tasks or more	5
**	Two Certified Engineers	1
	Three Certified Engineer or more	3
	24 X 7 Support and replacement of critical spares within three hours at DC	2
***	24 X 7 Support and replacement of critical spares within Eight hours in DC	1
	Next Day Service	Not Acceptable

27.7 The bidders are required to submit the compliance sheet as per the technical specification provided A1 through A3. The technical compliance will be calculated as under:

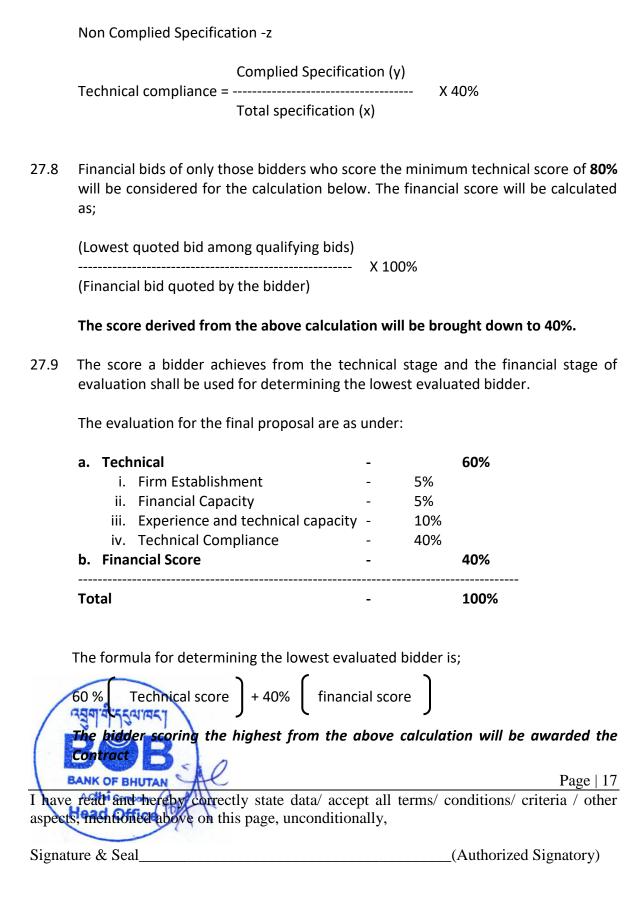
Total specification - x

Complied Specification - y

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27.10 In addition to satisfying all of the conditions mentioned in paras 27.1 through to 27.8 above, the selection criteria includes other criteria as mentioned in <u>Special</u> Conditions of Contract, Section 3, Sub Section 3.12.

#### 28 Contacting the Client

- 28.1 Subject to Clause 25 above, no Bidder shall contact the Client on any matter relating to its Bid, from the time of bid opening to the time the Contract is awarded.
- 28.2 Any effort by a Bidder to influence the Client's decisions in respect of bid evaluation, bid comparison or Contract awards will result in the rejection of the Bidder's Bid.

#### 29 Client's right to accept any Bid and to reject any or all Bids

29.1 The Client reserves the right to accept or reject any Bid or to annul the bidding process and reject all Bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder(s) or any obligation to inform the affected Bidder(s) of the ground for the Client's action.

#### F. Award of Contract

BANK OF BHUTAN

#### 30 Post qualification and Award

- 30.1 The Client will determine to its satisfaction whether the Bidder selected on the basis of the lowest-evaluated, responsive Bid is qualified to satisfactorily perform the Contract.
- 30.2 The determination will take into account the Bidder's financial, technical and production/support capabilities. It will be based on an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to Clause 14 above, as well as such other information as the Client deems necessary and appropriate.
- 30.3 An affirmative determination will be a prerequisite for award of the Contract to the

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Bidder. A negative determination will result in rejection of the Bidder's Bid.

30.4 The Client will award the Contract to the successful Bidder whose Bid has been determined to be the lowest-evaluated responsive Bid, provided further that the Bidder is determined to be qualified to satisfactorily perform the Contract.

#### 31 Client's right to vary quantities at the time of Award

31.1 The Client reserves the right at the time of award of Contract to increase up to twenty per cent (20%) or decrease by up to twenty per cent (20%) of the unit of Goods specified in the Specifications, without any change in unit price or other terms and conditions.

#### 32 Notification of Award

- 32.1 The Client will notify the successful Bidder in writing or by email to be confirmed in writing, that its Bid has been accepted and on which basis the Bid has been accepted.
- 32.2 The notification of award will constitute the formation of a contract, until the Contract has been affected pursuant to Clause 33.

#### 33 Signing of Contract

- 33.1 Within 10 (ten) days from the date of issue of the notification of award of contract, the successful Bidder will be requested to come and sign, date and seal the contract agreement at the office of Chief Executive Officer, Bank of Bhutan Limited, Thimphu Bhutan.
- 33.2 The Chief Executive Officer, Bank of Bhutan Limited, Thimphu Bhutan shall be the authorized signatory to sign and execute the contract with the selected Bidder in accordance with the provisions of this bid document, and any other specific instructions issued by the Board of Directors of Bank of Bhutan Limited.

#### 34 Performance Security

Signature & Seal

3	4.1 At the time of signing of the contract, t	he successful Bidder shall furnish the e General Conditions of Contract Section
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- 34.2 The Performance Security @ 10% of the contract value shall be furnished by the successful Bidder in the form of Bank Guarantee (valid for 36 months after successful installation and commissioning) issued by any commercial bank in Bhutan (except Bank of Bhutan Ltd).
- 34.3 Failure of the successful Bidder to submit the above-mentioned Performance Security or Sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Client may award the Contract to the next selected Bidder whose offer is substantially responsive and is determined by the Client to be qualified to perform the Contract satisfactorily.

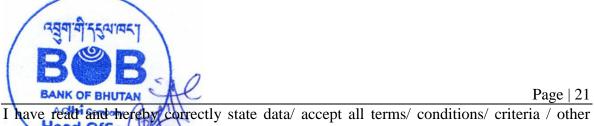


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### **Section II**

### **General Conditions of Contract**



aspects, mentioned above on this page, unconditionally,

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### Section II General Conditions of Contract

#### 1. Definitions

- 1.1 In this Contract, the following terms shall be interpreted as indicated:
  - a) "The Contract" means the agreement entered into between the Client and the Bidder, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
  - b) "The Contract Price" means the price payable to the Bidder under the Contract for the full and proper performance of its contractual obligations.
  - c) "The Goods" means all the equipment, machinery, and/or other materials, which the Bidder is required to supply to the Client under the Contract.
  - d) "The Services" means those services ancillary to the supply of the Goods, such as transportation and Insurance, provision of technical assistance, training, and other such obligations of the Bidder covered under the Contract.
  - e) "The Client" means Bank of Bhutan Limited with its corporate office at Thimphu, Bhutan.
  - f) "The Bidder" means the individual or firm supplying the Goods and Services under this Contract.
  - g) "Day" means calendar day.

#### 2. Use of contract documents and information

2.1 The Bidder shall not, without the Client's prior written consent, disclose the Contract, or any provision thereof, or any specification, drawings, pattern, sample or information furnished by or on behalf of the Client in connection therewith, to any person other than a person employed by the Bidder in the Performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.

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- 2.2 The supplier shall not, without the Client's prior written consent, make use of any document or information specified in Clause 2.1 above, except for purposes of performing the Contract.
- 2.3 Any document, other than the Contract itself, specified in Clause 2.1 above, shall remain the property of the Client and shall be returned (in all copies) to the Client, on completion of the Bidder's performance under the Contract, if so required by the Client.

#### 3. Change orders

4. Contract amendments

- 3.1 The Client may at any time, by a written notice to the Bidder, make changes within the general scope of the Contract in any one or more of the following:
  - a) Specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Client; or
  - b) The method of shipment or packing; or
  - c) The place of delivery.
- 3.2 Upon notification by the Client of such change, the Bidder shall submit to the Client an estimate of costs for the proposed change (hereinafter referred to as the Change) within ten (10) days of receipt of notice of the change, and shall include an estimate of the impact (if any) of the change on the delivery dates under the Contract, as well as a detailed schedule for the execution of the change, if applicable.
- 3.3 The Bidder shall not perform changes in accordance with Clause 3.1 above until the Client has authorized a change order in writing on the basis of the estimate provided by the Bidder as described in Clause 3.2 above.
- 3.4 Changes mutually agreed upon as a Change shall constitute a part of the work under this Contract, and the provisions and conditions of the Contract shall apply to said change.

### 4.1 Subject to Clarke 3 no variation in or modification of the conditions and terms of the

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#### 5. Sub-contracts

- 5.1 The Bidder shall not sub-contract all or any part of the Contract without first obtaining the Client's approval in writing of the sub-contracting and the sub-contractor in case of works.
- 5.2 The supplier shall guarantee that any and all sub-contractors of the Bidder to performance of any part of the work under the Contract will comply fully with the terms of the Contract applicable to such part of the work under the Contract.

#### 6. Country of Origin

6.1 For purposes of this Clause, "origin" shall be considered to be the place where the Goods were mined, grown or produced. Goods are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.

#### 7. Inspection and tests

- 7.1 The bidder shall furnish with relevant document (certificate) for each equipment being delivered pertaining to the quality inspections and tests carried out by the manufacturer prior to import.
- 7.2 The Client or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Specifications.
- 7.3 The inspections and tests may be conducted on the premises of the Bidder or its sub-contractor(s), at point of delivery and at the Goods' final destination. When conducted on the premises of the Bidder or its sub-contractor(s), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Client.
- 7.4 Should any inspected or tested Goods fail to conform to the Specifications, the Client may reject them, and the Bidder shall either replace the rejected Goods or make all alterations necessary to meet the requirements of the Specifications, free of cost to the Client

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- 7.5 The Client's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival in the Bhutan shall in no way be limited or waived by reason of the Goods' having previously been inspected, tested and passed by the Client or its representatives prior to the Goods' shipment from the country of origin.
- 7.6 Nothing in this Clause 7 shall in any way release the Bidder from any Warranty or other obligations under the Contract.
- 7.7 The Client or its representative shall have the right to inspect and/or to test the deployed equipment/solution(s), to verify conformity to the specifications stated in the design/Contract. The inspection procedures and tests to be conducted by the Client in respect of the service(s)/equipment/solution(s) being provided and the relevant details will be specified in the Contract. This test must be carried out before the Job Completion Form/ Delivery sign-off can be obtained on any provided equipment/solution/service.

#### 8. Packing

- 8.1 The Bidder shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
- 8.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any and in any subsequent instructions ordered by the Client.

#### 9. Delivery & installation of goods

9.1 Delivery of the Goods and	services shall be made by the Bidder in accordance with
the terms specified in the	Price Schedule – Annexure A6. All the equipment should
be properly installed, conf	igured and commissioned at the office of Bank of Bhutan
Limited Within the dates	specified by the Client in this RFP. All equipment will
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undergo a joint inspection between Bank of Bhutan Limited (BOBL) and the selected Bidder after the installation is completed by the Bidder. There would be an Installation Completion Report which will have to be signed off by Bank of Bhutan Ltd representative upon which the installation process will be considered as complete.

#### 10. Patent Rights

10.1 The Bidder shall indemnify and hold the Client harmless against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the Goods or any part thereof.

#### 11. Performance Security

- 11.1 The selected Bidder shall provide the performance security to the Client for the amount indicated in the contract. Such performance security shall be provided, in a form satisfactory to the Client, at the time of the signing of the Contract.
- 11.2 The proceeds of the performance security shall be payable to the Client as compensation resulting from the Bidder's failure to complete its work under the Contract satisfactorily. The Bidder shall cause the validity period of the performance security to be extended for such period(s) as the contract performance may be extended pursuant to Clause 16.2
- 11.3 The performance security shall be denominated in the currency of the Contract and shall be in the form of a Bank Guarantee issued by a bank acceptable to the Client.

#### 12. Insurance

12.1 All Goods supplied under the Contract shall be fully insured in the currency of Contract against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery. Evidence of such insurance shall be furnished to the Bank within 7 days of dispatch of goods.

13. Warranty	
13.1 The Bidder warrants to the Client that	the Goods supplied under the Contract will
complystrictly with Contract and shal	I be free from all defects. The Bidder further
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warrants to the Client that all materials, equipment and supplies furnished by the Bidder or its sub-contractors for the purpose of the Goods will be new, merchantable of the most suitable grade, and fit for their intended purposes.

- 13.2 This Warranty shall be comprehensive on-site warranty and remain valid for thirty six (36) months after all the Goods have been delivered, commissioned and the Installation Completion Report which has been duly signed off by Bank of Bhutan Ltd representative.
- 13.3 The Client will not release the performance security that will be deposited by the supplier at the time of signing contract until the time the supplied equipment have been successfully field tested and proven their quality and the warranty period of 36 months after the installation is over.
- 13.4 The Client shall promptly notify the Bidder in writing of any claim arising under this Warranty.
- 13.5 Upon receipt of such notice, the Bidder shall promptly repair or replace the defective Goods or parts thereof, without cost to the Client other than, where applicable, the cost of inland delivery of the repaired or replaced Goods or parts from the port of entry to the final destination.
- 13.6 Without prejudice to Clauses 13.2 and 13.5 above, the Bidder shall within the warranty period, promptly correct, at no cost to the Client, any defect in any work of correction performed pursuant to Clauses 13.2 and 13.5 above, upon receipt of written notice of defect within 7 working days.
- 13.7 If the Bidder, having been notified, fails to remedy the defect(s) in accordance with the Contract, the Client may proceed to take such remedial action as may be necessary, at the Bidder's expense. The Bidder's Warranty pursuant to this Clause 13 is without prejudice to any other rights or remedies, which the Client may have against the Bidder under the Contract.

14. Payment	
14.1 The selected Bidder's request(s) for p	ayment shall be made to the Client in writing
accompanied by an invoice describing	ng, as appropriate, the Goods delivered and
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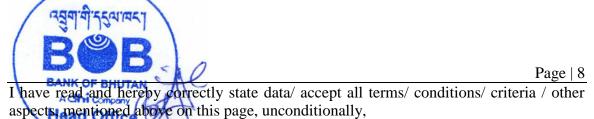
- services performed, and by documents submitted pursuant to Clause 9 and upon fulfilment of other obligations stipulated in the Contract.
- 14.2 Payment shall be made promptly by the Client, but in no case later than 30 (thirty) days after submission of an invoice or claim by the selected Bidder.
- 14.3 The currency or currencies in which payment is made to the selected Bidder under this Contract will be made in the currency or currencies specified by the bidder in the Price Schedule Annexure A6.
- 14.4 Payment terms:
  - a) 80% on delivery of equipment (within 30 days of receiving the invoice)
  - b) Balance 20% after 3 months of successful commissioning.

#### 15. Prices

15.1 Prices charged by the selected Bidder for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the selected Bidder in its bid, with the exception of any change in price resulting from a Change Order issued in accordance with Clause 3 of General Conditions of Contract.

#### 16. Extensions in the Bidder's performance

- 16.1 Delivery of the Goods and services shall be made by the Bidder in accordance with clause 9.
- 16.2 The Bidder may claim extension of the time limits in case of:
  - a) Change in the Goods ordered by the Client pursuant to Clause 3;
  - b) Delay of any materials, drawings or services, which are to be provided by the Client; services provided by the Client shall be interpreted to include all approvals by the Client under the Contract;
  - c) Force Majeure pursuant to Clause 23; and
  - d) Delay in performance of work caused by orders issued by the Client.



- 16.3 The Bidder shall demonstrate to the Client's satisfaction that it has used its best endeavours or overcome such causes for delay, and the parties will mutually agree upon remedies to mitigate or overcome such causes for delay.
- 16.4 Notwithstanding Clause 16.2 above, the Bidder shall not be entitled to an extension of time for completion unless the Bidder, at the time of such circumstances arising, immediately has notified the Client in writing of any delay that it may claim as caused by circumstances pursuant to Clause 16.2 above; and upon request of the Client, the Bidder shall substantiate that the delay is due to the circumstances referred to by the Bidder.

#### 17. Liquidated Damages

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- 17.1 Subject to Clause 23, Force Majeure, if the Bidder fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Client shall without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages @0.1%, per day on the contract amount price of the delayed goods or unperformed services for each day or part thereof of delay until actual delivery of performance, up to a maximum deduction of the 10 % percentage of total contract amount. Once the maximum is reached, the Client may consider termination of the Contract pursuant to Clause 18, Termination for Default. However the Client reserves the right to terminate the contract if it is perceived that the delay will impact the timely completion of the overall project. While there is no bonus for early delivery, such performances shall be noted favourably in the supplier's track record for future references.
- 17.2 The Vendor shall be liable to pay liquidated damages (LD) @0.1%, per day on the contract amount price for each day of delay, solely attributable to the Vendor, in the completion and acceptance of the equipment/solution by the Client. The aggregate liquidated damages, payable by the Vendor shall not exceed 10% of the contract value. Liquidated damages shall be evaluated at various stages as per the project timeline and not be deferred till the time of project completion. For instance any delay in delivering the equipment from the projected timeline shall be liable for LD on that phase of the project beyond its target deadline.

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#### 18. Termination for default

- 18.1 The Client may, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Bidder, terminate the Contract in whole or in part:
  - a) If the Bidder fails to deliver any or all of the Goods within the time period(s) specified in the Contract, or any extension thereof granted by the Client, pursuant to Clause 16; or
  - b) If the supplier fails to perform any other obligation(s) under the Contract; and
  - c) If the Bidder, in either of the above circumstances, does not cure its failure within a period of 10 (ten) calendar days (or such longer period as the Client may authorize in writing) after receipt of a notice of default from the Client specifying the nature of the default(s).
- 18.2 In the event the Client terminates the Contract in whole or in part, pursuant to Clause 18.1 above, the Client may procure, upon such terms and in such manner, as it deems appropriate, goods similar to those undelivered, and the Bidder shall be liable to the Client for any excess cost for such similar goods. Notwithstanding the above, the Bidder shall continue performance of the Contract to the extent not terminated.

#### 19. Termination for insolvency

19.1 The Client may at any time terminate the Contract by giving written notice to the Bidder, without compensation to the Bidder, if the Bidder becomes bankrupt or otherwise insolvent. Notwithstanding the above, such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the Client.

#### 20. Termination for convenience

20.1 The Client may, by written notice sen	t to the Bidder, terminate the Contract, in
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specify that termination be for the (	Client's convenience, the extent to which
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performance of work under the Contract is terminated, and the date upon which such termination becomes effect.

- 20.2 The Goods that are complete and ready for shipment within 30 (thirty) days after the Bidder's receipt of notice of termination shall be purchased by the Client at the Contract prices and on the other Contract terms. For the remaining Goods, the Client may elect:
  - a) To have any portion thereof completed and delivered at the contract prices and on the other Contract terms; and/or
  - b) To cancel the remainder and pay to the Bidder an agreed amount for partially completed Goods and for materials and part previously procured by the Bidder for the purpose of the Contract, together with a reasonable allowance for overhead and profit.

#### 21. Resolution of disputes

- 21.1 The Client and the Bidder shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 21.2 If, after 30 (thirty) days from the commencement of such informal negotiations, the Client and the Bidder have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution by arbitration as described in Clause 21.3.
- 21.3 If the dispute is to be settled by arbitration, the Client and the Bidder shall be entitled to appoint one member each, and third arbitrator will be appointed by both of them by mutual consent. If either the Client or the Bidder fails to appoint a representative, or both of them cannot agree on the appointment of a third member within thirty (30) days from the date of agreement to refer the matter for arbitration, then the case will be referred to the proper court in Bhutan for adjudication. The award shall be final and binding on the parties. If the disputes are settled by Arbitration, the cost of Arbitration shall be borne by both parties equally.

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#### 22. Applicable Law

22.1 The Contract shall be governed by and interpreted in accordance with the laws of the Kingdom of Bhutan.

#### 23. Force Majeure

- 23.1 In the event that the Bidder or any of its sub-contractors or the Client is delayed in performing any of their respective obligations under the Contract, and such delay is caused by Force Majeure, including but not limited to war, civil insurrection, fires, floods, epidemics, earthquakes, quarantine restrictions and freight embargoes, such delay may be excused as provided in Clause 16, and the period of such delay may be added to the time of performance of the obligation delayed.
- 23.2 If a Force Majeure situation arises, the Bidder shall promptly notify the Client in writing of such condition and the cause thereof. Unless otherwise directed by the Client in writing, the Bidder shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

#### 24. Assignment

24.1 The Bidder shall not assign, in whole or in part, its obligations to perform under the Contract, except with the Client's prior written consent.

#### 25. Contract language

25.1 The Bidder hereby represents that it has sufficient knowledge of the English language fully to understand the contract, the contract shall be in the English language, and all documentation related hereto will also be in the English language.

#### 26. Taxes and duties

	III be entirely responsible for all taxes, stamp duties and other such
levies imposed	outside the Client's country.

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26.2 The Bidder shall also be entirely responsible for all taxes payable in the Client's country.

#### 27. Headings

27.1 Headings, whether of Clauses or of other parts of the Contract, are for reference only and are not to be construed as part of the Contract.

#### 28. Waiver

28.1 Failure of either party to insist upon strict performance by the other party of any provision of the Contract shall in no way be deemed or construed to effect in any way the right of that party to require such performance.

#### 29. Quantity variation

29.1 The Client reserves the right to increase the quantity of Goods and Services specified in the Specifications, without any change in price or other terms and conditions by way of repeat order within the bid validity period. Such repeat orders will constitute quantity variation within the original contract BOQ and can go up to 20% or more of the present BOQ. The repeat orders shall be issued through an amendment with the additional price schedule and an applicable delivery schedule for that portion of the supplies.

#### 30 Bid validity

30.1 Price quoted by the Bidder shall remain fixed and valid for 60 (SIXTY) days from the date of bid opening and will not be subject to variation on any account except as provided for in Clause 3 of the Conditions of Contract. The Client reserves the right to place any repeat order within this validity period and the supplier shall perform at the price, terms and conditions agreed to within this contract.

#### 31 Contract validity

31.1 This contract shall be valid for a perio	d of seven years (3 years warranty period + 4
Years AMC) from the date of succe	essful installation and commissioning of the
equipment	
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	/ accept all terms/ conditions/ criteria / other
aspects, mentioned above on this page, unco	nditionally,
Signature & Seal	(Authorized Signatory)

### **SECTION III**

### **Request for Proposal**

&

### **Special Conditions of Contract**

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#### 1. Introduction

#### 1.1 Overview

The Bank of Bhutan Limited, Thimphu (hereinafter referred to as the Client) wishes to receive bids for Installation, configuration, commissioning and maintenance of Network Equipment and Licenses in TCO (Total Cost of Ownership) over a 7 year basis for DC.

Bidders are required to develop a proposal for the service(s) covering all bid areas and the approach for meeting the specified requirements. The bids must be submitted by **1430hrs** (BST) on **03**<sup>rd</sup> October, **2018**.

#### 1.2 Intent and purpose of RFP

The purpose of the RFP is to effectively procure, configure and install required network equipment for its Data Centre. The RFP represents a critical effort for the Client to upgrade existing network infrastructure that will effectively and efficiently support its service delivery intent and support the existing TCS' BaNCS core banking solution. It represents a process by which the Client can obtain information on the products and services of experienced Bidders, evaluate their capabilities, and enter into a long-term, strategic partnership with the Bidder(s) that meets its overall needs.

#### 1.3 Organization of this RFP document

This RFP is structured as follows:

#### I. Section 1 - Introduction

This section introduces the RFP, and explains its structure. It provides an overview of the Bidder selection initiative and the background of the project.

#### II. Section 2 – Background / Company overview

This section provides an overview of the Client, and details of the different bid areas required to support the business requirements of the company.

#### III. Section 3 – Terms and Conditions

This section sets out the:

- a) Conditions under which bids would be accepted
- b) Required validity of information
- Required format of bids
- d) Contact policy during the evaluation period

e) Submission deadline

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- IV. Section 4 Technical specification
- V. Section 5 Bidder Profile
- VI. Section 6 Response format and content outline

This section introduces an outline for the structure of each Bidder's response to ensure consistency, and thus an easy evaluation of each of the responses. It also highlights the required structure/outline of Bidder's bid.

#### VII. Annexure

### 2. Background

#### 2.1 The Client

The Client is based in Thimphu, Bhutan and is in the process of upgrading its network infrastructure.

The implementation will include among other things the full installation and set-up of all networking equipment i.e. hardware, software required to support the day-to-day core and non-core functions of the Client.

#### 2.2 Scope of Work

This section provides an inventory of the services required by the Client. The scope of this RFP covers the deployment of the following technology and service components as given below:

	Bid Are	ea	Brie	Description	
Hardware Solution	and	Infrastructure	 g and	Installation, maintenance ses.	•

a) Bidder should supply, commission, install, configure, test, and maintain (both under warranty and AMC) the equipment and their add-on components required for this project as specified in technical specifications.

વર્ષ્કુ b) વે ક્રાંતુ Bidder should provide comprehensive on-site three year warranty.

c) All the parts of items would be covered under comprehensive warranty. If there is any gap between Bank's requirement and OEM warranty then it BANK OF will be the responsibility of Bidder to fill up the gap.

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- d) Bidder should undertake to provide maintenance support to equipment and arrange for spare parts for a minimum period of 7 years for network equipment from the date of its supply. (i.e. 3 year warranty and 4 year AMC) Comprehensive annual maintenance contract has to be entered into separately with the bank for this purpose.
- e) Bidder has to guarantee minimum uptime and availability of 99.9% on quarterly basis and shall execute service level agreement for the same.
- f) Bidder (successful Bidder) will generate the configuration/specification report from the network equipment and the associated software and present the printout of same along with installation report to the bank for their verification & signatures.
- g) Bidder should specify various infrastructure requirements which need to be provided for commissioning and smooth functioning of the equipment.
- h) Obtaining of the Road permits, form, other security forms, etc will be the sole responsibility of the successful Bidder. However, Bank will sign the necessary forms as purchaser, as per the requirements.
- i) Training the Client's personnel in operating and trouble-shooting the hardware and software installed as per this RFP.

If your company is interested in submitting a bid for this opportunity, please follow the enclosed instructions. *Bidders are requested to bid for all bid areas specified in Section 4 to be considered for evaluation*.

#### 3. Terms and Conditions

#### 3.1 Award

The Client reserves the right to award the contract to the best equipment/solution provider(s). Therefore, your bid must be submitted on the most favourable terms possible from a pricing, delivery, support and technical standpoint.

#### 3.2 Contacts and guidelines

Should there be any questions concerning RFP, the Bidder shall direct those questions to Client 10 days prior to the deadline for the submission of Bids prescribed by the Client. The queries concerning RFP after 22<sup>nd</sup> September 2018 shall not be considered. In an effort to maintain consistency and equity in responding to questions concerning the RFP, Bidders are encouraged to direct all the questions to:

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BANK OF BHUTAN

Adhi Company

Head Office

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Bid Clarification	Technical Clarification	
Cheten Dorji	Sangum Chhetri	
Procurement Manager	IT Officer,	
Bank of Bhutan Limited,	Bank of Bhutan Limited,	
P.O Box No. 102,	Data Center, Phuentsholing,	
Thimphu Bhutan.	Chhukha, Bhutan	
PABX: +975- 02- 334333 (Ext – 0023)	<b>PABX:</b> +975- 02- 334333 (Ext – 0120/0127)	
Email: cheten.dorji@bob.bt	Email: sangum.chhetri@bob.bt	
cc: bharat.gurung@bob.bt	cc: bharat.gurung@bob.bt	

All communications must be in writing. Responses, where appropriate, will be circulated to all respondents. No other source of information shall be considered an authorized expression of the Client.

#### 3.3 Cost of preparation

All costs incurred by the Bidder in responding to this RFP, including cost for embarking on client reference will be entirely borne by the Bidder.

#### 3.4 Reservation of rights

The Client reserves the right to:

- a) Reject any or all bids
- b) Waive any infirmity in the bids
- c) Accept the bid(s) that is/are in the best interest of the Client
- d) Accept the bid(s) other than the lowest price bid
- e) Cancel the project at any time prior to contract signing for any reason and without penalty

All responses and correspondences remain the property of the Client. In the event a contract is agreed upon, responses to RFP may be referenced, in whole or in part, and considered binding. Bids, which, in the sole judgment of the Client, are incomplete or considered non-responsive may be rejected. The Client has no obligation to explain to unsuccessful respondents the reasons for rejecting the bid.

### 3.5 Validity of Bid

Bids should be valid for **Sixty Days** from the closing date of submission of bids and the Client reserves the right to extend for an additional period of thirty (30) days with the same terms and conditions

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In the event it becomes necessary to revise any part of this RFP, a written addendum will be provided via registered or certified mail (and email) to all Bidders who receive the original RFP. The Client reserves the right to issue amendments to this RFP.

#### 3.6 Price quotations and currency instructions

Price quotations will include but is not limited to the following items; details of all proposed products (hardware, software, AMC etc), training, documentation and services necessary for the successful implementation of the contract except as may be otherwise expressly provided herein and awarded.

Please include all applicable licenses, annual maintenance fees in price quotations as separate items. The Bidder should quote the rates, inclusive of all the taxes and duties in Ngultrum/INR/US\$ CIF location as detailed in the RFP and should be firm for the period of validity of the bid

All quotations should be final. Bidders should state clearly that the quotations include all costs. Bidders may be invited for further negotiations on their quoted bids. Invitation for further negotiations does not however in any way imply a successful bid or intention by the Client to award the bid to the Bidder.

#### 3.7 Use and Disclosure of Information

The Respondents shall not disclose information within this RFP to any third party without a written approval from Client. Likewise, information within this RFP shall not be used for any other purpose not directly related to the response to this RFP or to the job in the case of an award.

#### 3.8 Contractual Requirement

Bidders are requested to indicate their acceptance of each of the following terms and conditions and to provide the additional information requested below:

This RFP, Bidders' bids, any associated documentation, and any interchange of correspondence or information by way of elucidation or amplification, will form the basis of the Bidder's contractual obligations.

Bidders should note that final contracts will be based on provided Terms and Conditions, and would include the following provisions:

a) Confidentiality of details of the proposed services/products
b) Suitability for the stated technical specifications requirements
c) Timeliness, covered by, for example, liquidated damages

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- d) Guaranteed availability of key supplier staff
- e) Overall component guarantees, including compensation for missing agreed reliability levels
- f) Service level agreements for maintenance and support including compensation if not met
- g) Fixed prices on initial supply with limitations on price increases for subsequent products and support charges
- h) Control of publicity
- i) Successful completion of implementation

#### 3.9 Hand Holding Period

The Bidder should specify the duration of infrastructure stabilization period they are willing to support with details of on-site support engagement during this period. The infrastructure stabilization period commences from the day the infrastructure implementation user acceptance testing is signed off.

All expenses pertaining to the hand holding period should be borne by the Bidders.

#### 3.10 Contract Negotiations

BANK OF BHUTAN

After final bid selection, the Client will enter into negotiations for purposes of making a contract with respect to the procurement, implementation, commissioning and support of the proposed equipment/solution(s).

#### 3.11 Quotation Form/Commercial Bid

Quotes should include the cost of supply, delivery, installation, configuration, commissioning and maintenance of network equipment and other software and licenses in TCO (Total Cost of Ownership) over a 7-year basis. Indicate your best unit price for one or more of the options listed in this RFP. Please note:

a) Alternative Bids for same platform shall not be permitted, however the Bidder may submit independent bids for different platforms with separate TECHNICAL and COMMERCIAL BIDS for each option. Bid for each platform should independently comply with all the RFP requirements.

b) The Base Price should include specified equipment and the subcomponents such case Cables, pluggable components which are part of standard configuration and warranty

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#### 3.12 Bid Evaluation

The Client's evaluation of your response to this RFP will be based on assessment of each element of your response, including intangible factors, such as the Client's perception of your ability to meet your commitments.

The Client reserves the right to accept or reject any and all responses at its sole discretion and to negotiate the terms of any subsequent agreements. The Client is looking for reliable, competent Solution Providers who have the ability to meet or exceed the selection criteria. These selection criteria include, but are not limited to the following:

- a) Company Evaluation
- b) Solution Capabilities
- c) Service Coverage
- d) Cost Competitiveness
- e) Project Experience
- f) Project Delivery Timeline
- g) Quality and specification of the equipment

Accordingly, each is discussed below:

- I. Company Evaluation Detailed assessment of the history of the Solution Providers (in terms of financial stability, project management standards and procedure, training etc as well as the technical skill, qualification and experience of the employees). The Bidder should have a minimum annual turnover of Nu. 50 Million per annum (Average of last 3 years). In the event of a bid through a joint bid arrangement, each party should fulfil this requirement individually. Audited financial statements for the last 3 years should be submitted. Bidders should also submit a list of technical persons with their resume and also submit their full organization structure including project management unit, and their company quality procedure for managing such projects.
- II. **Solution and Equipment Capabilities** –All equipment offered by the Bidder shall meet the technical specification and also be fully compatible with the requirement of the TCS' BaNCS version 14.0 CBS. The detailed specifications are provided in Section 4.
- While effort has been made to make the BOQ comprehensive, Bidders are required to list and quote for all ancillary and accessory equipment in order to make this project comprehensive and successful. Any bid which fails to submit rates for any item that might have a material impact on the successful implementation of the project shall be rejected.

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- IV. Service Coverage Bidders should bid for all requirements covered by this RFP. However, for those bid areas where the Bidder needs to use subcontractor(s), the Bidder should strictly follow the conditions specified in section 3.20.
- V. **Cost Competitiveness** Bidder must provide highly competitive pricing both at the outset of the relationship and on an ongoing basis.
- VI. **Project Experience** The Client wishes to work closely with proven and tested end-to-end equipment/solution provider. This will be judged, in part, through similar implementation and customer references, if considered necessary. It is also expected that Bidders live up to the commitments they make with the Client.
- VII. **Project Delivery Timeline** Bidders with strong capability to deliver the required equipment/solution(s) in good time, based on past experience will receive higher consideration.

The Client retains the right to change the evaluation criteria at any point in the process.

#### 3.13 Patent Rights

The Bidder shall indemnify the Client against all third party claims of infringement of patent, trademark or industrial design rights arising from use of the provided services/solutions or any part thereof.

#### 3.14 Standards

These General conditions shall apply to the extent that they are not superseded by provisions in other parts of the contract. The components (hardware, software, etc.) of the equipment/solution provided by the Bidder under this Contract shall conform to the standards mentioned in the Technical Specifications / Requirement List and when no applicable standard is mentioned, to the authoritative standard appropriate to the equipment/solution required such standards shall be the latest issued by the concerned institution.

#### 3.15 Liquidated Damages

The Bidder shall be liable to pay liquidated damages (LD) @0.1%, per day on the contract amount for delay, solely attributable to the Bidder, in the completion and acceptance of the equipment/solution by the Client. The aggregate liquidated damages, payable by the Bidder shall not exceed 10% of the contract value. Liquidated damages shall be evaluated at various stages as per the project timeline and not be deferred till the time of project completion. For instance any delay in delivering the equipment from the projected timeline shall be liable for LD on that phase of the project beyond its target deadline.

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#### 3.16 Delays in the Bidder's Performance

Delivery of the equipment/solution(s) and performance of Services shall be made by the Bidder as specified in the Implementation Timeline and/or the Contract.

An unexcused delay by the Bidder in the performance of its delivery obligations shall render the Bidder liable to any or all of the following sanctions: imposition of liquidated damages, and or termination of the Contract for default.

If at any time during performance of the contract, the Bidder or its sub-contractor(s) should encounter conditions impeding timely delivery of the agreed equipment/solution(s) and performance of services, the Bidder shall promptly notify the Client in writing of the fact of the delay, it's likely duration and its causes(s). As soon as practicable after receipt of the Bidder's notice, the Client shall evaluate the situation and may at its discretion extend the Bidder's time for performance, in which case the extension shall be ratified by the parties by amendment of the contract.

#### 3.17 Inspection and Tests

The bidder shall furnish with relevant document (certificate) for each equipment being delivered pertaining to the quality inspections and tests carried out by the manufacturer prior to import. Failing to submit the required documents along with the tender document will be treated as non-responsive and hence will be rejected.

The Client or its representative shall have the right to inspect and/or to test the deployed equipment/solution(s), to verify conformity to the specifications stated in the design/Contract. The inspection procedures and tests to be conducted by the Client in respect of the service(s)/equipment/solution(s) being provided and the relevant details will be specified in the Contract. This test must be carried out before the Job Completion Form/ Delivery sign-off can be obtained on any provided equipment/solution/service.

#### 3.18 Warranty

The Bidder must provide a warranty that the equipment/solution (software, hardware, etc) provided under the Contract meet the specifications agreed and are fit for the purpose for which they are intended. The warranty period, shall be as given by the OEMs and/or otherwise agreed in Conditions of Contract between the Client and the Bidder. Failing to submit the required warranty/support along with the tender document will be treated as non-responsive and hence will be rejected.

This Warranty shall be comprehensive on-site warranty and remain valid for thirty six (36) months after the Goods, or any portion thereof, as the case may be, have been delivered and commissioned and signoff obtained by the bidder.

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#### 3.19 Third Parties

In case the Bidder is not directly present within the territories of Bhutan, the Bidder should detail out the engagement model for the delivery of Products and Services to the Client as part of the response.

The Client will have the right, at any time at its sole discretion, to contract with third parties to perform any part of the services provided for in this RFP. The Bidder will cooperate with such third parties and the Client. Additionally, the Bidder will adhere to the following requirements:

- i) **Delegation** The Bidder will neither delegate nor sub-contract any of its responsibilities, without prior written approval of the Client.
- ii) **Sub-contractors** If the Bidder intends to use sub-contractors, the Bidder's bid must include a list of proposed material sub-contractors containing the firm name, a description of the work to be sub-contracted, an explanation of why that work is to be sub-contracted, and descriptive information about each sub-contractor's ability to perform the work. The Client reserves the right to reject the use of a sub-contractor(s).
- iii) **Standards** Sub-contractors will adhere to the standards, policies, and procedures of the Client and the primary Bidder's which are in effect from time to time.
- iv) **Bidder Capability** The Bidder must confirm that it will remain responsible for all obligations performed by sub-contractors to the same extent as if such obligations were performed by the Bidder.

#### 3.20 Bidder Designated Contact

The Bidder should identify the name, title, address, telephone, and e-mail of a single point of contact (and one alternate) for the duration of this RFP process. The availability of this person should be specified.

Key personnel contacts shall be provided as per Escalation Matrix provided in Annexure A8.



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#### 3.21 Submission of Responses to the RFP

Bidders must submit responses in a sealed package clearly marked "Request for Proposal for Installation, configuration, commissioning and maintenance of Network Equipment and Licenses in TCO (Total Cost of Ownership) over a 7 year basis for DC" addressed to:

#### **Cheten Dorji**

Procurement Manager,

Bank of Bhutan Limited,

P.O Box No. 102,

Thimphu Bhutan.

Refer Section 1, Instruction to Bidders, (D) Submission of Bids for detailed instruction.

All packages must be delivered to the Client at the above contact address by 1430 hrs (BST) on 03<sup>rd</sup> October 2018. Client reserves the right to disqualify Bidder whose responses are not submitted by this date. No responses will be accepted after this time unless Client determines in its sole judgment, to do so. The bid, along with all supporting documents shall become the property of the Client.

#### 3.22 Timeline/ Schedule of Events

This RFP represents one of several steps taken to assist the Client for efficient equipment/solution that will meet its business requirement. The Client reserves the right to adjust the RFP project schedule listed below:

Activity	Date / Timeline	
Last date for seeking clarification on RFP	22 <sup>nd</sup> September 2018 by 1700 hrs	
Receive responses to RFP (deadline)	03 <sup>rd</sup> October 2018 by 1430 hrs	
Bid Opening	03 <sup>rd</sup> October 2018 by 1500 hrs	
Tentative Commercial Bid Opening *	24 <sup>th</sup> October 2018 by 1400 hrs	
Award of provisional Purchase Order*	By 25th October 2018	
Contract Signing & Submission of 10% Performance guarantee*	By 02nd November 2018	
Delivery at Data center (Thimphu)*	By 15th December 2018	
Installation & commissioning at Data Centre (Thimphu) of BHUTAN	By 28th December 2018	

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\*in pursuant to Section I , Instruction to Bidders r, Clause E - Bid Opening and evaluation sub clause 23.6 the client may pre-pond the date for opening of the commercial bid which may result in change of Award of provisional Purchase Order, Contract Signing & Submission of 10% Performance guarantee and Delivery, installation & commissioning at Data Centre (Thimphu).

The timely completion of the activities on the above target dates is very crucial and shall be treated as the essence of the contract. Therefore any bids that do not conform to meeting the above deadlines shall be rejected. The Client will do all that is feasible within foreseeable limits to ensure strict adherence to this timeline.

#### 3.23 Bid Security

The Bidder shall furnish 2% of the quoted price, which is refundable. The EMD should be enclosed in the same sealed envelope as the Technical Bid. Any bid not accompanied by the EMD shall be rejected.

The Bid security shall be valid for 30 (thirty) days beyond the validity of the Bid and shall be in the form of Demand Draft/Cash Warrant issued by the Bank of Bhutan or any other commercial bank in Bhutan.

An unsuccessful Bidder's security shall be refunded. The bid security may be forfeited if a Bidder withdraws its bid during the period of bid validity; or in the case of a successful Bidder, if the Bidder fails to sign the contract.

#### 3.24 Tax Deducted at Source (TDS)

All payment to the successful Bidder will be subject to 2 to 3% TDS in line with the Income Tax Act of the Kingdom of Bhutan.

### 4. Technical Specification

This section provides information on the technical requirements/specifications for the required equipment/solution(s) /service(s). Refer Annexure A1 through to A4 for details.

#### 4.1 Data Centre Location

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The Data Centre is located in Thimphu and Disaster Recovery site is located in Phuentsholing The Centre houses all servers, communication equipment, and other IT infrastructure deployed for the Client's business operations.

A chi company (40) Page | 12 I have read and hereby correctly state data/ accept all terms/ conditions/ criteria / other aspects, mentioned above on this page, unconditionally,

\_\_\_\_\_(Authorized Signatory) Signature & Seal

#### 4.2 Site Visits

If required, the Client can make arrangements for site visits by Bidders if necessary.

#### 4.3 List of Hardware and Software Specifications

Detailed Hardware and Software Specifications for different platforms are given in Annexure A1 through to A4.

#### 4.4 General Requirement

Every Bidder has to quote for at least one of the options as above in section 4.3.

While proposing, the following requirements should be provided for and included in the pricing:

- a) The Bidder should supply, install and commission the network equipment at the Production Data Centre (DC) Thimphu.
- b) The bidder should be able to support the client team during installation which includes the following

#### I. Installation.

- (1) Installation of the equipment on the rack.
- (2) Uplink cable layout/cable tagging.
- (3) Structured cabling.

#### II. Switching

- (1) Switch stacking (Installation/configuration)
- (2) VLAN Configuration.
- (3) VTP Configuration.
- (4) EtherChannel Load Balancing Configuration.
- (5) L3 routing on the switches.
- (6) SFP+ Transceiver installation and configuration.

#### III. Routing

<ol><li>Dynamic VPN Configuration and testing.</li></ol>	
(2) Site to Site IPsec VPN configuration and tes	sting.
(3) Access list configuration on the Routers.	
(4) High availability configuration between Co	re Routers.
BANK (5) High availability configuration between Int	ernet Router
A othi company ()	

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- (6) QoS.
- (7) Traffic shaping.
- (8) Traffic routing.

#### IV. Firewall and Security

- (1) Firewall high availability (Active/Active).
- (2) Firewall configuration.
- (3) Configuration of ISP on the firewall.
- (4) Reputation and category-based URL filtering offering comprehensive alerting and control over suspect web traffic and enforces policies on more than 280 million of URLs in more than 80 categories.
- (5) Natting/Port forwarding.
- (6) Access list design.
- (7) Configuration of demilitarized zone.
- (8) Log/activity/threads/attack inspection and details.
- (9) Firewall manager installation and configuration for all the firewall listed in Annexure 2 through annexure 4.
- 2) The Bidder should provide a compliance statement for all the above specification of technical requirements against each item.
- 3) All relevant product information such as user manuals, technical specifications sheet etc. should be submitted along with the offer. Failure to submit this information along with the bid may result in disqualification of the bid.
- 4) Please note that every Bidder is required to quote separately for hardware, software and licenses.

Details of sub-components and accessories (such as cables, pluggable components, cards etc) which are required but not listed should also be included as part of a standard hardware configuration and must be provided and installed at no additional cost.

Any major component not specified by the Client, that might be required during the execution of the project, shall be supplied by the Bidder at a mutually agreed cost.

#### 5. Bidder Profile

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This section is intended to provide the Client with sufficient information to enable an evaluation of your company's stability and ability to provide the service(s) described in the response lease include the following information:

A citri company (40) Page | 14 I have read and hereby correctly state data/ accept all terms/ conditions/ criteria / other aspects, mentioned above on this page, unconditionally,

\_\_\_\_\_(Authorized Signatory) Signature & Seal

#### 5.1 Company Size, Organization and Location

Provide brief profile of your company detailing the description of corporate ownership, number of employees, number of divisions and/or product lines, number and description of location(s) etc.

#### **5.2 Number of Customers/Related Sites**

List organization where similar service(s) have been provided, broken down by platform or service provided, as appropriate over the last 3 years.

#### **5.3 Implementation Timeline**

The Client expects the successful Bidder(s) to complete implementation within the timeframe outlined below which is subject to finalization during contract negotiation.

Activity	Date / Timeline
Award of provisional Purchase Order*	By 25 <sup>th</sup> October 2018
Contract Signing & Submission of 10% Performance guarantee*	By 02 <sup>nd</sup> November 2018
Delivery at Data center (Thimphu)*	By 15 <sup>th</sup> December 2018
Installation & commissioning at Data Centre (Thimphu)*	By 28 <sup>th</sup> December 2018

<sup>\*</sup>in pursuant to Section I Instruction to Bidder, Clause E - Bid Opening and evaluation sub clause 23.6 the client may pre-pond the date for opening of the commercial bid which may result in change of Award of provisional Purchase Order, Contract Signing & Submission of 10% Performance guarantee and Delivery, installation & commissioning at Data Centre (Thimphu).

#### **5.4 Support Information**

- 1) Specify the number of support sites you have. Which support site will be responsible for the Client?
- 2) Outline the support structure of your organization i.e. the number of staff allocated to customer support, development and maintenance
- 3) Include evidence of support agreement (s) with sub-contractors and OEM partners, if

a) Back-to-back Agreements

Back-to-back Support Agreements with sub-contractors, if any

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- c) Service Level Agreements and Principal Support Agreements
- 4) What are your standard terms for support? Please specify the level of resolution to different levels of issues.

Severity	Definition	Response Time (hrs)	Restoration Time (hrs)	Resolution Time (hrs)
1	"Severity 1" shall mean that the hardware system is so severely impacted that it is not possible to continue work; there is a complete loss of service. It often means data corruption/loss.			
2	"Severity 2" shall mean that the hardware system experiences severe loss of service; important features are unavailable with no work-around. It often means no significant loss/corruption of data.			
3	"Severity 3" shall mean that the hardware system experiences minor loss of service which may be addressed through a work-around; there is no loss/corruption of data.			

- 5) What facilities do you have for problem resolution including:
  - a) Hot line?
  - b) Expert assistance?
  - c) Direct contact with owner/developers?
- 6) Please define your escalation procedures for problem resolution.

#### 5.5 Strategic Alliances and Partnerships

Submit relevant documentation on, and describe all technical partnerships and strategic alliances the company is involved in.



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#### **5.6 Industry Awards and Certifications**

Please provide information on significant awards/certifications possessed by your organization or employees that is relevant to the successful delivery of this project.

#### 5.7 Training

Training the Client's personnel in operating and trouble-shooting the hardware and software installed as per this RFP. Please outline a description of the training plans (timeframe, resources etc) proposed for technical users to enhance in-house support.

#### **5.8 Procurement Tracking Process**

Bidders are expected to provide information on their procurement tracking process especially for items which are being imported. Please provide an overview of your procurement schedule. The schedule should contain the following key information:

- Average cycle time in days from order to receipt, shipment, local transportation arrangement etc
- b) Please try to ensure that your procurement cycle will conform to the detail project timeline provided in section 3.22.

#### 5.9 Implementation Methodology (Standards & Procedures)

Please describe your project implementation and project management methodology

- Provide a project schedule/plan, identifying the main stages and activities, and a) critical dependencies. Outline the dependencies on the Client for resources, infrastructure, information etc that may impact your delivery of services
- b) Provide details on how quality is assured during the entire project delivery
- Explain the procedures for reporting progress to the Client c)

#### 5.10 Financial Statement

Include copies of the <u>audited</u> financial statements. (E.g. Balance Sheet, Profit & Loss, Cash Flow Statement for the last 3 years)

### 6. Response Format

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The objective of the section is to enable a final comparison to be made between each Bidder's offerings. Only bids adhering to the response structure will be considered. When responding to questions, each item should be answered in a separate section, in the sequence given and should include the reference number.

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The required structure, numbering and content of each section of Bidders' responses is detailed below. All bids must include the following sections in order to be considered:

#### **6.1 Executive Summary**

This is to contain a brief summary of all the key aspects of the bid including but not limited to:

- 6.1.1 Statement of agreement (or exceptions if any) with terms and conditions stated in section 3
- 6.1.2 Overall description of your approach to meeting the Client's requirements
- 6.1.3 Details of Key Contact Person as required in section 3.20
- 6.1.4 Any other important/critical factors
- 6.1.5 Integrated Cost Sheet covering all bid areas
- 6.1.6 Check list of main documents (EMD, trade License, dealer authorization by the OEM, Tax Clearance Certificate, Power of Attorney, Signed, sealed and dated bid forms, Signed and Stamped Price Schedule, Signed Integrity Pact Statement, & Signed and Stamped technical specification)

#### 6.2 Bidder Profile

This section should contain information about the Bidder's organization and its capability to support the equipment/solution. Please respond to all the enquiries in Section 5 including information on Company Size, Organization and Location, Client References, Support Information, Strategic Alliances & Partnerships and comprehensive subcontractor information (if sub-contractors are involved).

#### 6.3 Proposed Solution(s) & Pricing Information

Please provide a description and technical details of the equipment/solution(s) components offered to the Client.

All price responses should be documented in line with format specified in Section 3.6 & 3.11 and should include:

a) Bill of Quantity, Price Quotation, Billing Schedule, and corresponding Warranty

b) Bidders must give price quotation separately as shown in the price schedule Annexure A6

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#### 6.4 Appendices

- a) All technical specifications, diagrams, relevant brochures/supporting documents of equipment, devices, resources and components of the proposed equipment/solution(s) that the Bidder considers relevant should be included in the Appendices.
- b) Also include detailed résumé of key personnel(s) to be involved in the implementation and a copy of any standard contract and other formal agreements you would propose to use.
- c) Please provide full and complete answers to all questions. Additional information may be included in the appropriate section if the RFP requirements do not specifically address a feature or functionality the Bidder would like to address as relevant to the section topic.
- d) Any deviation to the specification and the conditions in this RFP shall be clearly specified in the schedule of Deviations **Annexure A5.**

#### 6.5 Statement of Confidentiality

The RFP response should include the Statement of Confidentiality as per the format given below:-

#### **Statement of Confidentiality**

This request for proposal document is strictly confidential. It is made available to on the strict understanding that it will not be shown
to, read by or passed to any person who is not a current employee of
This document contains materials that are confidential and proprietary to Client. The materials, ideas, network design and concepts contained herein are supplied in confidence to and are to be used exclusively to understand the requirements of Client, towards submitting a bid to provide the required services.
The information and the ideas herein shall not be used in whole or in part by the or any of its subsidiaries, agents, sub-contractors or employees, and shall also not be disclosed, duplicated or otherwise revealed in whole or in part to any third party without the written consent of the Client.
Signature and Seal of Bidder Page   19
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### **Annexure**



### **Annexure A1: Summary of the entire BOQ**

SI/no	Particulars	Qty	Remarks
1	Core Router	2	DC
2	Internet Router	2	DC
3	Perimeter Firewall	2	DC
4	Server Farm Firewall	2	DC
5	Core Switch	2	DC
6	DC Server Farm Aggregation Switch	2	DC
7	Server Farm Access Switch	4	DC
8	Floor access Switch (48 Port)	15	DC
9	Floor Access Switch (24 Port)	2	DC
10	10G Base-SR Modules for Access Switches	12	DC



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### **Annexure A2: Minimum Technical Specification**

### 1. Core Router

S/N	Specifications		
Gene	General Feature and Performance		
1	The Router should support modular architecture, multi-core Processor, internal redundant field replaceable power supply (from Day-1). The Router Should have capabilities to seamless upgrade/replacement for modular interfaces (without interrupting running processes and services).		
2	Architecture should supports high bandwidth module to module communication at speeds up to 10 Gbps.		
3	Router should have 6 x 1G SFP/Base-T (combo or dedicated) port from Day 1.		
4	The Router should support interfaces supported by router like Channelized E1/T1, V.35, G.703, LTE, Gigabit and 10G Ethernet modules to accommodate field upgrades without rebooting the router.		
5	The Router should have 3 empty slot for future use		
6	Router should have minimum 6 GB of DRAM/RAM for data plane + control plane processes and 8GB Flash. Should support expandability up to 16GB DRAM and 32GB Flash.		
7	The router performance should be scalable up to 540 Mbps or more with IPSec + QoS + NAT + FW services from Day-1, scalable up to 950 Mbps with mentioned services.		
8	Router should support minimum 1000K IPv4 and IPv6 routes, with 4000 IPSec tunnel.		
9	The router should support 1.5 Gbps of IPSEC Bandwidth as and when required		
Laye	er-3 Features and Security		
1	Should support other IP Services like GRE tunnelling, ACLs, IPSEC VPNs, Firewalling, NAT services. Should support IPSec with IKEv2 Encryption.		
I have	Page   ii		

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S/N	Specifications
2	Should support Voice traffic optimization with features like WRED, H-QoS, RSVP, performance routing and network based application routing
3	Router should support static Routes, OSPFv2, OSPFv3, BGP4, MBGP, BFD, Policy based routing, IPv4 and IPv6 tunnelling
4	Should support Multicast routing protocols IGMP v1/v2/v3, PIM-SM, PIM-SS, DVMRP, IPv4 to IPv6 Multicast, BFD, IEEE802.3ah, IEEE802.1ag
5	Should support DHCPv6, IPv6 QoS, RIPng, OSPFv3
6	Should support MPLS, Layer2 and Layer3 VPN, L2TPv3
7	The Router should support Zone Based Firewall feature or an external appliance for the same functionality can be provided.
8	Router should Support Traffic Optimization feature built in the router operating system or an external appliance for the same functionality can be provided.
9	Shall have 802.1p class of service and marking, classification, policing and shaping.
10	Router should support SSHv2, SNMPv2c, SNMPv3 and NTP
11	Routers should support AAA using RADIUS and TACACS+
12	Should support extensive support for IP SLA and best path selection for metrics like delay, latency, jitter, packet loss to assure business-critical IP applications.
13	The router should support cRTP to compress voice (RTP) streams
14	Router should support monitoring of network traffic with application level insight with deep packet visibility into web traffic, RTP-Based VoIP traffic.
15	Router shall support traffic load balancing capability on dual WAN Links based on based on advanced criteria, such as reachability, delay, loss, jitter and bandwidth utilization.

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S/N	Specifications		
16	Router shall support capability to add on demand IPSec VPN tunnels dynamically established multipoint-to-multipoint IPSEC based spoke-to-spoke VPN tunnels matching traffic conditions		
17	<ul> <li>The Router shall support DNS security capability with following features:</li> <li>a. The supported DNS security must be cloud-delivered security service for the Routers is simple deploy and easy to manage.</li> <li>b. The supported DNS security Solution must have capability to analyse realtime, diverse data sets to learn Internet activity patterns.</li> <li>c. The supported DNS security Solution must be capable to provide DNS Visibility and enforcement at the DNS layer blocks requests to malicious domains and IPs before a connection is ever made</li> </ul>		
Cert	Certification		
1	Router shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.		
2	Router shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.		
3	Router/Router's Operating System should be tested and certified for EAL-2/NDPP or above under Common Criteria Certification		
4	Router should be IPv6 Certified/IPv6 logo ready		



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### 2. Internet Router

Specifications		
General Feature and Performance		
The Router should support modular architecture, multi-core Processor, internal field replaceable power supply .The Router Should have capabilities to seamless upgrade/replacement for modular interfaces (without interrupting running processes and services).		
Shall support 100Mbps Throughput from day-1, which can be scalable up to 300Mbps in future		
Router should have 3 x 1G UTP ports		
The Router should support interfaces supported by router like Channelized E1/T1, V.35, G.703, LTE, Gigabit and 10G Ethernet modules to accommodate field upgrades without rebooting the router.		
The Router should have 1 empty slot for future use		
Router should have minimum 4 GB of DRAM and 8GB Flash. Should support expandability of up to 16GB DRAM and 16GB Flash.		
The router performance should be scalable up to 85Mbps or more with IPSec + QoS + NAT + FW services from Day-1, scalable up to 200 Mbps with mentioned services.		
Router should support minimum 600K IPv4 and IPv6 routes, with 1000 IPSec tunnel.		
The router should support 270 mbps of IPSEC bandwidth as and when required		
Layer-3 Features and Security		
Should support other IP Services like GRE tunnelling, ACLs, IPSEC VPNs, Firewalling, NAT services. Should support IPSec with IKEv2 Encryption.		
Should support Voice traffic optimization with features like WRED, H-QoS, RSVP, performance routing and network based application routing		

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S/N	Specifications
3	Router should support static Routes, OSPFv2, OSPFv3, BGP4, MBGP, BFD, Policy based routing, IPv4 and IPv6 tunnelling
4	Should support Multicast routing protocols IGMP v1/v2/v3, PIM-SM, PIM-SS, DVMRP, IPv4 to IPv6 Multicast, BFD, IEEE802.3ah, IEEE802.1ag
5	Should support DHCPv6, IPv6 QoS, RIPng, OSPFv3
6	Should support MPLS, Layer2 and Layer3 VPN, L2TPv3
7	The Router should support Zone Based Firewall feature or an external appliance for the same functionality can be provided.
8	Router should Support Traffic Optimization feature built in the router operating system or an external appliance for the same functionality can be provided.
9	Shall have 802.1p class of service and marking, classification, policing and shaping.
10	Router should support SSHv2, SNMPv2c, SNMPv3 and NTP
11	Routers should support AAA using RADIUS and TACACS+
12	Should support extensive support for IP SLA and best path selection for metrics like delay, latency, jitter, packet loss to assure business-critical IP applications.
13	Router should support monitoring of network traffic with application level insight with deep packet visibility into web traffic, RTP-Based VoIP traffic.
14	The router should support cRTP to compress voice (RTP) streams
15	Router shall support traffic load balancing capability on dual WAN Links based on based on advanced criteria, such as reachability, delay, loss, jitter and bandwidth utilization.
16	Router shall support capability to add on demand IPSec VPN tunnels dynamically established multipoint-to-multipoint IPSEC based spoke-to-spoke VPN tunnels matching traffic conditions

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S/N	Specifications			
17	<ul> <li>The Router shall support DNS security capability with following features:</li> <li>a) The supported DNS security must be cloud-delivered security service for the Routers is simple deploy and easy to manage.</li> <li>b) The supported DNS security Solution must have capability to analyse real-time, diverse data sets to learn Internet activity patterns.</li> <li>c) The supported DNS security Solution must be capable to provide DNS Visibility and enforcement at the DNS layer blocks requests to malicious domains and IPs before a connection is ever made</li> </ul>			
Mult	Multi-media support (Only Future support by software upgradation in future):			
1	Should support Voice capabilities			
2	Should support G.711 and G.729 Codec			
3	Should support the capability to integrate with PBXs using E1 connectivity.			
4	Should support H.323, SIP, MGCP			
5	Should support QSIG, E1 R2 and several CAS signalling			
6	Should support bandwidth optimization features like Voice Activity Detection, Silence Suppression, Echo cancellation			
Certi	fication			
1	Router shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.			
2	Router shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.			
3	Router/Router's Operating System should be tested and certified for EAL 2/NDPP or above under Common Criteria Certification			
4	Router should be IPv6 Certified/IPv6 logo ready			



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### 3. Perimeter Firewall

S/N	Specifications		
Indu	Industry Certifications and Evaluations		
1	Firewall solution offered from OEM must be rated as 'leaders' or 'Challengers' in the latest Magic Quadrant for Enterprise Firewall published by Gartner		
2	Firewall solution offered from OEM must be part of NSS NGFW latest report and security effectiveness must be more than 60%		
Hard	ware Architecture		
1	The appliance based security platform should be capable of providing firewall, application visibility, IPS, Anti-APT and URL filtering functionality in a single appliance from day one.		
2	The appliance should support at least 12 x 10/100/1000 Base-T ports and 4 x 1G SFP ports from Day-1		
3	The appliance hardware should be a multicore CPU architecture with a hardened 64 bit operating system to support higher memory (minimum 16GB from day one)		
4	Proposed Firewall should not be proprietary ASIC based in nature & should be open architecture based on multi-core CPU's to protect & scale against dynamic latest security threats.		
5	Appliance should have 16GB RAM from day one for better performance		
Perfo	ormance & Scalability		
1	Should support at least 2Gbps of NGFW performance throughput (includes FW, Application Visibility & IPS)		
2	NG Firewall should support at least 1 million concurrent sessions		
3	NG Firewall should support at least 12000 connections per second with L7 Application visibility.		
4	NG Firewall should support at least 1000 VLANs		
/			

S/N	Specifications
5	The Firewall should support IPS, Malware Protection Feature and URL Filtering features from day-1
6	NG Firewall should support 50 VPN users from day-1 which can be scalable upto 1500 peers in future.
High	-Availability Features
1	Firewall should support Active/Standby failover
2	Firewall should support 802.3ad Etherchannel functionality for the failover control & date interfaces for provide additional level of redundancy
3	Firewall should support redundant interfaces to provide interface level redundancy before device failover
4	Firewall should support integrated redundant power supply
NGF	W Firewall Features
1	Solution must be capable of passively gathering information about network hosts and their activities, such as operating system, services, open ports, client applications, and vulnerabilities, to assist with multiple activities, such as intrusion event data correlation, elimination of false positives, and policy compliance.
2	Firewall should support creating access-rules with IPv4 & IPv6 objects simultaneously
3	Firewall should support operating in routed & transparent mode
4	Should support Static, RIP, OSPF, OSPFv3 and BGP
5	Firewall should support manual NAT and Auto-NAT, static nat, dynamic nat, dynamic pat
6	Firewall should support Nat66 (IPv6-to-IPv6), Nat 64 (IPv6-to-IPv4) & Nat46 (IPv4-to-IPv6) functionality
7/	Firewall should support Multicast protocols like IGMP, PIM, etc
8	Should support security policies based on security group names in source or destination fields or both
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aspects, mentioned above on this page, unconditionally,

S/N	Specifications
9	Should support capability to limit bandwidth on basis of apps / groups, Networks / Geo, Ports, etc
10	Should be capable of dynamically tuning IDS/IPS sensors (e.g., selecting rules, configuring policies, updating policies, etc.) with minimal human intervention.
11	Should be capable of automatically providing the appropriate inspections and protections for traffic sent over non-standard communications ports.
12	Should be able to link Active Directory and/or LDAP usernames to IP addresses related to suspected security events.
Shou	ld be capable of detecting and blocking IPv6 attacks.
1	Solution should support full-featured NBA capability to detect threats emerging from inside the network. This includes the ability to establish "normal" traffic baselines through flow analysis techniques (e.g., NetFlow) and the ability to detect deviations from normal baselines. If the vendor does not support this feature on the Firewall they can propose separate solution.
2	The solution must provide IP reputation feed that comprised of several regularly updated collections of poor reputation of IP addresses determined by the proposed security vendor
3	Solution must support IP reputation intelligence feeds from third party and custom lists of IP addresses including a global blacklist.
4	Should must support URL and DNS threat intelligence feeds to protect against threats
5	Should support Reputation- and category-based URL filtering offering comprehensive alerting and control over suspect web traffic and enforces policies on more than 280 million of URLs in more than 80 categories.
6	Should support safe search and YouTube EDU enforcement



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S/N	Specifications
7	Solution must be capable of passively gathering details unique to mobile devices traffic to identify a wide variety of mobile operating systems, mobile applications and associated mobile device hardware.
8	Should support more than 3000 application layer and risk-based controls that can invoke tailored intrusion prevention system (IPS) threat detection policies to optimize security effectiveness.
9	Should be capable of providing network-based detection of malware by checking the disposition of known files in the cloud using the SHA-256 file-hash as they transit the network and capability to do dynamic analysis on premise on purpose built-appliance (if required in future)
10	NGFW OEM must have its own threat intelligence analysis centre and should use the global footprint of security deployments for more comprehensive network protection.
11	The detection engine should support capability of detecting and preventing a wide variety of threats (e.g., malware, network probes/reconnaissance, VoIP attacks, buffer overflows, P2P attacks, etc.).
12	Should be able to identify attacks based on Geo-location and define policy to block on the basis of Geo-location
13	The detection engine should support the capability of detecting variants of known threats, as well as new threats
14	The detection engine must incorporate multiple approaches for detecting threats, including at a minimum exploit-based signatures, vulnerability-based rules, protocol anomaly detection, and behavioural anomaly detection techniques. Identify and explain each type of detection mechanism supported.
15	Should support Open based application ID for access to community resources and ability to easily customize security to address new and specific threats and applications quickly
Man	Page   vi

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S/N	Specifications
1	Centralized management should be separate appliance. It should be VM appliance or Hardware appliance
2	The management platform must be accessible via a web-based interface and ideally no need for additional client software
3	The management platform must provide a highly customizable dashboard.
4	The management platform must be capable of role-based administration, enabling different sets of views and configuration capabilities for different administrators subsequent to their authentication.
5	Appliance should have capacity to store record of 15000 users/host for log-correlation and forensic analysis
6	Centralised management can do contextual threat intelligence service accelerates analysis, correlation of events. This can be on appliance or can be cloud services
7	The management platform must include flexible workflow capabilities for managing the complete life cycle of an event, from initial notification through to any response and resolution activities that might be required.
8	The Centralised management platform must provide robust reporting capabilities, including a selection of pre-defined reports and the ability for complete customization and generation of new reports. Report can be consolidated or can be generate individual NGFW
9	Management need to provide complete threat intelligence report from day one. It can be from the appliance or can be from cloud services
10	The management platform must provide multiple report output types or formats, such as PDF, HTML, and CSV.
11	The management platform must support multiple mechanisms for issuing alerts (e.g., SNMP, e-mail, SYSLOG).
12	The management platform must risk reports like advanced malware, attacks and network

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S/N	Specifications
13	The management platform must include an integration mechanism, preferably in the form of open APIs and/or standard interfaces, to enable events and log data to be shared with external network and security management applications, such as Security Information and Event Managers (SIEMs), and log management tools.
14	Should support REST API for monitoring and configuration programmability

## 4. Server Farm Firewall

S/N	Specifications	
Indus	Industry Certifications and Evaluations	
1	Firewall solution offered from OEM must be rated as 'leaders' or 'Challengers' in the latest Magic Quadrant for Enterprise Firewall published by Gartner	
2	Firewall solution offered from OEM must be part of NSS NGFW latest report and security effectiveness must be more than 60%	
Hard	ware Architecture	
1	The appliance based security platform should be capable of providing firewall, application visibility, IPS, Anti-APT and URL filtering functionality in a single appliance from day one.	
2	The appliance should support at least 12 x1G and 4 x 10G SFP+ ports from Day one and should be scalable to support additional 8 x 10G ports in future. The firewall should be populated with 4 x 10G Base-SR modules. The fiber modules should be compatible with the proposed Core switches.	
3	The appliance hardware should be a multicore CPU architecture with a hardened 64 bit operating system to support higher memory (minimum 64GB from day one)	

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S/N	Specifications	
4	Proposed Firewall should not be proprietary ASIC based in nature & should be open architecture based on multi-core cpu's to protect & scale against dynamic latest security threats.	
5	Appliance should have 64 GB RAM from day one for better performance	
Perfo	ormance & Scalability	
1	Should support at least 8.5 Gbps of NGFW performance throughput (includes FW, Application Visibility & IPS) with minimum 1.5KB TCP (HTTP) packet size	
2	NG Firewall should support at least 3 million concurrent sessions	
3	NG Firewall should support at least 40000 connections per second with L7 Application visibility.	
4	NG Firewall should support at least 1000 VLANs	
5	The Firewall should support IPS features from day-1 and scalable to support Malware Protection Feature and URL Filtering features in future.	
High-	Availability Features	
1	Firewall should support Active/Standby failover	
2	Firewall should support 802.3ad Etherchannel functionality for the failover control & date interfaces for provide additional level of redundancy	
3	Firewall should support redundant interfaces to provide interface level redundancy before device failover	
4	Firewall should support integrated redundant power supply	
NGF	NGFW Firewall Features	

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Page | xiv | I have read and hereby correctly state data/ accept all terms/ conditions/ criteria / other aspects, mentioned above on this page, unconditionally,

S/N	Specifications
1	Solution must be capable of passively gathering information about network hosts and their activities, such as operating system, services, open ports, client applications, and vulnerabilities, to assist with multiple activities, such as intrusion event data correlation, elimination of false positives, and policy compliance.
2	Firewall should support creating access-rules with IPv4 & IPv6 objects simultaneously
3	Firewall should support operating in routed & transparent mode
4	Should support Static, RIP, OSPF, OSPFv3 and BGP
5	Firewall should support manual NAT and Auto-NAT, static nat, dynamic nat, dynamic pat
6	Firewall should support Nat66 (IPv6-to-IPv6), Nat 64 (IPv6-to-IPv4) & Nat46 (IPv4-to-IPv6) functionality
7	Firewall should support Multicast protocols like IGMP, PIM, etc
8	Should support security policies based on security group names in source or destination fields or both
9	Should support capability to limit bandwidth on basis of apps / groups, Networks / Geo, Ports, etc
10	Should be capable of dynamically tuning IDS/IPS sensors (e.g., selecting rules, configuring policies, updating policies, etc.) with minimal human intervention.
11	Should be capable of automatically providing the appropriate inspections and protections for traffic sent over non-standard communications ports.
12	Should be able to link Active Directory and/or LDAP usernames to IP addresses related to suspected security events.
13	Should be capable of detecting and blocking IPv6 attacks.

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S/N	Specifications
14	Solution should support full-featured NBA capability to detect threats emerging from inside the network. This includes the ability to establish "normal" traffic baselines through flow analysis techniques (e.g., NetFlow) and the ability to detect deviations from normal baselines. If the vendor does not support this feature on the Firewall they can propose separate solution.
15	The solution must provide IP reputation feed that comprised of several regularly updated collections of poor reputation of IP addresses determined by the proposed security vendor
16	Solution must support IP reputation intelligence feeds from third party and custom lists of IP addresses including a global blacklist.
17	Should must support URL and DNS threat intelligence feeds to protect against threats
18	Should support Reputation- and category-based URL filtering offering comprehensive alerting and control over suspect web traffic and enforces policies on more than 280 million of URLs in more than 80 categories.
19	Should support safe search and YouTube EDU enforcement
20	Solution must be capable of passively gathering details unique to mobile devices traffic to identify a wide variety of mobile operating systems, mobile applications and associated mobile device hardware.
21	Should support more than 3000 application layer and risk-based controls that can invoke tailored intrusion prevention system (IPS) threat detection policies to optimize security effectiveness.
22	Should be capable of providing network-based detection of malware by checking the disposition of known files in the cloud using the SHA-256 file-hash as they transit the network and capability to do dynamic analysis on premise on purpose built-appliance (if required in future)
23	NGFW OEM must have its own threat intelligence analysis centre and should use the global footprint of security deployments for more comprehensive network protection.

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S/N	Specifications
24	The detection engine should support capability of detecting and preventing a wide variety of threats (e.g., malware, network probes/reconnaissance, VoIP attacks, buffer overflows, P2P attacks, etc.).
25	Should be able to identify attacks based on Geo-location and define policy to block on the basis of Geo-location
26	The detection engine should support the capability of detecting variants of known threats, as well as new threats
27	The detection engine must incorporate multiple approaches for detecting threats, including at a minimum exploit-based signatures, vulnerability-based rules, protocol anomaly detection, and behavioural anomaly detection techniques. Identify and explain each type of detection mechanism supported.
28	Should support Open based application ID for access to community resources and ability to easily customize security to address new and specific threats and applications quickly
Mana	agement
1	Centralized management should be separate appliance. It should be VM appliance or Hardware appliance
2	The management platform must be accessible via a web-based interface and ideally no need for additional client software
3	The management platform must provide a highly customizable dashboard.
4	The management platform must be capable of role-based administration, enabling different sets of views and configuration capabilities for different administrators subsequent to their authentication.
5	Appliance should have capacity to store record of 15000 users/host for log-correlation and forensic analysis
6	Centralised management can do contextual threat intelligence service accelerates analysis, correlation of events. This can be on appliance or can be cloud services
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S/N	Specifications
7	The management platform must include flexible workflow capabilities for managing the complete life cycle of an event, from initial notification through to any response and resolution activities that might be required.
8	The Centralised management platform must provide robust reporting capabilities, including a selection of pre-defined reports and the ability for complete customization and generation of new reports. Report can be consolidated or can be generate individual NGFW
9	Management need to provide complete threat intelligence report from day one. It can be from the appliance or can be from cloud services
10	The management platform must provide multiple report output types or formats, such as PDF, HTML, and CSV.
11	The management platform must support multiple mechanisms for issuing alerts (e.g., SNMP, e-mail, SYSLOG).
12	The management platform must risk reports like advanced malware, attacks and network
13	The management platform must include an integration mechanism, preferably in the form of open APIs and/or standard interfaces, to enable events and log data to be shared with external network and security management applications, such as Security Information and Event Managers (SIEMs), and log management tools.
14	Should support REST API for monitoring and configuration programmability
15	Both perimeter and Server Farm firewalls should be manageable through same management software. This software should be proposed with 10 Firewall manage license.



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### 5. Core Switch

S/N	Specifications		
Gene	General		
1	Switch OEM should be in the Gartner's Leaders & Challengers quadrant for Wired and Wireless LAN Access Infrastructure for past 3 years.		
2	The Switch should have minimum 40 x 10G SFP+ Ports for the downlink connectivity and at least 8 x 10G SFP+ ports for uplink connections and future use		
3	The switches populated with 12 x 10G Base-SR modules and 8 x 1000 Base-T Modules. The Switch and fiber modules should be from same OEM.		
4	All Switches proposed in the RFP should be from same OEM.		
5	Should have internal Redundant Power supply from Day 1		
6	Support for Configuration and image rollback		
7	IPv4 & IPv6 Layer 3 forwarding in hardware		
8	Should have at least 16 GB DRAM & 16GB Flash memory		
Perf	ormance		
1	Should have at least 480 Gbps Switching capacity & 700 Mbps forwarding rate		
2	Fully non-blocking backplane and wire-speed throughput with minimal latency		
3	MAC Address table : 64000		
4	Should support 64000 IPv4 Routes, 32000 IPv6 Routes		
5	Should support 32000 IPv4 Multicast Routes, 16000 IPv6 Multicast Routes		
Layer 3 feature ruc			

S/N	Specifications	
1	Basic IP unicast routing protocols (static, RIPv1, and RIPv2) should be supported from day 1.	
2	Should have support for advanced routing support including OSPF, IS-IS, BGP, policy based routing & Multicast routing, Protocol-independent multicast (PIM) for IP multicast routing is supported, including PIM sparse mode (PIM-SM), PIM dense mode (PIM-DM), PIM sparse-dense mode, and source-specific multicast (SSM),PBR,BGPv4, and IS-ISv4, OSPFv3 etc from day-1	
Laye	r 2 feature	
1	IEEE 802.1Q VLAN encapsulation. At least 1000 VLANs should be supported. Support for 4000 VLAN IDs.	
2	Centralized VLAN Management. VLANs created on the Core Switches should be propagated automatically.	
3	IEEE 802.1d, 802.1s, 802.1w, 802.3ad standard support from day-1	
4	Link Aggregation Protocol (LACP)	
5	Support for Detection of Unidirectional Links (in case of fiber cut) and to disable them to avoid problems such as spanning-tree loops.	
6	The Switch should be able to discover the neighbouring device giving the details about the platform, IP Address, Link connected through etc, thus helping in troubleshooting connectivity problems.	
7	Per-port broadcast, multicast, and storm control to prevent faulty end stations from degrading overall systems performance.	
Netw	Network Security Features	
	Support for mechanisms to improve the network's ability to automatically identify, prevent, and respond to security threats and also to enable the switches to collaborate with third-party solutions for security-policy compliance and enforcement before a host is permitted to access the network. Thus preventing the spread of Viruses & worms.  Page   xx   read and hereby correctly state data/ accept all terms/ conditions/ criteria / other	
	s, mentioned above on this page, unconditionally,	

S/N	Specifications	
2	IEEE 802.1x to allow dynamic, port-based security, providing user authentication.	
3	Port-based ACLs for Layer 2 interfaces to allow application of security policies on individual switch ports. There should be a scale of at least 16000 Security ACLs on the switch from Day 1	
4	Support for SSHv2 and SNMPv3.	
5	RADIUS authentication to enable centralized control of the switch and restrict unauthorized users from altering the configuration.	
6	MAC address notification to allow administrators to be notified of users added to or removed from the network.	
7	Dynamic ARP Inspection or equivalent which can ensure user integrity by preventing malicious users from exploiting the insecure nature of the ARP protocol.	
8	DHCP snooping to allow administrators to ensure consistent mapping of IP to MAC addresses. This can be used to prevent attacks that attempt to poison the DHCP binding database, and to rate-limit the amount of DHCP traffic that enters a switch port.	
9	Port security to secure the access to an access or trunk port based on MAC address.	
10	Multilevel security on console access to prevent unauthorized users from altering the switch configuration using local database or through an external AAA Server.	
11	Spanning tree feature to shut down Spanning Tree Protocol enabled interfaces when BPDU's are received to avoid accidental topology loops.	
Qual	Quality of Service (QoS) & Control	
1	Standard 802.1p CoS and DSCP	
2	Control- and Data-plane QoS ACLs	
3/	Eight egress queues per port to enable differentiated management of up to four traffic types across the stack.	



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S/N	Specifications	
4	Support for congestion avoidance mechanism	
5	Strict priority queuing mechanisms	
6	There should not be any performance penalty for highly granular QoS functions.	
7	Future support for feature which will provide rate limiting based on source and destination IP address, source and destination MAC address, Layer 4 TCP and UDP information, or any combination of these fields, using QoS ACLs (IP ACLs or MAC ACLs), class maps, and policy maps.	
Man	agement	
1	Command Line Interface (CLI) support for configuration & troubleshooting purposes.	
2	For enhanced traffic management, monitoring, and analysis, upto four RMON groups (history, statistics, alarms, and events) must be supported.	
3	Domain Name System (DNS) support to provide IP address resolution with user-defined device names.	
4	FTP/ Trivial File Transfer Protocol (TFTP) to reduce the cost of administering software upgrades by downloading from a centralized location.	
5	Network Timing Protocol (NTP) based on RFC 1305 to provide an accurate and consistent timestamp to all intranet switches.	
6	SNMP v1, v2c, and v3 and Telnet interface support delivers comprehensive inband management, and a CLI-based management console provides detailed out-of-band management.	
7	RMON I and II standards	
8	SNMPv1, SNMPv2c, and SNMPv3	
Cert	Certification:	

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S/N	Specifications
1	The Operating System of the Switch should be tested and certified for EAL-2/NDPP or above under Common Criteria Certification
2	The Switch should be IPv6 Ready Logo certified

## 6. DC Server Farm Aggregation Switch

S/N	Specifications	
Hard	Hardware features	
1	Proposed network device must be 19" rack mountable & 1 RU in size.	
2	It is desirable that the network infrastructure is based on delivering front to back airflow.	
3	Must have Redundancy Power Supply Units (PSUs), Hot-swappable, field-replaceable power supplies, 1:1 power redundancy.	
4	Must have N: 1 fan module redundancy.	
5	In the event of a PSU failure, a single power supply Must be able to support the network device.	
6	The switch should have 48 x 1/10/25-Gbps fiber ports and 6 x 40/100-Gbps Quad Small Form-Factor Pluggable 28 (QSFP28) ports. The switch should be populated with 8 x 1G UTP modules and 12 x 10G Base-SR Modules. Switch should have 1 x 40G DAC Cable (1m long) and 2 x 40G DAC Cable (10m long). All fiber modules, DAC cables and Switches should be from same OEM. All Switches proposed in the RFP should be from same OEM.	
7	Must support Standard SFPs like including QSFP, SFP+, 1000BASE-T SFP, Gigabit Ethernet SFP.	
8	Should support 3.2Tbps throughput & 2.4Bpps forwarding rate	
9	Must have Line-rate traffic throughput on all ports at Layer 2.	

S/N	Specifications
10	Must have Line-rate traffic throughput on all ports at Layer 3
11	Must support minimum 240000 MAC address table entries.
12	Support for 32000 multicast routes
13	Support for 1000 VRF instances which can be scalable to support upto 12000 in future
14	Support for 30000 IGMP Groups
15	Should support 600000 shared IP host entries
16	Should support 128000 unicast routes
Switch features	
1	Must support Ten Gigabit Ethernet (IEEE 802.3ae)
2	Must support IEEE 802.1d - Spanning-Tree Protocol
3	Must support IEEE 802.1w - Rapid Spanning Tree
4	Must support IEEE 802.1s - Multiple Spanning Tree Protocol
5	Must support IEEE 802.1q - VLAN encapsulation
6	Must support IEEE 802.3ad - Link Aggregation Control Protocol (LACP)
7	Must support IEEE 802.1ab - Link Layer Discovery Protocol (LLDP)
8	Must support IEEE 802.3x Flow Control
9	Must support auto-sensing and auto-negotiation (Link Speed/Duplex)
10	Routing protocol support when upgraded with Layer3 License
11	Must support Static IP routing
12	Must support Open Shortest Path First (OSPF) v2 (RFC 2328)
10	Routing protocol support when upgraded with Layer3 License  Must support Static IP routing

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S/N	Specifications
13	Must support Protocol Independent Multicast Version 2 (PIMv2) sparse mode, Source Specific Multicast (SSM), Multicast Source Discovery Protocol (MSDP), and Internet Group Management Protocol Versions 2, and 3 (IGMP v2, and v3)
14	Must have Routed ports on platform interfaces, switch virtual interface (SVI), PortChannels, sub interfaces, and PortChannel sub interfaces for a total of 4096 entries
15	Virtual Route Forwarding (VRF): VRF-lite (IP VPN); VRF-aware unicast; and BGP-, OSPF-, RIP-, and VRF-aware multicast
16	Must support 64-way equal-cost multipathing (ECMP)
17	Must support In-Service Software Upgrade (ISSU) for Layer 2
18	Must have Layer 2 IEEE 802.1p
19	Must have 8 hardware queues per port with per port QoS configuration
20	Must have Modular QoS classification compliance
21	Must have per port virtual output queuing
22	Must have ether channel support allowing up to 32 ports per EtherChannel
23	Must support Jumbo Frame Size (9k)
24	IEEE 802.3ad Link Aggregation or equivalent capabilities
25	Must provide for at least 32 physical ports grouped together into a single logical link
26	Must be able to load balance across a logical bundle using the following algorithms: Source & Destination IP, Source and Destination MAC, TCP Port (destination and/or source), UDP Port (destination and/or source)
27	Switch must support VXLAN (Bridging and Routing) as well as NVGRE overlay encapsulation protocol in hardware to support multiple hypervisor deployment in the Data Center
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S/N	Specifications		
Secu	Security features		
1	Must support multiple privilege levels for remote access (e.g. console or telnet access)		
2	Must support Remote Authentication Dial-In User Service (RADIUS) and/or Terminal Access Controller Access Control System Plus (TACACS+)		
3	Must support AAA using RADIUS (RFC 2138 & 2139) and/or TACACS+, enabling centralized control of the device and the ability to restrict unauthorized users from altering the configuration		
4	Must have following Access Control features		
5	Must support Ingress ACLs (Standard & Extended) on Ethernet and virtual Ethernet ports		
6	Must support Standard and extended Layer 2 ACLs: MAC addresses, protocol type, etc.		
7	Must support Standard and extended Layer 3 to 4 ACLs: IPv4 and v6, Internet Control Message Protocol (ICMP), TCP, User Datagram Protocol (UDP), etc.		
8	Must support VLAN based ACLs (VACLs) and Port-Based ACLs (PACLs)		
9	Must support ACL logging and statistics		
10	Must support Storm control (unicast, multicast, and broadcast)		
11	Must have Optimized ACL Distribution		
QoS	QoS features		
1	Must support IEEE 802.1p class-of-service (CoS) prioritization		
2	Must have 8 Hardware queues per port		
3	Must have Per-Port QoS configuration		



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S/N	Specifications
4	Must have CoS Trust
5	Must have CoS-based egress queuing
6	Must have Egress strict-priority queuing
7	Must have Modular QoS classification compliance
8	Must have per port virtual output queuing
9	Must support Egress port-based scheduling: Weighted Round-Robin (WRR)
10	Must have ACL-based QoS classification (Layers 2, 3, and 4)
Man	agement features
1	Must provide management using 10/100/1000-Mbps management or console ports
2	Must have CLI-based console to provide detailed out-of-band management
3	Must have In-band switch management
4	Must have Configuration synchronization & Configuration rollback
5	Must support Secure Shell Version 2 (SSHv2), Telnet & SNMPv1, v2, and v3
6	Must support AAA, AAA with RBAC, Radius, TACACS+ for user authentication
7	Must support RMON
8	Must support XML (NETCONF)
9	Must have Advanced Encryption Standard (AES) for management traffic
10	Must support Unified username and passwords across CLI and SNMP
11	Must support Microsoft Challenge Handshake Authentication Protocol (MS-CHAP)
12	Must have Digital certificates for management between switch and RADIUS server
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S/N	Specifications
13	Must support Port Mirroring on physical, PortChannel, VLAN interfaces

### 7. Server Farm Access Switch

S/N	Specifications	
Hard	Hardware features	
1	Proposed network device must be 19" rack mountable & 1 RU in size.	
2	It is desirable that the network infrastructure is based on delivering front to back airflow.	
3	Must have Redundancy Power Supply Units (PSUs), Hot-swappable, field-replaceable power supplies, 1:1 power redundancy.	
4	Must have N:1 fan module redundancy.	
5	In the event of a PSU failure, a single power supply Must be able to support the network device.	
6	The switch should have $48 \times 1/10G$ Base-T copper ports and $6 \times 40/100$ -Gbps Quad Small Form-Factor Pluggable $28$ (QSFP28) ports. The switch should be populated with $4 \times 40G$ DAC Cable (10m long). All Switches proposed in the RFP should be from same OEM.	
7	Should support 2.0Tbps throughput & 1.5Bpps forwarding rate	
8	Must have Line-rate traffic throughput on all ports at Layer 2.	
9	Must have Line-rate traffic throughput on all ports at Layer 3	
10	Must support minimum 240000 MAC address table entries.	
11	Support for 32000 multicast routes	
12	Support for 1000 VRF instances which can be scalable to support upto 12000 in future	
1	Page   xxviii	

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S/N	Specifications
13	Support for 30000 IGMP Groups
14	Should support 600000 shared IP host entries
15	Should support 128000 unicast routes
Swit	ch features
1	Must support Ten Gigabit Ethernet (IEEE 802.3ae)
2	Must support IEEE 802.1d - Spanning-Tree Protocol
3	Must support IEEE 802.1w - Rapid Spanning Tree
4	Must support IEEE 802.1s - Multiple Spanning Tree Protocol
5	Must support IEEE 802.1q - VLAN encapsulation
6	Must support IEEE 802.3ad - Link Aggregation Control Protocol (LACP)
7	Must support IEEE 802.1ab - Link Layer Discovery Protocol (LLDP)
8	Must support IEEE 802.3x Flow Control
9	Must support auto-sensing and auto-negotiation (Link Speed/Duplex)
10	Routing protocol support when upgraded with Layer3 License
11	Must support Static IP routing
12	Must support Open Shortest Path First (OSPF) v2 (RFC 2328)
13	Must support Protocol Independent Multicast Version 2 (PIMv2) sparse mode, Source Specific Multicast (SSM), Multicast Source Discovery Protocol (MSDP), and Internet Group Management Protocol Versions 2, and 3 (IGMP v2, and v3)

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S/N	Specifications
14	Must have Routed ports on platform interfaces, switch virtual interface (SVI), PortChannels, sub interfaces, and PortChannel sub interfaces for a total of 4096 entries
15	Virtual Route Forwarding (VRF): VRF-lite (IP VPN); VRF-aware unicast; and BGP-, OSPF-, RIP-, and VRF-aware multicast
16	Must support 64-way equal-cost multipathing (ECMP)
17	Must support In-Service Software Upgrade (ISSU) for Layer 2
18	Must have Layer 2 IEEE 802.1p
19	Must have 8 hardware queues per port with per port QoS configuration
20	Must have Modular QoS classification compliance
21	Must have per port virtual output queuing
22	Must have ether channel support allowing upto 32 ports per EtherChannel
23	Must support Jumbo Frame Size (9k)
24	IEEE 802.3ad Link Aggregation or equivalent capabilities
25	Must provide for at least 32 physical ports grouped together into a single logical link
26	Must be able to load balance across a logical bundle using the following algorithms: Source & Destination IP, Source and Destination MAC, TCP Port (destination and/or source), UDP Port (destination and/or source)
27	Switch must support VXLAN (Bridging and Routing) as well as NVGRE overlay encapsulation protocol in hardware to support multiple hypervisor deployment in the Data Center
Seci	erity features

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S/N	Specifications	
1	Must support multiple privilege levels for remote access (e.g. console or telnet access)	
2	Must support Remote Authentication Dial-In User Service (RADIUS) and/or Terminal Access Controller Access Control System Plus (TACACS+)	
3	Must support AAA using RADIUS (RFC 2138 & 2139) and/or TACACS+, enabling centralized control of the device and the ability to restrict unauthorized users from altering the configuration	
4	Must have following Access Control features	
5	Must support Ingress ACLs (Standard & Extended) on Ethernet and virtual Ethernet ports	
6	Must support Standard and extended Layer 2 ACLs: MAC addresses, protocol type, etc.	
7	Must support Standard and extended Layer 3 to 4 ACLs: IPv4 and v6, Internet Control Message Protocol (ICMP), TCP, User Datagram Protocol (UDP), etc.	
8	Must support VLAN based ACLs (VACLs) and Port-Based ACLs (PACLs)	
9	Must support ACL logging and statistics	
10	Must support Storm control (unicast, multicast, and broadcast)	
11	Must have Optimized ACL Distribution	
QoS	QoS features	
1	Must support IEEE 802.1p class-of-service (CoS) prioritization	
2	Must have 8 Hardware queues per port	
3	Must have Per-Port QoS configuration	
5	Must have CoS Trust	
6	Must have CoS-based egress queuing	

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S/N	Specifications
7	Must have Egress strict-priority queuing
8	Must have Modular QoS classification compliance
9	Must have per port virtual output queuing
10	Must support Egress port-based scheduling: Weighted Round-Robin (WRR)
11	Must have ACL-based QoS classification (Layers 2, 3, and 4)
Man	agement features
1	Must provide management using 10/100/1000-Mbps management or console ports
2	Must have CLI-based console to provide detailed out-of-band management
3	Must have In-band switch management
4	Must have Configuration synchronization & Configuration rollback
5	Must support Secure Shell Version 2 (SSHv2), Telnet & SNMPv1, v2, and v3
6	Must support AAA, AAA with RBAC, Radius, TACACS+ for user authentication
7	Must support RMON
8	Must support XML (NETCONF)
9	Must have Advanced Encryption Standard (AES) for management traffic
10	Must support Unified username and passwords across CLI and SNMP
11	Must support Microsoft Challenge Handshake Authentication Protocol (MS-CHAP)
12	Must have Digital certificates for management between switch and RADIUS server
13	Must support Port Mirroring on physical, PortChannel, VLAN interfaces

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### 8. Floor access Switch (48 Port)

S/N	Specifications	
Gen	General Features	
1	Switch OEM should be in the Gartner's Leaders & Challengers quadrant for Wired and Wireless LAN Access Infrastructure for past 3 years.	
2	The switch should have minimum $48 \times 10/100/1000$ Base-T POE/POE+ Ports & $2 \times 10G$ SFP+ slots. The POE budget of the switch should be 720W.	
3	Future support for external Redundant Power supply	
4	Should have fan for proper cooling.	
5	All Switches proposed in the RFP should be from same OEM.	
Perf	Performance	
1	At least 200 Gbps switching bandwidth	
2	Forwarding rate – At least 120 Mpps.	
3	Configurable at least 16000 MAC addresses	
4	The switch should support stacking with 80 Gbps Stacking bandwidth to stack up to 8 switches into a single virtual switch. Stacking is required from day 1 with 1mtr stacking cable.	
5	DRAM 512 MB and 128 MB Flash	
Laye	Layer-2 Features	
1	IEEE 802.1Q VLAN encapsulation. At least 1000 VLANs should be supported. Support for 4000 VLAN IDs.	
2	Support for Automatic Negotiation of Trunking Protocol, to help minimize the configuration & errors.	
3	Centralized VLAN Management. VLANs created on the Core Switches should be propagated automatically.	
4	Spanning-tree Enhancements for fast convergence	
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S/N	Specifications
5	IEEE 802.1d, 802.1s, 802.1w, 802.3ad, 802.3af, 802.3at.
6	Spanning-tree root guard feature to prevent other edge switches becoming the root bridge.
7	IGMPv3. Support for at least 1000 IGMP Groups. IGMP filtering.
8	Link Aggregation Protocol (LACP)
9	Support for UDLD (in case of fiber cut) and to disable them to avoid problems such as spanning-tree loops.
10	The Switch should be able to discover the neighbouring device of the same vendor giving the details about the platform, IP Address, Link connected through etc, thus helping in troubleshooting connectivity problems.
11	Per-port broadcast, multicast, and storm control to prevent faulty end stations from degrading overall systems performance.
12	Local Proxy Address Resolution Protocol (ARP) to work in conjunction with Private VLAN Edge to minimize broadcasts and maximize available bandwidth.
13	Multicast VLAN registration (MVR) to continuously send multicast streams in a multicast VLAN while isolating the streams from subscriber VLANs for bandwidth and security reasons.
Netv	work Security Features
1	Support for mechanisms to improve the network's ability to automatically identify, prevent, and respond to security threats and also to enable the switches to collaborate with third-party solutions for security-policy compliance and enforcement before a host is permitted to access the network. Thus preventing the spread of Viruses & worms.
2	IEEE 802.1x to allow dynamic, port-based security, providing user authentication.
3	Port-based ACLs for Layer 2 interfaces to allow application of security policies on individual switch ports.
4	SSHv2 and SNMPv3 to provide network security by encrypting administrator traffic during Telnet and SNMP sessions.



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S/N	Specifications
5	Bidirectional data support on the Mirrored port to allow the intrusion detection system (IDS) to take action when an intruder is detected.
6	RADIUS authentication to enable centralized control of the switch and restrict unauthorized users from altering the configuration.
7	MAC address notification to allow administrators to be notified of users added to or removed from the network.
8	DHCP snooping to allow administrators to ensure consistent mapping of IP to MAC addresses. This can be used to prevent attacks that attempt to poison the DHCP binding database, and to rate-limit the amount of DHCP traffic that enters a switch port.
9	Port security to secure the access to an access or trunk port based on MAC address.
10	Multilevel security on console access to prevent unauthorized users from altering the switch configuration using local database or through an external AAA Server.
11	BPDU Guard to shut down Spanning Tree Protocol PortFast-enabled interfaces when BPDU's are received to avoid accidental topology loops.
12	Should support 500 IPv4 ACL entries, 500 IPv6 ACL entries,
Qua	lity of Service (QoS) & Multicast
1	Standard 802.1p CoS and DSCP
2	Control- and Data-plane QoS ACLs, Cross-stack QoS
3	Up to eight egress queues per port
4	Strict priority queuing mechanisms
5	There should not be any performance penalty for highly granular QoS functions.
6	Committed information rate (CIR) function to provide bandwidth in increments of 8 Kbps



Page | xxxv | I have read and hereby correctly state data/ accept all terms/ conditions/ criteria / other aspects, mentioned above on this page, unconditionally,

S/N	Specifications
7	Rate limiting should be provided based on source and destination IP address, source and destination MAC address, Layer 4 TCP and UDP information, or any combination of these fields, using QoS ACLs (IP ACLs or MAC ACLs), class maps, and policy maps.
8	Flow-based rate limiting and up to 200 aggregate or individual policers per port
9	Shaped Round Robin (SRR) scheduling and Weighted Tail Drop (WTD) congestion avoidance.
10	2000 IPv4 & IPv6 Unicast Routes
11	1000 IPv4 Multicast Groups, 1000 IPv6 Multicast Groups
Man	agement
	Superior manageability Features
	Command Line Interface (CLI) support for configuration & troubleshooting purposes.
	For enhanced traffic management, monitoring, and analysis, upto four RMON groups (history, statistics, alarms, and events) must be supported.
	Layer 2 trace route to ease troubleshooting by identifying the physical path that a packet takes from source to destination.
	Domain Name System (DNS) support to provide IP address resolution with user-defined device names.
	FTP/ Trivial File Transfer Protocol (TFTP) to reduce the cost of administering software upgrades by downloading from a centralized location.
	Network Timing Protocol (NTP) based on RFC 1305 to provide an accurate and consistent timestamp to all intranet switches.
	SNMP v1, v2c, and v3 and Telnet interface support delivers comprehensive in-band management, and a CLI-based management console provides detailed out-of-band management.
	RMON and II standards
1	Page   yyyvi

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S/N	Specifications
	Certification:
	The Operating System of the Switch should be tested and certified for EAL-2/NDPP or above under Common Criteria Certification
	The Switch should be IPv6 Ready Logo certified

## 9. Floor Access Switch (24 Port)

S/N	Specifications	
Gene	eral Features	
1	Switch OEM should be in the Gartner's Leaders & Challengers quadrant for Wired and Wireless LAN Access Infrastructure for past 3 years.	
2	The switch should have minimum 24 x 10/100/1000 Base-T POE/POE+ Ports & 2 x 10G SFP+ slots. The POE budget of the switch should be 360W.	
3	Future support for external Redundant Power supply	
4	Should have fan for proper cooling.	
Perf	Performance	
1	At least 160 Gbps switching bandwidth	
2	Forwarding rate – At least 90 Mpps.	
3	Configurable at least 16000 MAC addresses	
4	The switch should support stacking with 80 Gbps Stacking bandwidth to stack upto 8 switches into a single virtual switch. Stacking is required from day 1 with 1mtr stacking cable.	
5	DRAM 512 MB and 128 MB Flash	
Laye	Layer-2 Features	
1	Support for 4000 VLAN IDs.	

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S/N	Specifications	
2	Support for Automatic Negotiation of Trunking Protocol, to help minimize the configuration & errors.	
3	Centralized VLAN Management. VLANs created on the Core Switches should be propagated automatically.	
4	Spanning-tree Enhancements for fast convergence	
5	IEEE 802.1d, 802.1s, 802.1w, 802.3ad, 802.3af, 802.3at.	
5	Spanning-tree root guard feature to prevent other edge switches becoming the root bridge.	
6	IGMPv3. Support for at least 1000 IGMP Groups. IGMP filtering.	
7	Link Aggregation Protocol (LACP)	
8	Support for UDLD (in case of fiber cut) and to disable them to avoid problems such as spanning-tree loops.	
9	The Switch should be able to discover the neighbouring device of the same vendor giving the details about the platform, IP Address, Link connected through etc, thus helping in troubleshooting connectivity problems.	
10	Per-port broadcast, multicast, and storm control to prevent faulty end stations from degrading overall systems performance.	
11	Local Proxy Address Resolution Protocol (ARP) to work in conjunction with Private VLAN Edge to minimize broadcasts and maximize available bandwidth.	
12	Multicast VLAN registration (MVR) to continuously send multicast streams in a multicast VLAN while isolating the streams from subscriber VLANs for bandwidth and security reasons.	
Netv	Network Security Features	
1	Support for mechanisms to improve the network's ability to automatically identify, prevent, and respond to security threats and also to enable the switches to collaborate with third-party solutions for security-policy compliance and enforcement before a host is permitted to access the network. Thus preventing the spread of Viruses & worms.	

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S/N	Specifications	
2	IEEE 802.1x to allow dynamic, port-based security, providing user authentication.	
3	Port-based ACLs for Layer 2 interfaces to allow application of security policies on individual switch ports.	
4	SSHv2 and SNMPv3 to provide network security by encrypting administrator traffic during Telnet and SNMP sessions.	
5	Bidirectional data support on the Mirrored port to allow the intrusion detection system (IDS) to take action when an intruder is detected.	
6	RADIUS authentication to enable centralized control of the switch and restrict unauthorized users from altering the configuration.	
7	MAC address notification to allow administrators to be notified of users added to or removed from the network.	
8	DHCP snooping to allow administrators to ensure consistent mapping of IP to MAC addresses. This can be used to prevent attacks that attempt to poison the DHCP binding database, and to rate-limit the amount of DHCP traffic that enters a switch port.	
9	Port security to secure the access to an access or trunk port based on MAC address.	
10	Multilevel security on console access to prevent unauthorized users from altering the switch configuration using local database or through an external AAA Server.	
11	BPDU Guard to shut down Spanning Tree Protocol PortFast-enabled interfaces when BPDU's are received to avoid accidental topology loops.	
12	Should support 500 IPv4 ACL entries, 500 IPv6 ACL entries,	
Qua	Quality of Service (QoS) & Multicast	
1	Standard 802.1p CoS and DSCP	
2	Control- and Data-plane QoS ACLs, Cross-stack QoS	
3	Up to eight egress queues per port	
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S/N	Specifications		
4	Strict priority queuing mechanisms		
5	There should not be any performance penalty for highly granular QoS functions.		
6	Committed information rate (CIR) function to provide bandwidth in increments of 8 Kbps		
7	Rate limiting should be provided based on source and destination IP address, source and destination MAC address, Layer 4 TCP and UDP information, or any combination of these fields, using QoS ACLs (IP ACLs or MAC ACLs), class maps, and policy maps.		
8	Flow-based rate limiting and up to 200 aggregate or individual policers per port		
9	Shaped Round Robin (SRR) scheduling and Weighted Tail Drop (WTD) congestion avoidance.		
10	2000 IPv4 & IPv6 Unicast Routes		
11	1000 IPv4 Multicast Groups, 1000 IPv6 Multicast Groups		
Management			
1	Superior manageability Features		
2	Command Line Interface (CLI) support for configuration & troubleshooting purposes.		
3	For enhanced traffic management, monitoring, and analysis, upto four RMON groups (history, statistics, alarms, and events) must be supported.		
4	Layer 2 trace route to ease troubleshooting by identifying the physical path that a packet takes from source to destination.		
5	Domain Name System (DNS) support to provide IP address resolution with user-defined device names.		
6	FTP/ Trivial File Transfer Protocol (TFTP) to reduce the cost of administering software upgrades by downloading from a centralized location.		
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S/N	Specifications			
7	Network Timing Protocol (NTP) based on RFC 1305 to provide an accurate and consistent timestamp to all intranet switches.			
8	SNMP v1, v2c, and v3 and Telnet interface support delivers comprehensive in-band management, and a CLI-based management console provides detailed out-of-band management.			
9	RMON I and II standards			
Certi	Certification:			
1	The Operating System of the Switch should be tested and certified for EAL-2/NDPP or above under Common Criteria Certification			
2	The Switch should be IPv6 Ready Logo certified			

### 10. 10G Base-SR Modules for Access Switches

S/N	Specifications
1	Bidders should propose total 12 qty of 10G Base-SR modules for the access switches.  The fiber modules and switches should be from same OEM.

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### **Schedule of Deviations** Annexure A5

Section No	Standard Clause	Deviation

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#### Annexure A6 Bid Form & Price Schedule

#### **Bid Form**

The Chief Executive Officer Bank of Bhutan Limited Head Office Thimphu Bhutan

Signature & Seal

Sir,
Having examined the Bidding Documents for the above Contract, including th
Specifications, the receipt of which is hereby duly acknowledged, we the undersigned
offer to supply and deliver(Description of Goods) i
conformity with the said Bidding Documents, including Addend
Nos(Insert Numbers), for the sur
of (Total Bid Amount CIF/CIP i
Words and Figures) or such other sums as may be ascertained in accordance with th
Price Schedules attached hereto and made part of this Bid.
We undertake, if our Bid is accepted, to commence delivery within
days, and to complete delivery of all the items specified in the Contract
withindays, calculated from the date of receipt of you
Notification of Award and in accordance with the Contract Execution Schedule provide
in the Special Conditions of Contract.
If our Bid is accepted, we will provide the performance security in the sum of
(Amount), equal to ten (10) percent of the Contract price, for the du
performance of the Contract.
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Page   xl
I have read and hereby correctly state data/ accept all terms/ conditions/ criteria / other aspects, mentioned above on this page, unconditionally,

\_\_\_\_\_(Authorized Signatory)

We agree to abide by this Bid for the period of 60 (Sixty) days from the date fixed for bid closing pursuant to Clause 20 of the Instructions to Bidders, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof in your Notification of Award, shall constitute a binding contract between us.

We understand that you are not bound to accept the lowest-priced or any Bid that you may receive.

Dated this	day of	2018.		
(Signature)				
(In the Capacity of)				
Duly authorized to sig	gn Bid for and on l	behalf of		
(Signature of Witness	;)			
Witness BBB	s)e			Page   xlvi
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above on this page, unconditionally,

(Authorized Signatory)

Signature & Seal

<b>Address</b>	

#### **Annexure A6 Continued**

#### **Price Schedule**

#### Note:

- a) Bidder should supply, commission, install, configure, test, and maintain (both under warranty and AMC) the network equipment and their add-on components required for this project as specified in technical specifications.
- b) Bidder should provide comprehensive on-site three year warranty for all equipment.
- c) All the parts of items would be covered under comprehensive warranty. If there is any gap between Bank's requirement and OEM warranty then it will be the responsibility of Bidder to fill up the gap.
- d) Bidder should undertake to provide maintenance support to equipment and arrange for spare parts for a minimum period of 7 years for network equipment from the date of its supply. (i.e. 3 year warranty and 4 year AMC) Comprehensive annual maintenance contract has to be entered into separately with the bank for this purpose.
- e) Bidder has to guarantee minimum uptime and availability of 99.9% on quarterly basis and shall execute service level agreement for the same.
- f) Bidder (successful Bidder) will generate the configuration/specification report from the equipment and the associated software and present the printout of same along with installation report to the bank for their verification & signatures.
- g) Bidder should specify various infrastructure requirements which need to be provided for commissioning and smooth functioning of the equipment.
- h) Obtaining of the Road permits, form, other security forms, etc will be the sole responsibility of the successful Bidder. However, Bank will sign the necessary forms as the Client, as per the requirements.
- i) Training the Client's personnel in operating and trouble-shooting the hardware and software installed as per this RFP.

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			with 3 year Warranty  Tax for Column A  Unit price charges per item (excl. of E									
Sl.no	Item Details	year			price	charges per			Total AMC (incl. of Tax)	cost per unit with AMC (incl. of tax)	Qt y	Total cost (incl. of tax
		A % of Tax Amt. (C)		D=A+C	E	% of Tax (F)	Tax Amt H=E+G (G)		I=D+H	J	K=(IxJ)	
1	Equipment Details											
а	Core Router	0	0	0	0	0	0	0	0	0	0	0
b	Internet Router											
С	Perimeter Firewall											
d	Server Farm Firewall											
e /	Core Switch											

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			Cost P	rice			AMC			Total		
Sl.no	Item Details	Unit Price with 3 year warranty (excl. of Tax)	Tax for (		Unit price Incl of tax	4 years AMC charges per item (excl. of tax)		Column E	Total AMC (incl. of Tax)	cost per unit with AMC (incl. of tax)	Qt y	Total cost (incl. of tax
		A % of Tax Amt. D=A+C (C)		E	% of Tax (F)	Tax Amt (G)	H=E+G	I=D+H	J	K=(IxJ)		
f	DC Server Farm Aggregation Switch											
g	Server Farm Access Switch											
h	Floor access Switch (48 Port)											
i	Floor Access Switch (24 Port)											

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			Cost P	rice			AMC			Total		
Sl.no	Item Details	Unit Price with 3 year warranty (excl. of Tax)		ax for Column A		4 years AMC charges per item (excl. of tax)		Column E	Total AMC (incl. of Tax)	cost per unit with AMC (incl. of tax)	Qt y	Total cost (incl. of tax
		A	% of Tax (B)	Tax Amt. (C)	D=A+C	E	% of Tax (F)	Tax Amt (G)	H=E+G	I=D+H	J	K=(IxJ)
j	10G Base-SR Modules for Access Switches											
2	Other H/W Equipment											
	А											
	В											
	С											
	D											
	E											

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			Cost P	rice			AMC			Total		
Sl.no	Item Details	Unit Price with 3 year warranty (excl. of Tax)	Tax for (		Unit price Incl of tax	4 years AMC charges per item (excl. of tax)		Column E	Total AMC (incl. of Tax)	cost per unit with AMC (incl. of tax)	Qt y	Total cost (incl. of tax
		A	% of Tax (B)	Tax Amt. (C)	D=A+C	E	% of Tax (F)	Tax Amt (G)	H=E+G	I=D+H	J	K=(IxJ)
3	Other S/W Licence											
	Α											
	В											
	С											
4	Other Charges											
	A											
	В											
	С											
	Total Cost of											
	Ownership											

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#### Commercial Version - Post Warranty AMC Charges calculation table for network equipment & other Items:

		Post Wa	arran		C Charg	ges per ye		r unit	inclusive of	f Tax (year wise) 6th Year					Post Warranty			
#	Particular s	AMC charg es (excl. of tax)	% Ta x	Ta x in A mt	Tot al AM C (Inc I. of tax)	AMC Charge s (excl. of charge s)	% Ta x	Ta x in A mt	Total AMC(In cl. of Tax)	AMC (excl. of tax)	% Ta x	Ta x in A mt	Total AMC (Incl. of tax)	AMC (excl.of tax)	% Tax	Tax in Amt	Total AMC (Incl. of tax)	AMC for 4 years per item (incl. of Tax) **
		1	2	3	4 = (1+ 3)	5	6	7	8 = (5+7)	9	10	11	12 = (9+1 1)	13	14	15	16 = (13+1 5)	17 = (4+8+12+1 6)
1	Equipment	Details																
1.0	Core																	
1	Router																	
1.0	Internet																	
2	Router																	
1.0	Perimeter																	
3	Firewall																	
1.0	Server Farm Firewall																	
1.0	Core 3 7 7 Switch	र्रियावर.																

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		Post Wa	arrant	ty AM	C Char	ges per ye	ar pe	r unit	inclusive of	Тах (уеа	r wis	e)						Post
			4th Y	'ear		5th Year				6th Year				7th Year				Warranty
#	Particular s	AMC charg es (excl. of tax)	% Ta x	Ta x in A mt	Tot al AM C (Inc l. of tax)	AMC Charge s (excl. of charge s)	% Ta x	Ta x in A mt	Total AMC(In cl. of Tax)	AMC (excl. of tax)	% Ta x	Ta x in A mt	Total AMC (Incl. of tax)	AMC (excl.of tax)	% Tax	Tax in Amt	Total AMC (Incl. of tax)	AMC for 4 years per item (incl. of Tax) **
		1	2	3	4 = (1+ 3)	5	6	7	8 = (5+7)	9	10	11	12 = (9+1 1)	13	14	15	16 = (13+1 5)	17 = (4+8+12+1 6)
1.0	DC Server Farm Aggregati on Switch																	
1.0 7	Server Farm Access Switch																	
1.0	Floor access Switch (48 Port)	\$5,01.10 £.1	1															D 11

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		Post Wa	arrant	ty AM	C Char	ges per ye	ar pe	r unit i	inclusive of	Tax (yea	ır wis	e)					Post	
			4th Y	'ear			5th Year			6th Year				7th Year			Warranty	
#	Particular s	AMC charg es (excl. of tax)	% Ta x	Ta x in A mt	Tot al AM C (Inc I. of tax)	AMC Charge s (excl. of charge s)	% Ta x	Ta x in A mt	Total AMC(In cl. of Tax)	AMC (excl. of tax)	% Ta x	Ta x in A mt	Total AMC (Incl. of tax)	AMC (excl.of tax)	% Tax	Tax in Amt	Total AMC (Incl. of tax)	AMC for 4 years per item (incl. of Tax) **
		1	2	3	4 = (1+ 3)	5	6	7	8 = (5+7)	9	10	11	12 = (9+1 1)	13	14	15	16 = (13+1 5)	17 = (4+8+12+1 6)
1.0	Floor Access Switch (24 Port)																	
1.1	10G Base- SR Modules for Access Switches	1501.00 L																

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		Post Wa	arran	ty AM	C Char	ges per ye	ar pe	r unit i	inclusive of	Tax (yea	ır wis	e)						Post
			4th Y	ear (			5th	Year			6th	Year			7th Y	'ear		Warranty
#	Particular s	AMC charg es (excl. of tax)	% Ta x	Ta x in A mt	Tot al AM C (Inc I. of tax)	AMC Charge s (excl. of charge s)	% Ta x	Ta x in A mt	Total AMC(In cl. of Tax)	AMC (excl. of tax)	% Ta x	Ta x in A mt	Total AMC (Incl. of tax)	AMC (excl.of tax)	% Tax	Tax in Amt	Total AMC (Incl. of tax)	AMC for 4 years per item (incl. of Tax) **
		1	2	3	4 = (1+ 3)	5	6	7	8 = (5+7)	9	10	11	12 = (9+1 1)	13	14	15	16 = (13+1 5)	17 = (4+8+12+1 6)
2	Other H/W	Equipm	ent				•											
2.0																		
1																		
2.0																		
2																		
2.0																		
2.0																		
4																		
2.0																		
5	5																	
3	Other S/W	Licence		•	•	•		•				•	•					
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			arrant 4th Y		C Charg	ges per ye		r unit i Year	inclusive of	Tax (yea	r wis				7th Y	'ear		Post Warranty
#	Particular s	AMC charg es (excl. of tax)	% Ta x	Ta x in A mt	Tot al AM C (Inc l. of tax)	AMC Charge s (excl. of charge s)	% Ta x	Ta x in A mt	Total AMC(In cl. of Tax)	AMC (excl. of tax)	% Ta x	Ta x in A mt	Total AMC (Incl. of tax)	AMC (excl.of tax)	% Tax	Tax in Amt	Total AMC (Incl. of tax)	AMC for 4 years per item (incl. of Tax) **
		1	2	3	4 = (1+ 3)	5	6	7	8 = (5+7)	9	10	11	12 = (9+1 1)	13	14	15	16 = (13+1 5)	17 = (4+8+12+1 6)
3.0																		
3.0																		
3																		
4	Other Char	ges		•														
4.0																		
1																		
4.0																		
2																		
4.0																		
3																		
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		Post Warranty AMC Charges per year per unit inclusive of Tax (year wise)  4th Year 5th Year 6th Year 7th Year									Post Warranty							
#	Particular s	AMC charg es (excl. of tax)	% Ta x	Ta x in A mt	Tot al AM C (Inc I. of tax)	AMC Charge s (excl. of charge s)	% Ta x	Ta x in A mt	Total AMC(In cl. of Tax)	AMC (excl. of tax)	% Ta x	Ta x in A mt	Total AMC (Incl. of tax)	AMC (excl.of tax)	% Tax	Tax in Amt	Total AMC (Incl. of tax)	AMC for 4 years per item (incl. of Tax) **
		1	2	3	4 = (1+ 3)	5	6	7	8 = (5+7)	9	10	11	12 = (9+1 1)	13	14	15	16 = (13+1 5)	17 = (4+8+12+1 6)

\*\* Note: The total AMC Charges mentioned in column no. 17 above should tally with the AMC prices mentioned in table no. A - Price Details of Network Equipment & Other Items against each line item under column H. The total of columns 1, 5, 9 & 13 above should tally with the 4 year AMC Charges per item (Excl. of Tax) mentioned in table no. A - Price Details of Network Equipment & Other Items against each line item under column E and total of Column 3, 7, 11 & 15 above should tally with the tax amount mentioned in table no. A - Price Details of Network Equipment & Other Items against each line item under column G.



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### **Annexure A7 - Sample Forms**



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#### **Contract Form**

Bhutan	Ltd, T	himphu,	the (hereinafte _ (Name of	r "the	Client")	of	the	one	part	and
"the Supp									(	
Supplier, maintena a 7 year b Goods") a Services	viz., Some of Notes o	Supply, [ etwork Ed DC, as ide accepted sum of N	sirous that of Delivery, Institutions Institution Inst	stallation, d Licenses e Bid Forn e Supplier	configuns in TCO (1 n and Price for the p	ration Fotal ( e Sche provisi	, cor Cost of edule ( on of	nmiss f Own (*here those	ioning ership) einafter Goods	and over "the and
NOW THI	S CONTE	RACT WIT	NESSETH AS	FOLLOWS	<b>&gt;</b> :					
exhibi (herei	its, drav inafter f	wings, sp the "Con	st of this Con pecifications tract docun d made part l	and oth	ner docu	ments	refe	rred	to th	erein
(a) (b)		cation of	Award; and Specific	ations						
(c)			ontract; and	ations,						
(d)		id Docum								
to the sup	oply of th	ne Goods	entire contra described he aining to the	rein and	supersede	s any		•	•	_
discrepan prevail in	cy or inc	consistend or listed al	over all other over all other over.							-
2. In cor hereir	nsiderati nafter m	on of the entioned,	e payments the Supplier	hereby c	ovenants <sup>•</sup>	with t	he Cli	ent to	provid Page	e the e   lix
			rectly state on this page, u			ns/ co	nd1t101	ns/ cri	teria /	other
Signature	& Seal						(Auth	orized	Signat	orv)

Goods and to remedy defects therein in conformity in all respects with the provisions of the Contract.

- 3. The Client hereby covenants to pay the Supplier, in consideration of the provision of the Goods and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract, at the times and in the manner prescribed by the Contract.
- 4. Any notice under this Contract shall be in the form of a letter or email.
  - a) Notices to either party shall be given at such address or addresses as such party shall specify from time to time by written notice to the other. In the absence of such notice to the contrary, notice to the

The Client

The Supplier

(Chief Executive Officer)
Bank of Bhutan Limited,
Corporate Office, Babesa,
Post Box No. 102
Thimphu: Bhutan.

(Enter Name and Address)

b) A notice shall be effective when delivered or on the notice's effective date, whichever is later.

IN WITNESS WHEREOF, the parties hereto have caused this Contract to be executed in accordance with their respective laws the day and year first above written.

Signature of the Client

Signature of the Supplier



Page | lx

I have read and hereby correctly state data/ accept all terms/ conditions/ criteria / other aspects, mentioned above on this page, unconditionally,

Signature & Seal

\_(Authorized Signatory)

Signed, sealed and delivered by the said(For the Client) in the presence of								
Signed, sealed and delivered by the said								
(For the Supplier) in the presence of								



Page | lxi

I have read and hereby correctly state data/ accept all terms/ conditions/ criteria / other aspects, mentioned above on this page, unconditionally,

#### Performance Security Form

To:

The Bank of Bhutan Limited **Corporate Office** Thimphu: Bhutan WHEREAS (Name the of supplier) hereinafter called "the Supplier", has undertaken Supply, Delivery, Installation, configuration, commissioning and maintenance of Network Equipment and Licenses for DC in pursuance of Contract # dated 2018, hereinafter called "the Contract"; AND WHEREAS it has been stipulated by you in the Contract that the Supplier shall furnish you with a Bank Guarantee issued by a recognized commercial bank in Bhutan for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract; AND WHEREAS we have agreed to furnish on behalf of the Supplier, an Irrevocable Guarantee; THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of Ngultrum (Amount of the guarantee in words and figures) and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract, and without cavil or argument, any sum or sums as specified by you, within the limit of Ngultrum (amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein, provided your demand reaches the office mentioned below within 15 (Fifteen) days of the expiry date of this guarantee. This guarantee is valid until day of 2018. (NAME OF GUARANTEEING BANK) Legal (Title) Stamp Page | lxii I have read and hereby correctly state data/ accept all terms/ conditions/ criteria / other aspects, mentioned above on this page, unconditionally, Signature & Seal (Authorized Signatory)

# Power of Attorney Form (To be supported by a Board Resolution for Registered Companies) (In case of Sole Proprietorship/Partnership, to be signed by the Proprietor/Partners)

By this Power of attorney, created on	(date),
(name	of manufacturer / supplier / firm /
dealer), having its legal domicile in	(Place, Country),
hereby nominates, constitutes and appoints	as its true and lawful attorney
Dasho/Mr/Ms/Mrs.	(Name of Signatory Authority) who is
given the authority to bind the company by his/h	er signature in matters connected with
or related to the company's activities in the Supp	ly, Delivery, Installation, configuration,
commissioning and maintenance of Network Equi	pment and Licenses for Bank of Bhutan
Limited.	
This Power of Attorney shall remain in force until	(Date).
Signature and Seal of Authorized Signatory	Signature of Authorised
of the company Name:	Power of Attorney Holder Name:
Designation:	Nume.
त्रमुवा वी दिश्यायदा	
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I have read and hereby correctly state data/ accep	
aspects, mentioned above on this page, uncondition	nany,
Signature & Seal	(Authorized Signatory)

#### **Escalation Matrix**

Name o	f the	Com	pany:
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#### **Delivery Related Issues:**

SI. No.	Name	Designation	Full Office Address	Phone No.	Mobile No.	Fax	Email address
		First Level Contact					
		Second level contact					
		Regional/Zonal Head					
		Country Head /CEO					

#### Service Related Issues:

SI. No.	Name	Designation	Full Office Address	Phone No.	Mobile No.	Fax	Email address
		First Level					
		Contact					
		Second level					
		contact					
		Regional/Zonal					
		Head					
		Country Head					
		/CEO					

Any change in designation, substitution will be informed by us immediately.

Date	Signature with	seal
	Name	:
	Designation	:

	BANK OF BUILDING	Page   lxiv
I	have read and hereby correctly s	state data/ accept all terms/ conditions/ criteria / other rage, unconditionally,
·	ispects and the continue of this p	age, unconditionally,

#### **INTEGRITY PACT (IP) STATEMENT**

#### 1 General

Limite	d, hereinafter referred to as the "Client" on one part, and (Name of Bidder or
	r authorized representative, with Power of Attorney) representing M/s. (Name of company), hereinafter referred to as the "Bidder" on the other
	ereby execute this agreement as follows:
by bot	greement shall be a part of the standard Bidding Document, which shall be signed the the parties at the time of purchase of Bidding Documents and submitted along he tender document. This IP is applicable only to "large" scale works, goods and es such as this contract.
2	Objectives
referre systen	eas, the Client and the Bidder agree to enter into this agreement, hereinafter ed to as IP, to avoid all forms of corruption or deceptive practices by following an that is fair, transparent and free from any influence/unprejudiced dealings in the ag process <sup>1</sup> and contract administration <sup>2</sup> , with a view to:
2.1	Enabling the Client to obtain the desired contract at a reasonable and competitive price in conformity to the defined specifications of the works or goods or services; and
2.2	Enabling Bidders to abstain from bribing or any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also refrain from bribing and other corrupt practices.
starting <sup>2</sup> Contra un-auth I have	g process, for the purpose of this IP, shall mean the procedures covering tendering process from bid preparation, bid submission, bid processing, and bid evaluation.  act administration, for the purpose of this IP, shall mean contract award, contract implementation, porized sub-contracting and contract handing/taking over.  Page   lxv read and hereby correctly state data/ accept all terms/ conditions/ criteria / other
	sumentioned above on this page, unconditionally,  ure & Seal(Authorized Signatory)
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#### 3. Scope

The validity of this IP shall cover the bidding process and contract administration period.

#### 4. Commitments of the Client

The Client Commits itself to the following:-

- 4.1 The Client hereby undertakes that no officials of the Client, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the Bidder, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process and contract administration.
- 4.2 The Client further confirms that its officials shall not favour any prospective Bidder in any form that could afford an undue advantage to that particular Bidder in the bidding process and contract administration and will treat all Bidders alike.
- 4.3 Officials of the Client, who may have observed or noticed or have reasonable suspicion shall report to the head of the client agency or the Anti-Corruption Commission any violation or attempted violation of clauses 4.1 and 4.2.
- 4.4 Following report on violation of clauses 4.1 and 4.2 by official (s), through any source, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings shall be initiated by the Client and such a person shall be debarred from further dealings related to the bidding process and contract administration.

#### 5. Commitments of Bidders

The Bidder commits himself/herself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of the bidding process and contract administration in order to secure the contract or in furtherance to secure it and in particular commits himself/herself to the following

5/1		y or through intermediaries, any bribe, gift, ny material or immaterial benefit or other Page   lxvi
I hav	ve read and hereby correctly state dat	a/ accept all terms/ conditions/ criteria / other
aspe	cts, mentioned above on this page, unc	onditionally,

advantage, commission, fees, brokerage or inducement to any official of the Client, connected directly or indirectly with the bidding process and contract administration, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding process and contract administration.

- 5.2 The Bidder shall not collude with other parties interested in the contract to manipulate in whatsoever form or manner, the bidding process and contract administration.
- 5.3 If the Bidder(s) has observed or noticed or has reasonable suspicion that the provisions of the IP have been violated by the procuring agency or other Bidders, the Bidder shall report such violations to the head of the procuring agency.

#### 6. Sanctions for Violation

The breach of any of the aforesaid provisions shall result in administrative charges or penal actions as per the relevant rules and laws.

- 6.1 The breach of the IP or commission of any offence (forgery, providing false information, misrepresentation, providing false/fake documents, bid rigging, bid steering or coercion) by the Bidder, or any one employed by him, or acting on his/her behalf (whether with or without the knowledge of the Bidder), shall be dealt with as per the terms and conditions of the contract and other provisions of the relevant laws, including Debarment Rules.
- 6.2 The breach of the IP or commission of any offence by the officials of the procuring agency shall be dealt with as per the rules and laws of the land in vogue.

#### 7. Monitoring and Administration

Signature & Seal\_

- 7.1 The respective procuring agency shall be responsible for administration and monitoring of the IP as per the relevant laws.
- 7.2 The Bidder shall have the right to appeal as per the arbitration mechanism contained in the relevant rules.

We, hereby declare that we have read and unde	erstood the clauses of this agreement and
shall abide by it.	
SANK OF THE STATE	Page   lxvii
I have read and hereby correctly state data/ acc	cept all terms/ conditions/ criteria / other
aspects, mentioned above on this page, uncondit	ionally,

(Authorized Signatory)

The parties hereby sign this Integrity Pact at	Thimphu on 2018.
Affix Legal Stamp	Affix Legal Stamp
CLIENT	BIDDER/REPRESENTATIVE
CID:	CID:
Witness:	Witness:
Name:	Name:
CID:	CID:
BOB B	Page   lxviii
I have read and hereby correctly state data/aspects, mentioned above on this page, uncon	accept all terms/ conditions/ criteria / other
Signature & Seal	(Authorized Signatory)

## ~~END OF DOCUMENT~~

