

INVITATION FOR BIDS

Hiring of Core IP Bandwidth & Dark Fiber Connectivity Services for FBR Data Centers located at Islamabad & Karachi

RFP No. 1(43)SS(IT)/2024

Federal Board of Revenue (FBR) invites bids from experienced and reputable firms having valid registration with tax and other relevant authorities, for provision of services related to “**Hiring of Core IP Bandwidth & Dark Fiber Connectivity Services for FBR Data Centers located at Islamabad & Karachi**”. The firms submitting their bids must be appearing on the Active Taxpayers List issued by Federal Board of Revenue, Government of Pakistan.

2. The eligible bidders may download the Bidding Document from FBR Website www.fbr.gov.pk/tenders and PPRA Website https://www.ppra.org.pk/dad_tenders.asp. However, eligible bidders opting to download the Bidding Documents **must inform FBR** on the email mentioned below failing which FBR shall not be responsible if the bidder does not receive clarifications and amendments, if any. In case of any discrepancy between the downloaded document and hard copy, the latter shall prevail.

3. Bids, prepared in accordance with the instructions provided in the bidding documents, must reach at the following address on or before **19-09-2024** at 1100 Hrs. Bids will be opened on the same day at 1130 Hrs in the presence of authorized representatives of the bidders who may choose to attend. In case the day of bid submission and opening falls on a public holiday, the next working day shall be considered as the deadline for the same.

4. To obtain further information and inspect the Bidding Documents, Bidders should contact:

Amjad Khan
Second Secretary (IT-Execution)
Room No. 111, FBR House, Constitution Avenue, Islamabad.
Phone # 051-9208455
Email: ssit@fbr.gov.pk

STANDARD BIDDING DOCUMENT

Hiring of Core IP Bandwidth & Dark Fiber Connectivity Services for FBR Data Centers located at Islamabad & Karachi

Single-Stage Single Envelope Bidding Procedure Under National Competitive Bidding (NCB)

Federal Board of Revenue, Islamabad

September, 2024

PREFACE

This Bidding Document for Procurement of Information Technology Products and Services has been prepared by the Federal Board of Revenue, Islamabad, and is based on the Standard Bidding Document for the Procurement of Goods issued by the Pakistan Engineering Council, dated July 2010.

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**INVITATION
FOR
BIDS (IFB)**

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**INSTRUCTIONS
TO
BIDDERS (ITB)**

INSTRUCTIONS TO BIDDERS

(Note: These Instructions to Bidders along with Bidding Data will not be part of the Contract and will cease to have effect once the Contract is signed.)

A. GENERAL

ITB.1 Scope of Bid

- 1.1 The Purchaser as defined in the Bidding Data hereinafter called “the Purchaser” wishes to receive bids for the supply of Engineering Goods as described in these Bidding Documents, and summarised in the Bidding Data hereinafter referred to as the “Goods”.
- 1.2 The successful Bidder will be expected to supply the Goods within the time specified in the Bidding Documents.
- 1.3 All Goods to be supplied under the Contract shall have as their country of origin an eligible country as per Appendix-A to Bid.
- 1.4 For purposes of this Clause, the term “Goods” includes commodities, raw material, machinery, equipment, and industrial plants.
- 1.5 The term “country of origin” means the country where the goods have been mined, grown, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its imported components.
- 1.6 The nationality of the firm that produces, assembles, distributes, or sells the goods shall not determine their origin.
- 1.7 The bidding is open to National/International Competitive Bidding as indicated in the Bidding Data.

ITB.2 Source of Funds

- 2.1 The Purchaser has applied for/received a loan/credit from the source (s) indicated in the Bidding Data in various currencies towards the cost of the project specified in the Bidding Data and it is intended that part of the proceeds of this loan/credit will be applied to eligible payments under the Contract for which these Bidding Documents are issued.

ITB.3 Eligible Bidders

- 3.1 This Invitation for Bids is open to all Bidders meeting the following requirements:
 - a. A Bidder having the nationality of an eligible country in accordance with Appendix A to Bid.
 - b. Duly prequalified / enlisted with the Purchaser.

ITB.4 One Bid per Bidder

- 4.1 Each Bidder shall submit only one bid either by himself, or as a partner in a joint venture. A Bidder who submits or participates in more than one bid (other than alternatives pursuant to Clause IB.20) will be disqualified.

ITB.5 Cost of Bidding

- 5.1 The Bidders shall bear all costs associated with the preparation and submission of their respective bids and the Purchaser will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

ITB.6 Site Visit

- 6.1 The Bidders are advised to visit and inspect the Location of Delivery and its surroundings and obtain for themselves on their own responsibility all information that may be necessary for preparing the bid and entering into a Contract for Supply of Goods. All cost in this respect shall be at the bidder's own expense.
- 6.2 The Bidders and any of their personnel or agents will be granted permission by the Purchaser to enter upon his premises and lands for the purpose of such inspection, but only upon the express condition that the Bidders, their personnel and agents, will release and indemnify the Purchaser, his personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of such inspection.

B. BIDDING DOCUMENTS

ITB.7 Contents of Bidding Documents

- 7.1 The Bidding Documents, in addition to Invitation for Bids, are those stated below and should be read in conjunction with any Addenda issued in accordance with Clause IB.9.
1. Instructions to Bidders
 2. Bidding Data
 3. Form of Bid and Appendices to Bid
 4. Schedules to Bid
 - (i) Schedule A: Price Schedule for Goods to be offered from within the Purchaser's country
 - (ii) Schedule B: Price Schedule for Goods to be offered from outside the Purchaser's country
 - (iii) Schedule C: Manufacturer's Authorization
 - (iv) Schedule D: List of Goods
 - (v) Schedule E: Delivery and Completion Schedule
 - (vi) Schedule F: Inspection and Tests to be carried out
 5. General Conditions of Contract (GCC), Part-I
 6. Particular Conditions of Contract (PCC), Part-II
 7. Standard Forms
 - (i) Form of Bid Security
 - (ii) Form of Performance Security
 - (iii) Form of Contract Agreement
 - (iv) Form of Advance Payment Security
 8. Specifications.....Special & Technical Provisions
 9. Drawings
- 7.2 The bidders are expected to examine carefully the contents of all the above documents. Failure to comply with the requirements of bid submission will be at the Bidder's own

risk. Pursuant to Clause IB.30, bids which are not substantially responsive to the requirements of the Bidding Documents will be rejected.

ITB.8 Clarification of Bidding Documents

8.1 Any prospective Bidder requiring any clarification (s) in respect of the Bidding Documents may notify the Purchaser in writing at the Purchaser's address indicated in the Invitation for Bids. The Purchaser will respond to any request for clarification which he receives earlier than the time, stated in the Bidding Data, prior to the deadline for submission of bids. Copies of the Purchaser's response will be forwarded to all purchasers of the Bidding Documents, including a description of the enquiry but without identifying its source.

ITB.9 Amendment of Bidding Documents

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

9.2 Any addendum thus issued shall be part of the Bidding Documents pursuant to Sub-Clause 7.1 hereof and shall be communicated in writing to all purchasers of the Bidding Documents. Prospective Bidders shall acknowledge receipt of each addendum in writing to the Purchaser.

9.3 To afford prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Purchaser may extend the deadline for submission of bids in accordance with Clause IB.24

C. PREPARATION OF BIDS

IBT.10 Language of Bid

10.1 The bid as well as all correspondence and documents related to the bid exchanged by a bidder and the Purchaser shall be in the bid language stipulated in the Bidding Data and Particular Conditions of Contract. Supporting documents and printed literature furnished by the Bidders may be in any other language provided the same are accompanied by an accurate translation of the relevant parts in the bid language, in which case, for purposes of evaluation of the bid, the translation in bid language shall prevail.

ITB.11 Documents Comprising the Bid

11.1 Each Bidder shall:

- (a) submit a written power of attorney authorizing the signatory of the bid to act for and on behalf of the Bidder;
- (b) update the information indicated and listed in the Bidding Data and previously submitted with the prequalification documents which as a minimum, would include the following application for prequalification, and continue to meet the minimum criteria set out in the:

- (i) Evidence of access to financial resources alongwith average annual turnover;
 - (ii) Financial predictions for the current year and the two following years including the effect of known commitments;
 - (iii) Supply commitments since prequalification;
 - (iv) Current litigation information; and
 - (v) Availability of critical equipment.
and
- (c) furnish a technical proposal taking into account the various Appendices to Bid specially the following:

Appendix-C to Bid	Method of Assuring Quality of Goods
Appendix-D to Bid	List of Quality Control/Laboratory Equipment
Appendix-E to Bid	List of Manufacturers / Subcontractors

and other pertinent information such as mobilization programme (under Appendix C to Bid) etc;

11.2 Bids submitted by a joint venture of two (2) or more firms shall comply with the following requirements:

- (a) the bid and in case of a successful bid, the Form of Contract Agreement shall be signed so as to be legally binding on all partners;
- (b) one of the joint venture partners shall be nominated as being in charge; and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the joint venture partners;
- (c) the partner-in-charge shall always be duly authorized to deal with the Purchaser regarding all matters related with and/or incidental to the supply of Goods as per the terms and Conditions of Contract and in this regard to incur any and all liabilities, receive instructions, give binding undertakings and receive payments on behalf of the joint venture;
- (d) all partners of the joint venture shall at all times and under all circumstances be liable jointly and severally for the execution of the Contract in accordance with the Contract terms and a statement to this effect shall be included in the authorization mentioned under Sub-Para (b) above as well as in the Form of Bid and in the Form of Contract Agreement (in case of a successful bid); and
- (e) a copy of the agreement entered into by the joint venture partners shall be submitted with the bid stating the conditions under which it will function, its period of duration, the persons authorized to represent and obligate it and which persons will be directly responsible for due performance of the Contract and can give valid receipts on behalf of the joint venture, the proportionate participation of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning. No amendments / modifications whatsoever in the joint venture agreement shall be agreed to between the joint venture partner without prior written consent of the Purchaser.

- 11.3 Bidders shall also submit proposals of supply and transportation methods and schedule, in sufficient detail to demonstrate the adequacy of the Bidders' proposals to meet the technical specifications and the completion time referred to in Sub-Clause 1.2 hereof.

ITB.12 Bid Prices

- 12.1 The Bidder shall submit the Form of Bid using the form attached herewith. This form must be completed without any alterations to its format, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.
- 12.2 The Bidder shall submit the Price Schedules for Goods, according to their origin as appropriate, using the forms furnished in Appendices to Bid along with Manufacturer, s Authorization (on the format provided) in case the Bidder is not himself the manufacturer
- 12.3 Unless stated otherwise in the Bidding Documents (in Lots under Schedule D to Bid), the Contract shall be for the whole of the Goods as described in Sub-Clause 1.1 hereof, based on the unit rates and/or prices submitted by the bidder.
- 12.4 The Bidders shall fill in rates and prices for all items of the Goods described in the Price Schedules. Items against which no rate or price is entered by a bidder will not be paid for by the Purchaser when delivered and shall be deemed covered by rates and prices for other items in the Price Schedules.
- 12.5 All duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, as on the date 28 days prior to the deadline for submission of bids shall be included in the rates and prices and the total Bid Price submitted by a Bidder.
Additional/reduced duties, taxes and levies due to subsequent additions or changes in legislation shall be dealt as per Clause 17 of the General Conditions of Contract.
- 12.6 The rates and prices quoted by the Bidders are subject to adjustment during the performance of the Contract in accordance with the provisions of Clause 15 of the General Conditions of Contract. The Bidders shall furnish the prescribed information for the price adjustment formulae if required under Sub-Clause 15.2 of General Conditions of Contract, and shall submit with their bids such other supporting information as required under the said Clause.

ITB.13 Currencies of Bid and Payment

- 13.1 The unit rates and the prices shall be quoted by the Bidder entirely in Pak rupees. A Bidder expecting to incur expenditures in other currencies for Goods supplied from outside the Purchaser's country (referred to as the "Foreign Currency Requirements") shall indicate the same in Appendix-B to Bid. The proportion of the Bid Price (excluding Provisional Sums) needed by him for the payment of such Foreign Currency Requirements either (i) entirely in the currency of the Bidder's home country or, (ii) at the Bidder's option, entirely in Pak rupees provided always that a Bidder expecting to incur expenditures in a currency or currencies other than those stated in (i) and (ii) above for a portion of the foreign currency requirements, and wishing to be paid accordingly, shall indicate the respective portions in his bid.
- 13.2 The rates of exchange to be used by the Bidder for currency conversion shall be the TT&OD Selling Rates published or authorized by the State Bank of Pakistan

prevailing on the date 28 days prior to the deadline for submission of bids. For the purpose of payments, the exchange rates used in bid preparation shall apply for the duration of the Contract.

ITB.14 Documents Establishing the Eligibility of the Bidder

To establish their eligibility in accordance with ITB 4, Bidders shall:

- (a) Provide the eligibility documents as per ITB Clause 3; and
- (b) If the Bidder is an existing or intended JV in accordance with ITB 4.1 and 11.2, submit a copy of the JV Agreement, or a letter of intent to enter into such an Agreement. The respective document shall be signed by all legally authorized signatories of all the parties to the existing or intended JV, as appropriate.

ITB.15 Documents Establishing the Eligibility of the Goods

- 15.1 To establish the eligibility of the Goods in accordance with ITB Clause 1-3, Bidders shall complete the country of origin declarations in the Price Schedule Forms, & Appendices to Bid.

ITB.16 Documents Establishing the Conformity of the Goods to the Bidding Document

- 16.1 To establish the conformity of the Goods to the Bidding Document, the Bidder shall furnish as part of its Bid the documentary evidence that the Goods and be supplied conform to the specified requirements.
- 16.1 The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item-by-item description of the essential technical and performance characteristics of the Goods.
- 16.2 Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Delivery and Completion Schedule, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in Delivery and Completion Schedule of Supply.

ITB.17 Documents Establishing the Qualification of the Bidder

- 17.1 The documentary evidence of the Bidder's qualifications to perform the contract, if its bid is accepted, shall establish to the Purchaser's satisfaction that the Bidder meets each of the qualification criterion specified in Bidding Documents.
- 17.2 If so required in the Bidding Data, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the appended form to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in the Purchaser's country.
- 17.3 If so required in the Bidding Data, a Bidder that does not conduct business within the Purchaser's Country shall submit evidence that it will be represented by an

Agent in the country equipped and able to carry out the Supplier's maintenance, repair and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications.

ITB.18 Bid Validity

- 18.1 Bids shall remain valid for the period stipulated in the Bidding Data after the Date of Bid Opening specified in Clause IB.27.
- 18.2 In exceptional circumstances, prior to expiry of the original bid validity period, the Purchaser may request that the Bidders extend the period of validity for a specified additional period which shall in no case be more than the original bid validity period. The request and the responses thereto shall be made in writing. A Bidder may refuse the request without forfeiting his Bid Security. A Bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his Bid Security for the period of the extension, and in compliance with Clause IB.19 in all respects.

ITB.19 Bid Security

- 19.1 Each Bidder shall furnish, as part of his bid, a Bid Security in the amount stipulated in the Bidding Data in Pak Rupees or an equivalent amount in a freely convertible currency.
- 19.2 The Bid Security shall be submitted in form of a Bank Draft from a scheduled bank in Pakistan
- 19.3 Any bid not accompanied by an acceptable Bid Security shall be rejected by the Purchaser as non-responsive.
- 19.4 The bid securities of unsuccessful Bidders will be returned as promptly as possible, but not later than 28 days after the expiration of the period of Bid Validity.
- 19.5 The Bid Security of the successful Bidder will be returned when the Bidder has furnished the required Performance Security and signed the Contract Agreement.
- 19.6 The Bid Security may be forfeited:
 - (a) if the Bidder withdraws his bid except as provided in Sub-Clause 26.1;
 - (b) if the Bidder does not accept the correction of his Bid Price pursuant to Sub-Clause 31.2 hereof; or
 - (c) In the case of successful Bidder, if he fails within the specified time limit to:
 - (i) furnish the required Performance Security; or
 - (ii) sign the Contract Agreement.

ITB.20 Alternate Proposals by Bidder

- 20.1 Should any Bidder consider that he can offer any advantages to the Purchaser by a modification to the designs, specifications or other conditions, he may, in addition to his bid to be submitted in strict compliance with the Bidding Documents,

submit any Alternate Proposal(s) containing (a) relevant design calculations; (b) technical specifications; (c) proposed manufacturing methodology; and (d) any other relevant details / conditions, provided always that the total sum entered on the Form of Bid shall be that which represents complete compliance with the Bidding Documents.

- 20.2 Alternate Proposal(s), if any, of the lowest evaluated responsive Bidder only may be considered by the Purchaser as the basis for the award of Contract to such Bidder.

ITB.21 Pre-Bid Meeting

- 21.1 The Purchaser may, on his own motion or at the request of any prospective Bidder(s), hold a pre-bid meeting to clarify issues and to answer any questions on matters related to the Bidding Documents. The date, time and venue of pre-bid meeting, if convened, is as stipulated in the Bidding Data. All prospective Bidders or their authorized representatives shall be invited to attend such a pre-bid meeting.
- 21.2 The Bidders are requested to submit questions, if any, in writing so as to reach the Purchaser not later than seven (7) days before the proposed pre-bid meeting.
- 21.3 Minutes of the pre-bid meeting, including the text of the questions raised and the replies given, will be transmitted without delay to all purchasers of the Bidding Documents. Any modification of the Bidding Documents listed in Sub-Clause 7.1 hereof which may become necessary as a result of the pre-bid meeting shall be made by the Purchaser exclusively through the issue of an Addendum pursuant to Clause IB.9 and not through the minutes of the pre-bid meeting.
- 21.4 Absence at the pre-bid meeting will not be a cause for disqualification of a Bidder.

ITB.22 Format and Signing of Bid

- 22.1 Bidders are particularly directed that the amount entered on the Form of Bid shall be for performing the Contract strictly in accordance with the Bidding Documents.
- 22.2 All Appendices and Schedules to Bid are to be properly completed and signed.
- 22.3 No alteration is to be made in the Form of Bid nor in the Appendices and Schedules thereto except in filling up the blanks as directed. If any such alterations be made or if these instructions be not fully complied with, the bid may be rejected.
- 22.4 Each Bidder shall prepare by filling out the forms completely and without alterations one (1) original and number of copies, specified in the Bidding Data, of the documents comprising the bid as described in Clause IB.7 and clearly mark them "ORIGINAL" and "COPY" as appropriate. In the event of discrepancy between them, the original shall prevail.
- 22.5 The original and all copies of the bid shall be typed or written in indelible ink (in the case of copies, Photostats are also acceptable) and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder pursuant to Sub-Clauses 11.1(a) and 11.2 hereof. All pages of the bid shall be initialled and stamped by the person or persons signing the bid.

- 22.6 The bid shall contain no alterations, omissions or additions, except to comply with instructions issued by the Purchaser, or as are necessary to correct errors made by the Bidder, in which case such corrections shall be initialled by the person or persons signing the bid.
- 22.7 Bidders shall indicate in the space provided in the Form of Bid their full and proper addresses at which notices may be legally served on them and to which all correspondence in connection with their bids and the Contract is to be sent.
- 22.8 Bidders should retain a copy of the Bidding Documents as their file copy.

D. SUBMISSION OF BIDS

ITB.23 Sealing and Marking of Bids

- 23.1 Each Bidder shall submit his bid as under:
- (a) ORIGINAL and each copy of the Bid shall be separately sealed and put in separate envelopes and marked as such.
 - (b) The envelopes containing the ORIGINAL and copies will be put in one sealed envelope and addressed/identified as given in Sub- Clause 23.2 hereof.
- 23.2 The inner and outer envelopes shall:
- (a) be addressed to the Purchaser at the address provided in the Bidding Data;
 - (b) bear the name and identification number of the Contract as defined in the Bidding Data; and
 - (c) provide a warning not to open before the time and date for bid opening, as specified in the Bidding Data.
- 23.3 In addition to the identification required in Sub- Clause 23.2 hereof, the inner envelope shall indicate the name and address of the Bidder to enable the bid to be returned unopened in case it is declared "late" pursuant to Clause IB.25
- 23.4 If the outer envelope is not sealed and marked as above, the Purchaser will assume no responsibility for the misplacement or premature opening of the Bid.

ITB.24 Deadline for Submission of Bids

- 24.1 (a) Bids must be received by the Purchaser at the address specified no later than the time and date stipulated in the Bidding Data.
- (b) Bids with charges payable will not be accepted, nor will arrangements be undertaken to collect the bids from any delivery point other than that specified above. Bidders shall bear all expenses incurred in the preparation and delivery of bids. No claims will be entertained for refund of such expenses.
 - (c) Where delivery of a bid is by mail and the Bidder wishes to receive an acknowledgment of receipt of such bid, he shall make a request for such

acknowledgment in a separate letter attached to but not included in the sealed bid package.

- (d) Upon request, acknowledgment of receipt of bids will be provided to those making delivery in person or by messenger.

24.2 The Purchaser may, at his discretion, extend the deadline for submission of bids by issuing an amendment in accordance with Clause IB.9, in which case all rights and obligations of the Purchaser and the Bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

ITB.25 Late Bids

- 25.1 (a) Any bid received by the Purchaser after the deadline for submission of bids prescribed in Clause IB.24 will be returned unopened to such bidder.
- (b) Delays in the mail, delays of person in transit, or delivery of a bid to the wrong office shall not be accepted as an excuse for failure to deliver a bid at the proper place and time. It shall be the Bidder's responsibility to determine the manner in which timely delivery of his bid will be accomplished either in person, by messenger or by mail.

ITB.26 Modification, Substitution and Withdrawal of Bids

- 26.1 Any Bidder may modify, substitute or withdraw his bid after bid submission provided that the modification, substitution or written notice of withdrawal is received by the Purchaser prior to the deadline for submission of bids.
- 26.2 The modification, substitution, or notice for withdrawal of any bid shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause IB.23 with the outer and inner envelopes additionally marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" as appropriate.
- 26.3 No bid may be modified by a Bidder after the deadline for submission of bids except in accordance with Sub-Clauses 26.1 and 31.2.
- 26.4 Withdrawal of a bid during the interval between the deadline for submission of bids and the expiration of the period of bid validity specified in the Form of Bid may result in forfeiture of the Bid Security in pursuance to Clause IB.19.

E. BID OPENING AND EVALUATION

ITB.27 Bid Opening

- 27.1 The Purchaser will open the bids, including withdrawals, substitution and modifications made pursuant to Clause IB.26, in the presence of Bidders' representatives who choose to attend, at the time, date and location stipulated in the Bidding Data. The Bidders' representatives who are present shall sign a register evidencing their attendance.
- 27.2 Envelopes marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" shall be opened and read out first. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause IB.26 shall not be opened.

- 27.3 The Bidder's name, total Bid Price and price of any Alternate Proposal(s), any discounts, bid modifications, substitution and withdrawals, the presence or absence of Bid Security, and such other details as the Purchaser may consider appropriate, will be announced by the Purchaser at the opening of bids.
- 27.4 Purchaser shall prepare minutes of the bid opening, including the information disclosed to those present in accordance with the Sub-Clause 27.3.

ITB.28 Process to be Confidential

- 28.1 Information relating to the examination, clarification, evaluation and comparison of bid and recommendations for the award of a Contract shall not be disclosed to Bidders or any other person not officially concerned with such process before the announcement of bid evaluation report which shall be done at least ten (10) days prior to issue of Letter of Acceptance. The announcement to all Bidders will include table(s) comprising read out prices, discounted prices, price adjustments made, final evaluated prices and recommendations against all the bids evaluated. Any effort by a Bidder to influence the Purchaser's processing of bids or award decisions may result in the rejection of such Bidder's bid. Whereas any Bidder feeling aggrieved may lodge a written complaint not later than fifteen (15) days after the announcement of the bid evaluation report; however mere fact of lodging a complaint shall not warrant suspension of the procurement process.

ITB.29 Clarification of Bids

- 29.1 To assist in the examination, evaluation and comparison of bids, the Purchaser may, at his discretion, ask any Bidder for clarification of his bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing but no change in the price or substance of the bid shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Purchaser in the evaluation of the bids in accordance with Clause IB.32.

ITB.30 Examination of Bids and Determination of Responsiveness

- 30.1 Prior to the detailed evaluation of bids, the Purchaser will determine whether each bid is substantially responsive to the requirements of the Bidding Documents.
- 30.2 A substantially responsive bid is one which (i) meets the eligibility criteria; (ii) has been properly signed; (iii) is accompanied by the required Bid Security; and (iv) conforms to all the terms, conditions and specifications of the Bidding Documents, without material deviation or reservation. A material deviation or reservation is one (i) which affect in any substantial way the scope, quality or performance of the Goods; (ii) which limits in any substantial way, inconsistent with the Bidding Documents, the Purchaser's rights or the Bidder's obligations under the Contract; or (iii) adoption/rectification whereof would affect unfairly the competitive position of other Bidders presenting substantially responsive bids.
- 30.3 If a bid is not substantially responsive, it will be rejected by the Purchaser, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

ITB.31 Correction of Errors

- 31.1 Bids determined to be substantially responsive will be checked by the Purchaser for any arithmetic errors. Errors will be corrected by the Purchaser as follows:
- (a) where there is a discrepancy between the amounts in figures and in words, the amount in words will govern; and
 - (b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern, unless in the opinion of the Purchaser there is an obviously gross misplacement of the decimal point in the unit rate, in which case the line item total as quoted will govern and the unit rate will be corrected.
- 31.2 The amount stated in the Form of Bid will be adjusted by the Purchaser in accordance with the above procedure for the correction of errors and with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected Bid Price, his Bid will be rejected, and the Bid Security shall be forfeited in accordance with Sub-Clause 19.6(b) hereof.

ITB.32 Evaluation and Comparison of Bids

- 32.1 The Purchaser will evaluate and compare only the Bids determined to be substantially responsive in accordance with Clause IB.30.
- 32.2 In evaluating the Bids, the Purchaser will determine for each Bid the evaluated Bid Price by adjusting the Bid Price as follows:
- (a) making any correction for errors pursuant to Clause IB.31;
 - (b) excluding Provisional Sums and the provision, if any, for contingencies; and
 - (c) making an appropriate adjustment for any other acceptable variation or deviation from specification or performance criteria
- 32.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in Bid evaluation.
- 32.4 If the Bid of the successful Bidder is seriously unbalanced in relation to the Purchaser's estimate of the cost of Goods to be delivered under the Contract, the Purchaser may require the Bidder to produce detailed price analyses for any or all items of the Price Schedules to demonstrate the internal consistency of those prices with the manufacturing methodology and schedule proposed. After evaluation of the price analyses, the Purchaser may require that the amount of the Performance Security set forth in Clause IB.37 be increased at the expense of the successful Bidder to a level sufficient to protect the Purchaser against financial loss in the event of default of the successful bidder under the Contract.

ITB.33 Post Qualification of the Bidder

- 33.1 The Purchaser shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive Bid is qualified to perform the Contract satisfactorily.
- 33.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder.
- 33.3 An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the Bid, in which event the Purchaser shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.

F. AWARD OF CONTRACT

ITB.34 Award

- 34.1 Subject to Clauses IB.35 and IB.39, the Purchaser will award the Contract to the Bidder whose bid has been determined to be substantially responsive to the Bidding Documents and who has offered the lowest evaluated Bid Price, provided that such Bidder has been determined to be eligible in accordance with the provisions of Clause IB.3 and qualify pursuant to Sub-Clause IB 33.2.
- 34.2 The Purchaser, at any stage of the bid evaluation, having credible reasons for or *prima facie* evidence of any defect in supplier's or contractor's capacities, may require the suppliers or contractors to provide information concerning their professional, technical, financial, legal or managerial competence whether already pre-qualified or not:

Provided that such qualification shall only be laid down after recording reasons therefor in writing. They shall form part of the records of that bid evaluation report.

ITB.35 Purchaser's Right to Accept any Bid and to Reject any or all Bids

- 35.1 Notwithstanding Clause IB.34, the Purchaser reserves the right to accept or reject any Bid, and 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 Bidders or any obligation except that the grounds for rejection of all bids shall upon request be communicated to any Bidder who submitted a bid, without justification of grounds. Rejection of all bids shall be notified to all Bidders promptly.
- 35.2 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods originally specified in Delivery and Completion Schedules, provided this does not exceed the percentages indicated in the Bidding Data, and without any change in the unit prices or other terms and conditions of the Bid and the Bidding Document.

ITB.36 Notification of Award

- 36.1 Prior to expiration of the period of bid validity prescribed by the Purchaser, the

Purchaser will notify the successful Bidder in writing (“Letter of Acceptance”) that his Bid has been accepted. This letter shall name the sum which the Purchaser will pay the Contractor in consideration of the delivery of Goods by the Contractor as prescribed by the Contract (hereinafter and in the Conditions of Contract called the “Contract Price”).

- 36.2 No Negotiation with the Bidder having evaluated as lowest responsive or any other Bidder shall be permitted, however, Purchaser may seek clarification in writing to clarify any item in the bid evaluation report; and response of the Bidder shall also be in writing.
- 36.3 The notification of award and its acceptance by the Bidder will constitute the formation of the Contract, binding the Purchaser and the Bidder till signing of the formal Contract Agreement.
- 36.3 Upon furnishing by the successful Bidder of a Performance Security, the Purchaser will promptly notify the other Bidders that their Bids have been unsuccessful and return their bid securities.

ITB.37 Performance Security

- 37.1 The successful Bidder shall furnish to the Purchaser a Performance Security in the form and the amount stipulated in the Bidding Data and the Conditions of Contract within a period of 28 days after the receipt of Letter of Acceptance.
- 37.2 Failure of the successful Bidder to comply with the requirements of Sub-Clause IB.37.1 or Clauses IB.38 or IB.40 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.

ITB.38 Signing of Contract Agreement

- 38.1 Within 14 days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the Purchaser will send the successful Bidder the Contract Agreement in the form provided in the Bidding Documents, incorporating all agreements between the parties.
- 38.2 The formal Agreement between the Purchaser and the successful Bidder shall be executed within 14 days of the receipt of the Contract Agreement by the successful Bidder from the Purchaser.

ITB.39 General Performance of the Bidders

The Purchaser reserves the right to obtain information regarding performance of the bidders on their previously awarded contracts. The Purchaser may in case of consistent poor performance of any Bidder as reported by the purchasers of the previously awarded contracts, interalia, reject his bid and proceed in accordance with Rule 19 of the Public Procurement Rules 2004 to take such action as may be deemed appropriate under the circumstances of the case including black listing of such Bidder and debarring him from participation in future bidding for supply of Goods.

ITB.40 Integrity Pact

The Bidder shall sign and stamp the Integrity Pact provided at Appendix-G to Bid in the Bidding Documents for all Federal Government procurement contracts exceeding Rupees ten million. Failure to provide such Integrity Pact shall make the bidder non-responsive.

ITB.41 Instructions not Part of Contract

Bids shall be prepared and submitted in accordance with these Instructions which are provided to assist Bidders in preparing their bids, and do not constitute part of the Bid or the Contract Documents.

ITB.42 Margin of Preference

Unless otherwise specified in the Bidding Data, no margin of preference shall apply.
[Domestic Preference shall be applicable in case of International Competitive Bidding as per policy of the government, in accordance with the procedure given in the Bidding Data.]

BID DATA SHEET (BDS)

Bid Data Sheet

Instructions to Bidders

Clause Reference

- 1.1 Name and address of the Purchaser
IT Wing, FBR, Islamabad
- 1.7 The bidding is open to **National Competitive Bidding (NCB) under Single Stage One Envelop Bidding procedure**
- 2.1 Source of Funding: **Federal Board of Revenue, Government of Pakistan**
- 8.1 Time limit for clarification:
14 days
- 10.1 Bid language:
English
- 11.1 (b) Prequalification Information to be updated:
Lowest Price Technically Acceptable (LPTA) Evaluation through Post Qualification will be carried out.
- 11.1(c) Furnish Technical Bid:
The bidder to submit a technical bid in sufficient detail to demonstrate the adequacy of the bid meeting requirements for timely delivery of Goods.
- 13.1 Currencies of Bid and Payment:
Bidders to quote entirely in Pak. rupees
Whenever bandwidth is increased or decreased, the bill will be charged on prorated basis. No addendum to SLA will be required for this purpose.
- 18.1 Period of Bid Validity: **90 days**
- 19.1 Amount of Bid Security: **5% of the Bid Price in the form of demand draft/pay order from a scheduled bank in favor of DDO, FBR**
- 21.1 Venue, time, and date of the Pre-Bid Meeting will be conducted:
Date: **13-09-2024**
Time: **11:30 a.m.**
Venue: **Auditorium, Ground Floor, FBR (HQ), G5/2, Islamabad.**
- 22.4 Number of copies of the Bid to be completed and returned:
One original and one copy & a soft copy in a USB
- 23.2(a) Purchaser's address for the purpose of Bid submission
Attention: **Second Secretary IT;**

Street address: **FBR House, Constitution Ave, G-5,**
Floor/Room number: **519**
City: **Islamabad;** ZIP code: **44000;** Country: **Pakistan.**
Telephone: **+92 (51) 9208455**
Fax: **+92 (51) 9211888**
E-mail: ssit@fbr.gov.pk
Web page: www.fbr.gov.pk

24.1(a) Deadline for submission of bids:

Date: **19-09-2024**

Time: **11 A.M.**

27.1 Venue, time, and date of Bid opening:

Date: **19-09-2024**

Opening Time: **11.30 A.M.**

Venue: Federal Board of Revenue (HQ)

Constitution Ave, G5/2 Islamabad

32 **Evaluation Criteria:**

The Purchaser's evaluation of responsive Bids will take into account the following technical factors:

The Qualification Criteria shall be **Lowest Price Technically Acceptable (LPTA)** wherein the bidder has to pass the Mandatory Firm Qualification Criteria and Technical Compliance of all the product features of the intended equipment during the Technical Evaluation.

Owing to the critical nature of all the product features, particular product features have been given the Mandatory status and the remaining product features are subject to their compliance Client's requirements with a maximum variation of **10%** which shall not affect the functionality of the equipment.

35.2 Percentage increase or decrease shall not exceed: **25%**

37.1 Standard form and amount of Performance Security acceptable to the Purchaser:
Performance Security (Bank Guarantee) unconditional equal to 05 percent of the Contract Price

SECTION-3

Evaluation Criteria

Technical Evaluation

3.0 Technical Criteria (ITB 31 and ITB 32)

The Purchaser's evaluation of responsive Bids will take into account the following technical factors, in addition to cost factors as specified in Section 3 (Evaluation and Qualification Criteria):

The Product & Firm Qualification Criteria are based on **Lowest Price Technically Acceptable (LPTA)** Evaluation wherein the bidder has to pass the Mandatory Firm Qualification Criteria and Technical Compliance during the Technical evaluation.

Owing to the critical nature of all the product features, particular product features have been given the Mandatory status with a maximum variation of 10% which does not affect the functional performance of the equipment.

Qualification Criteria

The Qualification Criteria is **Lowest Price Technically Acceptable (LPTA)** based on *Mandatory Firm Qualification Criteria and Technical Compliance Based Methodology along with Lowest Price Bid.*

**FORM OF BID
AND
APPENDICES TO BID**

Form of Bid

Date: _____

Bid Reference No. _____
(Name of Contract)

To:

Gentleman,

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Document, including Addenda No.: _____;
- (b) We offer to supply in conformity with the Bidding Document and in accordance with the Delivery and Completion Schedule, the following Goods _____
_____;
- (c) The total price of our Bid, excluding any discounts offered in item (d) below is: _____
_____;
- (d) The discounts offered and the methodology for their application are: _____

_____;
- (e) Our Bid shall be valid for a period of _____ days from the date fixed for the bid submission deadline in accordance with the Bidding Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (f) If our Bid is accepted, we commit to obtain a Performance Security in the amount of _____ percent of the Contract Price for the due performance of the Contract;
- (g) Our firm, including any subcontractors or suppliers for any part of the Contract, have nationalities from the following eligible countries _____;
- (h) We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Document;
- (i) Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the Contract, has not been declared ineligible by the Purchaser;

(j) The following commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract:

Name of Recipient	Address	Reason	Amount
_____	_____	_____	_____
_____	_____	_____	_____

(If none has been paid or is to be paid, indicate "none.")

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

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

(m) We agree to permit the Purchaser or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by the Bank.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Witness:

Name: _____

Signature: _____

Address: _____

Occupation: _____

NAME OF ELIGIBLE COUNTRIES

All countries EXCEPT INDIA & ISRAEL.

FOREIGN CURRENCY REQUIREMENTS (NOT APPLICABLE)

1. The Bidder may indicate here in below his requirements of foreign currency (if any), with reference to various Goods/services.
2. Foreign Currency Requirement as percentage of the Bid Price excluding Provisional Sums _____% IF APPLICABLE.
3. Table of Exchange Rates

Unit of Currency	Equivalent in Pak. Rupees
Australian Dollar	-----
Euro	-----
Japanese Yen	-----
U.K. Pound	-----
U.S. Dollars	-----
-----	-----
-----	-----

LIST OF MANUFACTURERS / VENDORS

I/We intend to supply Goods from the following manufactures or engage the following subcontractors for supply of Goods. In my/our opinion, the manufacturers/ subcontractors named hereunder are reliable and competent to supply of Goods/services for which each is listed.

Enclosed are documentation outlining experience of manufacturers/subcontractors, the curriculum vitae and experience of their key personnel who will be assigned to the Contract, Goods to be supplied or transportation to be done, size, location and type of contracts performed in the past.

Description of Goods/Services (Give Details)	Manufacturers/Vendors (With Complete Address)
1	2

Note:

In case, the Bidder is itself either manufacturer or transporter or both, the above table should be filled and requisite documentation be submitted accordingly.

(INTEGRITY PACT)

**DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC.
PAYABLE BY THE SUPPLIERS OF GOODS, SERVICES & WORKS IN
CONTRACTS WORTH RS. 10.00 MILLION OR MORE**

Contract No. _____ Dated _____
Contract Value: *[To be filled in at the time of signing of Contract]*
Contract Title: _____

..... [name of Supplier] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Pakistan (GoP) or any administrative subdivision or agency thereof or any other entity owned or controlled by GoP through any corrupt business practice.

Without limiting the generality of the foregoing, [name of Supplier] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder’s fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP, except that which has been expressly declared pursuant hereto.

[name of Supplier] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoP and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[name of Supplier] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to GoP under any law, contract or other instrument, be voidable at the option of GoP.

Notwithstanding any rights and remedies exercised by GoP in this regard, [name of Supplier] agrees to indemnify GoP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoP in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder’s fee or kickback given by [name of Supplier] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP.

Name of Buyer:
Signature:
[Seal]

Name of Seller/Supplier:
Signature:
[Seal]

SCHEDULES TO BID

**Price Schedule for Links Connectivity Services
to be offered from within the Purchaser's country**
(Applicable to All LOTs)

Name of Bidder _____ Bid Reference Number _____ Page ___ of ___

1	2	3	4	5
Item	Description	Unit Price	Sales and Other Taxes Per Item	Total Price including Taxes
1.	Cost of IP Bandwidth/Solution			
2.	Supply of equipment and related Cost (hardware)			
3.	Services and related Cost			
4.	Monthly recurrent cost Operation, Maintenance and support cost - Year 1			
5.	Monthly recurrent cost Operation, Maintenance and support cost -Year 2			
6.	Monthly recurrent cost Operation, Maintenance and support cost - Year 3			
Total Cost				

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Price Schedule for Goods to be offered from outside the Purchaser's country

Name of Bidder _____ Bid Reference Number _____ Page ___ of ___

1	2	3	4	5	6	7	8	
Item	Description	Country of Origin	Quantity and Unit of Measurement	Unit Price DDP	Total DDP Price per Item	Customs, Sales and other Taxes per Item	Total Price per Item including Customs and Taxes	
					4 x 5		6+7	
NOT APPLICABLE								
					Total Amount			

Notes:

Column 5 and 6 : Currency in accordance with ITB Clause 13

Column 6: Only to be used if the Purchaser wishes to reserve transportation and insurance to domestic companies or other designated sources. Identification of the lowest evaluated bid must be on the basis of the DDP.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Manufacturer's Authorization

Date: _____

Bid Reference No.: _____

Invitation for Bid No.: _____

To: _____

WHEREAS _____ who are official manufacturers of _____ having factories at _____ do hereby authorize _____ to submit a Bid in relation to the Invitation for Bids indicated above, the purpose of which is to provide the following Goods, manufactured by us _____ and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 28 of the General Conditions of Contract, with respect to the Goods offered by the above firm in reply to this Invitation for Bids

Name _____

In the capacity of: _____

Signed _____

Duly authorized to sign the Authorization for and on behalf of _____

Date _____

Schedule D

List of IT Goods/Services to be supplied

Lot #	Description	Specification
01/2024	CORE IP BANDWIDTH FOR ISLAMABAD (PRIMARY ISP) a) CORE BANDWIDTH FOR DATA CENTER FBR HOUSE b) CORE BANDWIDTH FOR AEOI AT DATA CENTER FBR HOUSE	As per technical specifications (Page 71 and onward)
02/2024	CORE IP BANDWIDTH FOR ISLAMABAD (SECONDARY ISP) a) CORE BANDWIDTH FOR DATA CENTER FBR HOUSE b) CORE BANDWIDTH FOR AEOI AT DATA CENTER FBR HOUSE	
03/2024	DARK FIBER FOR SYNCHRONOUS REPLICATION AND NETWORK CONNECTIVITY FOR DATA CENTERS INETRCONNECTIVITY (PRIMARY ISP)	
04/2024	DARK FIBER FOR SYNCHRONOUS REPLICATION AND NETWORK CONNECTIVITY FOR DATA CENTERS INETRCONNECTIVITY (SECONDARY ISP)	
05/2024	CORE IP BANDWIDTH FOR FBR HOUSE, ISLAMABAD (PRIMARY ISP)	
06/2024	CIR IP BANDWIDTH FOR FBR HOUSE, ISLAMABAD (SECONDARY ISP)	
07/2024	CORE IP BANDWIDTH FOR DATA CENTER KARACHI (PRIMARY ISP)	
08/2024	CORE IP BANDWIDTH FOR DATA CENTER KARACHI (SECONDARY ISP)	

**For all lots where primary and secondary ISP is involded, only one vendor will be selected for that link.*

Delivery Schedule:

The delivery timeline from the date of issuance of LOI for all lots is as following:

DELIEVERY OF LOT 01/2024: CORE IP BANDWIDTH FOR ISLAMABAD (PRIMARY ISP)

Description	Bandwidth	Delievery timelines	Delivery Location
Core IP Bandwidth for Islamabad	450 Mbps	1-2 weeks	Data Center, FBR House, Islamabad
Core IP Bandwidth for AEOI	100 Mbps	1-2 weeks	Data Center, FBR House, Islamabad

DELIEVERY OF LOT 02/2024: CORE IP BANDWIDTH FOR ISLAMABAD (SECONDARY ISP)

Description	Bandwidth	Delievery timelines	Delivery Location
Core IP Bandwidth for Islamabad	250 Mbps	1-2 weeks	Data Center, FBR House, Islamabad
Core IP Bandwidth for AEOI	50 Mbps	1-2 weeks	Data Center, FBR House, Islamabad

DELIEVERY OF LOT 03/2024: DARK FIBER FOR SYNCHRONOUS REPLICATION AND NETWORK CONNECTIVITY FOR DATA CENTERS INETRCONNECTIVITY – (PRIMARY ISP)

Description	Bandwidth	Delievery timelines	Delivery Location
P2P Dark Fiber Optic	-	1-2 weeks	FBR House to STP I-9, Islamabad with redundant fiber

DELIEVERY OF LOT 04/2024: DARK FIBER FOR SYNCHRONOUS REPLICATION AND NETWORK CONNECTIVITY FOR DATA CENTERS INETRCONNECTIVITY – (SECONDARY ISP)

Description	Bandwidth	Delievery timelines	Delivery Location
P2P Dark Fiber Optic	-	1-2 weeks	FBR House to STP I-9, Islamabad with redundant fiber

DELIEVERY OF LOT 05/2024: CORE IP BANDWIDTH FOR FBR HOUSE, ISLAMABAD (PRIMARY ISP)

Description	Bandwidth	Delievery timelines	Delivery Location
Core IP Bandwidth for FBR House	150 Mbps	1-2 weeks	FBR House, Islamabad

DELIEVERY OF LOT 06/2024: CORE IP BANDWIDTH FOR FBR HOUSE, ISLAMABAD (SECONDARY ISP)

Description	Bandwidth	Delievery timelines	Delivery Location
Core IP Bandwidth for FBR House	150 Mbps	1-2 weeks	FBR House, Islamabad

DELIEVERY OF LOT 07/2024: CORE IP BANDWIDTH FOR DATA CENTER KARACHI (PRIMARY ISP)

Description	Bandwidth	Delievery timelines	Delivery Location
Core IP Bandwidth for Karachi	300 Mbps	1-2 weeks	Data Center, 9 th Floor Custom House, Karachi

DELIEVERY OF LOT 08/2024: CORE IP BANDWIDTH FOR DATA CENTER KARACHI (SECONDARY ISP)

Description	Bandwidth	Delievery timelines	Delivery Location
Core IP Bandwidth for Karachi	100 Mbps	1-2 weeks	Data Center, 9 th Floor Custom House, Karachi

Inspection and Tests to be carried out

[Purchaser shall list down the Inspection and Tests to be carried out]

STANDARD FORMS

**BID SECURITY
PERFORMANCE SECURITY
CONTRACT AGREEMENT
ADVANCE PAYMENT SECURITY**

FORM OF BID SECURITY
(Bank Guarantee)

Security Executed on _____
(Date)

Name of Surety (Bank) with Address: _____
(Scheduled Bank in Pakistan)

Name of Principal (Bidder) with Address _____

Penal Sum of Security Rupees . _____ (Rs. _____)

Bid Reference No. _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bid and at the request of the said Principal (Bidder) we, the Surety above named, are held and firmly bound unto _____

(hereinafter called the 'Purchaser') in the sum stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Bidder has submitted the accompanying Bid dated _____ for Bid No. _____ for _____ (Particulars of Bid) to the said Purchaser; and

WHEREAS, the Purchaser has required as a condition for considering said Bid that the Bidder furnishes a Bid Security in the above said sum from a Scheduled Bank in Pakistan or from a foreign bank duly counter-guaranteed by a Scheduled Bank in Pakistan, to the Purchaser, conditioned as under:

- (1) that the Bid Security shall remain in force up to and including the date 28 days after the deadline for validity of bids as stated in the Instructions to Bidders or as it may be extended by the Purchaser, notice of which extension(s) to the Surety is hereby waived;
- (2) that the Bid Security of unsuccessful Bidders will be returned by the Purchaser after expiry of its validity or upon signing of the Contract Agreement; and
- (3) that in the event of failure of the successful Bidder to execute the proposed Contract Agreement and furnish the required Performance Security, the entire said sum be paid immediately to the said Purchaser pursuant to Clause 19.6 of the Instruction to Bidders for the successful Bidder's failure to perform.

NOW THEREFORE, if the successful Bidder shall, within the period specified therefor, on the prescribed form presented to him for signature enter into a formal Contract with the said Purchaser in accordance with his Bid as accepted and furnish within twenty eight (28) days of his being requested to do so, a Performance Security with good and sufficient surety, as may be required, upon the form prescribed by the said Purchaser for the faithful performance and proper fulfilment of the said Contract or in the event of non-withdrawal of the said Bid within the time specified for its validity then this obligation shall be void and of no effect, but otherwise to remain in full force and effect.

PROVIDED THAT the Surety shall forthwith pay the Purchaser the said sum upon first written demand of the Purchaser (without cavil or argument) and without requiring the Purchaser to prove or to show grounds or reasons for such demand, notice of which shall be sent by the Purchaser by registered post duly addressed to the Surety at its address given above.

PROVIDED ALSO THAT the Purchaser shall be the sole and final judge for deciding whether the Principal (Bidder) has duly performed his obligations to sign the Contract Agreement and to furnish the requisite Performance Security within the time stated above, or has defaulted in fulfilling said requirements and the Surety shall pay without objection the said sum upon demand from the Purchaser forthwith and without any reference to the Principal (Bidder) or any other person.

IN WITNESS WHEREOF, the above bounden Surety has executed the instrument under its seal on the date indicated above, the name and seal of the Surety being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

WITNESS:	SURETY (Bank)
	Signature _____
1. _____	Name _____
_____	Title _____
Corporate Secretary (Seal)	Corporate Guarantor (Seal)
2. _____	

Name, Title & Address	

**FORM OF PERFORMANCE SECURITY
(Bank Guarantee)**

Guarantee No. _____
Executed on _____
Expiry date _____

[Letter by the Guarantor to the Purchaser]

Name of Guarantor (Bank) with address: _____
(Scheduled Bank in Pakistan)

Name of Principal (Supplier/Contractor) with address:

Penal Sum of Security (express in words and figures) _____

Letter of Acceptance No. _____ Dated _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bidding Documents and above said Letter of Acceptance (hereinafter called the Documents) and at the request of the said Principal we, the Guarantor above named, are held and firmly bound unto the _____ (hereinafter called the Purchaser) in the penal sum of the amount stated above for the payment of which sum well and truly to be made to the said Purchaser, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has accepted the Purchaser's above said Letter of Acceptance for _____ (Name of Contract) for the _____ (Name of Project).

NOW THEREFORE, if the Principal (Supplier/Contractor) shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said Documents during the original terms of the said Documents and any extensions thereof that may be granted by the Purchaser, with or without notice to the Guarantor, which notice is, hereby, waived and shall also well and truly perform and fulfill all the undertakings, covenants terms and conditions of the Contract and of any and all modifications of said Documents that may hereafter be made, notice of which modifications to the Guarantor being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue till all requirements of Clause 28, Warrenty, of Conditions of Contract are fulfilled.

Our total liability under this Guarantee is limited to the sum stated above and it is a condition of any liability attaching to us under this Guarantee that the claim for payment in writing shall be received by us within the validity period of this Guarantee, failing which we shall be discharged of our liability, if any, under this Guarantee.

We, _____ (the Guarantor), waiving all objections and defences under the Contract, do hereby irrevocably and independently guarantee to pay to the Purchaser without delay upon the Purchaser's first written demand without cavil or arguments

and without requiring the Purchaser to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the Purchaser's written declaration that the Principal has refused or failed to perform the obligations under the Contract which payment will be effected by the Guarantor to Purchaser's designated Bank & Account Number.

PROVIDED ALSO THAT the Purchaser shall be the sole and final judge for deciding whether the Principal (Contractor) has duly performed his obligations under the Contract or has defaulted in fulfilling said obligations and the Guarantor shall pay without objection any sum or sums up to the amount stated above upon first written demand from the Purchaser forthwith and without any reference to the Principal or any other person.

IN WITNESS WHEREOF, the above-bounden Guarantor has executed this Instrument under its seal on the date indicated above, the name and corporate seal of the Guarantor being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Guarantor (Bank)

Witness:

1. _____

Signature _____

Corporate Secretary (Seal)

Name _____

Title _____

2. _____

Name, Title & Address

Corporate Guarantor (Seal)

FORM OF CONTRACT AGREEMENT

THIS AGREEMENT made on the _____ day of _____, 20____, between _____ of _____ (hereinafter “the Purchaser”), of the one part, and _____ of _____ (hereinafter called “the Supplier”), of the other part:

WHEREAS the Purchaser invited bids for certain Goods viz., _____ and has accepted a Bid by the Supplier for the supply of those Goods in the sum of _____ (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) the Purchaser’s Notification to the Supplier of Award of Contract (Letter of Acceptance);
 - (b) the Form of Bid and the Price Schedules submitted by the Supplier;
 - (c) the Particular Conditions of Contract; Part-II
 - (d) the General Conditions of Contract; Part-I
 - (e) the Schedule to Bid (other than Price Schedule);
 - (f) Appendices to Bid;
 - (g) Specifications;
 - (h) Drawings; and
 - (i) Any other Item

This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.

3. In consideration of the payments to be made by the Purchaser to the Supplier as indicated in this Agreement, the Supplier hereby covenants with the Purchaser to provide the Goods and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Purchaser 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.

IN WITNESS the parties hereto have caused this Agreement to be executed in accordance with the laws of _____ on the day, month and year indicated above.

Signature of the Supplier

Signature of the Purchaser

(Seal)

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

(Name, Title and Address)

Witness

(Name, Title and Address)

Form of Advance Payment Security (N/A)

Date: _____

Contract Name and No.: _____

To: _____

In accordance with the payment provision included in the Contract, in relation to advance payments, _____ (hereinafter called "the Supplier") shall deposit with the Purchaser a security consisting of _____, to guarantee its proper and faithful performance of the obligations imposed by said Clause of the Contract, in the amount of _____.

We, the undersigned _____, legally domiciled in _____ (hereinafter "the Guarantor"), as instructed by the Supplier, agree unconditionally and irrevocably to guarantee as primary obligor and not as surety merely, the payment to the Purchaser on its first demand without whatsoever right of objection on our part and without its first claim to the Supplier, in the amount not exceeding _____.

This security shall remain valid and in full effect from the date of the advance payment received by the Supplier under the Contract until _____, _____.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the security for and on behalf of _____

Date _____

General Conditions of Contract

General Conditions of Contract

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1. Definitions

1.1 The following words and expressions shall have the meanings hereby assigned to them:

- (a) “Contract” means the Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, schedules and all documents incorporated by reference therein.
- (b) “Contract Documents” means the documents listed in the Agreement, including any amendments thereto.
- (c) “Contract Price” means the price payable to the Supplier as specified in the Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.
- (d) “Day” means calendar day.
- (e) “Delivery” means the transfer of the Goods from the Supplier to the Purchaser in accordance with the terms and conditions set forth in the Contract.
- (f) “Completion” means the fulfillment of the supply of Goods by the Supplier in accordance with the terms and conditions set forth in the Contract.
- (g) “Eligible Countries” means the countries as per Appendix-A.
- (h) “GCC” means the General Conditions of Contract.
- (i) “Goods” means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
- (j) “Purchaser’s Country” is the country specified in the Particular Conditions of Contract (PCC).
- (k) The “Purchaser” means the Employer who is the entity purchasing the Goods, as specified in the PCC, and includes the legal successors or assigns of the Purchaser.
- (l) “PCC” means the Particular Conditions of Contract.
- (m) “Subcontractor” means any natural person, private or government entity or a combination of the above, including its legal successors or permitted assigns, to whom any part of the Goods to be supplied is subcontracted by the Supplier.
- (n) “Supplier” means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Agreement, and includes the

legal successors or permitted assigns of the Supplier.

(o)“The Site,” where applicable, means the place named in the PCC.

2. Contract Document

Subject to the order of precedence set forth in the Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory.

3. Corrupt and Fraudulent Practices

3.1

(a) For the purposes of this provision, the term “Corrupt and Fraudulent Practices” includes the offering, giving, receiving, or soliciting of any thing of value to influence the action of a public official or the supplier or contractor in the procurement process or in contract execution to the detriment of the procuring agencies; or misrepresentation of facts in order to influence a procurement process or the execution of a contract, collusive practices among bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the procuring agencies of the benefits of free and open competition and any request for, or solicitation of anything of value by any public official in the course of the exercise of his duty.

(b) The Purchaser will reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt and fraudulent practices in competing for the Contract.

3.2 The Supplier shall permit the Purchaser to inspect the Supplier’s accounts and records relating to the performance of the Supplier and to have them audited by auditors appointed by the Purchaser, if so required by the Purchaser.

4. Interpretation

4.1 If the context so requires it, singular means plural and vice versa wher the context requires.

4.2 Incoterms

The meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms.

(a) EXW, CIF, DDP, and other similar terms, shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce at the date of the Invitation for Bids or as

specified in the PCC.

4.3 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of parties with respect thereto made prior to the date of Contract.

4.4 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

4.5 Nonwaiver

- (a) Subject to GCC Sub-Clause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.
- (b) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

4.6 Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

5. Language

- 5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be written in the language specified in the PCC. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the PCC, in which case, for purposes of interpretation of the Contract, this translation shall govern.

- 5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation.
- 6. Joint Venture, Consortium or Association**
- 6.1 Unless otherwise specified in the PCC, if the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.
- 7. Eligibility**
- 7.1 The Supplier and its Subcontractors shall have the nationality of an Eligible Country in case of International Competitive Bidding but only of Pakistan in case National Competitive Bidding. A Supplier or Subcontractor shall be deemed to have the nationality of a country if it is a citizen or constituted or incorporated, and operates in conformity with the provisions of the laws of that country.
- 7.2 All Goods to be supplied under the Contract and financed by the Purchaser shall have their origin in Eligible Countries. For the purpose of this Clause, origin means the country where the goods have been grown, mined, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its imported components.
- 8. Notices**
- 8.1 Any Notice given by one party to the other pursuant to the Contract shall be in writing to the address specified in the PCC. The term “in writing” means communicated in written form with proof of receipt.
- 8.2 A Notice shall be effective when delivered or on the Notice’s effective date, whichever is later.
- 9. Governing Law**
- 9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Purchaser’s country, unless otherwise specified in the PCC.
- 10. Settlement of Disputes**
- 10.1 The Purchaser and the Supplier 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.
- 10.2 If the parties fail to resolve such a dispute or difference by mutual consultation within twenty-eight (28) days from the commencement of such consultation, either party may require that the dispute be referred for resolution to the formal mechanisms specified in the PCC.

- 11. Scope of Supply**
- 11.1 Subject to the PCC, the Goods to be supplied shall be as specified in Schedules to Bid.
- 11.2 Unless otherwise stipulated in the Contract, the Scope of Supply shall include all such items not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining Delivery and Completion of the Goods as if such items were expressly mentioned in the Contract.
- 12. Delivery**
- 12.1 Subject to GCC Sub-Clause 33.1, the Delivery of the Goods shall be in accordance with the Delivery and Completion Schedule specified in the Schedules to Bid. The details of shipping and other documents to be furnished by the Supplier are specified in the PCC.
- 13. Supplier's Responsibilities**
- 13.1 The Supplier shall supply all the Goods included in the Scope of Supply in accordance with GCC Clause 11, and the Delivery and Completion Schedule, as per GCC Clause 12.
- 14. Purchaser's Responsibilities**
- 14.1 Whenever the supply of Goods requires that the Supplier obtain permits, approvals, and import and other licenses from local public authorities, the Purchaser shall, if so required by the Supplier, make its best effort to assist the Supplier in complying with such requirements in a timely and expeditious manner.
- 14.2 The Purchaser shall afford all costs involved in the performance of its responsibilities, in accordance with GCC Sub-Clause 14.1.
- 15. Contract Price**
- 15.1 The Contract Price shall be as specified in the Agreement subject to any additions and adjustments thereto, or deductions therefrom, as may be made pursuant to the Contract.
- 15.2 Prices charged by the Supplier for the Goods delivered under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized as per the formula if given in GCC Sub-Clause 15.3.
- 15.3 *[The Purchaser should develop the formula and other factors for Price Adjustment based on the principle of Clause 70.1 of PEC Bidding Documents for Civil Works and Standard Procedure and Formulae for Price Adjustment prepared by PEC, with following modifications:*
- i. Adjustable material would be those raw materials used for manufacturing of specific Goods Items on which, in*

opinion of the Purchaser, the price adjustment is payable. However, the Purchaser shall calculate, to make project specific price adjustment formula, the appropriate weightages of major raw materials as per the PEC standard documents mentioned above.

ii. In case of adjustable materials and labor, the current price indices shall be 42 days prior to date of Goods transport [or any other appropriate period may be incorporated by the Purchaser representing the mid-point of the period of manufacture], while in case of POL, the current price indices shall be 15 days [or any other reasonable period may be incorporated by the Purchaser] before the date of Goods transport.

iii. Source for indices:

a. For Local Manufactured Items;

PICC cost data or any other credible source to be mentioned in bidding documents, failing which to be agreed between parties before signing the Contract.

b. For Foreign Manufactured Items;

London Metal Exchange (LME) Rate]

OR

[The Purchaser shall state “This is a Fixed Price Contract” in case the Price Adjustment is not applicable for lesser time of delivery or smaller quantities of Goods to be supplied.]

16. Terms of Payment

16.1 The Contract Price shall be paid as specified in the PCC.

16.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered by the documents submitted pursuant to GCC Clause 12 and upon fulfillment of all the obligations stipulated in the Contract.

16.3 Payments shall be made promptly by the Purchaser, no later than sixty (60) days after submission of an invoice or request for payment by the Supplier, and the Purchaser has accepted it.

16.4 The currency or currencies in which payments shall be made to the Supplier under this Contract shall be specified in the PCC.

- 17. Taxes and Duties**
- 17.1 For Goods supplied from outside the Purchaser's Country, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser's Country.
- 17.2 For Goods supplied from within the Purchaser's Country, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.
- 17.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in the Purchaser's Country, the Purchaser shall use its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.
- 18. Performance Security**
- 18.1 The Supplier shall, within twenty-eight (28) days of the notification of Contract award, provide a Performance Security for the due performance of the Contract in the amounts and currencies specified in the PCC.
- 18.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 18.3 The Performance Security shall be denominated in the currencies of the Contract, or in a freely convertible currency acceptable to the Purchaser, and shall be in one of the forms stipulated by the Purchaser in the PCC, or in another form acceptable to the Purchaser.
- 18.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than twenty-eight (28) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in the PCC.
- 19. Copyright**
- 19.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.
- 20. Confidential Information**
- 20.1 The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it receives from the

Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 20.

20.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the Contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the design, procurement, required for the performance of the Contract.

20.3 The obligation of a party under GCC Sub-Clauses 20.1 and 20.2 above, however, shall not apply to information that:

- (a) the Purchaser or Supplier need to share with the purchaser or other institutions participating in the financing of the Contract;
- (b) now or hereafter enters the public domain through no fault of that party;
- (c) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or
- (d) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

20.4 The above provisions of GCC Clause 20 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof.

20.5 The provisions of GCC Clause 20 shall survive completion or termination, for whatever reason, of the Contract.

21. Subcontracting

The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the Bid. Subcontracting shall in no event relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.

21.1 Subcontracts shall comply with the provisions of GCC Clauses 3 and 7.

22. Specifications and Standards

22.1 Technical Specifications and Drawings

- (a) The Supplier shall ensure that the Goods comply with the technical specifications and other provisions of the

Contract.

- (b) The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.
- (c) The Goods supplied under this Contract shall conform to the standards mentioned in the Schedules to Bid and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the country of origin of the Goods.

22.2 Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Schedules to Bid. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with GCC Clause 33.

23. Packing and Documents

23.1 The Supplier 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. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the final destination of the Goods and the absence of heavy handling facilities at all points in transit.

23.2 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, specified in the PCC, and in any other instructions ordered by the Purchaser.

24. Insurance

24.1 Unless otherwise specified in the PCC, the Goods supplied under the Contract shall be fully insured, in a freely convertible currency from an eligible country, against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms or in the manner specified in the PCC.

25. Transportation

25.1 Unless otherwise specified in the PCC, obligations for transportation of the Goods shall be in accordance with the Incoterms specified in the Schedules A and B to Bid.

26. Inspections

26.1 The Supplier shall at its own expense and at no cost to the

and Tests

Purchaser carry out all such tests and /or inspections of the Goods as are specified in the Schedules to Bid.

- 26.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/or at the final destination of the Goods, or in another place in the Purchaser's country as specified in the PCC. Subject to GCC Sub-Clause 26.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.
- 26.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC Sub-Clause 26.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.
- 26.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.
- 26.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications, codes and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.
- 26.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 26.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC Sub-Clause 26.4.
- 26.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GCC Sub-Clause 26.6, shall release the

Supplier from any warranties or other obligations under the Contract.

27. Liquidated Damages

27.1 Except as provided under GCC Clause 32, if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the PCC of the Contract Price for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in the PCC. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 35.

28. Warranty

28.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.

28.2 Subject to GCC Sub-Clause 22.1, the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.

28.3 Unless otherwise specified in the PCC, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the PCC, or for eighteen (18) months after the date of shipment or loading in the country of origin, whichever period concludes earlier.

28.4 The Purchaser shall give Notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.

28.5 Upon receipt of such Notice, the Supplier shall, within the period specified in the PCC, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.

28.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the PCC, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

29. Patent

29.1 The Supplier shall, subject to the Purchaser's compliance with

Indemnity

GCC Sub-Clause 29.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

- (a) the installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and
- (b) the sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

- 29.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Sub-Clause 29.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.
- 29.3 If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.
- 29.4 The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.
- 29.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract

arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

30. Limitation of Liability

30.1 Except in cases of gross negligence or willful misconduct:

- (a) neither party shall be liable to the other party for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser; and
- (b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort, or otherwise, shall not exceed the amount specified in the PCC, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the Supplier to indemnify the Purchaser with respect to patent infringement.

31. Change in Laws and Regulations

31.1 Unless otherwise specified in the Contract, if after the date of the Invitation for Bids, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in the place of the Purchaser's country where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC Clause 15.

32. Force Majeure

32.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

32.2 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

- 32.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier 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.
- 33. Change Orders and Contract Amendments**
- 33.1 The Purchaser may at any time order the Supplier through Notice in accordance GCC Clause 8, to make changes within the general scope of the Contract in any one or more of the following:
- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
 - (b) the method of shipment or packing;
 - (c) the place of delivery; and
 - (d) Any other
- 33.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery and Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Supplier's receipt of the Purchaser's change order.
- 34. Extensions of Time**
- 34.1 If at any time during performance of the Contract, the Supplier or its Subcontractors should encounter conditions impeding timely delivery of the Goods pursuant to GCC Clause 12, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.
- 34.2 Except in case of Force Majeure, as provided under GCC Clause 32, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 27, unless an extension of time is agreed upon, pursuant to GCC Sub-Clause 34.1.
- 35. Termination**
- 35.1 Termination for Default
- (a) The Purchaser, without prejudice to any other remedy for breach of Contract, by Notice of default sent to the

Supplier, may terminate the Contract in whole or in part:

- (i) if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 34; or
 - (ii) if the Supplier fails to perform any other obligation under the Contract.
- (b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 35.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods. However, the Supplier shall continue performance of the Contract to the extent not terminated.
- (c) if the Supplier, in the judgment of the Purchaser has engaged in corrupt and fraudulent practices, as defined in GCC Clause 3, in competing for or in executing the Contract.

35.2 Termination for Insolvency

The Purchaser may at any time terminate the Contract by giving Notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser.

35.3 Termination for Convenience

- (a) The Purchaser, by Notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The Notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- (b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of the Notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:
- (i) To have any portion completed and delivered at the

Contract terms and prices; and/or

- (ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

36. Assignment

36.1 The Supplier shall not assign, in whole or in part, its obligations under this Contract, except with prior written consent of the Purchaser.

Particular Conditions of Contract (PCC)

The following Particular Conditions of Contract (PCC) shall supplement the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC Sub Clause 1.1(j)

The Purchaser's country is **Islamic Republic of Pakistan**.

GCC Sub Clause 1.1(k)

The Purchaser is: **Federal Board of Revenue, Islamabad**.

GCC Sub Clause 1.1 (o)

The Site is: **FBR Data Centers and FBR (HQ)**

GCC Sub Clause 4.2 (b)

The version of Incoterms shall be that prevailing on the date of Invitation for Bids is **Incoterms 2020**

GCC Sub Clause 5.1

The language shall be **English**

GCC Sub Clause 7.1 and 7.2

The procurement is based on **National Competitive Bidding (NCB)**

GCC Sub Clause 8.1

For **notices**, the Purchaser's address shall be:

Attention: **Second Secretary IT;**

Street address: **FBR House, Constitution Ave, G-5,**

Floor/Room number: **519**

City: **Islamabad;**

ZIP code: **44000;**

Country: **Pakistan.**

Telephone: **+92 (51) 9209046**

Fax: **+92 (51) 9211888**

E-mail: ssit@fbr.gov.pk

Web page: www.fbr.gov.pk

[Addresses of the Supplier shall be entered before signing the Contract]

GCC Sub Clause 9.1

The governing law shall be the Law of Islamic Republic of Pakistan: **Pakistan Arbitration Act 1940**

GCC Sub Clause 10.2

The formal mechanism for the resolution of disputes shall be as follows:

- a. The rights and obligations of the Parties under or pursuant to these Conditions shall be governed and construed according to the Law of Islamic Republic of Pakistan.
- b. The dispute shall be referred to arbitration and finally settled in Pakistan in accordance with the **Pakistan Arbitration Act, 1940**, and any amendment or substitution thereof. If the Parties cannot agree to the appointment of a sole arbitrator each Party shall appoint an arbitrator and the arbitrators shall, before entering upon the reference, jointly appoint an umpire. The decision of the arbitrator(s) shall be final and shall not be challenged or assailed in any court on any ground whatsoever.

GCC Sub Clause 11.1

The scope of Goods/Services Supply is described in **Schedule-D** to Bid.

GCC Sub Clause 12.1

Details of shipping and other documents to be furnished by the Supplier shall be:

- (a) Bill of Quantities (Inclusive of all the products as specified in the Client's requirements duly reflecting their prices through the Price Schedule);
- (b) Product Brochure / Solution Write-up w.r.t. Solicited Technical Specifications
- (c) Delivery Schedule
- (d) Transportation Details w.r.t. Incoterms 2020;
- (e) Equipment Installation and Go-LIVE Details
- (f) Warranty Coverage Details

The delivery shall be required as mentioned in Schedule E.

GCC Sub Clause 16.1

The terms of payment shall be as given in Financial Management, & Powers of PAO Regulation, 2021. No advance payment shall be made to any vendor. Whenever bandwidth is increased or decreased, the bill will be charged on prorated basis. No addendum to SLA will be required for this purpose. Payment will be made on quarterly basis.

GCC Sub Clause 16.4

The currencies for payments shall be: **PKR**

GCC Sub Clause 18.1

The Supplier shall provide a Performance Security of **Five percent** of the Contract Price in Pakistani Rupees.

GCC Sub Clause 18.3

The Supplier shall provide a Performance Security in the prescribed Form annexed to these Documents in the form of an **unconditional Bank Guarantee** from any Scheduled Bank duly verified by the said bank in **Pakistan & SECP**.

The cost of complying with the requirements of this Sub-Clause shall be borne by the Contractor.

GCC Sub Clause 18.4

Discharge of Performance Security shall take place: **Upon execution of the Project activity as per the contractual Work Schedule**

GCC Sub Clause 23.2

The packing, marking and documentation within and outside the packages shall be: **As per the Schedule of requirements.**

GCC Sub Clause 24.1

The insurance coverage shall be in accordance with: **Incoterms 2020**

GCC Sub Clause 25.1

Obligations for transportation of the Goods shall be in accordance with:

Incoterms 2020 & Schedule of Requirements

GCC Sub Clause 26.2

Tests and Inspections specified in Schedule F to Bid, shall be carried out at the following times or milestones, and places: **As per the submitted Work Schedule**

GCC Sub Clause 27.1

The penalty shall apply as per the following table:

Duration	Penalty rate (% of the PO/WO)
Late by 1-2 weeks	1-3%
Late by 3-4 weeks	4-7%
Late by more than 4 weeks	8-10%

GCC Sub Clause 27.1

The maximum amount of liquidated damages shall be: **Not exceeding 10% of the Contract Amount.**

GCC Sub Clause 28.3

The period of validity of the Warranty shall be 3 years

GCC Sub Clause 28.5

The Supplier shall correct any defects covered by the Warranty within: **24-48 hours** of being notified by the Purchaser of the occurrence of such defects

GCC Sub Clause 30.1

The amount of aggregate liability shall be: **Not exceeding 10% of the Contract Amount.**

GCC Sub Clause 31.1

In case of any change in tax laws and regulations resulting in fluctuation in the amount of duties and taxes, no additional amount shall be paid by the Purchaser.

GCC Sub Clause 36.

This contract will remain valid for period of three years from the day of signing or provisioning of the services

TECHNICAL SPECIFICATIONS

ANNEXURE-I: SCOPE OF SERVICES

1 STATEMENTS OF WORK

1.1 PURPOSE

Federal Board of Revenue intends to acquire Internet, Dark Fiber Connectivity Services and Core IP Bandwidth for its Data Centers in Islamabad and Karachi.

1.2 DESCRIPTION AND SCOPE OF WORK

The services are required for a period of three (03) years on contract terms and conditions, including all applicable taxes which will be extendable with mutual consent of both parties.

1.3 Security and Privacy

FBR reserves the right to validate the compliance with security of the proposed solution prior to authorizing payment. The bidder shall also abide by the security procedures in place by FBR. The bidder/contractor must certify that any information obtained during the course of performing the tasks will not be disclosed to any external party.

1.4 Mandatory Requirements

The proposed Solution MUST possess the following characteristics at the time of proposal submission.

1. Delivery of fiber hand-off (Gigabit data rate) at FBR data center meet me room is required and will be the responsibility of bidder against all
2. The bidder should have its own help desk/ticketing system.
3. The FBR requires connectivity across the Internet to be reliable and error free. Therefore, the circuits will continuously be monitored for CRCs.
4. The service provider will ensure that FBR at all times has the guaranteed bandwidth available as requested and signed off in the confirmation of commissioning of the leased circuits.
5. The proposed solution should be scalable considering possible future expansion.
6. All fiber optic termination / configuration equipment's required shall be service provider's responsibility.
7. The solution should be on turn-key basis including hardware equipment, media acquisition, installation/integration/configuration/commissioning and services. All Hardware quoted should be on turnkey & rental basis.
8. In case of FBR data center relocation to newly established data center site, the selected bidder has to provide the same connectivity and services on the new site under the same SLA. The bidder shall provide relocation cost as per requirement at the time of relocation.
9. Fiber optic link will be on turnkey basis which includes but is not limited to, items like laying of fiber cable, ODF / ONT, Mux.
10. In case of any hardware failure, backup equipment should be available. Faulty device should be replaced within four (04) hours.

11. The response time of the engineers will be counted from the fault reporting time to the arrival/response of the respective engineer.
12. The escalation on email shall be immediately responded by the service provider team within **15 minutes** with conclusive feedback on the matter. Inordinate delay beyond half an hour on the escalated ticket shall be treated under the penalty clauses defined in following section.
13. The service provider shall be responsible for all civil work related to the installation of the Fiber Optics, Wireless links, cabling of data, grounding, earthing as well as channeling and all other works pertaining to the installation. The service provider will be responsible for the quality of the works and will assume full responsibility in case of damage to FBR building and/or property while carrying out the same.
14. FBR also requires that the service provider conduct pre-emptive maintenance inspections on a quarterly basis to ensure that the equipment is not deteriorating or about to undergo failure through cable damage, corrosion, breakage etc.
15. FBR requires help line numbers to be provided where problems may be immediately reported and a quick process initiated to identify and rectify the problem. The office, mobile number and email addresses of operational staff must be provided for immediate escalation of the problem. In case of absence or leave of the primary responsible resource, the backup resource contact numbers will also be provided by the service provider and his presence during that period will be ensured to FBR.
16. All PTA or any other Licenses required will be the sole responsibility of the service provider.
17. Provide periodic reports (in form of excel spread sheet, executive report) as and when required within two days of FBR's intimation.
18. The initial point of contact will be the Pakistan Revenue Automation Limited technical team.
19. FBR reserves the right to activate or de-activate any link or LOT as per its sole discretion.
20. The bidder will be completely responsible for the execution of the project as a single point solution provider.
21. Bidder must have working office in Pakistan with registered address/proof.
22. Service provider should be capable to restrict/allow/filter specific traffic on the requirement basis of FBR.
23. Local support should be available all the time and response time should be less than one (01) hour.
24. The bidder requires to provide 99.99% uptime and any reduction in uptime will be deducted from MRC as per the signed contract accordingly.
25. Service provider shall provide 24x7x365 service and response engineers mobile numbers to FBR for direct support during off hours.
26. Bidders are required to quote listed bandwidth slab rates for all lots. FBR may request ISP to increase the bandwidth as per quoted rates for any slab according to FBR requirement any time on prorated basis. This will be the part of SLA and signing of additional addendum will not be required.
27. Down time on primary or secondary link will be considered as non availability of link and deduction will be made in accordance with down time policy.
28. For lot 01/2024 and lot 02/2024, since both the primary and secondary links are involved for same site, it is mandatory that the services be provided by different ISPs. This is necessary to ensure a redundant IP backbone/upstream through an alternate route, guaranteeing 24/7 operations.
29. For lot 03/2024 and lot 04/2024, since both the primary and secondary links are involved for same site, it is mandatory that the services be provided by different ISPs.

This is necessary to ensure a redundant IP backbone/upstream through an alternate route, guaranteeing 24/7 operations.

30. For lot 05/2024 and lot 06/2024, since both primary and secondary links are involved for same site, it is mandatory that the services be provided by different ISPs. This is necessary to ensure a redundant IP backbone/upstream through an alternate route, guaranteeing 24/7 operations.
31. For lot 07/2024 and lot 08/2024, since both primary and secondary links are involved for same site, it is mandatory that the services be provided by different ISPs. This is necessary to ensure a redundant IP backbone/upstream through an alternate route, guaranteeing 24/7 operations.
32. If a same ISP submits the lowest bid for both primary and secondary link (Sr. No 28, 29, 30 & 31) the financial selection will be made by FBR, based on the most favorable and reasonable option among them.

1.5 Summary of SLA and Service Credits

Sr.No	SLA indicator	Required SLA Values
1	Network backbone and individual link availability	99.99 %
2	Network backbone round trip latency between 2 sites	Less than 100 milliseconds
3	Packet Loss	Less than 0.3 %
4	Pack Jitter	Less than 2 milliseconds
5	Mean time to repair	1 hour

1.6 Credit Allocation Policy for Link Availability

Cumulative monthly time of outages	Customer Credit % of the monthly recurrent cost, the concerned Internet link or the Backbone
Between 15 minutes and 4 hours	10 %
Between 4 and 8 hours	20 %
Between 8 and 12 hours	40 %
Between 12 and 24 hours	50 %
More 24 hours	One-month credit

1.7 Credit Allocation for Latency, Packet Loss, Jitter

Performance Indicators	Service credit
Latency > 100 milliseconds for more than 1 hour during the service month	15% of the MRC
Packet loss >.3% for more than 1 hour during the service month	15% of the MRC
Jitter > 2millisecond	15% of the MRC

1.8 Deployment Responsibility Matrix

Sr. #	Items	Description	Responsibility
1.	Equipment Rack	Rack or equivalent space in existing rack is required for the installation of network equipment.	FBR
2.	Air Conditioning	Required for maintaining the proper temperature for communication equipment	FBR
3.	Site related permission & site access	This is the responsibility of FBR to facilitate permissions and site access	FBR
4.	Power/Generators	Providing Raw power and with Generator backup (where Generator is required) is the responsibility of FBR	FBR
5.	Point of Contacts	FBR will provide point of contacts for each location.	FBR
6.	Security	All possible measures should be taken to ensure security of the equipment and prevent access of irrelevant persons, animals, objects etc.	FBR
7.	Cable Route	FBR will help to finalize the survey for cable route	FBR
8.	Power Sockets	FBR will provide the required power point	FBR
9.	Electrician Availability	FBR electricians are available only in Major cities. Rest is the responsibility of service provider (if required)	FBR/Service Provider
10.	Civil Work	Permission for civil work like concrete base etc. if required (FBR role is only limited to permissions)	FBR/Service Provider
11.	Routing/Switching device / Converters	Customer end router/switching device / converters/SFPs (Gig)/ Gigabit Patch Cords etc	Service Provider

LOT 01/2024 (CORE IP BANDWIDTH FOR ISLAMABAD) PRIMARY ISP

1. Core Bandwidth for Data Center FBR House (450 Mbps)
2. Core Bandwidth for AEOI at Data Center FBR House (100 Mbps)

Project Background:

Core IP bandwidth on redundant IP backbone/upstream providers with and self-healed **redundant Last Mile** fiber through alternate route is required from two different upstream service providers for hosting of our core application systems. The reason for the choice of two upstream service providers is important is to provide protection against International Bandwidth failures and various disasters.

Technical Requirement Framework

A minimum technical requirements matrix is listed below. All prospective bidders must fill the below table along with necessary documentation required to be provided with this

S #	Description	Compliance	Remarks
1.	The service provider should have long haul with multiple ring protection to ensure redundancy.		
2.	The service provider should have their own Active Disaster recovery sites.		
3.	Evidence that the FBRs Islamabad and Karachi Core sites will be feed through redundant POPs. Alternate pops are available in case of failure.		
4.	All the sites in major cities should be on fiber should be in ring configuration, if ring is not possible than the backup should be on wireless.		
5.	Both FBR core Aggregation Sites required to be deployed in active/active configuration.		
6.	The complete core network must be around secure Layer3 core network of ISP.		
7.	The SLA is 99.9 %. This is based required 24x7 the data center operations of FBR.		
8.	The design of the network should have the scalability/flexibility for us to upgrade bandwidth at any of FBR location, with the existing technology or with alternate technology.		
9.	The design of the network should have the scalability/flexibility to add any new sites in future.		
10.	The core routers/devices and their capacity sizing are the responsibility of vendor to cater the FBR needs of CIR bandwidth in Gbps		
11.	All the equipment used in the network should be insured and hot replacement will be provided in case of any failure or mal function.		
12.	The vendor must not be black listed by any Govt. agency & PTA		
13.	Bidder must be in relevant business for at least 5 years.		
14.	The bidder should have its own help desk/ticketing system		
15.	The upload and download bandwidth should be same at all sites. No cached bandwidth shall be accepted or if it is found during the contract period that bandwidth is cached, contract will be terminated due to violation of		

	the mandatory requirement.		
16.	Provide weekly update to FBR regarding the project		
17.	NMS/MRTG server configured with 24/7 monitoring consolidated status of the links should be provided by the vendor. It is mandatory requirement		
18.	NMS/MRTG portal access with administrative privlidge to view the reports in detail shall be provided to FBR. It is mandatory requirement.		

Note:

It is the responsibility of bidder to get a sign-off from the POC. Without the sign-off certificate the site will be considered undeployed. The sign off shall be considered effective from the date of successful commissioning and services activation duly verified by the FBR technical team. The certificate should be clearly signed with clear details regarding the date of commissioning visiting engineer details etc.

Last Mile Preference:

Fiber Optic is the fastest and most secure transmission medium. Selecting fiber optic media means that the network delay between two end points will be very small as compared to other links/media. To ensure the uninterrupted services the last Mile must be connected to service provider’s self-heal/redundant ring (a must requirement). Preference will be given to the bidder with maximum fiber-based connections. The connectivity medium required is mentioned against each site.

Core IP Bandwidth for Islamabad – (Primary ISP)

Core IP bandwidth on redundant IP backbone/upstream providers with and self-healed **redundant Last Mile** fiber through alternate route is required from two different service providers for hosting of our core application systems. The reason for the choice of two service providers is important is to provide protection against International Bandwidth failures and various disasters in case of force disaster.

CIR IP Bandwidth with Primary last mile on Fiber and Secondary Last mile, in active redundant form, on Alternate (Physical) fiber ring is required for Data Center, FBR House, Islamabad (conceptual illustration of the solution is depicted below).

Following is the required scenario

1. Bidder are required to submit solution with two up streams along with information about which submarine cable is being used as primary and backup e.g. ITI and TW1.
2. 256 Public IP (/24) addresses subnet is required from each bidder (Primary ISP) for Data Center link.
3. The bidder shall include NOC in the technical proposal that FBR can advertise this 256 (/24) IP subnet to anyother Services provider with FBR’s owned AS number. This functionality is required on mandatory basis.

4. 32 Public IP Address subnet is required from each bidder (Primary ISP) for AEOI link.
5. Service provider should have sufficient bandwidth (upto Gbps) available at its local POP from both sources i.e., ITI and TW1 so that in case of outage of one source, traffic could be automatically switched to other source without any congestion. (Information of IP bandwidth from both sources is required to be submitted by the bidders)
6. FBR reserves the right to select the IP bandwidth as per our own discretion (table enclosed). Bidders are also required to submit prices (inclusive of taxes) for each of these bandwidths as CIR
7. Initially bandwidth required for data center is of **450 Mbps**. The bandwidth should be burstable up to listed bandwidth slabs and FBR may request to increase the bandwidth upto required slab (this burst will be at any date/time for one month). The bidder should be capable to upgrade the link within **15 minutes** after intimation from technical team.
8. Initially bandwidth required for AEOI is of **100 Mbps**. The bandwidth should be burstable up to listed bandwidth slabs and FBR may request to increase the bandwidth upto required slab (this burst will be at any date/time for one month). The bidder should be capable to upgrade the link within **15 minutes** after intimation from technical team.
9. Provision of 100% buried fiber is mandatory and bidder has to provide documentary evidence with map. No Aerial fiber shall be accepted for this connectivity service.
10. The cost of IP address should be mentioned separately.
11. The bidder must have the provision of bandwidth 1 Gbps – 2Gbps or above and its infrastructure/devices (SFPs, fiber patch cords, interfaces) at ISP end and FBR side should be supportive to handle Gigabit data rate and related services availability without any additional cost except the quoted cost in the submitted bid document.
12. This is a mandatory requirement that both bandwidths must be protected by the DDOS attacks at the service provider's end. Proof of this must be presented in the solution with DDOS prevention technique and details of device(s) (e.g. DOSarrest, Akamai, Nexus Guard OR equivalent) used for this purpose. Also, it is compulsory that the management interface of the DDos appliance or Portal access shall be provided by the vendor to FBR IT team actively accessible all the time as and when required to FBR IT Team. The bidder has to ensure that 100% clean bandwidth is provided to FBR. The complete DDOS prevention solution is required and the bidder has to provide all the relevant support material for ensuring that the bandwidth is cleaned (DDOS prevention) at bidder's end. Failing to do so will make the solution non-compliant. Further, there will be no only blackhualing of the traffic, the DDOS protection must be truly enforced.
13. The DDoS portal must have detailed logging and reports availability on FBR User IDs to analyse the traffic.
14. The scrubing center must be located in Pakistan and clean bandwidth should be provided to FBR.
15. The solution shall monitor IP traffic of multiple class Cs / variable IP prefix length.
16. The solution shall be able to detect bandwidth depletion attacks including but not limited to the following:
 - TCP floods - SYN, ACK, RST, Null
 - UDP floods - DNS flood

- ICMP floods - Smurf, ping flood, Ping of Death, ICMP echo
 - Spoofed-packet floods
17. The solution shall support at least 10,000 active mitigations.
 18. The solution shall support both time-based and instant flood detection.
 19. The solution shall provide autobaselining tool to continually and passively learn traffic profiling for the network under protection.
 20. The solution shall support auto-profiling that generate a mitigation policy based on traffic profiles dynamically learned from the network.
 21. The solution shall detail all DDoS events on the customer portal with the following info:
 - start time of the attack
 - size of the attack in bps & pps
 - duration of the attack
 - status of the attack
 - under attack IP address
 - attack type
 - top 100 traffic patterns
 - packet size distribution
 - threat map
 - IP of router detecting attack
 - traffic graph during the DDoS event
 22. The DDOS solution shall support at least 100 Gbps / 144 Mpps mitigation capacity locally within Pakistan and more than 2 Tbps leveraging on cloud provider.
 23. The solution shall be able to mitigate multiple attacks at the same time.
 24. The solution shall support auto-mitigation.
 25. The solution shall allow dynamic update of policies during attack mitigation.
 26. The solution shall support IP black/whitelist.
 27. The solution shall be able to drop bogon IP addresses.
 28. The solution shall provide anti-flooding policy against
 - TCP floods - SYN, ACK, RST, Null
 - UDP floods - DNS flood
 - ICMP floods - Smurf, ping flood, Ping of Death, ICMP echo
 - Spoofed-packet floods
 29. The solution shall support filters to drop or ratelimit traffic with the following matching conditions:
 - protocol
 - source IP
 - source port
 - destination IP
 - destination port
 - TTL
 - packet length
 30. The solution shall support zombie filters to detect as well as ratelimit or drop traffic sent from compromised host.
 31. The solution shall support traffic policing to shape the traffic delivered to the destination network / host.
 32. The solution shall be able to notify registered portal user's email address on DDoS attack alert.
 33. The solution shall support notification through syslog or SNMP trap.
 34. The DDos Portal access shall be provided to FBR technical team.
 35. The DDos portal access shall support secure HTTPS access only.

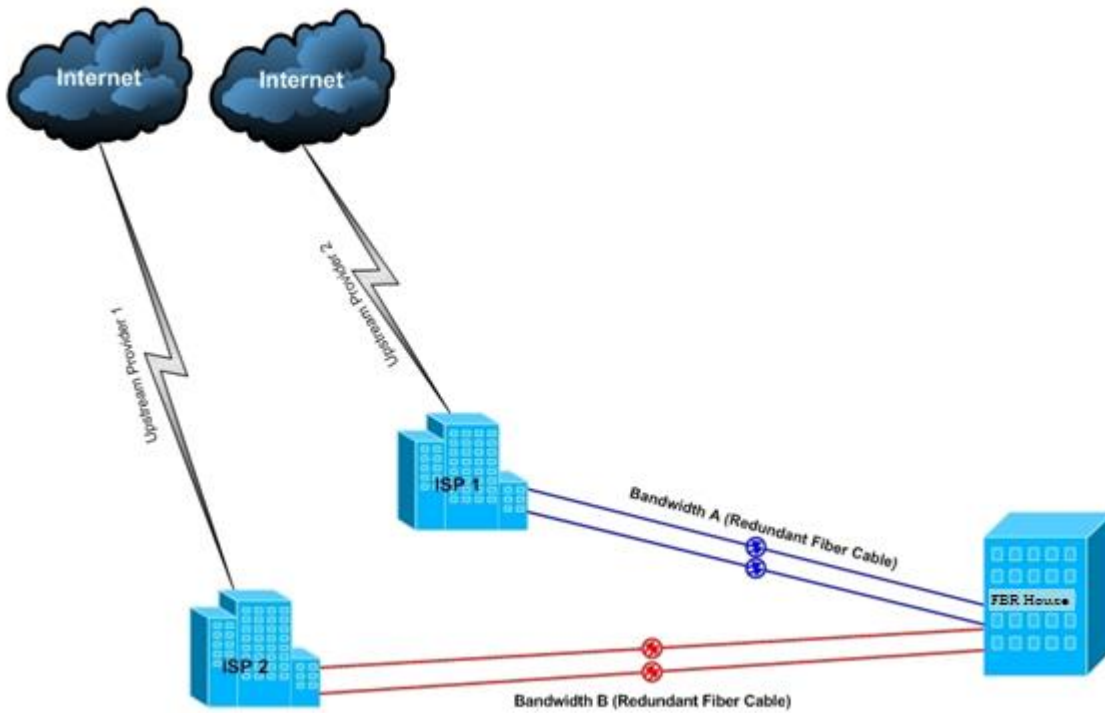
36. The DDoS portal shall support standard web browsers such as Chrome & Firefox.
37. The DDoS portal users shall be able to view traffic summary, DDOS alerts, managed profiles, and view ongoing mitigations through this service portal.
38. The DDoS portal shall support at least 100 concurrent access.
39. The DDoS portal shall support 2FA.
40. The DDoS portal shall equip with near-real-time Traffic Overview Dashboard including raw, mitigated and clean traffic graphs in bps & pps.
41. The DDoS portal shall equip with DDoS Alert Dashboard for reporting attack events and associated statistics including but not limited to
 - start time of the attack
 - size of the attack in bps & pps
 - duration of the attack
 - status of the attack
 - under attack IP address
 - attack type
 - top 100 traffic patterns
 - packet size distribution
 - threat map
 - IP of router detecting attack
 - traffic graph during the DDoS event
42. The DDoS portal shall provide transparency on
 - top protocols
 - top applications
 - top visitor IPs
 - top ASNs
 - top locations
43. The DDoS portal shall equip with Dashboard to view site configuration for managed objects configuration.
44. The DDoS portal shall equip with Dashboard to view detection and mitigation policies.
45. Depending upon the requirement, the FBR may request to increase or decrease the bandwidth as per quoted rates. Whenever bandwidth is increased or decreased, the bill will be charged on prorated basis. No addendum to SLA will be required for this purpose.
46. The service provider should response on the escalated ticket within 15 minutes with proper feedback regarding the escalated issue and provide solution ETTR. In oridante delay, non-respoviness to the FBR emails, calls after halfan hour shall be considered as non-compliance and penality clauses of the contract shall be enforced against the escalated ticket. The same shall be deducted from the billing invoices either it is own primary or secondary link.

Vendors are required to quote IP Bandwidth rates (inclusive of taxes) as per below mentioned table. In addition, following Bandwidth slabs rates are also required.

S.No	Core IP Bandwidth Data Rates
1.	50 Mbps CIR
2.	60 Mbps CIR
3.	70 Mbps CIR
4.	80 Mbps CIR
5.	90 Mbps CIR
6.	100 Mbps CIR

7.	110 Mbps CIR
8.	120Mbps CIR
9.	130Mbps CIR
10.	140Mbps CIR
11.	150 Mbps CIR
12.	160 Mbps CIR
13.	170 Mbps CIR
14.	180 Mbps CIR
15.	190 Mbps CIR
16.	200 Mbps CIR
17.	210 Mbps CIR
18.	220 Mbps CIR
19.	230 Mbps CIR
20.	240 Mbps CIR
21.	250 Mbps CIR
22.	260 Mbps CIR
23.	270 Mbps CIR
24.	280 Mbps CIR
25.	290 Mbps CIR
26.	300 Mbps CIR
27.	310 Mbps CIR
28.	320 Mbps CIR
29.	330 Mbps CIR
30.	340 Mbps CIR
31.	350 Mbps CIR
32.	360 Mbps CIR
33.	370 Mbps CIR
34.	380 Mbps CIR
35.	390 Mbps CIR
36.	400 Mbps CIR
37.	410 Mbps CIR
38.	420 Mbps CIR
39.	430 Mbps CIR
40.	440 Mbps CIR
41.	450 Mbps CIR
42.	460 Mbps CIR
43.	470 Mbps CIR
44.	480 Mbps CIR
45.	490 Mbps CIR
46.	500 Mbps CIR
47.	550 Mbps CIR
48.	600 Mbps CIR
49.	650 Mbps CIR
50.	700 Mbps CIR
51.	750 Mbps CIR
52.	800 Mbps CIR
53.	900 Mbps CIR
54.	950 Mbps CIR
55.	1 Gbps CIR
56.	1.5 Gbps CIR

Note: The bidder should have at least two upstream service providers so that in case of failure at one upstream the services can be shifted to another available upstream. Two service providers will be selected with separate upstream combinations, provided that the two selected service providers would be on different submarine cables. Both the last miles are required to be terminated at separate router/layer 3 switch.



LOT 02/2024 (CORE IP BANDWIDTH FOR ISLAMABAD) SECONDARY ISP

1. Core Bandwidth for Data Center FBR House (250 Mbps)
2. Core Bandwidth for AEOI at Data Center FBR House (50 Mbps)

Project Background:

Core IP bandwidth on redundant IP backbone/upstream providers with and self-healed **redundant Last Mile** fiber through alternate route is required from two different upstream service providers for hosting of our core application systems. The reason for the choice of two upstream service providers is important is to provide protection against International Bandwidth failures and various disasters.

Technical Requirement Framework

A minimum technical requirements matrix is listed below. All prospective bidders must fill the below table along with necessary documentation required to be provided with this

S #	Description	Compliance	Remarks
1.	The service provider should have long haul with multiple ring protection to ensure redundancy.		
2.	The service provider should have their own Active Disaster recovery sites.		
3.	Evidence that the FBRs Islamabad and Karachi Core sites will be feed through redundant POPs. Alternate pops are available in case of failure.		
4.	All the sites in major cities should be on fiber should be in ring configuration, if ring is not possible than the backup should be on wireless.		
5.	Both FBR core Aggregation Sites required to be deployed in active/active configuration.		
6.	The complete core network must be around secure Layer3 core network of ISP.		
7.	The SLA is 99.9 %. This is based required 24x7 the data center operations of FBR.		
8.	The design of the network should have the scalability/flexibility for us to upgrade bandwidth at any of FBR location, with the existing technology or with alternate technology.		
9.	The design of the network should have the scalability/flexibility to add any new sites in future.		
10.	The core routers/devices and their capacity sizing are the responsibility of vendor to cater the FBR needs of CIR bandwidth in		

	Gbps		
11.	All the equipment used in the network should be insured and hot replacement will be provided in case of any failure or mal function.		
12.	The vendor must not be black listed by any Govt. agency & PTA		
13.	Bidder must be in relevant business for at least 5 years.		
14.	The bidder should have its own help desk/ticketing system		
15.	The upload and download bandwidth should be same at all sites. No cached bandwidth shall be accepted or if it is found during the contract period that bandwidth is cached, contract will be terminated due to violation of the mandatory requirement.		
16.	Provide weekly update to FBR regarding the project		
17.	NMS/MRTG server configured with 24/7 monitoring consolidated status of the links should be provided by the vendor. It is mandatory requirement		
18.	NMS/MRTG portal access with administrative privlidge to view the reports in detail shall be provided to FBR. It is mandatory requirement.		

Note:

It is the responsibility of bidder to get a sign-off from the POC. Without the sign-off certificate the site will be considered undeployed. The sign off shall be considered effective from the date of sucessifull commissioning and services activation duley verified by the FBR technical team. The certificate should be clearly signed with clear details regarding the date of commissioning visiting engineer details etc.

Last Mile Preference:

Fiber Optic is the fastest and most secure transmission medium. Selecting fiber optic media means that the network delay between two end points will be very small as compared to other links/media. To ensure the uninterruptable services the last Mile must be connected to service provider's self-heal/redundant ring (a must requirement). Preference will be given to the bidder with maximum fiber-based connections. The connectivity medium required is mentioned against each site.

Core IP Bandwidth for Islamabad (Secondary ISP)

Core IP bandwidth on redundant IP backbone/upstream providers with and self-healed **redundant Last Mile** fiber through alternate route is required from two different upstream service providers for hosting of our core application systems. The reason for the choice of two upstream service providers is important is to provide protection against International Bandwidth failures and various disasters.

CIR IP Bandwidth with Primary last mile on Fiber and Secondary Last mile, in active redundant form, on Alternate (Physical) fiber ring is required for Data Center, FBR House, Islamabad (conceptual illustration of the solution is depicted below).

Following is the required scenario

1. Bidder are required to submit solution with two up streams along with information about which submarine cable is being used as primary and backup e.g. ITI and TW1.
2. P2P Public IP Adress/ subnet is required from each bidder (Secondary ISP) for Data Center link.
3. 32 (/27) Public IP Address subnet is required from each bidder (Secondary ISP) for AEOI link.
4. Service provider should have sufficient bandwidth (upto Gbps) available at its local POP from both sources i.e., ITI and TW1 so that in case of outage of one source, traffic could be automatically switched to other source without any congestion. (Information of IP bandwidth from both sources is required to be submitted by the bidders)
5. FBR reserves the right to select the IP bandwidth as per our own discretion (table enclosed). Bidders are also required to submit prices (inclusive of taxes) for each of these bandwidths as CIR
6. Initially bandwidth required for data center is of **250 Mbps**. The bandwidth should be burstable up to listed bandwidth slabs and FBR may request to increase the bandwidth upto required slab (this burst will be at any date/time for one month). The bidder should be capable to upgrade the link within **15 minutes** after intimation from technical team.
7. Initially bandwidth required for AEOI is of **50 Mbps**. The bandwidth should be burstable up to listed bandwidth slabs and FBR may request to increase the bandwidth upto required slab (this burst will be at any date/time for one month). The bidder should be capable to upgrade the link within **15 minutes** after intimation from technical team.
- 8.
9. Provision of 100% buried fiber is mandatory and bidder has to provide documentary evidence with map. No Aerial fiber shall be accepted for this connectivity service.
10. The cost of IP address should be mentioned separately.
11. The bidder must have the provision of bandwidth 1 Gbps – 2Gbps or above and its infrastructure/devices (SFPs, fiber patch cords, interfaces) at ISP end and FBR side should be supportive to handle Gigabit data rate and related services availability without any additional cost except the quoted cost in the submitted bid document.

12. This is a mandatory requirement that both bandwidths must be protected by the DDOS attacks at the service provider's end. Proof of this must be presented in the solution with DDOS prevention technique and details of device(s) (e.g. DOSarrest, Akamai, Nexus Guard OR equivalent) used for this purpose. Also, it is compulsory that the management interface of the DDOS appliance or Portal access shall be provided by the vendor to FBR IT team actively accessible all the time as and when required to FBR IT Team. The bidder has to ensure that 100% clean bandwidth is provided to FBR. The complete DDOS prevention solution is required and the bidder has to provide all the relevant support material for ensuring that the bandwidth is cleaned (DDOS prevention) at bidder's end. Failing to do so will make the solution non-compliant.
13. The scrubbing center must be located in Pakistan and clean bandwidth should be provided to FBR.
14. The solution shall monitor IP traffic of multiple class Cs / variable IP prefix length.
15. The solution shall be able to detect bandwidth depletion attacks including but not limited to the following:
 - TCP floods - SYN, ACK, RST, Null
 - UDP floods - DNS flood
 - ICMP floods - Smurf, ping flood, Ping of Death, ICMP echo
 - Spoofed-packet floods
16. The solution shall support at least 10,000 active mitigations.
17. The solution shall support both time-based and instant flood detection.
18. The solution shall provide autobaselining tool to continually and passively learn traffic profiling for the network under protection.
19. The solution shall support auto-profiling that generate a mitigation policy based on traffic profiles dynamically learned from the network.
20. The solution shall detail all DDoS events on the customer portal with the following info:
 - start time of the attack
 - size of the attack in bps & pps
 - duration of the attack
 - status of the attack
 - under attack IP address
 - attack type
 - top 100 traffic patterns
 - packet size distribution
 - threat map
 - IP of router detecting attack
 - traffic graph during the DDoS event
21. The DDOS solution shall support at least 100 Gbps / 144 Mpps mitigation capacity locally within Pakistan and more than 2 Tbps leveraging on cloud provider.
22. The solution shall be able to mitigate multiple attacks at the same time.
23. The solution shall support auto-mitigation.
24. The solution shall allow dynamic update of policies during attack mitigation.
25. The solution shall support IP black/whitelist.
26. The solution shall be able to drop bogon IP addresses.
27. The solution shall provide anti-flooding policy against
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28. The solution shall support filters to drop or ratelimit traffic with the following matching conditions:
 - protocol
 - source IP
 - source port
 - destination IP
 - destination port
 - TTL
 - packet length
29. The solution shall support zombie filters to detect as well as ratelimit or drop traffic sent from compromised host.
30. The solution shall support traffic policing to shape the traffic delivered to the destination network / host.
31. The solution shall be able to notify registered portal user's email address on DDoS attack alert.
32. The solution shall support notification through syslog or SNMP trap.
33. The DDoS Portal access shall be provided to FBR technical team.
34. The DDoS portal access shall support secure HTTPS access only.
35. The DDoS portal shall support standard web browsers such as Chrome & Firefox.
36. The DDoS portal users shall be able to view traffic summary, DDOS alerts, managed profiles, and view ongoing mitigations through this service portal.
37. The DDoS portal shall support at least 100 concurrent access.
38. The DDoS portal shall support 2FA.
39. The DDoS portal shall equip with near-real-time Traffic Overview Dashboard including raw, mitigated and clean traffic graphs in bps & pps.
40. The DDoS portal shall equip with DDoS Alert Dashboard for reporting attack events and associated statistics including but not limited to
 - start time of the attack
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 - attack type
 - top 100 traffic patterns
 - packet size distribution
 - threat map
 - IP of router detecting attack
 - traffic graph during the DDoS event
41. The DDoS portal shall provide transparency on
 - top protocols
 - top applications
 - top visitor IPs
 - top ASNs
 - top locations
42. The DDoS portal shall equip with Dashboard to view site configuration for managed objects configuration.
43. The DDoS portal shall equip with Dashboard to view detection and mitigation policies.
44. Depending upon the requirement, the FBR may request to increase or decrease the bandwidth as per quoted rates. Whenever bandwidth is increased or decreased, the

bill will be charged on prorated basis. No addendum to SLA will be required for this purpose.

45. The service provider should response on the escalated ticket within 15 minutes with proper feedback regarding the escalated issue and provide solution ETTR. In oridante delay, non-respoviness to the FBR emails, calls after halfan hour shall be considered as non-compliance and penality clauses of the contract shall be enforced against the escalated ticket. The same shall be deducted from the billing invoices either it is own primary or secondary link.

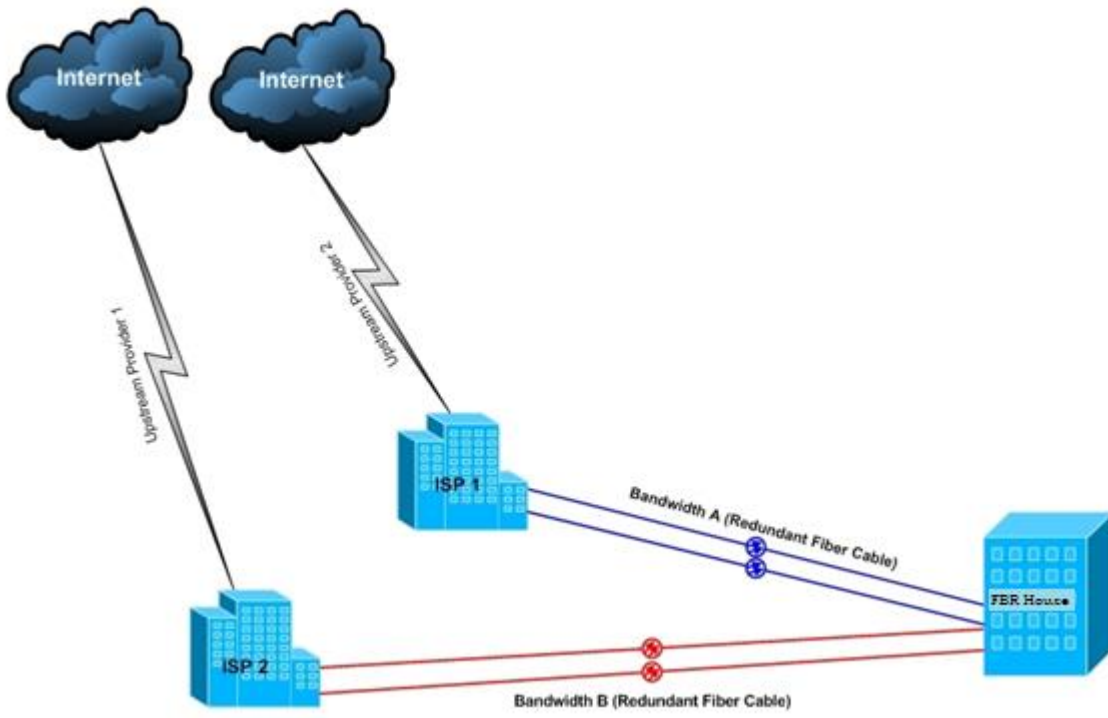
Vendors are required to quote IP Bandwidth rates (inclusive of taxes) as per below mentioned table. In addition, following Bandwidth slabs rates are also required.

#	Core IP Bandwidth Data Rates
1.	50 Mbps CIR
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14.	190 Mbps CIR
15.	200 Mbps CIR
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17.	220 Mbps CIR
18.	230 Mbps CIR
19.	240 Mbps CIR
20.	250 Mbps CIR
21.	260 Mbps CIR
22.	270 Mbps CIR
23.	280 Mbps CIR
24.	290 Mbps CIR
25.	300 Mbps CIR
26.	310 Mbps CIR
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45.	500 Mbps CIR
46.	550 Mbps CIR
47.	600 Mbps CIR
48.	650 Mbps CIR
49.	700 Mbps CIR
50.	750 Mbps CIR
51.	800 Mbps CIR
52.	900 Mbps CIR
53.	950 Mbps CIR
54.	1 Gbps CIR
55.	1.5 Gbps CIR
56.	2 Gbps CIR

Note:

Note: The bidder should have at least two upstream service providers so that in case of failure at one upstream the services can be shifted to another available upstream. Two service providers will be selected with separate upstream combinations, provided that the two selected service providers would be on different submarine cables. Both the last miles are required to be terminated at separate router/layer 3 switch.



LOT 03/2024: Dark Fiber for Synchronous Replication and Network Connectivity for Data Centers Inetrconnectivity (Primary ISP)

Point to point redundant Metro Dark fiber optic (Primary and Secondary) with redundant last mile in ring connectivity is required for our P2P connectivity between our core locations Islamabad from alternate routes. The bidders are required to ensure that the both primary and secondary fibers are from alternate routes.

Ideally the latency should be less than 1 millisecond but the vendor must make sure that the latency should not exceed beyond 2 milliseconds. The total distance of route and Dark Fiber between both sites should not be more than 25 Kilometers. The bidders have to provide connectivity to our switch, last mile fiber should be separate to send and receive i.e. LC-LC. In case the distance is between 25 KM to 50 KM, then the vendor has to provide long range SFPs at both end for connectivity. In case of SFPs malfunctioning during the contract period, it will be the responsibility of the vendor to provider the new SFP and replace the faulty SFP. The bidder(s) shall be responsible to provide local support and maintenance during and after commissioning of Dark Fiber.

Link deployment details:

S #	P2P Sites	Connectivity Type
1.	FBR House to STP I-9, Islamabad with redundant fiber	P2P Dark Fiber Optic

Mandatory Requirements

The proposed Solution MUST possess the following characteristics at the time of proposal submission

1. Delivery of SFPs (long range), if required fhardware (Router/Layer 3 device) will be the responsibility of the bidder.
2. In case of SFPs malfunctioning during the contract period, it will be the responsibility of the vendor to provider the new SFP and replace the faulty SFP
3. The bidder should have its own help desk/ticketing system.
4. The FBR requires connectivity across the ISP lanughaul to be reliable and error free. Therefore, the circuits will continuously be monitored for CRCs.
5. The Fiber should be 100% buried and no Aerial fiber solution shall be accepted. Evidence of the same with map shall be furnished to FBR.
6. The service provider will ensure that FBR at all times has the guaranteed bandwidth available as requested and signed off in the confirmation of commissioning of the leased circuits.
7. The Dark Fiber must be 100% buried and no aerial fiber will be accepted.
8. The bidder has to provide dark fiber media that must be proper in condition and safeguards in conduit under-ground. Old fiber, badly patched or repaired dark fiber links shall not be accepted and qualified.
9. The bidder shall share the OTDR reports with FBR in technical proposal and periodically to ensure the connectivity service is not under latency or any other transmission errors.
10. The proposed solution should be scalable considering possible future expansion.
11. All fiber optic termination / configuration equipment’s required shall be service provider’s responsibility.

12. The solution should be on turn-key basis including hardware equipment, media acquisition, installation/integration/configuration/commissioning and services. All Hardware quoted should be on turnkey & rental basis.
13. Fiber optic link will be on turnkey basis which includes but is not limited to, items like laying of fiber cable, ODF / ONT, Mux.
14. In case of any hardware failure, backup equipment should be available. Faulty device, SFP , Patch cords should be replaced within four (04) hours.
15. The response time of the engineers will be counted from the fault reporting time to the arrival/response of the respective engineer.
16. The service provider shall be responsible for all civil work related to the installation of the Fiber Optics, Wireless links, cabling of data, grounding, earthing as well as channeling and all other works pertaining to the installation. The service provider will be responsible for the quality of the works and will assume full responsibility in case of damage to FBR building and/or property while carrying out the same.
17. FBR also requires that the service provider conduct preemptive maintenance inspections on a quarterly basis to ensure that the equipment is not deteriorating or about to undergo failure through cable damage, corrosion, breakage etc.
18. FBR requires help line numbers to be provided where problems may be immediately reported and a quick process initiated to identify and rectify the problem. The office, mobile number and email addresses of operational staff must be provided for immediate escalation of the problem. In case of absence or leave of the primary responsible resource, the backup resource contact numbers will also be provided by the service provider and his presence during that period will be ensured to FBR.
19. The service provider should response on the escalated ticket within 15 minutes with proper feedback regarding the escalated issue and provide solution ETTR. In oridante delay, non-respoviness to the FBR emails, calls after halfan hour shall be considered as non-compliance and penality clauses of the contract shall be enforced against the escalated ticket. The same shall be deducted from the billing invoices either it is own primary or secondary link.
20. All PTA or any other Licenses required will be the sole responsibility of the service provider.
21. The initial point of contact will be the FBR (PRAL) technical team.
22. FBR reserves the right to activate or de-activate any link or LOT as per its sole discretion.
23. The bidder will be completely responsible for the execution of the project as a single point solution provider.
24. Bidder must have working office in Pakistan with registered address/proof.
25. Service provider should be capable to restrict/allow/filter specific traffic on the requirement basis of FBR.
26. Local support should be available all the time and response time should be less than one (01) hour.
27. The bidder requires to provide 99.99% uptime and any reduction in uptime will be deducted from MRC as per the signed contract accordingly.
28. Service provider shall provide 24x7x365 service and response engineers mobile numbers to FBR for direct support during off hours.

1.5 Summary of SLA and Service Credits

Sr.No	SLA Indicator	Required SLA Values
1	Network backbone and individual link availability	99.99 %
2	Dar core Network backbone round trip latency between 2 sites	Less than 1 milliseconds but not beyond 2 miliseconds
3	Packet Loss	Less than 0.1 %
4	Pack Jitter	Less than 1 milliseconds
5	Mean time to repair	1 hour

1.6 Credit Allocation Policy for Dark Fiber Link Availability

Cumulative monthly time of outages	Customer Credit % of the monthly recurrent cost, the concerned Dark Fiber link or the Backbone
Between 15 minutes and 4 hours	10 %
Between 4 and 8 hours	20 %
Between 8 and 12 hours	40 %
Between 12 and 24 hours	50 %
More than 24 hours	One-month credit

1.7 Credit Allocation for Latency, Packet Loss, Jitter

Performance Indicators	Service credit
Latency > 2 milliseconds for more than 1 hour during the service month	15% of the MRC
Packet loss >.1% for more than 1 hour during the service month	15% of the MRC
Jitter > 2millisecond	15% of the MRC

1.8 Deployment Responsibility Matrix

Sr.No	Items	Description	Responsibility
1	Point of Contacts	FBR will provide point of contacts for each location.	FBR
2	Security	All possible measures should be taken to ensure security of the equipment and prevent access of irrelevant persons, animals, objects etc.	FBR
3	Cable Route	FBR will help to finalize the survey for cable route	FBR
4	Power Sockets	FBR will provide the required power point	FBR
5	Civil Work	Permission for civil work like concrete base etc. if required (FBR role is only limited to permissions)	FBR/Service Provider
6	Routing/Switching device /ONTs/ODFs Converters	Customer end router/switching device / converters/ONTs,/ODFs/Fiber Patch Cords, SFPs	Service Provider

LOT 04/2024: Dark Fiber for Synchronous Replication and Network Connectivity for Data Centers Inetrconnectivity (Secondary -ISP)

Point to point redundant Metro Dark fiber optic (Primary and Secondary) with redundant last mile in ring connectivity is required for our P2P connectivity between our core locations Islamabad from alternate routes. The bidders are required to ensure that the both primary and secondary fibers are from alternate routes.

Ideally the latency should be less than 1 millisecond but the vendor must make sure that the latency should not exceed beyond 2 milliseconds. The total distance of route and Dark Fiber between both sites should not be more than 25 Kilometers. The bidders have to provide connectivity to our switch, last mile fiber should be separate to send and receive i.e. LC-LC. In case the distance is between 25 KM to 50 KM, then the vendor has to provide long range SFPs at both end for connectivity. In case of SFPs malfunctioning during the contract period, it will be the responsibility of the vendor to provider the new SFP and replace the faulty SFP. The bidder(s) shall be responsible to provide local support and maintenance during and after commissioning of Dark Fiber.

Link deployment deatails:

S #	P2P Sites	Connectivity Type
2.	FBR House to STP I-9, Islamabad with redundant fiber	P2P Dark Fiber Optic

Mandatory Requirements

The proposed Solution MUST possess the following characteristics at the time of proposal submission

1. Delivery of SFPs (long range), if required fhardware (Router/Layer 3 device) will be the responsibility of the bidder.
2. In case of SFPs malfunctioning during the contract period, it will be the responsibility of the vendor to provider the new SFP and replace the faulty SFP
3. The bidder should have its own help desk/ticketing system.
4. The FBR requires connectivity across the ISP lanughaul to be reliable and error free. Therefore, the circuits will continuously be monitored for CRCs
5. The Fiber should be 100% buried and no Aerial fiber solution shall be accepted. Evidence of the same with map shall be furnished to FBR.
6. The service provider will ensure that FBR at all times has the guaranteed bandwidth available as requested and signed off in the confirmation of commissioning of the leased circuits.
7. The bidder shall share the OTDR reports with FBR in technical proposal and periodically to ensure the connectivity service is not under latency or any other transmission errors.
8. The proposed solution should be scalable considering possible future expansion.
9. All fiber optic termination / configuration equipment’s required shall be service provider’s responsibility.
10. The solution should be on turn-key basis including hardware equipment, media acquisition, installation/integration/configuration/commissioning and services. All Hardware quoted should be on turnkey & rental basis.
11. Fiber optic link will be on turnkey basis which includes but is not limited to, items like laying of fiber cable, ODF / ONT, Mux.
12. In case of any hardware failure, backup equipment should be available. Faulty device, SFP , Patch cords should be replaced within four (04) hours.

13. The response time of the engineers will be counted from the fault reporting time to the arrival/response of the respective engineer.
14. The service provider shall be responsible for all civil work related to the installation of the Fiber Optics, Wireless links, cabling of data, grounding, earthing as well as channeling and all other works pertaining to the installation. The service provider will be responsible for the quality of the works and will assume full responsibility in case of damage to FBR building and/or property while carrying out the same.
15. FBR also requires that the service provider conduct preemptive maintenance inspections on a quarterly basis to ensure that the equipment is not deteriorating or about to undergo failure through cable damage, corrosion, breakage etc.
16. FBR requires help line numbers to be provided where problems may be immediately reported and a quick process initiated to identify and rectify the problem. The office, mobile number and email addresses of operational staff must be provided for immediate escalation of the problem. In case of absence or leave of the primary responsible resource, the backup resource contact numbers will also be provided by the service provider and his presence during that period will be ensured to FBR.
17. The service provider should response on the escalated ticket within 15 minutes with proper feedback regarding the escalated issue and provide solution ETTR. In oridante delay, non-respoviness to the FBR emails, calls after halfan hour shall be considered as non-compliance and penality clauses of the contract shall be enforced against the escalated ticket. The same shall be deducted from the billing invoices either it is own primary or secondary link.
18. All PTA or any other Licenses required will be the sole responsibility of the service provider.
19. The initial point of contact will be the FBR (PRAL) technical team.
20. FBR reserves the right to activate or de-activate any link or LOT as per its sole discretion.
21. The bidder will be completely responsible for the execution of the project as a single point solution provider.
22. Bidder must have working office in Pakistan with registered address/proof.
23. Service provider should be capable to restrict/allow/filter specific traffic on the requirement basis of FBR.
24. Local support should be available all the time and response time should be less than one (01) hour.
25. The bidder requires to provide 99.99% uptime and any reduction in uptime will be deducted from MRC as per the signed contract accordingly.
26. Service provider shall provide 24x7x365 service and response engineers mobile numbers to FBR for direct support during off hours.

1.5 Summary of SLA and Service Credits

	SLA indicator	Required SLA Values
1	Network backbone and individual link availability	99.99 %
2	Dark core Network backbone round trip latency between 2 sites	Less than 1 milliseconds but not beyond 2 miliseconds
3	Packet Loss	Less than 0.1 %
4	Pack Jitter	Less than 1 milliseconds
5	Mean time to repair	1 hour

1.6 Credit Allocation Policy for Dark Fiber Link Availability

Cumulative monthly time of outages	Customer Credit % of the monthly recurrent cost, the concerned Dark Fiber link or the Backbone
Between 15 minutes and 4 hours	10 %
Between 4 and 8 hours	20 %
Between 8 and 12 hours	40 %
Between 12 and 24 hours	50 %
More than 24 hours	One-month credit

1.7 Credit Allocation for Latency, Packet Loss, Jitter

Performance Indicators	Service credit
Latency > 2 milliseconds for more than 1 hour during the service month	15% of the MRC
Packet loss >.1% for more than 1 hour during the service month	15% of the MRC
Jitter > 2millisecond	15% of the MRC

1.8 Deployment Responsibility Matrix

Sr. #	Items	Description	Responsibility
1.	Point of Contacts	FBR will provide point of contacts for each location.	FBR
2.	Security	All possible measures should be taken to ensure security of the equipment and prevent access of irrelevant persons, animals, objects etc.	FBR

LOT 05/2024: CIR IP BANDWIDTH FOR FBR HOUSE, ISLAMABAD (PRIMARY ISP) (150 Mbps)

IP bandwidth on redundant IP backbone and self-healed redundant fiber with **redundant Last Mile** is required from two upstream separate service providers for our very critical site at FBR House.

CIR IP Bandwidth with Primary last mile on Fiber and Secondary Last mile on (in active redundant Dark Core from) Alternate (Physical) fiber ring is required for FBR House, Islamabad.

Following is the required scenario

1. Bidder are required to submit solution with two up streams along with information about which submarine cable is being used as primary and backup e.g. ITI and TW1.
2. 32 Public IP Address subnet is required from each bidder (Primary ISP) link.
3. Service provider should have sufficient bandwidth available at its local POP from both sources i.e., ITI and TW1 so that in case of outage of one source, traffic could

- be automatically switched to other source without any congestion. (Information of IP bandwidth from both sources is required to be submitted by the bidders)
4. FBR reserves the right to select the IP bandwidth as per our own discretion (table enclosed). Bidders are also required to submit prices (inclusive of taxes) for each of these bandwidths as CIR
 5. Initially bandwidth required is of **150 Mbps**. The bandwidth should be burstable up to listed bandwidth slabs and FBR may request to increase the bandwidth upto required slab (this burst will be at any date/time for one month). The bidder should be capable to upgrade the link within **15 minutes** after intimation from technical team.
 6. Provision of 100% buried fiber is mandatory and bidder has to provide documentary evidence with map. No Aerial fiber shall be accepted for this connectivity service.
 7. The cost of IP address should be mentioned separately.
 8. Depending upon the requirement, the FBR may request to increase or decrease the bandwidth as per quoted rates. Whenever bandwidth is increased or decreased, the bill will be charged on prorated basis. No addendum to SLA will be required for this purpose.
 9. The service provider should response on the escalated ticket within 15 minutes with proper feedback regarding the escalated issue and provide solution ETTR. In oridante delay, non-respoviness to the FBR emails, calls after halfan hour shall be considered as non-compliance and penality clauses of the contract shall be enforced against the escalated ticket. The same shall be deducted from the billing invoices either it is own primary or secondary link.
 10. The bidder has to provide ethernet hand off from the ONT/ODF to FBR end routing/Firewall device.
 11. The bidder must have to provide the NMS portal for monitoring of this link and access must be provided to the FBR technical team.

Vendors are required to quote IP Bandwidth rates (inclusive of taxes) as per below mentioned table. In addition, following Bandwidth slabs rates are also required.

Sr.No	Core IP Bandwidth Data Rates
1.	100 Mbps CIR
2.	110 Mbps CIR
3.	120Mbps CIR
4.	130Mbps CIR
5.	140Mbps CIR
6.	150 Mbps CIR
7.	160 Mbps CIR
8.	170 Mbps CIR
9.	180 Mbps CIR
10.	190 Mbps CIR
11.	200 Mbps CIR
12.	210 Mbps CIR
13.	220 Mbps CIR
14.	230 Mbps CIR
15.	240 Mbps CIR
16.	250 Mbps CIR

17.	260 Mbps CIR
18.	270 Mbps CIR
19.	280 Mbps CIR
20.	290 Mbps CIR
21.	300 Mbps CIR
22.	310 Mbps CIR
23.	320 Mbps CIR
24.	330 Mbps CIR
25.	340 Mbps CIR
26.	350 Mbps CIR
27.	360 Mbps CIR
28.	370 Mbps CIR
29.	380 Mbps CIR
30.	390 Mbps CIR
31.	400 Mbps CIR
32.	410 Mbps CIR
33.	420 Mbps CIR
34.	430 Mbps CIR
35.	440 Mbps CIR
36.	450 Mbps CIR
37.	460 Mbps CIR
38.	470 Mbps CIR
39.	480 Mbps CIR
40.	490 Mbps CIR
41.	500 Mbps CIR

Note: The bidder should have at least two upstream service providers so that in case of failure at one upstream the services can be shifted to another available upstream. Both the last miles are required to be terminated at separate router/layer 3 switch.

LOT 06/2024:CIR IP BANDWIDTH FOR FBR HOUSE, ISLAMABAD (SECONDARY ISP) (150 Mbps)

IP bandwidth on redundant IP backbone and self-healed redundant fiber with **redundant Last Mile** is required from two upstream separate service providers for our very critical site at FBR House.

CIR IP Bandwidth with Primary last mile on Fiber and Secondary Last mile on (in active redundant Dark Core from) Alternate (Physical) fiber ring is required for FBR House, Islamabad.

Following is the required scenario

12. Bidder are required to submit solution with two up streams along with information about which submarine cable is being used as primary and backup e.g. ITI and TW1.
13. 32 Public IP Address subnet is required from each bidder (Primary ISP) link.
14. Service provider should have sufficient bandwidth available at its local POP from both sources i.e., ITI and TW1 so that in case of outage of one source, traffic could

- be automatically switched to other source without any congestion. (Information of IP bandwidth from both sources is required to be submitted by the bidders)
15. FBR reserves the right to select the IP bandwidth as per our own discretion (table enclosed). Bidders are also required to submit prices (inclusive of taxes) for each of these bandwidths as CIR
 16. Initially bandwidth required is of **150 Mbps**. The bandwidth should be burstable up to listed bandwidth slabs and FBR may request to increase the bandwidth upto required slab (this burst will be at any date/time for one month). The bidder should be capable to upgrade the link within **15 minutes** after intimation from technical team.
 17. Provision of 100% buried fiber is mandatory and bidder has to provide documentary evidence with map. No Aerial fiber shall be accepted for this connectivity service.
 18. The cost of IP address should be mentioned separately.
 19. Depending upon the requirement, the FBR may request to increase or decrease the bandwidth as per quoted rates. Whenever bandwidth is increased or decreased, the bill will be charged on prorated basis. No addendum to SLA will be required for this purpose.
 20. The service provider should response on the escalated ticket within 15 minutes with proper feedback regarding the escalated issue and provide solution ETTR. In oridante delay, non-respoviness to the FBR emails, calls after halfan hour shall be considered as non-compliance and penality clauses of the contract shall be enforced against the escalated ticket. The same shall be deducted from the billing invoices either it is own primary or secondary link.
 21. The bidder has to provide ethernet hand off from the ONT/ODF to FBR end routing/Firewall device.
 22. The bidder must have to provide the NMS portal for monitoring of this link and access must be provided to the FBR technical team.

Vendors are required to quote IP Bandwidth rates (inclusive of taxes) as per below mentioned table. In addition, following Bandwidth slabs rates are also required.

Sr.No	Core IP Bandwidth Data Rates
1.	100 Mbps CIR
2.	110 Mbps CIR
3.	120Mbps CIR
4.	130Mbps CIR
5.	140Mbps CIR
6.	150 Mbps CIR
7.	160 Mbps CIR
8.	170 Mbps CIR
9.	180 Mbps CIR
10.	190 Mbps CIR
11.	200 Mbps CIR
12.	210 Mbps CIR
13.	220 Mbps CIR
14.	230 Mbps CIR
15.	240 Mbps CIR
16.	250 Mbps CIR

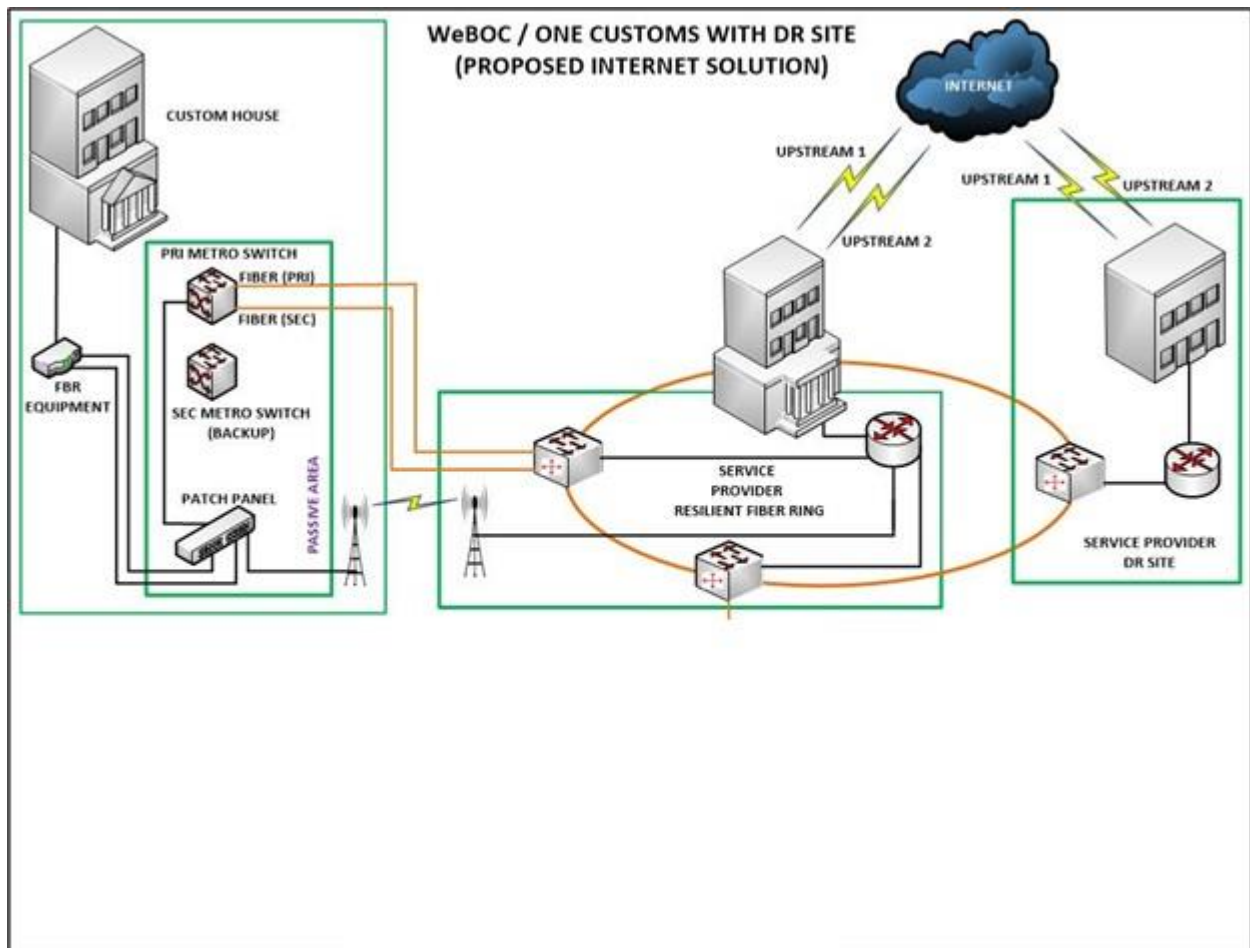
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18.	270 Mbps CIR
19.	280 Mbps CIR
20.	290 Mbps CIR
21.	300 Mbps CIR
22.	310 Mbps CIR
23.	320 Mbps CIR
24.	330 Mbps CIR
25.	340 Mbps CIR
26.	350 Mbps CIR
27.	360 Mbps CIR
28.	370 Mbps CIR
29.	380 Mbps CIR
30.	390 Mbps CIR
31.	400 Mbps CIR
32.	410 Mbps CIR
33.	420 Mbps CIR
34.	430 Mbps CIR
35.	440 Mbps CIR
36.	450 Mbps CIR
37.	460 Mbps CIR
38.	470 Mbps CIR
39.	480 Mbps CIR
40.	490 Mbps CIR
41.	500 Mbps CIR

Note: The bidder should have at least two upstream service providers so that in case of failure at one upstream the services can be shifted to another available upstream. Both the last miles are required to be terminated at separate router/layer 3 switch.

LOT 07/2024: CORE IP BANDWIDTH FOR DATA CENTER KARACHI: - PRIMARY ISP (300 Mbps)

Core IP bandwidth on redundant IP backbone/upstream providers with and self-healed **redundant Last Mile** fiber through alternate route is required from two different upstream service providers for hosting of our core application systems. The reason for the choice of two upstream service providers is important is to provide protection against International Bandwidth failures and various disasters. In addition, **the tertiary** link is to be provided over **Wireless (Radio link)**.

CIR IP Bandwidth with Primary last mile on Fiber and Secondary Last mile on (in active redundant form) Alternate (Physical) fiber ring is required for Data Center, Custom House, Karachi. The diagram below might not be an accurate depiction of solution.



Following is the required scenario

1. Bidder are required to submit solution with two up streams along with information about which submarine cable is being used as primary and backup e.g. ITI and TW1.
2. 64 Public IP (/26) addresses subnet is required from each bidder (Primary ISP) for KHI Data Center link.
3. Service provider should have sufficient bandwidth (upto Gbps) available at its local POP from both sources i.e., ITI and TW1 so that in case of outage of one source, traffic could be automatically switched to other source without any congestion. (Information of IP bandwidth from both sources is required to be submitted by the bidders)
4. FBR reserves the right to select the IP bandwidth as per our own discretion (table enclosed). Bidders are also required to submit prices (inclusive of taxes) for each of these bandwidths as CIR
5. Initially bandwidth required is of **300 Mbps**. The bandwidth should be burstable up to listed bandwidth slabs and FBR may request to increase the bandwidth upto required slab (this burst will be at any date/time for one month). The bidder should be capable to upgrade the link within **15 minutes** after intimation from technical team.
6. Provision of 100% buried fiber is mandatory and bidder has to provide documentary evidence with map. No Aerial fiber shall be accepted for this connectivity service.
7. The cost of IP address should be mentioned separately.

8. The bidder must have the provision of bandwidth 1 Gbps – 2Gbps or above and its infrastructure/devices (SFPs, fiber patch cords, interfaces) at ISP end and FBR side should be supportive to handle Gigabit data rate and related services availability without any additional cost except the quoted cost in the submitted bid document.
9. This is a mandatory requirement that both bandwidths must be protected by the DDOS attacks at the service provider's end. Proof of this must be presented in the solution with DDOS prevention technique and details of device(s) (e.g. DOSarrest, Akamai, Nexus Guard OR equivalent) used for this purpose. Also, it is compulsory that the management interface of the DDos appliance or Portal access shall be provided by the vendor to FBR IT team actively accessible all the time as and when required to FBR IT Team. The bidder has to ensure that 100% clean bandwidth is provided to FBR. The complete DDOS prevention solution is required and the bidder has to provide all the relevant support material for ensuring that the bandwidth is cleaned (DDOS prevention) at bidder's end. Failing to do so will make the solution non-compliant. Further, there will be no only blackhualing of the traffic, the DDOS protection must be truly enforced.
10. The DDoS portal must have detailed logging and reports availability on FBR User IDs to analyse the traffic.
11. The scrubbing center must be located in Pakistan and clean bandwidth should be provided to FBR.
12. The solution shall monitor IP traffic of multiple class Cs / variable IP prefix length.
13. The solution shall be able to detect bandwidth depletion attacks including but not limited to the following:
 - TCP floods - SYN, ACK, RST, Null
 - UDP floods - DNS flood
 - ICMP floods - Smurf, ping flood, Ping of Death, ICMP echo
 - Spoofed-packet floods
14. The solution shall support at least 10,000 active mitigations.
15. The solution shall support both time-based and instant flood detection.
16. The solution shall provide autobaselining tool to continually and passively learn traffic profiling for the network under protection.
17. The solution shall support auto-profiling that generate a mitigation policy based on traffic profiles dynamically learned from the network.
18. The solution shall detail all DDoS events on the customer portal with the following info:
 - start time of the attack
 - size of the attack in bps & pps
 - duration of the attack
 - status of the attack
 - under attack IP address
 - attack type
 - top 100 traffic patterns
 - packet size distribution
 - threat map
 - IP of router detecting attack
 - traffic graph during the DDoS event
19. The DDOS solution shall support at least 100 Gbps / 144 Mpps mitigation capacity locally within Pakistan and more than 2 Tbps leveraging on cloud provider.
20. The solution shall be able to mitigate multiple attacks at the same time.
21. The solution shall support auto-mitigation.

22. The solution shall allow dynamic update of policies during attack mitigation.
23. The solution shall support IP black/whitelist.
24. The solution shall be able to drop bogon IP addresses.
25. The solution shall provide anti-flooding policy against
 - TCP floods - SYN, ACK, RST, Null
 - UDP floods - DNS flood
 - ICMP floods - Smurf, ping flood, Ping of Death, ICMP echo
 - Spoofed-packet floods
26. The solution shall support filters to drop or ratelimit traffic with the following matching conditions:
 - protocol
 - source IP
 - source port
 - destination IP
 - destination port
 - TTL
 - packet length
27. The solution shall support zombie filters to detect as well as ratelimit or drop traffic sent from compromised host.
28. The solution shall support traffic policing to shape the traffic delivered to the destination network / host.
29. The solution shall be able to notify registered portal user's email address on DDoS attack alert.
30. The solution shall support notification through syslog or SNMP trap.
31. The DDoS Portal access shall be provided to FBR technical team.
32. The DDoS portal access shall support secure HTTPS access only.
33. The DDoS portal shall support standard web browsers such as Chrome & Firefox.
34. The DDoS portal users shall be able to view traffic summary, DDOS alerts, managed profiles, and view ongoing mitigations through this service portal.
35. The DDoS portal shall support at least 100 concurrent access.
36. The DDoS portal shall support 2FA.
37. The DDoS portal shall equip with near-real-time Traffic Overview Dashboard including raw, mitigated and clean traffic graphs in bps & pps.
38. The DDoS portal shall equip with DDoS Alert Dashboard for reporting attack events and associated statistics including but not limited to
 - start time of the attack
 - size of the attack in bps & pps
 - duration of the attack
 - status of the attack
 - under attack IP address
 - attack type
 - top 100 traffic patterns
 - packet size distribution
 - threat map
 - IP of router detecting attack
 - traffic graph during the DDoS event
39. The DDoS portal shall provide transparency on
 - top protocols
 - top applications
 - top visitor IPs

- top ASNs
 - top locations
40. The DDoS portal shall equip with Dashboard to view site configuration for managed objects configuration.
 41. The DDoS portal shall equip with Dashboard to view detection and mitigation policies.
 - 42.
 43. Depending upon the requirement, the FBR may request to increase or decrease the bandwidth as per quoted rates. Whenever bandwidth is increased or decreased, the bill will be charged on prorated basis. No addendum to SLA will be required for this purpose.
 44. The service provider should response on the escalated ticket within 15 minutes with proper feedback regarding the escalated issue and provide solution ETTR. In oridante delay, non-respoviness to the FBR emails, calls after halfan hour shall be considered as non-compliance and penality clauses of the contract shall be enforced against the escalated ticket. The same shall be deducted from the billing invoices either it is own primary or secondary link.

Note: Vendors are required to quote IP Bandwidth rates (inclusive of taxes) as per below mentioned table. In addition, following Bandwidth slabs rates are also required.

Bidders are required to quote the rate as follows:

S.No	IP Bandwidth Data Rates
1.	80 Mbps CIR
2.	90 Mbps CIR
3.	100 Mbps CIR
4.	110 Mbps CIR
5.	120Mbps CIR
6.	130Mbps CIR
7.	140Mbps CIR
8.	150 Mbps CIR
9.	160 Mbps CIR
10.	170 Mbps CIR
11.	180 Mbps CIR
12.	190 Mbps CIR
13.	200 Mbps CIR
14.	210 Mbps CIR
15.	220 Mbps CIR
16.	230 Mbps CIR
17.	240 Mbps CIR
18.	250 Mbps CIR
19.	260 Mbps CIR
20.	270 Mbps CIR
21.	280 Mbps CIR
22.	290 Mbps CIR
23.	300 Mbps CIR
24.	350 Mbps CIR

25.	400 Mbps CIR
26.	450 Mbps CIR
27.	500 Mbps CIR
28.	550 Mbps CIR
29.	600 Mbps CIR
30.	650 Mbps CIR
31.	700 Mbps CIR

Important Note:

The bidders must ensure to provide the committed bandwidth to FBR, upload and download speed should be same. A site will only be considered commissioned once all the requirements are fulfilled and the performance of application is tested as per the satisfaction of the Customer. Bidder are to clearly mention bandwidth slabs rates inclusive of all taxes. FBR can scale up the bandwidth as per requirement for each LOT and available slabs on monthly basis. FBR will intimate the ISP to increase the bandwidth to requested slab when the need arises.

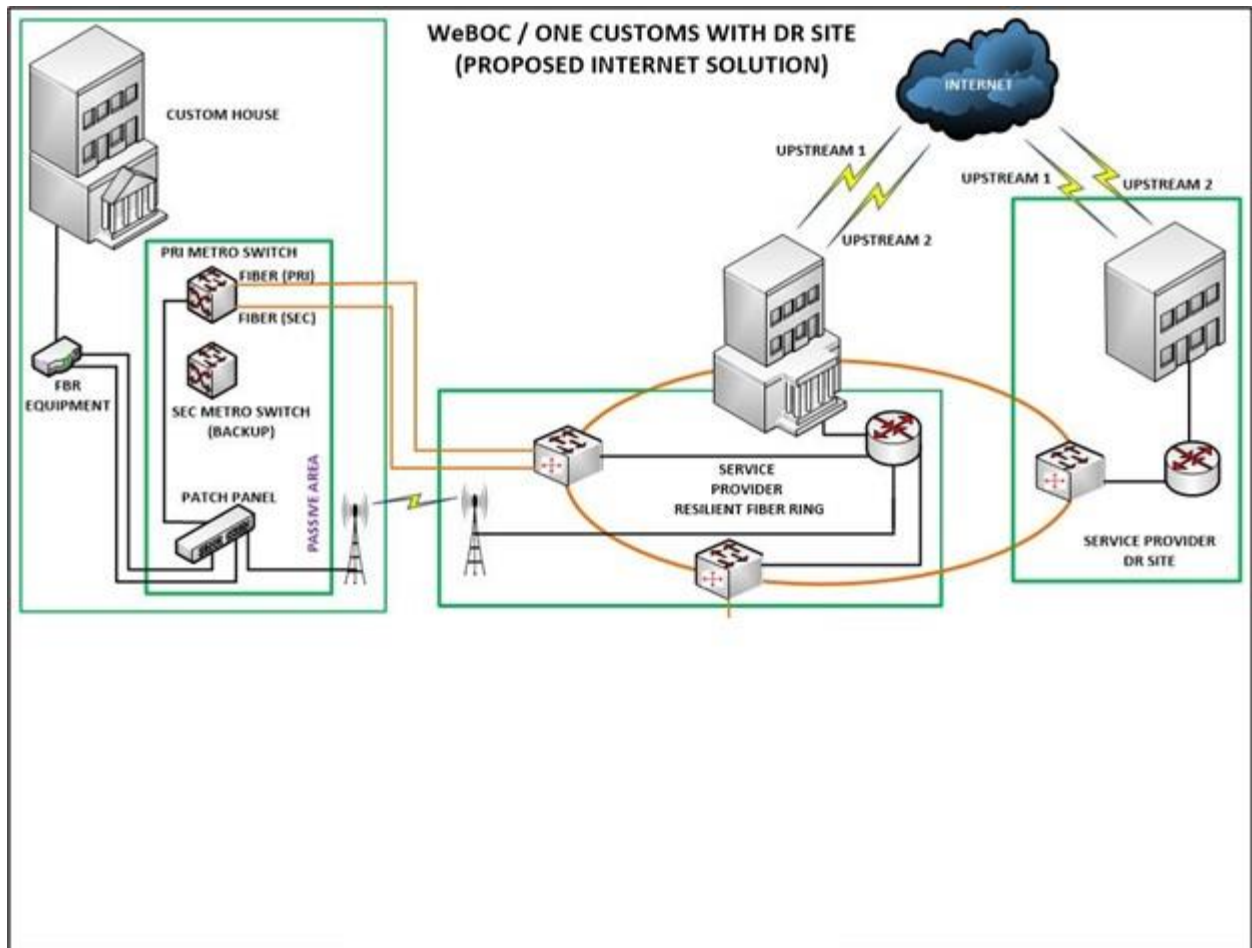
The Internet backbone connectivity shall allow a high secured IP Access services to FBR’s critical applications and data hosted at FBR’s Data centers in Islamabad & Karachi. The proposed solution should be flexible to switch multimedia voice, data and video traffic as well as to provide, voice and video conferencing services based on IP Protocol. The proposed solution should have the following features:

- Focusing on end-to-end network management.
- Full redundancy and resilience based on alternative routing paths with different fiber optic cables, nodes and POP.
- End-to-end bandwidth guarantees from CE to CE through the network, including the last mile (local loop).
- Fully integrated and scalable solution.
- Business everywhere function: enabling remote users to securely, reliably and simply connect the corporate systems, resources, services and applications.
- Flexible, customized solution enabled to support existing and future business-critical applications with security and service levels agreements (SLAs) to guarantee the reliability of the network and Quality of Service
- There should be no CRC on CE Ethernet interface.
- For link bandwidth monitoring, traffic graph access should be provided to FBR.

LOT 08/2024: CORE IP BANDWIDTH FOR DATA CENTER KARACH (SECONDARY ISP) (100 Mbps)

Core IP bandwidth on redundant IP backbone/upstream providers with and self-healed **redundant Last Mile** fiber through alternate route is required from two different Upstream service providers for hosting of our core application systems. The reason for the choice of two upstream service providers is important is to provide protection against International Bandwidth failures and various disasters in case of force disaster. In addition, the tertiary link is to be provided over **Wireless (Radio link)**.

CIR IP Bandwidth with Primary last mile on Fiber and Secondary Last mile on (in active redundant form) Alternate (Physical) fiber ring is required for Data Center, Custom House, Karachi. The diagram below might not be an accurate depiction of solution.



Following is the required scenario

1. Bidder are required to submit solution with two up streams along with information about which submarine cable is being used as primary and backup e.g. ITI and TW1.
2. The bidder must be Tier-I service provider and has its own longhaul network nation wide
3. 64 Public IP (/26) addresses subnet is required from each bidder (Secondary ISP) for KHI Data Center link.
4. Service provider should have sufficient bandwidth (upto Gbps) available at its local POP from both sources i.e., ITI and TW1 so that in case of outage of one source, traffic could be automatically switched to other source without any congestion. (Information of IP bandwidth from both sources is required to be submitted by the bidders)
5. FBR reserves the right to select the IP bandwidth as per our own discretion (table enclosed). Bidders are also required to submit prices (inclusive of taxes) for each of these bandwidths as CIR
6. Initially bandwidth required is of **100 Mbps**. The bandwidth should be burstable up to listed bandwidth slabs and FBR may request to increase the bandwidth upto required slab (this burst will be at any date/time for one month). The bidder should be capable to upgrade the link within **15 minutes** after intimation from technical team.

7. Provision of 100% buried fiber is mandatory and bidder has to provide documentary evidence with map. No Aerial fiber shall be accepted for this connectivity service.
8. The cost of IP address should be mentioned separately.
9. The bidder must have the provision of bandwidth 1 Gbps – 2Gbps or above and its infrastructure/devices (SFPs, fiber patch cords, interfaces) at ISP end and FBR side should be supportive to handle Gigabit data rate and related services availability without any additional cost except the quoted cost in the submitted bid document.
10. This is a mandatory requirement that both bandwidths must be protected by the DDOS attacks at the service provider's end. Proof of this must be presented in the solution with DDOS prevention technique and details of device(s) (e.g. DOSarrest, Akamai, Nexus Guard OR equivalent) used for this purpose. Also, it is compulsory that the management interface of the DDos appliance or Portal access shall be provided by the vendor to FBR IT team actively accessible all the time as and when required to FBR IT Team. The bidder has to ensure that 100% clean bandwidth is provided to FBR. The complete DDOS prevention solution is required and the bidder has to provide all the relevant support material for ensuring that the bandwidth is cleaned (DDOS prevention) at bidder's end. Failing to do so will make the solution non-compliant. Further, there will be no only blackhualing of the traffic, the DDOS protection must be truly enforced.
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12. The scrubing center must be located in Pakistan and clean bandwidth should be provided to FBR.
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 - TCP floods - SYN, ACK, RST, Null
 - UDP floods - DNS flood
 - ICMP floods - Smurf, ping flood, Ping of Death, ICMP echo
 - Spoofed-packet floods
15. The solution shall support at least 10,000 active mitigations.
16. The solution shall support both time-based and instant flood detection.
17. The solution shall provide autobaselining tool to continually and passively learn traffic profiling for the network under protection.
18. The solution shall support auto-profiling that generate a mitigation policy based on traffic profiles dynamically learned from the network.
19. The solution shall detail all DDoS events on the customer portal with the following info:
 - start time of the attack
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 - status of the attack
 - under attack IP address
 - attack type
 - top 100 traffic patterns
 - packet size distribution
 - threat map
 - IP of router detecting attack
 - traffic graph during the DDoS event

20. The DDOS solution shall support at least 100 Gbps / 144 Mpps mitigation capacity locally within Pakistan and more than 2 Tbps leveraging on cloud provider.
21. The solution shall be able to mitigate multiple attacks at the same time.
22. The solution shall support auto-mitigation.
23. The solution shall allow dynamic update of policies during attack mitigation.
24. The solution shall support IP black/whitelist.
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 - top protocols
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 - top ASNs
 - top locations
41. The DDoS portal shall equip with Dashboard to view site configuration for managed objects configuration.
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12.	190 Mbps CIR
13.	200 Mbps CIR
14.	210 Mbps CIR
15.	220 Mbps CIR
16.	230 Mbps CIR
17.	240 Mbps CIR
18.	250 Mbps CIR
19.	260 Mbps CIR
20.	270 Mbps CIR
21.	280 Mbps CIR
22.	290 Mbps CIR

23.	300 Mbps CIR
24.	350 Mbps CIR
25.	400 Mbps CIR
26.	450 Mbps CIR
27.	500 Mbps CIR
28.	550 Mbps CIR
29.	600 Mbps CIR
30.	650 Mbps CIR
31.	700 Mbps CIR

Important Note:

The bidders must ensure to provide the committed bandwidth to FBR, upload and download speed should be same. A site will only be considered commissioned once all the requirements are fulfilled and the performance of application is tested as per the satisfaction of the Customer. Bidder are to clearly mention bandwidth slabs rates inclusive of all taxes. FBR can scale up the bandwidth as per requirement for each LOT and available slabs on monthly basis. FBR will intimate the ISP to increase the bandwidth to requested slab when the need arises.

The Internet backbone connectivity shall allow a high secured IP Access services to FBR’s critical applications and data hosted at FBR’s Data centers in Islamabad & Karachi. The proposed solution should be flexible to switch multimedia voice, data and video traffic as well as to provide, voice and video conferencing services based on IP Protocol. The proposed solution should have the following features:

- Focusing on end-to-end network management.
- Full redundancy and resilience based on alternative routing paths with different fiber optic cables, nodes and POP.
- End-to-end bandwidth guarantees from CE to CE through the network, including the last mile (local loop).
- Fully integrated and scalable solution.
- Business everywhere function: enabling remote users to securely, reliably and simply connect the corporate systems, resources, services and applications.
- Flexible, customized solution enabled to support existing and future business-critical applications with security and service levels agreements (SLAs) to guarantee the reliability of the network and Quality of Service
- There should be no CRC on CE Ethernet interface.
- For link bandwidth monitoring, traffic graph access should be provided to FBR.