

# CENTRAL POWER PURCHASING AGENCY (GUARANTEE) LIMITED (CPPA-G)



## TENDER DOCUMENT

*No: CPPA-G/2453-58*

For Datacenter Security (Cyber Security), Phishing Simulator Tools, Firewall, Server, Data Scanning and uploading in Record Management System, Misc Software, Invigate ITSM tool, Site Preparation for Datacenter

**Note:** Bidders are expected to examine Bidding Document carefully, including all instructions, forms, terms, specifications etc. Failure to furnish all information required in the Bidding document or submission of a Bid not substantially responsive to Bidding Document in every respect would result in the rejection of the Bid.

**OFFICE OF THE CHIEF INFORMATION OFFICER (CIO)**

**CPPA-G, Shaheen Plaza, Plot 73-A West, Fazlul Haq Road Blue Area,  
Islamabad**

**Tel: 051-111-922-772 Ext-224 & 225**

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## SECTION A: INVITATION FOR BIDS

### 1. Invitation to Bid

CPPA-G, invites sealed bids from eligible bidders (original manufacturers/authorized distributors/suppliers) registered/incorporated company/firm in Pakistan, registered with Income Tax and Sales Tax department (FBR) For Datacenter Security (Cyber Security), Phishing Simulator Tools, Firewall, Server, Data Scanning and uploading in Record Management System, Misc Software, Invigate ITSM tool, Site Preparation for Datacenter following schedule:

Equipment/ Software/ Services		
-	LOT A	Data Centre Security
-	LOT B	Phishing Simulator with Policies, Threat Advisory & Compliance Manager
-	LOT C	Firewall
-	LOT D	Data Scanning and uploading in Record Management System
-	LOT E	Server
-	LOT F	Invigate ITSM tool
-	LOT G	Supply and Installation of Allied Equipment and Services for Datacenter Facility
-	LOT H	Misc Software

#### 1.1 PPRA Rules

This tender for procurement will be processed strictly under public procurement rules, 2004. These may be obtained from <http://ppra.org.pk/doc.rules.pdf>. In this document, unless otherwise mentioned to the contrary, 'Rule' means Rule under the procurement rules, 2004.

#### 1.2 Mode of Advertisement(s)

As per Rule 12(1) and 12(2), this Tender is being placed in national newspapers with wide circulation and online at PPRA's <http://www.ppra.org.pk> and CPPA-G's official websites <http://www.cppa.gov.pk>.

#### 1.3 Type of Open Competitive Bidding

As per rule 36(b), Single Stage - Two Envelop Bidding procedure shall be followed.

#### 1.4 Bidding Document

The bidding document containing detailed terms and conditions, method of procurement, procedure for submission of bids, bid security, bid validity, opening of bid, evaluation criteria, clarification/ rejection of bids, performance guarantee etc. can be downloaded from the CPPA-G official website <http://www.cppa.gov.pk>.

#### 1.5 Bidding Process Schedule

Brief schedule of bidding process is as under:

Sr.	Summary	Description
1.	Recipient	CIO CPPA-G, Shaheen Plaza, 73 A West, Blue Area, Islamabad
2.	Venue	O/O Chief Information Officer, Shaheen Plaza, 73 A West, Blue Area, Islamabad
3.	Closing Date & Time of Bids (Technical & Financial)	01 <sup>st</sup> June, 2022 11:00 AM
4.	Technical Bids shall be opened in the presence of bidder or authorized representatives	01 <sup>st</sup> June, 2022 11:30 AM
5.	Public Opening Date & Time of Financial Bids	Technical responsive Companies shall be informed to participate in the opening process of financial bids with date/time.

6.	Bid Money	05% of the total value of quoted cost (Please enclose bid money with financial bid envelope)
7.	Cost of Tender Document	Rs. 1,000/-

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## SECTION B: INSTRUCTIONS TO BIDDERS

### 2. General Instructions to Bidders

#### 2.1 Scope of Bid

The CPPA-G invites sealed bids for Laptops, All in One Desktop & Workstation, Access Switches, Wi-fi Operationalization, HCI Solution, UPS, Internet/Email/Voice/Data Services and Miscellaneous Software in schedule of requirements along with technical specifications, as per Annexures, at O/O Chief Information Officer, Shaheen Plaza, 73 A West, Blue Area, Islamabad.

#### 2.2 Tender Document Fee

The bidding documents can be downloaded from [www.cppa.gov.pk](http://www.cppa.gov.pk); however, cost of tender document is PKR 1000/- (nonrefundable) that will be deposited by potential bidders in CPPA-G Imprest Account. Account Title: 'Central Power Purchasing Agency (Guarantee) Limited' Account No. 3057606195, National Bank of Pakistan, Super Market, Corporate Branch, F-6, Islamabad. The bidders will present original receipt of tender document fee, deposited, along with sealed technical and financial bids.

#### 2.3 Eligibility of Bidders/Bids/Goods/Services

The eligibility of bidders, bids, goods or services will be evaluated in line with following clauses:

##### 2.3.1 Bidders:

This Invitation for Bids is open to all original manufacturers/ their authorized agents/ suppliers and in case of imported goods their authorized agents/ importers/ suppliers in Pakistan for supply of Goods who:

- i) have registered/incorporated company/firm in Pakistan with relevant business experience of at least Three Years (3) years (except lot D which is at least one year (1) ) as on closing date for tender submission;
- ii) is registered with Tax Authorities as per prevailing latest tax rules (Only those validly registered with sales tax and income tax departments and having sound financial strengths can participate);
- iii) has valid registration of General Sales Tax (GST) & National Tax Number (NTN);
- iv) must be involved in sales or supply business of IT equipment and services for last 3 years;
- v) has authorization of principal manufacturer (For Lots A,B,C,E,F) and for lot G only for items mentioned in Technical BoQ of lot G.
- vi) has not been blacklisted or under a declaration of ineligibility for corrupt and fraudulent practices by any provincial or federal government department, agency, organization or autonomous body or private sector organization anywhere in Pakistan and has read CPPA-G's blacklisting SOP and have no objection being trailed in case of breach of contract (submission of undertaking on legal stamp paper, as per 'Annexure-A' is mandatory),
- vii) has required relevant qualified and enough strength of technical staff to fulfill the requirement of assignment,
- viii) has office(s) at Islamabad / Rawalpindi

**Note:** verifiable documentary proof for all above requirements is a mandatory requirement, non-compliance will lead to disqualification

##### 2.3.2 Bids:

Any bid not received as per the terms and conditions laid down in this document is liable to be ignored. No offer shall be considered if:



- Received without tender document fee submission receipt
- received without earnest money/ bid Security
- received after the date and time fixed for its receipt
- tender document and the bid are unsigned
- offer is ambiguous
- offer is conditional i.e. advance payment, currency fluctuations or currency is not PKR (Except Lot A, B, F, H which will be quoted in USD).
- offer is received by a telegram
- offer is received with shorter price validity and longer delivery period than asked in this document
- offer is for store/items not conforming to the specifications indicated in the tender BOQ

### **2.3.3 Goods or Services:**

All goods and related services to be supplied under the contract shall conform to the policies of the Government of Pakistan in vogue. All expenditures made under the contract shall be limited to such goods and services. For purposes of this clause, (a) the term “Goods” includes any goods that are the subject of this Invitation for Bids and (b) the term “Services” includes related ancillary services such as transportation, insurance, installation, after sale service/support and trainings etc.

## **2.4 Corruption and Fraud**

- The Government of Pakistan defines Corrupt and Fraudulent Practices as “corrupt and fraudulent practices” which includes the offering, giving, receiving, or soliciting of anything 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”.
- Indulgence in corrupt and fraudulent practices is liable to result in rejection of bids, cancellation of contracts, debarring and blacklisting of the bidder, for a stated or indefinite period of time.

## **2.5 Cost of Bidding**

The Bidder shall bear all the costs associated with the preparation and submission of its bid, and the Procuring Agency shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

## **2.6 Joint Venture / Consortium**

Joint venture / consortium is not eligible for this tender.

# **3. Special Instructions to Bidders**

## **3.1 Bidding Document Contents**

### **3.1.1 Contents of bidding document**

- The goods/licenses/support/services required, applicable bidding procedures, and Contract Terms are prescribed in this Bidding Document. In addition to the Invitation for Bids, this Bidding Documents include: (a) Instructions to Bidders (ITB) (b) Schedule of Requirements (c) Technical Specifications (d) Evaluation

Criteria (e) Bid Forms (including technical forms and financial forms) (f) Draft Standard Contract including Special Conditions of Contract (with Annexures) and General Conditions of the Contract, and Integrity pact.

- ii) The bid prepared by the bidder, and all correspondence and documents relating to the bid exchanged by the bidder and CPPA-G shall be written in English language. Any printed literature furnished by the bidder may be written in another language, provided that this literature is accompanied by an English translation, in which case, for purposes of interpretation of the bid, the English translation shall govern.

### **3.1.2 Clarification(s) on Bidding Document**

The potential bidders requiring clarification(s) on bidding document may notify CPPA-G at the address indicated in the Invitation for Bids. The CPPA-G shall respond in writing through email to any request for clarification(s) no later than seven (7) days prior to the deadline for the submission of bids prescribed in the Invitation for Bids. The responses of CPPA-G (including an explanation of the query but without identifying the source of inquiry) shall be uploaded on the company's website: [www.cppa.gov.pk](http://www.cppa.gov.pk).

### **3.1.3 Amendment(s) on Bidding Document**

- i) At any time prior to deadline for submission of bids, CPPA-G, for any reason, whether at its own initiative or in response to a clarification(s) requested by a prospective bidder, may modify bidding document by amendment(s). The amendments incorporated will be published/notified on company's website: [www.cppa.gov.pk](http://www.cppa.gov.pk) and same shall be binding to all bidders.
- ii) In order to allow prospective bidders reasonable time to take into account the amendment(s) in preparing their bids, CPPA-G, at its discretion, may extend deadline for the submission of bids.

## **3.2 Bidding Procedure**

### **3.2.1 Governing Rules**

The bidding procedure shall be governed by PPRA rules 2004, issued and amended time to time by the Public Procurement Regulatory Authority (PPRA). The bidding procedure is also governed by PPRA rule 36 'Procedures of Open Competitive Bidding' sub-rule (b) 'Single stage - Two Envelope procedure'. Bidders are advised to refer to the section-A, sub-sections 1.1, 1.2, 1.3 and 1.5.

### **3.2.2 Bidding Procedure**

The bidding procedure prescribed in the Invitation for Bids is explained herein below:

#### **Single Stage: Two Envelope Procedure**

- i) The bid shall comprise a single package containing two separate sealed envelopes. Each envelope shall contain separately the Financial Bid and the Technical Bid;
- ii) The envelopes shall be marked as "FINANCIAL BID" and "TECHNICAL BID" in bold and legible letters to avoid confusion;
- iii) Initially, only the envelope marked as "TECHNICAL BID" shall be opened at O/o Chief Information Office, CPPA-G, Shaheen Plaza, 73 A West, Fazlul Haq Road, Blue Area, Islamabad on the date/time fixed in the Invitation for Bids (IFB) in the presence of the bidders or their authorized representatives, who may choose to be present.
- iv) The envelope marked as "FINANCIAL BID" shall be retained in the custody of CPPA-G without being opened;
- v) The CPPA-G shall first establish the "Eligibility" and then evaluate the technical Bid conforming the compliance of the offered item's technical specifications with the demanded ones and other terms & conditions, without reference to the price and reject any bid which shall not conform to the specified requirements;

- vi) During the technical evaluation no amendments in the technical bid shall be permitted, however, if required, any clarification(s) which shall not constitute any material deviation of bid, may be asked. The request for clarification and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered, or permitted.
- vii) The “FINANCIAL BIDS” of eligible and technically qualified Bidders shall be opened publicly at a time, date and venue to be announced and communicated to the bidders in advance within the bid validity period;
- viii) The Financial Bid of ineligible and/or technically nonresponsive bidders shall be returned un-opened to the respective bidders subsequent to the announcement of “Bid Evaluation Report” (BER); and
- ix) The bid found to be the lowest evaluated & responsive shall be accepted. In case, two bidders submit equal financial bid, the bidder with highest technical marks will be awarded tender.

### **3.3 Preparation of Bids**

#### **3.3.1 Documents Comprising of Bids**

- i) The bid shall comprise of bid forms, duly signed by the authorized personnel along with the stamp of the company, and all those documentation that are prescribed for the eligibility of the bidders and goods/services that are found necessary and highlighted in the bid forms in Annexure-B.
- ii) The Bidder shall complete the Bid Forms and an appropriate Price Schedule furnished in the bidding documents, indicating the goods to be supplied, a brief description of the goods, their general and specific characteristics, ancillary services that the bidder is willing or required to provide along with the proposed price.

#### **3.3.2 Bid Prices**

- i) The bidder shall quote unit prices and total price (inclusive of all taxes and duties where applicable) as per price schedule, prescribed in this bidding document, of goods/services, he proposes to supply under contract on FOR basis at the addresses provided in section 2.1 of this bidding document. If there is no mention of taxes, the offered/ quoted price shall be considered as inclusive of all prevailing taxes/duties.
- ii) In case sale tax is revised by government of Pakistan during three agreement years price inclusive of GST will be revised accordingly. The benefit of exemption from or reduction in the taxes and duties shall be passed on to CPPA-G.
- iii) While making a price quote, trend/inflation in the rate of goods and services in the market should be kept in mind. No request for increase in price due to market fluctuation in the cost of goods and services shall be entertained.
- iv) Form prescribed for quoting of prices, should be typed and printed on the bidder’s letterhead. Any alteration/correction must be initialed.
- v) The bidder should quote prices of goods/services on the form provide in Annexure-B according to the technical specifications demanded in BoQ for which Vendor is participating of this bidding document. The technical specifications of goods, different from the required specifications, shall straightway be rejected.

#### **3.3.3 Bid Currency**

Prices shall be quoted in Pak Rupees. Bids with prices offered in any other currency will be rejected (Except Lot A, B, F, H which will be quoted in USD).

#### **3.3.4 Supporting Documents**

The bidder shall provide the leaflets/brochures/catalogs of quoted products with the bid.

### **3.3.5 Bidders Eligibility Documents**

Bidder shall furnish, as part of its bid (with bid form & price schedule) the documentary evidence mentioned in eligibility criteria Section D for the bidder's eligibility and its qualifications to perform the contract if his bid is accepted:

- Minimum Three (03) years of experience in supplying of IT & Related items having proper Outlet/Office,
- duly authorized by Manufacturer/Principal of Leading Brands (Authorization Letter shall be provided For Lots A,B,C,E,F) and for lot G only for items mentioned in Technical BoQ of lot G.)
- registered with Income & Sales Tax Departments and on the Active Tax Payers List of FBR,
- Affidavit duly attested by the Oath Commissioner/Notary Public to the effect that the respective bidder is not blacklisted by any Government (Federal, Provincial or Local) or a public-sector organization. respective bidder has read CPPA-G's blacklisting SOP and have no objection being trailed in case of forged document provide/ breach of contract (as per Annexure-A is mandatory).

### **3.3.6 Bid Security**

- i) The bidder shall furnish, as part of its bid, a bid security @ 05% of the total quoted bid value in PKR, in the shape of pay order/demand draft/call deposit in the name of CPPA-G, Shaheen Plaza, Fazlul Haq Road, Blue Area, Islamabad. The unsuccessful bidder's bid security shall be discharged or returned soon after the announcement of successful bids.
- ii) The bid security (in the shape of pay order/demand draft/call deposit) shall be enclosed with in the 'Financial Bid' sealed envelope.
- iii) The successful bidders' Bid Security will be kept in CPPA-G's account as Performance Security until successful bidder replace it with the Bank Guarantee within sixty days after issuance of Purchase Order and Performance security shall be valid till the expiry of warranty period, support period or termination of services or fulfillment of all obligations under contract whichever is later. No other shape or form of performance security shall be acceptable.
- iv) The bid Security may be forfeited: (a) if a Bidder withdraws its bid during the period of bid validity; or (b) In the case of a successful bidder, if the bidder fails to sign the contract or fails to provide equipment/software/Support awarded.

### **3.3.7 Bid Validity**

- i) The bids price shall remain valid for 120 days after the date of opening of technical bid prescribed by CPPA-G. A bid having validity for a shorter period shall be rejected by CPPA-G as non-responsive.
- ii) The CPPA-G shall be under an obligation to process and evaluate the bid within the stipulated bid validity period. However, under exceptional circumstances and for reason to be recorded in writing, if an extension is considered necessary, all those who have submitted their bids shall be asked to extend their respective bid validity period. Such extension shall be for not more than the period equal to the period of the original bid validity.
- iii) The bidders who; (a) agree to the CPPA-G request for extension of bid validity period shall not be permitted to change the substance of their bids; and (b) do not agree to an extension of the bid validity period shall be allowed to withdraw their bids without forfeiture of their bid securities/Performance Security.

### 3.4 Submission of Bids

#### 3.4.1 Sealing and Marking

- i) The envelopes shall be marked as “FINANCIAL BID” and “TECHNICAL BID” in bold and legible letters to avoid confusion. Similarly, the Bidder shall seal the bid/ bids in separate envelopes.
- ii) The envelopes shall then be sealed in an outer envelope.
- iii) The inner and outer envelopes shall: (a) be addressed to the CPPA-G at the address, and (b) Bid Reference No. given, and a statement: ‘DO NOT OPEN BEFORE’ the time and the date specified, in the Invitation for Bids for opening of Bids.
- iv) The inner envelopes shall also indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared as ‘non-responsive’ or ‘late’.
- v) If the outer as well as inner envelope is not sealed and marked as required, CPPA-G, shall assume no responsibility for the bid’s misplacement or premature opening.
- vi) The bids must be delivered by hand or by courier so as to reach on the date and time prefixed in the Invitation for Bids at:

**O/o Chief Information Officer, CPPA-G**

CPPA-G, Shaheen Plaza, Plot 73-A West,  
Fazlul Haq Road Blue Area,  
Islamabad

Tel. No. 051-111-922-772 Ext-224

- vii) Bids submitted through telegraph, telex, fax or email shall not be entertained.

#### 3.4.2 Submission Deadline

- i) Bids must be submitted by the bidder and received by the CPPA-G on/or before 01<sup>st</sup> June, 2022, 11:00 AM. Bids received later than the time and date specified will stand summarily rejected.
- ii) The CPPA-G may, in its discretion, may extend the prescribed deadline for the submission of bids by amending the bidding documents in accordance with sub-section 3.1.3, in which case all rights and obligations of CPPA-G and bidders previously subject to the deadline shall thereafter be subject to deadline as extended.

#### 3.4.3 Submission Deadline

Any bid received by CPPA-G after the deadline for submission of bids prescribed by CPPA-G pursuant to sub-section 3.4.2 shall be rejected and returned unopened to the bidder.

#### 3.4.4 Withdrawal of Bids

- i) The Bidder may withdraw its bid after bid’s submission and prior to the deadline/closing time & date prescribed for submission of bids.
- ii) No bid may be withdrawn in the period between deadline for submission of bids and the expiration of the period of bid validity. Withdrawal of a bid during this period may result in forfeiture of the bid Security submitted by the bidder, pursuant to the sub-section 3.3.6.

### 3.5 Bids Opening and Evaluation

#### 3.5.1 Open and Evaluation of Technical/Finance Bids

- i) ‘Technical Bids’ received, shall be opened by CPPA-G publicly in the presence of bidders or their representatives who may choose to be present on 01<sup>st</sup> June, 2022, 11:00 AM. No Technical Bid shall be rejected at opening, except for late bids, which shall be returned unopened to the bidders.
- ii) All Bidders in attendance shall sign an attendance sheet.
- iii) Prior to detailed evaluation, CPPA-G shall determine the substantial responsiveness of Technical Evaluation bid to the bidding documents. For purposes of this clause,

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a substantially responsive bid is one, which conforms to all the terms and conditions of the bidding documents without material deviations, specifically sub-section 3.3.3 and 3.4. Deviations from, or objections or reservations to critical provisions, such as those concerning Applicable Laws, delivery schedule, taxes & duties etc. shall be deemed to be a material deviation for technical bids and bid security for financial bids. CPPA-G's determination of a bid's responsiveness will be based on contents of the bid itself.

- iv) The Technical Bids shall then be evaluated conforming compliance of the offered item's technical specifications with the demanded ones.
- v) The Financial Bids of technically qualified (i.e. compliant to technical specifications and other terms & conditions) bidders shall be opened publicly on a specified date, time and venue which shall be communicated to the bidders after evaluation of technical bids.
- vi) The Procuring Agency shall open one Financial Bid at a time and read out aloud its contents which may include name of the bidder, items bided for and unit prices and total amount of the bid (if applicable). CPPA-G may choose to announce any other details which it deems appropriate if not in conflict with the Public Procurement Rules-2004, specifically Rule 28 (Opening of Bids).
- vii) In 'Financial Bids' the arithmetical errors shall be rectified on the following basis:
  - If there is a discrepancy between unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected.
  - If bidder does not accept the correction of the errors, its bid shall be rejected, and its bid security may be forfeited.
  - If there is a discrepancy between words and figures, the amount in words shall prevail.

### **3.5.2 Bids Rejection**

- i) CPPA-G may reject any or all bids at any time prior to the acceptance of a bid under Public Procurement Rules (PPR) 2004. CPPA-G may upon request communicate to any bidder who submitted a bid, the grounds for its rejection of any or all bids but, is not required to justify those grounds.
- ii) Bidder must not indicate directly or indirectly their financial bid anywhere in the technical bid. Any such disclosure shall result in summary rejection of entire bid of the concerned bidder.
- iii) Conditional offer i.e. advance payment, currency is not PKR (Except Lot A, B, F, H which will be quoted in USD) or currency fluctuations etc.
- iv) Incomplete bid/bids shall be rejected.
- v) Bid/bids received with over-writing, cutting and doubtful figures shall be rejected.
- vi) CPPA-G incurs no liability, solely by virtue of its invoking Rule 33.1 of PPR 2004, towards bidders who have submitted bids.
- vii) Notice of the rejection of any or all bids shall be given promptly to the concerned Bidders that submitted bids.

### **3.5.3 Re-Bidding**

- i) If CPPA-G rejected all bids in pursuant to sub-section 3.5.4, it may call for a re-bidding.
- ii) CPPA-G before invitation for re-bidding shall assess the reasons for rejection and may revise specifications, evaluation criteria or any other condition for bidders, as it may deem necessary.

### **3.5.4 Announcement of Evaluation Report**

Announcement of Evaluation Report will be as per PPR rules 2004.



### **3.5.5 Contacting Procurement Agency**

- i) No Bidder shall contact CPPA-G on any matter relating to its bid, from the time of bid opening to the time of announcement of Evaluation Report. If a Bidder wishes to bring additional information to the notice of CPPA-G, it should do so in writing.
- ii) Any effort by a bidder to influence CPPA-G in its decisions on bid evaluation, bid comparison, or contract award may result in the rejection of bid. Canvassing by any bidder at any stage of the bid evaluation is strictly prohibited. Any infringement shall lead to disqualification.

## **3.6 Award of Contract**

### **3.6.1 Acceptance of Bid/Award Criteria**

The Bidder whose bid is found to be most closely conforming to the Evaluation Criteria prescribed in Section D, being technically qualified and having lowest financial bid, if not in conflict with any other law, rules, regulations or policy of the Government of Pakistan, shall be awarded the contract, within the original or extended period of bid validity.

### **3.6.2 Variation in Quantity**

The CPPA-G reserves the right at/after the time of award of contract to increase or decrease, quantities of goods up to 15% as originally specified in Schedule of Supplies without any change in unit price or other terms and conditions.

### **3.6.3 Performance Security**

The successful bidders' Bid Security will be kept in CPPA-G's account as Performance Security until successful bidder replace it with the Bank Guarantee within sixty days after issuance of Purchase Order and Performance security shall be valid till the expiry of warranty period, support period or termination of services or fulfillment of all obligations under contract whichever is later. No other shape or form of performance security shall be acceptable.

### **3.6.4 Notification of Award / Letter of Acceptance (LoA)**

- i) Prior to the expiration of the period of bid validity, CPPA-G shall issue Purchase Order to the successful bidder. This Purchase order is termed as Letter of Acceptance.
- ii) The notification of award shall constitute the formation of the contract between CPPA-G and the successful Bidder.
- iii) The enforcement of the contract shall be governed by Rule 44 of the PPR-2004. The performance security shall be forfeited in case of bidder fails to fulfill the obligations under the contract or violates any of the terms and conditions of the contract.

## **3.7 Goods Inspections/ Verification**

### **3.7.1 Inspection and Test**

- i) After delivery of goods at CPPA-G's premises (for LoTs in which hardware is to be delivered), CPPA-G shall inspect the quantity, quality, specifications of goods in the presence of the bidder.
- ii) The Inspection Committee of CPPA-G will carry out detailed physical examination of stocks (for LoTs in which hardware is to be delivered) and can reject, any item if found not according to the approved technical specifications etc. Moreover, the Supplier will also be responsible to replace the same without any further charges.
- iii) After delivery/Renewal of Licenses ((for LoTs in which software is to be renewed/purchase) CPPA-G will issue verification certificate of delivery/Renewal of licenses

### **3.8 Packing of Goods Delivered**

#### **3.8.1 Packing & Accessories**

All the items to be provided in proper company packing with brochures and CDs if applicable.

### **3.9 Transportation**

#### **3.9.1 Transportation and Delivery Requirements**

- i) The bidder shall deliver the supplies at the destination in scratch-less condition with all the manufacturer supplied accessories.
- ii) The bidder shall arrange such transportation of the Goods as is required to prevent their damage or deterioration during transit to their final destination and in accordance with the terms and manner prescribed in the Schedule of Requirement.
- iii) All costs associated with the transportation including loading/unloading and road taxes shall be borne by the Supplier.

### **3.10 Disputes**

#### **3.10.1 Resolution of Disputes**

In case of any dispute concerning the interpretation and/or application of this document shall be settled through arbitration. The CEO, CPPA-G or his nominee shall act as sole arbitrator. The decisions taken and/or award made by the sole arbitrator shall be final and binding on the parties.

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## SECTION C: SCHEDULE OF SUPPLIES AND PAYMENT

### 4. Supplies of Equipment/ Software (Purchase/ Renewal)

#### 4.1 Equipment Delivery

The equipment shall be delivered and installed in accordance with the following schedule of requirements:

S. No	Milestone	Time Period
1.	For All Lots Except Lot D	Within One Twenty Days (120) Days from date of Issuance of Purchase Order
2.	For Lot D only	<ul style="list-style-type: none"> <li>Staff will be deployed in CPPA-G Premises within 30 Days from of issuance of Work Order</li> <li>Project completion should be within 240 days</li> </ul>

### 5. Late Delivery Penalty

#### 5.1 Liquidated Damages upon Late Delivery of Supplies

The hardware, Software and Supports shall be delivered in accordance with the Purchase Orders to be issued by CPPA-G. In case of late deliveries, penalties at the following rates will be applied:

Mode of Penalty	100% Quantity as per Purchase Order	Total delivery period
<b>For Goods/license/Services (All Lots Except lot D )</b>		
Without penalty	120 days	120 days
With penalty @ 1% per day after 120 days of issuance of Purchase Order up to maximum of 10% of the total contract value.	10 days	130 days
<b>For Goods/license/Services (For lot D only )</b>		
Without penalty	240 days	240 days
With penalty @ 1% per day after 240 days of issuance of Purchase Order up to maximum of 10% of the total contract value.	10 days	250 days

#### 5.2 Failure to Delivery

Failure to supply items within the stipulated time period will invoke a penalty as specified in sub-section 5.1; however, in case for delivery exceeds allowed period with penalty, CPPA-G may terminate/cancel the Contract/ Purchase Order, Performance Security amount may be forfeited and the company may be blacklisted and will not be allowed to participate in future tenders as well.

### 6. Terms of Payment

#### 6.1 Payment

Payment of the Equipment, Software and Support will be made directly by consignees within thirty days, from the date of receipt of invoice, on production of following documents:

- i) Currency of Invoice should be PKR

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- ii) For Lot A, B, F, H the rate of exchange (USD to PKR) shall be the selling rate, prevailing on the date of invoice as notified by the State Bank of Pakistan on that day.
- iii) Invoice having NTN, GST No. printed of Both Supplier & Consignee.
- iv) For Equipment GRN (Goods Receipt Note) issued by the consignee and for Software/ Support/ Services GRN is not applicable.
- v) Inspection/ Verification/Satisfactory performance Report issued by CPPA-G.
- vi) Warranty Certificate (Lot C, E, G)
- vii) Sales Tax Invoice (if not exempted) or attach exemption certificate.
- viii) For release of GST Payment Supplier should provide copy of submitted Annex-C from FBR Portal
- ix) For Lot G 50% Payment will be made after delivery of Goods and remaining 50% after successful deployment
- x) For lot D successful bidder may submit invoice upon completion of at least Fifty Thousand Pages

## SECTION D: EVALUATION CRITERIA

### 7. Evaluation Criteria

#### 7.1 Bidder's Evaluation Criteria

Bidder as a part of his bid shall provide the following depending upon applicability:

- i) Company profile
- ii) NTN Certificate
- iii) GST Certificate
- iv) On Active Tax Payers List of FBR
- v) Registration/Incorporation/Business Certificate and number of business years in Pakistan.
- vi) Minimum Three (3) years' experience in supply and installation of hardware/IT equipment or supply of software licenses along with list of clients to whom the bidder has done or been doing business during last Three (3) years along with their Names, Addresses and Phone Numbers Except (except lot D which is at least one year (1) ).
- vii) A list showing the location of head office along with those of branch offices.
- viii) A list of technical expertise and qualified maintenance engineers/staff to handle the task efficiently along with their qualification.
- ix) Bid Validity period of 120 days from date of opening of Technical Bids.
- x) Affidavit to the effect that not blacklisted and rendered ineligible for corrupt and fraudulent practices by any Government (Federal, Provincial or Local) or a public-sector organization/Division/Ministry... (Annexure-A).
- xi) Complete specifications with supporting document, brochures of the offered items. If specifications do not meet the tender requirements; offered material shall not be entertained.
- xii) The Bidder should be authorized partner with quoted brand for Lots (A,B,C,E,F) for lot G only for items mentioned in Technical BoQ of lot G.
- xiii) Must have minimum annual turnover at least PKR 5 million in the last 3 years – Income Tax Returns/Audited Financial Statements to be attached except Lot D
- xiv) The Refurbished, Grey smuggled products will be not accepted in any case.
- xv) Manufacturer's authorization certificate/Letter (For Lots A, B, C, E, F) and for lot G only for items mentioned in Technical BoQ of lot G.
- xvi) for Lot G the bidder should have registration with Pakistan Engineering Council (PEC) in relevant fields (Certificate copy must be attached)

#### 7.2 Bid's Evaluation Criteria

- i) Technical bids will be evaluated as per given criteria in sub-section 7.3. The bidder will be declared technically qualified if score of technical factors  $\geq 70\%$ .
- ii) Financial bids will be opened only of those bidders who are technically responsive.
- iii) The tender will be awarded to the financially lowest bidder. In case if lowest financial value is tied between two or more bidders, tender will be awarded to the bidder having highest score in technical evaluation. In case lowest financial value and technical score are tied between two or more bidders, tender will be awarded to the bidder having more experience.
- iv) For lots for which financial value is asked for two or more years, tender financial evaluation will be done on sum of two year or three years depending upon the years of agreement.
- v) For Lot H, purchase order will be issued to the financially lowest Item wise, In case if lowest financial value is tied between two or more bidders, tender will be awarded to the bidder having highest score in technical evaluation. In case lowest financial

value and technical score are tied between two or more bidders, tender will be awarded to the bidder having more experience.

### 7.3 Technical Evaluation Criteria

The technical evaluation will be done on the basis of following parameters for eligibility of the Bidder:

Sr.	Factors	Max. Score
I.	Registration/Incorporation/Business Certificate and at least three business years in Pakistan (except lot D which is at least one year (1) )	Mandatory
	Valid Income Tax Registration	Mandatory
	Valid General Sales Tax Registration (Active with FBR)	Mandatory
	Affidavit to the effect that bidder is not blacklisted and rendered ineligible for corrupt and fraudulent practices by any Government (Federal, Provincial or Local) or a public-sector organization/Division/ Ministry (Annexure-A)	Mandatory
	Compliance to technical specifications of BoQ for competing LOT on Letter head of company. For lot G compliance must be provided as per Annexure D.	Mandatory
	Compliance to schedule of supplies	Mandatory
	Principal authorization certificate/ Letter (For Lots A,B,C,E,F) and for lot G only for items mentioned in Technical BoQ of lot G.	Mandatory
	Principal valid Partnership certificate (For Lots A,B,C,E,F ) and for lot G only for items mentioned in Technical BoQ of lot G.	Mandatory
	Must have minimum annual turnover at least PKR 05 million in the last 3 years – Income Tax Returns to be attached for all lots Except Lot D	Mandatory
	Must have Office in Islamabad/Rawalpindi	Mandatory
	For <b>Lot G</b> Participating bidder should have certified technical team for data center certified resources on their company. The participating firm must have CTDC, CDCP or equivalent resources (Documentary proof required & to be submitted with the bid). CVs of Technical staff along with certifications to be submitted	Mandatory
	For <b>lot G</b> Documentation: The vendor must also provide hard printed sets for Detailed Technical Proposal, DataSheets, schematic diagrams, single line diagram for all electrical, mechanical, air-conditioning systems etc. CAD/layout drawings/shop drawings/General. Arrangement drawings of Electrical including networks and Data Sheets for the proposed Data Center Components along with soft copies	Mandatory
	for <b>Lot G</b> the bidder should have registration with Pakistan Engineering Council (PEC) in relevant fields (Certificate copy must be attached)	Mandatory
II.	<b>Company Profile</b>	
i.	No. of Offices other than Islamabad/Rawalpindi * each office = 2.5	Max (5)
ii.	Experience with CPPA-G	Max (5)
iii.	For All Lots Except Lot D. Age of Company 5 years or more (10 Marks) Age of company between 3 to 5 years (5 Marks) For Lot D Age of Company 1 Years or more (10 Marks)	Max (10)
III.	<b>Annual Sales Turnover for Last Three Years (For All Lots Except D)</b> <ul style="list-style-type: none"> <li>• Annual Turnover equals or more than 35 million = 20 Points</li> <li>• Annual Turnover equals or more than 20 million and less than 35 million = 15 Points</li> <li>• Annual Turnover equals or more than 05 million and less than 20 million = 10 Points</li> </ul>	Max (20)

	<p>Note: Income Tax Returns /Audited Reports for Last Three Years will be attached</p> <p><b>Annual Sales Turnover for Last Years (Lot D only)</b></p> <ul style="list-style-type: none"> <li>Annual Turnover equals or more than 0.3 million = 20 Points</li> </ul> <p>Note: Income Tax Returns /Audited Reports for Last One Years will be attached</p>	
IV.	<p><b>For All lots Except Lot D:</b></p> <p><b>A List of Clients</b> (other than CPPA-G) to whom the bidder has done or been doing business of IT related equipment/services/licenses during last Three (3) years along with their Names, Addresses, Phone Numbers. Documentary evidence required.</p> <p>List is to be provided bifurcating in following slabs:</p> <ul style="list-style-type: none"> <li>Equals or more than 3 million and less than 5 million (10 marks)</li> <li>Equals or more than 5 million and less than 7 million (15)</li> <li>Equals or more than 7 million (20)</li> </ul> <p><b>For Lot D only:</b></p> <ul style="list-style-type: none"> <li>Equals or more than .3 million and less than 1 million (15 marks)</li> <li>Equals or more than 1 million and less than 3 million (20 marks)</li> </ul>	Max (20)
V.	<p><b>Qualified Staff Position residing in Islamabad / Rawalpindi. of Company (must attach certificates), Certified for Lots A,B,C,E,F with principal</b></p> <ul style="list-style-type: none"> <li>Certified with principal per resource =10 points</li> </ul> <p><b>Qualified Staff Position residing in Islamabad / Rawalpindi of Company (must attach resume), Except Lots A,B,C,E,F,D</b></p> <ul style="list-style-type: none"> <li>Properly Qualified Engineer/Technician per resource = 10 Points</li> </ul> <p><b>Qualified Staff Position residing in Islamabad / Rawalpindi of Company (must attach resume), For Lots D only</b></p> <p>Properly Qualified Engineer/Technician per resource = 15 Points</p>	(Max. 40)
<b>Max. score</b>		100

**LOT A: TECHNICAL SPECIFICATIONS – DATA CENTRE  
SECURITY(CYBER SECURITY)**

<b>Sr. No</b>	<b>Key Requirements (Please provide relevant evidence for compliance for each of the Below requirement):</b>
1	The solution must provide single platform for complete server protection over physical, virtual (server/desktop) and cloud
2	Solution must support On-Premises Deployment
3	Solution should support protection for minimum of 60 servers.
4	The proposed product must have at-least 03 customers in Pakistan
5	The proposed solution should be able to scan vulnerabilities of operating system and third-party software
6	Provides layered defense against advanced attacks and virtual patch against vulnerabilities on OS level and application level
7	Should be able to provide virtual patch against WebSphere Application Server
8	Should be able to provide virtual patch against Oracle Web Logic
9	Should be able to identify use of PSEXEC tool through SMB share
10	Should be able to detect and alert if executable file is being uploaded on a SMB share
11	Should be able to detect and alert batch file upload on network share
12	Should be able to identify and alert on suspicious remote desktop protocol (RDP) brute force attempt
13	Should be able to prevent access to administration share
14	Should be able to detect OneDrive, Dropbox, BOX traffic
15	Should be able to detect download of a file over FTP
16	Should be able to detect traffic remote applications like VNC and TeamViewer
17	The proposed solution must provide firewall feature on Windows, Linux and AIX
18	The proposed solution must provide file integrity monitoring (FIM) that detects changes and generates related alerts
19	The proposed solution must provide the ability to collect and analyze operating systems and application logs for security events and logs inspection purposes
20	The proposed solution must have application control feature to quickly identify new suspicious files.
21	The proposed solution must provide Malware Protection, Advance Malware Protection and Malware Pattern Analysis

22	The proposed solution should be able to analyze unknown files and zero-day threats for malware determination using machine learning algorithms
23	The proposed solution should be able to examine and block an unknown item as it loads and looks for suspicious behavior in the operating system, applications and scripts
24	The proposed solution should be able to perform sandbox analysis for suspicious objects for detonation and extensive analysis for rapid response
25	The proposed solution must provide IPS feature on Windows, Redhat and AIX
26	The proposed solution must be able to detect and alert on administrator logins on servers
27	The proposed solution must be able to alert when log file is cleared (e.g., Windows Event Logs)
28	The proposed solution must be able to detect PowerShell command execution
29	Should be able to detect ftpd events on Solaris
30	Should be able to detect ftpd events on AIX
31	Should be able to detect ftp event on Windows
32	Should be able to detect hosts file modification on Windows
33	Should be able to detect file attribute changes in /usr/bin and /user/sbin on Unix
34	Should be able to detect change in the attribute Permissions of any log file under /var/log path
35	Should be able to alert when command history is cleared
36	Should be able to detect installation of root certificate
37	Should be able to detect removable devices on Linux
38	Should be able to identify create and delete activity of users and groups
39	Should be able to detect when task scheduler entries are modified
40	Should be able to detect when Windows startup programs are modified
41	Should be able to detect when a software is installed or uninstalled on Unix
42	Should be able to detect files created by Oracle Bea WebLogic Server when modified
43	Should be able to provide lock-down ability (to block all new executable) if needed on Linux
44	Should be able to provide information on the user and process associated with launching of executable

45	Should be able to provide a way to block suspicious list of hashes on Linux
46	Should be able to list down the vulnerabilities being protected with relevant CVE and CVSS score
47	Should be able to provide a mechanism to block suspicious web traffic
48	The proposed solution should support concurrent backup
49	The successful bidder will be responsible for deployment and configuration of all the components of the proposed solution
50	The selected vendor has to suggest and implement new policies in line of standard best practices according to CPPA-G's environment
51	The selected vendor has to provide the following documentation: <ul style="list-style-type: none"> <li>a. Deployment documentation &amp; Network Diagram (HLD &amp; LLD)</li> <li>b. Details about how to handle day-to-day administrative activities</li> </ul>
52	The selected vendor will provide OEM accredited trainings to Three CPPA-G's personnel and local training/Knowledge transfer to Five CPPA-G's personnel for all the components of the proposed solution. The training should cover the deployment, configuration, management, upgrade and reporting aspects of the proposed solution
53	Availability of local/onsite support in Islamabad
54	An SLA will be signed with successful vendor initially for one agreement year extendable up to three agreement years (subject to annual renewal upon satisfactory performance)



## LOT B: TECHNICAL SPECIFICATIONS- PHISHING SIMULATOR WITH POLICIES, THREAT ADVISORY & COMPLIANCE MANAGER

S.N.	CPPA-G's Requirements
	CPPA-G intends to have a solution in place that would automate the entire security awareness program with the ability to continuous measure the phishing readiness of the organization in a quantitative manner. The objective is to have an integrated and analytics driven solution in place to empower the end users to contribute toward securing the digital assets of CPPA-G
<b>1</b>	<b>Objectives</b>
	<p>High-level objectives are listed below.</p> <ol style="list-style-type: none"> <li>1. Automate the security awareness program.</li> <li>2. Measure the Security Awareness improvements in a quantitative manner.</li> <li>3. Measure the state of phishing readiness at any time for the organization, department, and individual users.</li> <li>4. Raise the awareness of CPPA-G employee to understand and comply with Information Security Policies, Procedures, and related documentations.</li> <li>5. Reduce risk to CPPA-G by encouraging security-conscious employee behavior.</li> <li>6. Gather internal threat intelligence and release threat advisories for the internal staff to update them on the latest threat vectors.</li> <li>7. Improve incident response by teaching employees how to identify and report an information security incident.</li> <li>8. Have analytics in place to make data driven decision-making.</li> <li>9. Automate policy communication and staff consent.</li> </ol>
<b>2</b>	<b>Phishing Simulation -</b>
<b>2.1</b>	Automation of the phishing readiness along with the awareness program, policy, and threat advisory compliance
2.2	Phishing assessment automation and measurement
2.3	Both options of integration with Active Directory and import of staff information list
2.4	Customizable Phishing/Email Templates
2.5	Customizable Landing Pages
2.6	Phishing Incident Plugin for Outlook
2.7	Custom Sending Domain
2.8	Flexibility to customize templates
2.9	Unlimited number of recipients
2.10	Run unlimited number of phishing campaigns
2.11	Flexibility to customize the landing pages
2.12	Sending mock phishing tests to end users to gauge vulnerability against phishing attacks
2.13	Analytics for phishing readiness including but not limited to: <ul style="list-style-type: none"> <li>○ Organization Wide Phishing Index</li> </ul>

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	<ul style="list-style-type: none"> <li>○ Division Wide Phishing Index</li> <li>○ End User Phishing Index</li> <li>○ Phishing Index over Time</li> <li>○ Most Vulnerable End Users</li> <li>○ Phishing Readiness Trends over Time</li> <li>○ Location Wise Distribution</li> <li>○ Reporting of suspicious phishing</li> <li>○ Correlation of Phishing Index &amp; Awareness Index &amp; Threat Advisory Compliance</li> <li>○ Integrated Individual user report on Phishing Readiness, Security Awareness &amp; Threat Advisory Compliance</li> </ul> <p>Any other end user behavior analytics</p>
2.14	Ability to filter users before running the phishing simulation campaign
2.15	Capability to run multiple phishing simulation campaigns
2.16	Flexibility to run campaign in the following modes if the phishing simulation is successful <ul style="list-style-type: none"> <li>○ No feedback, only analytics captured through the system</li> <li>○ Customized text content to be displayed to the users</li> </ul>
2.17	Security Policy communication and consent
2.18	Phishing awareness program scheduling and management
2.19	Security Awareness content and delivery (e.g., videos etc.)
2.20	Knowledge check through quiz & questionnaire
2.21	Sequenced restrictive flow such that the sequential activities must only be allowed in defined order i.e., access to an activity allowed only if the pre-requisite activity is performed
2.22	Have time constraint on a course/activity
2.23	Creating staff groups / launch targeted awareness communication to certain groups
2.24	Producing analytics dashboards
2.25	Dashboard for each module or for multiple integrated modules on departmental and individual user level
2.26	Capability for end user to communicate back to the security awareness team to provide feedback, queries, report incident. etc.
2.27	Centralized, interactive, analytics driven dashboard and comprehensive reporting
2.28	Ready to use security awareness content (Urdu subtitles) and education modules addressing latest information security trends and security education requirements.
2.29	Adding customized awareness content like videos, infographics, SCORM and HTML5 compliant modules
2.30	Capable to create security awareness program calendar which includes the different activities and campaigns to be launched for a defined period
2.31	Able to send alerts and reminders to the security awareness administrators about the program progress and upcoming events as per schedule
2.32	Mechanism to send automated reminders / reassignment of modules to users in an engaging and calling for action manner
2.34	Provide the possibility of sending pre-defined quizzes, questionnaires, surveys to end users, the ability to customize the content is an additional point

2.35	allow to define pass/ fail criteria for each assigned module
2.36	Define approval process for awareness campaigns
2.37	provide a bank of quizzes questions with ability to measure awareness level and progress over time
<b>3</b>	<b>USB Drop Test</b>
3.1	Ability to create multiple types of attachments, Word, and Excel, with customized name and content
3.2	Track IP, file opening and enable Macro events
3.3	Track Mac Address and ability to enroll them in awareness training
3.4	Display information on USB specific Dashboard
<b>4</b>	<b>Smishing</b>
4.1	Ability to upload employee information and send customized SMS to each user in bulk
4.2	Track user information and ability to enroll them in awareness training
4.3	Display above information on Dashboard
<b>5</b>	<b>Advisory Compliance</b>
5.1	The Information Security team must have the option to release a threat advisory on any reported suspicious email so that all the other users should be aware of it
<b>6</b>	<b>Policy Compliance</b>
6.1	System must provide the feature to assign single or multiple policies to end users for their review and compliance
<b>7</b>	<b>Dashboard &amp; Reports</b>
	The proposed solution must provide a centralized, interactive, analytics driven dashboard and comprehensive reporting. There should be a separate dashboard for:
<b>7.1</b>	<b>Phishing Simulator:</b>
7.1.1	Real time dashboard
7.1.2	Compliance of the Phishing campaigns
7.1.3	Ability to send multiple attack types, like file attachments, credential harvesting etc.
7.1.4	Ability to enroll employees based on phishing results and take feedback
7.1.5	The dashboard can be for each module or for multiple integrated modules on departmental and individual user level
<b>7.2</b>	<b>USB Drop Test:</b>
7.2.1	Real time dashboard
7.2.2	Compliance of the USB drop test campaigns
<b>7.3</b>	<b>Smishing:</b>
7.3.1	Real time dashboard
7.3.2	Compliance of the Smishing campaigns
<b>7.4</b>	<b>Policy Compliance Manager:</b>
7.4.1	The system must provide a dashboard to monitor the policy communication and consent at the organization/department and section level
7.4.2	The system must seek acknowledgement for compliance on a policy and map the results on analytics driven dashboard
7.4.3	Policies can be sent as attachments, or customized courses can be created as policies

<b>7.5</b>	<b>Threat Advisory Compliance Manager:</b>
7.5.1	Compliance of the threat advisory being released.
<b>7.6</b>	<b>Advance Reporting:</b>
7.6.1	Provides additional information such as learning statistics and detailed descriptions of the campaigns executed like management summaries, campaign trends or even campaign comparisons should be provided in a company branded layout or in a format that can be reused in other documents
<b>8</b>	<b>Required Security Awareness Courses:</b>
8.1	Bring your own device (BYOD)
8.2	Data Security
8.3	Email Security
8.4	Information Security
8.5	Internet Browser Security
8.6	Malware Security
8.7	Password Security
8.8	Phishing Attacks
8.9	Ransomware
8.10	Social Media Security
<b>9</b>	<b>Training and Support</b>
9.1	The selected vendor will be responsible for configuration, testing, and commissioning
9.2	The selected vendor will be responsible to provide complete documentation inclusive of configuration manuals with necessary SOPs
9.3	The selected vendor will be responsible to provide OEM training/knowledge training to Ten CPPA-G's personnel for all components of the proposed solution. The training should cover the deployment, configuration, management and reporting aspects of the proposed solution.
9.4	Availability of local/onsite support in Islamabad
9.5	An SLA will be signed with successful vendor initially for one agreement year extendable up to three agreement years (subject to annual renewal upon satisfactory performance)

## LOT C: TECHNICAL SPECIFICATIONS- FIREWALL

S #	Attributes
1	OEM must be listed in Challengers in Gartner / Forester wave Magic Quadrant 2020/21 for Network Firewalls.
2	Should have at least 10x 1G RJ45 Ports.
3	Should have minimum 4 x SFP port
4	should have minimum of 16GB of memory
5	should have minimum of 100GB of SSD storage
6	Firewall must have FAN installed for cooling.
7	Firewall must have 1RU Form factor and must be ready to be install in 19inch Rack.
8	Firewalls must have at-least one AC 220v Power Supply.
10	<b>Performance and Feature Set</b>
11	should have FW/NFW throughput of 3 Gbps min
12	should have IPS throughput of 3 Gbps min
13	Should have min of 1Gbps of Ipsec VPN throughput
14	must be enabled in detection, blocking, tracking, analysis, and containment of targeted and persistent malware, addressing the attack continuum both during and after attacks
15	Should be a State-full Firewall, which can accept at least 17000 new connection per second.
16	The Firewall must support at-least 1.5million concurrent Sessions with application and visibility control
17	Should support min 450mbps transport layer security
18	Must support All UTM features ( IPS , malware URL filtering ) with Flexible licending / subscription model
19	Should provide 1PSEC VPN Thoughput of at-least 1Gbps
20	The firewall should support at-least 3000 1PSEC VPN peers
21	must have new 50 remote access VPN licenses included . Existing remote access licences ( QTY 100 ) migration from old to new firewall will be responsibility of vendor
22	UTM licenses for 5 years
23	Direct OEM support for 5 years
24	Should support contemporary Encryption algorithm at-least AES-128, AES-256 etc.
25	Firewall must support static routes and routing protocols such as OSPF.
26	The firewall should support NAT / PAT.
27	The firewall should support SNMPv1,SNMPv2,SNMPv 2c, SNMPv3 and SSHv2
28	Should support virtual context
29	Must be Centralized manageable
30	Must support in depth logging Monitoring and reporting
31	Firewall must support High Availability Configuration as Active/Active OR Active/Passive.

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32	Firewall should provide Traffic Shaping features like setting maximum bandwidth, guaranteed Bandwidth based on 1P Address, Traffic control policies.
33	Must be provided with centralized management and control with minimum of 6 devices support
	TRAINING/Implementation
34	Instructor Led Training at OEM Premises/Training Center
35	The successful bidder will be responsible for deployment and configuration of all the components of the proposed solution

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**LOT D: TECHNICAL SPECIFICATIONS- DATA SCANNING  
AND UPLOADING IN RECORD MANAGEMENT SYSTEM**

<b>Data Scanning and Uploading in Record Management System</b>			
<b>Sr.#</b>	<b>Items</b>	<b>Description</b>	<b>Est Quantity</b>
1	License	Data Scanning and uploading in Record Management System	0.8 million
RMS is developed in Microsoft Sharepoint and Per document meta data fields to be updated are from ten to twelve			

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## LOT E: TECHNICAL SPECIFICATIONS- SERVER

<b><u>DETAILED TECHNICAL BOQ OF SERVER</u></b>		
S.NO	Description	Qty
01		01
	Chassis Configuration	Chassis with up to 8x2.5" Drives
	Processor	Intel® Xeon® Gold 6330 2G, 28C/56T, 11.2GT/s, 42M Cache, Turbo, HT (205W) DDR4-2933
	Additional Processor	Intel® Xeon® Gold 6330 2G, 28C/56T, 11.2GT/s, 42M Cache, Turbo, HT (205W) DDR4-2933
	Memory DIMM Type and Speed	3200MT/s RDIMMs
	Memory Capacity	(01TB) 16x 64GB RDIMM, 3200MT/s, Dual Rank
	SSD Drives	6x 960GB SSD SATA Mix Use 6Gbps 512 2.5in Hot-plug AG Drive, 3 DWPD
	BOSS Cards	BOSS-S2 controller card + with 2 M.2 240GB (RAID 1)
	RAID Controller	H755 SAS Front
	Network Cards	Broadcom 5720 Dual Port 1Gb On-Board LOM Broadcom 5719 Quad Port 1GbE BASE-T Adapter, PCIe Full Height Broadcom 57412 Dual Port 10GbE SFP+, OCP NIC 3.0
	Optics Cables	2x Networking, Cable, SFP+ to SFP+, 10GbE, Copper Twinax Direct Attach Cable, 3 Meter
	Power Supply	Dual, Hot-Plug, Power Supply Redundant (1+1), 1400W, Mixed Mode
	Power Cords	Jumper Cord - C13/C14, 4M, 250V, 10A (US, EU, TW, APCC countries except ANZ)
	Riser	Riser Config 1, 6x8, 2x16 slots
	Bezel	2U Standard Bezel
	Rack Rails	Ready rails sliding rails with cable management arm
	Remote Management	Enterprise Remote Management Software
	Form Factor	2U Rack Mount
	Warranty	ProSupport and Next Business Day Onsite Service-ACDTS Initial, 36 Month(s)
	VMware License	VMware vSphere 7 Enterprise Plus for 1 CPU, up to 32 cores, 3 Year License and Maintenance
	Training	Instructor Led Training at OEM Premises/Training Center
	Deployment	The successful bidder will be responsible for deployment and configuration of all the components of the proposed server



**LOT F: TECHNICAL SPECIFICATIONS- INVIGATE ITSM  
TOOL**

<b>INVIGATE IT SERVICES MANAGEMENT (LICENSING+IMPLEMENTATION)</b>			
<b>Description</b>	<b>QT Y</b>	<b>AGREEMEN T YEARS</b>	<b>PRICE CURRENC Y</b>
Invgate service desk (Twenty-Five (25) Agents)	1	Initially One agreement year extendable upto three years annually	USD
Invgate Insight Pro (CMDB) for Five Hundred (500 Assets)	1		
Invgate Asset for Six Hundred (600) Assets	1		

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**LOT G: TECHNICAL SPECIFICATIONS- SUPPLY AND  
INSTALLATION OF ALLIED EQUIPMENT AND SERVICES  
FOR DATACENTER FACILITY**

1. The turn-key solution is required for complete Data Center infrastructure. The solution shall encompass services (Electrical, Civil, Mechanical and Telecom), as per TIA 942 Design and Facility Requirements on 'Turn-Key Basis'.
2. The intended achievable result from this TSR is "Concurrent Maintainable Data Center" operational 24x7. Eliminating all single point of failures in the Electrical, Mechanical and Telecom Distribution.
3. This document describes technical specifications of components, materials, appliances, and services to be delivered. The document is structured such that the bidder is aware of the complete set of requirements which include allied services, equipment, systems, integration, processes, post installation work and subsequent operating support. No deviation in specification given in this document will be accepted.
4. Documentation: The vendor must also provide hard printed sets for Detailed Technical Proposal, DataSheets, schematic diagrams, single line diagram for all electrical, mechanical, air-conditioning systems etc. CAD/layout drawings/shop drawings/General. Arrangement drawings of Electrical including networks and Data Sheets for the proposed Data Center Components along with soft copies.
5. **Key Design Considerations**

Data Center will have compartmentalized design as per CPPA-G requirements.

  - a) High emphasis is placed on design scalability for future design and facility design as per TIA-942 B rated 3 Data Center on all elements i.e Telecom, Electrical, Architectural and Mechanical
  - b) Rack load is assumed to be approximately 4 KW however, it will be diversified as the number of racks increase.
  - c) Electrical infrastructure (conductors & switchgear) shall be sized and designed based on maximum scale of Datacenter i.e 11 racks and 2 Communication Racks
  - d) Network Operations Centre (NOC). The NOC area must be designed and fully equipped to accommodate required number of persons with, furniture and requisite HW/SW which is in scope of this project.
6. **Electrical Distribution Systems (Qty-02).** The power system required for this data center shall have 2N redundancy with regards to ATS Panels, MCBs, MCCBs, LV Electric Panels. There shall be two independent paths of power.
  - (a) The whole power supply system shall be Concurrent Maintainable in a way that any repair, maintenance, extension or retrofitting work on one path does not affect continuous operation of the second path to IT equipment and there shall be Zero Single Point of Failure in the system. Contractor must share the SLD and Complete Panel BOQ.
    1. Panels shall be designed & manufactured as per IEC standards.
    2. Manufacturing to be done as per ISO 9001:2015 , ISO45001 and ISO 14001 compliant quality management system.
    3. Type Test Imported components should be used with adequate K rating.
    4. All MCCBs shall be of European / Japanese Brands.

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5. All DBs & panels shall have fixed (dead) backs, and shall be only serviceable from the front.
6. Main Panels shall have protection of Under / Over-Voltage , Frequency and Earth Leakage.
7. Fiber glass insulators shall be used for bus bar mounting.
8. Space for circuit tagging required with permanent installation on protective sheet.
9. 15% space required in DBs / Panels for future provisioning.
10. Tin plated Copper bus bar with heat shrink colour coded sleeves to be used.
11. Protection for eliminating risk of direct contact with bus bar.
12. All bolts and nuts shall be of 8.8 grade or equivalent.
13. Creepage and clearance distances must be per IEC 61439.
14. All panels shall have safety covers in a manner that only operating components should be visible.
15. Hinged protective metallic door with knob/handle is required.
16. Braided Door earth required.
17. Lockable handle required for main door.
18. As-built drawing pocket required.
19. Cable hanging arrangement required.
20. Terminals of European brands for termination of incoming & outgoing cables where required.
21. Powder paint up to 120 microns required on all Panels & DBs.
22. Panel Accessories and associated components such and Energy Analysers, CTs, Indication Lamps , selector switches , control ancillary components etc should be preferably of MCB brand or European Brands.
23. Energy Analysers wherever used shall have communication feature and port for Modbus over IP / RS -485 and shall be integrated over EMS / DCIM.
24. Main Panels shall have provision for Display Module for Key Parameters.
25. Pre-shipment Inspection and Factory Inspection will be carried out and managed by the OEM / Bidder / Panel Builder.
26. Detailed Shop Drawings of each panel all schematic drawings, general arrangement drawings, disposition views, wiring and control diagrams.
27. Schematic Design of Monitoring Solution will be submitted along with control and logic diagrams.
28. Minimum One Year Warranty Required from date of successful commissioning on site.
29. OEM Authorization / MAF / MAL should be provided for the components such as breakers etc.

#### **7. *Comfort Cooling for LT Rooms & Communication Room***

- Make of cooling units must be of renowned brand
- If available Cooling, heating, humidifying, dehumidifying, other related sensors would be preferred
- Ambient Temperature of Outdoor Units of Data Center must be with compatible with ambient of Islamabad / Rawalpindi
- Units having maximum tolerable range will be preferred
- Type of Compressor Motor must be Brushless DC Motor (BLDC)
- Unit with Minimum Operating Current is preferred
- Indoor Motor must be DC (Direct Current)
- Indoor Vane Motor must be DC (Direct Current)
- Outdoor Motor must be DC (Direct Current)

- Condenser Fins
- Coils must be copper
- Wi-Fi and Android Wi-Fi Application is preferred
- Cooling unit warranty must be as per support and warranty of the project
- Availability of Spares in Rawalpindi / Islamabad
- IEC and ASHRAE standards Compliant

#### 8. Power Cables

- Power cables used will be 99.99% copper.
- Cables must have 100% conductivity.
- Cables must have 100% compliance with BSS & IEC Standards.
- Cables should be from recognized Pakistan manufacturers Pakistan Cables / Fast Cables/ Newage Cables.
- Factory Test Reports against cables delivered to be provided
- Separate Technical Data Sheet has to be provided for each specific cable
- The qty given in BOQ is estimated any variation will be responsibility of the bidder to complete the scope of project.
- All accessories for cable termination including lugs, shrouds, sleeves, ties, nylon tapes etc. will be responsibility of the contractor.

#### 9. Earthing / Grounding System.

Grounding & Bonding System shall be built as per TIA/EIA 607-A.

- Dedicated Earth for Equipment Rooms to attain <1 Ohm
- Each will have inspection maintenance and inspection pit and covers

#### 10. Cable Management :

- Powder Coated 16 SWG Cable Trays for Power and Cooling.
- Overhead Fiber Runner for Fiber from Communication Rooms to Racks and above DC Racks

#### 11. Enterprise Security and Surveillance system CCTV systems

- 4 MP Wide Angle IR , Auto Iris 4MP IP Cameras Strategically deployed surveying all critical and equipment areas including relevant support systems areas including the external genset area, condenser area.
- NVRs with 1 month HD recording at 25 FPS , H. 265 Codec
- VMS Software
- Drawings to be submitted

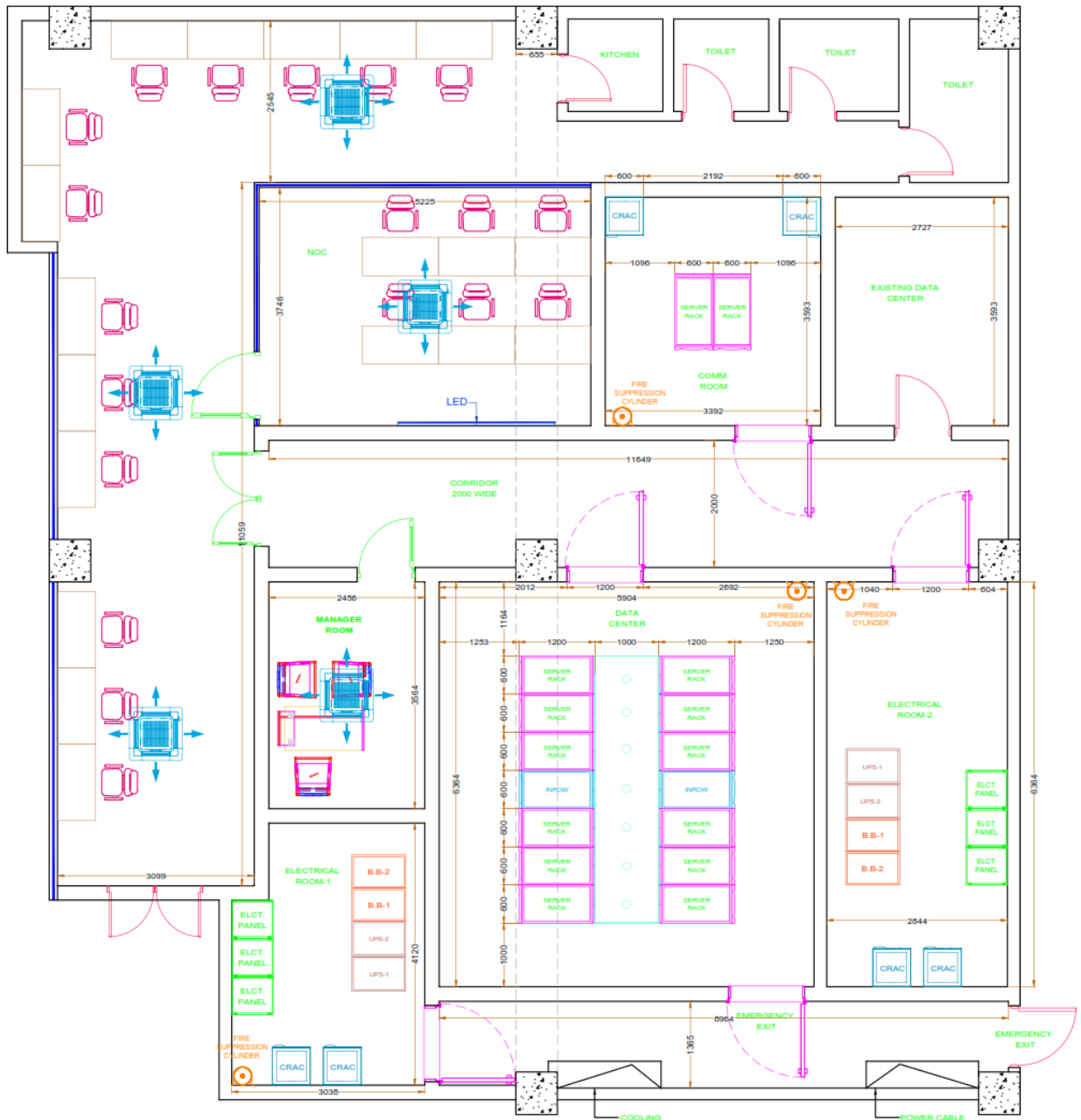
#### 12. Access Control System

- (a) Make and Model should be specified.
- (b) **RFID + Biometric** for single/double door magnetic locks, centralized management.
- (c) Facial recognition tab as per specs mentioned in BOQ with cloud management portal for employees, vendors and visitors separate access mechanism.

#### 13. Miscellaneous

- a) **Anti-Static Vinyl Tiles** Raw floor enhancement, final floor makeup and Fixing of Copper insulation and Fire-Rated Anti-Static Vinyl Tiles
- b) **Illumination System** on entire facility with 500 Lux (Rooms), 200 Lux (Corridors), 150 Lux Service Areas
- c) **Foaming / Sealing** of all openings that lead to external entry for Termite / Moisture / Insects protection.
- d) Complete fire / flame retarded paint coat on walls, roof including preparation, primer and top coat in the interior of datacenter

## Data Center Layout (For Reference Only)



### Terms of Reference

1. All provided equipment / services must be covered under **warranty** for 01 year from the date successful deployment.
2. The Bidder shall follow the standards mentioned in this document. If no standards are mentioned for anything, relevant International Standards and **TIA-942 rating III** have to be followed.
3. If any misconduct in materials used, implemented works or quality is found during works or during the warranty period of the project, it shall be repaired to required level and to the satisfaction of Purchaser at the cost of the Bidder.
4. The Vendor shall be responsible for all designing, supervision & management of the project. Vendor shall submit the **Project Implementation plan** covering details of detailed technical team / Resident Engineer, Delivery Timelines,

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5. Vendor shall be responsible to provide design and drawings (Both **Planned & As-Built** with complete calculations).
6. Vendor will provide **detail working drawings** before the start of the project and only approved working drawings shall be executed, however only Purchaser has the right to modify as per site requirements. Vendor shall be responsible to inform the Purchaser and take approval for any change in design.

#### TECHNICAL REQUIREMENTS

S No	Description	Unit	Qty
1	Dismantling and Reinstallation works		
1.01	Dismantling of Existing light fixtures, Electrical Points, Network Nodes. Removal of debris from site and dumped outside as per the Customer requirement.	Job	1
1.02	Removal of ceiling and cable trays and move to CPPA specified locations	Job	1
1.03	Removal and shifting of existing HVAC copper pipes from Data Center facility	Job	1
1.04	Removal, shifting and installation of existing furniture and office setup to CPPA specified locations	Job	1
1.05	Partition for temporary workplace setup at CPPA-G Specified location	Job	1
1.06	Supply and Installation of Cat 6 UTP cabling, I/Os, Faceplates, BackBox, Light Plugs, Power cables for sitting arrangement of 20 people	Job	1
1.07	Removal of Glass doors/partitions and reinstallation at CPPA specified location/ safe storage in stores	Job	1
2	Electrical Cables		
2.01	From Building Main Panel To ATS Panel - A & B 95 mmsq SC CU/PVC/PVC Std X 4	meters	60
2.02	From ATS Panel To MDB panel - A & B 95 mmsq SC CU/PVC/PVC Std X 4	meters	20
2.03	From MDB panel To UPS Bypass - A & B 50 mmsq 4C CU/PVC/PVC Std X 1	meters	25
2.04	From MDB panel To AC DB - A & B 50 mmsq 4C CU/PVC/PVC Std X 1	meters	20
2.05	From MDB panel To LSP DB - A & B 10 mmsq 4C CU/PVC/PVC Std X 1	meters	30
2.06	From UPS DB To SPM/PDU/PDF - A & B 50 mmsq 4C CU/PVC/PVC Std X 1	meters	30
2.07	From UPS DB To ELV DB - A & B 6 mmsq 4C CU/PVC/PVC Std X 2	meters	20
2.08	From SPM/PDU/PDF To IT Racks - A & B 6 mmsq 3C CU/PVC/PVC Std X 11	meters	550
2.09	From SPM/PDU/PDF To MMR Racks - A & B 4 mmsq 3C CU/PVC/PVC Std X 2	meters	160
2.10	From AC DB To MMR Cooling Indoor Unit - A & B 2.5 mmsq 3C CU/PVC/PVC Std X 2	meters	60
2.11	From MMR Cooling Indoor Unit To MMR Cooling Outdoor Unit - A & B 2.5 mmsq 4C CU/PVC/PVC Std X 2	meters	100

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2.12	From AC DB To Power Room Cooling Indoor Unit - A & B 4 mmsq 4C CU/PVC/PVC Std X 4	meters	120
2.13	From Power Room Cooling Indoor Unit To Power Room Cooling Outdoor Unit - A & B 2.5 mmsq 4C CU/PVC/PVC Std X 4	meters	200
2.14	From ELV DB To Fire Detection & Suppression System - A & B 1.5 mmsq 3C CU/PVC/PVC Std	meters	60
2.15	From ELV DB To NOC workstation - A & B 2.5 mmsq 3C CU/PVC/PVC Std X 6	meters	180
2.16	From MGB To Generator - ECCA & B 70 mmsq SC CU/PVC std X 1	meters	100
2.17	From MGB To ATS Panel - ECCA & B 70 mmsq SC CU/PVC std X 1	meters	40
2.18	From MGB To AC DB - ECCA & B 50 mmsq SC CU/PVC std X 1	meters	30
2.19	From MGB To LSP DB - ECCA & B 10 mmsq SC CU/PVC std X 1	meters	30
2.20	From AC DB To Power Room Cooling Indoor Unit - ECCA & B 6 mmsq SC CU/PVC std X 4	meters	40
2.21	From AC DB To Power Room Cooling Outdoor Unit - ECCA & B 6 mmsq SC CU/PVC std X 4	meters	200
2.22	From MGB To SPM/PDU/PDF - ECCA & B 50 mmsq SC CU/PVC std X 1	meters	15
2.23	Installation laying and testing of power cables	Job	1
3	Industrial Sockets		
3.01	32A Industrial Sockets 3 pin single phase	Nos.	26
4	LV Switch Gear		
4.01	250A ATS with MOR	Nos.	2
4.02	250A MDP with Surge Protection	Nos.	2
4.03	DB ELV and NOC	Nos.	2
4.04	AC DB	Nos.	2
4.05	LSP DB	Nos.	2
4.06	UPS Output and Bypass DB	Nos.	2
4.07	Rack Power Distribution DB	Nos.	2
4.08	Provisioning of Electrical parameters central monitoring through energy analyzers on DCIM software	Each	1
4.09	Installation Testing and Comissioning of Switch gear	Job	1
5	Electrical Sub-circuits		
5.01	2.5 Sqmm Cu/PVC for Lights swtiches and Light Plugs	Lot	1
5.02	Circuit wiring from DB to switch board including any wiring from switch board to switch board with 2x1.5 Sq.mm + ECC 1x1.5 Sqmm, 1-core PVC wires in 25mm dia PVC Conduit.	Job	1
5.03	Emergency Wiring for Group Control light fixtures From DB to first light point with 2x1.5 Sq.mm + ECC 1x1.5 Sq.mm in 25mm dia PVC conduit.	Job	1
5.04	Supply & Installation of following 10 Amps switches or 10/13/15/20 Amps socket outlets including PVC Box recessed	Job	1

5.05	Six/Four Gang Switch Unit	Nos.	8
5.06	13A, International Switch Socket unit (For Raw Power) including floor boxes where required	Nos.	60
5.07	Surface mounted LED Panel, Color temp. 6500K to Achieve 500 Lux	Nos.	50
5.08	Providing and fixing approved signs for EXIT lights along with battery operated SMD emergency lights with backup time as per DC standards (UL Listed)	Nos.	8
6	Grounding		
6.01	Grounding of less than 1 OHM through earth pits (DC Hall, Electric UPS Room, Communication Room, Generator ) Chemical Enhanced Earth using 25 mm dia 10'-0" long copper rod filled with soil conditioning material (low res/bentonite) including 4" dia, boring and back filled chemical	Job	3
6.02	Grounding and Bonding Wire appropriate size as per load for all metallic components in DC (cable)	lot	3
6.03	Supply and Installation of Earthing bus bar with enclosure and bar dimension 300mm X 50mm X 5mm	Nos	3
7	Mechanical		
7.01	<b>(Existing Building HVAC System) Shifting</b> , Rigging, lifting, Installation, testing and commissioning of Air Conditioning units different capacities & types (as per mentioned in schedule) including supply and installation of supports, brackets, rubber isolator, flashing, control wiring & power wiring (connection) in PVC for internal complete in all respects ready to operate. Supply, installation, testing and commissioning of refrigerant pipes (liquid + gas) with expanded rubber foam insulation, PVC tape wrapping + control wiring for units complete in all respects ready to operate.	Job	1
7.02	Supply of 2.0 ton Inverter type Comfort cooling unit for Communication Room and Power Rooms with Sequence Controller	No	6
7.03	<b>(Comfort cooling units) (Outdoor on Roof top)</b> Rigging, lifting, Installation, testing and commissioning of Air Conditioning units different capacities & types (as per mentioned in schedule) including supply and installation of supports, brackets, rubber isolator, flashing, control wiring & power wiring (connection) in PVC for internal from outdoor unit to indoor unit complete in all respects ready to operate. Supply, installation, testing and commissioning of refrigerant pipes (liquid + gas) with expanded rubber foam insulation, PVC tape wrapping + control wiring from indoor to outdoor for units complete in all respects ready to operate.	Job	6
7.04	Supply and installation of 16 SWG MS Powder coated Perforated Cable Tray with 18 SWG Cover. Complete with all supporting hangers, brackets, elbows, Tee & mounting accessories etc.	meters	90
7.05	Supply and installation Mesh type imported cable tray for Data Cables with all supporting hangers, brackets, elbows, Tee, Drops & mounting accessories etc.	meters	30



7.06	Supply and installation of imported Fiber runner made of glass fiber/PVC free of halogen. Complete with all supporting hangers, brackets, elbows, Tee & mounting accessories etc.	meters	20
8	Civil		
8.01	Providing and Fixing of Fire Rated Partion UPS/Power Room and Communication Room at 60 Min Fire Sepertaion with 100 mm thick board drywall, consisting of 10 mm thick Cement board sheets fixed over framing made up of sections of G.I 16 SWG sheets, including providing and fixing of 50mm thick glass wool sheets as per drawing. Complete in all respects	Job	1
8.02	Providing bricks masonry of 4.5 “ work wherever required inside the premises. Removal of wall. Plaster Work in ratio of 1:4 at 1st floor from Lawrencepur Sand or equivalent	Job	1
8.02	Painting of all walls and roof, with two coats of fire rated paint including scraping, dusting, leveling, filling cracks, finishing etc. Complete in all respects. Fire Rated Paint in DC Hall , UPS/Power Room and MMR/ Communication Room	Job	1
8.03	Supply and installation of Single Leaf 4ftX7.5ft, 90 mins Fire Rated Doors for DC Hall, Power rooms, DC Hall, MMRs with Trim Lock, Panic Bar	No.	7
8.04	Providing and Laying of anti static (Static Dissipative) Solid Vinyl Conductive ESD flooring with thickness of 3mm of approved color, complete in all respects and conforming to the requirements, specifications. Antistatic Vinyl Tilling for DC Hall , UPS/Power Room and MMR/ Communication Room, LT room	Sqft	900
8.05	Interior/ Exterior Design and Implementation for DC hall, NOC, Manager Room to ensure 24/7 work environment	Job	1
8.06	NOC furniture for 6 persons including Interwood or equivalent office chairs, Height adjustable workstation tables	Nos.	6
8.07	IT Hall/Manager furniture for 12 persons including Interwood or equivalent office chairs and tables alongwith visitor chairs for manager	Nos.	12
9	CCTV & Access Control		
9.01	Ceiling mounted fixed type PoE Powered I.P Camera with day and night feature. Resolution 4MP with live and recording quality of minimum 25 fps, along with all mounting accessories	Nos.	8
9.02	16 Port PoE 1-Gig Switch	Nos.	1
9.03	Network Video Recorder (NVR). The NVR shall be equipped with LAN / WAN facility, Suitable to accommodate 16-channels or more video input, NVRs should have minimum 30 days storage. Complete with all connecting cords and accessories using CMS Software.	Nos.	1
9.04	LCD Display 55" 1.8 mm Bezel with wall mount bracket/pedestal/mounts including HDMI cables and all accessories	Nos.	1
9.05	Supply and Wiring of CAT-6, UTP Cables from Camera to POE Switch in 25mm dia PVC Conduit, including termination and tagging at both ends. Complete in all respects.	Job	1

9.06	Face Pad with following features and cloud based reporting and door lock mechanism a) CPU: Hexa Core Processor b) OS: Android 7.1 c) Screen Resolution: 1200x600 d) Capacitive Touch Screen e) Camera: Dual, 2 MP f) Face capacity: 5,000 g) Speed: <4 secs h) Bulk Registration supported i) Ethernet: 100/10 MBPS j) Wifi, USB, Relay controller & Buzzer enabled (with indication lights)	Nos.	1
9.07	Supply, Installation, testing and commissioning of Access Control System (with features of Bio Metric & RFID) including all accessories. Complete with mounting brackets, wiring, adapters etc with single/double door magnetic locks	Job	4
10	Structured Cabling & LAN		
10.01	CAT 6 based LAN Cabling of NOC	Job	1
10.02	CAT 6 based LAN Cabling of IT Hall workstations	Job	1
10.03	CAT 6 UTP Drop cords 3m	Each	20
10.04	CAT 6 UTP Drop cords 5m	Each	20
10.05	Provisioning for 20 IP Intercom Lines	Job	1
11	Miscellaneous Items		
11.01	Rubber mat for Power Room (3 x 6 ft)	Nos.	4
11.02	Supply and Installation of Automatic Shoe cover Machine to be placed near door of Data Center with Shoe covers	Nos.	1

## LOT H: TECHNICAL SPECIFICATIONS- MISC SOFTWARES

S. No.	ITEM	DESCRIPTION	QUANTITY	AGREEMENT YEARS	PRICE CURRENCY
1	Telerik Dev Craft Complete	One Year Subscription	1	Initially One agreement year extendable upto three years annually	USD
2	dbForge SQL Complete	One Year Subscription	1		
3	MS Project Plan 5	One Year Subscription	5		
4	MS Visual Studio Professional 2019 standalone or latest	Perpetual License	10	N/A	
5	SQL Server per Core 2 Core Pack	Perpetual License	4		

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**ANNEXURE-A: AFFIDAVIT OF LEGITIMATE BIDDER**

**Undertaking**

We, [**Name and Address of Bidder**], do hereby declare on solemn affirmation that:

- I. We have not been blacklisted from any Government Department/Agency
- II. We have not been involved in litigation with any client during the last 3 years
- III. We acknowledge that we have read, understood and accepted the Tender Document along with all terms and conditions specified above in the tender document
- IV. We understand that CPPA-G shall have right, at his exclusive discretion, to require, in writing, further information or clarification of the Tender, from any or all the Bidder(s)
- V. We have read CPPA-G's SOP for blacklisting
- VI. We have no objection If being trialed in case of breach of contract
- VII. We have no objection If being trialed in case of forged documents provided to CPPA-G against Lot for which we are participating.
- VIII. We understand that CPPA-G shall have right, at his exclusive discretion, to increase/decrease the quantity of any or all item(s), accept/reject any or all tender(s), cancel/annul the Tendering process at anytime prior to award of Contract, without assigning any reason or any obligation to inform the Bidders of the grounds for the CPPA-G's action, and without thereby incurring any liability to the Bidder and the decision of the CPPA-G shall be final

Dated \_\_\_\_\_.

***BIDDER:***

Signature \_\_\_\_\_

CNIC # \_\_\_\_\_

Designation \_\_\_\_\_

Address \_\_\_\_\_

***WITNESSES:***

Signature \_\_\_\_\_

Signature \_\_\_\_\_

CNIC # \_\_\_\_\_

CNIC # \_\_\_\_\_

Name \_\_\_\_\_

Name \_\_\_\_\_

Designation \_\_\_\_\_

Designation \_\_\_\_\_

Address \_\_\_\_\_

Address \_\_\_\_\_

## ANNEXURE-B: BID FORMS

### ***Bid-Form: 1 – Letter of Intention***

*Bid Ref No. {Add Tender No}*

**Letter of Intention**

*{Add Date of Technical Bid Opening}*

Name of the Contract: *{Add name}*

To: *[Chief Information Officer, CPPA-G, Shaheen Plaza, Blue Area, Islamabad.]*

Dear Sir,

Having examined the bidding documents, including Addenda Nos. [insert numbers & Date of individual Addendum], the receipt of which is hereby acknowledged, we, the undersigned, offer to supply and deliver the Goods/Services under the above-named Contract in full conformity with the said bidding documents and at the rates/unit prices described in the price schedule provided in Financial Bid or such other sums as may be determined in accordance with the terms and conditions of the Contract. The above amounts are in accordance with the Price Schedules attached herewith and are made part of this bid.

We undertake, if our Financial Bid is accepted, to deliver the Goods/Services in accordance with the delivery schedule specified in the schedule of requirements.

If our Financial Bid is accepted, we undertake to provide a performance security/guarantee in the form, in the amounts, and within the times specified in the bidding documents.

We agree to abide by this bid, for the Bid Validity Period specified in the bidding documents and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period.

Until the formal final Contract is prepared and executed between us, this bid, together with your written acceptance of the bid and your notification of award, shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest or any Financial Bid you may receive. We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in Pakistan.

We confirm that we comply with the eligibility requirements as per sub-section 2.3 of the bidding documents and have duly provided bid security @ 05% of the total bid value, in the shape of pay order/demand draft/call deposit in the name of **Central Power Purchasing Agency (Guaranty) Ltd (CPPA-G) Islamabad** with our Financial Bid.

Dated this [insert:number] day of [insert:month], [insert:year].

*Signed:*

*In the capacity of [insert: title or position]*

*Duly authorized to sign this bid for and on behalf of [insert: name of Bidder]*



## ***Bid-Form: 2 – Evidence of Eligibility***

*Name of the Company*

*Bid Ref No. {Add Tender No}*

*{Add Date of Technical Bid Opening}*

Documentary Evidence for Determining Eligibility of the Bidders & Evaluation of bids

<b>Required Documentation (To Be Filled by the Procuring Agency)</b>	<b>Checklist (To be initialed by the Bidder against each document)</b>	<b>Relevant Page Number in the Bid (To be filled by the Bidder)</b>	<b>Supporting Documents (To be filled by the Bidder with name of the documents that are submitted to meet the requirement)</b>
<b>*Column:1</b>	<b>*Column:2</b>	<b>*Column:3</b>	<b>*Column:4</b>
Registration/Incorporation/Business Certificate			
NTN Certificate			
GST Certificate			
On Active Taxpayers List of FBR			
Affidavit to the effect that bidder is not blacklisted and rendered ineligible for corrupt and fraudulent practices by any Government (Federal, provincial or local or public sector organization/division ministry... (Annexure-A)			
Compliance to Technical Specification for bidding lots (For Lot G compliance must be provided as per annexure D)			
Compliance to schedule of supplies			
Letter of Authorization from Manufacturer (For Lots A, B, C, E, F) and for lot G only for items mentioned in technical BoQ of Lot G			
The bidder should be the partner of the quoted brand (For Lots A, B, C, E, F) and for lot G only for items mentioned in technical BoQ of Lot G			
Company Must have minimum annual turnover at least PKR 05 million in last three years- Income Tax Returns must be attached for Lot D annual turnover at least .3 million and last years Income Tax return must be attached			
Complete Company profile			
Company Must have Office in Islamabad/Rawalpindi			
Company past experience i.e. Minimum have Three Years' in supplying and installation of Computer Hardware, Software & IT equipment, Services for all lots Except lot D which is minimum one years			
Bid Validity period of 120 days			
For <b>Lot G</b> Participating bidder should have certified technical team for data center certified resources on their company. The participating firm must have CTDC, CDCP or equivalent resources (Documentary proof required & to be submitted with the bid). CVs of Technical staff along with certifications to			

*F. Nawaz*

be submitted			
For <b>lot G</b> Documentation: The vendor must also provide hard printed sets for Detailed Technical Proposal, DataSheets, schematic diagrams, single line diagram for all electrical, mechanical, air-conditioning systems etc. CAD/layout drawings/shop drawings/General Arrangement drawings of Electrical including networks and Data Sheets for the proposed Data Center Components along with soft copies			
for <b>Lot G</b> the bidder should have registration with Pakistan Engineering Council (PEC) in relevant fields (Certificate copy must be attached)			
Submission of required amount of bid security with Financial Bid			

\* Bidders should only initial against those requirements that they are attaching with the form. In case they do not have any document to attach the corresponding cell in column 2 should be left blank. Bidders are also required to mention the exact page number of relevant document/s placed in the Bid. Bidders are advised to attach all Supporting documents with this form in the order of the requirement as mentioned in column 1.

*F. Nawaz*

### ***Bid-Form: 3 – Companies Past Performance***

*Name of the Firm*

*Bid Ref No. {Add Tender No}*

*{Add Date of Technical Bid Opening}*

Assessment Period: (**Minimum Three Years** as per Evaluation Criteria)

<b>Name of the Purchaser/ Institution</b>	<b>Purchase Order No.</b>	<b>Description of Order</b>	<b>Value of Order</b>	<b>Date of Completion</b>	<b>Purchaser's Certificate</b>

*F. Nawaz*



**Bid-Form: 4 – Financial Bid Form**

Name of the Firm

Bid Ref No. {Add Tender No}

{Add Date of Technical Bid Opening}

**Price Schedule  
Year Wise (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>) if applicable**

S.#.	Name of the Item	Unit Price (Inclusive of all applicable taxes) *	Qty	Final Total Price (Inclusive of all applicable taxes)
1	2	3	4	5 = (3*4)
Total Price (Inclusive of all applicable taxes)				

*User Note:*

- i) This form is to be filled by the Bidder for each individual item in every lot and shall submit with the financial bid along dully filled
- ii) All rates quoted shall be inclusive of the cost(s) of inspection, delivery, installation charges, services, transportation, all applicable taxes, import duties if any and other levies.
- iii) All prices are to be quoted in PKR for all Lots Except Lot A,B,F & H which will be quoted in USD.
- iv) For Lot G detailed item wise cost must be provided
- v) For lot A,B,F & H the quoted annual price in USD shall remain firm and final and shall not subject to any escalation during three agreement years.
- vi) For lots for which financial value is asked for two or more years, tender financial evaluation will be done on sum of two year or three years depending upon the years of agreement (Duration mentioned on BoQ).
- vii) For **Lot D** bidder will submit per page cost for an estimate of 0.8 million pages

**FINAL TOTAL PRICE (in words) Year wise where required:**

-----

Signature: -----

Designation: -----

Date: -----

Official Stamp: -----

## ANNEXURE-C: GENERAL CONDITIONS OF CONTRACT

<b>1. Definitions</b>	<p>1.1 In this Contract, the following terms shall be interpreted as indicated:</p> <ul style="list-style-type: none"><li>(a) “The Contract” means the agreement entered into between the Purchaser (CPPA-G) and Supplier, as recorded in the Agreement/ Contract signed by the Parties, including all attachments and appendices thereto and all documents incorporated by reference therein.</li><li>(b) “The Contract Price” means the price payable to the Supplier under the Contract for the full and proper performance of its Contractual obligations.</li><li>(c) “The Goods” means all those equipment, machinery and/or other material which the Supplier is required to supply to the Purchaser under the Contract.</li><li>(d) “The Services” means those services ancillaries to the supply of the goods, such as transportation of goods up to the desired destinations, insurance and any other incidental services such as installation, commissioning, provision of technical assistance, training and other such obligations of the Supplier covered under the Contract.</li><li>(e) “GCC” means the General Conditions of Contract contained in this section.</li><li>(f) “SCC” means Special Conditions of the Contract.</li><li>(g) “The Purchaser” means the organization purchasing the Goods, as named in the SCC.</li><li>(h) “The Supplier” means the individual or firm supplying the Goods and Services under this Contract.</li><li>(i) “The Project Site”, where applicable, mean the place or places named in the SCC.</li><li>(j) “Day” means calendar day.</li></ul>
<b>2. Application</b>	<p>2.1 These General Conditions shall apply to the extent that they are not superseded by provisions of other parts of the Contract.</p>
<b>3. Standards</b>	<p>3.1 The Goods supplied under this Contract against the “Purchase Order”, shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods’ country of origin. Such standards shall be the latest issued by the concerned institution.</p>
<b>4. Inspections and Tests</b>	<p>4.1 The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Purchaser. SCC and the Technical Specifications shall specify what inspections and tests the Purchaser requires and where they are to be conducted. The Purchaser shall notify the Supplier in writing, in a timely manner, of the identity of any samples (representatives) retained for these purposes.</p> <p>4.2 The inspections and tests may be conducted on the premises of the Supplier, at point of delivery, and/or at the Goods’ final destination. If conducted on the premises of the Supplier, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.</p> <p>4.3 Should any inspected or tested Goods fail to conform to the Specifications, the Purchaser may reject the Goods, and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Purchaser.</p> <p>4.4 The Purchaser’s right to inspect, test and, where necessary, reject the Goods after</p>

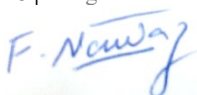
*F. Newaj*

	<p>the Goods' arrival at the Purchaser's delivery point shall in no way be limited or waived by reason of the Goods having previously been inspected, tested, and passed by the Purchaser or its representative prior to the Goods' shipment from the factory/warehouse.</p> <p>4.5 Nothing in GCC Clause 4 shall in any way release the Supplier from any warranty or other obligations under this Contract.</p>
<b>5. Packing</b>	<p>5.1 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 shall be indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.</p> <p>5.2 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 SCC, and in any subsequent instructions ordered by the Purchaser.</p>
<b>6. Delivery and Documents</b>	<p>6.1 Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in the Schedule of Requirements.</p> <p>6.2 For purposes of the Contract, DDP trade term is used to describe the obligations of the parties which means price inclusive of applicable taxes, transportation &amp; delivery charges, insurances &amp; warranties, if any, etc.</p>
<b>7. Transportation</b>	<p>7.1 The Supplier is required under the Contract to transport the Goods to a specified place of destination within the Purchaser's country, transport to such place of destination in the Purchaser's country, including insurance and storage, as shall be specified in the Contract, shall be arranged by the Supplier, and related costs shall be included in the Contract Price.</p>
<b>8. Warranty</b>	<p>8.1 The Supplier warrants that the Goods supplied under the Contract are original, new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Purchaser's specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.</p> <p>8.2 This OEM warranty shall remain valid for one/three year(s), respectively, 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 Contract.</p> <p>8.3 The Purchaser shall promptly notify the Supplier in writing of any claims arising under this warranty.</p> <p>8.4 Upon receipt of such notice, the Supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective Goods or parts thereof, without costs to the Purchaser.</p> <p>8.5 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, within a reasonable period, the Purchaser may proceed to take 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.</p>
<b>9. Payment</b>	<p>9.1 The method and conditions of payment to be made to Supplier under this Contract shall be specified in SCC.</p> <p>9.2 The Supplier's request(s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and Services performed and upon fulfillment of other obligations stipulated in the</p>

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	<p>Contract.</p> <p>9.3 Payments shall be made promptly by the Purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the Supplier complete in all respects.</p> <p>9.4 The currency of payment is Pak. Rupees.</p>
<b>10. Prices</b>	10.1 Prices without sales tax charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in SCC or in the Purchaser's request for bid validity extension, as the case may be.
<b>11. Change Orders</b>	<p>11.1 The Purchaser may at any time, by a written order given to Supplier, make changes within the general scope of the Contract in any one or more of the following:</p> <ul style="list-style-type: none"> <li>(a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;</li> <li>(b) the method of packing;</li> <li>(c) the place of delivery.</li> </ul> <p>11.2 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 delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within thirty (30) working days from the date of the Supplier's receipt of the Purchaser's change order.</p>
<b>12. Contract Amendments</b>	12.1 No variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.
<b>13. Assignment</b>	13.1 The Supplier shall not assign, in whole or in part to a subcontractor, its obligations to perform under this Contract.
<b>14. Delays in the Supplier's Performance</b>	<p>14.1 Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Purchaser in the Schedule of Requirements.</p> <p>14.2 If at any time during performance of the Contract, the Supplier should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). 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, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.</p> <p>14.3 Any delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 15, unless an extension of time is agreed upon pursuant to GCC Clause 14.2 without the application of liquidated damages.</p>
<b>15. Liquidated Damages</b>	15.1 Subject to GCC Clause 17, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in SCC. Once the maximum is reached, the Purchaser may consider termination of the Contract pursuant to GCC Clause 16.
<b>16. Termination for Default</b>	<p>16.1 The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate this Contract in whole or in part:</p> <ul style="list-style-type: none"> <li>(a) if the Supplier fails to deliver any or all of the Goods within the period(s) specified in the respective "Supply Order" which shall be issued from to time</li> </ul>

	<p>to time under this Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 14.2; or</p> <p>(b) if the Supplier fails to perform any other obligation(s) under the Contract.</p> <p>(c) if the Supplier, in the judgment of the Purchaser has engaged in corrupt and fraudulent practices in competing for or in executing the Contract.</p> <p>For the purpose of this clause:</p> <p>“corrupt and fraudulent practices” includes the offering, giving, receiving, or soliciting of anything 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.</p> <p>16.2 In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 16.1, the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods or Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.</p>
<b>17. Force Majeure</b>	<p>17.1 Notwithstanding the provisions of GCC Clauses 14, 15, and 16, the Supplier shall not be liable for forfeiture of its bid 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.</p> <p>17.2 For purposes of this clause, “Force Majeure” means an event beyond the control of the Supplier and not involving the Supplier’s fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.</p> <p>17.3 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.</p>
<b>18. Resolution of Disputes</b>	<p>18.1 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.</p> <p>18.2 If, after thirty (30) days from the commencement of such informal negotiations, the Purchaser and the Supplier have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified in SCC.</p>
<b>19. Governing Language</b>	<p>19.1 The Contract shall be written in the language specified in SCC. Subject to GCC Clause 20, the version of the Contract written in the specified language shall govern its interpretation. All correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.</p>
<b>20. Applicable Law</b>	<p>20.1 The Contract shall be interpreted in accordance with the laws of the country.</p>
<b>21. Notices</b>	<p>21.1 Any notice given by one party to the other pursuant to this Contract shall be sent to the other party in writing or by cable, telex, or facsimile and confirmed in writing to the other party’s address specified in SCC.</p>



	21.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.
<b>22. Taxes and Duties</b>	22.1 Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.

ANNEXURE-D: COMPLIANCE SHEET FOR LOT G

Sr.	Description	Compliance (FC/PC/ NC)	Document Reference
1	<b>Electrical Distribution Systems</b>		
	The power system required for this data center shall have 2N redundancy with regards to ATS Panels, MCBs, MCCBs, LV Electric Panels. There shall be two independent paths of power.		
	The whole power supply system shall be Concurrent Maintainable in a way that any repair, maintenance, extension or retrofitting work on one path does not affect continuous operation of the second path to IT equipment and there shall be Zero Single Point of Failure in the system. Contractor must share the SLD and Complete Panel BOQ.		
	Panels shall be designed & manufactured as per IEC standards.		
	Manufacturing to be done as per ISO 9001:2015 , ISO45001 and ISO 14001 compliant quality management system.		
	Type Test Imported components should be used with adequate K rating.		
	All MCCBs shall be of European / Japanese Brands.		
	All DBs & panels shall have fixed (dead) backs, and shall be only serviceable from the front.		
	Main Panels shall have protection of Under / Over-Voltage , Frequency and Earth Leakage.		
	Fiber glass insulators shall be used for bus bar mounting.		
	Space for circuit tagging required with permanent installation on protective sheet.		
	15% space required in DBs / Panels for future provisioning.		
	Tin plated Copper bus bar with heat shrink colour coded sleeves to be used.		
	Protection for eliminating risk of direct contact with bus bar.		
	All bolts and nuts shall be of 8.8 grade or equivalent.		
	Creepage and clearance distances must be per IEC 61439.		
	All panels shall have safety covers in a manner that only operating components should be visible.		
	Hinged protective metallic door with knob/handle is required.		
	Braided Door earth required.		
	Lockable handle required for main door.		
	As-built drawing pocket required.		



	Cable hanging arrangement required.		
	Terminals of European brands for termination of incoming & outgoing cables where required.		
	Powder paint up to 120 microns required on all Panels & DBs.		
	Panel Accessories and associated components such as Energy Analysers, CTs, Indication Lamps, selector switches, control ancillary components etc should be preferably of MCB brand or European Brands.		
	Energy Analysers wherever used shall have communication feature and port for Modbus over IP / RS-485 and shall be integrated over EMS / DCIM.		
	Main Panels shall have provision for Display Module for Key Parameters.		
	Pre-shipment Inspection and Factory Inspection will be carried out and managed by the OEM / Bidder / Panel Builder.		
	Detailed Shop Drawings of each panel all schematic drawings, general arrangement drawings, disposition views, wiring and control diagrams.		
	Schematic Design of Monitoring Solution will be submitted along with control and logic diagrams.		
	Minimum One Year Warranty Required from date of successful commissioning on site.		
	OEM Authorization / MAF / MAL should be provided for the components such as breakers etc.		
	250A ATS with MOR		
	250A MDP with Surge Protection		
	DB ELV and NOC		
	AC DB		
	LSP DB		
	UPS Output and Bypass DB		
	Rack Power Distribution DB		
	Provisioning of Electrical parameters central monitoring through energy analyzers on DCIM software		
	Installation Testing and Commissioning of Switch gear		
2	<b>Power Cables</b>		
	Power cables used will be 99.99% copper.		
	Cables must have 100% conductivity.		
	Cables must have 100% compliance with BSS & IEC Standards.		
	Cables should be from recognized Pakistan manufacturers Pakistan Cables / Fast Cables/ Newage cables		
	Factory Test Reports against cables delivered to be provided		
	Separate Technical Data Sheet has to be provided for each specific cable		



	The qty given in BOQ is estimated any variation will be responsibility of the bidder to complete the scope of project.		
	All accessories for cable termination including lugs, shrouds, sleeves, ties, nylon tapes etc. will be responsibility of the contractor.		
3	<b>Earthing / Grounding System</b>		
	Grounding & Bonding System shall be built as per TIA/EIA 607-A.		
	Dedicated Earth for Equipment Rooms to attain <1 Ohm		
	Each will have inspection maintenance and inspection pit and covers		
	Grounding of less then 1 OHM through earth pits (DC Hall, Electric UPS Room, Communication Room, Generator ) Chemical Enhanced Earth using 25 mm dia 10'-0" long copper rod filled with soil conditioning material (low res/bentonite) including 4" dia, boring and back filled chemical		
	Grounding and Bonding Wire appropriate size as per load for all metallic components in DC (cable)		
	Supply and Installation of Earthing bus bar with enclosure and bar dimension 300mm X 50mm X 5mm		
4	<b>Cable Management</b>		
	Powder Coated 16 SWG Cable Trays for Power and Cooling.		
	Overhead Fiber Runner for Fiber from Comms / MM Rooms to Racks and above DC Racks		
5	<b>Enterprise Security and Surveillance system CCTV systems</b>		
	4 MP Wide Angle IR , Auto Iris 4MP IP Cameras Strategically deployed surveying all critical and equipment areas including relevant support systems areas including the external genset area, condenser area.		
	NVRs with 1 month HD recording at 25 FPS , H. 265 Codec		
	VMS Software		
	Drawings to be submitted		
	Ceiling mounted fixed type PoE Powered I.P Camera with day and night feature. Resolution 4MP with live and recording quality of minimum 25 fps, along with all mounting accessories		
	16 Port PoE 1-Gig Switch		
	Network Video Recorder (NVR). The NVR shall be equipped with LAN / WAN facility, Suitable to accommodate 16-channels or more video input, NVRs should have minimum 30 days storage. Complete with all connecting cords and accessories using CMS Software.		

	LCD Display 55" 1.8 mm Bezel with wall mount bracket/pedestal/mounts including HDMI cables and all accessories		
	Supply and Wiring of CAT-6, UTP Cables from Camera to POE Switch in 25mm dia PVC Conduit, including termination and tagging at both ends. Complete in all respects.		
6	<b>Access Control System</b>		
	Face Pad with following features and cloud based reporting and door lock mechanism a) CPU: Hexa Core Processor b) OS: Android 7.1 c) Screen Resolution: 1200x600 d) Capacitive Touch Screen e) Camera: Dual, 2 MP f) Face capacity: 5,000 g) Speed: <4 secs h) Bulk Registration supported i) Ethernet: 100/10 MBPS j) Wifi, USB, Relay controller & Buzzer enabled (with indication lights)		
	Supply, Installation, testing and commissioning of Access Control System (with features of Bio Metric & RFID) including all accessories. Complete with mounting brackets, wiring, adapters etc with single/double door magnetic locks		
	Make and Model should be specified.		
	<b>RFID + Biometric</b> for single/double door magnetic locks, centralized management.		
	Facial recognition tab as per specs mentioned in BOQ with cloud management portal for employees, vendors and visitors separate access mechanism.		
7	<b>Miscellaneous</b>		
	<b>Anti-Static Vinyl Tiles</b> Raw floor enhancement, final floor makeup and Fixing of Copper insulation and Fire-Rated Anti-Static Vinyl Tiles		
	<b>Illumination System</b> on entire facility with 500 Lux (Rooms), 200 Lux (Corridors), 150 Lux Service Areas		
	<b>Foaming / Sealing</b> of all openings that lead to external entry for Termite / Moisture / Insects protection.		
	Complete fire / flame retarded paint coat on walls, roof including preparation, primer and top coat in the interior of datacenter		
8	<b>Dismantling and Reinstallation works</b>		
	Dismantling of Existing light fixtures, Electrical Points, Network Nodes. Removal of debris from site and dumped outside as per the Customer requirement.		
	Removal of ceiling and cable trays and move to CPPA specified locations		

	Removal and Shifting of existing HVAC copper pipes from Data Center facility		
	Removal, shifting and installation of existing furniture and office setup to CPPA specified locations		
	Partition for temporary workplace setup at CPPA-G Specified location		
	Supply and Installation of Cat 6 UTP cabling, I/Os, Faceplates, BackBox, Light Plugs, Power cables for sitting arrangement of 20 people		
	Removal of Glass doors/partitions and reinstallation at CPPA specified location/ safe storage in stores		
9	<b>Electrical Sub-circuits</b>		
	2.5 Sqmm Cu/PVC for Lights swtiches and Light Plugs		
	Circuit wiring from DB to switch board including any wiring from switch board to switch board with 2x1.5 Sq.mm + ECC 1x1.5 Sqmm, 1-core PVC wires in 25mm dia PVC Conduit.		
	Emergency Wiring for Group Control light fixtures From DB to first light point with 2x1.5 Sq.mm + ECC 1x1.5 Sq.mm in 25mm dia PVC conduit.		
	Supply & Installation of following 10 Amps switches or 10/13/15/20 Amps socket outlets including PVC Box recessed		
	Six/Four Gang Switch Unit		
	13A, International Switch Socket unit (For Raw Power) including floor boxes where required		
	Surface mounted LED Panel, Color temp. 6500K to Achieve 500 Lux		
	Providing and fixing approved signs for EXIT lights along with battery operated SMD emergency lights with backup time as per DC standards (UL Listed)		