Surat Municipal Corporation

बहुजनहिताय बहुजनसुखाय

ADDENDUM & CORRIGENDUM-2

REQUEST FOR PROPOSAL

FOR

SELECTION OF IMPLEMENTATION AGENCY FOR INTEGRATED COMMAND AND CONTROL CENTER (ICCC) IN SURAT CITY

RFP No.: SSCDL-ICCC-RFP-01-2020

Last date for Price Bid Submission: 06.10.2020

Surat SMART CITY

Invited by

Surat Smart City Development Limited

1st Floor, South Zone Office, Surat Municipal Corporation, Opp. Satyanagar, Udhna, Surat-394210, Gujarat, India

Surat Smart City Development Limited

ADDENDUM AND CORRIGENDUM-2

RFP Notification No.: SSCDL-ICCC-RFP-01-2020

The Bidder are requested to take note of the following changes made in the RFP documents, which are to be taken in to account while submitting the RFP. They shall be presumed to have done so and submitted the RFP accordingly.

- This Addendum and Corrigendum shall be the part of the RFP documents.
- All items specified in this Addendum and Corrigendum supersede relevant items to that effect as provided in the original RFP documents. All other specifications, terms and conditions of the original RFP document shall remain unchanged.
- Bidder shall read and consider following points, which shall be a part of the RFP documents.
- All the changes mentioned in this document should be read across the RFP, Addendum & Corrigendum, wherever applicable.
- **The queries raised and given by bidders, but the clarifications are not made in this Addendum and Corrigendum shall be considered to remain unchanged as per the terms and conditions mentioned in the original RFP documents.**

Other Changes

#	Section	Page No.	Tender Reference	Existing Clause	Amended/New Clause
1.	5.1	21	Bidder's Eligibility Criteria		Please refer to Annexure I for revised Bidder's Eligibility Criteria
2.	5.2	24	OEM's Eligibility Criteria	A. Active Network Equipment (Network Switches) B. Server C. Storage E. Enterprise Security Solution for Servers	This clause stands deleted and must be read across the RFP
3.	5.2	25	OEM's Eligibility Criteria	D. ICCC OEM	Please refer to Annexure II for revised ICCC OEM's Eligibility Criteria
4.	6.6	28	Consortium Conditions	Point No. 2 In case of consortium, the responsibility of implementation of ICCC Solution and use cases will lie with the consortium partner whose project experience is considered for evaluation and mentioned in R&R (Roles & Responsibilities) defined in Consortium Agreement.	Point No. 2 In case of consortium, the responsibility of implementation and support of ICCC Solution (including implementation of use cases) or any other scope of work/activities will lie with the respective consortium partner whose project experience is considered for evaluation and mentioned in R&R (Roles & Responsibilities) defined in Consortium Agreement.
5.	6.22	38	Technical Evaluation Criteria		Please refer to Annexure III for revised Technical Evaluation Criteria
6.	6.23	42	Opening of Commercial Bid		Please Refer to Annexure IV for revised clause
7.	7.5	52	Breach in supply of Onsite Manpower	1. All persons deputed shall be on the payroll of the Bidder's organization. If required, the resource will be	1. All persons deputed shall be on the payroll of the Bidder's/ consortium partner's whose project experience is considered for evaluation and mentioned in R&R (Roles

#	Section	Page No.	Tender Reference	Existing Clause	Amended/New Clause
				interviewed/screed using any screening procedure by SMC/SSCDL and/or is representative prior to deputation at SMC/SSCDL. The bidder would also remove a person from its staff at SMC/SSCDL if instructed to do so by the SMC/SSCDL within one month and provide suitable replacement with minimum overlap of 15 days	& Responsibilities) defined in Consortium Agreement. If required, the resource will be interviewed/screed using any screening procedure by SMC/SSCDL and/or is representative prior to deputation at SMC/SSCDL. The bidder would also remove a person from its staff at SMC/SSCDL if instructed to do so by the SMC/SSCDL within one month and provide suitable replacement with minimum overlap of 15 days
8.	14.1	140	Objective	Point no 5: The licenses to be procured for ICCC Application should be perpetual and enterprise level with no limit in terms of number of uses cases, domains, IOT devices, integration interfaces etc.	Point no 5: The software licenses provided should be perpetual and enterprise level such that SSCDL/SMC (or any entity as determined by SSCDL/SMC) can use the software products irrespective of number of users, number of domains, number of field devices (Sensors, cameras, etc.), number of cores/sockets/CPUs, integration interfaces, etc. without any additional cost. New Point No 6: For the purpose of sizing, the concurrent users to be considered should be 250 for ICCC application and 2000 for mobile app.
9.	14.2	150	Functional and Technical Specification for CCC Software	82. GIS Display	Please refer to Annexure V for better clarity.
10.	15	160-232	Annexure III- Technical requirements for ICT Components		Please refer to Annexure VI for revised specifications for below components: 1. 15.1 Video Wall Screen 2. 15.3 Video Wall Management Software 3. 15.22 DC Core Switch 4. 15.28 DC TOR/ DC Aggregation Switch Type-1 5. 15.29 DC TOR/ DC Aggregation Switch Type-2

#	Section	Page No.	Tender Reference	Existing Clause	Amended/New Clause
					6. 15.32.DC Application & Delivery Controller with Global Server Load Balancing 7. 15.34 Servers for SMC Application Requirements 8. 15.35 Servers for ICCC Requirements 9. 15.38 Storage 10. 15.41 Enterprise Security & Antivirus Software License for Server
11.	16	233	Annexure IV- Scope & requirements for Data Center & other Components	SSCDL will provide the space of approximately 1400 sq.ft. The DC hosting space is designed to house 30 racks and the selected SI will be required to supply, install and commission 15 racks which will be used to host the server, storage and network equipments proposed as part of this project. This rack space will also host SSCDL/SMC's own IT infrastructure. Further existing racks pertaining to other operational systems like AFCS, ITMS, ITCS, etc. will be shifted to DC on successful commissioning of the DC.	SSCDL will provide the space of approximately 1400 sq.ft. The DC hosting space is designed to house 30 racks and the selected SI will be required to supply, install and commission 16 racks which will be used to host the server, storage and network equipments proposed as part of this project. This rack space will also host SSCDL/SMC's own IT infrastructure. Further existing racks pertaining to other operational systems like AFCS, ITMS, ITCS, etc. will be shifted to DC on successful commissioning of the DC.
12.	17	261	Annexure V- Common guidelines regarding compliance of systems/equipment	Point no 2: In case of addition/update in number of license for the Integrated Command and Control Center (CCC) software, the SI is required to meet of technical specifications contained in the RFP and for the upward revisions and/or additions of licenses are required. The software licenses provided should be perpetual and at enterprise level such that SSCDL/SMC (or any entity as	Point no 2: In case of addition/update in number of license for the Integrated Command and Control Center (CCC) software, the SI is required to meet of technical specifications contained in the RFP and for the upward revisions and/or additions of licenses are required. The software licenses provided should be perpetual and enterprise level such that SSCDL/SMC (or any entity as determined by SSCDL/SMC) can use the software products irrespective of number of users, number of domains, number of field devices (Sensors, cameras, etc.),

#	Section	Page No.	Tender Reference	Existing Clause	Amended/New Clause
				determined by SSCDL/SMC) can use the software products irrespective of number of users and number of field devices (Sensors, cameras, etc.) or number of cores of computer. Additions to users or filed devices or number cores will have to be done at no additional cost	number of cores/sockets/CPUs, integration interfaces, etc. without any additional cost. For the purpose of sizing, the concurrent users to be considered should be 250 for ICCC application and 2000 for mobile app
13.	19	285	Annexure VII- Master Service Agreement	**i) Performance Guarantee** The SI shall submit performance guarantee which is unconditional & irrevocable equal to 10% of the order value of the contract in the format prescribed in RFP issued by any of the Nationalized Banks Only. The performance guarantee shall be valid for the term agreement & shall be renewed & maintained by the SI for the term of the agreement & extension, if any. The performance guarantee shall be forfeited / liquidated by the SSCDL as a penalty in the event of failure to complete obligations or breach of any of the conditions by the SI.	**i) Performance Guarantee** The SI shall submit performance guarantee which is unconditional & irrevocable equal to 10% of the order value of the contract in the format prescribed in RFP issued by any Bank as per the Approved List of Banks mentioned in Annexure VI of the RFP. The performance guarantee shall be valid for the term agreement & shall be renewed & maintained by the SI for the term of the agreement & extension, if any. The performance guarantee shall be forfeited / liquidated by the SSCDL as a penalty in the event of failure to complete obligations or breach of any of the conditions by the SI.
14.			**Additional Requirement**		Bidder is required to submit the **Valid Solvency Certificate** amounting minimum 20% of the consideration of the Contract from a scheduled / nationalized bank.

ANNEXURE-I

5.1 Revised Bidder's Eligibility Criteria

Note: For evaluation following definition is considered

- The total Project value shall be considered as Capex Cost + Operation & Maintenance Cost
- OEM experience will not be considered for Pre-Qualification Criteria and Technical Evaluation as bidder's experience unless bidder is also an OEM.
- **Integrated Command & Control Centre (ICCC)/ Command Control Centre (CCC):** ICCC/CCC Project is defined as those project where Command Centre Application is implemented. ICCC Application at such installation should not only be a viewing platform but should be used for SOP creation and triggering for specific event/incident. Project only pertaining to NOC and/or Data Center Monitoring will not be considered.
- In case of Consortium only 2 partners are allowed including Prime Bidder. For more details on Consortium please refer to the section 6.6
- R&R refers to roles & responsibilities mentioned in Consortium Agreement

#	Eligibility Criteria	Proof Document Required	Applicable to Sole Bidder	Applicable to Consortium
1.	The Prime Bidder / Sole Bidder should be registered under the Companies Act 1956 and should be in operation in India for a period of at least 5 years as on publication of bid. In case of Consortium, the Consortium Partner should be registered under the Companies Act 1956 Or a partnership firm registered under LLP Act, 2008 or partnership firm registered under Indian Partnership Act 1932	Copy of certification of incorporation issued by competent authority/ Registration Certificate	Yes	Yes
2.	Bidder (consortium)/ Sole Bidder jointly should have a minimum average annual turnover of **Rs. 100 crore** from ICT based business for last three financial years i.e. FY 2019-20,FY 2018-19, 2017-18. In case of consortium, each partner should have minimum average turnover of Rs. 25 Cr. The copies of Audited Annual Accounts for last three years to be submitted along with the bid [FY 2019-20,FY 2018-19, 2017-18]. If 2019-20 Financial Statements of any bidder is unaudited then the	Copy of the Audited Profit and Loss statement and statutory auditor / CA certificate from a regarding turnover. The certificate should be originally signed or notarized.	Yes	Yes

#	Eligibility Criteria	Proof Document Required	Applicable to Sole Bidder	Applicable to Consortium
	Audited Financial Statements of 2016-17 along with an undertaking letter from the bidder that the 2019-20 Statements are not audited is to be submitted.			
3.	Bidder/ Consortium should have a positive net worth as on 31st March 2020 If 2019-20 Financial Statements of any bidder is unaudited then Bidder should have a positive net worth as on 31st March 2019. Moreover, an undertaking letter from the bidder that the 2019-20 Statements are not audited is to be submitted	Certificate from the statutory auditor / CA towards positive net worth of the company. The certificate should be originally signed or notarized	Yes	Yes (All Members of Consortium)
4.	Sole Bidder / Bidder (Any member in case of Consortium as per R&R defined in Consortium Agreement) should have an experience in implementation of Integrated Command & Control Centre (ICCC) / Command Control Center (CCC) in India in last 7 years from the date of publishing this RFP One project costing not less than the amount equal to INR 20 Cr. with ICCC application solution component worth minimum INR 2.5 Cr. OR Two projects costing not less than the amount equal to INR 12 Cr. each with ICCC application solution component worth minimum INR 1.5 Cr. OR Three projects costing not less than the amount equal to INR 10 Cr. each with ICCC application solution component worth minimum INR 1.25 Cr. ***Note:*** *ICCC Application cost component shall include:* *1. Licenses cost for ICCC Applications* *2. SITC cost* *3. Integration cost*	• Copy of completion certificate issued by client • In case of an ongoing project, the project must have achieved the respective value in terms of entire project cost and ICCC application rrespectively from financial perspective. The Certificate to this effect from the client on client's letter head to be provided. If Go-Live certificate is to be submitted, the same must clearly specify the information that help ascertain the compliance to the respective evaluation criteria in terms of domains integrated / achievement of value in terms of project cost and ICCC application Solution component respectively from financial perspective. • Copy of Work order / Contract • PQ_12: Format for Use Case Submission from OEM	Yes	Yes (Any member of Consortium)

#	Eligibility Criteria	Proof Document Required	Applicable to Sole Bidder	Applicable to Consortium
	4. *Operation & Maintenance cost*			
5.	Sole Bidder / Bidder (Any member in case of Consortium as per R&R defined in Consortium Agreement) should have completed at least one project pertaining to setting up of Datacenter / Data Center Infrastructure in last 7 years as on Bid Submission date of value not less than INR 3 Crore in India. **Note:** In-house projects for own or group companies shall not be considered for above criteria. Data Center Infrastructure cost should be excluding software license cost.	1. Copy of completion certificate issued by client 2. Copy of Work order / Contract	Yes	Yes (Any member of Consortium)
6.	Bidder should be registered for GST number in India.	GST Registration Certificate PAN Card	Yes	Yes (All Members of Consortium)
7.	Bidder should not be blacklisted or debarred by any Government / PSU in India at the time of submission of the bid.	Declaration letter by bidder as per format given in the RFP document	Yes	Yes (All Members of Consortium)

ANNEXURE-II

5.2 Revised OEM's Eligibility Criteria

#	Selection criteria for the OEM	Proof Document Required
A	**Active Network Equipment (Network Switches)**	
1.	OEM must be listed in Leader's Quadrant of the latest Gartner Magic Quadrant for Wired and Wireless LAN Access Infrastructure.	This clause stands deleted
2.	**Commitment to Support** The OEM should commit to support the product proposed in the scope of this RFP for at least five (5) years from the date of Go-Live. End of support date should not have been announced for the product proposed.	
B	**Server**	
1.	OEM must be listed in Leader's Quadrant of the latest Gartner Magic Quadrant for Modular Servers	This clause stands deleted
2.	**Commitment to Support** The OEM should commit to support the product proposed in the scope of this RFP for at least five (5) years from the date of Go-Live. End of support date should not have been announced for the product proposed.	
C	**Storage**	
1	OEM must be listed in Leader's Quadrant of the latest Gartner Magic Quadrant for General-Purpose Disk Arrays	This clause stands deleted
2	**Commitment to Support** The OEM should commit to support the product proposed in the scope of this RFP for at least five (5) years from the date of Go-Live. End of support date should not have been announced for the product proposed.	
D	**ICCC OEM**	
1	ICCC OEM Solution should be implemented for at least 2 distinct projects covering at least 3 domains (with minimum 1 use case per domain) from below mentioned list out of which minimum 1 deployment should be within India. 1. Adaptive/Intelligent Traffic Control System (ATCS Signals with or without ANPR, RLVD, Wrong side, Speed detection, etc.) 2. Intelligent Transit Management System 3. SCADA System for drinking Water Treatment Plant / Water Distribution Plant 4. SCADA System for Sewage Treatment Plant / Sewage Pumping Station 5. Solid Waste Management	1. Work order of projects for supply of ICCC Solution 2. Any client document that clearly specifies the domains implemented & integrated as part of solution. The Certificate to this effect from the client on client's letter head to be provided. In case of ongoing project, any client document/certificate should clearly list minimum 3

#	Selection criteria for the OEM	Proof Document Required
	6. Grievance Redressal System 7. CCTV/ Surveillance Network with minimum 50 cameras (Excluding Camera considered under Point 1) 8. Smart Street Lighting System to monitor and control on/off and timer controller, etc. 9. Revenue Collection Systems (Property Tax, Water Meter Billing, Other Utility Meter Reading, AFCS etc.) 10. Electricity/Gas SCADA for utility company or power/gas generation company 11. Network monitoring for large scale WiFi service / dedicated OFC network 12. Sensor based Smart Parking	domains from the list that are implemented as part of the solution. If Go-Live certificate is to be submitted, the same must clearly specify the information that help ascertain the compliance in terms of domains integrated. 3. Self-certificate on OEM's letterhead from authorised signatory clearly defining the use cases implemented under each domain as part of the project as per format prescribed in PQ_12.
E	**Enterprise Security Solution for Servers**	
1	OEM must be listed in Leader's Quadrant of the latest Gartner Magic Quadrant for Endpoint Protection Platforms	This clause stands deleted
2	**Commitment to Support** The OEM should commit to support the product proposed in the scope of this RFP for at least five (5) years from the date of Go-Live. End of support date should not have been announced for the product proposed.	

ANNEXURE -III

6.22 Revised Technical Evaluation Criteria

The bidder's technical solution proposed in the Technical Evaluation bid shall be evaluated as per the evaluation criteria in the following table:

Section	Evaluation Criteria	Marks
A	Bidders Financial Competence & Organizational Strength	15
B	Project Experience of Bidder	55
C	Proposed IT Products and Solution	20
D	Project Presentation/Demonstration	10
	Total	**100**

#	Technical Evaluation Criteria	Technical Evaluation parameter	Marks
A	**Bidders Financial Competence & Organizational Strength**		**15**
1	Bidder's Competence – Turnover	• Bidder (consortium)/ Sole Bidder jointly should have a minimum average annual turnover of **Rs. 100 crore** from ICT based business for last three financial years i.e. FY 2019-20,FY 2018-19, 2017-18. In case of consortium, each partner should have minimum average turnover 25 Cr. **Average Turnover (in crores) / Marks [Maximum: 8]** >= INR 350 Cr. — 8 >= INR 300 Cr and < INR 350 Cr. — 7 >= INR 250 Cr and < INR 300 Cr. — 6 >= INR 200 Cr and < INR 250 Cr. — 5 >= INR 150 Cr. and < INR 200 Cr. — 4 >= INR 100 Cr. and < INR 150 Cr. — 3 • Bidder to submit the Certificate from the statutory auditor / CA clearly specifying the annual turnover from ICT for the specified years. Original or Notarized copy of the certificate should be submitted • The copies of Audited Annual Accounts for last three years to be submitted along with the bid [FY 2019-20,FY 2018-19, 2017-18].If 2019-20 Financial Statements of any bidder is unaudited then the Audited Financial Statements of 2016-17 along with an undertaking letter from the bidder that the 2019-20 Statements are not audited is to be submitted	8
2	People in organization	• The prime bidder having at least 250 FTE (full time employees) on the payroll of organization working on ICT projects. **Number of FTE / Marks [Maximum: 3]** > 500 — 3 > 250 FTE to =<500 FTE — 2	3

<table>
<tr><th>#</th><th>Technical Evaluation Criteria</th><th>Technical Evaluation parameter</th><th>Marks</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>= 250 FTE</td><td>1</td></tr>
</table>

Note: Full time Employees defined as employees on the Payroll of organization. Moreover, the employees of the Group companies will not be considered. The employees count of bidding entity will only be considered for evaluation.

Bidder to submit the Certificate from the HR or Company Secretary clearly specifying the total no of employees within the organization. Original or Notarized copy of the certificate should be submitted
</td><td></td></tr>
<tr><td>3</td><td>Bidder’s Certification</td><td>Certification with the Sole Bidder or any member of consortium (valid as on date of issuance of the bid):
• ISO 9001:2008
• ISO 20000:2011 for IT Service Management
• ISO 27001:2013 for Information Security Management System
• CMMi Level 3
• CMMi Level 5

<table>
<tr><th>Certification</th><th>Marks [Maximum: 4]</th></tr>
<tr><td>• Any one ISO certificate</td><td>1</td></tr>
<tr><td>• Any two ISO certification or CMMi Level 3</td><td>2</td></tr>
<tr><td>• All ISO certification or
• CMMi Level 5 Certification or
• Any two ISO certification & CMMi Level 3 Certification</td><td>3</td></tr>
<tr><td>• Any two ISO certification & CMMi Level 5 Certification or All ISO Certification & CMMi Level 3 Certification</td><td>4</td></tr>
</table>
</td><td>4</td></tr>
<tr><td>B</td><td>Project Experience of Bidder</td><td></td><td>55</td></tr>
<tr><td>1</td><td>Bidder Experience – Executing Command Control Center Project</td><td>Experience of Sole Bidder / Bidder (Any member in case of Consortium as per R&R defined in Consortium Agreement) in implementation of Integrated Command & Control Centre (ICCC) /Command Control Center (CCC) in India in last 7 years from the date of publishing this RFP (maximum 4 projects, Maximum Marks: 30)

<table>
<tr><th>Number of Projects</th><th>Marks [Maximum: 30]</th></tr>
<tr><td>For satisfying PQ criteria</td><td>10</td></tr>
<tr><td colspan="2">Additional project over and above the projects submitted under PQ criteria</td></tr>
<tr><td>Every additional project costing not less than the mount equal to INR 20 Cr. with ICCC application worth minimum INR 2.5 Cr.</td><td>10</td></tr>
<tr><td>Every additional costing not less than the amount equal to INR 12 Cr. each with ICCC application worth minimum INR 1.5 Cr.</td><td>7.5</td></tr>
<tr><td>Every additional project costing not less than the amount equal to INR 10 Cr. each with ICCC application worth minimum INR 1.25 Cr.</td><td>5</td></tr>
</table>

Bidder is required to submit :
• Copy of completion certificate issued by client</td><td>30</td></tr>
</table>

<table>
<tr><th>#</th><th>Technical Evaluation Criteria</th><th>Technical Evaluation parameter</th><th>Marks</th></tr>
<tr><td></td><td></td><td>
• In case of an ongoing project, the project must have achieved the respective value in terms of entire project cost and ICCC application Solution component respectively from financial perspective. The Certificate to this effect from the client on client's letter head to be provided. If Go-Live certificate is to be submitted, the same must clearly specify the information that help ascertain the compliance to the respective evaluation criteria in terms of domains integrated / achievement of value in terms of project cost and ICCC application Solution component respectively from financial perspective.

• Copy of Work order / Contract
• PQ_12: Format for Use Case Submission from OEM
</td><td></td></tr>
<tr><td></td><td>Bidder Experience – Executing Command Control Center Application</td><td>
Experience of Sole Bidder / Bidder (Any member in case of Consortium as per R&R defined in Consortium Agreement) in implementation of ICCC Solution integrating domains/systems in the last seven (7) years (maximum 2 projects) in India.
1. Adaptive/Intelligent Traffic Control System (ATCS Signals with or without ANPR, RLVD, Wrong side, Speed detection, etc.)
2. Intelligent Transit Management System
3. SCADA System for drinking Water Treatment Plant / Water Distribution Plant
4. SCADA System for Sewage Treatment Plant / Sewage Pumping Station
5. Solid Waste Management
6. Grievance Redressal System
7. CCTV/ Surveillance Network with minimum 50 cameras (Excluding Camera considered under Point 1)
8. Smart Street Lighting System to monitor and control on/off and timer controller, etc.
9. Revenue Collection Systems (Property Tax, Water Meter Billing, Other Utility Meter Reading, AFCS etc.)
10. Electricity/Gas SCADA for utility company or power/gas generation company
11. Network monitoring for large scale WiFi service / dedicated OFC network
12. Sensor based Smart Parking

<table>
<tr><th>Particular</th><th>Marks [Maximum: 20]</th></tr>
<tr><td>One project integrating any 4 domains/systems mentioned above</td><td>10</td></tr>
<tr><td>One project integrating any 3 domains/systems mentioned above</td><td>7.5</td></tr>
<tr><td>One project integrating any 2 domains/systems mentioned above</td><td>5</td></tr>
<tr><td colspan="2">Maximum Marks: 20 | Maximum projects: 2</td></tr>
</table>

Bidder is required to submit :
1. Copy of Work order / Contract
2. Copy of completion certificate issued by client
3. In case of an ongoing project, the claimed domains/systems must have been integrated. The Certificate to this effect from the client on client's letter head to be provided. If Go-Live certificate is to be submitted, the same must clearly specify the information that help ascertain the compliance in terms of domains integrated
</td><td>20</td></tr>
</table>

<table>
<tr><th>#</th><th>Technical Evaluation Criteria</th><th>Technical Evaluation parameter</th><th>Marks</th></tr>
<tr><td></td><td></td><td>4. PQ_12: Format for Use Case Submission from OEM.</td><td></td></tr>
<tr><td>3</td><td>Bidder Experience – Executing Data Center Project</td><td>Relevant experience of Sole bidder / Bidder (Any member in case of Consortium as per R&R defined in Consortium Agreement) in creation of Datacenter/ Data Center Infrastructure in State Govt./Central Govt./ULB/ Public Sector Units(PSU) in India in past 7 years having minimum project value of Rs. 3 Crore.

Each Project: 2.5 marks | Maximum Projects: 2

Bidder is required to submit :
• Copy of Work Order/ Contract
• Copy of completion certificate issued by client

Note:
1. In-house projects for own or group companies shall not be considered for above criteria. Data Center Infrastructure cost should be excluding software license cost</td><td>5</td></tr>
<tr><td>C</td><td colspan="2">Proposed IT Products and Solution</td><td>20</td></tr>
<tr><td>1</td><td>Active Network Equipment (Network Switches)</td><td><table><tr><th>Particular</th><th>Marks</th></tr><tr><td>Proposed OEM listed in Leaders Quadrant of the latest Gartner Magic Quadrant for Wired and Wireless LAN Access Infrastructure</td><td>4</td></tr><tr><td>Proposed OEM listed in Challengers Quadrant of the latest Gartner Magic Quadrant for Wired and Wireless LAN Access Infrastructure</td><td>2</td></tr><tr><td>Proposed OEM listed in Visionaries Quadrant of the latest Gartner Magic Quadrant for Wired and Wireless LAN Access Infrastructure</td><td>1</td></tr><tr><td>Proposed OEM for Wired and Wireless LAN Access Infrastructure doesn't belong to above Gartner Magic Quadrant as per the latest published report</td><td>0</td></tr></table></td><td>4</td></tr>
<tr><td>2</td><td>Servers</td><td><table><tr><th>Particular</th><th>Marks</th></tr><tr><td>Proposed OEM listed in Leaders Quadrant of the latest Gartner Magic Quadrant for Modular Servers</td><td>6</td></tr><tr><td>Proposed OEM listed in Challengers Quadrant of the latest Gartner Magic Quadrant for Modular Servers</td><td>4</td></tr><tr><td>Proposed OEM listed in Visionaries Quadrant of the latest Gartner Magic Quadrant for Modular Servers</td><td>2</td></tr><tr><td>Proposed OEM for Modular Servers doesn't belong to Gartner Magic Quadrant as per the latest published report</td><td>0</td></tr></table></td><td>6</td></tr>
<tr><td>3</td><td>Storage</td><td><table><tr><th>Particular</th><th>Marks</th></tr><tr><td>Proposed OEM listed in Leaders Quadrant of the latest Gartner Magic Quadrant for Primary storage</td><td>6</td></tr><tr><td>Proposed OEM listed in Challengers Quadrant of the latest Gartner Magic Quadrant for Primary storage</td><td>4</td></tr><tr><td>Proposed OEM listed in Visionaries Quadrant of the latest Gartner Magic Quadrant for Primary storage</td><td>2</td></tr><tr><td>Proposed OEM for Primary storage doesn't belong to Gartner Magic Quadrant as per the latest published report</td><td>0</td></tr></table></td><td>6</td></tr>
</table>

<table>
<tr><th>#</th><th>Technical Evaluation Criteria</th><th>Technical Evaluation parameter</th><th>Marks</th></tr>
<tr><td>4</td><td>Enterprise Security Solution for Servers</td><td>
<table>
<tr><th>Particular</th><th>Marks</th></tr>
<tr><td>Proposed OEM listed in Leaders Quadrant of the latest Gartner Magic Quadrant for Endpoint Protection Platforms</td><td>4</td></tr>
<tr><td>Proposed OEM listed in Challengers Quadrant of the latest Gartner Magic Quadrant for Endpoint Protection Platforms</td><td>2</td></tr>
<tr><td>Proposed OEM listed in Visionaries Quadrant of the latest Gartner Magic Quadrant for Endpoint Protection Platforms</td><td>1</td></tr>
<tr><td>Proposed OEM for Endpoint Protection Platforms doesn’t belong to Gartner Magic Quadrant as per the latest published report</td><td>0</td></tr>
</table>
</td><td>4</td></tr>
<tr><td>D</td><td colspan="2">Presentation and Demonstration</td><td>10</td></tr>
<tr><td>1</td><td colspan="2">Presentation and Demonstration
Following parameters will be evaluated:
• Understanding of the project
• Approach & Methodology
• Ability to clearly explain the proposed Solution
• Uniqueness of proposed solution as per requirement of SSCDL/SMC
• Demonstration of proposed ICCC Software for Use cases provided by SSCDL/SMC</td><td>10</td></tr>
</table>

ANNEXURE -IV

6.24. Evaluation of Commercial Bids and Selection Method

SSCDL/SMC will open the Commercial Bids of those Bidders who have achieved **minimum score of 60% of total marks in technical evaluation**

The Technical Bid Score 'St' of the Bidder shall be derived as under
$S_t = (S_{tm}/S_H)$, where

S_t is the Total Technical Bid Score
S_{tm} = Total technical bid marks of the bid under consideration
S_H = Highest total technical bid marks amongst all evaluated bids

The Financial Proposal should contain the total Project cost of all services, comprising of all items as mentioned under Scope of Work. Formula to determine the scores for the Commercial Bids shall be as follows
$S_f = (F_L / F)$, where

S_f is the Financial Score
F_L is the value of lowest Commercial Bid
F is the price quoted in the bid under consideration
F_L and F would be computed as:
= [Total Charges specified as per Section-12.3: Total Project Cost]

The final evaluation of proposals shall be on the principle of Quality Cum Cost Based Selection (QCBS) based on the final weighted score. A weightage of **60% will be assigned to the Technical Bid Score** and a weightage of **40% will be assigned to the Financial Bid Score**.

The final weighted score will be: (0.60 x St) + (0.40 x Sf)

The assignment shall be awarded to the bidder scoring the highest final weighted score.

Arithmetical errors: If there is a discrepancy between the 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 the Bidder does not accept the correction of the errors, its bid will be rejected. If there is a discrepancy between words and figures, the amount in words will prevail

ANNEXURE -V

14.2 Revised Functional and Technical Specification for CCC Software

#	Functions	Minimum Specifications	Bidder Compliance
82.	**GIS/Map Display**	**Note:** It is expected that ICCC solution proposed should have either inbuilt or integrated capabilities to provide various features GIS/Map display. All necessary licenses required to achieve the said functionalities should be provisioned as part of the proposed solution. The proposed solution shall able to provide following functionalities: • Shall be capable to visualise details on geospatial or fixed composite computer-generated (JPEG, BMP, AutoCAD, etc.) map • Should allow user to view sensor and related name from the displayed map • Should allow all resources, objects, sensors and elements on the map to be geo-referenced such that they have a real world coordinate. • Should visually display a camera sensor with related camera orientation, camera range and camera field of view angle. • Should visually display an alarming sensor on map • Should visually differentiate sensor alarm severities on map through different color and icon identifiers • Should immediately view alarm details (including description, video, etc.) and investigate the alarm from the map • Should allow user to choose camera and other sensors from map to view live video and the data • Should allow user to choose camera and take live video image snapshot and save to file from any camera • Should allow user to choose camera from map to move PTZ cameras • Should allow user to choose camera to play, pause, stop, fast-forward, rewind, and play recorded video from preset time • Should allow user to choose camera and take recorded video image snapshot and save to file or print from any live or recorded video • Should allow user to jump from one map to the next with a single click of a mouse with map links	

#	Functions	Minimum Specifications	Bidder Compliance
		• Should allow map information "layers" to be displayed/hidden on items such as – - Sensor names - Sensors - Sensor range (e.g. camera – orientation, range, field of view angle) - Locations and zones - Perimeter ranges - Resource tracks • Allow user to zoom in/out on different regions of map graphic • The proposed solution should able to import and export the map details along with one or multiple layers in the form of KML files.	

ANNEXURE-VI

[This section overrides the original Annexure-III of the RFP document]

15. Annexure III –Technical requirements for ICT Components

1. The bidder can quote for each item meeting or exceeding the below mentioned minimum specification. Separate sheet needs to be attached if required.
2. The specification mentioned below are minimum specification. The bidder can quote the products equivalent or higher depending upon the sizing for the entire solution.
3. The technical spec sheet and the product brochure of the product offered should also be submitted along with technical bid.
4. In case the space provided is not sufficient then a separate paper as per the format below can be annexed to the bid. The same must be duly signed and stamped.

15.1 Video Wall Screen

The Video Wall for CCC shall be configured with 14 x 4 matrix formation of the following Professional Display Screens of DELTA/BARCO/CHRISTIE/PLANNER/NEC/ MITSUIBISHI make.

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Technology	DLP Display suitable for use in video wall		
2.	Screen Size	70" or higher (14x4 matrix)		
3.	Projection	Rear Projection		
4.	Access	Rear Access		
5.	Light Source	Laser		
6.	Lifetime of Light Source	Minimum 1,00,000 hrs. in eco mode		
7.	Resolution	1920 x 1080 Full high definition (1080p) 16:9 Widescreen or 16:10		
8.	Brightness	Minimum 1000 lumens (ANSI) or Minimum onscreen 230 Cd/m2		
9.	Brightness Uniformity	≥ 95 %		
10.	Response time	8ms		
11.	Power Supply	Dual /redundant power supply		
12.	Screen to Screen Gap	≤ 1 mm at all temperature/humidity conditions		
13.	Input	HDMI and other inputs as per Video Wall solution offered		
14.	Control	- On Screen Display (OSD) - IR remote control (Desirable)		
15.	Chip Type	Single chip DLP		
16.	Operations	24 x 7		
17.	Specify the proposed Make			
18.	Specify the proposed Model No			

15.2 Video Wall Controller (From same Video wall OEM)

#	Parameters	Minimum Requirements	Compliance (Yes/No)	Remarks, if any
Display Processor				
1.	Features	Supports output up to 1920 * 1200 resolution with 60fps		
		Supports H.264 decoding immediately		
		Supports up to 64 windows per display		
		Supports Multicasting Windows		
2.	Output	HDMI 1.3 , Channel -1 , Color depth 8/10 bit		
3.	Image processing	High tap filter for image scaling		
		Accurate synchronization for display wall		
		Support H.264/H.265/MPEG4 decoding		
		Up to 64 free window per display		
		Window title with vector texts		
		Bezel-compensation and overlap		
4.	Network	1000 MB network with redundancy		
		Should support POE (Desirable)		
		Supports protocol - DHCP, UDP, TCP/IP		
		Supports Static IP & Automatic IP		
5.	MTBF	more than 100,000 hours		
6.	Interface	HDMI /DVI-D, RS 232x1, USB x 2,RJ-45 x 2, BNC-F*2 Sync In/Out		
7.	Operating Range	Temperature: 0-40 degree Centigrade, Humidity - 10 to 90% non-condensing		
8.	LED indicator	LED indicators for Power, Status, Network.		
9.	Specify the proposed Make	Make should be same of Video wall display		
10.	Specify the proposed Model No			
HD Input Processor				
11.	Features	Captures signals up to 1920 * 1200 resolution with 60fps		
		Supports four windows at any position and in any size		
		Supports to loopback progressive VGA or HDMI input signal		
		Supports Multicasting Windows		
		Supports Power-on-Ethernet(Desirable)		
		Supports KVM		
12.	Input	DVI -I, Channel -1, Color depth 8 bit		
13.	Output	HDMI 1.3, Channel -1		
14.	Network	1000 MB network with redundancy		
		Should support POE (Desirable)		
		Supports protocol - DHCP, UDP, TCP/IP		

#	Parameters	Minimum Requirements	Compliance (Yes/No)	Remarks, if any
		Supports Static IP & Automatic IP		
15.	Image processing	High tap filter for image scaling		
		Accurate synchronization for display wall		
		Support 4 window simultaneously		
		Supports windows multicasting		
16.	LED indicator	LED indicators for Power, Status, Network.		
17.	Operating Range	Temperature: 0-40 degree Centigrade, Humidity - 10 to 90% non-condensing		
18.	MTBF	more than 100,000 hours		
19.	Interface	HDMI Type A /DVI-I Type A/DVID/DP, RS 232 (DB 9), USB x 2, RJ-45 x 2		
20.	Specify the proposed Make	Make should be same of Video wall display		
21.	Specify the proposed Model No			
Video Wall Solution				
22.	Features	• Each input source (workstation or direct) shall be connected with an individual encoder device using HDMI/DVI/Display cable. • Each video wall cube to be connected to the decoder individually without looping. Maximum 4 video wall cubes can be connected with one decoder. • The encoder and decoder shall be connected using separate network cable to the dedicated network created for video wall. • Capability to project one or more input sources (workstation or direct) on the entire or part of the video wall or on single cube. • Apart from decoders required to connect 56 video wall cubes, four number of decoders with minimum 1 output to be provided separately to project content from video wall solution to other output devices like LED TV, projector, etc.		
Server Specifications				
23.	CPU	Core 2 Duo 2.4G Hz or above		
24.	Memory	16 GB or above		
25.	Network	2*1 GbE LAN		
26.	OS	Windows Server 2008/2010 or latest		
27.	HDD	2*1TB SAS HDD with RAID – 1 configuration		
28.	Specify the proposed Make			
29.	Specify the proposed Model No			

15.3 Video Wall Management Software

#	Functionality	Compliance (Yes/No)	Remarks, if any
1.	Ability to pre-configure and store various display layouts and access them at any time with a simple mouse click.		
2.	Ability to display multiple sources anywhere on video wall in any size.		
3.	Ability to configure display layouts in real time without reboot.		
4.	Ability to create the display layout in background without interrupting the live display.		
5.	Ability to create and store different profiles defining one or more source and size for different scenarios.		
6.	Application must be GUI based with easy to use and configure interface.		
7.	Ability to control the Wall Monitoring System through remote PC connected by LAN		
8.	Ability to share the layouts over LAN/WAN Network with display in Meeting room or on Remote Workstations connected on LAN/WAN Network		
9.	Ability to display the screen content of the desktop / workstation connected with the Display Controller on the Display wall.		
10.	The wall management software should support open APIs/ Command list / RS232 command to enable system integrators to integrate it with their Software or other 3rd party devices to control the system.		
11.	Ability to centrally manage configuration parameters.		
12.	Ability to schedule backup and restore the configuration parameters.		
13.	Ability to Drag and Drop of sources.		
14.	Ability to create event log of user access with time stamp.		
15.	Role based user creation and management.		

15.22 DC Core Switch

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Switching Capacity	• Minimum 5 Tbps or Higher Switching Capacity		
2.	Slots	• Minimum 4 Interface Line Card or Module Slots (other than management module/slot)		

		• Switch should support Interface Line cards/Modules of 1G, 10G, 40G and 100 GE ports		
3.	Ports	• Min. 24 x 10G Base-T RJ-45 ports • Min. 48 x 10G SFP+ ports with SR/LR/ZR ports • Min. 24 x 40G QSFP+ SR4/LR4 ports • Minimum 1 Slot must be empty after configuring above ports • HA Port.		
4.	High Availability/ Architecture	• Switch should have In-Service Software Upgrade (ISSU) and patching without interrupting traffic/operations. • Switch needs to be provided with redundant supervisor/Fabric modules, power supplies, and fans trays from day 1. • The switch should provide nonblocking, lossless CLOS architecture with VOQs and large buffers with the flexibility and scalability for future growth. • The switch should support modular operating system which brings native high stability, independent process monitoring, and restart through the modular design and multiple processes and support enhanced serviceability functions • The switch should support virtualization of a physical switch into multiple logical devices, with each logical switch having its own processes, configuration, and administration.		
5.	Backplane	• Properly sized Switching fabric capacity (as per network configuration to meet performance requirements of wire speed switching for the connected devices)		
6.	Layer-2 Features	• Switch should Support IEEE 802.1Q VLAN encapsulation & must have feature to configure minimum 4090 VLAN IDs.		
		• The switch must support dynamic VLAN Registration or equivalent and		

		Dynamic Trunking protocol or equivalent		
		• Switch should Support Ether Channelling - IEEE 802.3ad or port aggregation technologies (support of LACP)		
		• Switch should Support IEEE 802.3x flow control for full-duplex mode ports.		
		• Switch should Support IEEE 802.1s/w Rapid Spanning Tree Protocol (RSTP) and Multiple Spanning Tree Protocol (MSTP)		
		• Support for Automatic Negotiation of Trunking Protocol, to help minimize the configuration & errors.		
		• IGMP snooping v1, v2 and v3		
		• Should support 64k or more ARP/MAC Address table		
		• Should support Loop protection and Loop detection.		
7.	Layer-3 Features	• Must have Static, OSPFv3, BGP4, RIPv1, RIPv2 and Policy based routing protocols with IPV4 & IPv6 supported.		
		• Should support Dual IP stack which Maintains separate stacks for IPv4 and IPv6		
		• Should support Virtual Router Redundancy Protocol (VRRP).		
		• Should support Equal-Cost Multipath (ECMP) which provides equal-cost links in a routing environment to increase link redundancy.		
		• Support 802.1D, 802.1S, 802.1w, Rate limiting.		
		• Inter-VLAN IP routing for full Layer 3 routing between 2 or more VLANs.		
		• Inbuilt Feature of Dynamic Host Configuration Protocol (DHCP) Sever which simplifies the management of large IP networks and supports client and server system.		
		• L2/L3 VXLAN and EVPN support for virtualized environments		
8.		• Standard 802.1p CoS and DSCP.		

	Network Security & QoS	• Must have Network traffic filtering and network control using MAC and IP Binding based ACLs		
		• Support for Asynchronous data flows upstream and downstream from the end station or on the uplink using ingress policing and egress shaping.		
		• Should support TACACS+ and RADIUS authentication		
		• Broadcast storm control to help eliminate network traffic storms		
		• IEEE 802.1x to allow dynamic, port-based security, providing user authentication (Optional).		
		• VLAN ACLs (VACLs) on all VLANs to prevent unauthorized data flows from being bridged within VLANs. Port-based ACLs (PACLs) for Layer 2 interfaces to allow application of security policies on individual switch ports		
		• Standard and Extended IP security router ACLs to define security policies on routed interfaces for control- and data-plane traffic.		
		• Unicast MAC filtering to prevent the forwarding of any type of packet with a matching MAC address.		
		• Unknown unicast and multicast port blocking to allow tight control by filtering packets that the switch has not already learned how to forward.		
		• Support for SSHv2 and SNMPv3 to provide network security by encrypting administrator traffic during Telnet and SNMP sessions.		
		• Private VLAN or equivalent to provide security and isolation between switch ports, helping ensure that users cannot snoop on other users' traffic.		
		• MAC address management to allow administrators for analysis of users added to or removed from the network.		
		• Multilevel security on console access to prevent unauthorized users from altering the switch configuration.		

		• IPv6 Host, Management, multicast and QoS.		
9.	Management	• Easy-to-use, Web-based management interface through either GUI based software utility or using standard web browser interface which Supports configuration, system dashboard, system maintenance, and monitoring and for easier software/firmware upgrade through network using TFTP/HTTP etc.		
		• Should have accessibility using Telnet, SSH, Console access.		
		• Intuitive web interface to upload/download Configurations to and from the switch.		
		• Provision of Dual flash images to provide independent primary and secondary operating system files for backup while upgrading.		
		• Availability of Port statistics through industry-standard RMON		
		• SNMPv1, SNMPv2 and SNMPv3.		
10.	Networking Passive Components	• All types Fiber/DAC/Cat-6/Cat-7 Patch Cords of various lengths required to Interconnect Switch-Switch, Switch-Server, Switch-LIU must be provided/supplied from day one.		
11.	Warranty:	• 5 Years Direct OEM Comprehensive Warranty with parts, Support.		
12.	Chassis:	• Device must have 4 x AC power input supply and all 4 must be included with switch from day 1 with necessary switch mounting kit.		
13.	Specify the proposed Make			
14.	Specify the proposed Model No			

15.28 DC TOR/ DC Aggregation Switch Type-1

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Switching Capacity	• Switching Capacity of minimum 1440 Gbps or Higher		
2.	Ports	• Should have minimum 48 X 10G BASE-T RJ-45 ports.		

		• Should have minimum 4 X 40G BASE-QSFP+ LR4/SR4 ports		
3.	Switch type	• Fully Managed & Advanced Layer 3 Core/Data Centre Switch & Non Chassis Based		
4.	Backplane	• Properly sized Switching fabric capacity (as per network configuration to meet performance requirements of wire speed switching for the connected devices)		
5.	Layer-2 Features	• Switch should Support IEEE 802.1Q VLAN encapsulation & must have feature to configure minimum 4090 VLAN IDs.		
		• The switch must support dynamic VLAN Registration or equivalent and Dynamic Trunking protocol or equivalent		
		• Switch should Support Ether Channelling - IEEE 802.3ad or port aggregation technologies (support of LACP)		
		• Switch should Support IEEE 802.3x flow control for full-duplex mode ports.		
		• Switch should Support IEEE 802.1s/w Rapid Spanning Tree Protocol (RSTP) and Multiple Spanning Tree Protocol (MSTP)		
		• Support for Automatic Negotiation of Trunking Protocol, to help minimize the configuration & errors.		
		• IGMP snooping v1, v2 and v3		
		• Should support 32k or more ARP/MAC Address table		
		• Should support Loop protection and Loop detection.		
6.	Layer-3 Features	• Must have Static, OSPFv3, BGP4, RIPv1, RIPv2 and Policy based routing protocols with IPV4 & IPv6 supported.		
		• Should support Dual IP stack which Maintains separate stacks for IPv4 and IPv6		
		• Should support Virtual Router Redundancy Protocol (VRRP).		
		• Should support Equal-Cost Multipath (ECMP) which provides equal-cost links in a routing environment to increase link redundancy.		
		• Support 802.1D, 802.1S, 802.1w, Rate limiting.		

		• Inter-VLAN IP routing for full Layer 3 routing between 2 or more VLANs.		
		• Inbuilt Feature of Dynamic Host Configuration Protocol (DHCP) Sever which simplifies the management of large IP networks and supports client and server system.		
		• L2/L3 VXLAN and EVPN support for virtualized environments		
7.	Network Security & QoS	• Standard 802.1p CoS and DSCP.		
		• Must have Network traffic filtering and network control using MAC and IP Binding based ACLs		
		• Support for Asynchronous data flows upstream and downstream from the end station or on the uplink using ingress policing and egress shaping.		
		• Should support TACACS+ and RADIUS authentication		
		• Broadcast storm control to help eliminate network traffic storms		
		• IEEE 802.1x to allow dynamic, port-based security, providing user authentication (Optional)		
		• VLAN ACLs (VACLs) on all VLANs to prevent unauthorized data flows from being bridged within VLANs. Port-based ACLs (PACLs) for Layer 2 interfaces to allow application of security policies on individual switch ports		
		• Standard and Extended IP security router ACLs to define security policies on routed interfaces for control- and data-plane traffic.		
		• Unicast MAC filtering to prevent the forwarding of any type of packet with a matching MAC address.		
		• Unknown unicast and multicast port blocking to allow tight control by filtering packets that the switch has not already learned how to forward.		
		• Support for SSHv2 and SNMPv3 to provide network security by encrypting administrator traffic during Telnet and SNMP sessions.		

		• Private VLAN or equivalent to provide security and isolation between switch ports, helping ensure that users cannot snoop on other users' traffic.		
		• MAC address management to allow administrators for analysis of users added to or removed from the network.		
		• Multilevel security on console access to prevent unauthorized users from altering the switch configuration.		
		• IPv6 Host, Management, multicast and QoS.		
8.	Management	• Easy-to-use, Web-based management interface through either GUI based software utility or using standard web browser interface which Supports configuration, system dashboard, system maintenance, and monitoring and for easier software/firmware upgrade through network using TFTP/HTTP etc.		
		• Should have accessibility using Telnet, SSH, Console access.		
		• Intuitive web interface to upload/download Configurations to and from the switch.		
		• Provision of Dual flash images to provide independent primary and secondary operating system files for backup while upgrading.		
		• Availability of Port statistics through industry-standard RMON		
		• SNMPv1, SNMPv2 and SNMPv3.		
9.	Networking Passive Components	• All types Fiber/DAC/Cat-6/Cat-7 Patch Cords of various lengths required to Interconnect Switch-Switch, Switch-Server, Switch-LIU must be provided/supplied from day one.		
10	Warranty:	• 5 Years back to back OEM Warranty with parts		
11	Chassis:	• Device must have 1+1 redundant AC power input supply and must be included with switch from day 1 with necessary mounting kit.		
12	Specify the proposed Make			
13	Specify the proposed Model No			

15.29 DC TOR/ DC Aggregation Switch Type-2

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Switching Capacity	• Switching Capacity of minimum 1440 Gbps or Higher		
2.	Ports	• Should have minimum 24 X 10G BASE-T RJ-45 ports and • Should have minimum 24 X 10G BASE-SFP+ SR/LR ports. • Should have minimum 4 X 40G BASE-QSFP+ LR4/SR4 ports		
3.	Switch type	• Fully Managed & Advanced Layer 3 Core/Data Centre Switch & Non Chassis Based		
4.	Backplane	• Properly sized Switching fabric capacity (as per network configuration to meet performance requirements of wire speed switching for the connected devices)		
5.	Layer-2 Features	• Switch should Support IEEE 802.1Q VLAN encapsulation & must have feature to configure minimum 4090 VLAN IDs.		
		• The switch must support dynamic VLAN Registration or equivalent and Dynamic Trunking protocol or equivalent		
		• Switch should Support Ether Channelling - IEEE 802.3ad or port aggregation technologies (support of LACP)		
		• Switch should Support IEEE 802.3x flow control for full-duplex mode ports.		
		• Switch should Support IEEE 802.1s/w Rapid Spanning Tree Protocol (RSTP) and Multiple Spanning Tree Protocol (MSTP)		
		• Support for Automatic Negotiation of Trunking Protocol, to help minimize the configuration & errors.		
		• IGMP snooping v1, v2 and v3		
		• Should support 32k or more ARP/MAC Address table		
		• Should support Loop protection and Loop detection.		
6.	Layer-3 Features	• Must have Static, OSPFv3, BGP4, RIPv1, RIPv2 and Policy based routing protocols with IPV4 & IPv6 supported.		
		• Should support Dual IP stack which Maintains separate stacks for IPv4 and IPv6		

		• Should support Virtual Router Redundancy Protocol (VRRP).		
		• Should support Equal-Cost Multipath (ECMP) which provides equal-cost links in a routing environment to increase link redundancy.		
		• Support 802.1D, 802.1S, 802.1w, Rate limiting.		
		• Inter-VLAN IP routing for full Layer 3 routing between 2 or more VLANs.		
		• Inbuilt Feature of Dynamic Host Configuration Protocol (DHCP) Sever which simplifies the management of large IP networks and supports client and server system.		
		• L2/L3 VXLAN and EVPN support for virtualized environments		
7.	Network Security & QoS	• Standard 802.1p CoS and DSCP.		
		• Must have Network traffic filtering and network control using MAC and IP Binding based ACLs		
		• Support for Asynchronous data flows upstream and downstream from the end station or on the uplink using ingress policing and egress shaping.		
		• Should support TACACS+ and RADIUS authentication		
		• Broadcast storm control to help eliminate network traffic storms		
		• IEEE 802.1x to allow dynamic, port-based security, providing user authentication (Optional).		
		• VLAN ACLs (VACLs) on all VLANs to prevent unauthorized data flows from being bridged within VLANs. Port-based ACLs (PACLs) for Layer 2 interfaces to allow application of security policies on individual switch ports		
		• Standard and Extended IP security router ACLs to define security policies on routed interfaces for control- and data-plane traffic.		
		• Unicast MAC filtering to prevent the forwarding of any type of packet with a matching MAC address.		
		• Unknown unicast and multicast port blocking to allow tight control by filtering packets that		

		the switch has not already learned how to forward.		
		• Support for SSHv2 and SNMPv3 to provide network security by encrypting administrator traffic during Telnet and SNMP sessions.		
		• Private VLAN or equivalent to provide security and isolation between switch ports, helping ensure that users cannot snoop on other users' traffic.		
		• MAC address management to allow administrators for analysis of users added to or removed from the network.		
		• Multilevel security on console access to prevent unauthorized users from altering the switch configuration.		
		• IPv6 Host, Management, multicast and QoS.		
8.	Management	• Easy-to-use, Web-based management interface through either GUI based software utility or using standard web browser interface which Supports configuration, system dashboard, system maintenance, and monitoring and for easier software/firmware upgrade through network using TFTP/HTTP etc.		
		• Should have accessibility using Telnet, SSH, Console access.		
		• Intuitive web interface to upload/download Configurations to and from the switch.		
		• Provision of Dual flash images to provide independent primary and secondary operating system files for backup while upgrading.		
		• Availability of Port statistics through industry-standard RMON		
		• SNMPv1, SNMPv2 and SNMPv3.		
9.	Networking Passive Components	• All types Fiber/DAC/Cat-6/Cat-7 Patch Cords of various lengths required to Interconnect Switch-Switch, Switch-Server, Switch-LIU must be provided/supplied from day one.		
10	Warranty:	• 5 Years back to back OEM Warranty with parts		
11.	Chassis:	• Device must have 1+1 redundant AC power input supply and must be included with switch from day 1 with necessary mounting kit.		
12	Specify the proposed Make			
13	Specify the proposed Model No			

15.32 DC Application & Delivery Controller with Global Server Load Balancing

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1	**OEM should have support Centre in India.**		
	Port		
2	Should have minimum 4 X 1G Base-T ports		
3	Should have minimum 2 X 1G Base-X SFP ports (SFP Transceivers/Modules must be provided/supplied with product) from day one.		
	Appliance Throughput		
4	Minimum 1 Gbps or higher L4/L7 throughput		
5	Minimum 1,00,000 Layer 4 Connections per second		
6	Maximum Layer 4 Concurrent Connection 5M (Million)		
7	Minimum 1000 RSA TPS, 2k Keys as SSL Performance		
8	Minimum 4 Gb Memory		
	Global Server Load Balancing (GSLB)		
9	Should have Global data center DNS-based failover of web applications		
10	Should support WAN Link Load balancing between two locations (DC,DR)		
11	Should be able to Deliver local and global load balancing between multi-site SSL VPN		
12	DNS Access Control Lists		
	Layer 4 Application Load Balancing		
13	Should have Round robin, weighted round robin, least connections, shortest response		
14	Should have feature of L4 dynamic load balancing based on server parameters (CPU, Memory and disk)		
	Layer 7 Application Load Balancing		
15	Should be HTTP, HTTPS, HTTP 2.0 , FTP, SIP, RDP, RADIUS supported		
16	Should have feature of L7 content switching for HTTP Host, HTTP Request URL, HTTP Referrer, Source IP Address		
17	Should have feature of URL Redirect, HTTP request/response rewrite/modification		
18	Should have feature of Layer 7 DNS load balancing, security, and caching		
	Networking		
19	IPv6 Support, IPv6 routing		
20	**License for Device**		
	• The proposed solution must be licensed per unit for **5 years** & there should not be any license limit on number of sessions, rules, no of nodes/desktops, no. of IPs, domains, etc. It must include minimum **5 years** subscription for above stated specifications. • Hardware must be latest released product from OEM and it must not be under the list end of sale, end of support from OEM till **5 years** from date of commissioning.		
	• All types Fiber/DAC/Cat-6/Cat-7 Patch Cords of various lengths required to Interconnect Switch-Switch, Switch-Server, Switch-LIU must be provided/supplied from day one.		
21	5 Years OEM comprehensive Warranty with support		
22	Specify the proposed Make		

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
23	Specify the proposed Model No		

15.34 Servers for SMC Application Requirements

Note: Hyperconverged Solution will not be considered.

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Make	This is deleted		
2.	Form factor	Rack		
3.	Processor	2 No. of Intel® Xeon® Gold 6238 2.1G,22C/44T, 10.4GT/s, 30.25M Cache,Turbo,HT (140W) DDR4-2933		
4.	RAM	• DIMM Slots must be supporting 2400 MHz/2666MHz memory frequency • Memory DIMM Slots must be supporting 8GB / 16GB / 32GB /64GB/128GB memory modules. • Minimum 384 GB Memory per physical server		
5.	Chipset	Compatible latest series of chipset (specify chipset)		
6.	Internal Storage	Minimum 2 x 600 GB SAS (10k rpm) hot swap		
		Specify the No. of HDD Slots Supported		
7.	Storage Controllers	SAS RAID Controller supporting RAID 0,1 and 5 with minimum 2 GB Cache memory with battery backup		
8.	Network Interface	2 X 10G-Base T RJ45 LAN port for providing Ethernet connectivity		
9.	Storage Connectivity Interface	2 X Single-port 16Gbps FC HBA/FCOE for providing connectivity to SAN		
10.	Power Supply	Minimum 750W Hot Swappable High Efficiency Redundant Power Supplies (1+1) capable to provide necessary power for fully loaded server with C14 to C13 PDU Power Cables		
11.	Mounting Kit	Sliding Rack mounting kit rack server		
12.	Virtualization	Shall support Industry standard virtualization hypervisor like Hyper-V, VMWARE, Oracle VM etc. OEM of the blade chassis / rack and servers offered.		
13.	Warranty	24 x 7 Five (5) years on-site back to back comprehensive warranty		
14.	Quantity	9 No.		
15.	Specify the proposed Make			

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
16.	Specify the proposed Model No			

15.35 Servers for ICCC Requirements

Note: Hyperconverged Solution will not be considered.

(As Building block, to establishing computing solution for sub-systems/solutions)

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Make	This is deleted		
2.	Form factor	Blade / Rack		
3.	Processor	Latest series/Generation of 64 bit Gold or Platinum x86 processor(s) with 8 or higher Cores Processor speed should be minimum 2.4 GHz Minimum 2 processors each physical server		
		Specify Processor Model		
		Specify Processor Speed		
		Specify No. of Cores		
		Specify Cache		
		Specify No. of Processors Proposed		
4.	RAM	• DIMM Slots must be supporting 2400 MHz/2666MHz memory frequency • Memory DIMM Slots must be supporting 8GB / 16GB / 32GB /64GB/128GB memory modules. • Minimum 64 GB Memory per physical server		
		Specify Maximum RAM supported		
		Specify Total RAM proposed		
5.	Chipset	Compatible latest series of chipset (specify chipset)		
6.	Internal Storage	Minimum 2 x 600 GB SAS (10k rpm) hot swap		
		Specify the No. of HDD Slots Supported		
		Specify the HDD Capacity Offered		
		Specify the HDD Composition proposed with capacity of each type of HDD		
7.	Storage Controllers	SAS RAID Controller supporting RAID 0,1 and 5 with minimum 2 GB Cache memory with battery backup		
8.	Network interface	2 X 10G-Base T RJ45 LAN port for providing Ethernet connectivity		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
9.	Storage Connectivity Interface	2 X Single-port 16Gbps FC HBA/FCOE for providing connectivity to SAN		
10.	Power Supply (for Rack Server)	Minimum 750W Hot Swappable High Efficiency Redundant Power Supplies (1+1) capable to provide necessary power for fully loaded server with C14 to C13 PDU Power Cables		
11.	Mounting Kit	Sliding Rack mounting kit in case of rack server		
12.	Virtualization	Shall support Industry standard virtualization hypervisor like Hyper-V, VMWARE, Oracle VM etc. OEM of the blade chassis / rack and servers offered.		
13.	Warranty	24 x 7 Five (5) years on-site back to back comprehensive warranty		
14.	Quantity	Specify the quantity of the proposed server as per the solution architecture		
15.	Specify the proposed Make			
16.	Specify the proposed Model No			

15.38 Storage

Note: Hyperconverged Solution will not be considered.

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Make	This is deleted		
2.	Controllers	• At least 2 hot pluggable Controllers in active/active mode (for all required protocols) with automatic failover to each other in case of one controller failure. • The controllers / Storage nodes should be upgradable seamlessly, without any disruptions / downtime to production workflow for performance, capacity enhancement and software / firmware upgrades. • Minimum four Xeon 8 Core CPU across storage controllers • Controller must support Multipath I/O Architecture.		
3.	Storage Operating System	• Storage offered must be with the latest operating system		
4.	Cache	• Minimum 512 GB of useable cache across controllers, out of which minimum 384 GB Cache must be controller cache and rest can be flash based cache.		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		• Cache shall be used only for data and control operations and should not handle any overhead of operating system		
5.	Host Interface Port	Minimum 8 nos. of 16 Gbps Fibre Channel Ports per Controller shall be available. Ports must be active and populated with SFP+ from day one.		
6.	Back and front port	The storage should support 8/16 Gbps on FC to connect SAN Switch, 10Gbps on iSCSI (SFP+/Base-T) to Connect on LAN switch within same controller pair.		
7.	Scalability	System should support a minimum of 500 drives or more within the same set of controllers.		
8.	Disk Drive Support	System should have support for • SSD/Flash drives • SAS drives • Near-line SAS drives		
9.	RAID support	Should support various RAID Levels (RAID 0 / 1 / 5 / 6 / 10 or any combination of RAID level on single Storage system)		
10.	Solution/ Type	Bidder is required to offer corresponding ports both in server as well as storage controller based on the solution proposed (FC/iSCSI).		
11.	Storage	The proposed storage should be supplied with 1000 TB usable capacity (with no compression and de-duplication) with at least 200 TB usable capacity using SSD drive, 400 TB usable capacity using SAS drives and 400 TB usable capacity using NL-SAS drives. Bidder is required to use RAID 5 / RAID 6 / RAID 10 as per best practises and to maximise the performance of entire software solution proposed. Each LUN created should not have more than 10 drives. 1 Global Hot Spare per 20 drives with equivalent or higher capacity should be considered. • Capacity of SSD drive proposed should not be more than 4 TB. • Capacity of SAS drive proposed should not be more than 2 TB. • Capacity of NL-SAS drive proposed should not be more than 10 TB		
12.	Global Hot Spare	• System should have the capability to designate global hot spares that can be automatically be used to replace a failed drive anywhere in the system. • Storage system should be configured and offered with required Global Hot-spares for the different type and no. of		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		disks configured, as per the system architecture best practices.		
13.	Minimum LUNs	• Capacity to create minimum 2000 numbers of LUNs		
14.	Thin Provisioning	• Offered Storage System should have Thin Provisioning and Thin Reclamation.		
15.	Hardware Platform	• Rack mounted form-factor • Modular design to support controllers and disk drives expansion		
16.	On-line Expansion/RAID Group creation/ Expansion	• System should have online expansion and shrinking of RAID Group or addition and deletion of new RAID Group. Must be able to add and delete additional disks on the fly to expand or reduce the RAID group capacity or create new RAID Group.		
17.	Redundancy and High Availability	• The Storage System should be able to protect the data against single point of failure with respect to hard disks, Cache memory, Controller card, connectivity interfaces, fans and power supplies		
18.	Management software	• All the necessary software (GUI Based) to configure and manage the storage space, RAID configuration, logical drives allocation, snapshots, Deduplication, Compression, Thin Provisioning, Virtualization integration, etc. are to be provided for the entire system proposed from day-1. • Licenses for the storage management software should include disc capacity/count of the complete solution and any additional disks to be plugged in in the future, upto max capacity of the existing controller/units. • A single command console for entire storage system. • Should also include storage performance monitoring and management software. This should provide detail of performance like IOPs utilization, response time and also provide capacity detail like amount of capacity allocated, capacity used and capacity free. • Should provide the functionality of proactive monitoring of Disk drive and Storage system for all possible disk failures		

#	Parameter	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
		• Should be able to take "snapshots" of the stored data to another logical drive for backup purposes • There should be a dedicated Ethernet port for management and it should not use the iSCSI host ports for management.		
19.	Data Protection	The storage array must have complete cache protection mechanism either by de-staging data to disk or providing complete cache data protection with battery backup for up to 4 hours		
20.	Server Operating System Support	Must be completely supported by the server operating system offered by the bidder for all the features and technology		
21.	Virtualization Support	Storage System must be completely supported by the virtualization technology offered by the bidder for all the features and technology		
22.	Accessories	All the necessary tools & tackles licenses, cables/ connectors for Ethernet/ Fibre/USB/ Power etc. required for making the system operational shall be provided by the bidder.		
23.	SAN Switch	• Standard 24 Port 16Gbps SAN Switches x 2 Nos. • Each SAN switch with all 24 Activated ports from day one or if more active ports require as per proposed application architecture, bidder has to provide the same. • Necessary SFP modules, patch cables and other required accessories has to be provided. Bidder will have to ensure that all the hardware; i.e. servers, storage, backup or any other devices connecting to SAN switch shall be in redundant mode for controllers, ports as well as cables.		
24.	Warranty	• 24 x 7 five (5) years on-site back to back comprehensive warranty from the date of Golive • Minimum 7 years OEM's product support guarantee (Vendor has to give the same on OEM letterhead)	•	
25.	Specify the proposed Make			
26.	Specify the proposed Model No			

15.41 Enterprise Security & Antivirus Software License for Server

#	Minimum Specifications	Compliance (Yes/No)	Remarks, if any
1.	Enterprise Server Security Software shall provide server security, network security and application security covering Antivirus, Antimalware, IDS/IPS, Web Application Protection, etc. to ensure complete security		
2.	Specify the proposed Make		
3.	Specify the proposed Model No		