PROCEEDINGS OF THE PRE-BID CONFERENCE HELD ON 26TH DEC 2019 AT FMCD CONFERENCE HALL, CSIR-NAL, TOWARDS SUPPLY, INSTALLATION AND CONFIGURATION OF SECURED DATA CENTER

The Pre-bid Conference was held and the following T&PC members attended the meeting: -

Sl. No.	Name & Designation		Role
1	Dr. C.M. Ananda	Chief Scientist/Head, ALD	Chairman
2	Mr. Vineet Kumar	Chief Scientists, C-CADD	Member
3	Dr. Soumendhu Jana	Sr. Pr. Scientist, PR	Member
4	Smt. J. Jayanthi	Chief Scientist/Head ASISD	Member
5	Mr. Munim Akhtar Choudhary,	Sr.Technical Officer-1, ASD	Member- Convenor -TSC
6	AO or his representative		Member
7	FAO or his representative		Member
8	CoSP/SPO or his representative		Member - Convener (T&PC)

The list of Prospective bidders who attended the Pre-bid Conference is as per **Annexure-I.**

At the outset, the Chairman welcomed all the Members and the representatives of the Bidders and briefed in general the scope of the Project and thereafter requested **SPO** to brief the Bidders on the salient features of the commercial terms. The Indenting Officer to read out the clarification sought by the bidders and the replied thereto as detailed in **Annexure-II (Part A: Technical Clarification and Part B: Commercial Clarification, if any).**

The representatives present were satisfied with the replies given and it was informed that the corrections / additions / clarifications given, as discussed during the Pre-Bid Conference would be hosted on the website of CSIR-NAL and all prospective bidders are required to take cognizance of the proceedings of the Pre-Bid Conference before formulating and submitting their bids as stipulated in bidding Documents.

The meeting ended with a vote of thanks to the Chair.

Encl: as above.

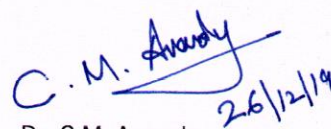CoSP/SPO-Member
Convenor -T&PC

FAO-Member

Admin-Member

Vineet Kumar
Member 26/Dec/2019

Dr. Soumendhu Jana
Member

Munim Akhtar Choudhary
Member

J. Jayanthi
Member

Dr. C.M. Ananda
Chairman

CSIR-NATIONAL AEROSPACE LABORATORIES
BENGALURU - 560 017

TENDER NO.: NAL/PUR/ASD/361/19-Z   ANNEXURE - I
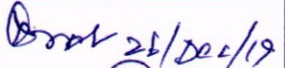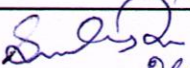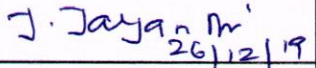
DATE & TIME : 26-12-2019 @ 10:30 AM

VENUE: System Seminar Hall, System Building, Ground Floor, CSIR-NAL, HALAirport Road, Kodihalli, Bengaluru-560017

Pre-Bid Conference for Supply, Installation and Configuration of Secured Data Center

ATTENDANCE SHEET - T&PC MEMBERS

Sr. No.	Name		Signature
1	Dr. C.M.Ananda, Chief Scientist/Head, ALD	Chairman	C.M
2	Mr. Vineet Kumar, Chief Scientists, C-CADD	Member	26/Dec/19
3	Dr. Soumendhu Jana, Sr. Pr. Scientist, PR	Member	26/12/19
4	Smt. J. Jayanthi, Chief Scientist/Head ASISD	Member	J. Jayanthi 26/12/19
5	Mr. Munim Akhtar Choudhary, Sr.Technical Officer-1, ASD	Member-Convenor -TSC	26/12/19
6	FAO or his representative	Member	
7	AO or his representative	Member	
8	CoSP/SPO or his representative	Member-Convenor T&PC	26-12-19

TENDER NO.: NAL/PUR/ASD/361/19-Z

ANNEXURE - I

DATE & TIME : 26-12-2019 @ 10:30 AM

VENUE: System Seminar Hall, System Building, Ground Floor, CSIR-NAL, HALAirport Road, Kodihalli, Bengaluru-560017

Pre-Bid Conference for Supply, Installation and Configuration of Secured Data Center

ATTENDANCE SHEET - PROSPECTIVE BIDDERS

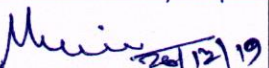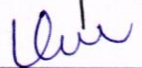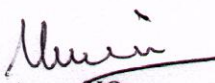| Sr. No.	Name of the Firm	Name & Designation of Representative	E-tender Registration (Yes/No)	Email ID	Signature
1	Citinfotech Pvt ltd	Manjunath M Presales Technical	Yes	manjunath@citinfotech.com	
2	"	Shibu THOMAS. Director	Yes.	shibu@citinfotech.com	
3	"	Avinash Presales Technical	Yes	avinash.g@citinfotech.com	
4	Frontier	Jomon Joseph SBU chemp	Yes	jomon@frontier	
5	FRONTIER	SATEESH KUMAR K MGR ISC	YES	Sateeshkumar@frontier.in	
6	FRONTIER	PRAKASH V NAIR SR. ACCOUNT MANAGER	YES	prakash@frontier.in	
7	STI Infotech	BHASKAR BABU P Head Technology Services	YES	bhaskar@systemtech.biz	
8	STI Infotech	Santosh Reddy Project lead	Yes	santoshreddy@systemtech.biz	
9	STI Infotech	Mohan Singh. R Pre-Sales-consultant	Yes	mohan@systemtech.biz	
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					

CSIR-NATIONAL AEROSPACE LABORATORIES
BENGALURU

TECHNICAL QUERIES & CLARIFICATION

Tender No.   : **ASD/361/19-Z**

Item Description   : Supply installation and configuration of secured data centre

	Query / Clarification Sought	Clarification/Amendment
1.	Whether any switches are part of this tender.	No. It is under the scope of CSIR-NAL
2.	How storage redundancy is planned.	Site-to-Site redundancy is planned.
3.	Firewall location, backup and specifications were not clear.	Firewall will not be part of this tender.
4.	AD authentication challenges were discussed.	Active directory authentication will be done locally.
5.	Windows licensing requirements were discussed.	Changed from Windows standard to Windows Data Centre.
6.	Storage type was suggested to be changed from NAS to SAN	NAL has accepted the suggestion and added SAN in revised RFQ.
7.	10G switches and number of ports needs to be planned with redundancy	Since storage is being changed from NAS to SAN, redundancy will be inbuilt in SAN.
8.	Concerns were raised about server encryption and time taken for client disk encryption	Due to concern, after through study it will be considered later.
9.	Concerns were raised about bandwidth consumption when DLP is enabled	Due to concern, after through study it will be considered later.
10.	Terms and conditions of Resident engineer were discussed	As per the Table 4.2.6 in RFQ. SLA will be decided after implementation.
12.	SLA clauses for the vendors needs to be added	SLA will be decided after implementation.
13.	Bid format and Payment mechanism to be reviewed	Modified in the RFQ.
14.	ADC redundancy was suggested for both the sites	Suggestion accepted and amended in revised RFQ.
15	H/w firewall and s/w firewall location concept not clear	Firewall will not be part of this tender.
16.	LDAP integration with NIC involvement needs to be clarified in scope of work	Active directory authentication will be done locally.
17.	Clarification for scope of work regarding Encryption key management	Encryption will not be part of this tender.
18.	Payment milestones and acceptance criteria	Amended in revised RFQ.
19.	Breakup of h/w cost, s/w cost, implementation cost	Bid format made accordingly.

Signature of IO

Signature PL

Table 4.2.1 List of Items

Sl.No	Item Description	Unit	Quantity
1.	Server for virtualization as per the specification in Table 4.2.2	Nos	6
2.	Unified storage system as per the specification in Table 4.2.3	Nos	2
3.	Windows Server 2019 OLP Datacentre edition for 32 cores (2x16 core processor) as per the specifications in Table 4.2.4.	Nos	4
4.	Windows server 2019 User-based CAL licenses.	Nos	1000
5.	System Centre Virtual Machine Manager (SCVMM) 2019 License for management of windows data centre.	Nos	1
6.	Redhat Virtualization (2-sockets), Standard L-1 Redhat support for 2 years.	Nos	3
7.	Redhat Enterprise Linux (Physical or Virtual Node) with L-1 Redhat support for 2 years.	Nos	2
8.	Redhat Ansible Tower with requisite perpetual license that manages automatic backup and Site to Site failover management for 4 hosts in 2 sites.	Nos	1
9.	Asset Management Software as per the specification in Table 4.2.5	Nos	1
10.	WAF license for existing Cyberoam UTM (Model No. CR-2500iNG) for a period of 2 years. It should support at least 20 web applications.	Nos	1
11.	Installation, Configuration and commissioning of Servers, Storage, Windows Server 2019 Data Centre and Centralized domain as per the specifications in Table 4.2.6.	Nos	1
12.	Installation, Configuration of Client Systems as per the specification in Table 4.2.7	Nos	1000

Table-4.2.2

Sl.No.	Specification of Server for virtualization:	Compliance
1.	Physical – 19-inch rack mountable server of 2U. Servers shall be offered with required rack mount hardware kit along with cable management arms.	
2.	Processor – Two Intel® Xeon silver Series Processor or Better processor shall be quoted, if better processor model is quoted, vendor shall ensure that frequency and core requirements are either equal or better.	
3.	Processor Clock: Min. 2.1 GHz frequency or better processor shall be quoted	
4.	Processor Cores: 16 Cores or more	
5.	Processor L3 cache: 11 MB or more	

J. Jayanthi
08/09/2020

6.	Memory – 64 GB X4 (256GB) DDR4-2400 or better ECC Registered memory spread across all memory channels or better memory configuration.	
7.	Internal Storage – 3 No's of SSD 250 GB SATA 6Gbps Hot-plug Hard Drive with RAID 5/6 Controller support or better.	
8.	Failed HDD shall not be returned back during warranty replacement. There shall not be any limits on number of I/O operations during warranty period.	
9.	2x10 Gigabit SFP+ port loaded with 2 Nos of 10G long range single mode module.	
10.	2 Nos of 1 port 16G HBA card loaded with 16G FC Modules.	
11.	Drive Controller – Integrated RAID Controller, 2GB Cache controller with RAID 0/1/5/6 Support or better.	
12.	Optical Drive – Internal DVD RW drive to be offered	
13.	Network Controller –with at least 4 Nos of 1G copper Ethernet ports.	
14.	Ports – Front :2 USB, Rear: 2 USB, VGA=2(front and back)	
15.	Power – Loaded Hot Pluggable redundant power supplies with Indian type 3 Pin Power cords.	
16.	Operating System: Should Support as Hypervisor Host in any virtualization platform.	
17.	Management - Enterprise, integrated Remote Access Controller, Enterprise Server shall include, IPMI 2.0 compliant management module. Management function shall be offered	
18.	Management functionalities (viz. remote display, power off, power on, reboot, System health monitoring, and remote media mount and software installation) should be possible to be carried out using the offered management module.	
19.	Cooling – Server shall be configured with redundant cooling fans.	
20.	Certification – RoHS or equivalent to be provided by vendor.	

Table-4.2.3

Sl. No.	Specification of Unified storage system	Compliance
1.	The storage array should support industry-leading Operating System platforms including: Windows 2012 / 2016, HPE-UX, VMware and Linux. Offered Storage Shall support all above operating systems in Clustering.	
2.	The Storage Array shall be offered with 10 Nos of 8TB 12G SAS 7.2K LFF (3.5in) 512e Midline drives. Additionally, vendor shall provide minimum 2 x 800GB SSD drives for SSD based read cache.	
3.	Shall have 2 Nos of Controllers populated with 2 Nos of 16Gb FC modules and 2 Nos of 10G long range single mode module each (Total 4Nos FC modules and 4 Nos 10G SFP+ modules) with eight nos of 3mtr LC-LC Cable.	
4.	Offered Storage Array shall be given with Minimum of 8GB cache per controller in a single unit Cache shall be backed up in case of power failure for indefinite time either using batteries or capacitors or any other equivalent technology. Offered storage shall have support for SSD / Flash based Cache and shall be supplied with minimum 2 x 800GB SSD drive for caching. Offered Flash cache shall be tuned for random read operations and shall remain activated even at less than 70% of random average read workload.	
5.	Offered Storage Subsystem shall support Raid 0, 1, 1+0, 5 and Raid 6 All Raid Sets shall support thin provisioning. Vendor shall offer the license of thing provisioning for complete supported capacity of the array. Thin provisioning shall be supported with offered Flash Cache	
6.	Offered Storage array shall be configured with array-based Snapshot and clone functionality and shall be configured for minimum of 512 snapshot licenses.	
7.	Offered storage subsystem shall support storage-based replication to DR location. License for same shall be given on day 1. Offered storage subsystem shall support replication to multiple storage array of the same family in fan-out mode. At least 1:4 mode shall be supported.	
8.	Offered storage shall be offered and configured with virtualization capability so that a given volume can be striped across all spindles of given drive type within a given disk pool. Disk pool shall support all listed raid sets of Raid 1, Raid 5 and Raid 6.	

J. Jayanthi
08/01/2020

	Offered Storage shall be offered and configured with Thin Provisioning capability.		
9.	Offered Storage shall also be offered and configured for Sub-Lun Data tiering in real time fashion across different type of drives within a given pool like SSD, SAS, NL-SAS etc		
10.	Offered Storage Array shall support Global hot Spare for offered Disk drives. At least 2 Global hot spare drive shall be configured for every 30 drives. Storage subsystem shall also have the flexibility to assign dedicated spare for raid sets.		
11.	Offered Storage shall have inbuilt performance management software. Configuration Dashboard shall show overall IOPS and MB/sec performance.		
12.	Multi-path and load balancing software shall be provided, if vendor does not support MPIO functionality of Operating system		
13.	Warranty includes 5-Year Parts, 5-Year Labor, 5-Year Onsite support with next business day response.		

Table-4.2.4

Sl. No	Specifications for Windows Server 2019 OLP Datacentre edition license	Compliance	
1.	Shall include Windows Server 2019 OLP Datacentre edition license for a server with two processors of 16 core each (total 32 cores)		
2.	Shall be paper based perpetual license which shall be registered in the name of CSIR-NAL.		
3.	Shall work with the number of users as per the CALs procured		
4.	Shall include unlimited windows virtual machines licenses that will be installed in a virtualization environment		
5.	Shall include licenses for Microsoft Hyper-V server license and licenses for a management machine		
6.	Shall support joining a domain, direct access, DLNA codecs and web media streaming		
7.	Shall support Active Directory Certificate Services, Active Directory Domain Services, Active Directory Federation Services, AD Lightweight Directory Services, AD Rights Management Services, DHCP Server, DNS Server, File Server, Data Deduplication, DFS Replication, File Server Resource Manager, iSCSI Target Server, Server for NFS, Storage Services, Hyper-V including Shielded Virtual Machines		
8.	Shall support Network controller, Network Policy and Access Services, Print and Document Services, Remote Access, Remote Desktop Services, Volume Activation Services, Web Services		

	(IIS), Windows Deployment Services, Windows Server Update Services	
9.	Shall support features .NET Framework 3.5, .NET Framework 4.7, Client for NFS, unlimited Windows and Hyper-V containers, Client for NFS, Data Center Bridging, Enhanced Storage, Failover Clustering, Group Policy Management, IPAM Server, SMTP Server, SNMP Service, Windows Server Backup, Windows Server Migration Tools, Inherited activation of host or guest	

Table 4.2.5

	Specification of Asset Management Software	Compliance
1.	It should able to discovers inventories, and tracks all the hardware, software and license assets in the IT infrastructure upto atleast 2000 Nodes with perpetual license.	
2.	It should able to manages assets and its hierarchical relationships to other configuration items, users, locations, departments, cost centers, and associated contracts	
3.	It should able to provide credible information on the location and license status of every important OS, virtualization platform, or application instance.	
4.	Easy-to-create and analyze reports. No advanced knowledge of databases or third-party reporting tools is required	
5.	supports complete lifecycle management of desktops, laptops, switches and servers.	

Table 4.2.6

Sl. No.	Details about Installation, Configuration and commissioning of Servers, Storage, Windows Server 2019 Data Centre and Centralized domain	Compliance
1.	Installation of server with necessary OS and drivers in 4 hosts.	
2.	Configuration of windows Hyper-Clustering of hosts into two clusters (2 hosts in each cluster) and setting up windows data center in two sites in each campus of CSIR-NAL (Kodihalli and NWTC). Installation and Configuration of software at-least in 4 client system for management windows data center.	
3.	Configuration of integrated Remote Access Controller in each host and storage with all features.	
4.	Creation of required Virtual Machines for setting up centralized domain with backup active domain controller in each site. Installation and Configuration of DHCP and DNS Server.	
5.	Setting up required no. of Organizational unit (OU) and enforcement of policies.	

J. Jayanthi
08/07/2020

6.	Installation and Configuration of Asset Management software with all subscribed features.	
7.	The vendor should provide 2 skilled support resident engineers single shift (6 days x 8 hours) for a period one years from the date of final acceptance of the entire system. Skilled person will be interviewed by CSIR-NAL before acceptance. Basic H/W (Server, Storage, Firewall) knowledge. • Need strong expertise to MS Windows Server and Virtualization technology. Must be able to maintain, patch and upgrade. Detailed knowledge of Active Directory Domain Services, preferably on MS Windows platform. Must understand the structure of AD well. Must be trained to administer the all software/hardware supplied	

Table 4.2.7

Sl. No	Details about Installation, Configuration of Client Systems	Compliance
1.	Joining of each of the client systems from Non-domain environment to active directory domain and demonstration of successful login using individual user credential at the premises.	
2.	Configuration of Asset Management Software.	

BID FORMAT

[In Bid Format Sl.No. 1 to 2 are Hardware Components, Sl.No.3 to 10 are Software components, Sl.No.11 to 12 are implementation components]

Sl.No	Item Description	Unit	Quantity	Unit Price	Total Price
1.	Server for virtualization as per the specification in Table 4.2.2	Nos	6		
2.	Unified storage system as per the specification in Table 4.2.3	Nos	2		
3.	Windows Server 2019 OLP Datacentre edition for 64 cores (32x2 Hosts) as per the specifications in Table 4.2.4.	Nos	2		
4.	Windows server 2019 User-based CAL licenses.	Nos	1000		
5.	System Centre Virtual Machine Manager (SCVMM) 2019 License for management of windows data centre.	Nos	1		
6.	Redhat Virtualization (2-sockets), Standard L-1 Redhat support for 2 years.	Nos	3		
7.	Redhat Enterprise Linux (Physical or Virtual Node) with L-1 Redhat support for 2 years.	Nos	2		
8.	Redhat Ansible Tower with requisite license that manages automatic backup and Site to Site failover management for 4 hosts in 2 sites.	Nos	1		
9.	Asset Management Software as per the specification in Table 4.2.5	Nos	1		
10.	WAF license for existing Cyberoam UTM (Model No. CR-2500iNG) for a period of 2 years. It should support at least 20 web applications.	Nos	1		
11.	Installation, Configuration and commissioning of Servers, Storage, Windows Server 2019 Data Centre and Centralized domain as per the specifications in Table 4.2.6.	Nos	1		
12.	Installation, Configuration of Client Systems as per the specification in Table 4.2.7	Nos	1000		
				Total	
	Taxes, delivery charges, training etc				
	Total cost including all the taxes, installation, delivery training etc				

J. Jayanthi
08/01/2020

Payment terms:

a) 75% of hardware component cost may be made upon delivery and inspection.

b) 50% of software/license component cost may be made upon delivery and inspection.

c) 100% of implementation components cost may be made upon successful installation, implementation, inspection and demonstration of:

   i)   Active Directory server installation and configuration with backup servers, Asset management software installation and configuration etc. as per Sl.11 and after completion of at least 700 clients as per the Sl.No.12.

   ii) 100% Knowledge transfer to NAL team.

d) Remaining Hardware and Software cost may be made after 100% acceptance.

CSIR-NATIONAL AEROSPACE LABORATORIES
BENGALURU

COMMERCIAL QUERIES & CLARIFICATION

Tender No. : NAL/PUR/ASD/361/19-Z

Item Description : SUPPLY, INSTALLATION AND CONFIGURATION OF SECURED DATA CENTER.

Tender Clause No	Query / Clarification Sought	Clarification/Amendment
	—NIL—	

Controller of Stores & Purchase
For and on behalf of CSIR