INDIAN INSTITUTE OF SCIENCE BANGALORE

Notice Inviting Tender (NIT)

from domestic bidders

under Two-Cover Bid System

for

**Supply and Installation of Data Center Network Test-bed Equipment
at
Centre for Networked Intelligence, RBCCPS, IISc Bangalore**

Tender No.: IISC/Purchase/RBCCPS(CPS)/2021-22/01
Date: April 06, 2021

Chair, CNI DCN Test-bed Purchase Committee
Robert Bosch Centre for Cyber-Physical Systems (RBCCPS)
(Division of EECS and RBCCPS)
3rd Floor, SID Building,
Indian Institute of Science,
Sir C. V. Raman Road,
Bengaluru 560012 (INDIA)

GSTIN: 29AAATI1501J2ZV

IISc website for tender announcements
https://iisc.ac.in/business-with-iisc/tenders/

Email ID for this tender
contact.cni@iisc.ac.in

Notice inviting tender from domestic bidders for supply and installation of Data Center Network Test-bed equipment at the Centre for Networked Intelligence in RBCCPS-EECS

The Centre for Networked Intelligence (CNI, referred henceforth as the Purchaser in this document), under the division of EECS and RBCCPS, Indian Institute of Science (IISc), is inviting bids in two-cover format for the supply and installation of Data Center Network (DCN) Test-bed comprising Mini-ACI (Application Centric Infrastructure) Fabric and APIC (Application Policy Infrastructure Controller) cluster as per the bill of quantity (BoQ) in Annexure-I. The equipment is meant for experimental research — to conduct research in next generation networking technologies such as *data-center networks* (DCN) and *software-defined networking* (SDN). In accordance with the specialised nature of planned experiments, the Purchaser has identified the OEM (Cisco Systems) equipment (with model numbers) for the DCN Test-bed.

1. SCOPE OF WORK

The bid is expected to be on a turn-key basis, meeting all the stipulated requirements involving supply, installation (including intra-rack network cabling), commissioning, configuration of the management software, documentation, and training/handover to CNI staff. The bid is also expected to include three years of OEM support.

The Test-bed will be housed in the ECE department building. The requirements of rack space, power, cooling, and uplink/management LAN connectivity will be the responsibility of the Purchaser. The bidder has to ensure that the resources (personnel) allocated for each one of the above tasks are competent and capable of meeting all the technical requirements in order to ensure that the broad objective of delivery of services as per expectations is fully met.

2. BIDDER'S ELIGIBILITY CRITERIA

1) Quotations should come only from Indian Original Equipment Manufacturer (OEM) or their authorized Indian distributor. The quotations should be on FOR-IISc Bangalore basis in INR only.

2) The bidder should belong to either class-I or class-II local supplier category distinguished by their "local content" as defined in the Govt. of India's policy.

3) The bidder should be Cisco (OEM) Certified Gold Partner, and needs to submit a Manufacturer's Authorisation Form (MAF) by the OEM stating that the bidder is authorised to supply the equipment.

4) The bidder should have a track record of having previously supplied similar equipment to Central/State Government or other reputed firms. Purchase order copy of at least one previous installation is required along with customer contact details.

5) In the technical bid, the bidder should clearly demarcate the responsibilities between the OEM and the bidder. Complete details of the same have to be submitted in the technical bid. However, for complete supply, installation, and post-installation service, the bidder shall be responsible.

6) The bidder should be in a position to demonstrate their competence and capability to deliver all the services expected during the contract period.

7) The bidder has to provide an undertaking on the official letter-head of the company that it has not been blacklisted by any department or undertaking of the Central or State Government department/Public Sector Undertakings (PSU)/Public Sector Enterprises (PSE)/ Banks in India.

3. SUBMISSION OF BIDS

1) Bids should be submitted in two-cover sealed hard-copy format – i.e., in two sealed envelopes clearly marked as "Technical bid" and "Commercial bid", enclosed within a common outer envelope mentioning
"Tender for CNI DCN Test-bed; Tender No.: IISC/Purchase/RBCCPS(CPS)/2021-22/01".

   The sealed envelope should be delivered to the following address on or before due date:

   Chair, CNI DCN Test-bed purchase committee,
   Robert Bosch Centre for Cyber-Physical Systems (RBCCPS)
   3rd Floor, SID Building, Indian Institute of Science,
   Sir C. V. Raman Road,
   Bengaluru 560012

2) Bid documents and all enclosures must contain the name and address of the bidder, as well as the signature and seal of the authorised representative of the bidder.

3) Late or delayed bids shall be summarily rejected.

3.1 TECHNICAL BID

The technical bid should contain the following.

1) Overall compliance statement indicating adherence to each and every clause in the terms and conditions, as per annexure-II.

2) Detailed technical description of the products and datasheets for the specific configuration options quoted.

3) Manufacturer's Authorisation Form (MAF) from the OEM (Cisco Systems) mentioning the Gold Partner Certification status, and authorizing the bidder to bid against this tender.

4) Terms for licensing (perpetual or linked with support contract) and service/support for each hardware/software component. Terms for software usage and update should be unambiguously stated.

5) A copy of the masked commercial bid in the BoQ format.

6) The bid has to quote for the entire solution as per BoQ, partial offers will not be accepted. The bidder is required to indicate, by filling-in Annexure-III, whether each line item in the BoQ is quoted.

7) Permanent Account Number (PAN, issued by Income Tax authorities) and GST Identification Number (GSTIN), along-with proof.

8) Bank/RTGS detail on the letter-head of the bidder. A copy of the cancelled cheque should also be attached.

3.2 COMMERCIAL BID

1) The commercial bid should contain the unit rate (in Indian Rupees) and the quantity for each one of the line items as well as the total bid price (in Indian Rupees).

2) Price must be quoted against each line item in the prescribed BoQ format as per Annexure-IV.

3) Price should include all discounts applicable to research institutions given that the equipment will be used for research purposes.

4) The commercial bid should contain, among other things, payment terms, warranty, installation, and commissioning charges. These charges will be paid only after successful supply, installation and acceptance.

5) Bid should be valid for 60 days from the date of submission.

4. INSTALLATION, TRAINING AND DOCUMENTATION, SUPPORT CONTRACT

4.1 INSTALLATION

The total solution supply, installation, and commissioning, as per the PO (purchase order), should be completed within 8 weeks after receiving firm PO from IISc.

4.2 TRAINING AND DOCUMENTATION

1) Appropriate number of training sessions for CNI technical staff for effective operation and management of the Mini ACI fabric and, including the configuration/usage of the APIC controller software.

2) Documentation (manuals, operating instructions, etc.) for all hardware, software, and services offered (in digital format) shall be provided to the Purchaser.

3) A technical report on the Mini ACI Fabric and APIC controller cluster installation and hardware/software configuration will be a prerequisite condition for granting acceptance from the Purchaser.

4.3 WARRANTY AND OEM SUPPORT CONTRACT

1) OEM support contract should be for a period of **three years** from the date of acceptance of the equipment for both hardware and software.

2) While the support contract is in effect, the bidder/OEM shall attend to all the hardware and/or software problems on site and shall replace the defective parts at no extra cost to the purchaser within 5 working days after reporting the issue.

3) Performance security guarantee through any nationalized bank in India for 3% of the total purchase order amount shall be given by the selected bidder to the Purchaser. Format of the performance security guarantee will be given by the purchaser at the time of issuing the purchase order.

4) OEM/bidder shall clearly specify the conditions over which the service obligations will be void. Detailed document regarding warranty conditions and applicability should be submitted along with bid with a declaration of accepting the warranty conditions of the purchaser stated at above clause 4.3.

5. ADDITIONAL GUIDELINES

1) Regarding any clarification on technical/commercial aspects or any other issue, queries may only be submitted to the email ID contact.cni@iisc.ac.in before the deadline (as per the schedule in section 7) for pre-bid queries. No queries will be entertained after this deadline.

2) Changes in the tender, if any, made after pre-bid meeting, will be published on the IISc website as corrigendum. Any kind of corrigendum/ addendum will become an integral part of this tender document.

3) IISc is eligible for 5% GST under concessional certificate for which GST exemption certificate will be provided against proforma invoice. Any other statutory levies (if applicable) and GST should be shown separately and not included in the total amount.

4) Delayed and/or incomplete bids are liable to be rejected.

5) The technical bid should not contain any price information.

6) All pages of the technical bid should be duly signed by the bidder.

7) The bidder must submit all the original documents submitted for technical bid in a hard copy, properly spiral bound in one volume only.

8) The bidders are requested to go through the terms and conditions detailed in this document. Agreeing to the terms and conditions of the tender document (by signing all pages of the copy of the document) is a mandatory requirement.

9) Award criteria: the two-cover system will be followed.

   a. Commercial bids of only the technically qualified bids will be taken up for further processing. Decision of IISc will be final and binding.

   b. IISc will place the purchase order on the bidder whose technical bid has been determined by the Purchaser to meet technical evaluation criteria and who has offered the lowest evaluated bid price.

10) IISc reserves the right to accept or reject any bid, and to cancel the bidding process and reject all bids, at any time prior to the award of contract, without thereby incurring any liability to the affected bidder(s) or any obligation to inform the affected bidder(s) of the grounds for the IISc's action.

11) The Director, IISc Bangalore reserves the right to modify the technical specifications or the required quantity at any time.

12) Courts of Bengaluru/New Delhi shall have exclusive jurisdiction over matters covered in this tender.

13) The bid must be addressed to "Chair, CNI DCN Test-bed Purchase Committee".

14) Contact: any queries or requests for clarification must be directed (through email only) to contact.cni@iisc.ac.in.

6.   PAYMENT TERMS

100% payment as per PO will be released after complete supply, installation, and commissioning of the items followed by submission of invoice and performance security guarantee as per clause 4.3(3).

7. IMPORTANT DATES

Release of the tender document on IISc website	April 06, 2021
Submission of queries (for pre-bid clarification) by email to contact.cni@iisc.ac.in	April 12, 2021, 5.00 pm
Pre-bid clarification meeting online over MS Teams (exact date/time and meeting invite to be intimated by email to potential bidders submitting pre-bid queries)	April 14, 2021, 5.00 pm
Deadline for submission of bids	April 23, 2021, 3.00 pm
Opening of technical bids	April 23, 2021, 5 pm
Opening of price bids (price bids of only those bidders, whose technical bid is shortlisted, will be opened)	Exact date and time will be communicated to technically qualified bidders by email.

ANNEXURE-I: BILL OF QUANTITIES (BOQ)

The bidders are required to submit their bids as per the following BoQ:

Line Number	Part Number	Description	Qty
1.0	**APIC-CLUSTER-XS**	**APIC Cluster with virtual APIC**	**1**
1.0.1	CON-SSSNT-APICCLXS	SOLN SUPP 8X5XNBD APIC Cluster with virtual APIC: 36months	1
1.1	APIC-VIRTUAL	ACI Virtual APIC	2
1.2	APIC-SERVER-M3	APIC Appliance - Medium Configuration (Up to 1200 Edge Ports)	1
1.3	APIC-DK9-5.0	APIC Base Software Release 5.0	1
1.4	SFS-250V-10A-ID	SFS Power Cord - 250V, 10A, India	1
1.5	APIC-PCIE-C25Q-04	Cisco UCS VIC 1455 Quad Port 10/25G SFP28 CNA PCIE	1
1.6	APIC-PSU1-770W	770W power supply for USC C-Series	1
1.7	APIC-USBFLSHB-16GB	UCS Servers 16GB Flash USB Drive	1
1.8	APIC-MR-X16G1RS-H	16GB DDR4-2666-MHz RDIMM/PC4-21300/single rank/x4/1.2v	6
1.9	APIC-TPM2-002	Trusted Platform Module 2.0 for UCS servers	1
1.10	APIC-SD400G123X-EP	400GB 2.5in Enterprise Performance 12G SAS SSD (3X endurance)	1
1.11	APIC-PSU-M5BLK	Power Supply Blanking Panel for C220 M4 servers	1
1.12	APIC-RAID-M5	Cisco 12G Modular RAID controller with 2GB cache	1
1.13	APIC-HD1T7K12N	1 TB 12G SAS 7.2K RPM SFF HDD	2
1.14	APIC-CPU-3106	1.7 GHz 3106/85W 8C/11MB Cache/DDR4 2133MHz	2
2.0	**N9K-C9332C**	**Nexus 9K ACI & NX-OS Spine, 32p 40/100G & 2p 10G**	**2**
2.0.1	CON-SNT-N9KC9332	SNTC-8X5XNBD Nexus 9K ACI NX-OS Spine, 32p 40/100G: 36 months	2
2.1	MODE-ACI-SPINE	Dummy PID for mode selection	2
2.2	ACI-N9KDK9-15.0	Nexus 9500 or 9300 ACI Base Software NX-OS Rel 15.0	2
2.3	NXK-ACC-KIT-1RU	Nexus 3K/9K Fixed Accessory Kit, 1RU front and rear removal	2
2.4	NXA-PAC-750W-PI	Nexus AC 750W PSU - Port Side Intake	4
2.5	CAB-IND-10A	10A Power cable for India	4
2.6	NXA-FAN-35CFM-PI	Nexus Fan, 35CFM, port side intake airflow	10
2.7	QSFP-100G-CU3M	100GBASE-CR4 Passive Copper Cable, 3m	12
3.0	**N9K-C93180YC-FX-24**	**Nexus 9300-FX w/24p 1/10/25G & 6p 40/100G**	**3**
3.0.1	CON-SNT-N9K-C931	SNTC-8X5XNBD Limited orderability: 36 Months	3
3.1	MODE-ACI-LEAF	Dummy PID for mode selection	3
3.2	ACI-N9KDK9-15.0	Nexus 9500 or 9300 ACI Base Software NX-OS Rel 15.0	3
3.3	NXA-FAN-30CFM-B	Nexus Fan, 30CFM, port side intake airflow	12

Line Number	Part Number	Description	Qty
3.4	NXA-PAC-500W-PI	Nexus NEBs AC 500W PSU - Port Side Intake	6
3.5	CAB-IND-10A	10A Power cable for India	6
3.6	N3K-C3064-ACC-KIT	Nexus 3K/9K Fixed Accessory Kit	3
3.7	SFP-H25G-CU3M	25GBASE-CU SFP28 Cable 3 Meter	48
3.8	C1E1TN9300XF-3Y	Data Center Networking Essentials Term N9300 XF, 3Y	3
3.9	SVS-B-N9K-ESS-XF	EMBEDDED SOLN SUPPORT SWSS FOR ACI NEXUS 9K	3

ANNEXURE-II: TECHNICAL BID COMPLIANCE CHECKLIST

(to be submitted along with technical bid)

Sr. No.	Criterion	Yes/No	Page No. of attachment
1	Manufacturer's Authorisation Form (MAF) from the OEM (Cisco Systems) mentioning the Gold Partner Certification status, and authorising the bidder to bid for the tender		
2	Whether the bidder has supplied similar equipment to Govt institutes or reputed firms and whether documentary proof attached		
3	Declaration that the bidder is not blacklisted by any Govt entities in India		
4	Detailed technical specifications and datasheets for all line items		
5	BoQ compliance sheet (Annexure-III) filled in and a copy of masked commercial bid attached (as per Annexure-IV)		

ANNEXURE-III: BOQ COMPLIANCE SHEET

(to be submitted along with technical bid)

Line Number	Part Number	Description	Qty	Quoted Yes/No
1.0	**APIC-CLUSTER-XS**	**APIC Cluster with virtual APIC**	**1**	
1.0.1	CON-SSSNT-APICCLXS	SOLN SUPP 8X5XNBD APIC Cluster with virtual APIC: 36months	1	
1.1	APIC-VIRTUAL	ACI Virtual APIC	2	
1.2	APIC-SERVER-M3	APIC Appliance - Medium Configuration (Up to 1200 Edge Ports)	1	
1.3	APIC-DK9-5.0	APIC Base Software Release 5.0	1	
1.4	SFS-250V-10A-ID	SFS Power Cord - 250V, 10A, India	1	
1.5	APIC-PCIE-C25Q-04	Cisco UCS VIC 1455 Quad Port 10/25G SFP28 CNA PCIE	1	
1.6	APIC-PSU1-770W	770W power supply for USC C-Series	1	
1.7	APIC-USBFLSHB-16GB	UCS Servers 16GB Flash USB Drive	1	
1.8	APIC-MR-X16G1RS-H	16GB DDR4-2666-MHz RDIMM/PC4-21300/single rank/x4/1.2v	6	
1.9	APIC-TPM2-002	Trusted Platform Module 2.0 for UCS servers	1	
1.10	APIC-SD400G123X-EP	400GB 2.5in Enterprise Performance 12G SAS SSD (3X endurance)	1	
1.11	APIC-PSU-M5BLK	Power Supply Blanking Panel for C220 M4 servers	1	
1.12	APIC-RAID-M5	Cisco 12G Modular RAID controller with 2GB cache	1	
1.13	APIC-HD1T7K12N	1 TB 12G SAS 7.2K RPM SFF HDD	2	
1.14	APIC-CPU-3106	1.7 GHz 3106/85W 8C/11MB Cache/DDR4 2133MHz	2	
2.0	**N9K-C9332C**	**Nexus 9K ACI & NX-OS Spine, 32p 40/100G & 2p 10G**	**2**	
2.0.1	CON-SNT-N9KC9332	SNTC-8X5XNBD Nexus 9K ACI NX-OS Spine, 32p 40/100G: 36 months	2	
2.1	MODE-ACI-SPINE	Dummy PID for mode selection	2	
2.2	ACI-N9KDK9-15.0	Nexus 9500 or 9300 ACI Base Software NX-OS Rel 15.0	2	
2.3	NXK-ACC-KIT-1RU	Nexus 3K/9K Fixed Accessory Kit, 1RU front and rear removal	2	
2.4	NXA-PAC-750W-PI	Nexus AC 750W PSU - Port Side Intake	4	
2.5	CAB-IND-10A	10A Power cable for India	4	
2.6	NXA-FAN-35CFM-PI	Nexus Fan, 35CFM, port side intake airflow	10	
2.7	QSFP-100G-CU3M	100GBASE-CR4 Passive Copper Cable, 3m	12	
3.0	**N9K-C93180YC-FX-24**	**Nexus 9300-FX w/24p 1/10/25G & 6p 40/100G**	**3**	
3.0.1	CON-SNT-N9K-C931	SNTC-8X5XNBD Limited orderability: 36 Months	3	
3.1	MODE-ACI-LEAF	Dummy PID for mode selection	3	
3.2	ACI-N9KDK9-15.0	Nexus 9500 or 9300 ACI Base Software NX-OS Rel 15.0	3	

Line Number	Part Number	Description	Qty	Quoted Yes/No
3.3	NXA-FAN-30CFM-B	Nexus Fan, 30CFM, port side intake airflow	12	
3.4	NXA-PAC-500W-PI	Nexus NEBs AC 500W PSU - Port Side Intake	6	
3.5	CAB-IND-10A	10A Power cable for India	6	
3.6	N3K-C3064-ACC-KIT	Nexus 3K/9K Fixed Accessory Kit	3	
3.7	SFP-H25G-CU3M	25GBASE-CU SFP28 Cable 3 Meter	48	
3.8	C1E1TN9300XF-3Y	Data Center Networking Essentials Term N9300 XF, 3Y	3	
3.9	SVS-B-N9K-ESS-XF	EMBEDDED SOLN SUPPORT SWSS FOR ACI NEXUS 9K	3	

ANNEXURE-IV: COMMERCIAL BID FORMAT

Bidders are required to fill-in priced bid in the following BoQ format only.

Note: The 'unit price' and 'amount' should be quoted without GST; GST amount (at a concessional rate of 5%) should be filled in the last column.

Line Number	Part Number	Description	Qty	Unit price (₹)	Amount (₹)	GST (@ 5%)
1.0	**APIC-CLUSTER-XS**	**APIC Cluster with virtual APIC**	**1**			
1.0.1	CON-SSSNT-APICCLXS	SOLN SUPP 8X5XNBD APIC Cluster with virtual APIC: 36months	1			
1.1	APIC-VIRTUAL	ACI Virtual APIC	2			
1.2	APIC-SERVER-M3	APIC Appliance - Medium Configuration (Up to 1200 Edge Ports)	1			
1.3	APIC-DK9-5.0	APIC Base Software Release 5.0	1			
1.4	SFS-250V-10A-ID	SFS Power Cord - 250V, 10A, India	1			
1.5	APIC-PCIE-C25Q-04	Cisco UCS VIC 1455 Quad Port 10/25G SFP28 CNA PCIE	1			
1.6	APIC-PSU1-770W	770W power supply for USC C-Series	1			
1.7	APIC-USBFLSHB-16GB	UCS Servers 16GB Flash USB Drive	1			
1.8	APIC-MR-X16G1RS-H	16GB DDR4-2666-MHz RDIMM/PC4-21300/single rank/x4/1.2v	6			
1.9	APIC-TPM2-002	Trusted Platform Module 2.0 for UCS servers	1			
1.10	APIC-SD400G123X-EP	400GB 2.5in Enterprise Performance 12G SAS SSD (3X endurance)	1			
1.11	APIC-PSU-M5BLK	Power Supply Blanking Panel for C220 M4 servers	1			
1.12	APIC-RAID-M5	Cisco 12G Modular RAID controller with 2GB cache	1			
1.13	APIC-HD1T7K12N	1 TB 12G SAS 7.2K RPM SFF HDD	2			
1.14	APIC-CPU-3106	1.7 GHz 3106/85W 8C/11MB Cache/DDR4 2133MHz	2			
2.0	**N9K-C9332C**	**Nexus 9K ACI & NX-OS Spine, 32p 40/100G & 2p 10G**	**2**			
2.0.1	CON-SNT-N9KC9332	SNTC-8X5XNBD Nexus 9K ACI NX-OS Spine, 32p 40/100G: 36 months	2			
2.1	MODE-ACI-SPINE	Dummy PID for mode selection	2			
2.2	ACI-N9KDK9-15.0	Nexus 9500 or 9300 ACI Base Software NX-OS Rel 15.0	2			
2.3	NXK-ACC-KIT-1RU	Nexus 3K/9K Fixed Accessory Kit, 1RU front and rear removal	2			
2.4	NXA-PAC-750W-PI	Nexus AC 750W PSU - Port Side Intake	4			
2.5	CAB-IND-10A	10A Power cable for India	4			
2.6	NXA-FAN-35CFM-PI	Nexus Fan, 35CFM, port side intake airflow	10			
2.7	QSFP-100G-CU3M	100GBASE-CR4 Passive Copper Cable, 3m	12			
3.0	**N9K-C93180YC-FX-24**	**Nexus 9300-FX w/24p 1/10/25G & 6p 40/100G**	**3**			
3.0.1	CON-SNT-N9K-C931	SNTC-8X5XNBD Limited orderability: 36 Months	3			
3.1	MODE-ACI-LEAF	Dummy PID for mode selection	3			

Line Number	Part Number	Description	Qty	Unit price (₹)	Amount (₹)	GST (@ 5%)
3.2	ACI-N9KDK9-15.0	Nexus 9500 or 9300 ACI Base Software NX-OS Rel 15.0	3			
3.3	NXA-FAN-30CFM-B	Nexus Fan, 30CFM, port side intake airflow	12			
3.4	NXA-PAC-500W-PI	Nexus NEBs AC 500W PSU - Port Side Intake	6			
3.5	CAB-IND-10A	10A Power cable for India	6			
3.6	N3K-C3064-ACC-KIT	Nexus 3K/9K Fixed Accessory Kit	3			
3.7	SFP-H25G-CU3M	25GBASE-CU SFP28 Cable 3 Meter	48			
3.8	C1E1TN9300XF-3Y	Data Center Networking Essentials Term N9300 XF, 3Y	3			
3.9	SVS-B-N9K-ESS-XF	EMBEDDED SOLN SUPPORT SWSS FOR ACI NEXUS 9K	3			
Total bid price						

ANNEXURE-V: DETAILS OF PAN / GSTN OF IISC BANGALORE

PAN/GST No.:

    PAN – AAATI1501J

    GST No. – 29AAATI1501J2ZV