



ASTI-FM 03-11  
REV 0/2 APR 2018

**DOST-ASTI Bids and Awards Committee  
Invitation to Bid (Public Bidding)**

ITB No:	19-04-2363	Date:	April-16-2019
PR No:	NetMeshR12-19-03-7399	Date:	March-11-2019
Source of Funds:			
Total ABC:		Php 11,050,000.00	
Time, Date & Venue of Pre-bid Conference:		May 07, 2019, 1:30 PM at DOST-ASTI	
Time and Date of Submission of Bids:		May 20, 2019, 12:00 PM	
Time, Date & Venue of Opening Bids:		May 20, 2019, 1:30 PM at DOST-ASTI	
Date of availability of Complete Set of Documents:		April 29, 2019	
Deadline of Potential Bidder's Clarifications:		May 10, 2019	
Deadline of ASTI's Supplemental Bid Bulletin:		May 13, 2019	
Delivery Schedule:			

The Advanced Science and Technology Institute (ASTI), through its Bids and Awards Committee (BAC), hereby invites all interested bidders to submit their bids for the item(s) listed below. Guidelines regarding the format, eligibility, technical and financial documents needed are described in the Instruction to Bidders of the Philippine Bidding Documents

Bidding will be conducted through open competitive bidding procedures using a non discretionary "pass/fail" criterion as specified in the 2016 R-IRR of RA 9184.

A complete set of Bidding Documents may be purchased by interested bidders upon payment of a fee for the Bidding Documents. It is also downloadable for free of charge at DOST-ASTI's website - [www.asti.dost.gov.ph](http://www.asti.dost.gov.ph)

For further inquiries, contact ASTI's BAC Secretariat via email at [bac-sec@asti.dost.gov.ph](mailto:bac-sec@asti.dost.gov.ph). Interested bidders may also call the number - (632)-426-7423 and look for ASTI's BAC Secretariat.

Respectfully,

  
**PEDRITO B. MANGAHAS**  
Chairperson, BAC-1

NO.	TECHNICAL SPECIFICATIONS	QTY	UNIT	UNIT PRICE(Php)	TOTAL PRICE(Php)
1	<b>Laptop for testing - Core i5 8GB Mem 512GB SSD 13.3"</b> 1.1 Intel Core™ i5-8250U processor (4 cores / 8 threads, 1.6GHz to 3.4GHz, 6MB cache) or equivalent 1.2 16GB 2400MHz DDR4 dual-channel capable, two DDR4 SO-DIMM sockets 32GB max Memory 1.3 512GB M.2 SSD SATA 6.0Gb/s Hard Disk Drive 1.4 13.3" (338mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250nits 1.5 HD720p resolution, low light sensitive, fixed focus 1.6 Intel UHD graphics 620 or equivalent 1.7 MicroSD card reader 1.8 Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 1, HDMI 1.4b 1.9 Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter 1.10 Intel Dual Band Wireless-AC 8265 Wi-Fi 2x2 802.11ac + BT4.1, M.2 card or equivalent	15	unit	70000.00	1,050,000.00

	<ul style="list-style-type: none"> <li>1.11 HD Audio, stereo speakers, 2W x 2 / dual array microphone, headphone / microphone combo jack</li> <li>1.12 Touch style fingerprint reader on the keyboard bezel, anti-spoofing technology</li> <li>1.13 Integrated Li-Ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) w/ 65W USB Type-C</li> <li>1.14 Windows 10 Pro 64-bit (No-recovery)</li> <li>1.15 Warranty: 3years On-site Warranty on Parts &amp; Labor (1Year Battery)</li> <li>1.16 with Manufacturer Gigabit Ethernet Extension Cable</li> <li>1.17 with Heavy duty and waterproof laptop sleeve or equivalent</li> </ul>				
2	<p><b>Network Equipment</b></p> <ul style="list-style-type: none"> <li>2. Four (4) units Core switch</li> <li>2.1 Minimum hardware features: <ul style="list-style-type: none"> <li>2.1.1 Ports: 48 x 10/25 Gbps and 6 x 40/100 Gbps QSFP28 ports</li> <li>2.1.2 Downlink supported speeds: 1/10/25 Gbps speeds</li> <li>2.1.3 CPU: 4 Cores</li> <li>2.1.4 System Memory: 24 GB</li> <li>2.1.5 SSD: 64 GB</li> <li>2.1.6 System buffer: 40 MB</li> <li>2.1.7 Management ports: 2 ports: 1 RJ-45 and 1 SFP</li> <li>2.1.8 USB Ports: 1</li> <li>2.1.9 RS-232 Serial ports: 1</li> <li>2.1.10 Power supply: Redundant</li> <li>2.1.11 Input voltage (AC): 100 to 240V</li> <li>2.1.12 Input voltage (DC): -48 to -60V</li> <li>2.1.13 Frequency: 50 to 60Hz</li> <li>2.1.14 Fans: 4</li> <li>2.1.15 Airflow: Port-side intake and exhaust</li> <li>2.1.16 Physical dimensions: 1.72 x17.3 x 22.5 in. (4.4 x 43.9 x 57.1 cm)</li> <li>2.1.17 Acoustics: 48.5 dBA at 40% fan speed, 64.9 dBA at 70% fan speed, and 77.8 dBA at 100% fan speed</li> <li>2.1.18 RoHS compliance: yes</li> <li>2.1.19 MTBF: 390,330 Hours</li> </ul> </li> <li>2.2 Hardware Performance and scalability specifications: <ul style="list-style-type: none"> <li>2.2.1 Maximum number of Longest Prefix Match (LPM): 896,000</li> <li>2.2.2 Maximum number of IP host entries: 896,00</li> <li>2.2.3 Maximum number of MAC Address entries: 256,000</li> <li>2.2.4 Maximum number of multicast routes: 32,000</li> <li>2.2.5 Number of Interior Gateway Management Protocol (IGMP) snooping groups: Shipping: 8,000; Maximum: 32,000</li> <li>2.2.6 Maximum number of Access Control List (ACL) entries: Per slice of the forwarding engine: <ul style="list-style-type: none"> <li>2.2.7 4000 ingress, 2000 egress</li> <li>2.2.8 Total (2 forwarding slices): <ul style="list-style-type: none"> <li>2.2.9 8000 ingress, 4000 egress</li> </ul> </li> <li>2.2.10 Maximum number of VLANs: at least 3,967</li> <li>2.2.11 Number pf Virtual Routing and Forwarding</li> </ul> </li> </ul> </li> </ul>	1	lot	10000000.00	10,000,000.00

(VRF) instances: Shipping: 1,000; Maximum: 16,000  
2.2.12 Maximum number of ECMP paths: 64  
2.2.13 Maximum number of port channels: 512  
2.2.14 Maximum number of link is a port channel: 32  
2.2.15 Number of active SPAN sessions: 4  
2.2.16 Maximum number of VLAN's in Rapid per-VLAN Spanning Tree (RPVST) instances: 3,967  
2.2.17 Maximum number of Hot-Standby Router Protocol (HSRP) groups: 490  
2.2.18 Number of Network Address Translation (NAT) entries: 1,023  
2.2.19 Maximum number of Multiple Spanning Tree (MST): 64

### 2.3 Regulatory Standards compliance: safety and EMC

#### 2.3.1 Safety: NEBS

2.3.1.1 UL 60950-1 Second Edition

2.3.1.2 CAN/CSA-C22.2 No. 60950-1 Second Edition

2.3.1.3 EN 60950-1 Second Edition

2.3.1.4 IEC 60950-1 Second Edition

2.3.1.5 AS/NZS 60950-1

2.3.1.6 GB4943"

#### 2.3.2 EMC: Emissions

2.3.3 47CFR Part 15 (CFR 47) Class A

2.3.3.1 AS/NZS CISPR22 Class A

2.3.3.2 CISPR22 Class A

2.3.3.3 EN55022 Class A

2.3.3.4 ICES003 Class A

2.3.3.5 VCCI Class A

2.3.3.6 EN61000-3-2

2.3.3.7 EN61000-3-3

2.3.3.8 KN22 Class A

2.3.3.9 CNS13438 Class A

#### 2.3.4 EMC: Immunity

2.3.4.1 EN55024

2.3.4.2 CISPR24

2.3.4.3 EN300386

2.3.4.4 KN 61000-4 series"

#### 2.3.5 RoHS

2.3.5.1 Product should be RoHS-6 compliant with exceptions for leaded-ball grid-array (BGA) balls and lead press-fit connectors.

### 3. Eight (8) units Server

3.1 Barebone: 1U, Intel Q170, 4x SATA, 4x DDR4, 350W AC Power

3.2 Supply with PFC, 4x 3.5" Hot-Swap SATA3 Drive bays Processor: Quad-Core Intel Core i7-7700 3.6GHz 8MB Cache Memory: 2 x Crucial 16GB PC4-19200 2400MHz DDR4 Non-ECC UDIMM

3.3 Boot Drive: 128GB SATA 6.0Gb/s Disk on Module (MLC) (Vertical)

3.4 Hard Drive: 2 x 2.0TB SATA 6.0Gb/s 7200RPM - 3.5"

3.5 Network Card: 10-Gigabit Ethernet Adapter ConnectX-3 EN MCX312A (2x SFP+)

3.6 Operating System: No Operating System

3.7 Warranty: 3 Year Advanced Parts Replacement Warranty

One (1) unit Border-router

#### 4. MINIMUM HARDWARE FEATURES

##### 4.1 Hardware Summary:

###### 4.1.1 Rack Unit (2RU)

###### 4.1.2 Quantity 1

###### 4.1.3 Redundant AC Power Supply Unit with C13 power cables for rated for 220v/30A

###### 4.1.4 Supplier warranty for 3 years

###### 4.1.5 Chassis Capacity:

###### 4.1.6 Switching: 120Gbps

##### 4.2 Integrated Route Switch Processor

###### 4.2.1 High-capacity full-duplex integrated dual switch fabric

###### 4.2.2 8-GB ECC-protected DRAM

###### 4.2.3 Memory external: USB 2.0 Type A receptacle

###### 4.2.4 Timing: Two independent clock source connections

###### 4.2.5 Ports: 4 x 10 GE SFP+, 20 x 1 GE SFP, included transceivers 4x10GESFP+ LR and 10 x 1GE SFP LX/LH: 4x10 GE SFP+, 20x1GE trans included

###### 4.2.6 Management

###### 4.2.6.1 Two 100/1000 BASE-T (RJ-45) LAN management ports: RJ45 Management

###### 4.2.6.2 One auxiliary port: Aux

##### 4.3 Compliance:

###### 4.3.1 ETSI:

###### 4.3.1.1 EN300 386: Telecommunications Network Equipment (EMC): EN300 386

###### 4.3.1.2 ETSI 300 019 Storage Class 1.1: ETSI 300 019 storage class

###### 4.3.1.3 ETSI 300 019 Transportation Class 2.3: ETSI 300 019 storage class 2.3

###### 4.3.1.4 ETSI 300 019 Stationary Use Class 3.1: ETSI 300 019 storage stationary use class 3.1

###### 4.3.1.5 EN55022: Information Technology Equipment (Emissions): EN55022: Information Technology (Emissions)

###### 4.3.1.6 EN55024: Information Technology Equipment (Immunity): EN55024: Information Technology Equipment (Immunity)

###### 4.3.1.7 EN50082-1/EN-61000-6-1: Generic Immunity Standard: EN 50082-1/EN-61000-6-1: Generic Immunity Standard

###### 4.3.2 EMC:

###### 4.3.2.1 FCC Class A: FCC Class A

###### 4.3.2.2 ICES 003 Class A: ICES 003 Class A

###### 4.3.2.3 AS/NZS 3548 Class A: AS/NZS 3548 Class A

###### 4.3.2.4 CISPR 22 (EN55022) Class A: CISPR 22 (EN55022) Class A

###### 4.3.2.5 VCCI Class A: VCCI Class A

###### 4.3.2.6 BSMI Class A: BSMI Class A

###### 4.3.2.7 IEC/EN 61000-3-2: Power Line Harmonics: IEC/EN 61000-3-2: Power Line Harmonics

###### 4.3.2.8 IEC/EN 61000-3-3: Voltage Fluctuations and Flicker: IEC/EN 61000-3-3: Voltage Fluctuations and flicker

###### 4.3.2.9 EN 50121-4: Railway EMC: EN 50121-4:

## Railway EMC

### 4.4 Software Features:

#### 4.4.1 Layer 3 Routing

4.4.1.1 IPv4 Routing (BGP, Intermediate System-to-Intermediate System [IS-IS], and Open Shortest Path First [OSPF]), Hot Standby Router Protocol (HSRP), Virtual Router Redundancy Protocol (VRRP), and IPv6 routing (OSPF v3 and ISIS): IPv4 Routing with BGP, ISIS and OSPF

### 4.5 MPLS:

4.5.1 Label Distribution Protocol (LDP), Targeted LDP (T-LDP), Resource Reservation Protocol (RSVP), Differentiated Services (DiffServ)-aware traffic engineering, MPLS L3VPN (including Carrier Supporting Carrier [CSC]), IPv6 Provider Edge and IPv6 VPN to Provider Edge: LDP, TLDP, TSVP and MPLS L3VPN

4.5.2 MPLS Traffic Engineering (including TE-FRR): MPLS TE FRR

4.5.3 MPLS TE Preferred Path: MPLS TE

4.6 More than 3 million queues per system  
Class-Based Weighted Fair Queuing (CBWFQ): 3M queues

4.7 Weighted Random Early Detection (WRED): WRED4

4.8 Priority Queuing with propagation: PQ with propagation

4.9 2-rate 3-color (2R3C) Policing: 2R3C policing

4.10 Modular QoS CLI (MQC): Modular QOS CLI

4.11 4-level H-QoS: 4 Level H-QOS

### 4.12 Multicast:

#### 4.12.1 IPv4 Multicast:

4.12.1.1 Source-based and shared distribution trees, Protocol Independent Multicast sparse mode (PIM-SX), PIM Source Specific Multicast (PIM SSM), Automatic route processing (AutoRP), Multiprotocol BGP (MBGP), Multicast Virtual Private Network (MVPN), and Multicast Source Discovery Protocol (MSDP): PIM-SX, PIM SSM, AutoRP MBGP

4.12.2 Internet Group Management Protocol Versions 2 and 3 (IGMPv2 and v3): IGMP v2 and v3

4.12.2.1 IGMPv2 and v3 snooping

### 4.13 Security:

4.13.1 ACLs; control-plane protection; routing authentications; authentication, authorization, and accounting (AAA) and TACACS+; Secure Shell (SSH) Protocol; SNMPv3; and leading RPL support: ACL: AAA and TACACS+ SSH SNMPv3

4.13.2 Layer 2 ACLs: Can be used to filter packets under an EVC based on MAC addresses: L2 ACL

4.13.3 Layer 3 ACLs: Provides ACL matching by IPv4 packet attributes: L3 ACL

4.13.4 Security: Critical security features supported:

4.13.5 802.1ad Layer 2 Control Protocol (L2CP) and bridge-protocol-data-unit (BPDU) filtering: 802.1ad L2CP

4.13.6 MAC limiting per EFP or bridge domain: Mac

limiting 4.13.7 Unicast, multicast, and broadcast storm-control blocking on any interface or port: Unicast Multicast 4.13.8 Unknown Unicast Flood Blocking (UUFb): UUFb 4.13.9 Dynamic Host Configuration Protocol (DHCP) snooping: DHCP snooping 4.13.10 Unicast Reverse Path Forwarding (URPF): URPF 4.13.11 Control-plane security: Control plane security 4.13.12 Dynamic ARP Inspection (DAI): Dynamic ARP Inspection 4.13.13 IP Source Guard (IPSG): IPSG				
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<b>TOTAL APPROVED BUDGET FOR THE CONTRACT (ABC):</b>	<b>Php 11,050,000.00</b>
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<b>RESERVATION CLAUSE</b>
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<p>The Advanced Science and Technology Institute reserves the right to accept or reject any proposal, to annul the bidding process, and to reject all proposals at any time prior to contract award, without thereby incurring any liability to the affected proponent or proponents.</p>
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Home

Infrastructure Projects

Consulting Services

**Procurement Timelines - Goods**









This is the earliest possible time.

BETA VERSION 2.0

Select date to begin with: 04/29/2019

Compute/Reset to Earliest Possible Time

Start Over

Procurement Stage	Start Date	End Date	Add days
Advertisement :	04/29/2019	05/06/2019	
Pre-bid Conference : Conduct? <input checked="" type="radio"/> Yes <input type="radio"/> No	05/07/2019	05/07/2019	
Submission of Bids :	05/19/2019	Sunday 05/19/2019	05/20/19 * 
Bid Evaluation :	05/20/2019	05/20/2019	
Post-qualification :	05/21/2019	05/21/2019	
Issuance of Notice of Award :	05/22/2019	05/22/2019	
Contract Preparation and Signing :	05/23/2019	05/23/2019	
Approval by Higher Authority : Necessary? <input checked="" type="radio"/> Yes <input type="radio"/> No	05/24/2019	05/24/2019	
Issuance of Notice to Proceed :	05/25/2019	05/25/2019	

Compute for the Latest Allowable Time

User's Guide

Found errors? Tell us.

\* Next working day