



# महाराजा गंगा सिंह विश्वविद्यालय

राष्ट्रीय राजमार्ग सं. 15, जैसलमेर रोड, बीकानेर-334004 (राजस्थान) भारत

प.04( )मंगसिविबी/भंडार/2014/ 17112

22 दिसम्बर, 2014

## सीमित निविदा आमंत्रण

विश्वविद्यालय के शैक्षणिक भवन-2 स्थित कांफ्रेंस हॉल हेतु निम्न मापदण्डानुसार Internet with wi-fi facilities (अनुमानित लागत 1,96,000 रुपये) स्थापित करने हेतु रजिस्टर्ड फर्म से मोहर बंद लिफाफे में सभी करों सहित एफओआर मय इंस्टालेशन दरें फर्म के लेटर पेड पर वित्त नियंत्रक, महाराजा गंगा सिंह विश्वविद्यालय, बीकानेर के कार्यालय में दिनांक 26.12.2014 तक सांय 12.00 बजे तक प्राप्त कर उसी दिन सांय 1.00 बजे उपस्थित निविदादाताओं के समक्ष खोली जावेगी।

### 1. Core Swith (Type-1)

S.No.	Core Switch (Type-1) - Quantity required - 02
1	Should have Ethernet Gigabit Switch
2	Should have minimum 24 or more 10/100/1000 BaseT (tripple speed) ports with 28.7 watt power from day one.
3	Should have minimum 4 or more 100/1000 BaseX SFP Uplink ports.
4	Should have switch management both using a) our of band 10/100-Mbps management b) console ports and c) In-band switch management.
5	Should have dedicated 10/100 Mbps management port.
6	Should have dedicated RS-232/RJ45/MiniUSB serial console port.
7	Should have minimum 500MHz CPU, 250MB RAM and 250MB Flash for storing configuration, logs, policies etc
8	Should have small form factor of less than 10" depth.
9	Should have Layer 2 switching of minimum 56 Gigabit per second (Gbps) and more than 41 million packets per second (mpps) for data plane.
10	Should have Robust and purpose-built operating system built for resiliency with process sepration, restart process without reboot, adding/upgrading of individual software modules dynamically without requiring a system reboot etc
11	Should have Layer 2 switch ports and VLAN trunks, IEEE 802.1Q VLAN encapsulation, Support for up to 1K VLANs, Private VLANs/Port Isolation, LACP: IEEE 802.3ad, Jumbo frames (up to 9216 bytes),Rapid per-VLAN Spanning Tree Plus (PVRST+) (IEEE 802.1w compatible), MSTP (IEEE 802.1s): 16 instances,
12	Should have Layer 2 IEEE 802.1p (class of service [CoS]), 8 hardware queues per port, Per-port QoS configuration, Differentiated services code point (DSCP) marking CoS-based egress queuing, Egress strict-priority queuing, Egress port-based scheduling: Weighted Round-Robin (WRR). ACL-based QoS classification (Layers 2, 3, and 4)
13	Should have Auto Provisioning enabling configuration of the switch, drastically reducing provisioning time.
14	Should have Embedded Event Management Service with Python, Tcl scripting enable automation and remote operations
15	Should have Switch Port Analyzer Mirroring sesszion for multiple input vlans, port for many to one and many to many SPAN probes.
16	Should have minimum 16,000 MAC addresses
17	Should have Link Layer Discovery Protocol and Cisco Discovery Protocol.
18	Should have Ingress and egress packet counters per interface.
19	Should have SSHv2, SCP, Telnet, RADIUS, TACACS+, Syslog, Network Time Protocol (NTP), Remote monitoring (RMON), Port-based locator LED,
20	Should have DHCP snooping with Option 82 at layer 2, Layer 2/3/4 ACL, VLAN-based ACLs (VACL), Port-based ACLs (PACLs), per port Storm control (unicast, multicast, and broadcast) and IPv6 Edge Security like IPv6 RA Filtering Guard
21	Should have following embedded NAC Features without installing NAC client on compute endpoints
a	a) Local user database licensed for upto 64 simultaneous users per port/switch for web-based URL (no NAC client to be installaed redirection network login authentication and role based vlan assignment. All linceses, software required to complete the NAC solution must be supplied from day one.
b	b) MDI LDAP/AD server for autenticating upto 1000 Microsoft Windows endpoints per port to the network without installaing any web/agent based client. All linceses, software required to complete the NAC solution must be supplied from day one.
22	Should support Proactive Serviceability Framework as Call Home or via NMS Call Home to OEM TAC
23	Should support XML API tools
24	Operating Temprature : 0 to 45 C
25	Operating Humidity : 10 to 95%, non condensing
26	OEM should be represented in Enterprise Wired of latest Gartner's Critical Capabilities for Wired and Wireless LAN Access Infrastructure Report - August 2014.
27	Should have all components like switch, PSU, power cable, optics, NMS software from same OEM

### 2. Wall Mount Rack

1	Racks manufactured out of steel shieet punched, formed, welded and Powder coated
2	Rack should be from ISO 9001:2008 Certified Company & UL Listed
3	Standard for Racks configuration will be welded frame and vented top cover
4	Rack should have Front Toughened Glass Door with lock & Key and Back Cover
5	1U=44.45 mm in Height,
6	Rack should Conforms to DIN 41494 or Equivalent EIA /ISO / EN/CEA Standard
7	Rack should have Adjustable mounting depth,
8	Rack 4 No Adjustable, 19" verticals with Punched 10mm Square Hole and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern offers greater mounting flexibility, maximizes usable mounting space.



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9	Rack should have Numbered U positions,
10	Rack should have 100% assured compatibility with all equipments conforming to DIN 41494 (General industrial standard for equipments)
11	Powder coated finish with seven Tank pretreatment process meeting IS
12	Rack should have Proper Grounding & Bonding
13	Rack should have Fan module Mount Provision on top Cover
14	Rack should have provision for cable entry Exit from Both top & Bottom.
15	Rack Should carry 3 years warranty

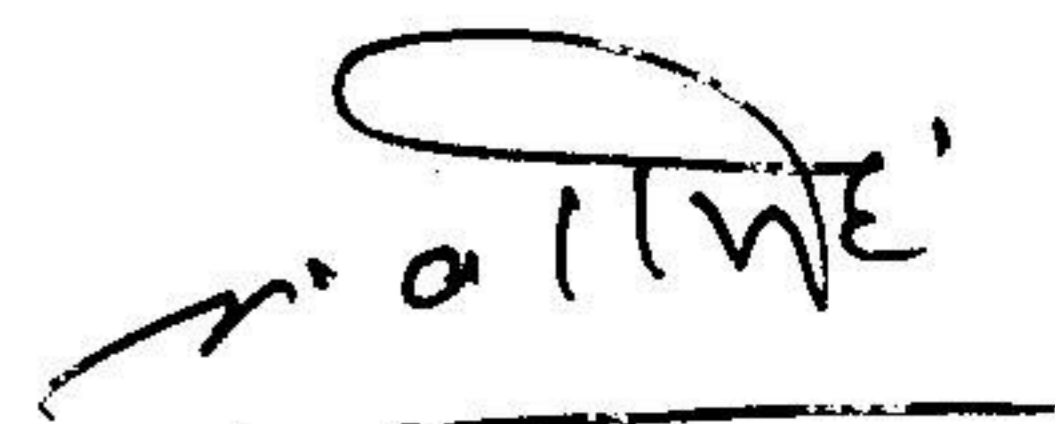
### 3. Access Point Unit

SN.	AP Unit Specification - Quantity Required - 04
<b>HARDWARE SPECS</b>	
1	Its should support both the Frequency bands 2.4 and 5GHz
2	Its should support Standard IEEE 802.11a/b/g/n
3	Its should support Data Rate upto 300 Mbps in both frequency bands
4	Its should support memory 64MB and flash memory 8MB
5	Its should support peak power up to 16W
6	Its should support 1x 10/100/1000 Fast Ethernet RJ-45 , Reset , Power Jack and POE
7	Its should support LED control on/off
8	Its should support 12V/ 2A power supply
<b>WIRELESS SPECS</b>	
1	Its should support SNMP version V1, V2c, V3
2	Its should support Save, Backup and Reset settings
3	Its should support Quality of Service WMM/802.11e
4	Its should support VLAN Tagging and Untagging
5	Its should support 8 SSIDs for 2.4 GHz and another 8 SSIDs for 5GHz
6	Its should support Topology Infrastructure/Ad-Hoc
7	Its should support Network Management System EZ Controller
8	Its should support WEP , WPA/WPA2 , MAC address filtering , 802.1x Authenticator, Station separation
9	Its should support system monitor statistic and event Log
10	Its should support PPOE in client router mode and PPTP
11	Its should support modulation OFDM
12	Its should support channel bandwidth Auto, 20Mhz, 40Mhz
13	Its should support 5 dBi 4 internal Omni-Directional Antennas
14	Its should support maximum power transmission 29dBm
15	Its should support Access Point, WDS Bridge, WDS Access Point, Universal Repeater
16	Its should support Web-based configuration and CLI Based configuration
17	Its should support transmission rate for 2.4 GHz b/g/n and 5 GHz a/n
18	Its should support minimum Receive Sensitivity -99dBm
19	Its should support automatic AP detection
20	Its should support Encryption TKIP , AES
21	Its should support Firmware upgrade on WEB and CLI based
22	Its should support auto reboot by scheduling
23	Its should support IP range and Bandwidth management system
24	Its should support Incoming and Outgoing wireless traffic shaping
25	Its should support Administrator Username and Password Change

4. CAT6 Cable - ATL Verified, 500 MGH, 23AWG, blue colour equivalent to Molex standard.

5. IO Ports RJ45 port (as per requirements)

6. Wiring clips (as per requirements)

  
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