उत्तर प्रदेश पुलिस रेडियो मुख्यालय, महानगर, लखनऊ – 226006

निविदा संख्याः ई–04/2015(पार्ट–A)   दिनांकः अप्रैल–08 2015

निम्नलिखित उपकरणों के क्रय हेतु दो प्रतियों में टेक्निकल एवं वित्तीय भाव पत्र अलग–अलग मुहरबन्द आमन्त्रित किये जाते हैं:–

क्र0	उपकरण का नाम	प्रतिभूति राशि	टेण्डर फीस (रू0)	
			नकद	बैंक ड्राफ्ट/पोस्टल ऑर्डर द्वारा
1	रेडियो मुख्यालय, लखनऊ से 04 जनपदों के मध्य कम्प्यूटर कनेक्टिविटी की व्यवस्था के क्रय/अधिष्ठापन	80,000/–	300/–	350/–

उपरोक्त कार्य की आपूर्ति हेतु इच्छुक फर्में किसी भी कार्य दिवस में रेडियो मुख्यालय से टेण्डर फीस नकद जमाकर अथवा निर्धारित धनराशि का ड्राफ्ट/पोस्टल आर्डर डाक से भेजकर निविदा फार्म मय टेक्निकल/फाइनेन्सियल बिड के प्रारूप व शर्तों सहित प्राप्त कर सकती हैं। बीओक्यू एवं तकनीकी विशिष्टियॉं (स्पेशिफिकेशन) उ0 प्र0 पुलिस की वेबसाइट www.uppolice.gov.in पर देखी जा सकती हैं। टेण्डर से सम्बन्धित कोई भी जानकारी किसी भी कार्य दिवस में मोबाइल नं. 09454402615 पर प्राप्त की जा सकती है। निविदा सूचना, सूचना विभाग की वेबसाइट www.upgov.nic.in पर देखी जा सकती है। निविदा की अन्य शर्ते निविदा फार्म में उल्लिखित हैं। विभाग के कार्यालय का फैक्स नं. 0522–2335346 है।

2.   निविदा के साथ उपकरण के सम्मुख दर्शायी गयी प्रतिभूति राशि/अर्नेस्ट मनी (EMD) जमा की जायेगी जो डिमाण्ड ड्राफ्ट, बैंकर्स चेक, बैंक गारण्टी एवं एफ.डी.आर. के रूप में **अपर पुलिस महानिदेशक (दूरसंचार), उ0 प्र0, लखनऊ (ADG, Telecom, U.P., Lucknow)** के पक्ष में बनवाकर प्रस्तुत की जायेगी। ईएमडी जमा करने से छूट के लिए दावा करने वाली फर्म को सक्षम प्राधिकारी द्वारा निर्गत ईएमडी से छूट प्रदान किये जाने सम्बन्धी प्रपत्र तकनीकी बिड के साथ उपलब्ध कराया जाना अनिवार्य है।

3.   विभाग को उपरोक्त सम्पूर्ण निविदा सूचना को निरस्त करने एवं क्रय किये जाने वाले उपकरणों की संख्या घटाने, बढ़ाने का अधिकार होगा।

4.   यदि उक्त प्रणाली डी.आई./डी.जी.एस. एण्ड डी. दर अनुबन्ध अथवा शासन द्वारा जारी शासनादेशों के अन्तर्गत किसी संस्था/फर्म पर उपलब्ध हो जाते हैं तो निविदा स्वतः निरस्त समझी जाएगी।

5.   निविदा प्रक्रिया की समय सारणी निम्नवत होगी–

1– निविदा विक्री की अवधि   – दिनांकः 19.04.2015 से दिनांक: 18.05.2015 को 1300 बजे तक।

2– निविदा डालने की अन्तिम तिथि   – दिनांकः 18.05.2015 समय 1400 बजे तक।

3– तकनीकी ऑफर खोले जाने की तिथि   – दिनांकः 18.05.2015 समय 1600 बजे।

(डी0एस0 चौहान)
अपर पुलिस महानिदेशक, दूरसंचार
उ0प्र0पुलिस रेडियो मुख्यालय,
महानगर लखनऊ
E-Mail : radiohq@nic.in
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GENERIC REQUIREMENTS

FOR

VIRTUAL PRIVATE NETWORK OVER WI- MAX

FOR

UTTAR PRADESH POLICE RADIO HQ

AND

DISTRICT HEADQUARTERS

PREPARED BY

UTTAR PRADESH POLICE RADIO HQ.

MAHANAGAR, LUCKNOW-226006

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1-   Introduction:

Uttar Pradesh Police Radio came into existence in 1938, dedicated especially to cater the communications needs U.P Police, Earlier, communication was totally based on High Frequency. As, more and more communication technologies invented and improved U.P. Police Radio adopted a few of them.

Along with High Frequency communication U.P. Police Radio adopted line communication technologies, such as; Tele-printer, RTTY, Automex and Super Automex, for faster and reliable communication.

Along with the passage of time these technologies became obsolete and out of phase. Equipments based on these technologies are defunct for want of repairs and spare parts.

For more secure and faster communication new solutions are available now a day .VPN over WI-MAX is one such solution.

So, UP Police Radio intends to establish VPN over WI-MAX for data communication at its Headquarters Mahanagar Lucknow and 04 district HQ. (Allahabad, Varanasi, Gautam Buddh Nagar and Moradabad.) remote locations.

2-   General overview of Virtual Private Network Over WI-MAX:

The requirements of Radio HQ. is VPN WI-MAX for data transfer from centre location Mahanagar, Lucknow to remote location as above. The Network is required to support data, voice and facsimile communication services. At initial stage Network is expected to support data communication only. The speed of VPN over WI-MAX should be below:-
1. VPN over WI-MAX connection at central location(two static IPx2)= 4 Mbps
2. VPN over WI-MAX connection at remote location –   512 Kbps

3.   System overview:

The data communication system or messaging system with VPN over WI-MAX shall be controlled through a server installed at UP Police Radio HQ., Mahanagar, Lucknow. The 04 districts HQ/ location of the State shall be connected with the server with a specific identity. Unauthorized identity must not be approved/ allowed for communication with control at radio HQ. or any other districts HQ. of this network & vice-versa.

4.   System Capabilities & features:

Data (communication) shall be installed at central location (i.e. Radio HQ. Lucknow) with 100 Percent redundancy. All district police units shall be connected to central location using VPN over WI-MAX.

Main Server at Radio HQ. shall be linked up through a 02 Mbps via VPN over WI-MAX with the nearest Telephone Exchange.From nearest Telephone Exchange data shall be

transmitted to the specific district HQ. through Wi-Max communication in a secure way. At the receiving end (i.e. at district HQ.) data shall be received at local Telephone Exchange and then it shall be transmitted through 512 kbps to the last port i.e. at a computer installed in police line at district HQ.

The system should incorporate following features :-

1- System should have 100 % redundancy at central location i.e. at Radio Hqrs Lucknow to avoid any break-down in communication.
2- There should be full tool proof antivirus and data protector software like SSL and suitable firewall, be installed.
3- System connected/disconnected status of Distt Hqrs should be indicated with green/red light at the Radio Hqrs Control.
4- There should be an indication with special beep sound or pop-up to indicate the pendency of urgent nature messages.
5- Operational feature of the system should be user friendly.
6- There should be facility of messaging to all the districts simultaneously and also separately.
7- System should be able to generate details of work execution by radio staff working on VPN over Wi-Max along with information related to the numbers of radiograms IN and OUT.
8- There shall be search options for messages with the NR/GR or Date.
9- There should be automatic registration generation of date time and message number with district code.
10- There should be provision for yearly, monthly, weekly and daily statement of IN and OUT radiograms at a glance and printing out such details to find out the work done by the radio staff during the referred period.
11- Bilingual (English & Hindi) software shall be preferred.
12- The system should be able to generate messages and other details in prescribed format which are enclosed.

5.   An overview of major technical requirements of system:
There may be message/email server 2013 or any latest hardware/software at central location (i.e. at UP Police Radio Hqrs) to send and receive messages from remote location i.e. at district Hqrs.

The software must incorporatestandardized protocols for handling mails/messages and the required graphics. Server programme may run on windows server and may be a part of the Microsoft servers or any other user friendly operating system.

Exchange server should be design to do at least the following :-

a- <u>To provide a resilient solution</u> – It should build upon an architecture that should be designed for simplicity of scale and maximum hardware utilization.

b- <u>Security and data loss prevention</u>–It should protect organization's communication secrecy. It should also incorporate with anti-malware protections. Data loss prevention feature must also be available.

c- <u>Large data handling</u> – It should be capable to handle large amount of data of the whole state round the clock with 100 % accuracy.

d- <u>Low cost and less management</u> – The system should be a low cost system with less amount of supervision required.

e- <u>Future expansion</u>– The system should be capable to incorporate more users, voice, video server, fax and/or SMS at later stage.

6- <u>BOQ for Implementation of mail/messaging solutions:</u>

BOQ			
Category	**SL.**	**Items Description**	**Quantity Required**
Central Location Hardware	1	Server (2 Proc/ 32GB/ 2*300GB10K SASHDD)	2
	2	Rack Mounted iSCSI NAS16TB	1
	3	Standard Server Rack	1
	4	KVM Switch For Server Rack8 Port	1
	5	OnlineUPS3 KVA with One Hour backup	1
	6	MFD Laser	1
	7	Fire Wall for100 User	1
Central Location Software	8	MSExchange2013 Enterprise OLP	1
	9	MSExchange2013 Standard Client Access License Sngl OLP Device CALESD	25
	10	MSExchange2013 Ent W/o Svcs Sngl OLP Dvc CAL (Addon to Exc Std CAL)ESD	0
	11	Exchg Svr ENT2013 ENG Disk Kit MVL DVD	1
	12	Win Svr Std 2012 SNGL OLPC 2Proc	2
	13	WinSvrCAL2012 SNGL OLP NL Usr CAL	25
	14	WinSvrStd2012 64 DVD Disk	1
	15	Print Connecter For Exchange Server	1
	16	Report Module For Exchange Server	1
	17	Customized Softfware as req. by RHQ	1
	18	GigabiteSwitch24 Port Managed	1

	19	Installation and Configuration at Central Location and One Year Onsite Support	1
Cental Location Job and Other Items	20	Unified Communications Certificate (SANS UCC Certificate) 4 names for3 Years	2
Remote Location Hardware	21	i3 Work Station with OS	4
	22	MFD	4
	23	1KVAOnlineUPSWith2 Hour Backup	4
Remote Location Job and Other Items	24	Installation and Configurationat Remote Location	4
Cental Location VPN Connectivity	25	VPNo WiMax 2MbpsVPN Over WiMax Connection at Central Location (2 Static IP) (Yearly Charge) x 2 =4mbps[only for e-Governance and other projects of Central/ State Government]	**2**
	26	Router For Bandwidth Aggregation/ Fail Over	**1**
	27	Outdoor CPE	2
Remote Location VPN Connectivity	28	VPNo WiMax 512 Kbps VPN Over WiMax Connection (Yearly Charge) [only for e-Governance and other projects of Central/ State Government]	**4**
	29	Outdoor CPE	4
	30	Standard4u Network Rack	4
	31	8PortSwitch	4

Note-Above BOQ is tentative. vender is free to increase items to fulfil requirements of deptt.

7- Minimum Technical Specification:

Server:	
Item	**Description of Requirement**
Chassis	1 U Rack Mountable
CPU	two numbers of latest generation Intel 6 Core E5-2620v3 processor
CPU L3 CACHE Memory	15MB L3 Cache
Motherboard	Intel® C610 Series Chipset
Memory	32 GB DIMMS scalable to at least upto 512GB, using DDR4 Load Reduced DIMM (LRDIMM) memory modules. Should be capable of identifying and reporting whether genuine OEM memory is installed. Each LRDIMM should work at 2133MHz, 1. 2V even after populating all the DIMMs in the channel.
Memory Protection	Advanced ECC with multi-bit error protection and memory online spare mode
HDD Bays	Up to 8 SFF/4 LFF max, HDD/SSD
Optical drive Bay	One optional optical drive bay to install DVD-ROM or DVD-RW .
Hard disk drive	2x 300GB 10k SAS HDD

Controller	Embedded 6Gb/s SATA controller RAID controller with RAID 0/1/10/5 for SATA DIsk. OR PCIe 3.0 based 12Gb/s Raid Controller with RAID 0/1/1+0/5/50/6/60/1 Advanced Data Mirroring/10 Advanced Data Mirroring with 4GB battery backed write cache (onboard or in a PCI Express slot)
Networking features	1. 1Gb 2-port network adaptor supporting advanced features such as TCP segmentation offload, VLAN tagging, MSI-X, Jumbo frames, IEEE 1588, and virtualization features such as VMDQ.
Interfaces	Video - 1 4 USB ports (standard) Micro SD slot - 1
Bus Slots	Three PCI-Express 3.0 slots, at least two x8 and one x16 slots
Power Supply	Redundant Power Supplies
Fans	Redundant hot-plug system fans
Graphics	Integrated Matrox G200 video standard 1280 x 1024 (32 bpp) 1920 x 1200 (16 bpp)
Industry Standard Compliance	ACPI 2.0b Compliant PCIe 3.0 Compliant PXE Support WOL Support Microsoft® Logo certifications USB 3.0 Support ASHRAE A3/A4
Embedded system management	Should support monitoring ongoing management, service alerting, reporting and remote management with embedded Gigabit out of band management port Server should support configuring and booting securely with industry standard Unified Extensible Firmware System should support REST ful API integration System management should support provisioning servers by discovering and deploying 1 to few servers with Intelligent Provisioning System should support embedded remote support to transmit hardware events directly to OEM or an authorized partner for automated phone home support
Security	Power-on password Serial interface control Administrator's password TPM 1.2 UEFI

Operating Systems and Virtualization Software Support	Microsoft Windows Server Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) Oracle Solaris VMware
iSCSI NAS:	
Item	**Description of Requirement**
Capacities	16 TB
CLIENT OS Compatibility	Windows 8, all 32-bit and 64-bit platforms, Windows 7, all 32-bit and 64-bit platforms, Windows Server 2012 / 2008 R2 platforms
Chassis	1 U Rack Mountable
Interface	High performance (10/100/1000) Gigabit Ethernet connection, 2 ports of powered USB 3.0, 1 port of powered USB 2.0 VGA Port
RAID	RAID 5 with automatic rebuild functionality
Operating Specifications	Operating temperature 0 to 35 °C, Non-op. temperature -40 to 70°C
HDD Bays	Up to 4 LFF max HDD
KVM Switch:	
Item	**Description of Requirement**
Computer Connections	Direct 8, Maximum 128 (via Cascade)
Port Selection	OSD, Hotkeys, Pushbuttons
KVM Ports Connectors	8 x SPHD-17 Female (Yellow)
FW Upgrade Connectors	1 x RJ-11 Female (Black)
Power Connectors	1 x 3-prong AC Socket (IEC60320/C14)
Keyboard / Mouse	USB /PS2
Video	19" LCD 1280×1024 @ 75 Hz ; DDC2B
Operating Specifications	Operating temperature 0 to 35 °C, Non-op. temperature -40 to 70°C
Online UPS 3 KVA	
Item	**Description of Requirement**
Output	
Output Power Capacity	2100 Watts / 3000 VA
Max Configurable Power	2100 Watts / 3000 VA
Nominal Output Voltage	230V

Output Voltage Note	Configurable for 220 : 230 or 240 nominal output voltage
Efficiency at Full Load	91%
Output Voltage Distortion	Less than 3%
Output Frequency (sync to mains)	50/60 Hz +/- 3 Hz user adjustable +/- 0.1
Other Output Voltages	220, 240
Crest Factor	03:01
Topology	Double Conversion Online
Waveform Type	Sine wave
Output Connections	
(8) IEC 320 C13	IEC 320 C13
(2) IEC 320 C19	IEC 320 C19
(3) IEC Jumpers	
Bypass	Internal Bypass (Automatic and Manual)
Input	
Nominal Input Voltage	230V
Input Frequency	50/60 Hz +/- 5 Hz (auto sensing)
Input Connections	British BS1363A
	IEC-320 C20
	Schuko CEE 7/EU1-16P
Cord Length	2.44 meters
Input voltage range for main operations	160 - 280V
Input voltage adjustable range for mains operation	100 - 280V
Other Input Voltages	220, 240
MFD Laser For Central Location	
Item	**Description of Requirement**
General	
Paper Type	300 Sheets (max.)
Paper Size	Drawers: A4/B5
	Bypass: A3/A5-R

Paper Weight	Drawers: 64 – 80 g/m2
	Bypass: 52 - 163 g/m2
Memory	Memory 128MB (Shared)
Printing Function	
Print Speed (A4)	25ppm
Resolution	600 x 600 dpi, 2400 x 2400 dpi (with smoothing)
Drivers	Windows XP SP3 (32 bit) / X64 (64 bit)
	Windows Vista (32 bit) / (64 bit)
	Windows 7 (32bit) / (64 bit)
	Windows Server 2003 (32 bit)
	Windows Server 2003 X64 (64 bit)
	Windows Server 2008 (32 bit) / (64 bit)
	Windows Server 2008 R2 (32 bit) / (64 bit)
	USB 2.0/Hi Speed USB x 1
Interface	USB 2.0/Hi Speed USB x 1
PDL	GDI
Copying Function	
Original/Copy Speed	A3 - A5-R
Resolution	2,400 x 600 dpi (with smoothing)
First Copy Out Time	Scanning: 600 x 600 dpi, 2400 x 2400 dpi (with smoothing)
	Copying: 600 x 600 dpi, 2400 x 2400 dpi (with smoothing)
Original Scanning Speed	20 spm
First copy time	7.0 sec.
Multiple Copy	1 to 999 copies
Reproduction Ratio	25% to 400% (1% Increment)
Scanning Function	
Scanning speed	20spm
Scanning mode	Colour, B&W
Scanning resolution	600dpi x 600dpi
Compatibility	TWAIN
Online UPS 1 KVA	
Item	**Description of Requirement**
Output	
Output Power Capacity	700 Watts / 1000 VA
Max Configurable Power	700 Watts / 1000 VA
Nominal Output Voltage	230V

Output Voltage Note	Configurable for 220 : 230 or 240 nominal output voltage
Efficiency at Full Load	86.00%
Output Voltage Distortion	Less than 3%
Output Frequency (sync to mains)	50/60 Hz +/- 3 Hz user adjustable +/- 0.1
Other Output Voltages	220, 240
Crest Factor	03:01
Topology	Double Conversion Online
Waveform Type	Sine wave
Output Connections	(1) Hard Wire 3-wire (H N + G)
(8) IEC 320 C13	IEC 320 C13
Bypass	**Built-in Bypass**
Input	
Nominal Input Voltage	230V
Input Frequency	50/60 Hz +/- 5 Hz (auto sensing)
Input Connections	**IEC-320 C20**
Cord Length	2.44 meters
Input voltage range for main operations	160 - 280V
Input voltage adjustable range for mains operation	100 - 280V
Other Input Voltages	**220, 240**
Batteries & Runtime	
Battery Type	Maintenance-free sealed Lead-Acid battery with suspended electrolyte : leakproof
Included Battery Modules	1
Available Battery Module Slots	1
Typical recharge time	3 hour(s)
MFD Laser For Remote Location	
Item	**Description of Requirement**
Functions	Print, copy, scan, fax

Multitasking supported	Yes
Print technology	Laser
Print languages	Host-based
Compatible operating systems	
	Windows 8, Windows 7, Windows Vista, Windows XP, Windows Server 2008 /2012, Windows Server 2003, Mac OS X v10.4, v10.5, v10.6, Linux
Display	2-line LCD
Processor speed	400 MHz
Media sizes supported	A4; A5; ISO B5; ISO C5; ISO C5/6; ISO C6; ISO DL; 16K;
Media sizes, custom	76 x 127 to 216 x 356 mm
Media types	Paper (plain, laser), envelopes, transparencies, labels, cardstock, postcards
Media weights, supported	60 to 163 g/m²
Fax transmission speed	33.6 kbps
Fax memory	Up to 500 pages
Fax resolution	Up to 300 x 300 dpi
Speed dials, maximum number	Up to 100 numbers
Scanner type	Flatbed, ADF
Scan file format	JPEG, TIF (compressed and uncompressed), PDF, GIF, BMP
Scan resolution, optical	Up to 1200 dpi
Scan speed (normal, A4)	Up to 7.4 ppm (b&w), up to 3 ppm (color)
File formats, supported	PDF, TIF , JPG, BMP, BIF
Energy Efficiency	ENERGY STAR® qualified

Note- vender is free to offer better specs to fulfil above mentioned requirements of the department.

8- Customized solution:

Special features in mail/messaging solution, such as start of duty of radio staff at remote location and change of duty after every 6 or 8 hrs (i.e. rotation duty) should be incorporated.

U.P. Police Radio Hqrs intend to monitor the performance of radio staff by number of mail/messages sent by particular radio staff as well as the status of remote location which are online or offline.

At Radio Hqrs as well as remote location radio staff must be alerted by the system for pending mail status by notification/pop-up.

It is desirable that lists, such as designation of officials, date, time etc. should appear automatically as soon as first few digits are typed in particular space and these lists can be upgradable.

If these and aforesaid features are not inbuilt in exchange server by default, they have to be incorporated.

9- Other Terms:

1- The System or any other device used with system should not compromise secrecy of the messages in particular and system as a whole in general. If, any such things found at any stage, the supplier shall be held responsible for the breach of secrecy and U.P. Police Radio Hqrs shall be free to take appropriate legal action against the supplier.

2- The supplier shall impart operational and minor maintenance training for the system to U.P. Police Radio staff, free of cost, at Police Radio Hqrs or at any other place indicated by U.P. Police Radio Hqrs.

3- Warranty period should not be less than two years.

4- After expiry of warranty period, supplier will take AMC at reasonable and mutual agreed price.

5- It is mandatory on the part of supplier to change to faulty parts or corrupt software of the system within warranty period, free of cost.

6- The supplier must be able to upgrade the software and security feature of the systems from time to time or as and when required by U.P. Police Radio Hqrs.

7- The supplier must have enough expertise and manpower to execute Annual Maintenance Contract (AMC).

MESSAGE FORM					
IN	Call	Priority	Trans Instruction	NR	GR

To	
Info	
From	

Originator's No.	Date	In Reply to	Date	Security Classifications

TEXT

Priority		TOO	THI

Receiver's Signature

LOG BOOK OF VPN OVER WI-MAX OF RADIO HQRS LUCKNOW

Name of operator	NR	GR	Start Time	End Time	From Distt	To Distt	Tx	Rx	No. of R/G	Priority			Time of Printing	Pending
										MUG	URG	ORD		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Above are some formats of the various reports to generated by the system.