Date: 08 MAY 2014

Corrigendum-II

RFP for Selection of System Integrator for Implementation of e-Governance in Registration Offices across the State of Uttar Pradesh (e-bid reference no. UPLC/HW/2014/04)

This is reference to invitation of Bid (e-bid reference no. UPLC/HW/2014/04) for Selection of System Integrator for Implementation of e-Governance in Registration Offices across the State of Uttar Pradesh published in News Papers and on e-tender portal http://etender.up.nic.in

As per the provisions mentioned in the Tender Document vide Bid reference no. UPLC/HW/2014/04, the corrigendum-II is issued on following points :-

S.N.	Particulars	
1	Corrigendum to RFP for Selection of System Integrator for Implementation of e-Governance in Registration Offices across the State of Uttar Pradesh.	Attached
2	Revised BOQ	

The above Corrigendum-II will be an integral part of the e-bid reference no. UPLC/HW/2014/04.

(Praveen Kumar)
Deputy General Manager

यू पी इलेक्ट्रानिक्स कारपोरेशन लिमिटेड
U.P. Electronics Corporation Limited
(A UP GOVT. UNDERTAKING)

Corrigendum to RFP for
Selection of System Integrator for
Implementation of e-Governance in Registration
offices across the State of Uttar Pradesh

eBid reference no. UPLC/HW/2014/04

Issued by:

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UPLC published the RFP for selection of System Integrator for Implementation of e-Governance in Registration offices across the State of Uttar Pradesh on 03.03.2014. The Pre-bid conference for the same was held on 20.03.2014 at UPLC's office in Lucknow. UPLC have reviewed the queries received so far. This Corrigendum will become an integral part of RFP and all the terms and conditions / clauses shall be read keeping both the documents accordingly.

S. No.	Section in RFP	Page no.	Existing clause	Modified Clause
1.	2.2 & 11.3, point 5	24& 187	The Bidder (Prime Bidder in case of a Consortium)should have a positive Net Cash Accruals of at least INR 30 crores (PAT + Depreciation – Dividends) for the last financial years i.e. 2010-2011, 2011-2012 & 2012-13).	The Bidder (Prime Bidder in case of a Consortium) should have a positive Net Cash Accruals of at least INR 30 crores (PAT + Depreciation – Dividends) in <u>at least one of the last two financial years</u> i.e. (2011-2012 & 2012-13).
2.	2.2 & 11.3 point 6	24& 187	The Bidder (Prime Bidder in case of a Consortium) should have successfully implemented/implementingat least ONE IT project with value of at least INR 75 Crores in the last 5 financial years (i.e. 2008-09, 2009-10, 2010-11, 2011-12 & 2012-13), in India for any Central / State Government / PSUs / Banks from multiple locations (minimum 150). The scope of such projects should include hardware supply, deployment / development / customization of application software, networking, and system integration. *Note: Multiple work orders against individual Project for the delivery of services / products*	The Bidder (Prime Bidder in case of a Consortium) should have successfully implemented/implementing **two projects worth a combined value (sum of project value of 2 projects) of at least INR 75 Crores in the last 6 financial years** (i.e. 2008-09, 2009-10, 2010-11, 2011-12, 2012-13&**2013-14**), in India for any Central / State Government / PSUs / Banks from multiple locations (minimum 150). Thescope of such projects shall **include hardware supply / IT system integration / networking system integration**. **Out of the aforementioned 2 projects, at least one project shall be of minimum project value of INR 50 Crores.** *Note: Multiple work orders against individual Project for the*

S. No.	Section in RFP	Page no.	Existing clause	Modified Clause
			during the last 5 years shall be considered.	*delivery of services / products during the last 6 years shall be considered.*
3.	2.2 & 11.3, point 9	25& 188	The Bidder (Prime bidder in case of consortium) shall have on their rolls as on 31st March 2013 at least 800 technically qualified professionals on its rolls in the area of networking, systems integration, infrastructure maintenance support & services, connectivity etc. Out of which: ……. for large scale IT projects.	As on 31st March 2014, the Prime Bidder and the Consortium member collectively shall have at least 800 technically qualified professionals on their rolls. Out of which, Prime Bidder shall have at least 450 technically qualified professionals on its rolls. (Technically qualified professionals would mean professionals in the area of networking, systems integration, infrastructure maintenance support & services, connectivity etc.) One of the Consortium members shall be able to provide all the following resources: ………..for large scale IT projects.
4.	3.6.4, 3rd bullet point	39	The existing SWAN bandwidth at Tehsil level is 2 Mbps on sharing basis and the uptime of SWAN is not very good especially at Tehsil level, hence a backup connectivity of L3 MPLS VPN has been envisaged for the project.	A backup connectivity of L3 MPLS VPN has been envisaged for the project.
5.	3.7, Point 1	43	Enterprise Management System	SI have the option of extending the Client licenses of the EMS already available in UP-SDC with 5 year support for updates, OR, Supply a new EMS tool with support for 5 years updates. Thetechnical specificationsof EMS toolhave been provided in Annexure 15.
6.	4.3, point e	50-51	The data centre is to be connected on a minimum	The data centre is to be connected on a minimum 50 Mbps Layer

S. No.	Section in RFP	Page no.	Existing clause	Modified Clause
			50 Mbps Layer 3 MPLS cloud preferably on Fibre. The bidder is required to quote for 50 Mbps Layer 3 MPLS cloud and dedicated bandwidth of 02 MBPS at category 'A' SRO offices and 512 KBPS at 'B' and 'C' category SRO offices.	3 MPLS cloud preferably on Fibre. The bidder is required to quote for 50 Mbps Layer 3 MPLS cloud at Data Centre and dedicated **bandwidth of 02 MBPS at category 'A' SRO and 'B' SRO offices** and 512 KBPS at 'C' category SRO offices.
7.	4.3 (f)	51	The locations for primary & secondary connectivity have been specified in section 11.11.2 of the RFP.	The locations for primary & secondary connectivity have been specified in the Annexure 1 of this Corrigendum to RFP. It also specifies the type of Primary connectivity already available at some of the SRO locations.
8.	4.3(j)	51	Client expects the bidder…. MPLS links for the IGRS Data Centre, **DR-site** and the branches/offices identified by the Department…… State Data Centre.	DR site has been removed from the clause.
9.	4.3.3	52	Service level agreement (SLA) for connectivity • Data centre: 99.5% • All IGRS Offices/Locations: 98%	The revised Service level agreement (SLA) for connectivity has been described in Annexure 2.
10.	4.4	54	Requirement of Database Administrator = 1	Requirement of Database administrator = 2
11.			-	Following **Technical Field Staff** is required in addition to manpower mentioned in RFP: • From start of operations in a district till end of 1st year from Go-Live – One resource at each district • From 2nd year start till completion of project – One resource at each Mandal Technical resource will assist in supervising the issues at the field

S. No.	Section in RFP	Page no.	Existing clause	Modified Clause
				level and will provide support in resolving technical issues related to software application,system software, Hardware & Networking. The minimum qualifications & experience requirements of Technical Field Staff will remain same as specified on Page 177 of RFP.
12.	4.5	55	The selected SI will be required to set up a Central Helpdesk, through an outsourced third party agency,.......business process related queries / grievances.	The selected SI will be required to set up a Central Helpdesk, through an outsourced third party agency **or through internal resources**, ……………….. business process related queries / grievances.
13.	4.7	60	SI shall ensure Vulnerability assessment done by any CERT-IN empanelled agency designated by the Registration Department …………. as per SLAs.	NIC will hand over the IGRS software application to SI after conducting the necessary audits (STQC or through CERT-IN empanelled agency) and after fixing all the non-conformances highlighted during audits. **The requirement of Vulnerability Assessment Toolhas been removed from Scope of work of SI.**
14.	4.7.2	60	SI will be required to make following consumables available from time to time to ensure smooth operations. The SI shall maintain an inventory adequate for one month's operation at each SRO. • **Consumables for scanner** • UPS Batteries	"Consumables for scanners" has been removed from scope of work of SI.
15.	5.2.3, point 4	70	<table><tr><td>**Service metric parameter**</td><td>**Measurement basis**</td><td>**Target**</td><td>**Penalty**</td></tr><tr><td>Repair / replacement</td><td>Time taken in repairing or</td><td>Any issue at the</td><td>Rs. 50,000/- per hour of</td></tr></table>	The service level for "Repair / replacement of any faulty component or equipment or system software at data centre" has been modified as follows:

S. No.	Section in RFP	Page no.	Existing clause				Modified Clause			
			of any faulty component or equipment or system software at data centre	replacement	data centre shall be resolved within 4 hrs. of reporting of fault	delay in resolution of issue subject to a max. of Rs. 5,00,000/-	**Service metric parameter**	**Measurement basis**	**Target**	**Penalty**
							Repair / replacement of any faulty component or equipment or system software at data centre	Time taken in repairing or replacement	Any issue impacting services at SRO offices – shall be resolved within 4 hrs. of reporting of default	Rs. 50,000/- per hour of delay in resolution of issue subject to a max. of Rs. 5,00,000/-
									Any other issues at the data centre – shall be resolved within 24 hrs. of reporting of fault	Rs. 25,000/- per hour of delay in resolution of issue subject to a max. of Rs. 5,00,000/-
16.	5.3	71	i. The total penalty in a year shall not exceed 10% of the total contract value. Default beyond 10% of the total ….. termination of contract with SI.				The clause has been modified as follows: i. The total penalty to be imposed on Bidder will be <u>limited to 10% of the Total Contract Value</u>. Default beyond 10% of the total contract value…. termination of contract with SI.			
17.	5.4 and 7.35	71& 115	-				Following clause has been added to existing clauses: "The total liability of the bidder towards UPLC / IGRS under this RFP will be <u>limited to the 100% of the contract value</u>".			
18.	7.19	104	-				Following clause has been added to existing clauses: "h. **Confidential Information** does not include information which: • is publicly available at the time of its disclosure; or • is made publicly available by Department following disclosure; or • is already known to or was in the possession of recipient party prior to disclosure under this Agreement; or • is or has been independently developed by the recipient Party			

S. No.	Section in RFP	Page no.	Existing clause	Modified Clause
				without using the Confidential Information; • is required to be disclosed in accordance with Court order or any other statutory or regulatory authority, but the same shall be done with consent from Department / UPLC.
19.	7.23	105	-	Following clause has been added to existing clauses: "c. In case of Suspension of work, due to reasons not attributable to SI, as defined in Points a & b: • An extension of time for completion corresponding with the delay caused by any such suspension of the works as aforesaid shall be granted to the SI on receipt of request by SI. In case SI decides to not submit such request, then no extension of timelines shall be granted."
20.	7.25	106	Payment schedule	The revised payment schedule is as provided in Annexure 3.
21.	7.34, point b – i	114	i. Any dispute or difference whatsoever arising between the parties to the Agreement out of or relating to the construction, meaning, scope, operation or effect of the Agreement or validity of the breach thereof, which cannot be resolved through negotiation process, shall be referred to a sole Arbitrator to be mutually agreed by both the parties. In the event of disagreement between the parties the sole Arbitrator shall be the Principal Secretary of Department of Stamps and Registration,	**i.** Any dispute or difference whatsoever arising between the parties to the Agreement out of or relating to the construction, meaning, scope, operation or effect of the Agreement or validity of the breach thereof, which cannot be resolved through negotiation process, shall be referred to a sole Arbitrator. The sole Arbitrator for the project shall be the "Principal Secretary of Department of Stamps and Registration, GoUP". The decision of the arbitrator shall be final and binding on the parties to this contract.The Arbitration shall be held in Lucknow, India and the language shall be in Hindi only.

S. No.	Section in RFP	Page no.	Existing clause	Modified Clause
			GoUP. The Provision of Arbitration and Conciliation Act 1996 shall apply. The Arbitration shall be held in Lucknow, India and the language shall be English only.	
22.	7.35	115-116	Limitation of the bidder's liability towards UPLC / IGRS	Following clause has been added in the Section 7.35 – Limitation of the bidder's liability towards UPLC / IGRS: g. **Liability for Content** – Departmentshall be fully responsible for the content of the data provided to the Bidder for use during the project and data entry carried through the resources (hardware etc.) provided by Bidder at SRO and other Departmental offices. Department shall use the same in accordance with all applicable statutory or regulatory rules, regulations and guidelines. Department shall not use the resources for sending any data or messages which is/are offensive, abusive, indecent and obscene or in violation of any Applicable Law. Department shall be solely liable and responsible for any breach of the aforesaid obligation(s) and no liability arising from such breach shall be imposed on the Bidder. Department shall indemnify and keep the Bidder indemnified against all costs, claims, damages or proceedings arising out of breach of this clause.
23.	7.41.3	120	The Bidder shall not assign to others, in whole or in part, their obligation to perform under this Agreement, except with UPLC's prior written consent. Bidder (Prime bidder in case of	"The Bidder shall not assign to others, in whole or in part, their obligation to perform under this Agreement, **except with UPLC's / Department's prior written consent. Sub-contracting will only be limited to Site preparation and Connectivity activities.**

S. No.	Section in RFP	Page no.	Existing clause	Modified Clause
			Consortium) will remain solely liable for all work / obligations under this agreement	Bidder (Prime bidder in case of Consortium) will remain solely liable for all work / obligations under this agreement."
24.	10.2	154	Bill of material for Client locations	The revised Bill of Material for Client Locations has been provided in Annexure 4.
25.	10.3	155	Annexure – Bill of material for State Data Centre	The revised Bill of Material for State Data Centre has been provided in Annexure 5.
26.	10.4.1	156	Minimum technical specifications of Blade Chassis	The revised minimum technical specifications of Blade Chassis have been provided in Annexure 6.
27.	10.4.2	158	Minimum technical specifications of Blade Server	The revised minimum technical specifications of Blade Server have been provided in Annexure 7.
28.	10.4.3, (5)	161	The switch shall support different port types such as FL_Port, F_Port, E_Port, EX_Port	The switch shall support different port types such as FL_Port, F_Port, E_Port / EX_Port
29.	10.4.4	161	Minimum Technical Specifications of SAN Storage	The revised minimum Technical Specifications of SAN Storage have been provided in Annexure 8.
30.	10.4.5	163	Technical specifications of Tape Library	The technical specifications of Tape Library have been DELETED. Instead of Tape Library only cartridge shall be supplied by the bidder for LTO6 tape drive available in UP-SDC
31.	10.4.6	164	Technical specifications of Backup Software	The technical specifications of Backup software have been DELETED.
32.	10.4.7	165	Minimum Technical Specifications of LCD Signature Tablet	The revised minimum technical specifications of LCD signature tablet are as follows: • Display – MonochromeReflective TFT LCD • Size - 10.2 x 7.6 cm (diagonal 5") • Resolution (max) - 640 x 480 pixels

S. No.	Section in RFP	Page no.	Existing clause	Modified Clause
				• Protective screen - Anti-glare • Other - Real-time visualisation of the signature on screen Pen and tablet • Reading method - Electromagnetic Resonance (EMR) • Battery-free & cordless pen - Yes • Data interfaces Full speed - USB • Power management - USB BUS power • Data cable - USB • <u>Device shall have drivers for Linux, Windows 7 & 8 operating systems</u> • <u>Shall be from a reputed brand</u>
33.	10.4.8 and 10.4.9	166-167	Minimum Technical Specifications of Firewall and IPS	Requirement of Firewall and IPS has been removed from Scope of work of SI.
34.	10.4.12	170	Minimum Technical Specifications of Server (to be used at Category A, B, C SRO offices)	The revised minimum technical specifications of Server (to be used at Category A, B, C SRO offices) have been provided in Annexure 9.
35.	10.4.14	172	Minimum Technical Specifications of Biometric device	The revised minimum technical specifications of Biometric Device have been provided in Annexure 10.
36.	10.4.15	172	Minimum Technical Specifications of Digital Camera	The revised minimum technical specifications of Digital Camera are as follows: • Digital Camera with 10 Mega Pixels or higher with minimum 3x optical zoom, • 05 years on-site warranty • Device shall have drivers for Linux, Windows 7 & 8 operating systems • Shall be from a reputed brand like Samsung, Nikon, Canon, Sony, Fujifilm, etc. • Hi-Speed USB 2.0 certified

S. No.	Section in RFP	Page no.	Existing clause	Modified Clause
				• Digital Still Imaging & High-definition video • Tripod / camera stand for holding camera in still position
37.	10.4.16	172	Network Laser Printer	Additional requirement: "The printer shall have **Drivers available for Linux and Windows operating system**"
38.	10.4.17	172	16 port 10/100/1000 unmanaged switch	The revised specifications for 16 Port 10/100/1000 unmanaged switch have been specified in Annexure 11.
39.	10.4.18	172-173	The DG set shall be – "Air cooled"	The revised requirement shall be read as – "**Air / Liquid Cooled**"
40.	10.4.22	175	Min. technical specifications of "Offline / line interactive UPS"	The technical specifications of "Offline / line interactive UPS" have been DELETED and requirement for Offline / line interactive UPS has been removed
41.	11.11.2.2	204	Detailed break up of Financial Bid	The revised format for "Detailed break up of Financial bid" has been provided in Annexure 12.
42.	-	-	Router	Router with necessary network security features to be deployed at SRO offices (354 locations). The OEMof router should be listed in any quadrant of independent technology and market research companies like Gartner and Forrester research.
43.	-	-	Load Balancer	Technical specifications of Load Balancer have been provided in Annexure 13.
44.	-	-	-	Technical Specifications of existing infrastructure at State Data Centre has been provided in Annexure 14.
45.	15	-	Abbreviations – IGRS	IGRS will mean – Inspector General of Stamps & Registration, UP, acting on behalf of Dept. of Stamps and registration, UP

Annexure 1 – Locationsfor Connectivity and status of availability

S. No.	Mandals	District	SRO office	SWAN connectivity completed or not	Type of SWAN connectivity
1	Meerut	Meerut	सदर—1	Completed	RF
2			सदर—2	Completed	RF
3			सदर—3		
4			सदर—4		
5			सरधना	Completed	RF
6			मवाना	Completed	RF
7		Ghaziabad	सदर—1	Completed	RF
8			सदर—2		
9			सदर—3		
10			सदर—4		
11			सदर—5		
12			मोदीनगर		
13		Hapur	हापुड़—1		
14			हापुड़—2		
15			गढ़मुक्तेश्वर		
16			घौलाना		
17		Baghpath	बड़ौत	Completed	Cat6
18			बागपत	Completed	RF
19			खेकड़ा	Completed	Cat6
20	G B Nagar	G B Nagar	नोयडा—1	Completed	Lease line
21			नोयडा—2		
22			नोयडा—3		
23			गौतमबुद्धनगर	Completed	RF
24			दादरी	Completed	Cat6
25			जेबर	Completed	RF
26		Bulandshehr	सदर—1	Completed	RF
27			सदर—2		
28			अनुपशहर	Completed	RF
29			खुर्जा	Completed	RF
30			सिकन्दराबाद		RF
31			शिकारपुर		RF
32			स्याना		RF

S. No.	Mandals	District	SRO office	SWAN connectivity completed or not	Type of SWAN connectivity
33			डिबाई	Completed	RF
34	Saharanpur	Saharanpur	सदर—1		
35			सदर—2		
36			सदर—3		
37			देवबन्द		
38			रामपुर मनि0		
39			नुकुड़		
40			बेहट		
41		Muzzafanagar	सदर—1		
42			सदर—2		
43			जानसठ		
44			बुढ़ाना		
45			खतौली		
46		Shamli	शामली		
47			कैराना		
48	Muradabad	Muradabad	सदर—1		
49			सदर—2		
50			बिलारी		
51			ठाकुरद्वारा		
52			कांठ		
53		Sambhal	चन्दौसी		
54			सम्भल		
55			गुन्नौर		
56		Bijnor	सदर		
57			चॉदपुर		
58			धामपुर		
59			नजीबाबाद		
60			नगीना		
61		Rampur	सदर		
62			विलासपुर		
63			मिलक		
64			स्वार		
65			शाहाबाद		
66			टान्डा		

S. No.	Mandals	District	SRO office	SWAN connectivity completed or not	Type of SWAN connectivity
67		**Amroha**	अमरोहा		
68			हसनपुर		
69			धनौरा		
70	**Bareli**	**Bareli**	सदर—1		
71			सदर—2		
72			बहेड़ी		
73			ऑवला		
74			फरीदपुर		
75			नवाबगंज		
76			मीरगंज		
77		**Badayun**	सदर—1		
78			सदर—2		
79			विसौली		
80			दातागंज		
81			सहसवान		
82			बिल्सी		
83		**Shahjahapur**	सदर—1		
84			पुवायॉ		
85			तिलहर		
86			जलालाबाद		
87		**Peelibeeth**	सदर		
88			पूरनपुर		
89			बीसलपुर		
90	**Agra**	**Agra**	सदर—1		
91			सदर—2		
92			सदर—3		
93			सदर—4		
94			सदर—5		
95			एतमादपुर		
96			किरावली		
97			खैरागढ़		
98			फतेहाबाद		
99			वाह		
100		**Mathura**	सदर—1		

S. No.	Mandals	District	SRO office	SWAN connectivity completed or not	Type of SWAN connectivity
101			सदर—2		
102			छाता	Completed	RF
103			मॉट	Completed	RF
104			महावन	Completed	RF
105		Mainpuri	सदर		
106			भोगाव		
107			करहल		
108		Ferozabad	सदर—1		
109			सदर—2		
110			टूण्डला		
111			शिकोहाबाद		
112			जसराना		
113	Aligarh	Aligarh	सदर—1		
114			सदर—2		
115			सदर—3		
116			खैर		
117			अतरौली		
118			इगलास		
119			गभाना		
120		Hathras	हाथरससदर		
121			सादाबाद		
122			सिकन्दराराऊ		
123			सासनी		
124		Kasgunj	कासगंज		
125			पटियाली		
126			सहावर		
127		Etah	सदर		
128			अलीगंज		
129			जलेसर		
130	Kanpur	Kanpur city	सदर—1		
131			सदर—2		
132			सदर—3		
133			सदर—4		
134			घाटमपुर		

S. No.	Mandals	District	SRO office	SWAN connectivity completed or not	Type of SWAN connectivity
135			बिल्हौर		
136		Kanpur rural / Ramabai Nagar	अकबरपुर		
137			रसूलाबाद		
138			भोगनीपुर		
139			डेरापुर		
140			सिकन्दरा		
141		Farokabad	सदर		
142			कायमगंज		
143			अमृतपुर		
144		Etawah	सदर		
145			भरथना		
146			जसवन्तनगर		
147			चकरनगर		
148			सैफई		
149		Auriya	सदर		
150			बिधूना		
151		Kannonj	कन्नौज		
152			छिबरामऊ		
153			तिर्वा		
154	Lucknow	Lucknow	सदर–1	**Completed**	**RF**
155			सदर–2		
156			सदर–3		
157			सदर–4		
158			सदर–5		
159			मोहनलालगंज	**Completed**	**Cat6**
160			मलिहाबाद	**Completed**	**RF**
161			बख्शीकातालाब	**Completed**	**RF**
162		Unnao	सदर	**Completed**	**Cat6**
163			हसनगंज	**Completed**	**RF**
164			सफीपुर	**Completed**	**RF**
165			पुरवा	**Completed**	**Cat6**
166			बीघापुर	**Completed**	**Cat6**
167		Raebareily	सदर	**Completed**	**Cat6**

S. No.	Mandals	District	SRO office	SWAN connectivity completed or not	Type of SWAN connectivity
168			महराजगंज	Completed	RF
169			लालगंज	Completed	RF
170			ऊॅंचाहार		RF
171			डलमऊ	Completed	Cat6
172	Seetapur	Seetapur	सदर	Completed	RF
173			मिश्रिख	Completed	RF
174			बिसवॉं	Completed	RF
175			महमूदाबाद	Completed	Cat6
176			लहरपुर	Completed	RF
177			सिधौली	Completed	Cat6
178		Hardoi	सदर	Completed	RF
179			संडीला	Completed	RF
180			बिलग्राम	Completed	RF
181			शाहाबाद	Completed	RF
182			सवायजपुर	Completed	RF
183		Kheri	सदर	Completed	RF
184			मोहम्मदी	Completed	RF
185			गोला	Completed	RF
186			धौरहरा	Completed	RF
187			निधासन	Completed	RF
188			पलिया	Completed	RF
189	Jhansi	Jhansi	झांसी–1		
190			झांसी–2		
191			मऊरानीपुर		
192			मोठ		
193			गरौठा		
194			टहरौली		
195		Jalaun	उरई		
196			कोंच		
197			माधवगढ़		
198			जालौन		
199			कालपी		
200		Lalitpur	सदर		
201			मेहरौनी		

S. No.	Mandals	District	SRO office	SWAN connectivity completed or not	Type of SWAN connectivity
202			तालबेहट		
203	ChitrakootDham	Chirakoot	सदर		
204			मऊ		
205		Hameerpur	सदर		
206			मौदहा		
207			राठ		
208			सरीला		
209		Banda	सदर		
210			अर्तरा		
211			बबेरू		
212			नरैनी		
213		Mahoba	सदर		
214			कुलपहाड़		
215			चरखारी		
216	Gorakhpur	Gorakhpur	सदर—1		
217			सदर—2		
218			गोला		
219			सहजनवॉ		
220			बॉसगॉव		
221			खजनी		
222			चौरी—चौरा		
223			कैम्पीयरगंज		
224		Devariya	सदर		
225			सलेमपुर		
226			रूद्रपुर		
227			भॉटपार		
228			बरहज		
229		Maharajgunj	सदर		
230			निचलौल		
231			नौतनवा		
232			फरेदा		
233		Kushinagar	सदर		
234			हाटा		
235			तमकुहीराज		

S. No.	Mandals	District	SRO office	SWAN connectivity completed or not	Type of SWAN connectivity
236			कसयाॅ		
237	Azamgarh	Azamgarh	सदर		
238			सगड़ी		
239			फूलपुर		
240			लालगंज		
241			बूढ़नपुर		
242			निजामाबाद		
243			मेहनगर		
244		Baliya	सदर		
245			रसड़ा		
246			बाॅसडीह		
247			बेल्थरारोड		
248			बैरिया		
249			सिकन्दरपुर		
250		Mau	सदर		
251			मो0 गोहना		
252			घोसी		
253			मधुबन		
254	Basti	Basti	सदर		
255			हरैया		
256			भानपुर		
257			रूधौली		
258		Siddharthnagar	नौगढ़		
259			बाॅसी		
260			डुमरियागंज		
261			इटवा		
262			सोहरतगढ़		
263		Santkabeernagar	खलीलाबाद		
264			मेहदावल		
265			घनघटा		
266	Faizabad	Faizabad	सदर		
267			रुदौली		
268			बीकापुर		
269			मिल्कीपुर		

S. No.	Mandals	District	SRO office	SWAN connectivity completed or not	Type of SWAN connectivity
270			सुहावल		
271		Sultanpur	सदर		
272			कादीपुर		
273			लम्हुआ		
274			जयसिंहपुर		
275		Barabanki	सदर		
276			फतेहपुर	Completed	RF
277			हैदरगढ़	Completed	RF
278			रामनगर	Completed	RF
279			रामसनेहीघाट	Completed	RF
280			सिरौली	Completed	RF
281		Ambedkar Nagar	अकबरपुर		
282			जलालपुर		
283			टान्डा		
284			आलापुर		
285			भीटी		
286		Amethi	अमेठी		
287			मुसाफिरखाना		
288			सलोन	Completed	Cat6
289			गौरीगंज		
290			तिलोई		RF
291	Devipatan	Gonda	गोण्डा		
292			कर्नेलगंज		
293			तरबगंज		
294			मनकापुर		
295		Bahraich	कैसरगंज		
296			सदर		
297			महसी		
298			नानपारा		
299		Balrampur	तुलसीपुर		
300			उतरौला		
301			बलरामपुर		
302		Shravasti	भिनगा		
303			इकौना		

S. No.	Mandals	District	SRO office	SWAN connectivity completed or not	Type of SWAN connectivity
304	Varanasi	Varanasi	सदर–1		
305			सदर–2		
306			सदर–3		
307			सदर–4		
308			पिन्डरा		
309			गंगापुर		
310			रामनगर		
311		Jaunpur	सदर		
312			मछलीशहर	Completed	RF
313			शाहगंज	Completed	RF
314			केराकत	Completed	RF
315			मड़ियाहूँ	Completed	RF
316			बदलापुर	Completed	RF
317		Ghazipur	मुहम्मदाबाद		
318			सदर		
319			जमानिया		
320			सैदपुर		
321			जखनियॉ		
322		Chandouli	सदर		
323			सकलडीहा		
324			चकिया		
325	Vindhyachal	Mirzapur	सदर		
326			चुनार		
327			मड़िहान		
328			लालगंज		
329		Sonbadhra	सदर		
330			घोरावल		
331			दुद्धी		
332		Santravidasnagar	ज्ञानपुर		
333			भदोही		
334			औराई		
335	Allahabad	Allahabad	सदर–1		
336			सदर–2		
337			सोराव	Completed	RF

S. No.	Mandals	District	SRO office	SWAN connectivity completed or not	Type of SWAN connectivity
338			फूलपुर	**Completed**	**RF**
339			हड़िया	**Completed**	**RF**
340			मेजा	**Completed**	**RF**
341			करछना	**Completed**	**RF**
342			बारा	**Completed**	**RF**
343			कोरॉव	**Completed**	**RF**
344		**Fatehpur**	सदर		
345			बिन्दकी		
346			खागा		
347		**Pratagarh**	सदर		
348			कुन्डा		
349			पट्टी		
350			लालगंज		
351			रानीगंज		
352		**Kausambi**	मंझनपुर		
353			चायल		
354			सिराथू		

Annexure 2 – Service Level agreement (SLA) for connectivity

The revised service levels for Connectivity are as follows:

S. No.	Service metric parameter	Measurement basis	Target	Penalty
1.	Connectivity uptime at SRO offices	Uptime will be calculated on monthly basis as follows = (Total uptime of connectivity during office hrs.) / (Total office hrs. in a month)	98%	• Uptime till 98% at all offices – No penalty • 95% =< Uptime < 98% - 5% of monthly bill per office having uptime between 95% and 98% • Uptime < 95% - 10% of monthly bill per office with uptime below 95% to a maximum of overall penalty limits
2.	Connectivity uptime at Data centre (for connectivity provided by SI)	Uptime will be calculated on monthly basis as follows = (Total uptime of connectivity in hrs.) / (Total hrs. in a month) Downtime because of Data Centre Operator or DC components will not be accounted for penalty purposes.	99.5%	• Uptime till 99.5% at DC – No penalty • 97% =< Uptime < 99.5% - 5% of monthly bill • Uptime < 97% - 10% of monthly bill to a maximum of overall penalty limits

Annexure 3 – Revised Payment Schedule

The payment schedule has been revised as follows:

S. No.	Payment Schedule	Fee Payable	Documents
Data Centre – Installation and Commissioning of hardware, network components and site preparation and AMC support			
1.	Successful commissioning of hardware, networking components, etc. with site preparation at state data centre (Except for Application Software developed by NIC)	80% of (E-1) (as per actual deployment)	Payments against the following: • Original Invoice (on actual basis) • Insurance Certificate • Pre–Dispatch Inspection Report issued by UPLC / IGRS • Successful commissioning certificate
2.	Successful installation and commissioning of all system software, database and other software tools at Data centre	80% of F (as per actual deployment)	• Penalties, if any,as per provisions of RFP shall be deducted from payments • Copy of BG submitted to UPLC / IGRS
3.	Successful deployment of Software Application of IGRS (provided by NIC) at Data centre, OR, 6 months, whichever is earlier	15% of (E-1) + 10% of F (as per actual deployment)	Payment against: • Original invoice • Acceptance certificate from IGRS / UPLC for successful deployment of Software at Data Centre to be done by NIC and facilitated by SI, OR, successful completion of 6 months • Penalties, if any, as per provisions of RFP, shall be deducted from payments • Copy of BG submitted to UPLC / IGRS
4.	Successful completion of 3 years from Commissioning of hardware	5% of (E-1) (as per actual deployment)	Payments against the following: • Original Invoice along with performance report
5.	Successful delivery of warranty services after 3 years of commissioning of hardware till completion of 5 years	(E-2 + 10% of F) distributed in 4 equal half-yearly instalments (as per actual deployment)	• Certificate from UPLC / IGRS for the successful completion of services • Penalties, if any, as per provisions of RFP, shall be deducted from payments • Copy of BG submitted to UPLC /

S. No.	Payment Schedule	Fee Payable	Documents
			IGRS
Client locations / IGRS offices – For installation, commissioning and AMC support for Hardware at client locations, Primary Connectivity and Site preparation (as per BOM) for Client locations			
6.	Successful commissioning of hardware, networking, connectivity with site preparation at Lucknow, Agra, Kanpur, Allahabad & Meerut Mandals of the IGRS offices and deployment of Technical resource at District level	• 80% of cost of hardware, site preparation and primary connectivity (one time charges) commissioned on actual no. of sites using unit rates provided in A-1 & C-1 • 10% on successful commissioning of IGRS software application at SRO offices of these Mandals, OR, 6 months from commissioning of hardware, whichever is earlier	Payments against the following: • Original Invoice • Insurance Certificate • Pre–Dispatch Inspection Report issued by UPLC / IGRS • Successful commissioning certificate of hardware • Successful commission certificate for software (as per BOM) • Penalties, if any, as per provisions of RFP, shall be deducted from payments • List of resources and contact nos. of Technical Filed staff deployed at Districts • Copy of BG submitted to UPLC / IGRS
7.	Successful commissioning of hardware, networking, connectivity systems software (except Application software) with site preparation at Moradabad, Faizabad, Bareilly, Aligarh & Saharanpur Mandals of the IGRS offices and deployment of Technical resource at District level	• 80% of cost of hardware, site preparation and primary connectivity (one time charges) commissioned on actual no. of sites using unit rates provided in A-1 & C-1 • 10% on successful commissioning of IGRS software application at SRO offices of these Mandals, OR, 6 months from commissioning of hardware, whichever is earlier	
8.	Successful commissioning of hardware, networking, connectivity, software (except application software) with site preparation at remaining Mandals of the IGRS offices (SI will play a role of facilitator to NIC)	• 80% of cost of hardware, site preparation and primary connectivity (one time charges) commissioned on actual no. of sites using unit rates provided in A-1 & C-1 • 10% on successful commissioning of IGRS software application at SRO	

S. No.	Payment Schedule	Fee Payable	Documents
		offices of these Mandals, OR, 6 months from commissioning of hardware, whichever is earlier	
9.	Successful completion of operations for 3 years after Go-Live of project	Remaining 10% for each of the above phases of deployment of hardware	Payments against the following: • Original Invoice along with performance report • Certificate from IGRS/UPLC for the successful completion of 3 years from Go-Live of project • Penalties, if any, as per provisions of RFP, shall be deducted from payments • Copy of BG submitted to UPLC / IGRS
10.	Completion of 1st year of extended warranty	Cost of (A-2 + B-2 + C-2) to be paid over 4 half yearly equal instalments	Payments against the following: • Original Invoice along with performance report • Certificate from IGRS/UPLC for the successful completion of the 1st / 2nd year of extended warranty • Penalties, if any, as per provisions of RFP, shall be deducted from payments • Copy of BG submitted to UPLC / IGRS
11.	Completion of 2nd year of extended warranty		
Connectivity (Secondary)			
12.	Payment for Bandwidth and O&M	On Quarterly basis for sites commissioned	Payments against the following: • Submission of original invoice by SI along with performance report • Penalties, if any, as per provisions of RFP, shall be deducted from payments • Copy of BG submitted to UPLC / IGRS

Annexure 4 – Revised Bill of Material for Client Locations

The revised BOM for Client Locations is as follows:

S. No.	IT Components	IG Offices	DIG	AIG	SRO			Total
					A	**B**	**C**	
		3	**23**	**92**	**60**	**165**	**109**	
1.	Server	0	0	0	60	165	109	334
2.	Laptop	3	23	92	0	0	0	118
3.	Desktop	4	0	0	300	660	327	1366
4.	Digital Camera	0	0	0	240	495	218	953
5.	Biometric devices	0	0	0	300	660	327	1362
6.	LCD Signature Tablet	0	0	0	240	495	218	953
7.	Printers	4	23	92	240	495	218	1072
8.	LAN Switch – 16 Ports	1	0	0	60	165	109	335
9.	UPS 6 KVA	1	0	0	60	165	109	335
10.	LAN Cabling	7	0	0	585	1155	545	2292
11.	DG set – 10 KVA	0	0	0	0	165	109	274
12.	Network Rack	1	0	0	60	165	109	335

Note: One Desktop at each SRO and Laptop will be supplied with Windows 8.1 SL Operating System (with Microsoft Defender) while all remaining desktops at SRO offices will be supplied withRed Hat Linux / SUSE Linux / Ubuntu Linux based Operating System (OS).

Annexure5 – Bill of material at State Data Centre

The modified requirements are as follows:

The minimum quantities of Bill of material required at the data centre are as follows. The SI is required to propose a BOM suitable for meeting the requirements of project and SLAs as defined in the RFP / corrigendum for the project. **In case any critical component of the solution is missed as a part of the bid, then the same shall be provided by SI during implementation at no additional cost to Department**.

The revised BOM for hardware at Data centre is as follows:

Min. Hardware BOM for Data Centre Note: SI is bound to optimize line item 1 to 15 mentioned in this table as per space available within UP-SDC	
S.No. **Items**	**Quantity**
Blade Servers	
1. Blade chassis	2
2. Web Server	2
3. Application Server	2
4. Database Servers	2
5. File Servers	2
6. Standby Server	1

S.No.	Items	Quantity
Min. Hardware BOM for Data Centre Note: SI is bound to optimize line item 1 to 15 mentioned in this table as per space available within UP-SDC	
7.	Staging and testing server	1
Storage		
8.	Storage SAN Box (40 TB usable capacity after RAID 5)	1
9.	24 Port SAN Switch for SAN Connectivity	2
10.	Cartridge for LTO6 tap drive available in UP-SDC	10
Network components		
11.	IP KVM Switch, LCD Monitor & keyboard	1
12.	L2 Switch	4
13.	Router module / card for existing router of SDC	2
14.	Module for External firewall of SDC	2
15.	Load Balancer	3

The revised BOM for Software applications / tools required at Data Centre has been revised as follows:

S. No.	Items	Item Description	Quantity
Min. Software BOM for Data centre		
1.	Enterprise Linux Server	For Server OS	10
2.	Cluster Suit / High Availability		6
3.	Oracle Database Enterprise Edition Processor with Real Application Cluster, Partitioning, Diagnostic Pack, Tuning Pack, and Data Vault	For Database	As per Sizing / Core Requirement
4.	Oracle Web Logic Enterprise Edition	For Application server	As per Sizing / Core Requirement
5.	SAN Storage Management Software	For SAN management including 3 years Support	1
6.	Enterprise Management system (EMS)	SI have the option of either extending the Client licenses of the EMS already available in UP-SDC with 5 year support for updates, OR, Supply new EMS toolwith 5 year support for updates. The Technical specifications for EMS have been provided in Annexure 15.	As per Sizing of infrastructure

NOTE: In Bill of Quantity, please quote Single Entity for SN.3 & 4 as per Sizing / Core Requirement.

Annexure 6 – BladeChassis

The revised minimum technical specifications for Blade Chassis are as follows:

S. No.	Item	Description	Compliance (Yes/No)
1.	Blade Chassis	Solution to house at least 14 Dual Socket Blade Servers or 7 Quad Socket Blade Servers in enclosures. Industry standard suitable for housing in Industry Standard Server Racks.	
		It should have support for Dual Socket and Quad Socket blades in the same enclosure, occupying 9U-12U rack units.	
		Additional 2 nos. of minimum slots should be available within the offered enclosures after populating 12 dual socket Blade Servers for further scalability of servers.	
		Same enclosure should support Intel Xeon/AMD / RISC/EPIC based blades	
		Should support Redundant Management Modules.	
		Dual network connectivity for each blade server for redundancy should be provided	
		DVD ROM can be internal or external, which can be shared by all the blades allowing remote installation of S/w and OS	
		Support simultaneous remote access for different servers in the enclosure.	
2.	Interconnect	Should support housing of Ethernet, FC, iSCSI, IB interconnect fabrics, offering Hot Pluggable & Redundancy as a feature. Enclosure Should have No-Single-Point-of-Failure Architecture with adequate numbers of Interconnect Bays.	
3.	Blade Server Interconnect to LAN/ Network	Redundant 10 Gbps Ethernet modules should be provided each with minimum 4 x 10Gbps SFP+ and minimum 4 x 1Gbps ports (overall) along with minimum dedicated 10Gbps downlink connection to the blade chassis. Each Ethernet module should support minimum 10 Nos. of 10Gbps or 1Gbps uplink ports.	
4.	Blade Server Interconnect to ext. FC SAN	Redundant Fibre channel modules each with minimum 4 x 8Gbps uplinks expandable to at least 6 uplink ports is to be provided. The modules should be configured to connect to atleast one FC port of each blade FC HBA and at the same time providing any or both card / port level redundancy.	
5.	Power Supply	The enclosure should be populated fully with power supplies of the highest capacity available with the vendor. Power supplies should support N+N as well as N+1 redundancy configuration, where N is greater than 1.	
		Should offer choice of a single phase or 3 phase power subsystem for flexibility in connecting to data centre power enabled with technologies for lower power consumption	
6.	Cooling	Each blade enclosure should have a cooling subsystem consisting of redundant hot pluggable fans or blowers enabled with technologies for improved power consumption and acoustics.	
7.	Warranty	Onsite comprehensive warranty for 5 years with 24 x 7 support with 4 hrs. response time**.**	
8.	System Software	Management/controlling software have to be from the OEM itself. Management software licenses for a fully populated blade	

S. No.	Item	Description	Compliance (Yes/No)
		enclosure shall be provided.	
		It should provision for a single console to monitor multiple enclosures and should support simultaneous remote access for different servers in the enclosure.	
		The management software should provide proactive notification of actual or impending component failure alerts. Should support automatic event handling that allows notification of failures via e-mail.	
		Should be able to perform comprehensive system data collection and enable users to quickly produce detailed inventory reports for managed devices. Software shall save the reports in some format for further analysis.	
		Should help to proactively identify out-of-date BIOS, drivers, and Server Management agents and enable the remote update of system software/ firmware components.	
9.	Deployment	Must have the capability of deploying multiple Operating Systems on the servers simultaneously and also be able to schedule deployment as and when needed	
		Must have the capability of capturing and deploying OS images.	
		Must have the capability of configuring the hardware and changing system settings such as RAID level before the deployment of the Operating System. Must also have the capability of capturing the hardware settings and replicating it across servers.	
10.	Remote Management	Must have real time Virtual KVM functionality and be able to perform a remote Power sequence. Must provide both Java / Java-free browsing options.	
		Must have the ability to map the remote media to the server. Also must have the ability to transfer files from the user's desktop/laptop folders to the remote server with only the network connectivity.	
		Must have the ability for multiple administrators across remote locations to collaborate on the remote session even in a server.	
11.	Performance Management & Alerting	Must have the ability to perform a hardware level (32 bit / 64 bit) measurement. Must also monitor CPU, I/O, Memory, Storage & Network	
		Must have the ability to provide comprehensive recommendations for the issue and the resolution.	
		Must have the ability to automatically trigger events and alerts based on performance issues or thresholds set	
12.	Integration with Enterprise Management software	Must have the ability to get event and traps from the Data Centre equipment. Also must integrate with the higher level management such as Open View, Tivoli &Uni-Centre. Must also have the ability to send the alerts to required administrator for further actions.	
13.	Contract & Warranty Management	There shall be an option to track warranty information of servers and also send alerts when the warranty is about to expire through website or alerts. Necessary reports, if required, can be generated.	

S. No.	Item	Description	Compliance (Yes/No)
14.	Power Management	Must be able to show the actual power usage and actual thermal measurements data of the servers. Must also show a historical trend of power and temperature and show comprehensive power reports.	
		Must be able to automatically shut down the servers if required, based on user policies and schedules.	
		Must be able to cap the power of individual server or a group of servers. Must be able to intelligently assign the power to the appropriate server in the pool based on policy settings.	
15.	Licenses	Should include all necessary licenses for management for a fully loaded chassis.	
16.	Additional requirements	All functionalities and software shall be available from day 1 of deployment.	
17.		Manufacturershould be listed in any quadrant of independent technology and market research companies such as Gartner and Forrester Research.	

Annexure 7 – BladeServer

The revised minimum Technical Specifications of Blade server are as follows:

S. No.	Item	Description
1.	Processor	Latest generation x86-64 processor, 4 nos. of Intel 8 Core E5-4620 processor or Higher, based on Intel C600 or higher series chipset, offering 16 MB shared L3 cache (Depends on processor)
2.	Memory	Min. 256 GB DIMMS scalable to at least upto 1TB, using DDR3 Load Reduced DIMM (LRDIMM) memory modules.
3.	Memory Protection	• Data bus ECC protection • Rank sparring (on line spare) • DIMM address/control bus parity protection • Failed DIMM isolation • Demand / Memory scrubbing (optional) • Memory thermal control (optional)
4.	Hard disk drive	2 * 300 GB hot plug SFF SAS drives.
5.	Storage Controller	Integrated PCIe 3.0 SAS Raid Controller with RAID 0/1/5with at least 512MB of cache onboard.
6.	Networking features	• Server should support 4 port 1Gpbs network adaptor along with dedicated 1Gbps Management port • Embedded two Dual Port 10GbE Ethernet ports
7.	Interfaces	Minimum of 1 * internal USB 2.0 port and / OR 1* internal SDHC card slot
8.	Blade Server Connectivity to SAN	Should be capable of supporting / configured with a 8Gbps Dual port Fiber Channel HBA internal to the Server Blade.
9.	Bus Slots	Minimum of 2 Nos. of PCIe 3.0 based mezzanine slots supporting Ethernet, FCadapters and should be x16 slots
10.	Graphics	Integrated G200 / equivalent

S. No.	Item	Description
11.	Industry Standard Compliance	ACPI 2.0 Microsoft® Logo certifications USB 2.0 Support IMPI 2.0 Secure Digital 2.0 TMP 1.2 Support IEEE (specific IEEE standards depending on Ethernet adapter card(s) installed) Advanced Encryption Standard (AES) SNMP SSL 2.0 Active Directory v1.0 PCIe 3.0
12.	OS Support	Microsoft Windows 2008 R2 Microsoft Windows 2008 (32 bit / 64 bit) Microsoft Windows Server 2008 Standard Edition (32 bit / 64 bit) Microsoft Windows Server 2008 Enterprise Edition (32 bit / 64 bit) Red Hat Enterprise Linux (latest version – 5.7 / 6.0 etc.) (32 bit / 64 bit) SUSE LINUX Enterprise Server 11 (32 bit / 64 bit) SUSE LINUX Enterprise Server 10 (32 bit / 64 bit) VMware ESX 4.1 VMware ESXi 5.0
13.	Warranty	Onsite comprehensive warranty of 5 years with 24x7 support and 4 hour response
14.	Provisioning	Essential tools, drivers, agents to setup, and deploy the server should be embedded inside the server. There should be a built -in Update manager that can update firmware of system by connecting online.
15.	Remote Management	System remote management should support browser based graphical remote console along with Virtual Power button, remote boot using USB/CD/DVD Drive. It should be capable of offering upgrade of software and patches from a remote client using Media/image/folder; It should support server power capping and should have support for multifactor authentication.
		Server should support agentless management using the out-of-band remote management port.
		The server should support Active Health System which monitors and records changes in the server hardware and system configuration. It assists in diagnosing problems and delivering rapid resolution when system failures occur.
		Applications to access the server remotely
		Should support remote console sharing with users as per requirements. Should provide remote firmware update functionality. Should provide support for Java free graphical remote console.
16.	Server Management	The Systems Management software should provide Role-based security
		Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD.

S. No.	Item	Description
		Should provide an online portal that can be accessible from anywhere. The portal should provide one stop, online access to the product, support information and provide information to track warranties, support contracts and status. The Portal should also provide a Personalized dashboard to monitor device heath, hardware events, contract and warranty status. Should provide a visual status of individual devices and device groups.
		Should support scheduled execution of OS commands, batch files, scripts, and command line apps on remote nodes
		Should be able to perform comprehensive system data collection and enable users to quickly produce detailed inventory reports for managed devices. Should support the reports to be saved in HTML, CSV or XML format.
		Should help to proactively identify out-of-date BIOS, drivers, and Server Management agents and enable the remote update of system software/firmware components.
		The Server Management Software should be of the same brand as of the server supplier.
17.	Additional requirement	Manufacturershould be listed in any quadrant of independent technology and market research companies such as Gartner and Forrester Research.
		All functionalities shall be available from day 1

Annexure 8 – SANStorage

The revised minimum Technical Specifications for SAN storage are as follows:

S. No.	Description	Compliance (Yes/No)
1.	The proposed Storage array should have at least Dual active-active storage Controllerswith battery backed cache supporting to At least 24hrs or more for or cache de-staging mechanism of complete cache protection. The array proposed should be in an end-to-end minimum 4 GBPS architecture.	
2.	The Storage should be configured with 40TB usable capacity with RAID 5 configuration as follows: • 30% of capacity shall be available on 600 GB, 10K/15K RPM SAS disks • 40% of capacity shall be available on 600 GB / 900 GB, 10K/15K RPM SAS disks • Remaining 30% of capacity can be made available on 900 GB or higher SAS / SATA disks	
3.	The storage array shall be configured with at least 32 GB of mirrored/protected cache scalable to 64 GB cache or more in the storage arrayfor disk I/O operations	
4.	The Storage subsystem should have at least 4 nos. of front-end host ports and at least 4 nos. of back-end drive ports. Also the storage system should support internal/external iSCSI ports.	
5.	The storage system should be scalable to Minimum 250 TB using SAS drives.	
6.	Must be able to support intermix disk capacity 300 GB or higher FC/SAS and SATA/FATA or equivalent disks.	
7.	All the necessary management software to be supplied to configure and manage the storage subsystem, RAID configurations, logical drives allocation & snapshot for the configured capacity of the array.	

8.	Dynamic Features should include – Dynamic Array/Volume and LUNs expansion. All features should be available while the system/applications are online.	
9.	Redundant power supplies, batteries and cooling fans and data path and storage controller.	
10.	Multipath & Load balancing software for all SAN connected servers shall be provided.	
11.	All the offered controllers shall be interconnected either in FC/Crossbar/Direct Matrix/Meshed architecture for maximum performance.	
12.	Offered Storage Array shall support distributed Global/local hot Spare for offered Disk drives per enclosure.	
13.	Offered Storage Array shall support distributed Global/local hot Spare for offered Disk drives per enclosure.	
14.	Storage should support RAID level 0, 1, 5 and 6. All RAID shall be hardware based RAID.	
15.	Should support multi OS like Windows, LINUX, AIX, HP-UX, SUN Solaris etc.	
16.	The Storage shall have functionality to take point-in time copy and full volume copy and license for the same should be supplied.	
17.	The proposed SAN storage should supply with SAN storage management software with following specifications:- • Shall provide highest version of Storage Array configuration and Managementsoftware. • Should support storage virtualization, i.e. Easy logical drive expansion • Should support hot-swappable physical drive raid array / storage pool expansion with the addition of extra hard disks • Should be able to allocate logical spaces to multiple operating Systems in the same storage facility • Offered storage shall support non-disruptive online firmware upgrade for all the Controllers and disk drives. Offered storage shall support non-disruptive dynamic migration of Volume from one Raid set to another set. • Should be able to support clustered and individual servers at the same time • Should be able to take "snapshots" of the stored data. • Vendor should also offer storage performance monitoring and management software	

Annexure 9 – Server(to be deployed at SRO offices – 334 locations)

The revised minimum Technical Specifications for Server (to be deployed at SRO offices) are as follows:

S. No.	Item	Description of Requirement
1.	Cabinet	Tower Model
2.	CPU	**Intel Xeon E3-1220v2 or higher**Quad Core processor, 3.1GHz or better, with 8 MB L3 cache Memory or better.
3.	Motherboard	Intel® C200 **or higher**Series Chipset, OEM / Intel original Motherboard
4.	Memory	Minimum 8 GB ECC 1333 MHz DDR3 RAM and min. 4 DIMM slots
5.	Drive Bays	Minimum 4 hot swap HDD Bays (Minimum 2 Internal)
6.	TFT Monitor	43 cm (17")or larger TFT/wide TFT/LED, TCO-03 or TCO-99 Certified.
7.	Optical drive Bay	One optical drive bay to install DVD-ROM or DVD-RW **/ Virtual DVD support**
8.	Hard disk drive	2 x 2 TB or higher Enterprise Class Hot pluggable SATA HDD 7200

S. No.	Item	Description of Requirement
		RPM or higher
9.	Controller	Four Port RAID Controller for RAID 0/1
10.	Networking features	Dual LAN (10/100/1000) Network Card with asset features tracking and security management, remote wake up
11.	Ports	Min. 4 USB Port, 1 Serial Port
12.	Bus Slots	4 PCI/ PCI Express
13.	Optical drive	DVD-RW drive
14.	Graphics Card	Integrated Matrox**G200 / equivalent**
15.	Keyboard	101 Keys Keyboard
16.	Mouse	Optical Mouse
17.	Power Supply	Redundant & Hot Plug Power Supplies
18.	Fans	Minimum one Fan
19.	Security	Screen blanking, hard disk and system idle mode in power on, set up password, power supply surge protected.
20.	OS Support	• Microsoft Windows Server • Linux • Vmware
21.	Warranty	05 year on-site comprehensive warranty. Pre failure warranty on CPU, Memory and Hard disks
22.	Certification	• ISO 9001 certified
23.	Server OS & database	**Enterprise Linux with Postgres SQL, Tomcat and Apache to be installed by Bidder**

Annexure 10 – Biometric Device

The revised minimum Technical specifications for Biometric device are as follows:

S. No.	Item Description	Compliance (Yes/No)
1.	Pixel Resolution: 500 DPI (Native) with margin of 5%	
2.	Pixel Resolution:1000 DPI (Interpolated)	
3.	Min. Platen area: Minimum 12.8mm (w) x 16.5mm (h)	
4.	Reader Size: 72 mmx 39 mm x 21.7 mm	
5.	USB 2.0 (High Speed) at least	
6.	High Quality Fingerprint Image	
7.	Counterfeit Finger Rejection	
8.	Latent Finger Rejection	
9.	Compatible with Windows 7& 8 and Linux operating systems	
10.	Verification time – less than 1 sec.	
11.	IP64 STQC certified sensor and extractor	Provide certificate
12.	5 years on-site warranty	

Annexure 11 – Minimum technical specifications for 16 port unmanaged switch

The minimum technical specifications for 16 Port unmanaged switch has been revised as follows:

S. No.	Feature	Specifications	Compliance (yes /no)
1.	Standards	IEEE 802.3 10 Base-T Ethernet	
		IEEE 802.3u 100 Base-TX Fast Ethernet	
		ANSI / IEEE 802.3 auto negotiation or Equivalent	
2.	Protocol	CSMA / CD	
3.	Data transfer rates	Ethernet: 10 Mbps (half-duplex) 20 Mbps (full-duplex)	
		Fast Ethernet: 100 Mbps (half duplex) 200 Mbps (full duplex)	
4.	Number of ports	16 x 10/100 Mbps ports	
5.	Twisted pair Rx Reverse Polarity	Auto correction for each port	
6.	MAC address learning	Automatic update	
7.	RAM buffer	256 MB per device	
8.	Power supply	100-240 VAC, 50/60 Hz 0.3 A internal power supply	
9.	IPv6 features	Shall support IPv6	
10.	Temperature	0 degree C to 50 degree C	
11.	Humidity	5% to 95% (non-condensing)	
12.	Network cables	As per specifications mentioned in RFP	

Annexure 12 – Revised Detailed Break up of financial bid

The format of "Detailed break of financial bid" as provided in the RFP has been revised as follows:

S. No.	Category	Component	Units of Components (X)	Rate (per unit including the standard 3 years warranty) (Y)	VAT / Service tax (T)	Total Cost {X*(Y+T)}
(A-1) Client locations Hardware Costs with 3 years on-site warranty (from the date of commissioning) from OEM						
1.	Hardware at client locations – including delivery, installation & successful commissioning	Server				
		Printers				
		Digital Camera				
		LCD signature Tablet				
		Biometric device				
		Desktops				
		Laptop				
		UPS – 6 KVA				
		DG Set				
		…				
		Others				
Total A-1:						
(B-1) Site preparation and Networking Related Costs						
2.	Site preparation cost	Average cost for LAN cabling per office				
		Average cost for electrical cabling per office				
Total B-1:						

S. No.	Category	Component	Units of Components (X)	Extended warranty for 2 years (Y)	VAT / Service tax (T)	Total Cost {X*(Y+T)}
(A-2) Client locations Hardware – Extended Warranty Costs						
1.	Hardware at client locations – extended warranty	Server				
		Printers				
		Digital Camera				
		LCD signature Tablet				
		Biometric device				
		Desktops				
		Laptop				
		UPS – 6 KVA				
		DG Set				
		…				
		Others				
Total A-2:						
(B-2) Maintenance of Sites						
2.	Maintenance of Sites	Per office maintenance cost				
Total B-2:						

S. No.	Category	No. of locations (X)	Per Location One Time Charges (including 3 yrs. warranty) (Y)	Taxes (T)	Total Cost {X * (Y+T)}
(C-1) Primary Connectivity – One time charges					
1.	Connectivity of SRO office with nearest SWAN POP (Last mile connectivity)	For Connectivity – 260			
Total C-1:					

Note – 3 yrs. Of OEM warranty will start from successful commissioning of connectivity at SRO location. The requirements for "any other equipment" will depend on actual availability / non-availability / functioning of SWAN last mile connectivity.

S. No.	Category	No. of locations (X)	AMC charges per year (Y)	Taxes (T)	Total Cost {X * (Y*+T)}*2
(C-2) Primary Connectivity – AMC charges					
1.	Connectivity of SRO office with nearest SWAN POP (Last mile connectivity)	For connectivity - 260			
Total C-2:					

Note – Extended warranty of 2 years will commence after successful completion of 3 years of OEM warranty. The requirements for "any other equipment" will depend on actual availability / non-availability / functioning of SWAN last mile connectivity.

S. No	Category	No of Locations (X)	Per Link Per Annum Charges (Y)	Per link one time charges (Z)	Taxes (T)	Total Cost {X * (Y*5 + Z + T)}
(D) Secondary Connectivity (L3 MPLS VPN)						
1.	Connectivity at SRO Category 'A' Offices with 02 MBPS Line	60				
2.	Connectivity at SRO Category 'B' Offices with 02 MBPS Line	175				
3.	Connectivity at SRO Category 'C' Offices with 512 KBPS Line	119				
4.	Connectivity at State Data Centre (SDC) with 50 MBPS Line	01				
Total D:						

(E-1) Data Centre Infrastructure

S. No.	Component	Units of Components (X)	Unit rate (inclusive for 3 years OEM warranty) (Y)	VAT / Service tax (T)	Total Cost {X*(Y+T)}
1.	Blade chassis				
2.	**Blade servers**				
2.1	Web server				
2.2	Database server				
2.3	Application server				
2.4	File server				
2.5	Standby server				
2.6	Staging and testing server				
3.	SAN storage box (40 TB usable capacity)				
4.	24 Port SAN switch				
5.	Cartridge for LTO6 tap drive available in UP-SDC				
6.	IP KVM switch, LCD monitor & keyboard				
7.	…				
8.	Others				
Total (E-1)					

	(E-2) Data Centre Infrastructure – Extended Warranty				
S. No.	Component	Units of Components (X)	Extended warranty for 2 years (Z)	VAT / Service tax (T)	Total Cost {X*(Z+T)}
1.	Blade chassis				
2.	**Blade servers**				
2.1	Web server				
2.2	Database server				
2.3	Application server				
2.4	File server				
2.5	Standby server				
2.6	Staging Server				
3.	SAN storage box (40 TB usable capacity)				
4.	24 Port SAN switch				
5.	IP KVM switch, LCD monitor & keyboard				
6.	…				
7.	Others				
	Total E-2				

	(F) Cost for Software components at Data Centre				
S. No.	Component	Cost per license	Total licenses	Taxes	Total
1.	Enterprise Linux Server		10		
2.	Cluster Suit / High Availability		6		
3.	Oracle Database Enterprise Edition Processor with Real Application		As per Sizing		

S. No.	(F) Cost for Software components at Data Centre				
	Component	**Cost per license**	**Total licenses**	**Taxes**	**Total**
	Cluster, Partitioning, Diagnostic Pack, Tuning Pack, and Data Vault				
4.	Oracle Web Logic Enterprise Edition		As per sizing		
5.	SAN Storage Management Software		1		
6.	**EMS**				
6.1	Application performance management (1 IGRS application to be monitored)				
6.2	Helpdesk management tool (refer sec. 4.5 of RFP for requirements of helpdesk)				
6.3	Network monitoring system (NMS) (to monitor input ports of routers deployed at all SRO offices)				
6.4	Server performance management (refer SDC BOM and specifications. Not required for Staging & testing and Standby servers)				
6.5	Other components of EMS as per technical specifications				
6.6	…				
Total F:					

Note: Purchase of Oracle Database and Web logic Licenses through SI may depend on the suitability of rates quoted by SI considering the standard rates available with NICSI / DGS&D and discounts available to Department as a Government organization. In case the rates quoted by SI are found to be detrimental to the smooth running of the project, then the Department / UPLC will be free to purchase the Oracle Licenses separately instead of purchasing through SI.

Annexure 13 – Technical Specifications of Load Balancer

The minimum technical specifications of Load Balancer are as follows:

S. No.	Features	Specifications	Compliance (Yes / No)
1.	**Hardware**	Should be appliance based solution with high performance purpose built hardware.	
2.		The appliance should have 8 GB RAM for support for multiple load balancing functions	
3.		The appliance should have minimum 4 triple speed 10/100/1000 Mbps gigabit copper ports and 2* 10G SFP+ fiber ports from day one	
4.		The appliance should have 10 Gbps of throughput from day one	
5.		Should have minimum 4M concurrent connections	
6.		Appliance should provide full IPv6 support. OEM should be listed vendor for IPv6 certification.	
7.	**Load balancing features**	The appliance should support layer 2 to layer 7 load balancing	
8.		Extensible policies (e-policies) scripts to implement business logic on network without any changes in application code.	
9.		The appliance should support server load balancing algorithms i.e. round robin, weighted round robin, least connection, Persistent IP, Hash IP, Hash Cookie, consistent hash IP, shortest response, proximity, SNMP, SIP session ID, hash header etc.	
10.		Should support one arm, reverse and transparent proxy mode deployment scenarios and should support nested layer7 policies.	
11.		Should maintain server persistency based on source IP and destination IP, HTTP header, URL, Cookie and SSL ID.	
12.		The appliance should support multi-port, scripted and custom health check with content verification	
13.		Should provide application & server health checks for well-known protocols i.e. ARP, ICMP, TCP, DNS, RADIUS, HTTP/HTTPS, RTSP etc.	
14.		The appliance should have and/or relationship to check various dependencies for the application delivery	
15.		should support layer4 and layer 7 load balancing for HTTP/HTTPS, FTP/FTPS, SIP, RTSP , RDP, TCP, TCPS and UDP protocols	
16.	**Clustering and Failover**	Should provide comprehensive and reliable support for high availability and N+1 clustering with active-active and active-standby support.	
17.		Stateful session failover with Connection mirroring support	
18.		Should support automated configuration synchronization from primary unit to secondary unit without any manual intervention by administrator	
19.		Support for multiple communication links for realtime configuration synchronizations including HA group, gateway health check, decision rules, SSF sessions etc. and heartbeat information. For heartbeat there should be support for secondary communication link for backup purpose	
20.		Should support floating MAC address to avoid MAC table updates on the upstream routers/switches and to speedup the failover	
21.		Should support floating IP address and group for	

S. No.	Features	Specifications	Compliance (Yes / No)
		statefulfailover support. Appliance should have support 256 floating IP address for a floating group	
22.		Should support built in failover conditions including, CPU overheated, SSL card failure, system memory, process health check, unit failover, group failover and reboot	
23.		Should also have option to define customized rules for gateway health check - the administrator should able to define a rule to inspect the status of the link between the unit and a gateway	
24.		Configuration synchronization at boot time and during run time to keep consistence configuration on both units.	
25.		The appliance should have software based site selection feature to provide global load balancing features on same appliance	
26.		Should support global load balancing algorithms like global round robin, VIP based weighted global round robin, global connection overflow, global least connections, IP overflow, Proximity etc.,	
27.	SSL Features	Should provide Secure online application delivery using hardware-based high performance SSL acceleration with minimum 3Gbps of SSL throughput and 25,000 SSL TPS	
28.		The appliance should support Certificate format as "OpenSSL/Apache, *.PEM", "MS IIS, *.PFX", and "Netscape, *.DB".	
29.		The appliance should have additional hardware card to perform the SSL offloading / acceleration for 1024 and 2048 bit certificates.	
30.		The appliance should support use of password protect Certificate/Private Key backup/restore to/from local disk or remote TFTP server, and through WebUI	
31.		The appliance should support Self generates CSR (Certificate Signing Request), self-signed Certificate and private key for specified host.	
32.		The appliance should support customization for SSL Error pages.	
33.		The appliance should support HTTP to HTTPS location header rewrite for enhanced application delivery support	
34.		The appliance should have end to end ssl support to act as a SSL Server and/or as SSL Client	
35.		Should support client certificate verification, certificate bases access control, CRL's (HTTP, FTP ,LDAP) and OSCP protocol	
36.	Security and Application Acceleration	Should provide performance optimization using TCP connection multiplexing, TCP buffering and IEEE 802.3ad link aggregation.	
37.		Should support TCP optimization options including windows scaling, timestamp & Selective Acknowledgement for enhanced TCP transmission speed.	
38.		TCP optimization option configuration should be defined on per virtual service basis not globally.	
39.		Appliance should provide real time Dynamic Web Content Compression to reduce server load.	
40.		Should provide selective compression for Text, HTML, XML, DOC, Java Scripts, CSS, PDF, PPT, and XLS Mime types.	
41.		Should provide have provision to define policy to skip compression for selected trouble URL for the specified Virtual.	

S. No.	Features	Specifications	Compliance (Yes / No)
42.		Should provide Advanced high performance memory/packet based Web cache; fully integrated with HTTP/HTTPS	
43.		Should provide support for customized cache rules including max object size, TTL objects, refresh time interval etc..	
44.		Should provide detailed cache access statistics based on ip or http hosts	
45.		Should support cache refresh with CLI, XML-RPC input commands and "PURGE" request	
46.		The appliance should support transparent, layer 7 proxy and triangular mode support	
47.		Appliance should have security features like reverse proxy firewall, SYN-flood and dos attack protection features from the day of installation.	
48.	**Management**	Role based access control for granular authentication and authorization. Administrator should able to define multiple roles namely Admin,Security-admin, Network-Engineer, Network Monitor, Network Manager on the appliance	
49.		The appliance should have extensive report and logging with inbuilt TCP dump like tool and log collecting functionality	
50.		The appliance should have SSH CLI, Direct Console, SNMP, Single Console per Cluster with inbuilt reporting.	
51.		Should support XML-RPC for integration with 3rd party management and monitoring	
52.		The appliance should provide detailed logs and graphs for real time and time based statistics	
53.		Appliance must support multiple configuration files with 2 bootable partitions for better availability and easy upgrade / fallback.	
54.		The system should support led warning and system log alert for failure of any of the power and CPU issues	

Annexure 14 – Technical Specifications of existing infrastructure at Data Centre

a. **Existing Router at State Data Centre**

Item	MSR 50-40
Number of Fixed Ethernet ports	MPUF :2GE Combo
	MPU-G2: 3GE Combo
Module slot	MPUF :4 SIC slots
	MPU-G2: null
	4 FIC slots
ESM slot	2
VPM slot	4
Fixed USB(USB1.1) ports	MPUF :2
	MPU-G2: null
AUX	1
Console	1
VCPM slot	1
Hardware encryption	Support（SNDE, ANDE）

Item	MSR 50-40
IP Forward Performance(pps)	MPUF :1M
	MPU-G2: 2M
DDR memory capacity (Default/Maximum)	512MB/1G (DDR)
CF (default/maximum)	256MB/1GB
Output Power(Maximum)	350W
AC input voltage	100 to 240 VAC
Frequency	50-60 Hz
DC input voltage	-48 VDC to -60 VDC
RPS	Internal RPS
PoE Power	500W
Max. port support (15.4W/port)	32
Outline dimension (mm) (W×D×H)	436.2×424×130.7mm
Weight	18kg
Environment temperature	32 to 104°F (0 to 40°C)
Environment relative humidity	5 ~ 90% (Non-condensing)

b. **Existing Firewall at SDC**

Device Specification	Part No.	Total No. of Slots/Part No.
H3C SEC-PATH F1000E, Comware version – 5.20	JD272A	2HIM SLOTS- 4GBE(JC163A)/8GBE(JC164A)

c. **Existing EMS available at State Data Centre**

- CA Spectrum: Version-9.2.0.4.24

- CA E-health: Version-6.3

- CA UDCC: Version-r11.5.0

- CA Wily (APM & CEM): **APM Version**-Version-9.1, Release-9.1.0.2 And **CEM Version**-Version-581100, Release-9.1.0.2

- CA Service Desk Manager: Version-SDr12_6-165, Release-1

Annexure 15 – Minimum Technical Specifications of Enterprise Management System (EMS)

S. No.	Features	Compliance (yes / no)
1	**Basic Requirement :**	
	Solution should provide for future scalability of the whole system without major architectural changes.	
	Should be SNMP compliant.	
	Filtering of events should be possible, with advance sort option based on components, type of message, time etc.	
	Should support Web / Administration Interface.	
	Should provide compatibility to standard RDBMS.	
	Solution should be open, distributed, and scalable and open to third party integration.	
	Should provide fault and performance management for multi-vendor TCP/IP networks.	
2	**Security :**	
	Should be able to provide secured windows based consoles / secured web based consoles for accessibility to EMS.	
	Should have web browser interface with user name and Password Authentication.	
	Administrator/ Manager should have privilege to create/modify/delete user.	
3	**Polling Cycle:**	
	Support discriminated polling	
	Should be able to update device configuration changes such as re-indexing of ports	
4	**Fault Management**	
	Should be able to get fault information in real time and present the same in alarm window with description, affected component, time stamp etc.	
	Should be able to get fault information from heterogeneous devices routers, switches, servers etc.	
	Event related to servers should go to a common enterprise event console where a set of automated tasks can be defined based on the policy.	
	Should have ability to correlate events across the entire infrastructure components of DC.	
	Should support automatic event correlation in order to reduce events occurring in DC.	
	Should support advanced filtering to eliminate extraneous data / alarms in Web browser and GUI.	
	Should be configurable to suppress events for key systems/devices that are down for routine maintenance or planned outage.	
	Should be able to monitor on user-defined thresholds for warning/ critical states and escalate events to event console of enterprise management system.	
	Should provide out of the box root cause analysis with multiple root cause algorithms inbuilt for root cause analysis.	
	Should have self-certification capabilities so that it can easily add support for new traps and automatically generate alarms.	
	Should provide sufficient reports pertaining to asset and change management, alarms and availability of critical network resources as well as network response times for critical links.	

		The tool shall integrate network, server and database performance information and alarms in a single console and provide a unified reporting interface for network and system components. The current performance state of the entire network and system infrastructure shall be visible in an integrated console.	
		Should provide an integrated performance view for all the managed systems and networks along with the various threshold violations alarms in them. It should be possible to drill-down into the performance view to execute context specific reports.	
		Should provide the following reports for troubleshooting, diagnosis, analysis and resolution purposes: Trend Reports, At-a-Glance Reports, & capacity prediction reports.	
		Should be able to auto-calculate resource utilization baselines for the entire managed systems and networks and allow user to set corresponding upper and lower threshold limits.	
5	**Discovery:**		
		Should provide accurate discovery of layer 3 and heterogeneous layer 2 switched networks for Ethernet, LAN, and Servers etc.	
		Manual discovery can be done for identified network segment, single, or multiple devices.	
6	**Presentation:**		
		Should be able to discover links with proper colour status propagation for complete network visualization.	
		Should support dynamic object collections and auto discovery. The topology of the entire Network should be available in a single map.	
		Should give user option to create his /or her map based on certain group of devices or region.	
7	**Agents**		
		Should monitor various operating system parameters such as processors, memory, files, processes, file systems etc. where applicable using agents on the servers to be monitored.	
		Provide performance threshold configuration for all the agents to be done from a central GUI based console that provide a common look and feel across various platforms in the enterprise. These agents could then dynamically reconfigure them to use these threshold profiles they receive.	
8	**System Monitoring**		
	Should be able to monitor/manage large heterogeneous systems environment continuously.		
	Should monitor / manage following:		
	Event log monitoring.		
	Virtual and physical memory statistics		
	Paging and swap statistics		
	Operating system		
	Memory		
	Logical disk		
	Physical disk		
	Process		
	Processor		
	Paging file		
	IP statistics		
	ICMP statistics		
	Network interface traffic		
	Cache		
	Should monitor following with statistics :		
	CPU Utilization, CPU Load Averages		

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	System virtual memory (includes swapping and paging)	
	Disk Usage	
	No. of Nodes in each file system	
	Network interface traffic	
	Critical System log integration	
9	**Infrastructure Services**	
	IIS / Tomcat / Apache / Web server statistics	
	HTTP service	
	HTTPS services	
	FTP server statistics	
	POP/ SMTP Services	
	ICMP services	
	Database Services – Monitor various critical relational database management system (RDBMS) parameters such as database tables / table spaces, logs etc.	
10	**Application Performance Management**	
	End to end Management of applications (J2EE/.NET based)	
	Determination of the root cause of performance issues whether inside the Java / .Net application in connected back-end systems or at the network layer.	
	Automatic discovery and monitoring of the web application environment	
	Ability to monitor applications with a dashboard.	
	Ability to expose performance of individual SQL statements within problem transactions.	
	Monitoring of third-party applications without any source code change requirements.	
	Proactive monitoring of all end user transactions; detecting failed transactions; gathering evidence necessary for problem diagnose.	
	Storage of historical data is for problem diagnosis, trend analysis etc.	
	Monitoring of application performance based on transaction type.	
	Ability to identify the potential cause of memory leaks.	
11	**Reporting**	
	Should able to generate reports on predefined / customized hours.	
	Should be able to present the reports through web and also generate "pdf" / CSV / reports of the same.	
	Should provide user flexibility to create his /or her custom reports on the basis of time duration, group of elements, custom elements etc.	
	Should provide information regarding interface utilization and error statistics for physical and logical links.	
	Should create historical performance and trend analysis for capacity planning.	
	Should be capable to send the reports through e-mail to pre-defined user with pre-defined interval.	
	Should have capability to exclude the planned-downtimes or downtime outside SLA.	
	Should be able to generate all sorts of SLA Reports.	
	Should be able to generate web-based reports, historical data for the systems and network devices and Near Real Time reports on the local management console.	
	Should be able to generate the reports for Server, Application.	
	Provide Historical Data Analysis: The software should be able to provide a time snapshot of the required information as well as the period analysis of the same in order to help in projecting the demand for bandwidth in the future.	
12	**Availability Reports:**	

		Availability and Uptime – Daily, Weekly, Monthly and Yearly Basis	
		Trend Report	
		Custom report	
		MTBF and MTTR reports	
13	**Performance Reports:**		
		Device Performance – CPU and Memory utilized	
		Interface errors	
		Server and Infrastructure service statistics	
		Trend report based on Historical Information	
		Custom report	
		SLA Reporting	
		Computation of SLA for entire DC Infrastructure	
		Automated Daily, Weekly, Monthly, Quarterly and Yearly SLA reports.	
14	**Data Collection**		
		For reporting, required RDBMS to be provided with all licenses.	
		Should have sufficient Storage capacity should to support all reporting data	
15	**Integration:**		
		Should be able to receive and process SNMP traps from infrastructure components such as router, switch, servers etc.	
		Should be able integrate with Helpdesk system for incidents.	
		Should be able to send e-mail or Mobile –SMS to pre-defined users for predefined faults.	
		Should trigger automated actions based on incoming events / traps. These actions can be automated scripts/batch files.	
16	**Network Management :**		
		The Network Management function must monitor performance across heterogeneous networks from one end of the enterprise to the other.	
		It should proactively analyze problems to improve network performance.	
		The Network Management function should create a graphical display of all discovered resources.	
		The Network Management function should have extensive reporting facility, providing the ability to format and present data in a graphical and tabular display.	
		The Network Management function should collect and analyze the data. Once collected, it should automatically store data gathered by the NMS system in a database. This enterprise-wide data should be easily accessed from a central location and used to help with capacity planning, reporting, and analysis.	
		The Network Management function should also provide information on performance of Ethernet segments, including capacity utilization and error statistics for the segment, WAN links and routers.	
		Alerts should be shown on the Event Management map when thresholds are exceeded and should subsequently be able to inform Network Operations Center (NOC) and notify concerned authority using different methods such as emails, etc.	
		It should be able to automatically generate a notification in the event of a link failure to ensure proper handling of link related issues.	
		The Systems and Distributed Monitoring (Operating Systems) of EMS should be able to monitor:	
		o Processors: Each processor in the system should be monitored for CPU utilization. Current utilization should be compared against user-specified warning and critical thresholds.	

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	o File Systems: Each file system should be monitored for the amount of file system space used, which is compared to user-defined warning and critical thresholds.	
	o Log Files: Logs should be monitored to detect faults in the operating system, the communication subsystem and in applications. The function should also analyze the files residing on the host for specified string patterns.	
	o System Processes: The System Management function should provide real-time collection of data from all system processes. This should identify whether or not an important process has stopped unexpectedly. Critical processes should be automatically restarted using the System Management function.	
	o Memory: The System Management function should monitor memory utilization and available swap space.	
	o Event Log: User-defined events in the	
17	**SLA Monitoring :**	
	The SLA Monitoring component of EMS will have to possess the following capabilities:	
	EMS should integrate with the application software component of portal software that measures performance of system against the following SLA parameters:	
	o Response times of Portal;	
	o Uptime of IT Infrastructure;	
	o Meantime for restoration of services etc.	
	EMS should compile the performance statistics from all the IT systems involved and compute the average of the parameters over a quarter, and compare it with the SLA metrics laid down in the RFP.	
	The EMS should compute the weighted average score of the SLA metrics and arrive at the quarterly service charges payable to the Agency after applying the system of penalties and rewards.	
	The SLA monitoring component of the EMS should be under the control of the authority that is nominated the client so as to ensure that it is in a trusted environment.	
	The SLA monitoring component of the EMS should be subject to random third party audit to vouchsafe its accuracy, reliability, and integrity.	
18	**ITIL based Helpdesk**	
	Helpdesk system would automatically generate the incident tickets and log the call. Such calls are forwarded to the desired system support personnel deputed by the Implementation Agency. These personnel would look into the problem, diagnose and isolate such faults and resolve the issues timely. The helpdesk system would be having necessary workflow for transparent, smoother and cordial DC support framework.	
	The Helpdesk system should provide flexibility of logging incident manually via windows GUI and web interface.	
	The web interface console of the incident tracking system would allow viewing, updating, and closing of incident tickets.	
	The trouble-ticket should be generated for each complaint and given to asset owner immediately as well as part of email.	
	Helpdesk system should allow detailed multiple levels/tiers of categorization on the type of security incident being logged.	
	It should provide classification to differentiate the criticality of the security incident via the priority levels, severity levels and impact levels.	
	It should allow SLA to be associated with a ticket based on priority, severity, incident type, requestor, asset, location or group individually as well as collectively.	

	It should maintain the SLA for each item/service. The system should be able to generate report on the SLA violation or regular SLA compliance levels.	
	It should be possible to sort requests based on how close are the requests to violate their defined SLA's.	
	It should support multiple time zones and work shifts for SLA & automatic ticket assignment.	
	It should allow the helpdesk administrator to define escalation policy, with multiple levels & notification, through easy to use window GUI / console.	
	System should provide a knowledge base to store history of useful incident resolution.	
	It should have an updateable knowledge base for technical analysis and further help end-users to search solutions for previously solved issues.	
	The web-based knowledge tool would allow users to access his / her knowledge article for quick references.	
	It should provide functionality to add / remove a knowledge base solution based on prior approval from the concerned authorities.	
	Provide seamless integration to generate events/incident automatically from NMS / EMS.	
	Each incident could be able to associate multiple activity logs entries manually or automatically events / incidents from other security tools or EMS / NMS.	
	Allow categorization on the type of incident being logged.	
	Provide audit logs and reports to track the updating of each incident ticket.	
	Proposed incident tracking system would be ITIL compliant.	
	It should be possible to do any customizations or policy updates in flash with zero or very minimal coding or down time.	
	It should integrate with Enterprise Management System event management and support automatic problem registration, based on predefined policies.	
	It should be able to log and escalate user interactions and requests.	
	It should support tracking of SLA (service level agreements) for call requests within the help desk through service types.	
	It should be capable of assigning call requests to technical staff manually as well as automatically based on predefined rules, and should support notification and escalation over email, web etc.	
	It should provide status of registered calls to end-users over email and through web.	
	The solution should provide web based administration so that the same can be performed from anywhere.	
	It should have a customized Management Dashboard for senior executives with live reports from helpdesk database.	
19	**Client Management System**	
	The proposed desktop management system should provide single integrated agent for asset management, remote software deployment and remote desktop control.	
20	**Asset Management System:**	
	The proposed Asset Management solution must provide inventory of hardware and software applications on end-user desktops including information on processor, memory, operating system, mouse, key board of desktops etc. through agents installed on them.	
	The proposed Asset Management solution must have reporting capabilities; provide predefined reports and the possibility to create customized reports on data in the inventory database. Report results could be displayed as lists or graphs.	

The proposed Asset Management solution must have the capability to export the reports to CSV, HTML and XML format.	
The proposed Asset Management solution must provide the facility for user defined templates to collect custom information from desktops.	
The proposed Asset Management solution must provide facility to recognize custom applications on desktops.	
The proposed Asset Management solution must support administrators to register a new application to the detectable application list using certain identification criteria's (Like executable, Date/time stamp etc.). The new application must be detected automatically from next time the inventory is scanned.	
The proposed Asset Management solution must provide facility for queries and automated policies to be set up and permit scheduling of collecting engines to pick up the data at defined intervals.	
The proposed Asset Management solution must be able to collect all the asset information.	
The proposed Asset Management solution must integrate with the helpdesk solution and allow ticket creation automatically on an event defined in asset management solution. It should also allow manual ticket creation also.	
The proposed Asset Management solution must support Software metering to audit and control software usage where launching of an application can be prevented based on centrally configured number of licenses for an application.	
Remote Software Deployment System:	
It should provide delivery, installation, and un-installation of software (ex. Patches of Anti-virus solution etc.) installed on end-user desktops by software delivery remotely through agents installed on them. It must allow pre- and post-installation steps to be specified if required & support rollback in the event of failure in installing software to end-user desktops.	
The tool should have the capability to install applications based on interdependencies i.e. to be installed in a particular order.	
It should support deployment of MSI based packages using drag and drop method.	
It should perform actual distribution of software remotely, not mere file transfer and manual installation at other end. Automated installation should be possible.	
It should include a Software packager for creating software packages to be delivered to end-user desktops which uses a snap-shot technology.	
It should support both push and pull software distribution modes. A catalog/advertisement option of the existing software delivery packages must be provided for end-user to download and install software of his / her choice.	
Users must be allowed to cancel jobs if they are launched at an inconvenient time. Cancelled jobs must be allowed to be reactivated. Forcing packages onto the computer must also be possible.	
Remote Desktop Control Management System:	
The proposed solution should allow remote control of end-user desktop for facilitating resolution of desktop issues without the need to go to the end-user desktop, through agents installed on them.	
It should provide the capability of taking Remote control of Linux systems also using Views sitting on Windows platform.	
It should provide Windows integrated authentication as well as application based authentication option to choose from for the agent installed.	
It should allow host enabled recording which allows the end user to initiate a recording session.	
It should have the ability to convert the recorded sessions in AVI/WMA format so it can be replayed using commonly available Windows media player.	

	Centralized User Management should allow administrators to centrally manage remote control users' and their access rights. Administrators must be able to define preferences and capabilities different users or user groups have, as well as defining which targets they can control.	
	It should support Seamless integration with management applications such as helpdesk, asset management and Software delivery.	
	It should support remote Reboot & Chat functions between nodes.	
	It should provide facility for encrypting the authentication traffic and support AES 256.	