

Corrigendum - I

Tender No. WTL/PAR/SWAN/17-18/025 dated 26/10/2017

1. Bill of Material (Section – H) has been revised. Revised Bill of Material is enclosed.
2. Technical Specification with Compliance Statement (Section – I) has been revised. Revised Technical Specification with Compliance Statement is enclosed.
3. BOQ has been revised. Revised BOQ uploaded.

SECTION – H

BILL OF MATERIAL

Sl. No.	Description of Materials	Total Qty	Unit
1	Router: with a total of 3 onboard/built-in 10/100/1000 Mbps WAN/LAN ports, Power Supply 30 Watt AC, Memory (DDR3 DRAM):Default/maximum 4GB/16GB, Flash memory (internal): Default/maximum : 4GB/8GB, router fixing accessories, console cable	22	Nos.
2	Warranty for Router: 8x5xNBDx3 years on-site comprehensive warranty	22	Nos.
3	Switch: 24 Port 10/100/1000 Mbps Managed POE (all interface) L2 Switch with 4 x Gigabit SFP (2 combo), with power cord, switch fixing accessories, console cable	47	Nos.
4	Warranty for Switch: 8x5xNBDx3 years on-site comprehensive warranty	47	Nos.
5	Switch: 24 Port 10/100/1000 Mbps Managed Non-POE L3 Switch with 4 x1G SFP, with power cord, switch fixing accessories, console cable	10	Nos.
6	Warranty for Switch: 8x5xNBDx3 years on-site comprehensive warranty	10	Nos.
7	Optical Transceiver: 1G Long Haul single mode fiber module GLC-LH-SMD	80	Nos.
8	UPS: 1 KVA Online UPS with 30 Minutes Battery Backup (3 year on-site comprehensive warranty)	56	Nos.
9	UPS Battery : 12 V, 26 AH battery for running above UPS for 30 minutes on full load for 3 years on-site comprehensive warranty	168	Nos.
10	Interlink Cable	56	Nos.
11	TVSS 10kA 3P (3 years on-site comprehensive warranty)	56	Nos.
12	Rack for Batteries	56	Nos.
13	Network Rack: 19" 12 U Rack with Tray, Power Strip, Cooling Fan and accessories, All equipments housed properly, air circulation & properly locking system with key. Make: D-Link / APW / VAL RACK or equivalent	10	Nos.
14	Network Rack: 19" 9U Rack with Tray, Power Strip, Cooling Fan and accessories, All equipments housed properly, air circulation & properly locking system with key. Make: D-Link / APW / VAL RACK or equivalent	11	Nos.
15	Network Rack: 19" 6U Rack with Tray, Power Strip, Cooling Fan and accessories, All equipments housed properly, air circulation & properly locking system with key. Make: D-Link / APW / VAL RACK or equivalent	35	Nos.
16	ADF Scanner	65	Nos.
17	Flatbed Scanner	65	Nos.
	LAN cabling work with OFC cable		
18	Supply of 6 Core SM Fiber Optic Cable	10000	Mtrs.
19	24 Port LIU Loaded	5	Nos.
20	12 Port LIU Loaded	5	Nos.
21	6 Port LIU Loaded	42	Nos.
22	LC-LC SM Patch Cord 2mtr. Duplex	110	Nos.
23	Laying of 6 Core Fiber Optic Cable through PVC conduit/GI wire with necessary fittings	10000	Mtrs.
24	Termination & Testing of Fiber at Both end	220	Nos.
25	Supply of Cat 6 cable	20000	Mtr.
26	Laying of CAT6 cable through PVC conduit (including supply of 20 mm. PVC conduit of ISI Grade) with RJ-45 crimping, termination, and establishing LAN connectivity as	20000	Mtrs.

	stated above; Testing		
27	I/O with back box	260	Nos.
28	RJ 45 connector	520	Nos.
29	Cat6 Patch cord 2 mtr	260	Nos.
30	Cat6 Patch cord 1 mtr	260	Nos.
31	Cat 6 patch panel	65	Nos.

Bill of quantity may change at the time of ordering/execution of work. Final bill will be raised on actual consumption of all materials.
Detailed Technical Specifications are given in Section – I

SECTION - I

TECHNICAL SPECIFICATION WITH COMPLIANCE STATEMENT

(Tender No. WTL/KP/SWAN/17-18/016)

- Bidder should submit all relevant data sheet/brochure of all quoted items and should also available in respective OEM's official website.
- Bidder should indicate items mentioned in the OEM data sheet / brochure by marketing the serial no. as mentioned in minimum specification in the RFP.

1. Minimum Specification of Router-

Qty.	22
Make	Cisco 4331 / K9 or equivalent
Model	
Part No.	

Minimum Specification		Qty.	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)
Part No	Description			
	Router: with a total of 3 onboard/built-in 10/100/1000 Mbps WAN/LAN ports), out of which at least 2 port should be fiber based ethernet interface and the remaining 1 port should be copper based Ethernet interface			
	Min. Power Supply 30 Watt AC			
	Default Advanced IP Services License having support for protocols like MPLS, IP SLA etc.			
	Should have minimum 4 GB DRAM from Day 1 with 100% scalability support			
	Should support minimum 4GB flash memory from Day 1			
	Router Rack mount Wall mount Kit			
	Blank faceplate for WIM slot			
	AC Power Cord for India			
	Router UNIVERSAL software			
	Fiber module to be added as per the Distribution Matrix published in the RFP			
	Warranty for Router 8x5xNBDx3 years on-site comprehensive			

2. Minimum Specification of 24 Port 10/100/1000 Mbps managed L2 Switch

Qty.	47
Make	Cisco or equivalent
Model	SG350-28P-K9-EU
Part No.	

Minimum Specification		Qty.	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)
Part No	Description			
	Switch L2 10/100/1000 Mbps 24 Port Managed +4 * 1G ethernet (2 should be combo port)			
	Warranty for Switch 8x5xNBDx3 Years on-site comprehensive			

	Fiber module to be added as per the Distribution Matrix published in the RFP			
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3. Minimum Specification of 24 Port 10/100/1000 Mbps managed L3 Switch

Qty.	10 nos.
Make	Cisco or equivalent
Model	WS-C3650-24TS-S
Part No.	

Minimum Specification		Qty.	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)
Part No	Description			
	Switch L3 10/100/1000 Mbps BASE-T 24 Port Managed +4 * 1G SFP based interface			
	Warranty for Switch 8x5xNBDx3 Years on-site comprehensive			
	Fiber module to be added as per the Distribution Matrix published in the RFP			
	Universal Software for the switch to be supplied from day 1			
	250W AC Power Supply from Day 1			
	India AC Type A Power Cable to be supplied from Day 1			

4. Minimum Specification of 1 KVA ON Line UPS System

Qty.	56 No.
Make	APC/Vertiv/Equivalent
Model	
Part No.	

Sl. No.	Parameter	Requirement	Offered Specification	Complied (Yes / No.)	Remarks
1	UPS Rating	1kVA / 800W			
	UPS Type	IGBT Based True On Line Double Conversation UPS System			
	Input Voltage	UPS having Single Phase input with the voltage Range 160VA To 300VAC			
	Input Power Factor	>0.95 for both single phase			
	Input Frequency	50Hz / 60Hz			
	Output Voltage	230V Single Phase			
	Output Frequency	50Hz±0.5Hz			
	Output vTHD	<=3% for Linear Load, <=6% for non linear load			
	LCD Display	UPS Should be LCD Status Display			
	Special Protection	a 10kA Surge Protective Device with response time of < 0.5 nano seconds UL listed will have to provided at the Input of the UPS System			

	Battery Bank	Battery bank will be suitable for 30 mins battery backup minimum 936 VAH. Battery type will be SMF VRLA only. Battery make Exide / Quanta equivalent.			
	Certificate Required	UPS Manufacturer's ISO 9001: 2008 certificate. UPS Manufacturer's ISO 14001 certificate. NABL accredited Test Laboratory certificate for the offered UPS system, same model and rating			

5. Minimum Specification of ADF Scanner : 65 Nos (HP/Canon Equiv.)

Scanner type

- Flatbed
- ADF
- Digital sending standard features
- Scan to email; Scan to PC; Scan to Network
- Digital sending optional features
- Send to email
- Send to network folder
- Send to PC
- Scan resolution, optical
- Up to 600 x 600 dpi (color and mono, ADF)
- Up to 1200 x 1200 dpi (color and mono, flatbed)
- Duty cycle (daily)
- Recommended daily duty cycle: 4000 pages (ADF), 100 pages (Flatbed)
- Bit depth
- 24-bits external 48-bits internal
- Levels of grayscale
- 256
- Multifeed detection
- Yes
- Task speed
- OCR A4 (8.5 x 11 in) text page (ADF, 300 dpi, Color, RTF): 6.51 sec for single image scan. 4.45 sec for single image save
- A4 (8.5 x 11 in) to e-mail (ADF, 300 dpi, Color, PDF): 6.43 sec for single image scan. 1.56 sec for single image send
- OCR A4 (8.5 x 11 in) text page (Flatbed, 300 dpi, Color, RTF): 7.89 sec for single image scan. 4.43 sec for single image save

- A4 (8.5 x 11 in) to e-mail (Flatbed, 300 dpi, Color, PDF): 7.89 sec for single image scan. 1.39 sec for single image send. [4 x 6-in is not supported. Slides to file and negative to file are not supported]
Scan size, maximum
- 216 x 356 mm
Media types
- Paper (banner, inkjet, photo, plain), envelopes, labels, cards (greeting, index)
Media weights, supported ADF
- 45 to 120 g/m²
Scan file format
- For text & images: PDF, JPEG, PNG, BMP, TIFF, Text (.txt), Rich Text (rtf) and Searchable PDF.
Scan input modes
- Scan front-panel function for Save as PDF, Save as JPEG, E-mail as PDF, E-mail as JPEG, Send to Cloud, Everyday Scan and Save as Editable Text (OCR). HP Scan in Win OS, HP Easy Scan/ICA in Mac OS and third parties applications via TWAIN.
Scanner advanced features
- Blank page removal
- Auto orientation
- Auto color detect
- Auto crop
- Auto exposure
- Hole removal
- Straighten content
- Erase edges
- Clean up background
- Auto threshold
- Color drop out
- OCR
Control panel
- 2.8-in (7.11-cm) Touchscreen, Buttons (Back, Home, Help)

ADF specifications

Automatic document feeder capacity

- Standard, 50 sheets (75 g/m² paper)

Automatic document feeder speed

Up to 30 ppm/60 ipm ¹

Scanning options (ADF)

- Single pass E-Duplex

Scan size (ADF), maximum

- 216 x 3100 mm

Scan size ADF (minimum)

- 105 x 148 mm

Compatible operating systems

Compatible operating systems

Win 7 or higher

Mac: OS X El Capitan 10.11

Mac compatible

- Yes

Connectivity

Connectivity, standard

- USB 2.0 and USB 3.0 (SuperSpeed)
- Built-in Fast Ethernet 10/100/1000Base-TX network port

Twain version

TWAIN Certified. Version 2.1

Power and operating requirements

Power

- Input Voltage: 100 to 240 VAC

Power consumption

6.11 watts (Ready), 1.35 watts (Sleep), 0.05 watts (Auto-Off), 0.05 watts (Off)

Operating temperature range

- 10 to 35°C

Operating humidity

- 15 to 80% RH (non-condensing)

6. Minimum Specification of 19" 12U/ 9U / 6U Wall mounting Rack

Qty.	10 nos /11 nos /35 Nos.
Make	
Model	
Part No.	

Minimum Specification	Qty.	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)
19" 6U wall mounting rack with all cables & tray, Power Strip, Cooling Fan & accessories input power strip & chassis ground. All equipments housed properly, air circulation & properly locking system with key. (Make: VALRACK / D-Link / APW or Equivalent)	Nos		

7. Minimum Specification of Factory Crimped Patch Cord 2 Mtr.

Qty.	260 Nos.
Make	AMP/Comscope/Equiv.
Model	
Part No.	

Sl. No.	Minimum Specification	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)	Remarks
1	Category 6 UTP Patch Cord – 2 Mtr.			
2	The Patch Cord shall, at a minimum comply with proposed ANSI/TIA/EIA-568-C.2-1 Commercial Building Cabling Standards Transmission Performance Specifications for 4 pair 100W Category 6 Cabling.			
3	Conductor size: 22-24 AWG stranded bare copper			
4	Jacket: PVC			
5	Contact blade: Phosphor bronze or equivalent			
6	Contact plating: 50µ" Gold			
7	Plug dimensions & tolerances compliant with FCC Part 68.500 and IEC 60603-7			
8	Insulation resistance : 35 M Ohm (Max)			
9	OEM should be ISO9001 and ISO14001 certified for design, development for LAN & WAN products.			
10	Brand and company together presence in India should be for last 10 years.			
11	OEM should have own service centre/Replacement Center in the state of installation			

8. Minimum Specification of Factory Crimped Patch Cord 1 Mtr.

Qty.	260 Nos.
Make	AMP/Comscope/Equiv.
Model	
Part No.	

Sl. No.	Minimum Specification	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)	Remarks
1	Category 6 UTP Patch Cord – 1 Mtr.			
2	The Patch Cord shall, at a minimum comply with proposed ANSI/TIA/EIA-568-C.2-1 Commercial Building Cabling Standards Transmission Performance Specifications for 4 pair 100W Category 6 Cabling.			
3	Conductor size: 22-24 AWG stranded bare copper			
4	Jacket: LSZH			
5	Contact blade: Phosphor bronze or equivalent			
6	Contact plating: 50µ" Gold			
7	Plug dimensions & tolerances compliant with FCC Part 68.500 and IEC 60603-7			
8	Insulation resistance : 35 M Ohm (Max)			

9	OEM should be ISO9001 and ISO14001 certified for design, development for LAN & WAN products.			
10	Brand and company together presence in India should be for last 10 years.			
11	OEM should have own service centre/Replacement Center in the state of installation			

9. Minimum Specification of CAT 6 Information Outlet (with Keystone, Back Box & Single Face Plate)

Qty.	260 Nos.
Make	AMP/Comscope/Equiv.
Model	
Part No.	

Sl. No.	Minimum Specification	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)	Remarks
1	Single Port			
2	Write on labels in transparent plastic window – supplied with plate			
3	Face Plate with shutter			
4	Should be able to support variety of jacks – UTP			
5	Category 6, TIA568 C.2-1 – 250MHz			
6	All information outlets for 100 W, 22-24 AWG copper cable shall:			
7	Shutter is on face plate			
8	Insertion force: 20N max (IEC 60603-7-4)			
9	Information outlet (RJ45 jack) should be covered under ETL Verification program for compliance with TIA568B.2-1,			
10	Jack Specification:			
11	Plastic Housing: Polycarbonate/PVC or equivalent, UL94V-0 rated or equivalent			
12	Operating Life: Minimum 750 insertion cycles			
13	Contact Material: Copper alloy			
14	Contact Plating: 50 μinches gold on plug contact area			
15	OEM should be ISO9001 and ISO14001 certified for design, development for LAN & WAN products.			
16	Brand and company together presence in India should be for last 10 years.			
17	OEM should have own service centre/Replacement Center in the state of installation			

10. Minimum Specification of CAT 6 UTP Cable

Qty.	20000 Mtr.
Make	AMP/Comscope/Equiv.
Model	
Part No.	

Sl. No.	Minimum Specification	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)	Remarks
1	Category 6 Unshielded Twisted Pair 4 pair 100W cable shall be compliant with ANSI/TIA/EIA-568-C.2-1 Additional Transmission Performance Specifications for 4-pair 100W Category 6Cabling. Cat6 cable should be tested up to 600MHz.ETL Intertek 4 connector channel certified, IEEE 802.3 Zero Bar, ISOIC 11801 report to be submitted.			
2	Category 6 UTP cables shall extend between the work area location and its associated telecommunications closet and consist of 4 pair, 23 AWG, Cat 6 LSZH jacket complying to fire rating IEC 60332-1 .			
3	The 4 pair Unshielded Twisted Pair cable shall be UL Listed			
4	Construction: 4 twisted pairs separated by internal X shaped, 4 channel, polymer spine / full separator. Half shall not be accepted.			
5	Conductor Solid bare Copper 23 AWG minimum			
6	Insulation :High Density Polyethylene/PVC			
7	Jacket PVC			
8	OEM should be ISO9001 and ISO14001 certified for design, development for LAN & WAN products.			
9	Brand and company together presence in India should be for last 10 years.			
10	OEM should have own service centre/Replacement Center in the state of installation			

11. Minimum Specification of CAT 6 24 Port Loaded JACK/PATCH PANEL

Qty.	65 No.
Make	AMP/Comscope/Equiv.
Model	
Part No.	

Sl. No.	Minimum Specification	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)	Remarks
1	Powder coated steel, in 24 port configurations.			
2	Port identification numbers on the front of the panel.			
3	IDC: Suitable for 22-24 AWG stranded and solid wire compatible with both 110 & Krone punch down tools			
4	Each port / jack on the panel should be individually removable on field from the panel.			
5	The Cat-6 transmission performance is in compliance with the ANSI/TIA/EIA 568C.2 standard			
	Jack Connector Specification:			
6	Plastic Housing: ABS , UL94V-0 rated			
7	Contact Material: Copper Alloy			
8	Contact Plating: 50µ" Gold plated on plug contact area			
9	Plug Retention Force: 15 lb.			
	IDC Connector Specification:			
10	Plastic Housing: Polycarbonate, UL94V-0 rated or			

	equivalent			
11	IDC cap : ABS, UL 94V -0			
12	Contact Material: Copper Alloy			
13	Wire Accommodation: 22-24 AWG solid			
14	OEM should be ISO9001 and ISO14001 certified for design, development for LAN & WAN products.			
15	Brand and company together presence in India should be for last 10 years.			
16	OEM should have own service centre/Replacement Center in the state of installation			

Minimum Specification of Outdoor Armored Fiber Optic 6 CORE Single Mode Cable

Qty.		10000 Mtr.		
Make		AMP/Comscope/Equiv.		
Model				
Part No.				
Sl. No.	Minimum Specification	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)	Remarks
1	6 Core Single Mode Outdoor Armored Fiber Optic Cable			
2	Protected by Glass-yarn in between corrugated steel tape & loose tube			
3	Sequential meter marking			
4	Standards: ISO 11801, IEC60793-1, IEC60794-1.2, ITU-T REC G.652D, Telecordia GR-20 Core			
5	The fiber type is a Matched Cladding Single Mode			
6	Fiber dual coated with acryl ate coating.			
7	The fiber is optimized for operation at 1310 nm and at 1550 nm.			
8	Nominal Mode Field Diameter: 9.2 μm			
9	Mode field diameter tolerance: ±4%			
10	Cladding Diameter: 125 μm			
11	Cladding diameter tolerance: ±1 μm			
12	Mode field Concentricity error: < 1 μm			
13	Cladding non-circularity: < 2 %			
	Attenuation (of cable with fibers):			
14	At 1310 nm: <= 0.40 dB/km			
15	In the range 1285-1330 nm :<= 0.40dB/km			
16	At 1550 nm : <= 0.25 dB/km			
17	OEM should be ISO9001 and ISO14001 certified for design, development for LAN & WAN products.			
18	Brand and company together presence in India should be for last 10 years.			
19	OEM should have own service centre/Replacement Center in the state of installation			

Minimum Specification of 12 Port LIU Box Loaded with LC coupler, Connector etc.

Qty.	5 No.
Make	AMP/Comscope/Equiv.

Model				
Part No.				
Sl. No.	Minimum Specification	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)	Remarks
1	sufficient slots accommodate Simplex LC adapters individually.			
2	Aluminum base material for light mounting			
3	Splice Tray & Cable Spool provision inside			
4	Accessory kit consists of cable ties, mounting ear screw earthling and spiral wrap tube.			
5	Panel cover should be slide out for easy maintenance			
6	Removable Rear & Front cover for better access to interior of LIU			
7	Should be loaded with 12nos.of LC Single mode simplex adapters			
8	Adapters should be Telcordia, TIA/EIA, IEC compliance			
9	OEM should be ISO9001 and ISO14001 certified for design, development for LAN & WAN products.			
10	Brand and company together presence in India should be for last 10 years.			
11	OEM should have own service centre/Replacement Center in the state of installation			

Minimum Specification of 6 Port LIU Box Loaded with LC coupler, Connector etc.

Qty.		12 No.		
Make				
Model				
Part No.				
Sl. No.	Minimum Specification	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)	Remarks
1	sufficient slots accommodate Simplex LC adapters individually.			
2	Aluminum base material for light mounting			
3	Splice Tray & Cable Spool provision inside			
4	Accessory kit consists of cable ties, mounting ear screw earthling and spiral wrap tube.			
5	Panel cover should be slide out for easy maintenance			
6	Removable Rear & Front cover for better access to interior of LIU			
7	Should be loaded with 6 nos.of LC Single mode simplex adapters			
8	Adapters should be Telcordia, TIA/EIA, IEC compliance			
9	OEM should be ISO9001 and ISO14001 certified for design, development for LAN & WAN products.			
10	Brand and company together presence in India should be for last 10 years.			
11	OEM should have own service centre/Replacement Center in the state of installation			

Minimum Specification of 1.5 mtr Pigtail with LC Single Mode Connector

Qty.	70 Nos.
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Make				
Model				
Part No.				
Sl. No.	Minimum Specification	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)	Remarks
1	Corning Optical Fiber single mode complying G652D, G657A & G657B			
2	SC type Single Mode Connector			
3	Low insertion & return loss, clean & scratch free faces			
4	1.5 Mtr length			
5	OEM should be ISO9001 and ISO14001 certified for design, development for LAN & WAN products.			
6	Brand and company together presence in India should be for last 10 years.			
7	OEM should have own service centre/Replacement Center in the state of installation			

Minimum Specification of Single Mode Fiber Patch Cord 3 Mtr. Duplex LC-LC				
Qty.		110 No.		
Make				
Model				
Part No.				
Sl. No.	Minimum Specification	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)	Remarks
1	Length : 3 Mtr			
2	All optical fiber patch leads shall comprise of Single mode 9/125µm fiber with LC & LC fiber connectors terminated at each end. The optical fiber patch leads shall comply with the following specifications:			
3	Optical Fiber – Corning Single Mode			
4	Connector: Zirconia ceramic ferrule or equivalent			
5	Pre-radiuses and pre-polished ferrule			
6	Duplex			
8	Insertion Loss - <0.2 db			
9	Cable: 9/125, SM			
10	Repeatability - < 0.2 db			
11	Durability – 1000 mating cycle			
12	OEM should be ISO9001 and ISO14001 certified for design, development for LAN & WAN products.			
13	Brand and company together presence in India should be for last 10 years.			
14	OEM should have own service centre/Replacement Center in the state of installation			

Authorized Signatory (Signature In full): _____

Name and title of Signatory: _____

Stamp of the Company: _____