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ADDENDUM related to the Tender Notice No.JNTUK /Campus wide networking /2016/1,is attached with this document.The existing tender specifications and BoM is given for 1G network, the bidders can also quote for 10G network back bone (***with 5 - 10G switches for core and distribution levels***) with additional components as **option-2** in price bid.

Prospective Bidders are requested to stay updated from University website (http://www.jntuk.edu.in) for more details.

Sd/ Registrar

ADDENDUM

1. Network Switch- Layer 3 Level

Active Components

Section T: Technical Compliance

Sl#	RFP Volume Section	RFP Page #	Row No	Content in the RFP	Updated RFP
1	1. Network Switch- Layer 3 Level	15	Row No: 3 (1. General Features)	Switch should be based on a Modular OS Architecture capable of hosting applications.	Switch should support OpenFlow, and shall be ready to take advantage of innovative SDN applications with OpenFlow support
2	1. Network Switch- Layer 3 Level	16	Row No: 6, 3rd Row in Page:16 (3 Stacking)	The Switch stacking module should be hot-swappable.	The Switch should support stacking module
3	1. Network Switch- Layer 3 Level	16	Row No: 10, 7th Row in Page:16 (3 Stacking)	The Switch stacking should support single configuration.	The Switch stacking should support single configuration / All the member stack switches should behaves as one logical switch and should accessible by the network through a single IP address"
4	1. Network Switch- Layer 3 Level	16	Row No: 1 (4. Layer 3 Features)	The Switch should support routing protocols like Static, RIP, RIPng, Eigrp-Stub from day one	The Switch should support routing protocols like Static, RIP, RIPng, Eigrp-Stub / OSPF shall include the required Licenses for operation from day one
5	1. Network Switch- Layer 3 Level	16	Row No: 5 (4. Layer 3 Features)	The Switch should support HSRP for IPv4 & IPv6.	The Switch should support HSRP/VRRP for IPv4 & IPv6
6	1. Network Switch- Layer 3 Level	16	Row No: 5 (4. Layer 3 Features)	The Switch should support Advance routing protocols like OSPF, EIGRP, BGPin Future.	The Switch should support Advance routing protocols like OSPF,EIGRP / Equivalent, BGP and required Licensees to be included for operation from day One
7	1. Network Switch- Layer 3 Level	17	Row No:8 or Row No 6 in Page No:17 (6 Network Security	The Switch should support RADIUS change of authorization and downloadable Access List for	The Switch should support RADIUS change of authorization and downloadable Access List / dynamic (RADIUS-assigned) access control lists for

			Features)	comprehensive policy management capabilities.	comprehensive policy management capabilities
8	1. Network Switch- Layer 3 Level	17	Row No:16 or Row No 6 in Page No:17 (6 Network Security Features)	The Switch should support Secure Shell (SSH) Protocol, Kerberos, and Simple Network Management Protocol Version 3 (SNMPv3) to provide network security by encrypting administrator traffic during Telnet and SNMP sessions.	The Switch should support Secure Shell (SSH) Protocol, Kerberos / TACACS+ / Equivalent /RADIUS and Simple Network Management Protocol Version 3 (SNMPv3) to provide network security by encrypting administrator traffic during Telnet and SNMP sessions
9	1. Network Switch- Layer 3 Level	18	Row No:1 (7 Smart Operations)	The Switch should support software image update and switch configuration without user intervention.	he Switch should support software image update and switch configuration
10	Network Switch- Layer 3 Level	18	Row No:6 in Pahe 18 (6 Network Security Features)	The Switch should support IPv6 RA Throttler for Wireless Implementation	The Switch/ wireless controller should support IPv6 RA Throttler for Wireless Implementation
11	Network Switch- Layer 3 Level	18	Row No:6 in Pahe 18 (6 Network Security Features)	The Switch should support enforcement of identity and context-based access policies for users and devices.	The Switch should support enforcement of identity and context-based access policies for users and devices or equivalent feature
12	1. Network Switch- Layer 3 Level	18	Row No:3 (7 Smart Operations)	The Switch should support system health checks within the switch.	The Switch should support system health checks within the switch / Equivalent
13	1. Network Switch- Layer 3 Level	18	Row No:4 (7 Smart Operations)	The Switch should support real-time network event detection and onboard automation	The Switch should support real-time network event detection and onboard automation or switch should support SDN for network automation

14	1. Network Switch- Layer 3 Level	18	Row No:5 (7 Smart Operations)	The Switch should be capable of being deployed by any installer at the site, without having any prior knowledge of the IOS CLIs	The Switch should be capable of being deployed by any one at the site who has some basic Networking Knowledge
15	1. Network Switch- Layer 3 Level	18	Row No:6 (7 Smart Operations)	The Switch should support dynamic port and session configuration management.	The Switch should support dynamic port and session configuration management or equivalent
16	1. Network Switch- Layer 3 Level	18	Row No:7 (7 Smart Operations)	The Switch should support real-time network event detection and onboard automation in order to take informational, corrective actions when the monitored events occur (Embedded Event Manager).	The Switch should support real-time network event detection and onboard automation in order to take informational, corrective actions when the monitored events occur (Embedded Event Manager) / Equivalent
17	1. Network Switch- Layer 3 Level	18	Row No:1 (8. Quality of Service (QoS) & Control)	The Switch should support hierarchical QoS (HQoS) including hierarchical classification, policing and shaping.	The Switch should support hierarchical QoS (HQoS) including hierarchical classification, policing and shaping / Advanced classifier-based QoS classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information
18	1. Network Switch- Layer 3 Level	18	Row No:2 (8. Quality of Service (QoS) & Control)	The Switch should be capable of Downloading Downloadable Access List from network security engine based on user identity	The Switch should be capable of Downloading Downloadable Access List from network security engine based on user identity or equivalent feature
19	1. Network Switch- Layer 3 Level	19	Row No:2 of page No 19. (8 Quality of	The Switch should support - Shaped round robin (SRR) scheduling to	The Switch should support- Shaped round robin (SRR) scheduling to ensure

			Service (QoS) & Control)	ensure differential prioritization of packet flows by intelligently servicing the ingress queues and egress queues. - Weighted tail drop (WTD) to provide congestion avoidance at the ingress and egress queues before a disruption occurs. - Strict priority queuing to ensure that the highest priority packets are serviced ahead of all other traffic.	differential prioritization of packet flows by intelligently servicing the ingress queues and egress queues. - Weighted tail drop (WTD) to provide congestion avoidance at the ingress and egress queues before a disruption occurs. or equivalent, - Strict priority queuing to ensure that the highest priority packets are serviced ahead of all other traffic or equivalent
20	1. Network Switch- Layer 3 Level	19	Row No:1 (9. Application Visibility)	The Switch should support Full Flexible Neflow or equivalent which provides ability to characterize IP traffic and identify its source, traffic destination, timing, and application information and is critical for network availability, performance, and troubleshooting.	The Switch should support Full Flexible Neflow / sFlow or equivalent which provides ability to characterize IP traffic and identify its source, traffic destination, timing, and application information and is critical for network availability, performance, and troubleshooting.
21	1. Network Switch- Layer 3 Level	19	Row No:2 (9. Application Visibility)	The Switch should be capable of enabling FnF on all ports of the switch for Ingress and Egress Traffic.	The Switch should be capable of enabling FnF on all ports of the switch for Ingress and Egress Traffic / Equivalent
22	1. Network Switch- Layer 3 Level	19	Row No:4 (9. Application Visibility)	The Switches when stacked together should be capable to exporting the flow independently / directly to the	The Switches when stacked together should be capable to exporting the flow independently / directly to the FnF Collector or equivalent

				FnFCollector.	
23	1. Network Switch- Layer 3 Level	19	Row No:5 (9. Application Visibility)	The Switch should be capable of showing customized reports on OS CLI, based on Top Talkers, Top Destination, Top Protocols etc.	The Switch should be capable of showing customized reports on OS CLI, based on Top Talkers, Top Destination, Top Protocols etc. by using of NMS or equivalent
24	1. Network Switch- Layer 3 Level	19	Row No:6 (9. Application Visibility)	The Switch should support Wireshark packet analyzer that supports multiple protocols and analyzes the LAN traffic	The Switch should support Wireshark packet analyzer that supports multiple protocols and analyzes the LAN traffic or equivalent feature

2. Network Fiber Switch- Layer 3 Level
Active Components
Section T: Technical Compliance

Sl#	RFP Volume Section	RFP Page #	Content in the RFP	Updated RFP
1	2. Network Fiber Switch- Layer 3 Level	20	Switch should be based on a Modular OS Architecture capable of hosting applications.	Switch should support OpenFlow, and shall be ready to take advantage of innovative SDN applications with OpenFlow support
2	2. Network Fiber Switch- Layer 3 Level	20	Switch should have USB 2.0 for OS Management (uploading, downloading & booting of OS and Configuration).	Switch should have Serial Port / RJ-45 or USB micro-B for OS Management(uploading, downloading & booting of OS and Configuration).
3	2. Network Fiber Switch- Layer 3 Level	20	Should support at least 20K Ipv4 Routes	Should support at least 15K Ipv4 Routes

4	2. Network Fiber Switch-Layer 3 Level	20	The Switch stacking module should be hot-swappable.	The Switch should support stacking module
5	2. Network Fiber Switch-Layer 3 Level	20	The Switch stacking should support single configuration.	The Switch stacking should support single configuration / All the member stack switches should behaves as one logical switch and should accessible by the network through a single IP address
6	2. Network Fiber Switch-Layer 3 Level	20	The Switch should support HSRP for IPv4 & IPv6.	The Switch should support HSRP/VRRP for IPv4 & IPv6
7	2. Network Fiber Switch-Layer 3 Level	20	The Switch should support Advance routing protocols like OSPF, EIGRP, BGP in Future.	The Switch should support Advance routing protocols like OSPF,EIGRP / Equivalent, BGP and required Licensees to be included for operation from day One
8	2. Network Fiber Switch-Layer 3 Level	20	The Switch shall support IP Multicast and PIM, PIM Sparse Mode, PIM Dense Mode, PIM Sparse-dense Mode & Source-Specific Multicast for wired clients in Future	The Switch shall support IP Multicast and PIM, PIM Sparse Mode, PIM Dense Mode or PIM Sparse-dense Mode \ Source-Specific Multicast for wired clients in Future
9	2. Network Fiber Switch-Layer 3 Level	20	The Switch should support Dynamic VLAN, Downloadable ACLs, Multi- Auth VLAN Assignment, MAC Based Filtering & Web Authentication security mechanism.	The Switch should support Dynamic VLAN ACLs, Multi- Auth VLAN Assignment, MAC Based Filtering & Web Authentication security mechanism

10	2. Network Fiber Switch-Layer 3 Level	21	The Switch should support software image update and switch configuration without user intervention.	Switches can download the software image and store it in flash and it will run by admin permission only
11	2. Network Fiber Switch-Layer 3 Level	21	The Switch should support system health checks within the switch.	The Switch should support system health checks within the switch / Equivalent
12	2. Network Fiber Switch-Layer 3 Level	21	The Switch should support real-time network event detection and onboard automation	The Switch should support real-time network event detection and onboard automation or switch should support SDN for network automation
13	2. Network Fiber Switch-Layer 3 Level	21	The Switch should support dynamic port and session configuration management.	The Switch should support dynamic port and session configuration management or equivalent
14	2. Network Fiber Switch-Layer 3 Level	21	The Switch should support hierarchical QoS (HQoS) including hierarchical classification, policing and shaping.	The Switch should support hierarchical QoS (HQoS) including hierarchical classification, policing and shaping./Advanced classifier-based QoS classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information
15	2. Network Fiber Switch-Layer 3 Level	22	The Switch should support Full Flexible Neflow or equivalent which provides ability to characterize IP traffic and identify its source, traffic destination, timing, and application information and is critical for network availability, performance, and troubleshooting.	The Switch should support netflow or equivalent feature

16	2. Network Fiber Switch- Layer 3 Level	22	The Switch should support Wireshark packet analyzer that supports multiple protocols and analyzes the LAN traffic	The Switch should support Wireshark packet analyzer that supports multiple protocols and analyzes the LAN traffic from mirror port
17	2. Network Fiber Switch- Layer 3 Level	21	The Switch should support enforcement of identity and context-based access policies for users and devices	The Switch should support enforcement of identity and context-based access policies for users and devices or equivalent feature

3. Network Switch- Layer 2 Level
Active Components
Section T: Technical Compliance

Sl#	RFP Volume Section	RFP Page #	Content in the RFP	Updated RFP
1	3. Network Switch- Layer 2 Level	22	The switch should support a Dual Core CPU	The switch should support a Dual Core CPU or 2 nos of CPU
2	3. Network Switch- Layer 2 Level	22	The switch shall have dedicated Stacking Port	The switch shall have dedicated Stacking Port or equivalent technology to support stack
3	3. Network Switch- Layer 2 Level	22	Stacking module should be Hot-swappable	The Switch should support stacking module
4	3. Network Switch- Layer 2 Level	23	The switch should be stackable with older switch models that use similar stacking technology	The switch should be stackable with older switch models that use similar stacking technology or switch should support Vlantrunking or equivalent to communicate with older switch models

5	3. Network Switch- Layer 2 Level	23	The switch should support an External Redundant Power Supply in future	The switch should support redundant power supply
6	3. Network Switch- Layer 2 Level	24	The switch should support UplinkFast&BackboneFast technologies to help ensure quick failover recovery, enhancing overall network stability and reliability	The switch should support UplinkFast&BackboneFast technologies to help ensure quick failover recovery, enhancing overall network stability and reliability or switch should support equivalent feature
7	3. Network Switch- Layer 2 Level	24	The switch should support Software image update and switch configuration without user intervention	The switch should support Software image update and switch configuration
8	3. Network Switch- Layer 2 Level	24	The Switch should support signed images	The Switch should support signed images\switch should support ndpp
9	3. Network Switch- Layer 2 Level	24	The switch should support Weighted tail drop (WTD) to provide congestion avoidance	The switch should support Weighted tail drop (WTD) to provide congestion avoidance / Weighted Round Robin (WRR)
10	3. Network Switch- Layer 2 Level	25	The switch should support reduction of greenhouse gas (GhG) emissions	The switch should support reduction of greenhouse gas (GhG) emissions/IEEE 802.3az
11	3. Network Switch- Layer 2 Level	25	The switch should support measuring of energy between itself and endpoints	The switch should support measuring of energy between itself and endpoints/IEEE 802.3az

12	3. Network Switch- Layer 2 Level	25	The switch should support discovery of manageable devices for Energy measurement	The switch should support discovery of manageable devices for Energy measurement/IEEE 802.3 az
13	3. Network Switch- Layer 2 Level	25	The switch should support support monitoring of power consumption of endpoints	The switch should support support monitoring of power consumption of endpoints/IEEE 802.3az
14	3. Network Switch- Layer 2 Level	25	The switch should support hibernation mode to save power when switch is idle	The switch should support hibernation mode to save power when switch is idle /IEEE 802.3 az
15	3. Network Switch- Layer 2 Level	26	The switch should support MAB based authentication (MAB)	The switch should support MAB based authentication (MAB) / MAC based authentication

Wireless LAN Controller
Active Components
Section T: Technical Compliance

Sl#	RFP Volume Section	RFP Page #	Content in the RFP	Updated RFP
1	Wireless LAN Controller	41	Must be compliant with IEEE CAPWAP for controller-based WLANs.	Must be compliant with IEEE CAPWAP or equivalent for controller-based WLANs
2	Wireless LAN Controller	42	The Controller should support a capability to shun / block WLAN client in collaboration with wired IPS on detecting malicious client traffi	The Controller should support a capability to shun / block WLAN client in collaboration with wired IPS or inbuilt IPS on detecting malicious client traffic

3	Wireless LAN Controller	43	Should provide an Air Quality rating on a per-radio basis to help gauge the impact of interference on the network	Should provide an Air Quality rating on a per-radio basis to help gauge the impact of interference on the network or should provide Spectrum Analysis graph
4	Wireless Access Point (Indoor)	44	Each radio has a dedicated memory and CPU apart from the shared Memory and CPU	Each radio has a dedicated/shared memory and CPU
5	Wireless Access Point (outdoor)	46	Must support 802.11ac, Wave 2 and back word compatible with 802.11n standards	Must support 802.11ac and back word compatible with 802.11n standards
6	Wireless Access Point (outdoor)	46	Access point shall support powering from AC /DC/ UPOE.	Access point shall support powering from AC /DC/ UPOE/ POE+
7	Wireless Access Point (outdoor)	46	The Access point shall support operating temperature of -40 to 65°C	Removed
8	Wireless Access Point (outdoor)	46	The Access point shall support Storage temperature of -50 to 70°C	Removed