



**PROJECT IMPLEMENTATION UNIT (PIU)
PUNJAB URBAN LAND SYSTEMS
ENHANCEMENT (PULSE)
Punjab Land Records Authority (PLRA)
Government of the Punjab**



Subject: MINUTES OF THE PRE-BID MEETING FOR THE PROVISION AND INSTALLATION OF CORE IT EQUIPMENT FOR PULSE DATA CENTER (PRIMARY & DR SITE) UNDER PIU-PLRA, PULSE PROJECT

A pre-bid meeting was held on August 29, 2024 at 02:00 PM under the Chairmanship of GIS Specialist, PIU-PLRA, PULSE in the committee room of PULSE for the subject activity. The meeting started with recitation of Holy Quran. The chair welcomed the participants and requested for round of introduction. Attendance Sheet of representatives of potential bidder who attended meeting in person is attached at “*Annex-A*”. Following participants attended the meeting:

1. Mr. Muhammad Sohail Aslam GIS Specialist, PIU-PLRA, PULSE
2. Mr. Muhammad Islam Financial Management Specialist, PIU-PLRA, PULSE
3. Mr. M Afzaal Amin Rana Procurement Specialist, PIU-PLRA, PULSE
4. Mr. Atif Manzoor DC, DM, SMS Specialist, PIU-PLRA, PULSE
5. Mr. Ali Usman HR Manager, PMU-BOR, PULSE
6. Mr. M Waqas Bashir MIS/IT Specialist, PIU-PLRA, PULSE

The following joined the meeting through zoom link:

1. Mr. Asim F5 Pakistan
2. Mr. Hendry Chandra F5 Pakistan
3. Mr. Usman Ch Jazz
4. Mr. Faizan Akhtar Jazz
5. Mr. Umair Cisco
6. Mr. Usman Shahid Cisco
7. Mr. Ali Raza Dell Technologies
8. Mr. Raheel HP Enterprise solution architect
9. Mr. Faheem Saeed CNS Engineering

2. Procurement Specialist, PIU-PLRA, PULSE apprised the participants regarding the procurement process of subject activity. DC, DM, SMS Specialist PIU-PLRA, PULSE round of introduction regarding SAN Storage, Scale out NAS, Data Protection Software, Cyber Recovery Vault and Backup Solution, Firewall, Load Balancer and OEM. Following queries were responded during the meeting:

Component	OEM / Vendor Queries	PULSE Response
Next Gen Firewall	What is the requirement / use case for 14 x 10G/1G RJ45 interfaces PoE; we believe it's not a requirement in DC firewall. At most a small branch firewall may require a PoE interface but even that is debatable.	PoE is not required, the bidder may quote 14 x 10G/1G RJ45 interface support without PoE. (RFB, page # 108, Section VII).

	Secondly there is a requirement of 25G interfaces / typically these are needed in DC switches or ToR switches where 25Gig interfaces are required for direct connection with compute nodes.	PULSE needs 25G interface support on the firewalls. In a data center's spine and leaf architecture, the firewall must connect directly to a border leaf switch using a 25G interface. Hence, we requested support for 25G interfaces, including SFP28 optics. (RFB, page # 108, Section VII).
Leaf Switches	The document didn't mention about Spine switch, do you have already a Spine deployed? If not, then please confirm if these DC switches will be deployed in collapsed architecture; then using the term Leaf is not logical.	PULSE already has a Cisco ACI network in production. We need to add leaf switches to expand the current network. (RFB, page # 116, Section VII)
	The SDN capability is not clear, please help us understand shall we offer the SDN controller as part of the solution?	If the proposed leaf switch is not compatible with the existing Cisco ACI network then bidder will suggest the necessary components, such as spine switches, leaf switches, and an SDN controller with hardware. (RFB, page # 116, Section VII)
	Lastly the CPU requirement is vendor specific requirement when you have already mentioned Fabric throughput, Interfaces etc. in detail the requirement highlighted below is specific to a Box, these specifications are dependent on the how a certain vendor has designed their DC switch, so we request that you review this requirement too; CPU 4 Cores System Memory 32 GB SSD Drive 64 GB).	The CPU, memory and storage specifications are mentioned to ensure network performance and reliability and inline with the already deployed leaf switches. (RFB, page # 116, Section VII)
SAN	Different architectures are available with different vendors where they can meet core Pulse called out requirements, which are active-active, 99.9999% availability, NSPOF and functionality/intelligence to provide workload placement along with load balancing recommendations. Please clarify if they can be offered?	NVMe based scale-up and scale-out Active-Active architecture where Controllers shall be true active-active so that a single logical unit can be shared across all offered controllers with 99.9999% availability and NSPOF. Storage systems should have native functionality/intelligence to provide workload placement and load balancing recommendation. (RFB, page # 98, Section VII)
	Please clarify if 512 cache is required per controller or overall storage? Please clarify if dual socket processors are required per controller?	Dual socket Intel or Equivalent CPU with 32 cores per controller or Per Array is required. Offered Storage Cache should be minimum 1TB.