

Clarification No.-IV to Bidding Document for Package – I : Unified Network Management System (U-NMS) for Central Sector & State Sector Communication in NER under Establishment of State of Art Unified Network Management System (U-NMS) for ISTS & State Utility Communication network in North Eastern Region (NER); Specification No.: CC-CS/1057-NER/CommEqp-4167/3/G4

S.No	Page Reference	Clause Reference	Clause Description	Query Request with Justification	POWERGRID's reply
1	Page 2 of 5 (PDF Doc Page No.277)	Appendix-E - SYSTEM DESIGN PARAMETERS - TABLE 2 – DESIGN PARAMETERS FOR U-NMS FUNCTIONS	Data Exchange across U-NMS (between other Regional/National U-NMS server): Database management for individual responsibility area network through remote login; Design Capacity: No. of Parameter specified in Appendix-G; Execution Rate: Updation/Configuration or on demand by exception; Response Time: 5 Sec	Kindly clarify the need of database management by remote login for individual responsibility – kindly also provide a use case.	Restricted database access for individual responsibility area shall be provided in remote login.
2	Page 2 of 5 (PDF Doc Page No.277)	Appendix-E - SYSTEM DESIGN PARAMETERS - TABLE 2 – DESIGN PARAMETERS FOR U-NMS FUNCTIONS	Data exchange with other/Offline system application: Historical data; Design Capacity: No. of Parameter specified in Appendix-G; Execution Rate: Scan Rate or by exception; Response Time: 5 Sec	Historical data trend can not be limited for a specific timeline. Kindly suggest/confirm.	Bidder to comply TS.
3	Page 2 of 5 (PDF Doc Page No.277)	Appendix-E - SYSTEM DESIGN PARAMETERS - TABLE 2 – DESIGN PARAMETERS FOR U-NMS FUNCTIONS	Continuous Real-time data storage: Sizing; Design Capacity: No. of Parameter specified in Appendix-G; Execution Rate: Each time the value is received in U-NMS;	Performance monitoring file size per hour each existing NMS is not defined under the "Continuous Real-time data storage" and in "Appendix-G". Kindly specify the size.	Performance monitoring file size is vendor specific. If needed, Details in addition to TS may be collected by the Bidder on their own.
4	Page 3 of 5 (PDF Doc Page No.278)	Appendix-E - SYSTEM DESIGN PARAMETERS - TABLE 3 – Design Parameters for ISR/Historian System FUNCTIONS	Storage of U-NMS system statistics: SOE Data; Design Capacity: 1 Year; Execution Rate: Every 15 minutes; Response Time: 1 Minute	You are requested to kindly specify the size of Storage Files and details about the Save Cases which need to be considered under this clause.	Bidder to consider size meeting the requirement of TS.
5	Page 3 of 5 (PDF Doc Page No.278)	Appendix-E - SYSTEM DESIGN PARAMETERS - TABLE 3 – Design Parameters for ISR/Historian System FUNCTIONS	Storage of U-NMS system statistics: Historical information - Storage of files and save cases; Design Capacity: 20 save cases and 20 output results of U-NMS Application; Execution Rate: As per spec; Response Time: 5 Minute;	Historical data trend can not be limited for a specific timeline. Kindly suggest/confirm.	Bidder to comply TS.
6	Page 3 of 5 (PDF Doc Page No.278)	Appendix-F - Table1 - a	Domain: User Interface Requirements ; Design Parameter: Display (including Trends) update rate; Remarks: Every 2 seconds for 4 displays together to be completed in 0.5 seconds;	Display update rate has to be completed in every 2 seconds or in 0.5 seconds? Kindly clarify.	Display updation shall be done in every 2 seconds and execution of same shall be 0.5 seconds as per requirements of TS.

7	Page 2 of 4 (PDF Doc Page No.282)	Appendix-F - Table1 - a	Domain: User Interface Requirements ; Design Parameter: Video Projection update rate (shall be performed during SAT); Remarks: Every 2 seconds for 4 displays together to be completed in 0.5 seconds;	Video projection update rate has to be completed in every 2 seconds or in 0.5 seconds? Kindly clarify.	Display updation shall be done in every 2 seconds and execution of same shall be 0.5 seconds as per requirements of TS.
8	Page 1 of 1 (PDF Doc Page No.285)	Appendix-G - System Sizing	Domain: Performance Management Sizing Parameter: Performance monitoring file size per hour each existing NMS; Sizing Input:	Performance monitoring file size per hour each existing NMS is not defined. Kindly specify the size.	Performance monitoring file size is vendor specific. If needed, Details in addition to TS may be collected by the Bidder on their own.
9	Page 20 of 28 (PDF Doc Page No.309)	Appendix-J - QUESTIONNAIRE FOR UNM FUNCTION AND APPLICATIONS - G	Performance Management System: Parameter: Does the system have multi tier architecture? If yes, provide details of the system architecture,	UNMS supports PM collection from different layers viz NMS, EMS and NE. its architecture can be discussed in detailed engineering. Plz confirm if this is ok	Bidder to comply TS.
10	Page 21 of 21 (PDF Doc Page No.25)	Section I - 1.15	20. TEC-GR No: GR/LSW-01/04 MAR-11 for LAN Switches	You are requested to kindly specify the type/category of LAN Switch for which the compliance is needed as per mentioned TEC-GR.	LAN switch meeting the requirement of TS to be supplied.
11	Page 11 of 21 (PDF Doc Page No.265)	Appendix-D - 10. Firewall Features/Characteristics required of internal Firewall:	31. Anti-APT (or Anti BOT), Adv Persistent Threat	In the RFP specs in Firewall features section where ever there is no "Yes" against a specific feature...does that mean that feature need not be proposed ? E.g the following mentioned 2 items	Yes, it is required as per TS
12	Page 11 of 21 (PDF Doc Page No.265)	Appendix-D - 10. Firewall Features/Characteristics required of internal Firewall:	32. Threat Extraction/Sandboxing/File sanitisation (additional software blade shall be needed for advance cyber security) at gateway level-for web server file upload/download req for monthly upload, 1 GB (peak) daily including PDF or word or excel files.		Yes, it is required as per TS
13	Page 9 of 21 (PDF Doc Page No.13)	1.7.C	Integration of existing NMS and Network Elements (NE) with Main and Back up UNMS System. One channel of each NMS/NE to Main and Back up UNMS center shall be used for redundancy of respective UNMS Centers. The splitter required for redundant channels integration of NEs shall be in the scope of the contractor.	Please clarify about the use splitter in asked solution as UNMS fetch details over the provided media/network on standard protocols.	Splitter shall be required to transmit NMS/NE data through redundant channels in case of no port redundancy in NMS/NE.
14	Page 10 of 21 (PDF Doc Page No.14)	1.7.I	Technical and Commercial tie-ups with existing vendors for NMS/NEs and OEM's of UNMS modules.	Generally this has to be taken care by customer which is PGCIL in this case. You are requested to kindly facilitate the same to successful bidder.	Bidder to comply TS.
15	Page 10 of 21 (PDF Doc Page No.14)	1.7.J	Supply of Spares identified under AMC along with main items to meet the contingency during installation period and during AMC period	Do the bidder needs to quantify the spares or there is any specific requirement from PGCIL? Please include the spares pricing in BOQ, So as to enable the bidder to quote for the same.	Bidder to maintain it's own spare for meeting U-NMS Application availability requirement as per TS.
16	Page 10 of 21 (PDF Doc Page No.14)	1.7.N	Shifting of existing system workstations and Installation of new system workstations at temporary location in parallel for intervening period.	Your are requested to kindly quantify and provide the details of equipments which need to be shifted.	The requirement pertains to UNMS locations involving minor renovation work , if any..

17	Page 10 of 21 (PDF Doc Page No.14)	1.7.0	Shifting and Installation of new system in UNMS Centre. This shall include all the services including cabling, interface modification and shifting or re-shifting of system required for intervening period and for final shifting to main UNMS Centre. Re-cabling for some or all equipments as required for final shifting shall also be in the scope of supplier.	Kindly clarify whether the Main UNMS center is under construction / development. It would be very difficult for the supplier to do the installation at one place and then shift the entire infra to a new place as this would involve lot of rework and downtime.	The requirement pertains to UNMS locations involving minor renovation work , if any..
18	Page 10 of 21 (PDF Doc Page No.14)	1.7.V	Contractor shall supply necessary interface (Hardware and software) for sniffing/tapping the existing NMS/EMS/NEs for parallel operation of new system with existing system.	Kindly define the scope of sniffing/tapping required.	Sniffing/ tapping is required for parallel operation of new system and existing system, if required. Bidder to comply TS.
19	Page 12 of 21 (PDF Doc Page No.16)	1.8	The equipment shall be designed and provisioned for expansions and reconfigurations without impairing normal operation, including adding and removing NMS/EMS/NEs/ channels & UNMS Centers. Adequate measures shall be taken to provide protection against rodents, contaminants, pollutants, water & moisture, lightning & short circuit, vibration and electro-magnetic interference etc. The Contractor shall demonstrate a specified level of performance of the offered items during well-structured factory and field tests.	Generally this has to be taken care by customer which is PGCIL in this case. You are requested to kindly facilitate the same to successful bidder.	Bidder to comply TS
20	Page 14 of 21 (PDF Doc Page No.18)	1.9.2	The Contractor shall be responsible for all cabling and wiring associated with the equipment provided both inside and outside buildings. The Contractor shall also be responsible for determining the adequacy of the local power source for the equipment and for cabling to it, with adequate circuit protective breakers, if required. In addition, the Contractor shall be responsible for shielding equipment and cabling to eliminate potential interference to or from the equipment and for earthing of all cabinets and shields as required for system.	Generally this has to be taken care by customer which is PGCIL in this case. You are requested to kindly facilitate the same to successful bidder.	Bidder to comply TS
21	Page 7 of 19 (PDF Doc Page No.73)	1.2.1	Communication channels between Regional UNMS and National UNMS shall be configured in redundant mode. The communication channel shall be designed for automatic switchover to protection communication channel on failure of main links.	We understand that communication channel (connectivity link/media) between UNMS Main & Backup will be provided by PGCIL and we have to take care of configuration part for UNMS functionality considering automatic switchover. Kindly confirm.	Confirmed
22	Page 8 of 19 (PDF Doc Page No.74)	1.2.2	Data Exchange with ISR system: The UNMS system shall be able to exchange data with ISR system for all type of data envisaged in the specification to meet the requirement of ISR defined in subsequent sections.	UNMS will provide API on standard protocols. Is there any specific requirement for asked data exchange? Kindly confirm.	All requirements for data exchange with ISR has been mentioned in the TS. Bidder to comply TS.

23	Page 8 of 19 (PDF Doc Page No.74)	1.6	<p>The ISR System shall capture raw production data in real-time, at its original scan rate from system such as Network resource management, fault management, performance management, trouble ticketing etc. and the same shall be submitted for approval during detail engineering. The raw data can be captured either by exception or periodically. The ISR System shall be a COTS (Commercial off the Shelf) product and shall provide user-configurable graphical visualization, reporting and analysis. It shall display current and past operating conditions on desktops anywhere and anytime throughout the enterprise and beyond. It shall store the information online for all data for 1 years and 6 years offline at its original resolution making it instantly available for deep and broad analysis, trending and bench marking for continuous processes improvements. The ISR System shall provide operators, engineers, and management with direct access to one integrated source of information. ISR system shall provide provision of insertion of future values in Historian.</p>	<p>As all the required reports and analytics including historical reports , trending etc are supported in UNMS platform, Shall we consider this ISR/Data Historian Server (Hardware/Software) as UNMS platform to suffice the requirement. Or is there any other ISR / Historian System separately to which UNMS needs to interface with. Kindly confirm the details.</p>	<p>ISR/Historian system is a separate requirement which is also to be integrated with UNMS applications for data exchange as mentioned in the TS. Bidder to comply TS.</p>
24	Page 14 of 19 (PDF Doc Page No.79)	1.6.1	<p>The ISR System shall communicate to the U-NMS servers and sample the near real-time values as configured by the User. The addition, deletion, or modification of data to be collected and processed shall not result in loss of any previously stored data during the transition of data collection and processing to the revised database. The ISR System should support High Availability (as per relevant Appendices of this specifications) and, automatic failover, interface data buffering to guarantee no data loss, and no impact to clients or applications in case of communication loss or data server shut down for maintenance or security patch installations, etc. The ISR System shall provide the trace logs for audit trails and audit purpose. Software utilities shall be provided in the ISR System to back-up the Historian data to an auxiliary memory (e.g. SAN System) available on network. This software shall have the feature of automatic as well as the manual backup of data. This utility shall also provide the feature of retrieval of data for selected period to be used in generation of reports through user-friendly pull-down menu and drag and drop facilities to generate reports/displays with performance requirement as provided at relevant Appendices of this specifications.</p>	<p>Bidder is supposed to deliver the developed and tested platform with required functionality. Are you looking for further in-house development in any UNMS modules using Program Development System. Kindly confirm. Kindly clarify what is the use case of PDS (Program Development System).</p>	<p>Bidder to comply TS.</p>

25	Page 17 of 19 (PDF Doc Page No.79)	1.7	Program Development System (PDS): The Programming Development System (PDS) shall be supplied at UNMS Centre. Many of the development system requirements are defined by reference to the corresponding system requirements in the Specification. When requirements are defined by reference, the development system shall meet relevant requirements of the referenced section and all subsections to that referenced section.	Bidder is supposed to deliver the developed and tested platform with required functionality. Are you looking for further in-house development in any UNMS modules using Program Development System. Kindly confirm. Kindly clarify what is the use case of PDS (Program Development System).	Bidder to comply TS.
26	Page 21 of 38 (PDF Doc Page No.106)	2.3.7	Performance Management System (PMS): 49) Tool shall have ability to enable users to do audits by generating periodic reports on user settable specific parameters such as group of NE's, circuits, services, ports, sites, operations regions and others.	We understand that under this clause "Generating report" is the only requirement from UNMS platform. Audit will be separate task by third party or user to comply/evaluate the reports. Kindly confirm.	This shall enable users to do audit as per requirement of TS. Bidder to comply TS.
27	Page 22 of 38 (PDF Doc Page No.107)	2.3.8.1	Trouble Ticketing (TT) System: v.Knowledge Management	Scope of knowledge Management is not clear. Kindly clarify.	This refers to Known Error Database (KEDB) updation and maintenance and other related requirements as mentioned in the TS. Bidder to comply TS.
28	Page 22 of 38 (PDF Doc Page No.107)	2.3.8.1	Trouble Ticketing (TT) System: vi.Release Management	We understand that "release management" is the part of "Patch Management" application or server. However management of TT module versions under UNMS platform shall be managed by OEM. Kindly confirm.	Bidder to comply TS.
29	Page 22 of 38 (PDF Doc Page No.107)	2.3.8.1	Trouble Ticketing (TT) System: 20) It shall be possible to configure filters that prevent the automatic creation of TT.	Why filter required to prevent TT auto generation which is based the actual network fault? However, the TT shall be generated manually wherever required. Kindly clarify.	The system shall be able to configure filters, if required.
30	Page 25 of 38 (PDF Doc Page No.110)	2.3.8.2	POWERGRID intends to provide a web portal for its Users with proper security in place to monitor status of their services and availability parameters. User should also be able to raise ticket for issues/problems/faults in their services/circuits and can get update on their tickets. SMS & Email alters shall also be provided to the User for update of ticket status and on resolution of their tickets. Contractor shall supply, install, commission, Integrate & test required solution including application Software, OS & hardware for implementation of the same under the proposed solution. The system shall have at least following capabilities:	We understand that web portal have to publish/display the data and reports based on the analysis performed by UNMS systems, Or the UNMS interface/dashboard may be extended to meet the requirement. Kindly clarify.	The web portal system shall also be integrated with relevant UNMS modules to publish/display the data and reports based on analysis performed by UNMS system. Bidder to comply TS.
31	Page 31 of 38 (PDF Doc Page No.117)	2.5.3.1	xiii. The contractor may require to integrate with existing LDAP/AAA of Employer within its network else may provide separate servers to install these (AAA & LDAP) functionalities.	You are requested to kindly clarify whether PGCIL have a LDAP/AAA solutions in place which need to be integrate with UNMS. Kindly confirm.	Bidder to comply TS.

32	Page 33 of 38 (PDF Doc Page No.118)	2.5.4	System Security, Access Control Management System & Audit (CERT-In or other guideline as applicable): 8) The proposed solution should provide the capability to manage application credential together with access control, password management all within a hardened platform. The product's appliance supports all features: Password Vault, Access Management, Session Recording , Application to Application (allows dynamic password access from applications), etc.	What session recording is required under UNMS platform functionality? Kindly clarify on specified requirement?	Bidder to comply all audit provisioning requirement as per CERT-In/GoI or other guidelines as applicable.
33	Page 35 of 38 (PDF Doc Page No.120)	2.6	An IT infrastructure is envisaged at each UNMS server location to enable publishing various applications such as Web portal System, Trouble ticketing etc. to be used by while on site. Other applications like DNS, Email servers etc. are also to be placed within this setup. Different zones shall be created for hosting different applications within this setup for ensuring system security. This setup shall be designed such that redundancy & replication of all applications shall be maintained with proper backup. The following components are to be included in this setup.	Kindly clarify whether DNS & Email servers need to be deployed in UNMS Main & Backup centers in HA.	Redundancy & replication of all applications shall be maintained with proper backup. Bidder to comply TS.
34	Page 36 of 38 (PDF Doc Page No.121)	2.7	Development System as a Test Bench and as a Training Simulator system: The development systems shall include all functions required to support the generation and testing of the system software, database, displays and reports. The development system shall also include tools to acquire data from existing NMSs and independent NEss under test mode.	Considering scope and purpose of platform, all the required reports, features are complied under UNMS platform. Kindly clarify on the requirement of Development System as a Test Bench and as a Training Simulator system?	All kind of changes, integration of new patch, integration of new NMS/EMS/Nes etc. shall be first tested on test bench before putting it online with the real time system. The Development system shall also be used for training purpose.
35	Page 37 of 38 (PDF Doc Page No.122)	2.7	<input checked="" type="checkbox"/> This Test bench for Cyber security shall also be used for VAPT (Vulnerability Assessment & Penetration Tests) e.g. OS fingerprinting, Port scanning etc.	Do the bidder need to propose VAPT solution? If yes, Kindly add the same in BOQ, so that bidder can offer accordingly.	Bidder to comply TS.
36	Page 3 of 20 (PDF Doc Page No.127)	3.0	General Requirements: The user interface requirements, specified in this section, are applicable for the user interface application of the complete UNMS system. All of the features and functions shall be available to any user, except for certain functions for which access is restricted according to system requirements. All reports/displays mentioned herein shall have the capability to generate pdf, word, xls format reports in addition to the displays as depicted typically in this section. Complete MS office suite with all features shall be compatible for all displays and report generation with find, search, copy, paste, sort, filter, exports etc. features.	UNMS platform is capable with import/export of .xls, .csv, .pdf related features for various features/funtions. The following statement is not clear Complete MS office suite with all features shall be compatible for all displays and report generation with find, search, copy, paste, sort, filter, exports etc. features. Kindly clarify.	It shall be compatible to generate reports and displays in any format of MS Office. Bidder to comply TS.
37	Page 5 of 20 (PDF Doc Page No.128)	3.2	General Requirements: <input checked="" type="checkbox"/> Identity Manager shall manage to automatically Load and Reconcile Account Data.	Kindly share the detailed requirement of this feature.	Bidder to comply TS.

38	Page 5 of 20 (PDF Doc Page No.128)	3.2	General Requirements: ☑ Manager to identify and eliminate orphan, dormant and ghost accounts automatically.	Kindly share the detailed requirement of this feature.	Bidder to comply TS.
39	Page 6 of 20 (PDF Doc Page No.129)	3.4	User Interface (UI) Environment: A common User Interface shall be provided across applications. It shall provide a common look and feel across all system functions and environments (excluding Historian Systems) including the real time system, backup system.	Each application have own look and feel with respect to OEM. Backup system may be COTS so it is not possible for Common UI. Kindly suggest.	A common User Interface shall be provided across all system functions as per TS.
40	Page 13 of 20 (PDF Doc Page No.136)	3.12	U-NMS System should have a Web based Trouble Ticket system. Every customer should be able to lodge a complaint, whenever a link/Channel is down. The complaint shall be raised by either customer himself or by calling to helpdesk. After raising of trouble ticket, customer should be able to track the status of trouble ticket from web browser.	Who are the customers for this platform? This is not defined, if a customer is normal civilian or organization or entity which is using PGCIL services then This is like CRM. Do we have to integrate the UNMS platform with PGCIL existing CRM like portal as well. Kindly clarify the scope.	Customer refers to network operators/owner's/users etc.
41	Page 14 of 20 (PDF Doc Page No.137)	3.12	There should be dedicated Android/iOS-based app of the tracking of trouble ticket. The customer should be able to raise the trouble ticket form the app itself. The App should be available in App store of Android and iOS for download. There should be a dedicated login for each customer from which he can raise ticket and track it status. The customer should get Push Notification from the app for the status of the trouble ticket. The customer should also get SMS and email notification for the status of trouble ticket.	Who are the customers for this platform? This is not defined, if a customer is normal civilian or organization or entity which is using PGCIL services then This is like CRM. Do we have to integrate the UNMS platform with PGCIL existing CRM like portal as well. Kindly clarify the scope.	Customer refers to network operators/owner's/users etc.
42	Page 3 of 14 (PDF Doc Page No.146)	4.1	The source codes /web-services based open APIs of the proposed U-NMS shall be provided to the Employer to allow integration with upper-layer or same layer management systems via WSDL or XML/SOAP/HTTPS etc.	Source code cannot be shared , but WSDL can be shared. Kindly confirm on the same.	Bidder to comply TS.
43	Page 3 of 14 (PDF Doc Page No.146)	4.1.1	(c) Portability & Interoperability: The system shall be designed for hardware independence and operation in a network environment that facilitates interoperability and integration of third-party applications. U-NMS system should support multiple database systems including Oracle, Microsoft SQL Server, MySQL etc.	Final delivery of UNMS platofrm shall be based on single database. Kindly confirm.	The UNMS system shall be capabale of integrating with multiple database as mentioned in the TS.
44	Page 4 of 14 (PDF Doc Page No.147)	4.3	The network software includes software for network communication, network security and network services. The network software shall be provided for each type of network node connection supplied with the initial system and shall be licensed for the quantities and types of nodes defined for the system configuration. It should be able to generate reports for a defined period regarding availability of communication links.	Availability report can be provided on basis of available information from existing UNMS/NMS/EMS. Kindly clarify, What should generate report regarding availability? Plz explain the relation between the two statements.	Availability report shall also be gerenated for links/services across the nodes/region etc. after analytics based on available informatiom from existing system.

45	Page 6 of 14 (PDF Doc Page No.149)	4.4.4	Facility of data export and import from and to U-NMS system to external system shall be provided as detailed below: - Through OPC Server; Through ODBC; Injection of external values	Why this facility required to access platform DB as UNMS is capable to provide you the desired output/reports from web portal and thorough API's. Kindly clarify.	Bidder to comply TS.
46	Page 7 of 14 (PDF Doc Page No.150)	4.4.5	c) Reports for Web server - The Contractor shall provide utilities for preparing reports suitable for Web publishing.	Kindly clarify on format of reports required or shall we consider the standard report facilitated as per UNMS platform. Kindly clarify.	The report formats shall be finalized during detailed engineering.
47	Page 12 of 14 (PDF Doc Page No.155)	4.9	4.9 Database development tools: The Contractor shall provide all necessary software tools for the development and maintenance of the U-NMS system, Historian and other databases at UNMS Centre.	Kindly clarify how you want to use this tool as the required feature are available with UNMS platform. Development & Maintenance will be performed by the OEM on provided DB tool. Will it suffice the requirement. Kindly confirm.	All kind of changes, integration of new patch, integration of new NMS/EMS/Nes etc. shall be first tested on test bench before putting it online with the real time system. The Development system shall also be used for training purpose.
48	Vol II, Part B Section 5, Page 10 of 15	5.5.4	(Intrusion Detection and Prevention System (IDPS): The contractor shall provide an intrusion detection and prevention system, to have a dedicated NIPS (Network Intrusion Protection System) appliance and the IPS (Intrusion Protection System) functionality shall not be coupled with the Firewall solutions, which shall be integrated to detect and prevent intrusion, worm, virus etc.	Earlier Query: With respect to RFP requirement, both internal & external firewalls are asked with Firewall + IPS combined throughput. Schedule of rate also ask for Firewalls with inbuilt NIPS (Intrusion Detection and Prevention Sytem) . Hence, We understand that there is no dedicated IDPS to be provisioned here and subject functionality of NIPS are to be incorporated within Firewall. Please confirm if our understanding is correct. PGCIL Response to above query: Confirmed, however Firewall and NIPS shall be from different OEM. Ref. to other clause 5.5.1) Firewalls shall be provided as per BOQ. It is required that both side firewalls (Internal and External) are supplied from two different manufactures. New Query: Considering your response & Query, Do the bidder have to provide internal and external firewalls of different OEM's including features IDPS (HIDS & NIPS). Kindly confirm.	i. External and internal firewalls shall be supplied from different manufacturers as mentioned in TS. ii. HIDS is a separate BoQ item. Please refer Appendix-C, sl.no. 10 "Host based IDS for all machines". Bidder to comply TS.