

## INDRAPRASTHA GAS LIMITED

IGL Bhawan, 4, Community Center, Sector 9, R.K.Puram, New Delhi-110022

Email: prateek.shrivastava@igl.co.in/ gaurav.agrawall@igl.co.in/ dnagar@igl.co.in Telephone: +91 (11) 46074-651, 657, 659

## TENDER DOCUMENT NO.IGL/ET2/CP/CM18379

Procurement of server infrastructure for hosting the application at IGL DC

## REPLY TO PREBID QUERIES

S.NO	Section	Tender Clause.	Page No.	Particulars	Description Bidder Query		IGL Reply
1	V	SOW Technical Specification DC Server - 2 Nos	67	Processor	The server should have 2 nos. of Intel Xeon Processor, 64 bit x86 processor fully binary compatible to 64/32-bit applications, number of cores on a single die/socket will be treated as a single processor, 2 x 20-core, minimum 2.0 GHz clock rate and CPU Cache minimum 35MB.	instead of the specified 20 cores. Can we propose the latest generation processor (4516+ with 24 cores per CPU) instead of the specified 20-core configuration, or is strict compliance with the mentioned core count	Tender conditions prevails  Clarification: Yes, same can proposed as 20 core per processor is minimum requirement
2	V	SOW Technical Specification DC Server - 2 Nos	67	HDD	4 x 3200GB Mixed Use NVMe SSD Hot Swap or Higher 2 x 960GB Read Intensive M.2 NVMe SSD or Higher for OS	Please change M.2/Hot swappable for wider participation	Tender conditions prevails
3	V	SOW Technical Specification DC Server - 2 Nos	67	FC HBA	2 x 32/64Gb Ports FC HBA	32Gig Ports	Tender conditions prevails
4	V	SOW Technical Specification DC Server - 2 Nos	67	PCIe Bus	Support for Gen4 PCIe slots.  Minimum 1 Nos of x16 and 2 Nos of x8.  Server should support minimum 12 Gen4 /Gen5 PCIe slots  Please change minimum 12 PCIe slots to up to 8 pcie slots The server can support maximum of 8 PCIe slots + 2 OCP slots		Tender conditions prevails
5	V	SOW Technical Specification DC Server - 2 Nos	67	Warranty	3 Years 24 / 7 Support	RFP states 7 years warranty, compliance states 3 years warranty. Please clarify the requirement	Tender conditions prevails  Clarification: Hardware warranty should be of 3 years. As stated in tender document, OEM confirmation required for proposed hardware support till 7 year from date of supply.
6	V	SOW Technical Specification DC Server - 2 Nos	68	System Management	a) Monitoring ongoing management, service alerting, reporting and remote management with embedded dedicated Gigabit out of band management port. Remote Management of Server over LAN & WAN with SSL encryption, Virtual Media and virtual folder with required advanced license, Remote KVM, Server Health logging, Directory Services compliance (AD or LDAP), REST/XML API, dynamic/group management of power, licenses including firmware or self-updating firmware system, Configuration backup, zero touch repository manager, Syslog (local / remote).  b) Management software should support integration with popular virtualization platform management software like Vcentre, SCVMM and Red Hat RHEV.	Request to remove self-updating firmware as firmware updates should require manual approval.  Request to remove zero touch repository manager - for wider participation	Tender conditions prevails  Clarification: Self Updation is prefered but manual option is also acceptable. (It is expected that the availible firmware update shall be triggered manually) Zero touch repository manager is optional feature.

7	V	SOW Technical Specification DC Server - 2 Nos	68	Serviceability	a) System should support embedded remote support to transmit hardware events support. The server should support monitoring and recording changes in the server hardware and system configuration. It assists in diagnosing problems and delivering rapid resolution when system failures occur. Should provide remote firmware update functionality.  b) Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD.  c) Solution should be provided for monitoring & analysis feature to predict, prevent and auto-resolve problems and by providing automating case creation and log file submission for the problems that can't be auto-resolved.  d) Should provide silicon-based hardware root of trust, automatic secure BIOS recovery, cryptographically signed firmware updates.	Request to change the below point to - Solution should be provided for monitoring, analysis and proactive alert notifications via email (instead of using SNMP trap forwarding) and automated alert forwarding. Hardware failures must automatically trigger a support case to be opened with OEM. Auto-resolve can have multiple dependencies, the better approach is to have alerting of issues in a proactive manner.	Tender conditions prevails  Clarification:  Either of the method is acceptable.
8	v	SOW Technical Specification DR Server - 1 Nos	69	Processor	The server should have 2 nos. of Intel Xeon Processor, 64 bit x86 processor fully binary compatible to 64/32-bit applications, number of cores on a single die/socket will be treated as a single processor, 2 x 20-core, minimum 2.0 GHz clock rate and CPU Cache minimum 35MB.	"The latest 5th Gen Intel Xeon 4516+ processor has 24 cores per processor instead of the specified 20 cores. Can we propose the latest generation processor (4516+ with 24 cores per CPU) instead of the specified 20-core configuration, or is strict compliance with the mentioned core count required?"	Tender conditions prevails  Clarification: Yes, same can proposed as 20 core per processor is minimum requirement
9	v	SOW Technical Specification DR Server - 1 Nos	69	HDD	x 1600GB Mixed Use NVMe SSD Hot Swap or Higher x 960GB Read Intensive M.2 NVMe SSD or Higher for OS  Please change M.2/Hot swappable for wider participation  T		Tender condition prevails
10	V	SOW Technical Specification DR Server - 1 Nos	69	FC HBA	2 x 32/64Gb Ports FC HBA	x 32/64Gb Ports FC HBA 32Gig Ports	
11	V	SOW Technical Specification DR Server - 1 Nos	69	PCIe Bus	Support for Gen4 PCIe slots.  Minimum 1 Nos of x16 and 2 Nos of x8.  Server should support minimum 12 Gen4 /Gen5 PCIe slots	Please change minimum 12 PCIe slots to up to 8 pcie slots The server can support maximum of 8 PCIe slots + 2 OCP slots	Tender condition prevails
12	V	SOW Technical Specification DR Server - 1 Nos	69	OS Certification	Certification for latest Server version of Windows and Linux.	RFP states 7 years warranty, compliance states 3 years warranty. Please clarify the requirement	Tender conditions prevails  Clarification: Hardware warranty should be of 3 years. As stated in tender document, OEM confirmation required for proposed hardware support till 7 year from date of supply.
13	V	V Technical Specification 69 System Management license, Remote KVM, Server Health logging, Directory Services require manual approval.		Request to remove self-updating firmware as firmware updates should require manual approval.  Request to remove zero touch repository manager - for wider participation	Tender conditions prevails  Clarification: Self Updation is prefered but manual option is also acceptable. (It is expected that the availible firmware update shall be triggered manually) Zero touch repository manager is optional feature.		

14	V	SOW Technical Specification DR Server - 1 Nos	69	Serviceability	a) System should support embedded remote support to transmit hardware events support. The server should support monitoring and recording changes in the server hardware and system configuration. It assists in diagnosing problems and delivering rapid resolution when system failures occur. Should provide remote firmware update functionality.  By Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD.  C) Solution should be provided for monitoring & analysis feature to predict, prevent and auto-resolve problems and by providing automating case creation and log file submission for the problems that can't be auto-resolved.  C) Should provide silicon-based hardware root of trust, automatic secure BIOS recovery, cryptographically signed firmware updates.		Tender conditions prevails  Clarification:  Either method is acceptable
15	-	-	65	-	Storage based replication is currently running between DC and DR and shall be enabled as part of migration		
16	-	-	65	-	Configuration and set up the hardware according to the relevant Application requirement (E-Office) shared by IGL during implementation		Tender conditions prevails  Clarification:  VMs to be made as per specifications given in SOW
17	-	-	-	-	-	Please confirm if OEM Authorization Form (MAF) required from all OEMs.	Tender conditions prevails  Clarification: Only from OEM of Hardware Infrastructure
18	-	-	1	-	-	Please confirm if MongoDB implementation must use Enterprise edition (or an equivalent licensed offering).	Tender conditions prevails  Clarification: We are considering Community Edition of the license as of now
19	-	-	ı	-	Please specify the planned subscription or licensing term (e.g. annual, multi-year, etc.) for MongoDB solution.		Tender conditions prevails  Clarification:  Not applicable for community edition as per our understanding
20	-	-	-	-	For MongoDB please confirm how many replica nodes are proposed within the primary data center to ensure adequate redundancy and throughput.		Tender conditions prevails  Clarification:  Replica set using required VMs in two separate Physical Servers
21	-	-	-	-	-	For MongoDB please specify whether the disaster recovery environment is required to maintain at least 50% or above of the production capacity for failover scenarios.	Tender conditions prevails  Clarification: Yes 50 % of Primary Site Capacity
22	-	-	-	-	PostgreDB	We request IGL to share the total number of Postgres Database instance count to estimate the professional services.	Tender conditions prevails  Clarification: 3 Postgres Database Instances with Community Edition as of now

							Tender conditions prevails
22		-			Does IGL needs Postgres Databas	Does IGL needs Postgres Database server with Enterprise Failover Cluster	Clarification : We need to set up replica of the Postgres
23	-		-	-	-	feature to provide high availability?	Database under high availability using 2 different physical servers and using
							community edition at primary site and other
							instance at DR site
							Tender conditions prevails
24	-	-	-	-	-	Does IGL has password security requirement in Postgres Database server which stops unauthorised access by enabling Password reuse max, verify	Clarification : Such security features shall be enabled if
						function, lock time to stop in database itself?	supported by the community edition else shall
	_						be enabled later
							Tender conditions prevails
25		-	-	-	-	Is there any Transparent Data encryption (TDE), data redaction requirement in Postgres DB?	Clarification : Such security features shall be enabled if
						requirement in 1 osigles BB.	supported by the community edition else shall
	-				_	Please help with draft architecture to understand the complete setup	be enabled later  Architecture diagram attached below as
26		-	-	-			Annexure-1
							Tender conditions prevails
		SOW Technical Specification DC Server - 2 Nos		Memory		Memory does not have any capability to identify its genuinity on Server.  It's the role of Server to show the alert.	Clarification :
27	V		67				It should be read as : The memory/server should have native
					memory installed in the server.	capability of identifying and reporting the geniuses of the memory installed in the	
							server.
28	v	SOW Technical Specification	67	HDD Controller	12 Gbps SAS/NVMe 4GB Cache RAID Controller supporting RAID	Request to confirm if bidder can populate RAID controller card on Server	Tender Condition prevails
	·	DC Server - 2 Nos	**		0, 1, 5 and 6 Gen4/Gen5 PCIe	OCP PCI-e slots.	
		SOW					Tender Condition prevails
29	V	Technical Specification	67	HDD	4 x 3200GB Mixed Use NVMe SSD Hot Swap or Higher 2 x 960GB Read Intensive M.2 NVMe SSD or Higher for OS	Not all major Server OEM's has 960GB M.2 NVM2 SSD's. Request to allow bidder to quote 960GB NVMe SSD instead for booting purpose.	Clarification:
		DC Server - 2 Nos					SSD capacity is the minimum size, higher can also be used.
•		SOW				Kindly confirm if bidder needs to provide FC HBA with 64G Speeds. 32G	
30	V	Technical Specification DC Server - 2 Nos	67	FC HBA	2 x 32/64Gb Dual Ports FC HBA	speed is more than sufficient for most of the requirements.	Tender Condition prevails
		SOW					
31	V	Technical Specification DC Server - 2 Nos	67	67 PCIe Bus	Support for Gen4 PCIe slots. Minimum 1 Nos of x16 and 2 Nos of x8.  Server should support minimum 12 Gen4 /Gen5 PCIe slots	Dual socket server cannot offer 12 PCI-e slots. PCI-e Gen5 is the latest generaton slot, request to ask for the latest technology.	Tender Condition prevails
32	v	SOW Technical Specification	68	System	b) Management software should support integration with popular virtualization platform management software like Vcentre, SCVMM and	Repetition of the point above.	Tender Condition prevails
		DC Server - 2 Nos		Management	Red Hat RHEV.		

33	V	SOW Technical Specification DC Server - 2 Nos	68	Serviceability	a) System should support embedded remote support to transmit hardware events support. The server should support monitoring and recording changes in the server hardware and system configuration. It assists in diagnosing problems and delivering rapid resolution when system failures occur. Should provide remote firmware update functionality. b) Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD. c) Solution should be provided for monitoring & analysis feature to predict, prevent and auto-resolve problems and by providing automating case creation and log file submission for the problems that can't be auto-resolved. d) Should provide silicon-based hardware root of trust, automatic secure BIOS recovery, cryptographically signed firmware updates.	To remove the point c since its not offered by all major Server OEM's.	Tender conditions prevails  Clarification: Point c to be read as: Solution to be provided with monitoring and analysis feature to predict impending failures, automatic case creation and log file submission.
34	v	SOW Technical Specification DR Server - 1 Nos	69	Memory	Minimum 512GB latest DDR5 memory using minimum 64GB DIMMs or higher. Advanced ECC with multi-bit error protection. The memory should have native capability of identifying and reporting the geniuses of the memory installed in the server.	gher. Advanced ECC with multi-bit error protection. The memory should lt's the role of Server to show the alert.	
35	V	SOW Technical Specification DR Server - 1 Nos	69	HDD Controller	12 Gbps SAS/NVMe 4GB Cache RAID Controller supporting RAID 0, 1, 5 and 6 Gen4/Gen5 PCIe		
36	V	SOW Technical Specification DR Server - 1 Nos	69	HDD	x 1600GB Mixed Use NVMe SSD Hot Swap or Higher 2 x 960GB Read ntensive M.2 NVMe SSD or Higher for OS  Not all major Server OEM's has 960GB M.2 NVM2 SSD's. Request to allow bidder to quote 960GB NVMe SSD instead for booting purpose		Tender Condition prevails  Clarification: SSD capacity is the minimum size, higher can also be used.
37	v	SOW Technical Specification DR Server - 1 Nos	69	FC HBA	2 x 32/64Gb Dual Ports FC HBA	Kindly confirm if bidder needs to provide FC HBA with 64G Speeds. 32G speed is more than sufficient for most of the requirements.	Tender Condition prevails
38	v	SOW Technical Specification DR Server - 1 Nos	69	PCIe Bus	Support for Gen4 PCIe slots. Minimum 1 Nos of x16 and 2 Nos of x8.  Server should support minimum 12 Gen4 /Gen5 PCIe slots	Dual socket server cannot offer 12 PCI-e slots. PCI-e Gen5 is the latest generaton slot, request to ask for the latest technology.	Tender Condition prevails
39	V	SOW Technical Specification DR Server - 1 Nos	69	Serviceability	a) System should support embedded remote support to transmit hardware events support. The server should support monitoring and recording changes in the server hardware and system configuration. It assists in diagnosing problems and delivering rapid resolution when system failures occur. Should provide remote firmware update functionality. b) Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD. c) Solution should be provided for monitoring & analysis feature to predict, prevent and auto-resolve problems and by providing automating case creation and log file submission for the problems that can't be auto-resolved. d) Should provide silicon-based hardware root of trust, automatic secure BIOS recovery, cryptographically signed firmware updates.	To remove the point c since its not offered by all major Server OEM's.	Tender conditions prevails  Clarification: Point c to be read as: Solution to be provided with monitoring and analysis feature to predict impending failures, automatic case creation and log file submission.
40	V	SCOPE OF WORK Clause no. 2.15	65	-	The "Hardware" supplied should be based on state-of-the-art technology and should be supported by OEM as part of comprehensive support with replacement of parts for at least next 7 years including warranty and post warranty AMC Support.	Request to please confirm if we need to provide support for virtualization software also for 7 years ( 3 years waranty + 4 years AMC support)	Tender conditions prevails  Clarification: The Provided hardware shall have support roadmap from OEM for atleast 7 years while we need subscription of virtulization software for 1 year.

41	V	SCOPE OF WORK FOR Clause no. 2.6	65	-	Storage based replication is currently running between DC and DR and shall be enabled as part of migration	Existing storage capacity and server migration software.	Tender conditions prevails  Clarification: We have sufficient storage capacity on FS7200 at primary site and FS5200 at DR site including IBM Global Mirror with change volume for replication.
42	v	SCOPE OF WORK FOR Clause no. 2.22	65	-	If there are any other software/ hardware required for successful commissioning or running of the solution, it is the bidder's responsibility to provide the same and the cost of such items shall be included in the bid.	Please share the complete architecture	Please refer reply at point no. 26
43	V	SCOPE OF WORK FOR Clause no. 2.23	66	-	All the licenses required for the successful running of the system/solution shall be included in the offered which includes OS viz. Linux, virtualization and database licenses of Mongo DB and PostgreSQL DB as per the minimum deployment architecture of the E-office Solution as attached.	pls confirm database software calculation.	Tender conditions prevails  Clarification: MongoDB, PostGres Community Edition for the shared architecture which includes 2 nodes replica at Primary site and 50% capacity at DR site.
44	v	SCOPE OF WORK FOR Clause no. 2.27	66	-	The offered solution/hardware should have "No Single Point Failure" such as hard disk, power supply, RAM or controller card etc.	Kindly provide more clarification on this clause.	Tender Condition prevails.
45	V	SCOPE OF WORK FOR Application List vCPU	67	-	DC 72/DR 28	Please confirm whether the cpu is vCPU witu P:V ratio 1:2	Tender conditions prevails  Clarification: The cores shared are physical cores i.e. each server shall have minimum 40 physical cores as per the shared updated architecture.

## **ANNEXURE – 1**

Functionality Of the Server	CPU Cores	RAM (in GB)	O/S Storage (in GB)	Additional Storage (in GB)	Mount Points
Web	8	12	70	-	-
Application, Redis, Kafka, Zookeeper, ELK	24	30	70	150	/eOffice (100GB) \$ /Uploads (50GB) \$
PostgreSQL DB	20	24	70	200	/var/lib/pgsql (200GB) 5
MongoDB	12	16	70	600	/MongoDB (600GB) \$
PostgreSQL DB SR & PITR MongoDB Replica Logs Backup	4	8	70	1350	/var/lib/pgsql (600GB) /MongoDB (600GB) /Logs (150GB)
Backup & Logs	2	4	70	500	/eOffice (100GB) /Uploads (50GB) /Logs (150GB) \$ /var/lib/pgsql (200GB)
CRL & eSign Gateway Server	2	4	70	50	/eOffice (50GB)

