

**INSTITUTE FOR PLASMA RESEARCH**  
**NEAR INDIRA BRIDGE, BHAT, GANDHINAGAR 382 428**  
**GUJARAT STATE**  
**Phone: 079 23962020, 23962021 Fax: 079 23962277**

**ADDENDUM No.1 DATED 07-06-2019**  
**TENDER NOTICE NO: IPR/TN/PUR/TPT/ET/19-20/3 dated 29/04/2019**  
**for Supply and implementation of Hyper Converged Infrastructure**  
**(HCI) with Disaster Recovery(DR) Solution for Server Virtualisation**  
**as per the specifications mentioned in the tender document**

Based on the Pre-Bid queries received, the Pre-bid clarifications (**Annexure-I**) along with the details of revision (**Annexure-II**) is uploaded in the e-tender portal.

Eligible Vendors are requested to upload their offer/quote within the due date and time mentioned in the tender document i.e., 13.00 hrs. IST on 19-06-2019.

All other details mentioned in the Tender documents will remain unchanged.

Tender No : IPR/TN/PUR/TPT/ET/19-20/3 Dated 29/04/2019

FOR

Supply and implementation of Hyper Converged Infrastructure (HCI) with Disaster Recovery (DR) Solution

Annexure-I

Pre bid clarifications

Sr. No.	Page No.	Section	Point No.	Description	(Optional-O/ Mandatory-M)	Query / Request	IPR Response
1	51	2.1 Technical specification for HCI solution	Point 3	Multi-hypervisor support would be preferred. Support for VMware and Microsoft Hyper-V is preferred.	O	Requesting to remove this point, as we presume this optional parameter will not impact technical evaluation criteria	No Change. As per tender document.
2	52	2.1 Technical specification for HCI solution	Point 4	The proposed HCI solution should be 100% software defined without dependency on any proprietary hardware card/devices.	O	Requesting to remove this point, as we presume this optional parameter will not impact technical evaluation criteria	No Change. As per tender document.
3	53	2.1 Technical specification for HCI solution	Point 14	Preferably support hardware of well- known OEM in case of future expansion within same cluster or in different cluster (hardware agnostic architecture).	O	Requesting to remove this point as we presume this optional parameter will not impact technical evaluation criteria	No Change. As per tender document.
4	53	2.1 Technical specification for HCI solution	Point 17	The solution should capable for enterprise data services such as data de-duplication, compression, and erasure coding. This capability should be part of ALL-FLASH and/or HYBRID storage. Ability to enable/disable this functionality per VM/Cluster basis.	O	Requesting to remove this point, Presuming this optional parameter will not impact technical evaluation criteria	No Change. As per tender document.
5	54	2.1 Technical specification for HCI solution- Hyper visor	Point 23	The proposed Hyper-Visor solution must be there in the leader quadrant of latest Gartner report. OR Proposed HCI solutions with their own hyper visor matching all other criteria is also acceptable	M	Requesting to standardized the proposed hypervisor to avoid any proprietary hypervisor positioning. To simplifying and ease of comparison and to bring all bidder in to the same page, proposed hypervisor should be compatible with the HCI OEM solutions.	No Change. As per tender document.
6	54	2.0 Technical Specification	Point 24	The solution must have the capabilities like Intelligent VM Placement (automatic based on the available resources on the nodes), VM affinity rules.	M	Sharing a common query herewith for both the aside points. Both the points are eventually centering around intelligent management of VM either on compute or on	<b>Read point no: 24 as optional.</b>

7	88	HCI Technical Specification	Point 15	Preferably the system should support Intelligent data tiering, pinning of particular VM to flash tier, automatic intelligent VM placement based on the load	O	storage side. One of point is Mandatory requirement and the another is Optional requirement. We request to please have both the points Optional preferably or otherwise please help keep both the points as Mandatory . The request is to keep uniformity of requirement for both the points since they are co-related.	No Change in Point No:15. As per tender document.
8	53	Section C-Technical Specifications	Point 10	The solution shall provide the capability to define and change storage policy per VM basis.	M	Is this policy required per VM basis only or also per VMDK basis for Data base log files kind of workload ? This storage policy is required to be changed on the fly or downtime is allowed for post effecting policy changes? Also further shall IPR allow to create separate containers to place the respective VMs in container for applying such policies ? Request to help advise.	No Change. As per tender document.
9	64	Section C- Backup Software specification	Point 3	Solution should support any type of storage as destination	M	1) What is the sizing for the storage for the secondary disk target and if there is any existing storage available, we need the make, model and capacity  2) Require to understand existing or new destination detail.	No Change. As per tender document.
10	64	Section C- Backup Software specification	Point 14	The proposed backup solution must support latest encryption capabilities. Software should be able to extend the backup repository to a public cloud service provider.	M	Capability for the movement to public cloud is from the backup repository automatically and not from the production host directly. There should not be any impact on the source system for the data migration and it should happen automatically.	No Change. As per tender document.
11	General	General	Point	In RFP , there has been points specified has M= Mandatary and O= Optional against each Technical specification		We understand that Optional specification will have no technical and commercial weightage in a tender. Hence we request you to kindly remove all the optional points. Request IPR to kindly clarify on the evaluation process for technical and commercial both.	<b>IPR will NOT disqualify any technical bid if specification mentioned optional in our RFP is not offered by the proposed solution.</b>

12	66	ToR Switch specification	Point 2	Each switch must have minimum 48 ports 10GBASE-T (10Gbps RJ45) with at least 6xQSFP+ (40GbE) ports. Must have support for dual stack IPV4 and IPV6.	M	Need clarification on whether bidder has to provide SFP+ module with switch or Not.	<b>All required accessories to connect ToR switches to our LAN to be provided by the vendor. Our LAN comprise of HPE switches and hence compatible accessories to be provided.</b>
13	61	Clause 2.3 - HCI node Specification for ST2 (DR Site)		ST2 with one node failure and other nodes are healthy and running (usable capacity for IPR's workload): 32 or higher usable Cores, 512 GB or higher usable RAM, 14 TB or higher storage capacity.	M	Please Amended with : 32 or higher usable Cores, 512 GB or higher usable RAM, 21TB or higher storage capacity. Reason : For Primary site (ST1), 24TB capacity has been asked after one node failure hence for DR site (ST2), kindly consider after one node failure. FTT1/RF=2 maintains 02 copies of data across cluster and reducing storage will lead to data loss situation hence amend it with 21TB capacity post one node failure scenario for ST2.	No Change. As per tender document.
14	68	SECTION – C Point No. 20 - L2 and L3 Services	point 20	Provides routing of IPv4 at media speeds; and supports static routes, RIP and RIPV2, OSPF, BGP, and IS-IS.	M	Please Amended with : RIP V1& V2, are not supported as the protocols are obsolete, PI make it Optional. For IS-IS, BGP provide same facility as IS-IS, PI Remove IS-IS.	No Change. As per tender document.
15	89/54		point 18	The proposed solution must be capable to use capacity tire storage either as NAS/SAN storage outside HCI cluster. There is also possibility to mount/access external storage on the HCI cluster. OR The proposed HCI must support File Services (NFS, CIFS & SMB) without use of 3rd party tools or additional licenses from day one.	M	Please Amended with : The proposed solution must be capable to use capacity tire storage either as NAS/SAN storage outside HCI cluster. There is also possibility to mount/access external iSCSI/NFS storage on the HCI cluster. OR The proposed HCI must support File Services (NFS, CIFS & SMB) without use of 3rd party tools or additional licenses from day one.	No Change. As per tender document.
16	106	Backup Software Specification - Point No. 1		The proposed solution should be in the leader quadrant at-least once in last three years of Gartner report for Data Centre Backup and Recovery Solutions.		Gartner Report for 2016 and 2017 is available, But Gartner has not generated yet Backup Software Report for 2018.	No Change. As per tender document.

17	106/65	Backup software specification	point 15	If proposed solution required additional server node outside cluster to run it, bidder is responsible to provide the hardware and software (OS) for the same. The node must be of 1U server grade hardware with 2x 10Gbps (10GBASE-T) network connectivity. 5 years onsite comprehensive support service.		1) Please Amended with : The backup solution should be independent of the HCI cluster. The backup management and backup target should be outside the cluster, so that in case the HCI cluster crashes, the virtual machines can be restored back.  2) Kindly allow at lease 2U server so that bidders can position the server with required storage in same appliance, it will help to isolate the production and backup storage.	Read as follows :  <b>Additional server node to run the proposed solution/software outside cluster is required,</b> bidder is responsible to provide the hardware and software (OS) for the same. The rackmount node must be of 1U server grade hardware with 2x 10Gbps (10GBASE-T) network connectivity. 5 years onsite comprehensive warranty and support service to be provided by bidder."
18	53	HCI Technical Specification	Point 17	The solution should capable for enterprise data services such as data de-duplication, compression, and erasure coding. This capability should be part of ALL-FLASH and/or HYBRID storage. Ability to enable/disable this functionality per VM/Cluster basis.	O	Erasure coding causes the cluster performance to go down drastically. And is never recommended for production workloads. Dedup compression in Hyperflex is always on and the performance is same with dedup compression on or off.	No Change. As per the tender document, this is optional specification
19	66	ToR Network Switch Specification	Point 2	Each switch must have minimum 48 ports 10GBASE-T (10Gbps RJ45) with at least 6xQSFP+ (40GbE) ports. Must have support for dual stack IPV4 and IPV6.	M	1)Request to please change the uplink speed to 40/100G. This is to ensure all participating OEM's only quote latest models.	No Change. As per tender document.
20	66	ToR Network Switch Specification	Point 4	The switch should support staking with at least 4 switches. The stacking accessory required to connect two ToR switches (with redundancy) including stacking cables and additional stacking module if required must be supplied by the vendor. The staking connectivity must be of 40Gbps.	M	The stacking technology is used in campus networks. We strongly recommended using datacenter grade technologies like MLAG/vPC for high performance and resiliency. With vPC we can go upto 600 Gbps of uplink bandwidth with the latest models of DC switches.  Switch should support stacking/VLT.	No Change. As per tender document.
21	66	ToR Network Switch Specification	Point 5	Routing/Switching capacity at least 1250 GbE.	M	We recommend going for 2Tbps throughput on ToR switches to ensure high performance network.	No Change. As per tender document.

22	67	ToR Network Switch Specification	Point 6	710 MPPS. Routing table size - 15K entries (Ipv4) at least, MAC address table size - 128000 entries at least.	M	We request you to please change the MAC address scale to 64K. A single switch will never hit the scale of 64000 MAC address even if your DC has 64000 end points. This is because in a L3 environment MAC address are selectively learnt.	No Change. As per tender document.
23	67	ToR Network Switch Specification	Point 7	Jumbo frames - frame sizes of up to 10,000 bytes on Gigabit Ethernet and 10 Gigabit ports.	M	1) This is a restrictive feature as it is supported by only 1 OEM. Industry standard jumbo frame is 9000 bytes. We request to please change to 9000 bytes.  2) Please change the spec from 10K bytes to 9K bytes	Read as -follow.  Jumbo frames - frame <b>size of 9000 bytes or higher</b> on Gigabit Ethernet and 10 Gigabit ports.
24	68	ToR Network Switch Specification	Point 17	VLAN support - support for 4096 VLANs based on the port, MAC address, IPV4 subnet, protocol and guest VLAN; and supports VLAN mapping.	M	We request to please change this to 3967 VLANs.	Read as -follow. VLAN support - support for <b>approx. 4K VLANs</b> (including reserved VLAN IDs)
25	54	Section -C , 1.4 Training	Point 1	Minimum 4 Days OEM Instructor led Administrative training (with soft copy of training material) for minimum 3 number of IPR Employees at OEM's training centre preferably in Gujarat or at Mumbai.		Can we offer OEM instructor led Administrative training at your location (IPR)	No Change. As per tender document.
26	54	SECTION-C, 2.1 HCI Technical Specification, Hypervisor	Point 22	Support for heterogeneous guest OS - Desktop and Server class OS for Windows and Linux (support for Redhat, Centos, SuSE, Ubuntu, Windows).	M	Require list is certified by OEM or only supporting document, Request to help advice	No Change. As per tender document.
27	65	Backup software specification	Point 15	If proposed solution required additional server node outside cluster to run it, bidder is responsible to provide the hardware and software (OS) for the same. The node must be of 1U server grade hardware with 2x 10Gbps (10GBASE-T) network connectivity. 5 years onsite comprehensive support service.	M	Kindly allow at lease 2U server so that bidders can position can position the server with required storage in same appliance, it will help to isolate the production and backup storage.	No Change. As per tender document.

28	77	Annexure - D List of Services to be migrated to HCI	Point 15	CATIA license management server		It seems the 3D modeling design software, is this used for and analysis or not? What purpose is this server used?	We do NOT want to run CATIA software as VM on proposed solution. We are planning to run license manager of CATIA as VM on proposed solution. The OS will be Windows.
29	77	Annexure - D List of Services to be migrated to HCI	Point 16	MATLAB license management server		It seems the numerical analysis software deployed by MathWorks, is this used for 3D modeling design and analysis or not? What purpose is this server used?	We do NOT want to run MATLAB software as VM on proposed solution. We are planning to run license manager of MATLAB as VM on proposed solution. The OS will be Windows.
30	77	Annexure - D List of Services to be migrated to HCI	Point 17 and 18	PAST and PASTA ( In-house developed java and Oracle based application)		What function has this server? What purpose is this server used?	PAST and PASTA both are in-house developed web application developed using JAVA and uses ORACLE as database engine. This application is running on Windows Server.
31	1	1. Scope of Work (SOW)		One ToR switch required at DR site will be provided by IPR		In DR, ToR Switch will be provided by IPR, who will do the configuration and management of this DR ToR Switch.	IPR Will help to configure the ToR switch.
32	1	1. Scope of Work (SOW)		Backup software for all proposed node to be deployed at primary site.		Which is the current Backup software being used & share the type, no. of licenses & Capacity of licenses available with the IPR	We do not have any backup software.
33	6	Technical Spec		Configure and automate the backup solution as per the requirement. Demonstrate the backup within and outside HCI environment, demonstrate the recovery of VM from respective backup after deletion of original VM.		What is the backup Size ? What is the Backup media vault used currently? & and what is needed in future (D2D, D2T,etc) What is the Increase size of backup YOY? What is the change rate ?	As per IPR's current and future need.
34	5	1.2 One time Implementation		Installation, configuration and implementation of HCI Solution at IPR and integration with existing LAN based on best practices		Share the current Network devices details with interface type on switches. This is required to check how ToR switches will connect to existing setup.	HPE switches (HPE 5940 as core switches).
35				General		Do you want to connect any existing devices to ToR Switches. If yes, please share the interface type of those hardware	As per IPR's current and future need we will connect additional devices.

36	7	1.3. Support and subscription for HCI Solution				What is the role of current services provider. Is he supporting any issues related to operating system, database, storage, taking & configuring backup policy, configuration changes to network. If yes then who will be managing above services after migrating to HCI	Help from IPR and AMC vendors will be provided as needed.
37	7	1.3. Support and subscription for HCI Solution		Onsite/remote support for configuration change and new configuration as per the requirement.		Need more clarification. Here are you talking about following points like creating new VM & assigning resources to the VM as well as increase/decrease of resources to VM Defining Backup Policy Change in Network configuration	No Change. As per tender document.
38	7	1.3. Support and subscription for HCI Solution				What type of connectivity you will provide to connect your network remotely.	As per IPR's need if required remote connectivity will be provided.
39	23	2.5 ToR Network switch		2. Each switch must have minimum 48 ports 10GBASE-T (10Gbps RJ45) with at least 6xQSFP+ (40GbE) ports. Must have support for dual stack IPV4 and IPV6.		Request to please change the uplink speed to 40/100G. This is to ensure all participating OEM's only quote the latest models. Also pls confirm number of 40Gig transceivers required from day 1	As per tender document redundant connectivity to be provided with core switches.
40				General		Specify the SLA required & Penalties/Awards	No Change. As per tender document.
41				General		Specify the RTO	As per current and future need of IPR.
42				General		Specify the current Production Data Size	As per the storage requirement of IPR.
43						Specify the Daily Rate of Change of Data	As per current and future need of IPR.
44	34	Annexure - D		List of Services to be migrated to HCI		Share the application dependencies on each other as well as other components	IPR is not planning to run any machine dependent application on HCI.



45	34	Annexure - D		List of Services to be migrated to HCI		Public & Private instances has been asked in the same cluster but no security component has been asked. Kindly clarify how the security will be provided.	No Change. As per tender document.
46	29	Annexure– A, UAT (User Acceptance Test) criteria		Adding removing of nodes from HCI cluster without any downtime.		No. of Nodes are very less so kindly change the clause to "Adding of nodes from HCI cluster without any downtime.	No Change. As per tender document.
47	14	2.1 Technical Speciation for HCI Solution		VM centric configurable RPO up to 5 minutes is desirable.		RPO of 5 minutes can be provided but IPR has to procure additional Replication bandwidth if required	No Change. As per tender document.
48	27	3.2 CONTRACT EXECUTION SCHEDULE:				Kindly share the make, model details of Physical Server hardware	No Change. As per tender document.
49	2	Eligibility Criteria (Annexure-A)		14) In the event of a purchase order/contract vendor has to provide Security Deposit in the form of Bank Guarantee for 10% of contract/ order value from SBI/nationalized....  &  15)In the event of a purchase order/contract Performance Bank Guarantee for 10% of the contract/order value from SBI/nationalized banks or any one of the scheduled		There is a requirement of Security deposit of 10% and Performance PBG of 10% . Request to apply only PBG of 10%.	No Change. As per tender document.
50	1	Deferred Terms of Form No. IPR-LP-ET-02.V5		The Tenderer shall submit, as part of its bid, interest free Earnest Money Deposit (EMD) for an amount as specified in the Tender Notice. EMD shall be submitted by way of Demand Draft from SBI/nationalized banks or any one of the scheduled banks mentioned in the bracket.....		Request the INSTITUTE FOR PLASMA RESEARCH to consider tendering EMD in form of Bank Guarantee and OR Demand Draft.. The clause may be reframed as: The Tenderer shall submit, as part of its bid, interest free Earnest Money Deposit (EMD) for an amount as specified in the Tender Notice. EMD shall be submitted by way of Demand Draft/Bank Guarantee from SBI/nationalized banks or any one of the scheduled banks mentioned in the bracket..... FORMAT OF BG to be provided.	No Change. As per tender document.

51						A request to exempt us from the Gartner Clause in this tender.	No Change. As per tender document.
<b>Eligibility Criteria (Annexure-A) related</b>							
52	82	Eligibility Criteria (Annexure-A)	point 2	The proposed OEM must be there in the leader quadrant in the latest report of Gartner Magic Quadrant for Integrated infrastructure. OR At least once in the leader quadrant of last two years (i.e. 2017 & 2018) in Gartner Magic Quadrant for Integrated infrastructure.		Please Amended with : The proposed OEM must be there in the leader quadrant in the latest report of Gartner Magic Quadrant for Hyperconverged infrastructure. OR At least once in the leader quadrant of last two years (i.e. 2017 & 2018) in Gartner Magic Quadrant for Hyperconverged Infrastructure Reason : Gartner has no category available for Integrated infrastructure Report.	Read as follows :  The proposed OEM must be there in the leader quadrant in the latest report of Gartner Magic Quadrant for <b>Integrated/hyperconverged infrastructure.</b> OR At least once in the leader quadrant of last two years (i.e. 2017 & 2018) in Gartner Magic Quadrant for <b>Integrated/hyperconverged infrastructure.</b>
53	82	Eligibility Criteria (Annexure-A)	Point 5	Bidder should be registered company having valid and updated ISO 9001:9002 certification.		As per our understanding It is typo error , So please provide the clarification for the same.	Read it as follow. "Bidder should be registered company having valid and updated <b>ISO 9001/ ISO 9002 certification.</b> " ( Any one - ISO 9001 or ISO 9002 will be acceptable)

## Annexure-II

Tender No : IPR/TN/PUR/TPT/ET/19-20/3 Dated 29/04/2019

FOR

Supply and implementation of Hyper Converged Infrastructure (HCI) with Disaster Recovery (DR) Solution

Sr. No	Page No	Section	Point No.	Text as per tender	Read As ( Changed Text)
1	54	2.1 HCI Technical Specification	Point 24	The solution must have the capabilities like Intelligent VM Placement (automatic based on the available resources on the nodes), VM affinity rules.	<b>Read point no: 24 as optional.</b>
	88	2.1 HCI Technical Specification	Point 15	Preferably the system should support Intelligent data tiering, pinning of particular VM to flash tier, automatic intelligent VM placement based on the load	
2	106/65	Backup software specification	Point 15	If proposed solution required additional server node outside cluster to run it, bidder is responsible to provide the hardware and software (OS) for the same. The node must be of 1U server grade hardware with 2x 10Gbps (10GBASE-T) network connectivity. 5 years onsite comprehensive support service.	<b>Additional server node to run the proposed solution/software outside cluster is required,</b> bidder is responsible to provide the hardware and software (OS) for the same. The node must be of 1U server grade hardware with 2x 10Gbps (10GBASE-T) network connectivity. 5 years onsite comprehensive support service to be provided by bidder."

3	67	ToR Network Switch Specification	Pointt 7	Jumbo frames - frame sizes of up to 10,000 bytes on Gigabit Ethernet and 10 Gigabit ports.	Jumbo frames - frame <b>size of 9000 bytes or higher</b> on Gigabit Ethernet and 10 Gigabit ports.
4	68	ToR Network switch specification	Point 17	VLAN support - support for 4096 VLANs based on the port, MAC address, IPV4 subnet, protocol and guest VLAN; and supports VLAN mapping.	VLAN support - support for <b>approx 4K VLANs( including reserved VLAN IDs)</b> based on the port, MAC address, IPV4 subnet, protocol and guest VLAN; and supports VLAN mapping.
5	82	Eligibility Criteria (Annexure-A)	Point 2	The proposed OEM must be there in the leader quadrant in the latest report of Gartner Magic Quadrant for Integrated infrastructure. OR At least once in the leader quadrant of last two years (i.e. 2017 & 2018) in Gartner Magic Quadrant for Integrated infrastructure.	The proposed OEM must be there in the leader quadrant in the latest report of Gartner Magic Quadrant for Integrated/ <b>hyperconvered</b> infrastructure. OR At least once in the leader quadrant of last two years (i.e. 2017 & 2018) in Gartner Magic Quadrant for Integrated/ <b>hyperconvered</b> infrastructure.
6	82	Eligibility Criteria (Annexure-A)	Point 5	Bidder should be registered company having valid and updated ISO 9001:9002 certification.	"Bidder should be registered company having valid and updated <b>ISO 9001/ ISO 9002</b> certification."

7					<p>All required accessories to connect ToR switches to our LAN to be provided by the vendor. Our LAN comprise of HPE switches and hence compatible accessories to be provided.</p>
8					<p>IPR will NOT disqualify any technical bid if specification mentioned optional in our RFP is not offered by the proposed solution.</p>