

The Institution of Engineers (India)

AN ISO 9001 : 2015 CERTIFIED ORGANISATION (ESTABLISHED 1920, INCORPORATED BY ROYAL CHARTER 1935) 8 Gokhale Road, Kolkata-700 020

A Century of Service to the Nation

**NOTICE INVITING TENDER** 

Tender No. T-1847

Dated :19.06.2025

# Supply, Installation & Commissioning of Servers, Backup Solution and Migration of Services

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The Institution of Engineers (India) [IEI] invites Sealed Tenders in Single Stage two Envelope bid system for engagement of an organization for following work:

"Supply, Installation & Commissioning of two no's of servers, Backup Solution and migration of Application and database".

- 1. The organization who shall be engaged has to perform the above-mentioned task as per the scope of work mentioned in the tender document.
- 2. The sealed tenders are to be submitted in prescribed format along with details/supporting documents wherever applicable duly authenticated by the vendor/s. No over-writings shall be accepted unless authenticated with full signature of the vendor/s.
- 3. The tender shall be in two parts viz. Technical Part (Envelope 'A') and financial bids (Envelope 'B') (Envelope 'A' and 'B' with the content shall be clearly marked on the top of the envelopes separately). Technical Part (Envelope - 'A') shall comprise of compliance documents against Qualification Requirement, GST Registration certificate and any other document in support of technical capability (Refer Table-A). The Technical bid should not contain any financial indication, violation of which will invite disgualification. Financial bid shall comprise of quoted price only in the format provided with the tender document in **Envelope – 'B'.** Both Envelope – A & B shall be put in a third envelope, sealed and submitted within the prescribed date & time and with signature of the tender applicant over it.
- 4. The sealed tender duly superscribed with "Commissioning of Servers and Backup Solutions" with Tender No. should be addressed to Deputy Director (IT &Administration) sent at the Institution's address either by registered post/speed post/or by hand. Postal / couriered tender must reach to this office within stipulated date & time i.e., upto16.00 hrs of 04 July 2025.
- 5. Tenders received after the stipulated date and time shall not be entertained. The Institution shall not be liable for any postal delays what so ever and tender received after the stipulated time/date are liable to be rejected summarily without giving any reason and any correspondence.

Deputy Director (IT & Administration)

## A. QUALIFICATION OF BIDDER

- **1.** The bidder should be registered entity and submit the certificate of incorporation.
- **2.** The Bidder should have Ten (10) years' experience in Consulting, supply and Implementation of solutions in domain of Storage, Server, backup (Self Declaration with Company Profile).
- **3.** The Bidder should provide satisfactory Work Completion certificates from GOVT/PSU/ Ltd Company, where the Bidder has implemented server/ storage/ backup. At least one Work Order of each category during last 5 Years to be submitted.
- **4.** The Bidder should have executed a similar kind of work in a single order of 1 crore value or two orders of 50 lakh value.
- **5.** The Bidder should not be blacklisted by any government / Autonomous / public / private organization in India (Declaration to be provided as per Annexure-I).
- **6.** The bidder should have an Office in Kolkata. Self-declaration with Address PAN No. & GSTIN (copy of certificates are to be attached as proof).
- **7.** Failure to provide the desired information documents by the bidder shall lead to disqualification of the Bidder.
- **8.** Bidder has to Un-conditionally accept the terms and conditions of this Tender Document(Declaration to be provided as per Annexure-II)
- **9.** Bidder its own operational service/support Centre in or around Kolkata on the date of submission of Bid (Declaration to be provided as per Annexure-III)

## B. GENERAL TERMS AND CONDITION

- **1.** The price shall include all taxes, duties, levies, various charges etc. and no additional payment shall be admissible on any account.
- **2.** The total work to be completed with 90 working days from the issuance of the work order.
- **3.** Standard LD Clause for delay in supply / service @ 2% per week or part thereof subject to maximum of 10% of the order value will be applicable.
- **4.** IEI reserves the right to reject any or all the quotations without assigning any reason whatsoever.
- **5.** Tender specific MAF having reference to this Tender & compliance from Hardware OEM is required and datasheet of the particular hardware must be attached with compliance sheet.
- **6.** Bidder shall not subcontract the job to any outside agency including their franchisee.
- 7. <u>Bidder has to provide 3 years onsite warranty for hardware and 3 years support services for backup solutions and other allied software including the operating systems</u>
- **8.** It will be the responsibility of the Bidder to obtain the Aceptance Report / Work Completion Report prior to the submission of tax invoice.
- **9.** Bidder is required to make onsite visit before submission of tender document to accesses the nature and volume of the work and also to assess the feasibility of implementation of the project.
- **10.** In case of failure to complete or non-compliance with the specifications, requirements, or standards set forth in this tender document, the IEI reserves the right to impose penalties.

#### **11. Payment Clause:**

- a. No advance payment will be made.
- b. Payment shall be made as per the schedule given below after successful completion of the work and handover of deliverables services :
  - i. 70% payment shall be made after the completion of the work
  - ii. 30% payment shall be made after three month successful operation of the system from the date of the completion of work
- **12.Performance Guarantee**: The successful bidder has to furnish a Bank Guarantee equivalent to 10% of the total order value (excluding taxes) as Performance Guarantee, valid for a period of three years from the date of successful installation and commissioning of the system. The Bank Guarantee shall serve as security against non-performance during the warranty period. The Bank Guarantee shall be returned upon expiry of the warranty period, provided there are no pending claims or unresolved issues related to system performance. It may be invoked, in part or in full, in the event of failure to meet the performance requirements or to address any valid complaints. The decision of IEI shall be final in this regard.
- **13.Jurisdiction:** This Agreement will be governed by and construed in accordance with the laws of India and any dispute arising out of this agreement will be subject to the jurisdiction of Court at Kolkata only.
- **14.Contact**: For any clarification, please contact Deputy Director (IT & Administration) at 033-40106242 or mail at <u>sudip.roy@ieindia.org</u>

### C. SCOPE OF WORK

**Brief**: The scope of work shall cover Supply, Installation, System Integration, configuration. migration and documentation. Warranty support includes support of Hardware, backup solutions and allied software including the operating systems for a period of three years from the date of acceptance of the system by IEI. The bidder shall also implement the proposed new infrastructure & complete the migration of existing applications/ systems in the new environment.

#### The Solution /Scope of Work :

- 1. Supply and commissioning of Hardware at the IEI data centre as per BOM Annexure-IV
- **2.** Installation of Operating systems, making required configuration in the supplied new Servers as per the requirement.
- **3.** Oracle database should be installed in a new Physical server in order ensure the compliance with existing License.
- **4.** Should perform all necessary OS Upgrade/Patches to the supplied Operating system, devises as applicable.
- **5.** The migration work includes existing oracle database, applications, system configurations, modifications, scripts and other parameters which are required for smooth functioning of existing applications
- **6.** Bidder has to make a physical visit of IEI prior to the submission of the tender document in order to assess the feasibility of implementation of the project.
- **7.** Existing Fujitsu Server to be used for archival of backup data while implementing backup solution.
- **8.** For the servers RAID to be configured (RAID 1+0 for Database Server, RAID 5 for Application Server).
- **9.** Servers/ devices should be communicated with existing VLAN/Network necessary configuration to be done by Vendor.

#### SLA Parameters

- 1. Vendor has to mention the Escalation procedure and matrix for customer complaints
- 2. Vendor has to provide services on 24 x 7 basis
- **3.** The vendor has to provide onsite support, when required during the warranty period i.e. Three years includes both hardware support and software services
- 4. Call to be attended within four hours of the fault booking and resolution time is 6 hours.
- **5.** The Bidder shall have a well-established support infrastructure for call reporting, logging, escalation, on-site support as well as remote support.
- **6.** Vendor has to arrange for replacement of spares without any additional cost during the warranty period.
- **7.** In case of any situation where the system becomes non-functional due to any hardware failure in cases the standby device to be provided by the OEM/vendor within 24 hours. Failing to which a penalty of Rs 5000/- shall be imposed per day and shall be adjusted with the security deposit

# <u> PART - A</u>

# Technical BID

# Supply, Installation & Commissioning of Server, Backup Solution and Migration of Application and database

SI	Description	(Yes/No)
1.	The bidder should have an Office in Kolkata. Self-declaration with Address PAN No. & GSTIN (copy of certificates are to be attached as proof).	
2.	The Bidder should have Ten (10) years' experience in Consulting, supply and Implementation of solutions in domain of Storage, Server backup (Self Declaration with Company Profile)	
3.	The Bidder should provide Work Completion certificates from GOVT/PSU/Ltd Company, where the Bidder has implemented server/ storage/backup. At least one Work Order of each category during last 5 Years to be submitted.	
4.	The Bidder should have executed a single work of similar nature of value 1 crore or two works of 50 Lakh each in last five years (Attached PO Copy)	
5.	The Bidder should not be blacklisted by any government / Autonomous / public / private organization in India (Declaration to be provided as per Annexure-I).	
6.	Tender specific MAF & compliance from Hardware OEM is required	
7.	DATASHEET of the particular hardware and Software must be attached with Compliance sheet.	
8.	Vendor has to mention the Escalation procedure and matrix for customer complaints.	
9.	The bidder should be registered entity and submit the certificate of incorporation.	
10.	Bidder has to accept Un-conditionally accepted the terms and conditions of this Tender Document. (Annexure-II)	
11.	Bidder has its own operational service/support Centre in or around Kolkata on the date of submission of Bid. (Annexure-III)	

<u>Table: A</u>

# <u> PART - B</u> FINANCIAL BID

Supply, Installation & Commissioning of Server and Migration of Application and database

## A. Rate of Services

Signature

Address

E-mail

Date

Phone No.

Company Name :

:

:

:

:

:

SI	Description	Quantity	Rate	%of GST	Amount
1.	Server for Application (Specifications as given in Annexure- V)	01			
2.	Server for Database (Specifications as given in Annexure- VI)	01			
3.	Additional HDD for old server (3.5" Inch 6TB NL-SAS) (Optional)	05			
4.	Windows Server 2025 Standard (16 Core)	01			
5.	Backup Software (Specifications as given in Annexure- VII)	01			
6.	RHEL (Latest version compatible with Oracle 19C)	01			
7.	One 42 Rack (Optional)	01			
8.	Installation, Configuration & Documentation	-			
	Total				
	l Amount against Sl. No				
(Rup	ees				)
	Name :				
	Designation :				

Seal of the Company

### **DECLARATION ON NOT BEING BARRED/BLACK LISTED**

(TO BE GIVEN ON A LETTER HEAD OF THE COMPANY / FIRM)

## **Ref: <<Tender No of IEI>>**

To, The Secretary and Director General The Institution of Engineers (India) 8, Gokhale Road, Kolkata – 700020

Dear Sir,

Thanking you,

Yours sincerely,

Name
Designation
Date
Company stamp/ Seal

### **DECLARATION ON ACCEPTANCE OF TERMS AND CONDITIONS**

(TO BE GIVEN ON A LETTER HEAD OF THE COMPANY/ FIRM)

## **Ref: <<Tender No of IEI with Tender Date>>**

To, The Secretary and Director General The Institution of Engineers (India) 8, Gokhale Road, Kolkata – 700020

#### Sub: <u>Acceptance of Terms and Conditions against your</u> Tender No.<<Tender No with date>>

Dear Sir,

- 1. We have carefully read and understood all the terms and conditions of the Tender document and hereby convey our un-conditional acceptance to the same. Also duly stamped, dated and signed by us on each page of the tender document is enclosed as proof of the terms and condition mentioned in the Tender Document.
- 2. The information / documents furnished along with the Tender Document Application are true and authentic to the best of my knowledge and belief. We are well aware of the fact that, furnishing of any false information / fabricated document would lead to rejection of our bid / application at any stage besides liabilities towards prosecution under appropriate law.
- 3. We have apprised ourselves fully about the job to be done during the period of engagement and also acknowledged to bear consequences of non-performance or deficiencies in the services on our part.
- 4. We also declare that
  - We have no objection, if enquiries are made about the work listed by us.
  - We have not been found guilty by a court of law in India for fraud, dishonesty or moral turpitude.
  - We agree that the decision of The Institution of Engineers (India) in selection of the Agency will be final and binding to us.

Thanking you, Yours sincerely,

Name
Designation
Date
Company stamp/ Seal

#### DECLARATION ON OWN OPERATIONAL SERVICE/SUPPORT CENTER IN OR AROUND KOLKATA

(TO BE GIVEN ON A LETTER HEAD OF THE COMPANY / FIRM)

## **Ref: <<Tender No of IEI>>**

To, The Secretary and Director General The Institution of Engineers (India) 8, Gokhale Road, Kolkata – 700020

Dear Sir,

We hereby declare that we have an operational service/support center located in or around Kolkata as of the date of submission of this bid. Below are the details of our service/support center:

a) Name of the Service/Support Center:

b) Address:

- c) Phone and email:
- d) Contact Details:

SI No	Name of Person	Designation	Mobile	Email

Thanking you,

Yours sincerely,

Name
Designation
Date
Company stamp/ Seal

Note: The declaration of all annexure(s) is to be signed and sealed by the authorized signatory of the company.

SI	Description	Quantity	
1.	Server for Application	01	
2.	(Specifications as given in Annexure- V) Server for Database (Specifications as given in Annexure- VI)	01	
3.	Additional HDD for old server (3.5" Inch 6TB NL-SAS) (Optional)	05	
4.	Windows Server 2025 Standard (16 Core)	01	
5.	Backup Software (Specifications as given in Annexure- VII)	01	
6.	RHEL (Latest version compatible with Oracle 19C)	01	
7.	One 42 Rack (Optional)	01	
8.	Installation, Configuration & Documentation	-	
	Total		

#### **BILL OF MATERIALS**

### **ANNEXURE-V**

## **APPLICATION SERVER:**

SI	Parameter	Minimum specification	Compliance	Remark, if any
1	Make & model	HP/Dell		
2	Form Factor	Maximum 1U rack mount server with front locking bezel, cable manager, sliding rails & accessories		
3	Processor	1 x Latest Generation Intel Xeon 16 core (Silver) processors, 2.00GHz, 30M L3 cach		
4	Memory	128GB (2 x 64GB RDIMM) scalable to at least 1TB		
5	Storage controller	12Gbps PCIe 4.0 controller, 8GB non-volatile cache, supporting RAID 1, 5, 6, 10; of same OEM as server (RAID 5 Preferred)		
6	Storage	4 x 1.92TB SSD[usable space - 5TB] (min extra four empty slot is required for capacity enhancement)		
7	I/O Slots	Minimum 3 x PCIe 4.0 x16 slots		
8	Network Port	Min. 2 x 1GbE baseT and Min. 2 x 10GbE		
9	FC interface	Min. 2 x 32Gbps FC supporting 32G, 16G, 8G		
10	OS certification	Certified for latest version of Red Hat Enterprise Linux, SUSE Linux Enterprise Server, Microsoft Windows Server, Ubuntu & VMWare		
11	Power supply	Redundant power supplies, 80Plus Platinum certified or Govt. of India test laboratory tested for similar efficiency (test report from 80Plus portal or GoI test laboratory, verifiable from respective webpage).		
12	Fans	Fully populated redundant hot-swap system fans		
13	Other Interfaces	1 x 1Gbps system management port (RJ-45), 1 x video port, min. 3 x USB ports		
14	System health	Monitoring fan, power supply, memory, CPU, RAID, NIC & proactive reporting for impending failure		
15	BIOS	System should boot with & run the BIOS of the OEM make (manufacturer) that is quoted to evaluate intellectual property MII compliance & security. All updates should happen only using quoted OEM's access controller & management software to enforce security.Bidder to submit OEM's legally binding declaration stating that the BIOS is original, untampered, not frozen & not customized in any way.		
16	Security	Publicly available links, verifiable evidence must be submitted against each of the feature below Silicon-based Hardware Root of Trust		
		Automatic BIOS recovery		
		Firmware drift detection & alerting		
		Cryptographically signed firmware updates Cryptographically verified trusted booting		
		Cryptographically verified trusted booting standards meeting NIST SP 800-147B, NIST SP 800-155, protection standards meeting NIST SP 800-193 standards & secure media sanitization standards meeting NIST SP 800-88		

		Development logging including ware activity	
		Persistent event logging including user activity	
		Drive security, including secure system erase for HDD, SSD & NVMe	
		Dynamically enabled / disable USB ports to protect from USB-based attacks	
		Protection against compromised firmware execution	
		UEFI secure boot with custom certificates	
		Intrusion alert in case chassis being opened	
17	System Management	Manufacturer's system management software supporting virtual media, virtual folders, remote file share & virtual console	
18	Access & management	Integrated remote access controller & software should support advanced agent-free local and remote server administration & support for features like configuration, firmware updates, OS deployment, health monitoring & diagnostics, automation of routine management activities with perpetual license	
19	Certifications & benchmarks	Product datasheets, certification, benchmark or references verifiable from publicly available data sources must be submitted along with bill of material. Links for certifications to be submitted.	
20	Authorization	"Manufacturer Authorization Letter" specific to the tender, signed digitally	
21	OEM presence & support	OEM should be registered in India & have a registered office in West Bengal for local support. OEM declaration confirming OEM's onsite support for the quoted systems to be submitted.	
22	Support portal	Portal should provide diagnostics, drivers & downloads, documentation & service events	
23	Warranty	3 years comprehensive warranty with 24x7x365 remote hardware support & next business day on-site support. Warranty listing in OEM support site	

## **ANNEXURE-VI**

## DB SERVER

SI	Parameter	Minimum specification	Compliance	Remark, if any
1	Make & model	HP / Dell		
2	Form Factor	Maximum 1U rack mount server with front locking bezel, cable manager, sliding rails & accessories		
3	Processor	1 x Latest Generation Intel Xeon 16 core (Gold) processors, 2.00 GHz, 30M L3 cache		
4	Memory	128GB (4 x 32GB RDIMM) scalable to at least 1TB		
5	Storage controller	12Gbps PCIe 4.0 controller, 8GB non-volatile cache, supporting RAID 1, 5, 6, P10of same OEM as server (RAID 1+0 preferred)		
6	Storage	4 x 1.92TB SSD (usable space required 3TB)		
7	I/O Slots	Minimum 3 x PCIe 4.0 x16 slots		
8	Network Port	Min. 2 x 1GbE baseT and Min. 2 x 10GbE +		
9	OS certification	Certified for latest version of Red Hat Enterprise Linux, SUSE Linux Enterprise Server, Microsoft Windows Server, Ubuntu &VMware		
10	Power supply	Redundant power supplies, 80Plus Platinum certified or Govt. of India test laboratory tested for similar efficiency (test report from 80Plus portal or GoI test laboratory, verifiable from respective webpage).		
11	Fans	Fully populated redundant hot-swap system fans		
12	Other Interfaces	1 x 1Gbps system management port (RJ-45), 1 x video port, min. 3 x USB ports		
13	System health	Monitoring fan, power supply, memory, CPU, RAID, NIC & proactive reporting for impending failure		
14	BIOS	System should boot with & run the BIOS of the OEM make (manufacturer) that is quoted to evaluate intellectual property MII compliance & security. All updates should happen only using quoted OEM's access controller & management software to enforce security. Bidder to submit OEM's legally binding declaration stating that the BIOS is original, untampered, not frozen & not customized in any way.		
15	Security	Publicly available links, verifiable evidence must be submitted against each of the feature below		
		Silicon-based Hardware Root of Trust		
		Automatic BIOS recovery		
		Firmware drift detection & alerting Cryptographically signed firmware updates		
		Cryptographically signed in inware updates		

		Cryptographically verified trusted booting standards meeting NIST SP 800-147B, NIST SP 800-155, protection standards meeting NIST SP 800-193 standards & secure media sanitization standards meeting NIST SP 800- 88 Persistent event logging including user activity Drive security, including secure system erase for HDD, SSD & NVMe Dynamically enabled / disable USB ports to protect from USB-based attacks Protection against compromised firmware execution UEFI secure boot with custom certificates	
		Intrusion alert in case chassis being opened	
16	System Management	Manufacturer's system management software supporting virtual media, virtual folders, remote file share & virtual console	
17	Access & management	Integrated remote access controller & software should support advanced agent-free local and remote server administration & support for features like configuration, firmware updates, OS deployment, health monitoring & diagnostics, automation of routine management activities with perpetual license	
18	Certifications & benchmarks	Product datasheets, certification, benchmark or references verifiable from publicly available data sources must be submitted along with bill of material. Links for certifications to be submitted.	
19	Authorization	"Manufacturer Authorization Letter" specific to the tender, signed digitally	
20	OEM presence & support	OEM should be registered in India & have a registered office in West Bengal for local support. OEM declaration confirming OEM's onsite support for the quoted systems to be submitted.	
21	Support portal	Portal should provide diagnostics, drivers & downloads, documentation & service events	
22	Warranty	3years comprehensive warranty with 24x7x365 remote hardware support & next business day on-site support. Warranty listing in OEM support site	

## **ANNEXURE-VII**

## **Backup Software**

SI	Parameter	Specification	Compliance
1	Analyst Rating	Backup software proposed should be in Gartner's leader quadrant for last five years in gartner Magic Quadrant report for Data Protection / Backup Software.	
2	Licensing	The proposed Backup software must offer instance based licenses with no restrictions on type of arrays (protecting heterogeneous storage technologies), front end production capacity or backup to disk target capacity restrictions. Licenses and associated hardware should be supplied for both primary and DR site. Licenses should be provided for 10 Instances, Licenses should be Universal in nature and can be used on any type of workload i.e Servers, End Points (Laptop, Desktop, Workstation) and all Major DB and App licenses/plug inns should be available in the licenses	
3	Ransomware Protection	The backup software must have YARA rules defined in the system.The proposed solution should have on demand scans available for malware attacks.The backup Software must have inline detection & in guest detection via guest indexing against any malware attacks.The proposed backup software should have four eyes approval for any backup deletion.	
4	Reporting Capabilities	recovery audits.         Proposed solution should have security and compliance dashboard inbuilt with the product.         Reporting         Proposed solution should support automated action for	
5	Data Protection and Recovery in the cloud	Software should be able to restore VMs to a cloud service provider like AWS, Azure or Google directly from the backup copy. Backup software should have capability to archive data to Amazon Galcier or Microsoft Azure storage Archive Tier. The Software must have capability to restore the data from archive tier, it should not be dependent on cloud vendor. Backup software should support agentless backups of applications residing in VMs like SQL, Exchange, SharePoint, Oracle, etc. with non-staged granular recovery of all these applications. It should support crash consistent VM level backup for all other workloads. Backup software should support SAP HANA backup integrated with HANA Cockpit The software must has the functionality to backup on-prem data directly into cloud repositories such as AWS S3 or Microsoft Blob.	

	Γ		
6	Backup support for hypervisors and Applications	Backup software should be a Hardware Agnostic software and it should support snapshot integration with hypervisors like VMware, Hyper-V, Nutanix AHV nad RHEV and support de-duplication on any storage target. It should be able to backup data to tapes (like LTO) as well for long term retention. The proposed backup software should provide Instant recoveries for any backup to VMware or Hyper-V Virtual machine. It should also support the Instant VM recovery for AHV workloads as well. Backup software should support file level recovery from any backup of any VM or physical server. It should support a full system recovery in case of a system crash, either on a physical system or virtual machine or as a Cloud Instance(AWS, Azure or Google) The Proposed backup Software should support Syslog and Service Now integration. Backup software should support instant database	
7	RPO/ RTO and Recovery Assurance	recoveries of MS SQL and Oracle from the backup files. Backup software must have a feature of data validation, whereby a workload (VM with OS and application) is powered-on in a sandbox environment and tested for its recoverability. Backup software should provide Backup and Replication capabilities in one console only and also allow users to integrate with RBAC capabilities of the hypervisor, so that users can initiate backup and restore only those VMs to which they have access, without administrator intervention, thereby delivering self serve capabilities. Proposed backup software should be able to Hardened the Linux Repository. This service will prevent backup copies of data from any corruption or ransomware attacks. Backup software should support instant file share recovery in NAS storages to allow users to access files fast after disaster.	
8	Backup and Replication Performance and SLA	The proposed Backup software must allow to configure the maximum acceptable I/O latency level for production data stores to ensure backup and replication activities do not impact storage Availability to production workloads. Backup software should provide Recovery of Application Items, File, Folder and Complete VM recovery capabilities from the image level backup within 15Mins RTO.	
9	Disaster Recovery Capabilities	Replication in the software should be a VM level replication and must replicate the VM level data with or without backing it up at the source site. It should also include failover and failback capabilities and should be able to perform automatic acquisition of network addresses at the destination site. The Proposed solution should support Continuous replication at VM level. The RPO must be less than 5 Seconds and it must deliver Application consistency. Backup and replication software must deliver maximum investment protection by supporting replication of workloads between dis-similar systems like hyper converged infrastructure to stand alone servers and storage running similar hypervisors across sites, thereby creating a Disaster recovery environment for production workloads irrespective of the underlying hardware.	

Backup software should have ability to backup data from one server platform and restore it to another server platform to eliminate dependence on a particular machine and for disaster recovery purposes. This bare metal recovery capability should be built in for the physical servers and should even work on the dissimilar	
hardware.	