COAST GUARD HEADQUARTERS

REQUEST FOR INFORMATION
DIGITAL COAST GUARD PROJECT

1. The Ministry of Defence, Government of India, intends to establish core IT infrastructure (Data Center, Disaster Recovery Data Center, Pan ICG MPLS Network) and implement an ERP solution (HR, Logistics and Finance Modules) as part of the Digital Coast Guard project.

2. This Request for Information (RFI) consists of three parts as indicated below:-

(a) **Part I**. The first part of the RFI incorporates operational characteristics and features that should be met by the equipment. Few important technical parameters of the proposed equipment are also mentioned.

(b) **Part II**. The second part of the RFI states the methodology of seeking response of vendors. Submission of incomplete response format will render the vendor liable for rejection.

(c) **Part III.** Guidelines for Framing Criteria for Vendor Selection/Pre Qualification in Buy Indian (IDDM), Buy (Indian) and Buy & Make (Indian) Cases.

PART-I

3. **Intended Use of Equipment (Operational Requirements)**. The project is intended to address the Digitisation imperatives of the Indian Coast Guard on Turnkey basis by establishing a robust and enabling digital infrastructure with pan ICG connectivity and to pave the way for systematic digitisation of records and processes in ICG. The broad requirements of the project are as under:-

(a) Establishment of a Data Centre including civil infrastructure at the area earmarked in Coast Guard land situated at Sector-62, Noida.

(b) Establishment of a Disaster Recovery Data Centre at Coast Guard land at New Mangalore.

(c) Establishment of pan ICG WAN 'Chakra' (MPLS/ VSAT network connecting all Coast Guard units and concerned offices of CDA and CGDA).

(d) Development of Enterprise Resource Planning (ERP) based system to cater for following:-

(i) Inventory management of CG Surface units and Coast Guard Store Depots (CGSDs).

(ii) Inventory management of Air units and Coast Guard Air Store Depots CGASD

(iii) Finance Management

(iv) Human Resource Management for ICG Personnel including Personnel on deputation

4. **Important Technical Parameters**. The Government of India has unveiled "Digital India"- an ambitious programme to "transform India into digitally empowered society and knowledge economy". In the same direction GoI has directed the Armed Forces to transform into "Digital Armed Forces" and take necessary steps towards achieving the same. I.A.W GoI initiative Indian Coast Guard has also initiated the "Project Digital Coast Guard", wherein, digitisation of all processes of ICG has been envisaged on turnkey basis through development of an ERP package for automation of Surface Logistics, Aviation Logistics, Finance and Human Resources. The project also envisages provisioning of MPLS connectivity to all it's locations (105 nodes/ 208 links spread across India) and establishment of a Data Center and a Disaster Recovery Data Center with separate air-gapped internet and intranet zones with associated Security Operations Center (SOCs).

5. The high level scope under the Digital Coast Guard is as mentioned below:-

Sl.	**Name/Type of item/services/description of stores**	**Qty.**
(a)	Creation and establishment of 165 kW Data Centre (DC) and 90 kW Disaster Recovery Data Center (DRDC) catering for scalability upto 200%. DC and DRDC should be designed and built to meet the standards of Tier-3 certification by uptime institute. Broad requirements of DC and DRDC are placed at ***Annexure-I***.	01 each
(b)	Provisioning of required Hardware with latest configuration for DC & DR at the time of supply as per details provided in ***Annexure-II***. There will be two separate airgapped zones (Internet and Intranet) each having a associated SOC facility. Broad outline for architecture as provided in ***Annexure-III***.	As per requirement
(c)	Provision of MPLS fiber/ VSAT networking at all CG units. Service Provider should be Govt PSU.	105 sites/ 208 links
(d)	Provisioning of required networking hardware including encryption/decryption devices (SAG graded IP encryptor – G3/G4).	02 links per site (only one IP encryptor for each site)

Sl.	Name/Type of item/services/description of stores	Qty.
(e)	Provision of Training and manuals for Data Centers, Networking.	As per requirement
(f)	Warranty and All Inclusive Annual Maintenance Contract (including consumables and batteries but excluding fuel for DG sets), Annual Technical Support (ATS), 3rd party software including software associated with Data Center & DRC and networking with suitable complaint handling system.	02 years warranty followed by 03 years AIAMC
(g)	Residential engineers of Networking Administrator, Data Center Administrator and Facility Engineer for DC & DR.	To ensure 24x7x365 availability
(h)	Recurring band width charges for MPLS/ VSAT connectivity for first year of operation	
(j)	The functional requirements and implementation of the private cloud for ICG will be fully integrated with the supplied and existing hardware/ software. The existing software/ hardware is placed at ***Annexure-IV***	

High-level scope of deliverables under the Digital Coast Guard

6. **Coast Guard Data Center (CG-DC).** To meet the present & future computing power requirements of Coast Guard, DC design should be based on modular & highly scalable design architecture. Design capacity of DC as follows:-

Sl.	Sizing	Total Load
	Current scope	
(a)	Total designed IT Load	165
(b)	Racks/10kW with Power, Cooling	15
(c)	Racks/5kW with Power, Cooling	03
	Scalability	
(d)	Spare rack space to cater for scalability upto 200%	160

Note:-

(a) Envisaged scope of delivery in current RFI as per Para-4 below.

(b) Each rack space is equal to positioning of 01 rack of 10kW.

7. **Coast Guard Disaster Recovery Data Center (CG-DR DC).** CG-DRDC should be designed for 90kW of IT load capacity and should be scalable upto 200% in phases as follows:-

Sl.	Sizing	Total Load
	Current scope	
(a)	IT Load	90
(b)	Racks/10kW with Power, Cooling	07
(c)	Racks/5kW with Power, Cooling	04
	Scalability	
(d)	Spare rack space to cater for scalability upto 200%	90

8. **Scope of work of Data Center & Disaster Recovery Data Center.** The DC/ DRDC degisn architecture should include required modularity and scalability. ICG is likely to go for enhanced digital drive on availability of reliable ICG Cloud Data Center and associated support. Factoring 'Year on Year (YoY)' growth, scalability upto 200% is envisaged. To achieve cost, resource optimisation, the entire ICG DC/ DRDC to opt for Cloud technology to inculcate modularity, scalability without overprovisioning at Day-1. Racks should be designed in such a way, it could be scaled to meet higher density IT loads or re-located across internet, intranet zones with minimal disruption. Required modularity and scalability within scope of work as follows:-

Sl.	Design Considerations of DC, DR	Scope of Delivery for current project
(a)	Low side work only	As required including scalability
(b)	HVAC, active network components	As required for 165 kW for DC and 90 kW for DR
(c)	Active components such as Server, Storage	As required as per Annex-III & IV
(d)	Additional Server, Utility area load-bearing floor as equal to present requirement including scalability to be provisioned and required ground space be earmarked. For better utilisation of earmarked space for expansion, it may be used as non-essential area such as car parking etc., which could be reclaimed as and when needed.	As required for scalability upto 200%

Rack Sizing

9. Rack sizing for current scope. Current scope covers provisioning of requisite power and cooling racks as follows:-

	DC Racks			DR Racks		
Zones	IT Racks	N/W Racks	**Tot. Racks**	IT Racks	N/W Racks	**Tot. Racks**
Internet, 10kW Racks	3	2	**5**	2	2	**4**
Intranet, 10kW Racks	8	2	**10**	2	1	**3**
Co-location, 5kW Racks	2	1	**3**	2	2	**4**
Total	11	4	**18**	6	5	**11**

10. **Rack space sizing for future scalability in 02 phases.** Current scope of RFI to provide low-side work only (ie other than IT hardware, DG Set, UPS, power, and cooling) for following:-

(a) Phase-II.

	DC Racks			DR Racks		
Zones	IT Racks	N/W Racks	**Tot. Racks**	IT Racks	N/W Racks	**Tot. Racks**
Internet	3	0	**3**	1	0	**1**
Intranet	5	0	**5**	2	0	**2**
Total	8	0	**8**	3	0	**3**

(b) Phase-III.

	DC Racks			DR Racks		
Zones	IT Racks	N/W Racks	**Tot. Racks**	IT Racks	N/W Racks	**Tot. Racks**
Internet	2	0	**2**	2	0	**2**
Intranet	6	0	**6**	2	0	**2**
Total	8	0	**8**	4	0	**4**

Floor Sizing

11. DC, DR floor design to accommodate various facilities as associated with data centers meeting Tier-III standards is required. Centralised air-conditioned for precision cooling and comfort cooling using centralised Chiller Units for following floor sizing:-

	DC	**DR**

	DC	DR
Total area per building	**2506 Sq Mtr**	**3035 Sq Mtr**
Avg. floor area for G+2 with stilt area	**835 Sq Mtr**	**1012 Sq Mtr**

DG Set and UPS Sizing

12. DG Set and UPS to be provided meeting Tier-III for IT power requirement and LEED certification for Green Building norms for Non-IT requirements. Minimum requirement of DG Set and UPS in high-availability with minimum of N+1 sizing as following :-

Sl.	Power requirement	DC	DR
	Current scope for RFI		
(a)	DG Set in kW	956	591
(b)	UPS in kW	182	149
	Scalability support		
(c)	DG Set in kW	1132	723
(d)	UPS in kW	358	281

Note: Wiring and cabling should cater for maximum scaled up capacity requirements

13. **Tier-III Certification Requirement.**

(a) The Facility Design shall adhere to Uptime Institute's Tier III Concurrently Maintainable Criteria as detailed in the Uptime Institute's Tier Standard: Topology (available at http://uptimeinstitute.com/tierpublication) and effective as of the date of the Contract Award. No substitute will be accepted for Uptime Institute Certification(s) and experience with Uptime Institute Certifications, as well as on-staff Accredited Tier Designers, will be a differentiating factor in evaluating respondents.

(b) The Bidder shall obtain:-

(i) Uptime Institute Tier Certification III of Design Documents for the Complete Data Centre Facility Design.

(ii) Uptime Institute Tier Certification III of Constructed Facility for all areas of the Data Centre Facility to be constructed under this Contract.

(iii) The necessary Certifications will be obtained on behalf of the Client and passed to the Client on Award.

(iv) All Certifications shall be kept current for the Contract Period.

(v) The Bidder shall be responsible for all costs associated with obtaining and maintaining these Certifications.

14. **LEED Certification for Green Building Requirement.**

(a) Design and construction of Data Centre, DR Data Center Facility under this Contract to be LEED (Leadership in Energy and Environmental Design) Certified to meet Green Building & Data Center standards by GBCI (Green Building Council of India).

(b) All Certifications shall be kept current for the Contract Period. The Bidder shall be responsible for all costs associated with obtaining and maintaining Certifications.

15. **DG Set installation & maintenance support.**

(a) Each site of DC & DR DC should have adequate fuel storage capacity to provide 07 days uninterrupted DG Set power factoring future scalability upto 200%.

(b) All necessary statutory approvals related to fuel storage need to be obtained by the Seller. ICG shall provide necessary support with documentations as required.

(c) Total of 500 hrs per year of DG Set running hours to be catered. All support services including maintenance consumables such as labour cost, filters, overhauling, engine oils etc. but excluding fuel to be provisioned for entire duration of warranty and AIAMC (2 yrs +3 yrs).

16. **Raw electrical power supply installation & maintenance.**

(a) Required High-Tension (HT) power supply shall be provisioned by ICG. The Seller to provide Low-Tension (LT) power supply related installation and maintenance.

(b) The Seller to provide all required installation & maintenance support including HT to LT transformation, Distribution Support, Tier-III compliance.

17. **Centralised Integrated Building Airconditioning.**

(a) Data Center built-up area of 2506 Sq. mtr.

(b) Disaster Recovery Data Center built-up area of 3035 Sq. mtr.

(c) Integrated building air-conditioning should be from Data Center cooling systems.

(d) Centrally monitored using DCIM software.

18. **Fibre MPLS/ VSAT intranet network (Chakra).** Digital Coast Guard project envisages to interconnect all Coast Guard units including ships using high-speed, highly-secured MPLS fibre networking. Key design objectives and design requirements

are as follows:-

(a) Key design objectives of the MPLS Intranet network are:-

(i) Higher availability

(ii) Scalability in phased manner

(iii) Redundant dark fiber or RF in the last mile based on site feasibility

(iv) High security network (SAG graded G3/G4 IP encryptors to be deployed)

(v) Software Defined WAN with virtual NGFW at ROBO sites

(b) Main design requirements of MPLS Network are as following: -

(i) All CG units including jetties/ harbours spread across India including Island territories (105 nodes and 208 links) need to be connected with high-bandwidth, low-latency fiber MPLS/ VSAT (in Islands where fibre connectivity may not be available) networking by using any one Govt PSU such as RailTel/BSNL/MTNL having Pan-India presence in the vicinity of Coast Guard units.

(ii) A total of 105 nos. of sites (208 links) need to be connected.

(iii) Bandwidth should be flexible to support 02 Mbps to 100 Mbps.

(iv) VSAT/MPLS connectivity for remote island locations.

(v) Last mile main path should be in fiber only, and protection path should be fiber where ever feasible.

(vi) All remote sites shall be provided as SD WAN duly micro-segmented with virtual NGFW. All functionalities such as router, load balancers, WAN optimisers, NGFW etc should be provisioned as virtual instances. Required IT infrastructure to be provided as HCI system enclosed in data closet with in-built cooling, power with central management and integrated with DC & DR DC DCIM software.

(vii) Network should be highly secured with IPSec encryption suite and other required security mechanisms. SAG graded IP Encryptors (G3/ G4) to be deployed at all network nodes.

19. **Surface, Aviation Finance and Logistics (SAFAL) ERP**. Software application SAFAL ERP is envisaged to achieve operational efficiency, practice better control over operations & logistics along with appropriate accountability and to establish uniform standards for excellence in operations and performance reporting. There are various dimensions to the strategy of the ERP deployment project of ICG, and they are formulated around the possibilities offered by Standardized ERP solutions. The scope of ERP implementation services to be provided by the bidder would include the following: -

(a) Configure/customize the ERP as per requirements of ICG.

(b) Integrating the ERP solution.

(c) Integration for Financial Management.

(d) Providing implementation and project management services.

(e) Sizing, supply of hardware for ERP solution and installing the ERP solution including Enterprise Database with offline support for Ships and internet zone ERP modules.

(f) Data Migration of the materials data, project data, employee data, etc.

(g) Training the selected users and facilitating the adoption of the ERP solution by the users/employees of ICG.

(h) Providing application support for five years after completing the implementation of the ERP Solution.

(j) Providing training to Core Team of ICG to augment the capacity of ICG in continuous improvement/adoption of the ERP solution.

(k) Number of ICG's ERP users have been categorized in three heads. Details are as under: -

Sl.	Type of Users	Details	No. of Approx. Licenses
(i)	Heavy Transactional User	Heavy Transactional User are the users who are assigned with the responsibilities and duties related to the core functions of the application.	250
(ii)	Light Transactional User	Light Transactional User are the users who are assigned with the responsibilities and duties related to the functions in the normal work flow which generally include	600

Sl.	Type of Users	Details	No. of Approx. Licenses
		viewer/creator/approver as per the application requirement.	
(iii)	Self Service Users	All the ICG personnel including civilian staff are considered as self-service users who are entitle to view their information and update their information through the ERP application.	16000

20. Key design objectives of the SAFAL ERP are:-

(a) Governance, Risk management and Compliance in all domains.

(ii) Higher availability.

(b) Modular and open architecture.

(c) Should support local survivability instance for ROBO deployments including on-board ships.

(d) Expose selected data through web services to central intranet portal.

(e) Should able to work in low bandwidth, high-latency VSAT connectivity environment.

(f) Integration of the ERP with other applications / solutions such as Business Intelligence (BI) / Analytics etc. to meet the needs of the users.

(g) ERP be deployed with integration to ICG middleware 'SIMHA'. ERP should also be accessible by ships both in offline access mode as well as through internet zone ERP application module.

21. Main design requirements SAFAL ERP are as following: -

(a) Material planning, provisioning, receipts, accounting, warehousing, stocking, issue, and technical services for surface logistics & air logistics ERP.

(b) Goods receipt/issue, stock verification, warehouse management, equipment maintenance system, procurement management, purchase management, contract management, RFP, tendering, conditioning, repair and disposal of all types of stores etc.

(c) Finance management features are budgeting, authorizations, funds management, account management, capital/revenue procurement, payments, etc.

(d) Human resource management system to support all key activities of HR starting from recruitment to release from service and subsequently for ex-servicemen. Key activities are recruitment, training, transfer, promotion and release.

(e) Governance, Risk management and Compliance (GRC) for Material management, Finance management and Human Resource management modules.

(f) ERP to be deployed in Enterprise grade database with native remote replication feature to support ICG Ships on offline mode and internet zone ERP module.

(g) ICG has central common portal for all ICG personnel which is designed to act as unified portal. An integrated portal to view selected information should be developed on SIMHA middleware platform as part of 'Unified ICG Portal' architecture requirements. **SAFAL ERP should provide required extensions, data for third party ICG applications as part of SIMHA architecture**. Any licensing conditions/ cost associated to meet this key requirement need to be explicitly mentioned in technical bid by vendor. SIMHA is an ICG middleware framework which requires all data to be made available across all ICG software applications without any restrictions, so as to avoid data silos.

(h) Supply of Enterprise Database licenses as required including offline remote replication support for ICG Ships and internet zone. Should include warranty for two years (including ATS) followed by three years AIAMC support (including ATS) post final acceptance and go-live of ERP.

22. **<u>High-level Bill of Material/ Services</u>**.

Sl	Items	Qty
A-01	ERP Software (for Heavy Transaction User-250, Light Transaction Users-600, Self Service users - 16,000 & as required. Licenses to include for DevOps and T&D. Warranty for 02 years from final Go Live.	1
A-02	Enterprise Database with native replication, security, warranty for 02 years from final go-live. Support for federated database replication across ICG Ships of about 150 Nos.	1
A-03	Hardware & related Software for DC/ DRDC, OEM warranty for 02 years from installation date. Hardware sizing to include DevOps and T&D environment. (Minimum Hardware sizing mentioned at Para 23 below)	1
(B)	**Design, Implementation & Support**	
B-01	Study, design, development & implementation of ERP software including logistics, financial and HR with 02-year warranty post final go-live. Onsite warranty support manpower	1
B-02	Audit and Quality Assurance Services from OEM Consultancy	1

Sl	Items	Qty
	Services. OEM should provide design for central and offline ERP module, validate delivery of software for Quality/ Security as per OEM standards. OEM. SI should obtain OEM audit team man-days of minimum of 100 days and provide on-site expert consulting for minimum of 75 man-days. Warranty for 02 year post-final go-live. *1 Man-day is team consisting all skillset	
B-03	Security Audit & VA (Vulnerability Analysis) by CERT-IN empanelled firm of Hardware, ERP Application etc.	1
B-04	AIAMC for 03-year post 02 year warranty	2
B-05	Training & Documentation	1
(C)	**Offline and Internet ERP module for Ships**	
C-01	Study, design, development & implementation of offline ERP software client including logistics, financial and HR. Total Ships are approx. 100 nos. with average Users of 50 Nos. each and internet zone	1
C-02	Enterprise Middleware software including Identity Access Management (IAM), warranty for 02 years from final go-live	1
C-03	Enterprise software as required. List of software to be provided. Warranty for 02 years from final go-live	1
(D)	**Onsite Manpower Support during Warranty and AIAMC**	
D-01	Functional ERP consultant, L3 level, OEM Certified, 05 years' experience, 03 Nos.	2
D-02	Onsite ERP support engineers, L2 level, OEM Certified, 03 years' experience, 06 Nos.	2
D-03	Onsite ERP Database Administrator, OEM Certified, 03 years' experience, 02 Nos.	2
D-04	Onsite ERP system engineer (02 Nos.), Middleware/ Cloud Automation (02 Nos.) OEM Certified, 03 years' experience	2

23. **<u>Minimum Required Hardware for ERP</u>**.

Sl.	IT Infrastructure Type	SAFAL ERP
(a)	All Flash Unified Storage	(a) 40TB available in RAID-6 (b) Qty.- 01 No.
(b)	Tape Library	Qty.- 01 No.
(c)	Composable IT Infrastructure with SDDC capabilities	(a) Chassis: 02 No. (b) Compute Nodes/Chassis, 2x20 Cores, 512GB RAM, 2TB SSD in RAID-10: Qty.- 02 Nos. (c) Storage Nodes/ Chassis, 5TB in RAID-10, NL-SAS: Qty.-02 Nos.
(d)	Backup Software	02 Socket x 02 Nodes for each of

Sl.	IT Infrastructure Type	SAFAL ERP
		DC & DR
(e)	Application Delivery Controller (ADC), Virtual Appliance	(a) 10 Gbps throughput (b) Qty. - 02 Nos. in HA each DC & DR
(f)	Rack Server	Qty. 02 Nos.
(g)	OEM Qualification, Warranty & Implementation support	Warranty 05 Years from Date of supply
(h)	Enterprise Database	

24. **Training**. The Bidder is required to train nominated personnel on operability and maintenance aspects (L1 and L2) of SAFAL ERP Package and associated hardware to enable them to effectively operate and perform their roles. Syllabus for the training would be proposed by the Bidder and approved by the Buyer. Following type of training needs to be provided by the bidder:-

(a) **Initial ERP Product Training**. Initial training will provide to ERP core team members. The training would provide understanding of the ERP solution and its functionalities. The training will highlight the unique requirement of the proposed ERP solution.

(b) **ERP Functional Training (End User)**. Functional training would be provided to all ERP users in all over India. This training would focus on user specific and address the daily working and reporting requirement in the ERP solution. A refresher training of all the functions needs to be provided to update the knowledge of ERP solutions.

(c) **Technical Training**. Technical training to be provided by OEM certified trainers to the technical team of Coast Guard and the training covers the aspects of networking, data centre maintenance and operations. The training matrix is as follows:-

Sl.	Type of training	No of batches	No. of Personnel/ Batch	Duration (Days)	Location
(i)	Initial ERP product training	01	10	5	At Noida/ Mangalore
(ii)	ERP core team training by OEM	01	10	10	At Noida/ Mangalore
(iii)	Oracle database administration	01	10	10	At Noida/ Mangalore
(iv)	ERP End user Training	10	20	03	At Noida, Mumbai, Kolkata, Gandhinagar,

Sl.	Type of training	No of batches	No. of Personnel/ Batch	Duration (Days)	Location
					Goa, Port Blair and Chennai.

25. **Details of ICG Existing Application for Onwards Integration with ERP Package**. Proposed ERP application should be **able to interface with existing ICG applications deployed on ICG Middleware Platform** (**SIMHA**) such as ASHA, PARAM, and BRASS etc. for bi-directional data transfer without any licensing restrictions. Details of existing applications required to be integrated and ICG middleware 'SIMHA' are as following: -

Sl	Application	Description	Technology Stack
(a)	CG-Yatra	Application facilitate online submission and auditing of TA/DA and LTC advances.	SOA micro services, J2EE app server (Tomcat), Spring 5.2.7, Oracle dB 12C, Hibernate, Java, Angular, HTML5, CSS
(b)	ASHA	Automation of Service Health Care Administration (ASHA), automate and digitise the medical/ health care domain of ICG.	Java, Spring and Hibernate Framework, Restful Web Services, Oracle Service Bus. Java Script, jQuery, Oracle and Postgre Sql
(c)	Pay and Allowances Records Auditing Management (PARAM)	PARAM provides complete automation of pay roll process of ICG i.e. from creation of Gx to generation of Statement of Entitlement.	SAP DMS Server 4.6, Windows Server 2012 R2, JBoss Wildfly 22.0, Weblogic Server 12C, Tomcat 9.0, PostgreSQL Community Edn 9.6, Java Spring Framework 4.0, Spring Boot 2.0, Angular Js, Angular 5, HTML5, CSS3.2, REST
(d)	DMS-DR	Document Management System - Document Repository - provide common documents such as CGOs, Policies	JBoss widfly, PostgreSQL Community Edition 9.6, Eclipse 4.12,

		of CGHQ/CGC/RHQ/DHQs, CGBRs, various reference manuals, routine e-magazines such as CGSMA Bulletins to all ICG Units including island units, ICG Ships with offline access.	Java, Spring Framework 4.0, Spring Boot 2.0, Angular 5, JBoss Fuse, Keycloak 9.02, Entire Open JDK 8, Apache Maven 3.6.0, JenKins 2.204, Rundeck 3.026, HTML5, CSS 3.2

26. **Warranty and AIAMC.** The Digital Coast Guard project also envisaged two year warranty support followed by three years AIAMC of all products and services to be delivered as part of this project. All spares, maintenance support, upgrades, patches and renewal of software/ enterprise/ database licences are to be provided free of cost during the period of warranty and AIAMC. The period of AIAMC can be further extended based on mutual consent and joint assessment of the residual operational life of the product. Additionally, the Bidder should be in a position to provide product support for the software, licences, stores, assemblies/subassemblies, fitment items and consumables, Special Maintenance Tools (SMT)/Special Test Equipment (STE) subcontracted from other agencies/ manufacturer in terms of maintenance, materials and spares for a minimum period of Seven (7) years including warranty and AIAMC. Bidder would be bound to give at least two years notice to the Government of India prior closing the production line so as to enable a Lifetime Buy of all spares before closure of the said production line. During the period of Warranty and AIAMC, SI to provide required SLA monitoring software to monitor SLA bound IT operations & incident management and configure, maintain as required. SI to provide detailed SLA service category, SLA services list along with KPI such as MTTR, MTBF, MTTF.

27. **On-site manpower.** The project also envisages positioning of adequate number of on-site manpower (L1, L2, L3) by the vendor to support 24x7 operations of the Digital Infrastructure (DC, DRDC, MPLS Network) and applications being delivered as part of the project. Considering the complex nature advanced systems such as Cloud Management Platform, SD Networking, ITOM/ ITSM Software, SOC software such as SIEM etc., need specialised onsite manpower and also need back-to-back support of respective OEMs to get reliable support and optimum exploitation. Recommended SLA setup to be as follows:-

(a) Level-1 (L1) Support. For day-to-day onsite operations and maintenance. Support staff to have minimum of 02-03 years of experience. OEM Certification is preferred.

(b) Level-2 (L2) Support. Any issues or need of new configurations/ setup, the services of L2 should be made available from OEM Certified engineers having adequate support.

(c) Level-3 (L3) Support. Should be for escalation of services from L2 and should be handled by authorised OEM partners/ OEM and should be final stop for

all DC related support & services. SI to position OEM manpower for Cloud management platform and for other support need get back-to-back OEM support including ITOM/ ITSM software, SOC software, PKI systems, APM software etc. for the entire support period of 05 years.

28. **Backward Integration with existing hardware, network and software/applications.** The project also envisages backward integration/ assimilation of the existing hardware available in the interim data center of ICG, existing network (MPLS network hired from RailTel connecting 82 sites), data bases and applications (both bespoke and Enterprise) into the IT infra being created as part of the network. The functional requirements and implementation of the private cloud for ICG will be fully integrated with the supplied and existing hardware/ software i.e., integration with manager of the hypervisor, Software Defined Network and storage, etc. The CMP (Cloud Management Platform) will be integrated with the existing Directory Services software and will create business group as per the requirements given by ICG. Details of existing assets are placed at ***Annexure IV*** to this RFI.

29. **Indigenous Content.** Minimum expected Indigenous content is 60% by cost of the overall project value.

30. Vendors should confirm that following conditions are acceptable:-

(a) The solicitation of offers will be as per 'Single Stage-Two Bid System'. It would imply that a 'Request for Proposal' would be issued soliciting the technical and commercial offers together, but in two separate sealed envelopes. The validity of commercial offers would be at least 18 months from the last date of submission of offers.

(b) The technical offers would be evaluated by a Technical Evaluation Committee (TEC) to check its compliance with RFP. A POC/ evaluation of the Minimum Viable Product as defined in Chapter-VIII of DAP-2020 of the ERP product being offered would form part of the TEC evaluation.

(c) Amongst the vendors cleared by TEC, a Contract Negotiations Committee would decide the lowest cost bidder (L1) on QCBS basis (60:40) and conclude the appropriate contract.

(d) Pilot implementation of ERP solution will be required to be demonstrated on offering of first version/ Minimum Verifiable Capability Release (MVCR), as defined in Chapter-VIII of DAP-2020 of modules developed under the ERP package so that initial capabilities of product can be tested and feedback can be provided for improvement. Final Integrated User Acceptance Trials of the complete core IT infrastructure and ERP package will be undertaken post incorporation of feedback generated during the pilot implementation.

(e) Vendor would be bound to provide product support for time period specified in the RFP, which includes spares and maintenance. Obsolescence management, Upgrades, patches and renewal of software/ enterprise/ database licences are to be provided free of cost during the period of warranty and

AIAMC.

(f) The vendor would be required to accept the general conditions of contract given in the Standard Contract Document at Chapter VI of DAP.

(g) **Integrity Pact (if applicable)**. An integrity pact along with appropriate IPBG is a mandatory requirement in the instant case (**Refer Annexure I to Appendix M of Schedule I of Chapter II of DAP 2020**).

(h) **Performance-cum-Warranty Bond**. Performance-cum-Warranty Bond both equal to 5% value of the contract (or as stipulated by GoI/ MoF/MoD at the time of submission of bids) inclusive of taxes and duties is required to be submitted after signing of contract.

PART-II

31. **Procedure for Response**.

(a) Vendors must fill the form of response as given in **Vendor Information Proforma and Request for Information Questionnaire**. Apart from filling details about company, details about the exact product meeting other generic technical specifications should also be carefully filled. Additional literature on the product can also be attached with the form.

(b) The filled form should be dispatched at under mentioned address

To,
The Director General
[for Principal Director (IT)]
Room No. 49
Coast Guard Headquarters
National Stadium Complex
Purana Quila Road
New Delhi – 110001 email id: dte-it@indiancoastguard.nic.in

(c) Last date of acceptance of filled form is **26 Aug 2021**. The vendors short listed for issue of RFP would be intimated.

32. The Government of India invites responses to this request only from reputed System Integrators with commensurate experience in delivering, implementing and supporting complex IT projects in the Government Sector. The end user of the equipment is Indian Coast Guard.

33. This information is being issued with no financial commitment and the Ministry of Defence reserves the right to change or vary any part thereof at any stage. The Government of India also reserves the right to withdraw it should it be so necessary at any stage. The acquisition process would be carried out under the provisions of DAP.

REQUEST FOR INFORMATION: PROCEDURE FOR RESPONSE

Request for information for

1. The Indian Coast Guard is planning to establish Core IT infrastructure for ICG (01 Data Centre, 01 Disaster Recovery Data Centre, 01 pan ICG MPLS/ VSAT connectivity) and ERP package 'SAFAL' (includes Logistic, Finance and HR modules) through Digital Coast Guard (DCG)' project. With the view to identify probable vendors who can undertake the said project, reputed System Integrators with commensurate experience in delivering, implementing and supporting complex IT projects in the Government Sector are requested to forward information on the product/ solutions which they can offer. The parameters/ broad specifications of the item are mentioned at Part-I f this RFI and Annexure I to IV of this RFI and in the attached Request for Information questionnaire. In addition the vendors are required to furnish details as per attached Vendor Information Proforma.

2. Apart from the information as per the Appendices the vendors may also forward technical details/product brochures/literature/ layout of civil works at DC & DRDC etc pertaining to the item in question.

3. The required information/ details may please be forwarded at the following address by **26 Aug 2021**:-

To,
The Director General
[for Principal Director (IT)]
Room No. 49
Coast Guard Headquarters
National Stadium Complex
Purana Quila Road
New Delhi – 110001 email id: dte-it@indiancoastguard.nic

VENDOR INFORMATION PROFORMA

1. **Name of the Vendor/Company/Firm**
(Company profile including Share Holding pattern, in brief, to be attached)

2. **Type (Tick the relevant category)**

Original Equipment Manufacturer (OEM) Yes/No

Authorised Vendor of foreign Firm Yes/No (attach details, if yes) Others (give specific details)

_____
_____

3. **Contact Details**

Postal Address:
City:_____ State: _____
Pin Code: _____ Tele: _____
Fax:_____ URL/Web Site:_____
Email: _____

4. **Local Branch/Liaison Office/Agent (if any)**.

Name & Address:_____
Pin code: _____Tel:_____Fax:_____
Email: _____

5. **Financial Details**. Category of Industry (Large/ Medium/ Small Scale): _____.

6. **Certification by Quality Assurance Organisation**

Name of Agency	Certification	Applicable from (Date &Year)	Valid till (Date & Year)

7. **Details of Registration**

Agency	Registration No.	Validity (Date)	Equipment
GeM			
DGQA/DGAQA/DGNAI			
OFB			
DRDO			

Any other Government Agency			

8. **Membership of FICCI/ASSOCHAM/CII or other Industrial Associations**.

Name of Organisation_____ Membership Number _____

9. **Equipment/Product Profile (to be submitted for each product separately)**

(a) Name of Product: _____
(IDDM Capability be indicated against the product)
(Should be given category wise for e.g. all products under night vision devices to be mentioned together)

(b) Description (attach technical literature):

(c) Whether OEM or Integrator:_____

(d) Name and address of Foreign collaborator (if any):

(d) Industrial Licence Number:_____

(e) Indigenous component of the product (in percentage):

(f) Status (in service/design & development stage):
(h) Production capacity per annum:

(j) Countries/agencies where equipment supplied earlier (give details of quantity supplied):

(k) Estimated price of the equipment

10. Alternatives for meeting the objectives of the equipment set forth in the RFI.

11. Any other relevant information:_____

12. **Declaration**. It is certified that the above information is true and any changes will be intimated at the earliest.

13. ***Note****: Paragraph 44 and Appendix F to Chapter II may be referred.*

(Authorised Signatory)

REQUEST FOR INFORMATION: QUESTIONNAIRE

Ser No	Specifications/ Parameters	Reply
1.	**General Parameters**	
(a)	Is your company an Indian Vendor as defined at Paragraph 20 of Chapter I of DAP 2020 that is to say, "An Indian Entity" registered under the relevant Indian laws and complying with all regulations in force applicable to the industry. Also please specify whether your entity is a company, subsidiary, an associate company (as defined in the Companies Act, 2013), a consortium or a Joint Venture (JV).	
(b)	Has any of your Business dealing or business dealings with any of your allied entities been suspended or banned, by MoD/ SHQ or any Government Department or organization (as defined in Guidelines for Penalties in Business Dealings with Entities issued vide Ministry of Defence, D (Vigilance) MoD ID No 31013/I/2006-D (Vig) Vol II dated 21 Nov 2016). A self-declaration duly certified by a practicing company law expert is to be enclosed.	
(c)	Have any of your company's Promoters and/ or Directors have been declared as wilful defaulters in connection with any previous/ ongoing/ prospective contracts concluded/ proposed to be concluded with MoD/ SHQs/any other Ministries/ Government organisations. A self-declaration duly certified by a practicing company law expert is to be enclosed.	
(d)	Have you registered in India under the Indian Companies Act 1956/ LLP Act 2008 / Partnership Act 1932 and should have been operating for the last five years as on the date of publishing of Tender/ RFP notice (including name change/impact of mergers or acquisitions).	
2.	**Technical Parameters**	
(a)	Please specify, whether your firm is a manufacturing entity, a System Integrator or an OEM partner.	
(b)	Please specify number of years of experience in delivery, implementation and support of complex IT projects including, data center, networking infrastructure and ERP based	

	enterprise solutions on Turnkey basis in large organisations with pan India footprint. However, if all the above fields have not been covered under any single project, number of years of experience in delivery, implementation and support of data center, networking and ERP based solutions as part of different projects may be specified. Documents in support of the experience claimed must be enclosed.	
(c)	Details including scope and value of projects including % of indigenous content (by cost) previously executed/ currently being executed to be clearly specified. Capacity/ size of Data Center, number, geographical disposition of nodes and technology employed for networks, geographical disposition and number of employees of organisations in respect of whom ERP solutions have been implemented also needs to be specified. A self-certification duly verified by a practicing chartered accountant/ company secretary to be attached.	
(d)	Copy of Certifications like Gartner Quadrant/ ISO9001/ CMMi3 or more (specifying development/ service/ acquisition models) /ISO27001, if held to be attached. How old is your ISO certification (years).	
(e)	Certifications with respect to compliance with IEEE/ ITU standards, if held to be attached.	
(f)	Whether the vendor has any existing partnership with OEMs for long term product support for IT infrastructure and Annual technical Support for ERP licences. If yes, details to be provided.	
(g)	Details and locations of branch offices, if any for maintenance support across India at ICG locations	
(h)	How many manpower do you have on your payroll on the following technologies:- Cloud automation Virtualisation support Network Engineer ITOM, ITSM & APM Support Server, Storage, Backup, 24x7 Linux Administrator Security Analyst Data Center Facility cooling, power & floor management	

	Data Center Facility cooling, power & floor management DCIM, IBMS Support 24x7 Fire Prevention & Protection Officer Service Desk Support Engineer, 24x7 Support manpower, Facility Management SOC support For each category of manpower indicate L1, L2 & L3 quantities on your payroll. Where as L1 – experience of two years in relevant technology L2 – OEM certified professional with minimum two year experience in relevant technology L3 – OEM certified professional from OEM authorised partner with minimum two year experience in relevant technology	
(j)	How many functional ERP consultant (L3 level engineer with 05 years' experience, OEM certified) do you have on your payroll?	
(k)	How many ERP support engineers (OEM Certified, 03 years' experience) do you have on your payroll?	
(l)	How many ERP Database Administrator (OEM Certified, 03 years' experience) do you have on your payroll?	
(m)	How many ERP System Engineer, Middleware & Cloud Automation engineers (OEM Certified, 03 years' experience) do you have on your payroll?	
(n)	How many Security Operation Centres (SOC) implemented by your company in last five years.	
(p)	How many EPS licenses of SIEM has been deployed in last five years.	
(q)	How many SOC services managed by your company in last five years.	
(r)	How many SOC analyst are available on your payroll.	
3.	**Financial Parameters**	
(a)	**Average Annual Turnover**. Minimum average annual turnover for last three financial years, ending 31st March of the previous financial year to be specified. A self-certification/ extracts of audited balance sheets duly verified by a practicing chartered accountant/ company secretary to be attached.	
(b)	**Net Worth**. Net worth of entities, ending	

	31st March of the previous financial year to be specified. A self-certification/ extracts of audited balance sheets duly verified by a practicing chartered accountant/ company secretary to be attached.	
(c)	**Insolvency.** A self-declaration duly signed by the Board of Directors/ authorised signatory certifying that the entity should not be under insolvency resolution as per Indian Bankruptcy Code at any stage of procurement process from the issuing of RFP to the signing of contract to be submitted.	
(d)	**Credit Rating (Desirable Financial Parameter)**. Long term credit rating as on 31st March of the previous financial year equivalent to CRISIL rating on Corporate Credit Scale as CCR-BBB or better issued by credit rating agencies recognized by SEBI to be specified. Relevant supporting documents to be attached.	
(e)	**Road Map for meeting 60% IC content.** Vendor should clearly specify the envisaged roadmap for meeting the IC content requirements of the project. However, if meeting the specified IC content is not considered feasible by the vendor, maximum IC content which can be complied is to be clearly indicated.	
(f)	**Project Implementation Timeline. Envisaged timelines for implementation of the project is to be clearly indicated:-** (a) Civil works at DC and DRDC. (b) Supply of Hardware and Software. (c) Offering of MVCR of each individual module of the ERP solution (d) Establishment of the Network including integration with the existing network. (e) Complete delivery of the ERP package. (f) Submission of required certifications. (g) Final timeline for delivery of the entire ERP package for user assessment (h) Final timeline for delivery of the entire project including positioning of the requisite onsite manpower.	
(g)	**Project Cost**. Estimated financial implications for complete project along with breakdown of major components to be	

	indicated as under:- (a) Civil Works (b) DC/ DRDC Hardware/ Software (c) ERP Pacakge (d) Network (e) AIAMC (f) Training and Documentation (g) Onsite manpower	
4.	**Documentation**. Vendors should provide all necessary self-authenticated documentation in support of their achievement of criteria. Such documentation should inter-alia include:-	
(a)	Details of projects/ supply orders successfully executed in the last two years including % of IC content achieved.	
(b)	Annual reports for three years of applicant entity, parent and associate companies, consortium and JV partners.	
(c)	Details of shareholders, promoters, associated, allied and JV companies.	
(d)	Details of vigilance action, viz. ongoing investigation and suspension/ debarment/ blacklisting actions against the applicant entity or any of its allied entities, parent company or consortium and JV partners, if any by any Department/agency of Central Government.	
(e)	A certificate from CA/CS indicating the financial parameters for the last three years.	
(f)	Bidders should produce a document provided by the OEM certifying that OEM of the proposed product with which the bidder may be pledging compliance has dedicated product development and support centres in India	
(g)	Bidders should produce a document provided by the OEM that the OEM have SLA based support for various product related issues. The support should be 24x7x365.	

Note: Any vendor furnishing false information will be liable for action as per existing guidelines.

Annexure-I

{Refers to Para 5(a)}

BROAD PARAMETERS: DC & DRDC BUILDINGS

Sl.	Floor requirement	DC	DR	Remarks
1.	Server area	As per the requirements including projected scalability (Tier III compliant)		
2.	Utility area in			
3.	Load bearing area			
4.	Floor	3	3	G+2
5.	Office space (work stations and cabins)	DC- 120 DR-120		Cabin to Cubicle ratio 20:80, Cabin- 10'x15' Cubicles - 8'x6' Each cabin/ cubicle to be equipped with one Desktop computer. Both DC and DRDC to be provided with 04 Heavy Duty MFDs and 15 printers each (05 color and 10 BW).
6.	Workspace amenities (Common area, Conference Rooms, Terrace Open Area, Store Rooms, Canteen, Dining Space, Restrooms, Lobby, Lounge etc.	Yes	Yes	To meet the requirements of the projected work force.
7.	Command Center	01	01	Command centre should be equipped with end to end video walls (6-8 cubes).
8.	SOC Room	01	01	
9.	Parking Space	Yes	Yes	80 four wheelers and 70 two wheelers each
10.	Industrial RO plant for portable water	01	01	Each floor of DC and DRDC to be equipped with 02 heavy duty portable water dispensers.

Annexure-II
{Refers to para 5(b)}

BROAD HARDWARE/ SOFTWARE REQUIREMENTS AT DC AND DRDC

	(A) SUPPLIES - SOFTWARE/ HARDWARE (ONE-TIME) (DC)
	CLOUD
1	Cloud Management Platform, All Zones
2	Compute Virtualization
3	Network and Security Virtualisation
4	Container Management Platform
5	Windows Server 2019 Datacenter
6	Windows Standard 2019
7	Linux Ent. Server (Socket pair)
8	Linux Ent. VM (Instance pair)
	SERVER/ STORAGE/ NETWORK
9	Blade Servers
10	Block & File Storage
11	Secondary Storage, Webscale, SMB/NFS/S3
12	Tape Library
13	Spine Switch
14	Leaf Switch
15	Core Router
16	GSLB
17	Virtual Server LB
18	SAN Core
19	SDWAN Controller
20	SDWAN Edge
21	Passive Cabling
	IT OPERATIONS & SERVICES MGMT.
22	IT Infrastructure, Operations and Service Desk Management Software
23	Application Performance and Monitoring
	BUSINESS CONTINUITY
24	DR Automation
25	Backup software
	SECURITY
26	SIEM
27	GRC
28	Cloud Workload Protection[3]
29	NGFW Appliance
30	Virtual NGFW
31	Endpoint Protection
32	WAF
33	APT[8]
34	AAA

35	VAPT
36	PKI as CA including KMS, IDAM with PAM
	(B) SERVICES - AMC/ MANPOWER SUPPORT (RECURRING) (DC)
37	AMC
38	SI Services
39	Manpower
40	Training
41	SOC Services

Note. Day one IT Load envisaged at DC & DRDC is as under:-

DC – 45 kW
DRDC- 30 kW

Annexure-III
{Refers to para 5(b)}

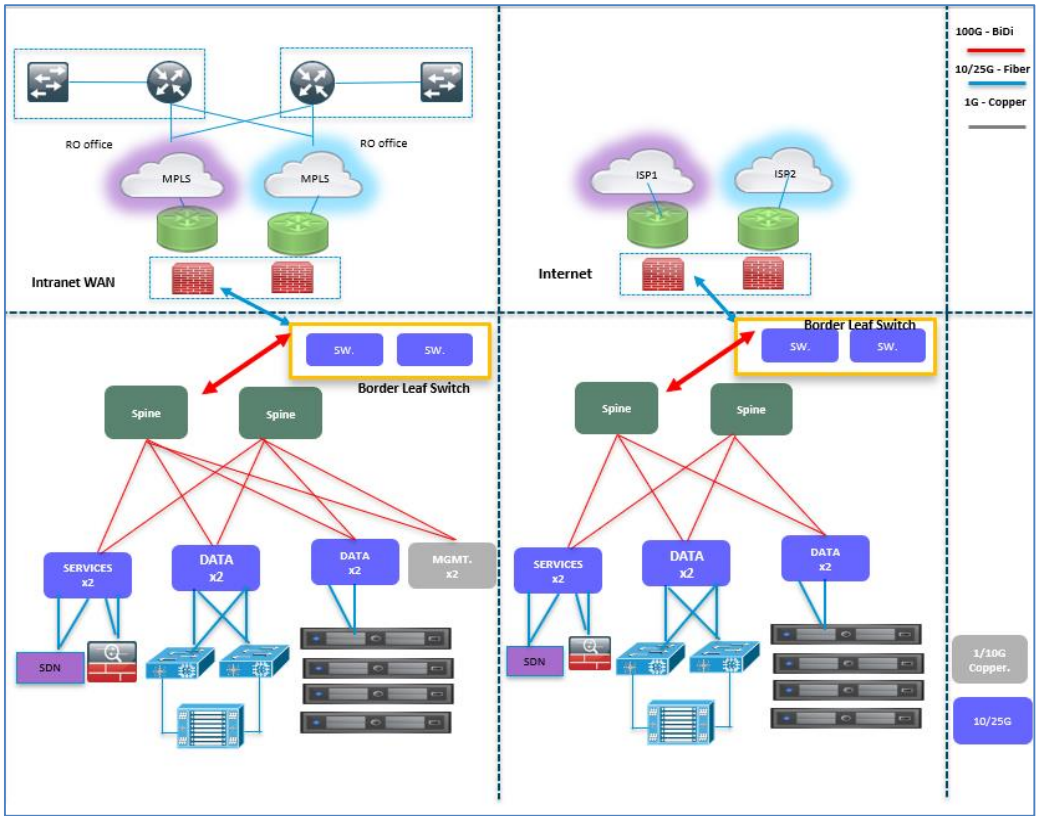
BROAD ARCHIECTURE DC AND DRDC

1. **Internet Zone, Security-Low.**

   (a) Public app hosting
   (b) (b) Internet leased lines

2. **Intranet with Airgap, Security-High**

   (a) Secured intranet apps
   (b) Keep airgap with internet zone
   (c) Terminate MPLS/ VPN
   (d) ICG Chakra WAN termination



Annexure-IV
{Refers to para 5(j) and para 28}

DETAILS OF EXISITNG HARDWARE/ SOFTWARE REQUIRED TO BE INTEGRATED

Product	Description	Qty
VMware vSphere 6	Resource Management, High Availability and Certificate Management	30 licenses (per processor based licensing)
VMware-vCentre Server	Software to manage hosts and VMs centrally	02 Licences
VMware NSX	NFV module	30 licenses (per processor based licensing)
VMware SRM	Replicate VM Data	2 packs of 25 VM
Anti-Malware Server+ Clients	TrendMicro Smart Protection Complete	3 Servers with XXX CALs
HIPS Server+ Clients	TrendMicro Deep Security Enterprise	3 Servers with 453 CALs
Patch Management Server	Microsoft systems Center	3
Enterprise Backup Solution	Veritas Netbackup platform base	1
Server Enclosures	HPE C3000	02 (DC)
Sever Enclosure Ethernet Blade Switch	HPE 6125G	04 (DC-02 and DR-02)
Blade Server	HPE BL460C G8	16 (DC-08 and DR-08)
Blade Server	HPE BL460C 69	04 (DR)
Store Once Backup Appliance	HPE Store Once 3540	01 (DC) 12 X 4 TB SAS
SAN controller with file persona	HPE 3PAR 8400,20TB	02 (01 DC and 01 DR)

Product	Description	Qty
NAS Service Processor	Proliant DL 120 G9	02 (01 DC and DR each)
Tape Library	HPE LT07- HPE MSL4048	02 (01 DC and 01 DR)
SAN Switch	HPE SN3000B	04 (DC-02 and DR-02)
Data Centre Modular Rack	Rittal SK009	01 (DC)
Modular Rack	CMC	01 (DC)
IP Camera	Dahua DH-SD6C120T-HN	01 (DC)
2 KVA UPS Online	EATON 9PX 11000	02 (DC)
Server Enclosure/Chasis	HPE C7000	01 (DC)
Server Encl C7000 SAN Switch	Brocade 8GB SAN Switch	02 (DC)
Fiber Channel 16Gb 4 Port HBA	HPE FC HBA 16Gb	02 (DR)
Fiber Channel 16Gb 2 Port HBA	HPE FC HBA 8Gb	01 (DR)
HPE 3PAR StoreServ Fle Ctl v3 Sys	HPE 3PAR Storeserv (File persona)	01 (DR)
HPE Ethernet 1G 4P 331FLR Adptr	HPE Ethernet 1G 4P 331FLR Adptr	01 (DR)
HPE Ethernet 10Gb 2P 560SFP +Adptr	HPE Ethernet 10Gb 2P 560SFP+Adptr	01 (DR)
L3 Switch 4-1G/10G, 24GE,4-10G	HPE Aruba 2930	02 (DR)
UPS 2KVA	EATON, PW9130i2000R-XL2U	02 (DR)
Rack Server (In DR)	Dell, Power Edge EMC R440	2x 12 core
	Dell, Power Edge EMC R740	2 x 20 core

Product	Description	Qty
	HPE DL380 Gen10	2 x 14 core
	HPE DL380 Gen09	04 x 16 core
HPE Synergy, Composable IT Infrastructure Server Hardware	HPE Synergy	01 (DR)
UTM Device	Fortinet, Fortigate 200E	02 (DR)
SAN Switch for Server Enclosure	HP Brocade 8Gbps,8P	02 (DR)
SAN Storage	3PAR Store Serv 7400	01 (DR)
Service Processor 3PAR 7400	Proliant DL320 E Gen8	01 (DR)
File Controller	3 PAR Store Serv 700	01 (DR)