

RFP-KYV-24-0258
Attachment B to RFP: Detailed Technical Specifications

SCOPE OF WORK

1. PROJECT BACKGROUND

The USAID Promoting Integrity in the Public Sector Activity (Pro-Integrity) will concentrate on addressing three narrow development challenges within its manageable interest and influence to overcome corruption risks at the national institutional level, local government level, and related to Ukraine's recovery and reconstruction. Specifically, these include:

- **Anti-Corruption Institutional Challenges:** Nascent anti-corruption institutions facing depleted human resources and budget austerity during wartime face challenges guaranteeing adequate corruption prevention, deterrence, and the inevitability of punishment for corruption offenses.
- **Weak Anti-Corruption Controls in Local Government:** Weak anti-corruption compliance and control measures in local communities, depleted human resources, and humanitarian emergencies during wartime challenge adequate corruption prevention, deterrence, and the inevitability of punishment for corruption offenses at the local level.
- **Recovery and Reconstruction Corruption Risks:** Unresolved corruption risks due to the lack of internal control, non-transparent procedure, and weak civil oversight over key reconstruction processes, including infrastructure restoration, asset management, and environmental recovery, create risks for transparent and accountable reconstruction and recovery.

The Pro-Integrity Activity will pursue a problem-driven approach addressing the root causes through targeted objectives aligned with the mission and U.S. government strategy.

2. Background on a task

Cybersecurity threats, including ransomware attacks, unauthorized access to data, and vulnerability of authentication systems, pose serious risks to the functioning of information systems. CEC requires a reliable and attack-resistant backup and archiving system to ensure uninterrupted operation during the electoral processes.

As part of the task of increasing the cyber resilience of the CEC's infrastructure (in terms of backup systems), it is proposed to implement a separate data backup and archiving infrastructure.

The implementation of the Backup System should provide the ability to protect data from ransomware and unauthorized access, through continuous scanning and end-to-end encryption during information replication and storage.

It should be noted that in conditions where Ukraine is resisting a full-scale invasion by the Russian Federation, the role of IT and cyber defense becomes critical for ensuring national security, preserving public administration and the functioning of key institutions, such as the CEC. The ability to restore and protect information systems and data is an important factor in maintaining citizens' trust in democratic processes and the country's sovereignty.

Today, the CEC' existing Backup System does not meet the following modern requirements for cyber resilience, namely:

- Lack of an isolated circuit for storing backup copies (isolated failure domain);
- Improper integration with modern cyber defense systems;
- Insufficient level of autonomy and independence from basic services that may be vulnerable to attacks;
- Limited functionality for working with large volumes of data on an organization-wide scale, especially in critical conditions.

3. Objective and activities

The objective of the procurement is supply, installation, and configuration of all components of the Backup system in the CEC' Data Center following the specifications agreed upon with the IT Department of the CEC, including hardware, software and related support services.

The project objectives are:

- **Data Security:** Ensure the safety and confidentiality of critical data using modern backup and encryption technologies;
- **Disaster Resilience:** Provide the ability to quickly restore the functioning of information systems in the event of accidents, cyberattacks, or other force majeure circumstances;
- **Compliance with standards:** Bring backup and archiving processes in line with the requirements of international cybersecurity standards and regulatory norms of Ukraine;
- **Attack Resistance:** Create an autonomous backup infrastructure that is independent of the compromise of core authentication and authorization services;
- **Scalability:** Ensure the ability to adapt the system to the growing needs of the organization and changes in its infrastructure.

The project will be successful if the following goals are achieved:

- The Backup System will ensure successful backup of all critical data and systems (physical servers, virtual machines, databases, file systems);
- Archiving, backup and recovery policies will be implemented that meet the requirements of the CEC RPO (Recovery Point Objective) and RTO (Recovery Time Objective);
- End-to-end data encryption will be ensured during replication and storage;
- The implemented isolated loop for the Backup System will provide protection against external attacks and unauthorized access;
- The Backup System will provide automation of critical backup and archiving processes;
- Long-term storage of backups using tape libraries will be ensured;
- Implementation of this solution will ensure reliable protection of critical data and support of electoral processes, reducing risks for the information infrastructure of the CEC.

The result of the project will be a modern, scalable and secure backup system that will meet the needs of the CEC and minimize the risks of data loss and disruption during electoral processes.

4. Deliverables and Payment Schedule:

The project includes the following stages:

1. Primary site - implementation of the first set of the backup system.
2. DR site - ensuring fault tolerance and high availability of the backup system.

Payment for the equipment will be made by the DAI rules and will be made after the equipment is delivered, installed, and accepted by CEC IT department.

Implementation of the Backup System includes:

- comprehensive inspection of server premises;
- collection of data on existing backup systems;
- analysis of the received data by the direction of backup;
- deployment of the server part, installation of the OS and basic settings;
- setting up data protection and recovery policies;
- integration with existing components of the CEC CSS;
- setting up sending event logs to the IBM QRadar SIEM system;
- Connecting backup system components to the IBM QRadar SIEM technology platform;
- Define policies and configure specific rules for collecting and aggregating security events from the backup system;
- Formation of a list of threat detection scenarios for the backup system;
- Design and implement threat detection scenarios for the backup system;
- testing the installed system based on the implementation results together with the CEC's specialists based on the testing program and methodology developed by the Provider and approved by the CEC;
- preparation of a report on the testing results.

The project documentation based on the results of the implementation services provided should include:

- system passport;
- description of the system architecture.

A detailed list of equipment and software with part numbers and their quantity is given in the specifications.

5. SELECTION CRITERIA

5.1. Requirements for the experience of the provider:

The Service Provider must have experience in implementing at least two similar projects over the past three years that meet the technical requirements for the project to build a highly available, productive backup system to protect information systems ("Backup System") of the Central Election Commission (CEC), namely, the Service Provider must provide information in its proposal confirming that the implemented projects included the following:

- Construction and implementation of information and communication infrastructure within the framework of the cybersecurity system (CSS).
- Development, installation, and implementation of the Backup System, including all necessary components, such as supply and configuration of equipment, software and necessary support.
- Ensuring system reliability and fault tolerance.
- Ensuring information protection and compliance with information security requirements, as well as regulatory requirements for personal data protection.

5.2. Staff qualification requirements:

The Service Provider must have a team of specialists who meet the tasks of the "Backup System" project, namely, the Service Provider, as part of its tender offer, must provide information confirming the qualifications of the specialists it plans to attract to provide the services. The qualifications of the proposed team to perform the specified services will be assessed based on the list of specialists that the participant proposes for the implementation of the project and the provided resumes of the proposed specialists. The offer and resumes of specialists must contain and confirm the following:

- Certificate in any form, on the availability of employees with the appropriate qualifications at the participant, who have the necessary knowledge and experience to provide the services provided for by the Technical Requirements of the subject of procurement and will be involved during the execution of the contract, indicating the full name, position, availability of a valid certificate according to the list specified below, and attaching copies of certificates:
 - The presence of at least 2 (two) employees at the participant, with a valid Fortinet certificate or similar equipment/software certificate proposed by the tenderer.
 - The participant must have at least 2 (two) employees with a valid Lenovo Certified Storage certificate or similar equipment/software certificate proposed by the tenderer.
 - The participant must have at least 2 (two) employees with a valid Commvault certificate or similar equipment/software certificate proposed by the tenderer.
 - The participant must have at least 1 (one) employee with a valid IBM Certified Analyst - Security QRadar SIEM certificate.
 - The participant must have at least 1 (one) employee with a valid IBM Certified Deployment Professional - Security QRadar SIEM certificate.
- The participant(s) of the procurement procedure must provide a copy of the authorization letter from the Software/Hardware Manufacturers Fortinet, Commvault, Lenovo (or similar equipment/software proposed by the tenderer) or the official representative office (OEM partner) of the specified Manufacturer in Ukraine.

At the same time, the participant has the right to propose his own vision of a team of specialists for the successful implementation of the project. The quantitative composition of the team must be sufficient to implement the project within the specified time.

The provision of certificates/diplomas confirming the qualifications of specialists is mandatory.

5.3. Compliance of the proposed solution with the technical requirements

The service provider must offer a description of a possible solution option in its proposal, which, among other things, must reflect the following aspects:

- Development, supply, installation, and configuration of the Backup System, which will become part of the recipient's overall CSS to ensure reliable protection of the CEC's information systems from ransomware, unauthorized access and other cyberattacks.
- Implementation of the Backup System must provide the ability to back up, archive and restore data for physical and virtual servers, file servers, databases, and components of the Backup System.
- The Backup System must guarantee continuous data encryption during replication and storage and ensure rapid recovery of critical data in the event of a crash or compromise of the main systems.
- Integration with existing components of the CSS.

- Non-functional requirements, namely, high availability, performance, reliability, fault tolerance, speed, system throughput.

5.4. Additional requirements for the preparation of the proposal:

The potential service provider is required to include in the project proposal, among other things, the following information:

The developer must provide the expected terms of implementation of all stages of the provision of all hardware and software as well as installation and support services for the creation and launch of the Backup System into industrial operation.

IMPORTANT: The information provided will be considered in the evaluation of the technical part of the proposal.

TECHNICAL REQUIREMENTS

Services for building a highly available, productive backup system to protect the information systems of the Central Election Commission

General provisions

This document is the Technical Requirements for the Services for the Construction of a Highly Available, Productive Backup System for the Protection of Information Systems of the Central Election Commission (hereinafter referred to as the Technical Requirements).

Software and hardware for building a solution for optimizing information and communication infrastructure in terms of cyber protection are partially provided by the Customer, and partially supplied by the Contractor within the framework of the project.

1. Purpose and purpose of backup system

1.1. The purpose of creating the backup system

The goal is to build and implement a backup system, which will become part of the customer's overall cybersecurity system to ensure reliable protection of the information systems of the Central Election Commission from ransomware, unauthorized access and other cyberattacks. The backup system must guarantee continuous encryption of data during its replication and storage, ensure the rapid recovery of critical data in the event of a disaster or compromise of the main systems.

1.2. Purpose of IBS

As part of the task of improving the cyber resilience of the CEC infrastructure (in terms of backup systems), the implementation of the backup system should provide the ability to backup, archive and restore data for:

- Physical and virtual servers with Windows, Linux SUSE, RHEL, Ubuntu, Oracle Solaris.
- Файлових серверів Win File Server.
- Oracle DB.
- Component of the CEC's Integrated Cybersecurity System (CSS) (if backup and restore procedures are supported by this solution):
 - Remote Access Subsystem (RAVPN);
 - Protection of the email subsystem (Email Security);
 - Protection against malicious zero-day code;
 - Management of network security devices;
 - Collection of log files, their analysis and construction of reports;
 - Web application protection and API protection;
 - Advanced Antivirus Protection (EDR);
 - Blocking Network-Level Attacks (IPS);
 - Filtering of outgoing web traffic (Web Security);
 - Prevention of sensitive data leakage (DLP);
 - Centralized collection, analysis and storage of event logs (SIEM);
 - Secure Internet Access Node (SIAN).

2. Scope of services

The Contractor must provide services for setting up the Subsystem that meet the following requirements:

Name	Service Requirements
General provisions	The Contractor must provide services for the implementation of the Backup System

Stages of service provision	<p>The project involves the following stages:</p> <ol style="list-style-type: none"> 1. Primary site - implementation of the first set of backup systems. 2. DR site - ensuring fault tolerance and high availability of the backup system. <p>Important:</p> <ul style="list-style-type: none"> • Stages 1 and 2 are implemented simultaneously.
Scope of work on setting up the subsystem	<p>The implementation of a Backup System includes:</p> <ul style="list-style-type: none"> - comprehensive inspection of server rooms; - collection of data on existing backup systems; - analysis of the received data in the direction of backup; - server deployment, OS installation, and basic settings; - configuring data protection and recovery policies; - integration with existing components of the CEC CSS; - configuring sending event logs to the IBM QRadar SIEM system; - Connecting backup system components to the IBM QRadar SIEM technology platform. - Define policies and configure specific rules for collecting and aggregating security events from the backup system. - Formation of a list of threat detection scenarios for the backup system. - Design and implement threat detection scenarios for the backup system. - testing of the installed system based on the results of implementation together with CEC specialists on the basis of the program and methodology for testing, which is developed by the Contractor and approved by the CEC; - preparation of a report based on the test results.
Development of documentation	<p>Project documentation based on the results of the implementation services provided should include:</p> <ul style="list-style-type: none"> - system passport; - Description of the system architecture.

3. Requirements for the content of the results of the services provided:

Based on the results of the implementation of the Backup System, the following will be implemented:

- the catastrophic resilience of the CEC infrastructure was ensured.
- the possibility of disaster recovery is provided;
- A transparent and documented process of copying, archiving and restoring data is provided
- the server part with the installation of the OS and the basic settings of the Backup System was deployed;
- data protection and recovery policies have been configured;
- integration with existing components of the CEC CSS has been configured;

- configured to send event logs to the IBM QRadar SIEM system;
- cyber resilience is ensured by separating authentication domains and isolating Backup System at the network level;
- end-to-end encryption is provided during replication and storage of information.

4. IBS Requirements

Name	Requirements
<p>Composition and stages of Backup System implementation</p>	<p>The project for the implementation of the Backup System provides for the following stages:</p> <p>Stage 1 – Construction of the Primary site, which involves the implementation of the first set of the backup system, which includes the following components of the Backup System:</p> <ul style="list-style-type: none"> - Firewalls with SD-WAN technology support – 2 pcs; - Network switches – 2 pcs; - SRK control server – 1 pc; - Storage server based on Commvault HyperScale X cluster – 3 pcs; - Additional Index server for Anti-Malware scanning - 1 pc; - Tape library – 1 pc (used available at the CEC); - Servers of the FreeIPA authentication system (RedHat IdM) – 2 pcs. <p>Stage 2 – Building a DR site, which involves ensuring fault tolerance and high availability of the backup system, which includes the following components of the Backup System:</p> <ul style="list-style-type: none"> - Firewalls with SD-WAN technology support – 2 pcs; - 2. Network switches – 2 pcs; - 3. Backup System control server – 1 pc; - 4. Storage server based on Commvault HyperScale X cluster – 3 pcs; - 5. Additional Index server for Anti-Malware scanning - 1 pc; - 6. Tape library – 1 pc (used available in the CEC).
<p>Architecture</p>	<p>The Fault Domain should be implemented on a separate set of equipment with limited access to form an Isolated Fault Domain and using an autonomous Authentication Domain, which should ensure the cyber resilience of the solution in case of compromise or destruction of the organization's main authentication and authorization systems and provide the ability to function and interact with the components of the Fault Domain in case of loss of basic services at the organization level.</p> <p>Functional requirements for IBS:</p> <ol style="list-style-type: none"> 1. A single interface for managing the processes of creating backups and transferring data to the archive, according to specified policies throughout the organization. 2. Centralized management of data protection policies. 3. Collegial confirmation of destructive operations. 4. Built-in support for 2FA and FIDO2. 5. Vertical and horizontal scaling.

Name	Requirements
	<ol style="list-style-type: none"> 6. End-to-end encryption of data between the agent and the server. 7. Encryption of data in backups. 8. Support for event logging in Syslog format for integration with SIEM system. 9. Configure organization-level approved backup policies. 10. Model of role-based access to backup storage resources. 11. End-to-end reporting on storage usage for performance data, backups, and archives. 12. End-to-end monitoring and notifications of backup and archiving processes. 13. Interaction with tape libraries without additional licensing. 14. A full-featured web interface that allows you to configure, create, monitor data backup status, SLA compliance, and have a self-service user portal. 15. Copying file systems of the following OS: <ul style="list-style-type: none"> • Windows; • Linux (Oracle Linux, Red Flag Linux, Red Hat Enterprise Linux AS / ES, Red Hat Enterprise Linux / CentOS, Suse Linux (SLES)); • FreeBSD. 16. Copying data in "hot mode" of the following DBMS and applications: <ul style="list-style-type: none"> • Microsoft Active Directory / SQL Server / Exchange Server / SharePoint Server; • Oracle; • MySQL; • PostgreSQL. 17. Creating backups in "hot mode", as well as full and granular restoration of virtual machines in environments: <ul style="list-style-type: none"> • VMware; • Microsoft Hyper-V; • Open Stack; • RHEV. 18. Object-by-object recovery of the MS Active Directory directory. 19. Object-by-object recovery of the MS Exchange directory. 20. Support for any backup and archive storage devices, including disk systems (DAS, SAN, NAS, VTL), tape libraries. 21. Multiplexing of data streams when working with belt drives. 22. Create more than two additional backups and backups. 23. Limit the available bandwidth of the network for backup. 24. Generation of reports on SLA compliance, backup schedules and status, accounts, credentials, legacy credentials. 25. Interaction of external systems with the backup system using REST API.

Name	Requirements
	<p>26. Interconnection between the components of the Backup System and related systems should be performed on network equipment with support for SD-WAN technology.</p> <p>27. SRS storage servers must support Commvault HyperScale technologies.</p>
Licensing	<p>The Backup System should provide the ability to backup, archive and restore data for:</p> <ul style="list-style-type: none"> • 100 virtual machines; • Saving up to 100TB of data at the implementation stage.
Reports and dashboards	<ul style="list-style-type: none"> • The ability to create graphical reports and dashboards to visualize the results of data backup and recovery; • Ability to customize the generation of reports and dashboards according to the schedule; • The ability to automatically generate and send reports by e-mail; • Ability to export reports in PDF, XML, HTML and CSV formats.
Administration of the Backup System	<ul style="list-style-type: none"> • All actions related to the administration and work with the Backup System must be carried out through a single web interface and/or a "fat client"; • All actions of Backup System users must be recorded in an internal Backup System log protected from changes; • Administration and configuration of the rules of operation of the Backup System should be carried out through an intuitive graphical interface; • The ability to flexibly configure user rights to access individual functions of the Backup System, data, reports and dashboards.
Web browser support	<p>The Backup System web interface must support the following web browsers:</p> <ul style="list-style-type: none"> • Chrome • Firefox • Edge • Safari
Technical support from the manufacturer	<ul style="list-style-type: none"> • Support from the Manufacturer for the hardware and software components of the Backup System for a period of at least 36 months; • The terms of support should include the ability to register service cases in 24x7 mode; • Permanent (24x7) authorized access to the Manufacturers' websites.

5. A detailed list of equipment and software, indicating batch numbers (the participant may offer similar equipment and software instead of the one listed) and their Quantity, is given in the table:

STAGE 1 / STAGE 1

List of Hardware / Software / Services			Quantity
1.	FG-600F-EU	Firewall FortiGate-600F 4x 25G SFP28 slots, 4 x 10GE SFP+ slots, 18 x GE RJ45 ports (including 1 x MGMT port, 1 X HA port, 16 x switch ports), 8 x GE SFP slots, SPU NP7 and CP9 hardware accelerated, dual AC power supplies	2
2.	FC-10-0600F-247-02-36	FortiGate-600F 3 Year FortiCare Premium Support Service Package	2
3.	FS-2048F-EU	FortiSwitch-2048F Layer 2/3 network switch FortiGate switch controller compatible switch with 48x25G(SFP28) +8x100G (QSFP28)+2x10G(SFP+). Dual AC power supplies	2
4.	FC-10-S2F48-247-02-36	FortiSwitch-2048F 3 Year FortiCare Premium Support Service Package	2
5.	SRC Management Layer Management Server : ThinkSystem SR630 V3 - 3yr Warranty		1
5.1	7D73CTO1WW	Management layer : ThinkSystem SR630 V3 - 3yr Warranty	1
5.2	BLK4	ThinkSystem V3 1U 10x2.5" Chassis	1
5.3	BFYE	Operating mode selection for: "Efficiency - Favoring Performance Mode"	1
5.4	BL0H	Data Center Environment 25 Degree Celsius / 77 Degree Fahrenheit	1
5.5	BYVS	Intel Xeon Silver 4510T 12C 115W 2.0GHz Processor	1
5.6	BNF6	ThinkSystem 32GB TruDDR5 4800MHz (1Rx4) 10x4 RDIMM	4
5.7	5977	Select Storage devices - no configured RAID required	1
5.8	BJHN	ThinkSystem RAID 9350-16i 4GB Flash PCIe 12Gb Adapter	1
5.9	BQ22	ThinkSystem 2.5" 5400 MAX 1.92TB Mixed Use SATA 6Gb HS SSD	2
5.10	BQ1Q	ThinkSystem 2.5" 5400 PRO 240GB Read Intensive SATA 6Gb HS SSD	2
5.11	B8N0	ThinkSystem 1U 8x2.5" SAS/SATA Backplane	1
5.12	BN2T	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP Ethernet Adapter	1
5.13	BLKF	ThinkSystem V3 1U x16/x16 BF PCIe Gen4 Riser1	1
5.14	BLK9	ThinkSystem V3 1U MS LP+LP BF Riser Cage	1
5.15	BLKH	ThinkSystem 1100W 230V Titanium Hot-Swap Gen2 Power Supply	2
5.16	6400	2.8m, 13A/100-250V, C13 to C14 Jumper Cord	2
5.17	BLKD	ThinkSystem 1U V3 10x2.5" Media Bay w/ Ext. Diagnostics Port	1
5.18	BH9M	ThinkSystem V3 1U Performance Fan Option Kit v2	6
5.19	B8LA	ThinkSystem Toolless Slide Rail Kit v2	1
5.20	AV1X	Lenovo 3m Passive 25G SFP28 DAC Cable	2
5.21	BPKR	TPM 2.0	1
5.22	B7XZ	Disable IPMI-over-LAN	1

5.23	BLK5	ThinkSystem SR630 V3 MB	1
5.24	BJKZ	MCHP SuperCap ASCM-35F with Filler	1
5.25	BVMC	Trigger MFG to scan the SN from the CPU Board via this MI	1
5.26	9205	Drop-in-the-Box Specify	1
5.27	9201	Windows Specify	1
5.28	9206	No Generic Preload Specify	1
5.29	BRPJ	XCC Platinum	1
5.30	BK15	High voltage (200V+)	1
5.31	B8KV	ThinkSystem 1U 8x2.5" SAS/SATA HDD Type Label	1
5.32	BPK3	ThinkSystem WW Lenovo LPK	1
5.33	B4X9	UA Server Carton Label	1
5.34	B97B	XCC Label	1
5.35	BPD5	ThinkSystem SR630 V3 Agency Label	1
5.36	BQPS	ThinkSystem logo Label	1
5.37	AUTQ	ThinkSystem small Lenovo Label for 24x2.5"/12x3.5"/10x2.5"	1
5.38	BPD7	ThinkSystem SR630 V3 Service Label for WW	1
5.39	BPD6	ThinkSystem SR630 V3 Model Name Label	1
5.40	AWF9	ThinkSystem Response time Service Label LI	1
5.41	BPDF	ThinkSystem 1100W Ti Power rating Label WW	1
5.42	BC4T	ThinkSystem 1U SFF Front 2.5" Backplane SAS/SATA Gen3 Cable	1
5.43	BJHR	680mm, SuperCap extend cable	1
5.44	BMJC	ThinkSystem 8x2.5" BP and 6+4 x2.5" BP Power Cable v2	1
5.45	BE0E	N+N Redundancy With Over-Subscription	1
5.46	BMAU	LP VENT W/STFNR 3LED	1
5.47	BK70	ThinkSystem V3 1U Supercap Holder Kit	1
5.48	BQBP	ThinkSystem MCC CPU Clip	1
5.49	BPFK	ThinkSystem SR850 V3/SR630 V3/SR630 V4 Standard Heatsink	1
5.50	B989	ThinkSystem V2 1U Package	1
5.51	B984	ThinkSystem 1U PLV Top Cover Sponge	1
5.52	BYQN	ThinkSystem SR630 V3 Firmware and Root of Trust Security Module v2	1
5.53	AVEN	ThinkSystem 1x1 2.5" HDD Filler	4
5.54	B8NM	ThinkSystem 1U MS Air Duct	1
5.55	B8NJ	ThinkSystem 1U MS Fan Dummy	2
5.56	BEYJ	ThinkSystem MS Height CPU Dummy	1
5.57	B5X6	ThinkSystem 1U 2x2.5" Fixed Filler	1
5.58	B8NB	ThinkSystem 1U MS LP Riser Filler	1
5.59	AUWG	Lenovo ThinkSystem 1U VGA Filler	1
5.60	A2HP	Configuration ID 01	1

5.61	5374CM1	Configuration Instruction	1
5.62	BJHX	ThinkSystem RAID 9350-16i 4GB Flash PCIe 12Gb Adapter Placement	1
5.63	A2JX	Controller 01	1
5.64	A2HP	Configuration ID 01	1
5.65	7S05CTOBWW	Windows Server 2022	1
5.66	S62D	Windows Server 2022 Standard (16 core) - MultiLang (not preinstalled)	1
5.67	3523	Drop-in-the-Box	1
5.68	3444	Registration only	1
5.69	7S0XCTO5WW	XClarity Controller Platin-FOD	1
5.70	SBCV	Lenovo XClarity XCC2 Platinum Upgrade (FOD)	1
5.71	5641PX3	XClarity Pro, Per Endpoint w/3 Yr SW S&S	1
5.72	1340	Lenovo XClarity Pro, Per Managed Endpoint w/3 Yr SW S&S	1
5.73	3444	Registration only	1
5.74	5372SWX	xSeries HIPO	1
5.75	S63S	Windows Server 2022 Standard (16 core) - MultiLang (not preinstalled)	1
5.76	7Q01CTS4WW	SERVER PREMIER 24X7 4HR RESP	1
5.77	QAA5	SR630 V3	1
5.78	QA18	Premier	1
5.79	QA0Y	Months	36
5.80	QA12	24x7 4hr Resp	1
5.81	7Q13CTOSWW	SERVER INSTALLATION	1
5.82	QAA5	SR630 V3	1
5.83	QA1T	Hardware Installation (Business Hours)	1
5.84	7Q01CTSAWW	SERVER KEEP YOUR DRIVE ADD-ON	1
5.85	QAK6	KYD	1
5.86	QA0Y	Months	36
5.87	7Q01CTSBWW	SERVER COMMITTED SERVICE REPAIR ADD-ON	1
5.88	QAKC	6Hr CSR	1
5.89	QA0Y	Months	36
6.	Commvault HyperScale X Storage Server Data layer Cluster – HyperScale X : ThinkSystem SR650 V3 – 3yr warranty		3
6.1	7D76CTO1WW	Data layer – HyperScale X : ThinkSystem SR650 V3 - 3yr warranty	1
6.2	BLKJ	ThinkSystem V3 2U 12x3.5" Chassis	1
6.3	BFYE	Operating mode selection for: "Efficiency - Favoring Performance Mode"	1
6.4	BVGL	Data Center Environment 30 Degree Celsius / 86 Degree Fahrenheit	1
6.5	BYVP	Intel Xeon Silver 4514Y 16C 150W 2.0GHz Processor	2

6.6	BWHS	ThinkSystem 64GB TruDDR5 5600MHz (2Rx4) RDIMM	8
6.7	5977	Select Storage devices - no configured RAID required	1
6.8	BM50	ThinkSystem 440-16i SAS/SATA PCIe Gen4 12Gb HBA	1
6.9	B7EZ	ThinkSystem 3.5" 16TB 7.2K SAS 12Gb Hot Swap 512e HDD	12
6.10	C2BW	ThinkSystem 2.5" U.3 7500 MAX 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	2
6.11	B8LT	ThinkSystem 2U 12x3.5" SAS/SATA Backplane	1
6.12	BSE3	ThinkSystem 4x2.5" AnyBay Gen5 Backplane	1
6.13	B8P9	ThinkSystem M.2 NVMe 2-Bay RAID Adapter	1
6.14	BTTY	M.2 NVMe	1
6.15	BKSR	ThinkSystem M.2 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	2
6.16	BN2T	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP Ethernet Adapter	1
6.17	BK1H	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter	1
6.18	BYPZ	ThinkSystem SR650 V3 x16/x16/E PCIe Gen5 Riser1 or 2 v2	1
6.19	BLKL	ThinkSystem V3 2U x16/x8/x8 PCIe Gen4 Riser1 or 2	1
6.20	BLKH	ThinkSystem 1100W 230V Titanium Hot-Swap Gen2 Power Supply	2
6.21	6400	2.8m, 13A/100-250V, C13 to C14 Jumper Cord	2
6.22	BLL6	ThinkSystem 2U V3 Performance Fan Module	6
6.23	B8LB	ThinkSystem Toolless Slide Rail Kit v2 Enhanced	1
6.24	BQQ2	ThinkSystem 2U V3 EIA Latch Standard	1
6.25	AV1X	Lenovo 3m Passive 25G SFP28 DAC Cable	4
6.26	BPKR	TPM 2.0	1
6.27	B7XZ	Disable IPMI-over-LAN	1
6.28	BRPJ	XCC Platinum	1
6.29	BLL0	ThinkSystem SR650 V3 MB	1
6.30	BVMC	Trigger MFG to scan the SN from the CPU Board via this MI	1
6.31	B8K9	ThinkSystem 2U MS 12x3.5" SATA/SAS HDD Type Label	1
6.32	AVEN	ThinkSystem 1x1 2.5" HDD Filler	2
6.33	BRLG	ThinkSystem 2U Rear 4x2.5 AnyBay HDD CAGE	1
6.34	BPF1	ThinkSystem SR650 V3 Agency Label	1
6.35	B4X9	UA Server Carton Label	1
6.36	B97B	XCC Label	1
6.37	B8MP	ThinkSystem 2U MS Air Duct Filler(For 2U Gap)	2
6.38	BQBP	ThinkSystem MCC CPU Clip	2
6.39	BP4Z	ThinkSystem SR650 V3 Performance Heatsink	2
6.40	BP46	ThinkSystem 2U Main Air Duct	1
6.41	AUTQ	ThinkSystem small Lenovo Label for 24x2.5"/12x3.5"/10x2.5"	1

6.42	BQPS	ThinkSystem logo Label	1
6.43	B986	ThinkSystem HV 2U WW General PKG BOM	1
6.44	BPFD	ThinkSystem 1100W Ti Power rating Label WW	1
6.45	BLLD	ThinkSystem 2U MS 3FH Riser 1&2 Cage w/ lbl2	1
6.46	BPKD	ThinkSystem 2U MS 3FH Riser 1&2 Cage w/Label1	1
6.47	BPF4	ThinkSystem SR650 V3 Service Label for WW	1
6.48	AWF9	ThinkSystem Response time Service Label LI	1
6.49	BPF3	ThinkSystem SR650 V3 model name Label	1
6.50	BYQL	ThinkSystem SR650 V3 Firmware and Root of Trust Security Module v2	1
6.51	ASFE	Notice for Advanced Format 512e Hard Disk Drives	1
6.52	BMP4	ThinkSystem 2U Power Cable from MB to Front 3.5" BP v2	2
6.53	BU73	ThinkSystem SR665/SR650 V2 SAS/SATA Y Cable from SFF (Gen4) to Front 3.5" BP SAS0/1,Riser2	1
6.54	BUJX	ThinkSystem SR665/SR650 V2 SAS/SATA Y Cable from SFF to Rear 3.5/2.5" BP to Riser 2 to "SAS2 FBP SAS Rear BP"	1
6.55	BPEU	ThinkSystem SR650 V3 MCIO8x Cable from PCIe 10/9 (MB) to MCIO 1/2 (Riser3), 250mm	2
6.56	BS6Y	ThinkSystem 2U V3 M.2 Signal & Power Cable, SLx4 with 2X10/1X6 Sideband, 330/267/267mm	1
6.57	BRL0	ThinkSystem SR650 V3 MB 7mm to Rear 4x2.5" SS BP Power Cable, 370mm	1
6.58	BPK3	ThinkSystem WW Lenovo LPK	1
6.59	BE0E	N+N Redundancy With Over-Subscription	1
6.60	BK15	High voltage (200V+)	1
6.61	BQ16	G5 x16/x16/E PCIe Riser BPQV for Riser 1 Placement	1
6.62	BQ18	G4 x16/x8/x8 PCIe Riser BLKL for Riser 2 Placement	1
6.63	A2HP	Configuration ID 01	1
6.64	5374CM1	Configuration Instruction	1
6.65	BM34	ThinkSystem 440-16i SAS/SATA PCIe Gen4 12Gb HBA Placement	1
6.66	A2JX	Controller 01	1
6.67	A2HP	Configuration ID 01	1
6.68	7S0XCTO5WW	XClarity Controller Platin-FOD	1
6.69	SBCV	Lenovo XClarity XCC2 Platinum Upgrade (FOD)	1
6.70	5641PX3	XClarity Pro, Per Endpoint w/3 Yr SW S&S	1
6.71	1340	Lenovo XClarity Pro, Per Managed Endpoint w/3 Yr SW S&S	1
6.72	3444	Registration only	1
6.73	7Q01CTS4WW	SERVER PREMIER 24X7 4HR RESP	1
6.74	QAA8	SR650 V3	1
6.75	QA18	Premier	1
6.76	QA0Y	Months	36

6.77	QA12	24x7 4hr Resp	1
6.78	7Q01CTSAWW	SERVER KEEP YOUR DRIVE ADD-ON	1
6.79	QAK6	KYD	1
6.80	QA0Y	Months	36
6.81	7Q01CTSBWW	SERVER COMMITTED SERVICE REPAIR ADD-ON	1
6.82	QAKC	6Hr CSR	1
6.83	QA0Y	Months	36
6.84	7Q13CTOSWW	SERVER INSTALLATION	1
6.85	QAA8	SR650 V3	1
6.86	QA1T	Hardware Installation (Business Hours)	1
7.	Server Index for Anti-Malware Scan Security layer : ThinkSystem SR630 V3 - 3yr Warranty		1
7.1	7D73CTO1WW	Security layer : ThinkSystem SR630 V3 - 3yr Warranty	1
7.2	BLK4	ThinkSystem V3 1U 10x2.5" Chassis	1
7.3	BFYE	Operating mode selection for: "Efficiency - Favoring Performance Mode"	1
7.4	BLOH	Data Center Environment 25 Degree Celsius / 77 Degree Fahrenheit	1
7.5	BYVS	Intel Xeon Silver 4510T 12C 115W 2.0GHz Processor	2
7.6	BNF6	ThinkSystem 32GB TruDDR5 4800MHz (1Rx4) 10x4 RDIMM	4
7.7	5977	Select Storage devices - no configured RAID required	1
7.8	BJHN	ThinkSystem RAID 9350-16i 4GB Flash PCIe 12Gb Adapter	1
7.9	BQ22	ThinkSystem 2.5" 5400 MAX 1.92TB Mixed Use SATA 6Gb HS SSD	4
7.10	BQ1Q	ThinkSystem 2.5" 5400 PRO 240GB Read Intensive SATA 6Gb HS SSD	2
7.11	B8N0	ThinkSystem 1U 8x2.5" SAS/SATA Backplane	1
7.12	BN2T	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP Ethernet Adapter	1
7.13	BLKF	ThinkSystem V3 1U x16/x16 BF PCIe Gen4 Riser1	1
7.14	BLK9	ThinkSystem V3 1U MS LP+LP BF Riser Cage	1
7.15	BLKH	ThinkSystem 1100W 230V Titanium Hot-Swap Gen2 Power Supply	2
7.16	6400	2.8m, 13A/100-250V, C13 to C14 Jumper Cord	2
7.17	BLKD	ThinkSystem 1U V3 10x2.5" Media Bay w/ Ext. Diagnostics Port	1
7.18	BH9M	ThinkSystem V3 1U Performance Fan Option Kit v2	8
7.19	B8LA	ThinkSystem Toolless Slide Rail Kit v2	1
7.20	AV1X	Lenovo 3m Passive 25G SFP28 DAC Cable	2
7.21	BPKR	TPM 2.0	1
7.22	B7XZ	Disable IPMI-over-LAN	1
7.23	BLK5	ThinkSystem SR630 V3 MB	1
7.24	BJKZ	MCHP SuperCap ASCM-35F with Filler	1

7.25	BVMC	Trigger MFG to scan the SN from the CPU Board via this MI	1
7.26	9205	Drop-in-the-Box Specify	1
7.27	9201	Windows Specify	1
7.28	9206	No Generic Preload Specify	1
7.29	BRPJ	XCC Platinum	1
7.30	BK15	High voltage (200V+)	1
7.31	B8KV	ThinkSystem 1U 8x2.5" SAS/SATA HDD Type Label	1
7.32	BPK3	ThinkSystem WW Lenovo LPK	1
7.33	B4X9	UA Server Carton Label	1
7.34	B97B	XCC Label	1
7.35	BPD5	ThinkSystem SR630 V3 Agency Label	1
7.36	BQPS	ThinkSystem logo Label	1
7.37	AUTQ	ThinkSystem small Lenovo Label for 24x2.5"/12x3.5"/10x2.5"	1
7.38	BPD7	ThinkSystem SR630 V3 Service Label for WW	1
7.39	BPD6	ThinkSystem SR630 V3 Model Name Label	1
7.40	AWF9	ThinkSystem Response time Service Label LI	1
7.41	BPDF	ThinkSystem 1100W Ti Power rating Label WW	1
7.42	BC4T	ThinkSystem 1U SFF Front 2.5" Backplane SAS/SATA Gen3 Cable	1
7.43	BJHR	680mm, SuperCap extend cable	1
7.44	BMJC	ThinkSystem 8x2.5" BP and 6+4 x2.5" BP Power Cable v2	1
7.45	BE0E	N+N Redundancy With Over-Subscription	1
7.46	BMAU	LP VENT W/STFNR 3LED	1
7.47	BK70	ThinkSystem V3 1U Supercap Holder Kit	1
7.48	BQBP	ThinkSystem MCC CPU Clip	2
7.49	BPFK	ThinkSystem SR850 V3/SR630 V3/SR630 V4 Standard Heatsink	2
7.50	B989	ThinkSystem V2 1U Package	1
7.51	B984	ThinkSystem 1U PLV Top Cover Sponge	1
7.52	BYQN	ThinkSystem SR630 V3 Firmware and Root of Trust Security Module v2	1
7.53	AVEN	ThinkSystem 1x1 2.5" HDD Filler	2
7.54	B8NM	ThinkSystem 1U MS Air Duct	1
7.55	B5X6	ThinkSystem 1U 2x2.5" Fixed Filler	1
7.56	B8NB	ThinkSystem 1U MS LP Riser Filler	1
7.57	AUWG	Lenovo ThinkSystem 1U VGA Filler	1
7.58	A2HP	Configuration ID 01	1
7.59	5374CM1	Configuration Instruction	1
7.60	BJHX	ThinkSystem RAID 9350-16i 4GB Flash PCIe 12Gb Adapter Placement	1
7.61	A2JX	Controller 01	1

7.62	A2HP	Configuration ID 01	1
7.63	7S05CTOBWW	Windows Server 2022	1
7.64	S62D	Windows Server 2022 Standard (16 core) - MultiLang (not preinstalled)	1
7.65	3523	Drop-in-the-Box	1
7.66	3444	Registration only	1
7.67	7S0XCTO5WW	XClarity Controller Platin-FOD	1
7.68	SBCV	Lenovo XClarity XCC2 Platinum Upgrade (FOD)	1
7.69	5641PX3	XClarity Pro, Per Endpoint w/3 Yr SW S&S	1
7.70	1340	Lenovo XClarity Pro, Per Managed Endpoint w/3 Yr SW S&S	1
7.71	3444	Registration only	1
7.72	7S05CTOEWW	Windows Server 2022 Addl Lic	1
7.73	S60T	Windows Server 2022 Standard Additional License (2 core) (No Media/Key) (POS Only)	4
7.74	5372SWX	xSeries HIPO	1
7.75	S616	Windows Server 2022 Standard Additional License (2 core) (No Media/Key) (POS Only)	4
7.76	5372SWX	xSeries HIPO	1
7.77	S63S	Windows Server 2022 Standard (16 core) - MultiLang (not preinstalled)	1
7.78	7Q01CTS4WW	SERVER PREMIER 24X7 4HR RESP	1
7.79	QAA5	SR630 V3	1
7.80	QA18	Premier	1
7.81	QA0Y	Months	36
7.82	QA12	24x7 4hr Resp	1
7.83	7Q13CTOSWW	SERVER INSTALLATION	1
7.84	QAA5	SR630 V3	1
7.85	QA1T	Hardware Installation (Business Hours)	1
7.86	7Q01CTSAWW	SERVER KEEP YOUR DRIVE ADD-ON	1
7.87	QAK6	KYD	1
7.88	QA0Y	Months	36
7.89	7Q01CTSBWW	SERVER COMMITTED SERVICE REPAIR ADD-ON	1
7.90	QAKC	6Hr CSR	1
7.91	QA0Y	Months	36
8.	FreeIPA_Server Authentication System Servers : ThinkSystem SR250 V3 - 3yr Warranty		2
8.1	7DCLCTO1WW	FreeIPA_Server : ThinkSystem SR250 V3 - 3yr Warranty	1
8.2	BWM1	SR250 V3 2.5" Chassis Base	1
8.3	BWVG	ThinkSystem SR250 V3 Motherboard	1
8.4	BFYE	Operating mode selection for: "Efficiency - Favoring Performance Mode"	1

8.5	BWME	Intel Xeon E-2478 8C 80W 2.8GHz Processor	1
8.6	BWLK	ThinkSystem 16GB TruDDR5 4800MHz (1Rx8) ECC UDIMM	2
8.7	5977	Select Storage devices - no configured RAID required	1
8.8	BJHP	ThinkSystem RAID 9350-16i 4GB Flash PCIe 12Gb Internal Adapter	1
8.9	BQ1Q	ThinkSystem 2.5" 5400 PRO 240GB Read Intensive SATA 6Gb HS SSD	2
8.10	BPRM	ThinkSystem SR250 Series 10x2.5" Hot Swap SAS/SATA Backplane Kit for X350/X40 RAID/HBA	1
8.11	BK1H	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter	1
8.12	5053	SFP+ SR Transceiver	2
8.13	BMWQ	ThinkSystem SR250 Series X8/X8 PCIe Gen4 Riser Card	1
8.14	BWM3	ThinkSystem 800W 230V/115V Titanium CRPS Hot-Swap Power Supply v1.4	2
8.15	6311	2.8m, 10A/100-250V, C13 to C14 Jumper Cord	2
8.16	BK7W	ThinkSystem Toolless Friction Rail v2	1
8.17	BPKR	TPM 2.0	1
8.18	B7XZ	Disable IPMI-over-LAN	1
8.19	BRPJ	XCC Platinum	1
8.20	BWMW	RoT SR250 V3, Absolut-RoW Host TPM	1
8.21	AVKJ	ThinkSystem 2x2 Quad Bay Gen4 2.5" HDD Filler	1
8.22	AVEN	ThinkSystem 1x1 2.5" HDD Filler	4
8.23	B40E	ThinkSystem SR250/SR150 VGA Filler	1
8.24	B4X9	UA Server Carton Label	1
8.25	BNR1	No CPU Label Selected	1
8.26	BWL7	System Label GBM for SR250 V3	1
8.27	BWLB	Lenovo Label and SR250 V3 model number Label - 2.5"	1
8.28	AUTA	XCC Network Access Label	1
8.29	BQPS	ThinkSystem logo Label	1
8.30	BWMQ	SR250 V3 Service Label LI	1
8.31	COMD	SR250 V3 CRPS 800W Power rating - AC	1
8.32	BA6Q	ThinkSystem ST650 V2 PCIe Slot 8 Enablement Kit	1
8.33	BWMH	CFF RAID x4 slimSAS to BP mini-SAS HD, 260mm	1
8.34	BWMT	MB-CFF Power, HSG 2X8-2X5	1
8.35	B40H	ThinkSystem 1P CPU Entry Heatsink	1
8.36	BJKZ	MCHP SuperCap ASCM-35F with Filler	1
8.37	BNFS	ThinkSystem ST250 Series 9350 SuperCap Extension Cable	1
8.38	BXBJ	SR250 V3 WW PKG BOM	1
8.39	B657	2U Bracket for ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter	1

8.40	BWMY	Power Interposer Board SR250 V3	1
8.41	BWL2	SR250 V3 RDN PSU Cage	1
8.42	BE0F	N+N Redundancy Without Over-Subscription	1
8.43	BK15	High voltage (200V+)	1
8.44	BWLF	ThinkSystem WW Lenovo LPK	1
8.45	A2HP	Configuration ID 01	1
8.46	5374CM1	Configuration Instruction	1
8.47	BJHY	ThinkSystem RAID 9350-16i 4GB Flash PCIe 12Gb Internal Adapter Placement	1
8.48	A2JX	Controller 01	1
8.49	A2HP	Configuration ID 01	1
8.50	7S0XCTO5WW	XClarity Controller Platin-FOD	1
8.51	SBCV	Lenovo XClarity XCC2 Platinum Upgrade (FOD)	1
8.52	5641PX3	XClarity Pro, Per Endpoint w/3 Yr SW S&S	1
8.53	1340	Lenovo XClarity Pro, Per Managed Endpoint w/3 Yr SW S&S	1
8.54	3444	Registration only	1
8.55	7Q13CTOSWW	SERVER INSTALLATION	1
8.56	QAEF	ThinkSystem SR250 V3	1
8.57	QA1T	Hardware Installation (Business Hours)	1
8.58	7Q01CTSAWW	SERVER KEEP YOUR DRIVE ADD-ON	1
8.59	QAK6	KYD	1
8.60	QA0Y	Months	36
8.61	7Q01CTS4WW	SERVER PREMIER 24X7 4HR RESP	1
8.62	QAEF	ThinkSystem SR250 V3	1
8.63	QA18	Premier	1
8.64	QA0Y	Months	36
8.65	QA12	24x7 4hr Resp	1
8.66	7Q01CTSBWW	SERVER COMMITTED SERVICE REPAIR ADD-ON	1
8.67	QAKC	6Hr CSR	1
8.68	QA0Y	Months	36
9.	4XB7A93897	Additional drives to existing servers ThinkSystem 2.5" U.2 Multi Vendor 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	16
10.	YubiKey 5Ci	Yubico Yubikey 5Ci	10
11.	RHEL3Y	Red Hat Enterprise Linux Server Software, Standard 3Y	2
12.	CV-DPP-FT	Commvault Cloud Cyber Resilience Software, Per Front-End Terabyte, Perpetual with Standard Maintenance Support 3Y	5
13.	CV-DPP-VM10	Commvault Cloud Cyber Resilience Software for Virtual Machines, Per VM (10-Pack), Perpetual with Standard Maintenance Support 3Y	10

14.	CV-HSRA-12-1N	Software Commvault Cloud Hyperscale X Reference Architecture 12-Drive Node, Per Node, Perpetual with Standard Maintenance Support 3Y	3
15.	-	Phase 1 Implementation Services	1

STAGE 2

List of Hardware / Software / Services			Quantity
1.	FG-600F-EU	Firewall FortiGate-600F 4x 25G SFP28 slots, 4 x 10GE SFP+ slots, 18 x GE RJ45 ports (including 1 x MGMT port, 1 X HA port, 16 x switch ports), 8 x GE SFP slots, SPU NP7 and CP9 hardware accelerated, dual AC power supplies	2
2.	FC-10-0600F-247-02-36	FortiGate-600F 3 Year FortiCare Premium Support Service Package	2
3.	FS-2048F-EU	FortiSwitch-2048F Layer 2/3 network switch FortiGate switch controller compatible switch with 48x25G(SFP28) +8x100G (QSFP28)+2x10G(SFP+). Dual AC power supplies	2
4.	FC-10-S2F48-247-02-36	FortiSwitch-2048F 3 Year FortiCare Premium Support Service Package	2
5.	SRC Management Layer Management Server : ThinkSystem SR630 V3 - 3yr Warranty		1
5.1	7D73CTO1WW	Management layer : ThinkSystem SR630 V3 - 3yr Warranty	1
5.2	BLK4	ThinkSystem V3 1U 10x2.5" Chassis	1
5.3	BFYE	Operating mode selection for: "Efficiency - Favoring Performance Mode"	1
5.4	BL0H	Data Center Environment 25 Degree Celsius / 77 Degree Fahrenheit	1
5.5	BYVS	Intel Xeon Silver 4510T 12C 115W 2.0GHz Processor	1
5.6	BNF6	ThinkSystem 32GB TruDDR5 4800MHz (1Rx4) 10x4 RDIMM	4
5.7	5977	Select Storage devices - no configured RAID required	1
5.8	BJHN	ThinkSystem RAID 9350-16i 4GB Flash PCIe 12Gb Adapter	1
5.9	BQ22	ThinkSystem 2.5" 5400 MAX 1.92TB Mixed Use SATA 6Gb HS SSD	2
5.10	BQ1Q	ThinkSystem 2.5" 5400 PRO 240GB Read Intensive SATA 6Gb HS SSD	2
5.11	B8N0	ThinkSystem 1U 8x2.5" SAS/SATA Backplane	1
5.12	BN2T	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP Ethernet Adapter	1
5.13	BLKF	ThinkSystem V3 1U x16/x16 BF PCIe Gen4 Riser1	1
5.14	BLK9	ThinkSystem V3 1U MS LP+LP BF Riser Cage	1
5.15	BLKH	ThinkSystem 1100W 230V Titanium Hot-Swap Gen2 Power Supply	2

5.16	6400	2.8m, 13A/100-250V, C13 to C14 Jumper Cord	2
5.17	BLKD	ThinkSystem 1U V3 10x2.5" Media Bay w/ Ext. Diagnostics Port	1
5.18	BH9M	ThinkSystem V3 1U Performance Fan Option Kit v2	6
5.19	B8LA	ThinkSystem Toolless Slide Rail Kit v2	1
5.20	AV1X	Lenovo 3m Passive 25G SFP28 DAC Cable	2
5.21	BPKR	TPM 2.0	1
5.22	B7XZ	Disable IPMI-over-LAN	1
5.23	BLK5	ThinkSystem SR630 V3 MB	1
5.24	BJKZ	MCHP SuperCap ASCM-35F with Filler	1
5.25	BVMC	Trigger MFG to scan the SN from the CPU Board via this MI	1
5.26	9205	Drop-in-the-Box Specify	1
5.27	9201	Windows Specify	1
5.28	9206	No Generic Preload Specify	1
5.29	BRPJ	XCC Platinum	1
5.30	BK15	High voltage (200V+)	1
5.31	B8KV	ThinkSystem 1U 8x2.5" SAS/SATA HDD Type Label	1
5.32	BPK3	ThinkSystem WW Lenovo LPK	1
5.33	B4X9	UA Server Carton Label	1
5.34	B97B	XCC Label	1
5.35	BPD5	ThinkSystem SR630 V3 Agency Label	1
5.36	BQPS	ThinkSystem logo Label	1
5.37	AUTQ	ThinkSystem small Lenovo Label for 24x2.5"/12x3.5"/10x2.5"	1
5.38	BPD7	ThinkSystem SR630 V3 Service Label for WW	1
5.39	BPD6	ThinkSystem SR630 V3 Model Name Label	1
5.40	AWF9	ThinkSystem Response time Service Label LI	1
5.41	BPDF	ThinkSystem 1100W Ti Power rating Label WW	1
5.42	BC4T	ThinkSystem 1U SFF Front 2.5" Backplane SAS/SATA Gen3 Cable	1
5.43	BJHR	680mm, SuperCap extend cable	1
5.44	BMJC	ThinkSystem 8x2.5" BP and 6+4 x2.5" BP Power Cable v2	1
5.45	BE0E	N+N Redundancy With Over-Subscription	1
5.46	BMAU	LP VENT W/STFNR 3LED	1
5.47	BK70	ThinkSystem V3 1U Supercap Holder Kit	1
5.48	BQBP	ThinkSystem MCC CPU Clip	1
5.49	BPFK	ThinkSystem SR850 V3/SR630 V3/SR630 V4 Standard Heatsink	1
5.50	B989	ThinkSystem V2 1U Package	1
5.51	B984	ThinkSystem 1U PLV Top Cover Sponge	1

5.52	BYQN	ThinkSystem SR630 V3 Firmware and Root of Trust Security Module v2	1
5.53	AVEN	ThinkSystem 1x1 2.5" HDD Filler	4
5.54	B8NM	ThinkSystem 1U MS Air Duct	1
5.55	B8NJ	ThinkSystem 1U MS Fan Dummy	2
5.56	BEYJ	ThinkSystem MS Height CPU Dummy	1
5.57	B5X6	ThinkSystem 1U 2x2.5" Fixed Filler	1
5.58	B8NB	ThinkSystem 1U MS LP Riser Filler	1
5.59	AUWG	Lenovo ThinkSystem 1U VGA Filler	1
5.60	A2HP	Configuration ID 01	1
5.61	5374CM1	Configuration Instruction	1
5.62	BJHX	ThinkSystem RAID 9350-16i 4GB Flash PCIe 12Gb Adapter Placement	1
5.63	A2JX	Controller 01	1
5.64	A2HP	Configuration ID 01	1
5.65	7S05CTOBWW	Windows Server 2022	1
5.66	S62D	Windows Server 2022 Standard (16 core) - MultiLang (not preinstalled)	1
5.67	3523	Drop-in-the-Box	1
5.68	3444	Registration only	1
5.69	7S0XCTO5WW	XClarity Controller Platin-FOD	1
5.70	SBCV	Lenovo XClarity XCC2 Platinum Upgrade (FOD)	1
5.71	5641PX3	XClarity Pro, Per Endpoint w/3 Yr SW S&S	1
5.72	1340	Lenovo XClarity Pro, Per Managed Endpoint w/3 Yr SW S&S	1
5.73	3444	Registration only	1
5.74	5372SWX	xSeries HIPO	1
5.75	S63S	Windows Server 2022 Standard (16 core) - MultiLang (not preinstalled)	1
5.76	7Q01CTS4WW	SERVER PREMIER 24X7 4HR RESP	1
5.77	QAA5	SR630 V3	1
5.78	QA18	Premier	1
5.79	QA0Y	Months	36
5.80	QA12	24x7 4hr Resp	1
5.81	7Q13CTOSWW	SERVER INSTALLATION	1
5.82	QAA5	SR630 V3	1
5.83	QA1T	Hardware Installation (Business Hours)	1
5.84	7Q01CTSAWW	SERVER KEEP YOUR DRIVE ADD-ON	1
5.85	QAK6	KYD	1
5.86	QA0Y	Months	36
5.87	7Q01CTSBWW	SERVER COMMITTED SERVICE REPAIR ADD-ON	1

5.88	QAKC	6Hr CSR	1
5.89	QA0Y	Months	36
6.	Commvault HyperScale X Storage Server Data layer Cluster – HyperScale X : ThinkSystem SR650 V3 – 3yr warranty		3
6.1	7D76CTO1WW	Data layer – HyperScale X : ThinkSystem SR650 V3 - 3yr warranty	1
6.2	BLKJ	ThinkSystem V3 2U 12x3.5" Chassis	1
6.3	BFYE	Operating mode selection for: "Efficiency - Favoring Performance Mode"	1
6.4	BVGL	Data Center Environment 30 Degree Celsius / 86 Degree Fahrenheit	1
6.5	BYVP	Intel Xeon Silver 4514Y 16C 150W 2.0GHz Processor	2
6.6	BWHS	ThinkSystem 64GB TruDDR5 5600MHz (2Rx4) RDIMM	8
6.7	5977	Select Storage devices - no configured RAID required	1
6.8	BM50	ThinkSystem 440-16i SAS/SATA PCIe Gen4 12Gb HBA	1
6.9	B7EZ	ThinkSystem 3.5" 16TB 7.2K SAS 12Gb Hot Swap 512e HDD	12
6.10	C2BW	ThinkSystem 2.5" U.3 7500 MAX 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	2
6.11	B8LT	ThinkSystem 2U 12x3.5" SAS/SATA Backplane	1
6.12	BSE3	ThinkSystem 4x2.5" AnyBay Gen5 Backplane	1
6.13	B8P9	ThinkSystem M.2 NVMe 2-Bay RAID Adapter	1
6.14	BTTY	M.2 NVMe	1
6.15	BKSR	ThinkSystem M.2 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	2
6.16	BN2T	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP Ethernet Adapter	1
6.17	BK1H	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter	1
6.18	BYPZ	ThinkSystem SR650 V3 x16/x16/E PCIe Gen5 Riser1 or 2 v2	1
6.19	BLKL	ThinkSystem V3 2U x16/x8/x8 PCIe Gen4 Riser1 or 2	1
6.20	BLKH	ThinkSystem 1100W 230V Titanium Hot-Swap Gen2 Power Supply	2
6.21	6400	2.8m, 13A/100-250V, C13 to C14 Jumper Cord	2
6.22	BLL6	ThinkSystem 2U V3 Performance Fan Module	6
6.23	B8LB	ThinkSystem Toolless Slide Rail Kit v2 Enhanced	1
6.24	BQQ2	ThinkSystem 2U V3 EIA Latch Standard	1
6.25	AV1X	Lenovo 3m Passive 25G SFP28 DAC Cable	4
6.26	BPKR	TPM 2.0	1
6.27	B7XZ	Disable IPMI-over-LAN	1
6.28	BRPJ	XCC Platinum	1
6.29	BLLO	ThinkSystem SR650 V3 MB	1

6.30	BVMC	Trigger MFG to scan the SN from the CPU Board via this MI	1
6.31	B8K9	ThinkSystem 2U MS 12x3.5" SATA/SAS HDD Type Label	1
6.32	AVEN	ThinkSystem 1x1 2.5" HDD Filler	2
6.33	BRLG	ThinkSystem 2U Rear 4x2.5 AnyBay HDD CAGE	1
6.34	BPF1	ThinkSystem SR650 V3 Agency Label	1
6.35	B4X9	UA Server Carton Label	1
6.36	B97B	XCC Label	1
6.37	B8MP	ThinkSystem 2U MS Air Duct Filler(For 2U Gap)	2
6.38	BQBP	ThinkSystem MCC CPU Clip	2
6.39	BP4Z	ThinkSystem SR650 V3 Performance Heatsink	2
6.40	BP46	ThinkSystem 2U Main Air Duct	1
6.41	AUTQ	ThinkSystem small Lenovo Label for 24x2.5"/12x3.5"/10x2.5"	1
6.42	BQPS	ThinkSystem logo Label	1
6.43	B986	ThinkSystem HV 2U WW General PKG BOM	1
6.44	BPDF	ThinkSystem 1100W Ti Power rating Label WW	1
6.45	BLLD	ThinkSystem 2U MS 3FH Riser 1&2 Cage w/ lbl2	1
6.46	BPKD	ThinkSystem 2U MS 3FH Riser 1&2 Cage w/Label1	1
6.47	BPF4	ThinkSystem SR650 V3 Service Label for WW	1
6.48	AWF9	ThinkSystem Response time Service Label LI	1
6.49	BPF3	ThinkSystem SR650 V3 model name Label	1
6.50	BYQL	ThinkSystem SR650 V3 Firmware and Root of Trust Security Module v2	1
6.51	ASFE	Notice for Advanced Format 512e Hard Disk Drives	1
6.52	BMP4	ThinkSystem 2U Power Cable from MB to Front 3.5" BP v2	2
6.53	BU73	ThinkSystem SR665/SR650 V2 SAS/SATA Y Cable from SFF (Gen4) to Front 3.5" BP SAS0/1,Riser2	1
6.54	BUJX	ThinkSystem SR665/SR650 V2 SAS/SATA Y Cable from SFF to Rear 3.5/2.5" BP to Riser 2 to "SAS2 FBP SAS Rear BP"	1
6.55	BPEU	ThinkSystem SR650 V3 MCIO8x Cable from PCIe 10/9 (MB) to MCIO 1/2 (Riser3), 250mm	2
6.56	BS6Y	ThinkSystem 2U V3 M.2 Signal & Power Cable, SLx4 with 2X10/1X6 Sideband, 330/267/267mm	1
6.57	BRL0	ThinkSystem SR650 V3 MB 7mm to Rear 4x2.5" SS BP Power Cable, 370mm	1
6.58	BPK3	ThinkSystem WW Lenovo LPK	1
6.59	BE0E	N+N Redundancy With Over-Subscription	1
6.60	BK15	High voltage (200V+)	1
6.61	BQ16	G5 x16/x16/E PCIe Riser BPQV for Riser 1 Placement	1
6.62	BQ18	G4 x16/x8/x8 PCIe Riser BLKL for Riser 2 Placement	1
6.63	A2HP	Configuration ID 01	1

6.64	5374CM1	Configuration Instruction	1
6.65	BM34	ThinkSystem 440-16i SAS/SATA PCIe Gen4 12Gb HBA Placement	1
6.66	A2JX	Controller 01	1
6.67	A2HP	Configuration ID 01	1
6.68	7S0XCTO5WW	XClarity Controller Platin-FOD	1
6.69	SBCV	Lenovo XClarity XCC2 Platinum Upgrade (FOD)	1
6.70	5641PX3	XClarity Pro, Per Endpoint w/3 Yr SW S&S	1
6.71	1340	Lenovo XClarity Pro, Per Managed Endpoint w/3 Yr SW S&S	1
6.72	3444	Registration only	1
6.73	7Q01CTS4WW	SERVER PREMIER 24X7 4HR RESP	1
6.74	QAA8	SR650 V3	1
6.75	QA18	Premier	1
6.76	QA0Y	Months	36
6.77	QA12	24x7 4hr Resp	1
6.78	7Q01CTSAWW	SERVER KEEP YOUR DRIVE ADD-ON	1
6.79	QAK6	KYD	1
6.80	QA0Y	Months	36
6.81	7Q01CTSBWW	SERVER COMMITTED SERVICE REPAIR ADD-ON	1
6.82	QAKC	6Hr CSR	1
6.83	QA0Y	Months	36
6.84	7Q13CTOSWW	SERVER INSTALLATION	1
6.85	QAA8	SR650 V3	1
6.86	QA1T	Hardware Installation (Business Hours)	1
7.	Server Index for Anti-Malware Scan Security layer : ThinkSystem SR630 V3 - 3yr Warranty		1
7.1	7D73CTO1WW	Security layer : ThinkSystem SR630 V3 - 3yr Warranty	1
7.2	BLK4	ThinkSystem V3 1U 10x2.5" Chassis	1
7.3	BFYE	Operating mode selection for: "Efficiency - Favoring Performance Mode"	1
7.4	BL0H	Data Center Environment 25 Degree Celsius / 77 Degree Fahrenheit	1
7.5	BYVS	Intel Xeon Silver 4510T 12C 115W 2.0GHz Processor	2
7.6	BNF6	ThinkSystem 32GB TruDDR5 4800MHz (1Rx4) 10x4 RDIMM	4
7.7	5977	Select Storage devices - no configured RAID required	1
7.8	BJHN	ThinkSystem RAID 9350-16i 4GB Flash PCIe 12Gb Adapter	1
7.9	BQ22	ThinkSystem 2.5" 5400 MAX 1.92TB Mixed Use SATA 6Gb HS SSD	4
7.10	BQ1Q	ThinkSystem 2.5" 5400 PRO 240GB Read Intensive SATA 6Gb HS SSD	2

7.11	B8N0	ThinkSystem 1U 8x2.5" SAS/SATA Backplane	1
7.12	BN2T	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP Ethernet Adapter	1
7.13	BLKF	ThinkSystem V3 1U x16/x16 BF PCIe Gen4 Riser1	1
7.14	BLK9	ThinkSystem V3 1U MS LP+LP BF Riser Cage	1
7.15	BLKH	ThinkSystem 1100W 230V Titanium Hot-Swap Gen2 Power Supply	2
7.16	6400	2.8m, 13A/100-250V, C13 to C14 Jumper Cord	2
7.17	BLKD	ThinkSystem 1U V3 10x2.5" Media Bay w/ Ext. Diagnostics Port	1
7.18	BH9M	ThinkSystem V3 1U Performance Fan Option Kit v2	8
7.19	B8LA	ThinkSystem Toolless Slide Rail Kit v2	1
7.20	AV1X	Lenovo 3m Passive 25G SFP28 DAC Cable	2
7.21	BPKR	TPM 2.0	1
7.22	B7XZ	Disable IPMI-over-LAN	1
7.23	BLK5	ThinkSystem SR630 V3 MB	1
7.24	BJKZ	MCHP SuperCap ASCM-35F with Filler	1
7.25	BVMC	Trigger MFG to scan the SN from the CPU Board via this MI	1
7.26	9205	Drop-in-the-Box Specify	1
7.27	9201	Windows Specify	1
7.28	9206	No Generic Preload Specify	1
7.29	BRPJ	XCC Platinum	1
7.30	BK15	High voltage (200V+)	1
7.31	B8KV	ThinkSystem 1U 8x2.5" SAS/SATA HDD Type Label	1
7.32	BPK3	ThinkSystem WW Lenovo LPK	1
7.33	B4X9	UA Server Carton Label	1
7.34	B97B	XCC Label	1
7.35	BPD5	ThinkSystem SR630 V3 Agency Label	1
7.36	BQPS	ThinkSystem logo Label	1
7.37	AUTQ	ThinkSystem small Lenovo Label for 24x2.5"/12x3.5"/10x2.5"	1
7.38	BPD7	ThinkSystem SR630 V3 Service Label for WW	1
7.39	BPD6	ThinkSystem SR630 V3 Model Name Label	1
7.40	AWF9	ThinkSystem Response time Service Label LI	1
7.41	BPFD	ThinkSystem 1100W Ti Power rating Label WW	1
7.42	BC4T	ThinkSystem 1U SFF Front 2.5" Backplane SAS/SATA Gen3 Cable	1
7.43	BJHR	680mm, SuperCap extend cable	1
7.44	BMJC	ThinkSystem 8x2.5" BP and 6+4 x2.5" BP Power Cable v2	1
7.45	BE0E	N+N Redundancy With Over-Subscription	1

7.46	BMAU	LP VENT W/STFNR 3LED	1
7.47	BK70	ThinkSystem V3 1U Supercap Holder Kit	1
7.48	BQBP	ThinkSystem MCC CPU Clip	2
7.49	BPFK	ThinkSystem SR850 V3/SR630 V3/SR630 V4 Standard Heatsink	2
7.50	B989	ThinkSystem V2 1U Package	1
7.51	B984	ThinkSystem 1U PLV Top Cover Sponge	1
7.52	BYQN	ThinkSystem SR630 V3 Firmware and Root of Trust Security Module v2	1
7.53	AVEN	ThinkSystem 1x1 2.5" HDD Filler	2
7.54	B8NM	ThinkSystem 1U MS Air Duct	1
7.55	B5X6	ThinkSystem 1U 2x2.5" Fixed Filler	1
7.56	B8NB	ThinkSystem 1U MS LP Riser Filler	1
7.57	AUWG	Lenovo ThinkSystem 1U VGA Filler	1
7.58	A2HP	Configuration ID 01	1
7.59	5374CM1	Configuration Instruction	1
7.60	BJHX	ThinkSystem RAID 9350-16i 4GB Flash PCIe 12Gb Adapter Placement	1
7.61	A2JX	Controller 01	1
7.62	A2HP	Configuration ID 01	1
7.63	7S05CTOBWW	Windows Server 2022	1
7.64	S62D	Windows Server 2022 Standard (16 core) - MultiLang (not preinstalled)	1
7.65	3523	Drop-in-the-Box	1
7.66	3444	Registration only	1
7.67	7S0XCTO5WW	XClarity Controller Platin-FOD	1
7.68	SBCV	Lenovo XClarity XCC2 Platinum Upgrade (FOD)	1
7.69	5641PX3	XClarity Pro, Per Endpoint w/3 Yr SW S&S	1
7.70	1340	Lenovo XClarity Pro, Per Managed Endpoint w/3 Yr SW S&S	1
7.71	3444	Registration only	1
7.72	7S05CTOEWW	Windows Server 2022 Addl Lic	1
7.73	S60T	Windows Server 2022 Standard Additional License (2 core) (No Media/Key) (POS Only)	4
7.74	5372SWX	xSeries HIPO	1
7.75	S616	Windows Server 2022 Standard Additional License (2 core) (No Media/Key) (POS Only)	4
7.76	5372SWX	xSeries HIPO	1
7.77	S63S	Windows Server 2022 Standard (16 core) - MultiLang (not preinstalled)	1
7.78	7Q01CTS4WW	SERVER PREMIER 24X7 4HR RESP	1
7.79	QAA5	SR630 V3	1

7.80	QA18	Premier	1
7.81	QA0Y	Months	36
7.82	QA12	24x7 4hr Resp	1
7.83	7Q13CTOSWW	SERVER INSTALLATION	1
7.84	QAA5	SR630 V3	1
7.85	QA1T	Hardware Installation (Business Hours)	1
7.86	7Q01CTSAWW	SERVER KEEP YOUR DRIVE ADD-ON	1
7.87	QAK6	KYD	1
7.88	QA0Y	Months	36
7.89	7Q01CTSBWW	SERVER COMMITTED SERVICE REPAIR ADD-ON	1
7.90	QAKC	6Hr CSR	1
7.91	QA0Y	Months	36
8.	CV-HSRA-12-1N	Software Commvault Cloud Hyperscale X Reference Architecture 12-Drive Node, Per Node, Perpetual with Standard Maintenance Support 3Y	3
9.	-	Phase 2 Implementation Services	1