

THE FUTURE PROOF *DECOMMISSION*



Introduction

The need to shut down data centers can arise from various factors like technological advancements, business restructuring, or shifting to cloud services. These shutdowns, if not managed properly, can lead to significant data breaches, financial losses, and environmental harm. OceanTech's future-proof strategies for data center decommissioning are designed to address these challenges with a proactive and systematic process that ensures the secure, compliant, and environmentally sound dismantling of IT infrastructure.

The purpose of this guide is to provide a comprehensive framework for both experienced and inexperienced data center managers to successfully decommission a data center. Proper decommissioning ensures the secure and environmentally responsible disposal of IT assets, compliance with legal requirements, and effective project management. This guide covers the entire decommissioning process from planning and preparation to post-decommissioning activities.

Redundancy and Migration

Before decommissioning, it is crucial to establish systems that will take over the functions of the outgoing data center. This may involve setting up redundancies or migrating data and services to other locations or the cloud. A seamless transition is vital to maintain business continuity and minimize downtime. OceanTech provides guidance in developing a migration strategy that aligns with the client's operational objectives and technical capabilities.

Cross-Functional Collaboration

A holistic approach to data center decommissioning necessitates the involvement of cross-functional teams. This collaborative effort between IT, facilities management, finance, and legal departments ensures that all perspectives are considered, and that the shutdown process aligns with broader organizational goals. OceanTech facilitates these collaborations to streamline decision-making and execution.

The Decommissioning Process



Planning and Preparation

Effective decommissioning starts with a detailed plan that encompasses all aspects of the shutdown. This plan should outline the scope of work, identify all assets and dependencies, and create a timeline for each stage of the process. It is crucial to conduct an audit of the physical and logical assets to understand the configuration and interdependencies of systems that will be affected. The audit will also reveal opportunities for asset recovery, be it through resale or recycling, thereby providing potential financial return and minimizing environmental impact.

01

Assessing the Need for Decommissioning

- **Reasons for Decommissioning:** Driven by tech upgrades, consolidation, relocation, cost reduction, or regulatory compliance. Identifying reasons aids planning and justification.
- **Cost-Benefit Analysis:** Weigh maintenance costs against decommissioning expenses, energy savings, and asset recovery value.

02

Project Management for Stakeholders

- **Decommissioning Team:** Assemble IT staff, facility managers, security, and vendors. A project manager ensures coordination.
- **Roles and Responsibilities:** Clearly define tasks to improve accountability and efficiency.
- **Stakeholders & Communication:** Identify all affected parties and maintain transparency with a communication plan.

03

Compliance Considerations

- **Legal & Environmental Compliance:** Adhere to laws on environmental impact, data privacy, and safety to avoid penalties.
- **Data Privacy & Security:** Ensure compliance with GDPR, HIPAA, and other regulations. Secure data handling prevents breaches.

04

Inventory Documentation

- **Asset Cataloging:** Maintain a detailed list of hardware, software, and licenses using asset management tools.
- **Critical Data & Systems:** Identify and secure sensitive data before migration or destruction. Map dependencies to assess impact.

05

Assessing Asset Condition

- **Equipment Evaluation:** Inspect assets to determine reuse, resale, or recycling potential.
- **Reuse, Resale, or Recycling:** Sell functional assets, responsibly recycle obsolete ones through certified partners.

06

Risk Assessment

- **Risk Identification:** Anticipate security breaches, data loss, and operational disruptions.
- **Mitigation Strategies:** Implement redundancy and contingency plans to minimize impact.

Data Security and Compliance



Data centers house sensitive information that must be handled with the utmost care. It is imperative to follow strict data sanitization protocols to ensure all data is irrecoverably destroyed and to maintain compliance with industry and legal standards. This involves using certified data destruction methods and providing documentation that verifies the integrity of the sanitization process. OceanTech emphasizes a security-first approach, ensuring that data breaches are prevented during the decommissioning process.

Data Backup and Migration

Before shutting down any systems, verifying the completeness and integrity of backups is critical. Securely backing up and migrating data to new systems or locations prevents loss and ensures business continuity. Selecting reliable backup and migration tools is equally important, as rigorous testing helps identify potential issues before execution.

Data Destruction

Secure data destruction involves using software-based erasure tools to overwrite data multiple times or employing physical destruction methods like degaussing or shredding. These techniques ensure data cannot be recovered from decommissioned equipment. Obtaining certificates of data destruction from vendors provides documented proof of compliance, which is essential for audits and regulatory adherence.

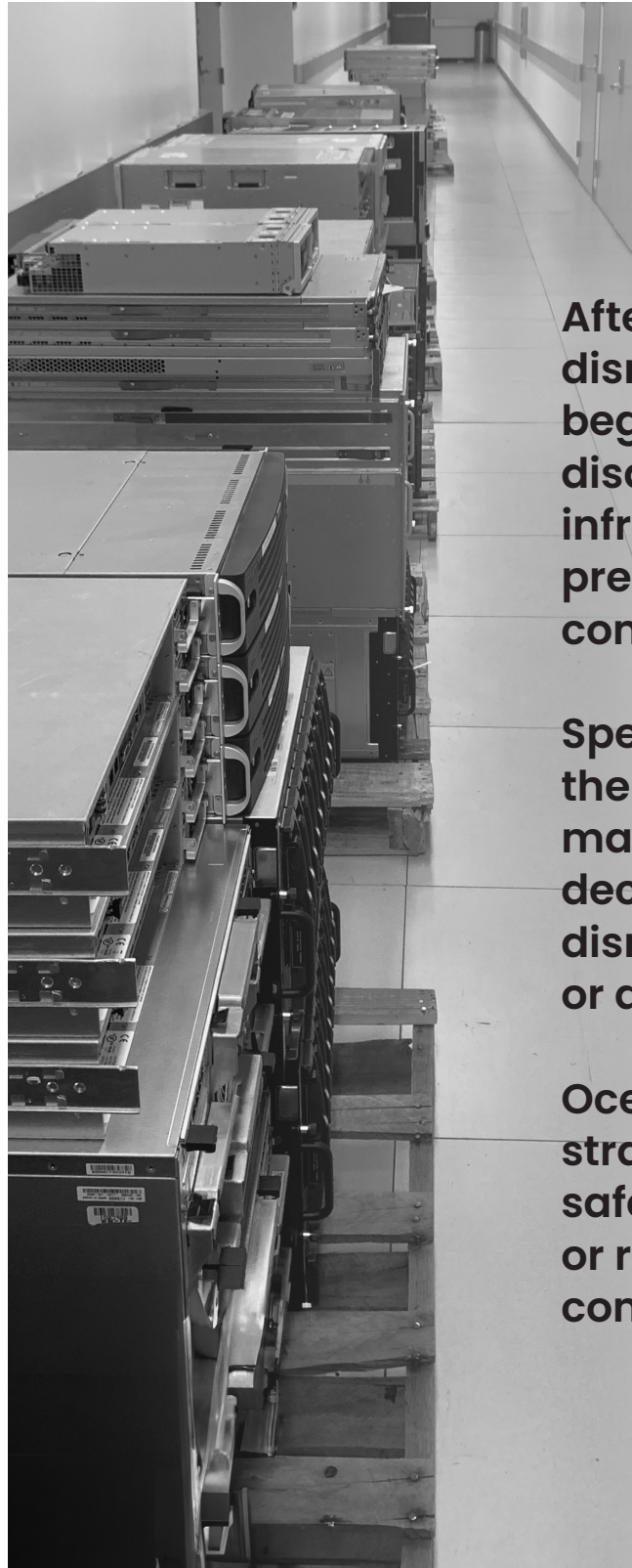
Compliance with Data Regulations

Compliance with data protection laws such as GDPR and HIPAA is a fundamental requirement during decommissioning. Securely handling, erasing, or migrating data while maintaining detailed compliance records ensures adherence to legal standards and protects against regulatory violations.

data sanitization standards

NIST 800-88r1 Purge or Clear	1- Pass
Secure Erase	1-Pass
U.S. Air Force System Security Instruction 5020	3-Pass
Gutmann All	35-Pass
Russian GOST-R 50739-95	2-Pass
Pfitzner Algorithm	33-Pass
AR 380-19	3-Pass
Gutmann MFM	18-Pass
British HMG Infosec Standard 5	3-Pass
Canada RCMP TSSIT OPS-II	7-Pass
U.S. Department of Defense 5220.22-M	3-Pass
Gutmann RLL 1.7	26-Pass
Schneier's Algorithm	7-Pass
U.S. Department of Defense 5220.28-STD	7-Pass
Gutmann RLL 2.7	23-Pass
Pfitzner Algorithm	7-Pass
Germany VSITR	7-Pass

Physical Decommissioning



After data sanitization, the physical dismantling of the data center begins. This involves the careful disassembly of hardware and infrastructure in a manner that prevents damage to reusable components.

Special attention must be paid to the safe handling of hazardous materials and to ensuring that decommissioning activities do not disrupt ongoing operations within or adjacent to the data center.

OceanTech advocates for strategies that prioritize worker safety and maximize the resale or recycling value of hardware components.

1

Disconnecting and Removing Equipment

- **Safe Shutdown Procedures:** Following manufacturer guidelines ensures a safe shutdown without data loss or damage. Properly closing applications, disconnecting power sources, and verifying backups are essential steps.
- **Disconnecting Power and Network Connections:** Safely disconnecting power and network cables prevents electrical hazards and network issues. Labeling cables and connections ensures proper disassembly and reinstallation.

2

Physical Security Measures

- **Ensuring Secure Access During Decommissioning:** Restricting site access prevents unauthorized interference. Security measures like access control, surveillance cameras, and on-site personnel help maintain a secure environment.
- **Preventing Unauthorized Access:** Physical barriers, locks, and monitoring systems safeguard sensitive areas and equipment. Regular security checks and surveillance help detect and prevent potential breaches.


3

Transportation and Logistics

- **Coordinating the Removal of Equipment:** Partnering with trusted logistics providers ensures safe handling and timely transportation of decommissioned assets. Proper coordination helps manage schedules and minimize delays.
- **Selecting Transportation Partners:** Vetting vendors for reliability and compliance ensures best practices in IT asset transportation. Verifying insurance coverage protects against potential losses or damages in transit.

Asset Disposition and Recovery

Decommissioning provides an opportunity to recoup investments through the sale, recycling, or re-purposing of hardware assets. Developing a hierarchy of disposition avenues—resale, donation, recycling—can help maximize returns and support corporate social responsibility efforts.



The R2v3 standard is essential for responsible electronics recycling and IT asset disposition, setting the best practices in environmental and data security. It emphasizes sustainable recycling methods to minimize environmental impact and requires certified vendors to implement robust data destruction techniques to protect sensitive information.

By following the R2v3 standard, organizations show their commitment to ethical management of electronic assets, regulatory compliance, and corporate social responsibility, making it a crucial certification for any ITAD vendor.

Partnering with Certified Vendors

Choosing ITAD vendors with proper certifications, such as R2v3, ensures that assets are disposed of responsibly and in compliance with environmental and data security regulations. Reviewing vendor policies and procedures helps in selecting the right partner.

Tracking and Documenting The Disposal Process

Maintaining detailed records of all disposed assets, including their condition and disposal method, ensures transparency and accountability. Using asset tracking software helps in managing this documentation and providing audit trails.



By partnering with specialized vendors or leveraging industry marketplaces, **OceanTech** assists clients in achieving the best possible outcomes for their decommissioned assets.



Environmental Responsibility

Responsible e-waste management is a cornerstone of OceanTech's decommissioning process. By adhering to best practices for recycling and waste management, we ensure minimal environmental impact. This involves working with certified recyclers and waste management providers to dispose of non-recoverable assets in a manner that complies with all environmental regulations and ethical standards.



E-Waste Recycling Best Practices

Following environmentally responsible recycling practices involves ensuring that all electronic waste is properly handled and recycled. This includes safely disposing of hazardous materials, such as batteries and chemicals, and promoting the reuse or refurbishment of functional equipment.

Reducing Environmental Impact

Minimizing the environmental impact of decommissioning involves reducing landfill contributions by recycling and reusing as much equipment as possible. Implementing sustainable practices and partnering with certified recyclers help in achieving this goal.

Compliance with Regulations

Adhering to local and international e-waste regulations is essential for responsible asset disposition. Conducting environmental impact assessments and following regulatory guidelines helps in maintaining compliance and avoiding legal issues.

Obtaining Disposal and Recycling Certifications

Working with ITAD vendors to obtain necessary certifications for disposal and recycling demonstrates compliance with environmental regulations. Displaying these certifications provides proof of responsible practices and can be used in environmental audits.



Cleaning and Restoring the Site.

Performing a thorough cleaning of the site, including floors, walls, and ceilings, ensures that it is restored to its original condition or prepared for new occupants. This may involve hiring professional cleaning services and conducting final inspections.

Final Audits and Reporting

Conducting final audits ensures that all decommissioning activities are reviewed for compliance with legal and internal standards, confirming secure asset disposal and complete documentation. Compiling comprehensive reports on the decommissioning process provides detailed records of activities and outcomes, crucial for demonstrating compliance and transparency to stakeholders and regulatory bodies.

Lessons Learned and Continuous Improvement

Analyzing what went well and areas for improvement during the decommissioning process helps in identifying best practices and lessons learned. Documenting these insights ensures that future projects benefit from this knowledge.

Updating decommissioning procedures based on feedback from post-mortem reviews helps in continuously improving the process. Training staff on new protocols and best practices ensures that future decommissioning projects are more efficient and effective.

CERTIFICATE OF DATA DESTRUCTION

This document certifies that OceanTech, a division of Ocean Enterprises LLC, has received 78,061 lbs of electronic equipment from Company on 01/04/2024

We hereby certify that all electronic scrap will be managed and recycled according to applicable EPA, MPCRA, and Hennepin County waste management rules. And that all data on all storage devices from the above equipment has been destroyed to standards of NIST SP 800-88r1 Clear (National Institute of Standards and Technology Standard 800-88r1) and in compliance with the following laws and regulations:

- HIPAA (Health Insurance Portability and Accountability Act)
- Sarbanes-Oxley Act
- Gramm-Leach-Bliley Act (GLBA)
- Bank Secrecy Act
- Patriot Act of 2002
- Identity Theft and Assumption Deterrence Act
- FDM Security Regulations (21 C.F.R. part II)
- All Applicable State Laws

EPA number: MNS 000 153 460
Hennepin Co. Operation ID: 1747405309028

AUDIT REPORT

#	Make and Model	Serial Number
1	X5-2, IU Database Server, EXADATA X5	1521NM10E
2	X5-2, IU Database Server, EXADATA X5	1521NM107T
3	X5-2L, 2U, High Capacity Server, EXADATA X5	1521NM107T
4	X5-2L, 2U, High Capacity Server, EXADATA X5	1521NM714R
5	X5-2L, 2U, High Capacity Server, EXADATA X5	1521NM70AR
6	X5-2, IU Database Server, EXADATA X5	1514NM1072
7	X5-2, IU Database Server, EXADATA X5	1514NM106B
8	X5-2L, 2U, Extreme Flash Server, EXADATA X5	1513NM70BP
9	X5-2L, 2U, Extreme Flash Server, EXADATA X5	1513NM704V

Take the next step with OceanTech.
Our comprehensive strategies and real-world experience make us the ideal partner for your data center decommission needs.

OceanTech is committed to providing robust, secure, and environmentally conscious strategies for data center decommissioning.

We are equipped to handle the complexities of shutdowns while delivering value and peace of mind to our clients. If your organization is facing the need to decommission a data center, contact us to leverage our expertise and ensure a future-proof decommission.

Reach out today, and let's ensure a secure, efficient, and environmentally responsible transition for your business.

