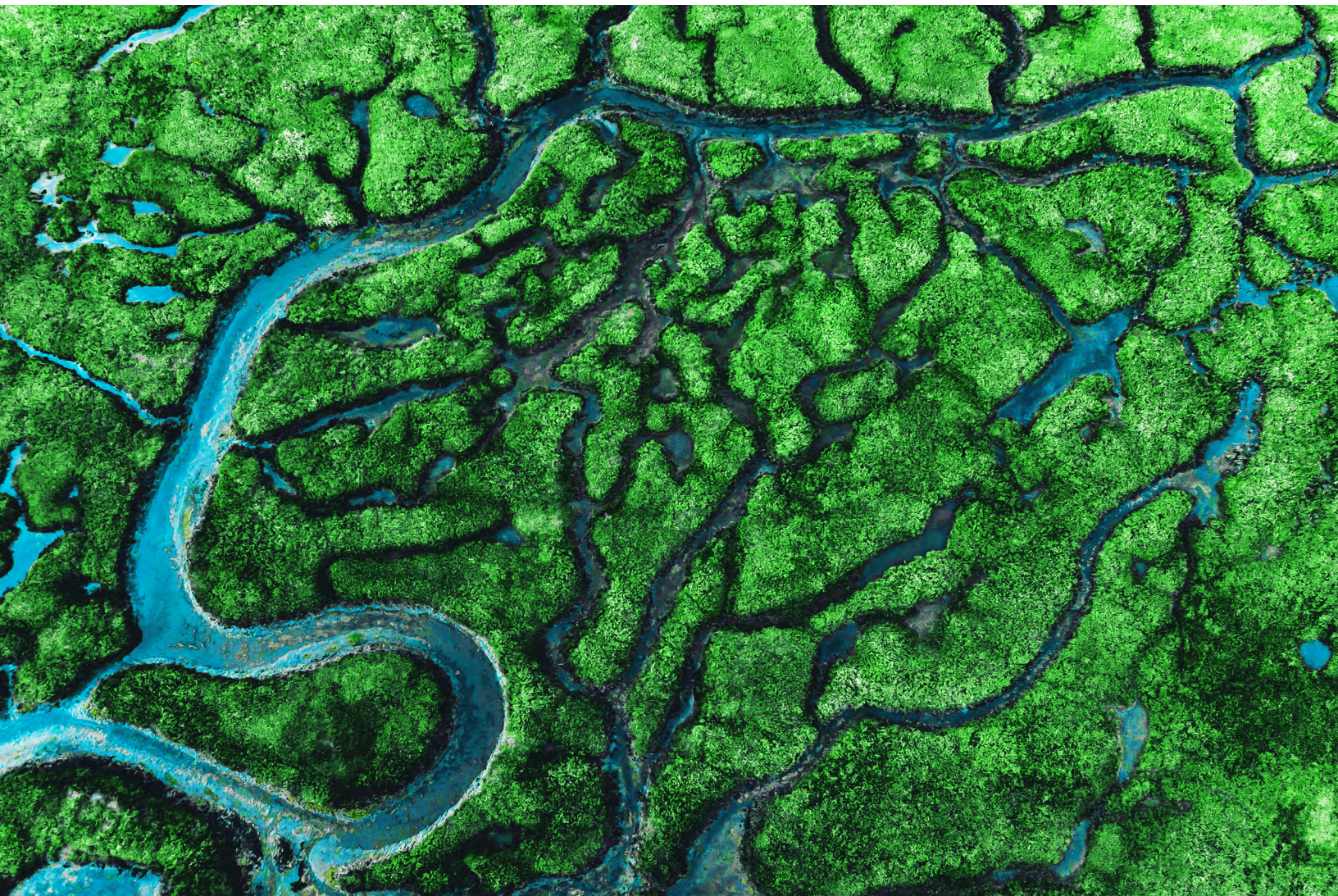


Data Security and Climate Change

How Voltage Supports Carbon-Friendly Strategies



Voltage: Sustainable, Carbon-Friendly Data Security

Climate change is a subject that is important to everyone, our customers, partners, governments, and citizens around the world. At OpenText, we aim to make sustainable and responsible business part of how we operate and translate that into how we deliver our products—from lowering our energy consumption and waste materials to helping our customers address their carbon footprint, adopting carbon-friendly IT strategies, and working more sustainably.

Many organizations are setting targets to reduce the impact they have on the environment by reducing energy usage and greenhouse gas emissions. Many more are looking to their suppliers to help them achieve their sustainability targets directly through technology and indirectly through their supply chain operations.

Green Voltage: Privacy and ESG Intersection Points to Reducing Risk and Carbon Emissions

Environmental, Social, and Governance (ESG) metrics refer to a set of criteria used to evaluate organizations' sustainability and societal impact. Data privacy is one aspect of governance often considered in ESG evaluations. Innovative techniques for detecting, protecting, and securely sharing data can also spur reducing the environmental impact of managing data.

In addition to data privacy, ESG evaluations may consider other governance factors, such as data ethics and transparency. Addressing these ESG considerations demonstrates a commitment to responsible and sustainable data handling and operations, which can in turn help establish goodwill and a strong reputation with stakeholders.

Organizations that prioritize data privacy and the ethical use of data in their operations and policies can reap social, financial, and competitive advantages. Privacy-enhancing technology enables organizations to build data-driven programs that preserve privacy and uncover risk while establishing practices that minimize data and support sustainability mandates.

What Is the Difference between Privacy-Enhancing and Privacy-Preserving Technologies?

Privacy-enhancing technology (PET) refers to technologies designed to improve privacy by reducing the amount of personal data collected and shared. These technologies include PII detection,

de-identification, anonymization, and data minimization techniques. The goal of PET is to reduce the risk of personal data being used or misused in ways that could harm the user if not handled ethically.

Privacy-preserving technology (PPT) refers to a subset of Privacy-enhancing technologies that offers a variety of techniques and tools designed to protect the privacy of individuals and organizations when they share, collect, or personally process data. These technologies are used in various contexts, including consumer privacy, data analytics, and data lifecycle management. The goal of PPT is to ensure that personal data remains secure and cannot be accessed or used by unauthorized parties.

Some examples of privacy-preserving technology include:

- **Encryption:** preserves data from unauthorized use/ access or seeing the data in clear text
- **Masking/Anonymization:** preserves data by removing personally identifiable information (PII) from data sets, making it difficult to trace the data back to specific individuals
- **Tokenization:** preserves data by replacing sensitive data with a unique, reversible token that can be used to represent the data but cannot be used to reveal the data itself without the presence of the token
- **Pseudonymization:** preserves data by replacing PII with a pseudonym, or fake name, that cannot be traced back to the individual
- **Data minimization:** preserves data by collecting and storing only the minimum amount necessary to achieve a specific purpose, reducing the risk of data misuse or abuse.
- **Data access monitoring and controls:** preserve privacy by ensuring that unauthorized parties cannot access or use personal data.

These privacy-preserving technologies are critical to business operations as organizations look to balance the collection and use of customer data and their obligation to protect individuals' personal information from being accessed, used, or shared without their consent. They also help organizations comply with global data protection regulations and laws, such as the General Data Protection Regulation (GDPR) in the European Union and the California Consumer Privacy Act (CCPA/CPRA) in the United States.

How Voltage Privacy-Enhancing Technologies Help Customers Address Green-IT Challenges, Providing Sustainable, Carbon-Reducing Data Security Approaches

Green Voltage—Reducing Carbon Footprints and Accelerating Green Projects

DATA DISCOVERY

Unstructured data makes up roughly 80% of all enterprise data and can represent high costs and risks if not managed properly. Voltage File Analysis Suite by OpenText with Data Discovery is ideally suited for data cleanup and hygiene aimed at reducing redundant, obsolete, and trivial (ROT) data, ultimately driving down the energy and resources required to manage, store, and transmit that data. By eliminating ROT, which can represent as much as 30-50% of storage, across the enterprise, Voltage customers can reduce their carbon footprint in cloud migration efforts by two metric tons of CO2 per terabyte of data.

DATA MINIMIZATION

Similarly, data minimization techniques, which involve collecting and retaining only the minimum amount necessary for a specific purpose, can help reduce the environmental impact of data processing. According to recent estimates, up to 30 percent of all servers in data centers are zombie servers—consuming energy, resources, and licenses yet carrying out little actual work. Additionally, retiring legacy applications allows organizations to maintain compliance while immediately reducing costs (hardware, software licenses) and energy. The Voltage File Analysis Suite and Voltage Structured Data Manager by OpenText provide data consolidation, application retirement, and archiving capabilities for unstructured and structured data that help reduce application sprawl and zombie servers by eliminating legacy applications and infrastructure.

DEFENSIBLE DELETION AND DATA CENTER CONSOLIDATION

Defensible deletion and data center consolidation can significantly impact sustainability programs. Consider the price of carbon @ US\$51 per metric ton—that means a petabyte of data has a carbon footprint of 4,000 metric tons of CO2. In this case, that translates to a price tag of \$500,000 annually just to run, manage and operate those servers. The cost savings for data deletion are significant as well; for every terabyte deleted, organizations can save upwards of ~\$3,300/TB of primary storage costs. Building practices around ESG combined with robust data security principles can mitigate risk, protect critical data assets, and improve the overall corporate privacy posture. These practices can also drive bottom-line savings and support your shift towards more sustainable, ethical business practices.

ENCRYPTION

Many organizations rely on data analytics to interpret buying patterns and trends and gain insight into their business. However, in today's business environments, this is a risky venture if data is misused, lost, or stolen. Privacy-preserving techniques that de-identify or anonymize data allow it to be used and analyzed without revealing sensitive information about individual people. As a result, it can be a powerful tool for ensuring privacy across various market sectors, including healthcare, finance, and retail.

Some privacy-preserving technologies, such as homomorphic encryption, require additional resources and energy to implement, potentially increasing an organization's carbon footprint. When evaluating the overall environmental impact of encryption technologies, consider how Voltage SecureData Enterprise by OpenText's Format-Preserving Encryption can run with far lower computational demands and energy needs than alternate approaches.

SHIFTING TO PUBLIC CLOUD AND SAAS

As organizations move more and more enterprise workloads and data to the cloud, vendors like Amazon can also help drive down carbon emissions. A 2019 report from 451 research titled, The Carbon Reduction Opportunity of Moving to Amazon Web Services, found that moving enterprise workloads to AWS showed significant IT operational efficiencies and carbon footprint reduction. These benefits are mainly driven by Amazon's use of renewable energy, energy-efficient servers, and improved server utilization. Further, 451 Research calculations in the report showed that moving a 1-megawatt enterprise data center (at standard 30% server utilization) to AWS can reduce carbon emissions by 400-1000 metric tons per year on average. This trend should continue to show more potential savings due to Amazon's renewable energy goals (80% renewable by 2024 and 100% by 2030).

In a parallel trend, OpenText™ Cybersecurity solutions now offer cloud-hosted SaaS deployment options, including Voltage File Analysis Suite (FAS) in partnership with Amazon Web Services (AWS). A shift to the cloud reduces carbon emissions and improves resiliency. David Gahan, VP Cybersecurity SaaS Center of Excellence, says, "By moving our SaaS business to the cloud, we've been able to reduce our carbon footprint by retiring our legacy data centers in favour of new, more energy-efficient facilities. Our average utilization per compute instance is higher in the cloud, reducing our overall energy needs."

We waste less and do more with SaaS, doing our part to help build a better, more sustainable future. Running Voltage FAS on the AWS Public Cloud helps our customers take advantage of these efficiencies at scale.”

Migrating to the public cloud using renewable energy or optimizing business processes can reduce energy consumption and contribute to reducing an organization’s carbon footprint. For organizations that want to avoid (or cannot) move to the public cloud, Voltage can also help reduce their data security power consumption in various ways.

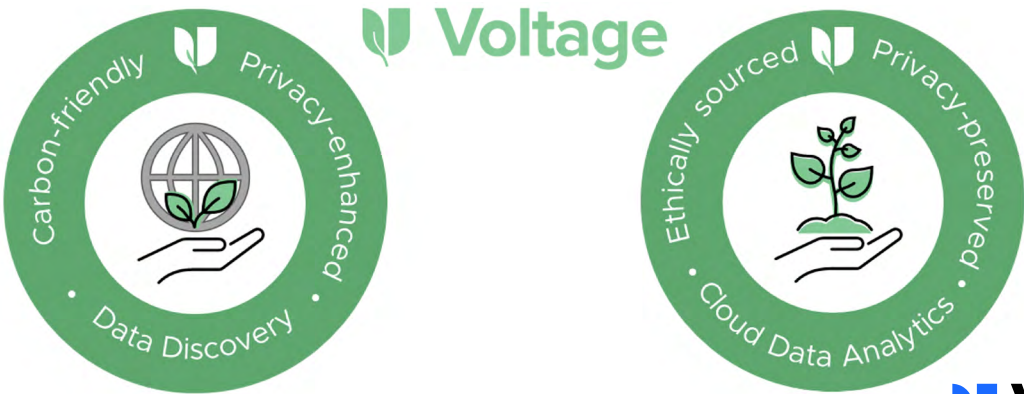
Green Voltage: Privacy-Enabling Technologies Reduce Inefficiencies, Carbon Footprint, and Energy Use

Energy Inefficiencies	Improving Them with Voltage
Compute: In many organizations, the growth of data and applications has led to an inefficient patchwork of equipment.	Voltage supports running elastic workloads in an energy-efficient cloud for data discovery and protection, and server consolidation and application retirement can dramatically reduce the amount of equipment, thus reducing energy consumption.
Storage: Understanding data can uncover even more efficiencies in data storage.	Voltage can discover and help manage ROT data—redundant, obsolete, and trivial data across unstructured and structured repositories. Moreover, they assist in handling misplaced, orphaned, and exposed data.
Data Management: Knowing your systems and data is a starting point for improving efficiencies.	Voltage provides data discovery tools for assessing, monitoring, and analyzing the value of data and provides valuable insights into risk. Classified data and risk scoring help identify what needs to be kept and stored centrally. In addition, Voltage intelligent data management solutions use machine learning and artificial intelligence to eliminate the time-consuming manual work required to classify and protect your most valuable assets. In the end, efficient data management leads to efficient use of resources.
Security: More and more resources are needed to keep systems secure and prevent threat actors from taking control over IT resources. Often organizations use many different solutions for different platforms.	OpenText Cybersecurity can offer a clear path for customers looking to consolidate security solutions (Data Security, Security Operations, Identity and Access Management and Application Security), use fewer resources and improve security levels.

Conclusion

Overall, organizations need to consider the environmental impacts of their operations, including the use of technology, as part of their efforts to reduce their carbon footprint. Strong governance practices and demonstrable social responsibilities are intangible benefits

that can build data trust with customers, employees, and other stakeholders. Privacy-enhancing technologies from Voltage can help find ways to balance the need for privacy compliance with the need to minimize resource usage and reduce the environmental impact of their operations.



“As a result of using Voltage data discovery, we started to find ‘unused data, unnecessary tables, obsolete databases and even forgotten databases that contain data.’

Even with the initial iteration, we lowered our energy consumption and CO₂ emissions by shutting down physical servers, SAN switches and storage platforms. By doing this, we helped our organization comply with our commitment to being more environmentally friendly.

Lowering the amount of processed data and consolidating the IT architecture helped us assign IT professionals to more value-added tasks. All these contribute to a better sustainability of both human and natural resources over longer periods of time.”

Olcay Nisanoğlu
IT Director
Belbim

Green IT in Action at OpenText



OpenText takes its responsibility to protect the natural environment seriously and supports its customers in doing the same. OpenText products and services help customers reduce their carbon footprint and adopt carbon-friendly IT strategies. Fully aware that the non-people related element accounts for 80 percent of its global power consumption*, OpenText is undergoing an international data center consolidation project, as explained by Rafi Levy, director of service

operations and hosting services within the Product Service Delivery Center (PSDC): “Through this consolidation, we create more efficient IT architectures, reduce our costs, and significantly reduce our environmental impact through lower energy consumption. Ultimately, we want to enhance our operations to provide maximum customer flexibility.”

“We reduced our energy consumption by 510 KW and saved \$3 million in annual rent and energy costs. This further strengthens our commitment to reduce our environmental impact.”

Rafi Levy
Director of Service Operations and Hosting Services
Product Service Delivery Center
Micro Focus

Sarah Atkinson, director of corporate social responsibility at Micro Focus (now part of OpenText), concludes: “We are committed to helping our customers address their carbon footprint and adopt carbon-friendly IT strategies, just like we’re doing for ourselves. Our Cybersecurity Voltage portfolio of leading-edge solutions is designed to help customers save costs, increase operational efficiencies, and operate more sustainably to support our planet.”

Learn more at
[Privacy Begins with Data Discovery](#)
[Data Privacy Financial Risk Calculator | CyberRes](#)

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OpenText Cybersecurity provides comprehensive security solutions for companies and partners of all sizes. From prevention, detection and response to recovery, investigation and compliance, our unified end-to-end platform helps customers build cyber resilience via a holistic security portfolio. Powered by actionable insights from our real-time and contextual threat intelligence, OpenText Cybersecurity customers benefit from high efficacy products, a compliant experience and simplified security to help manage business risk.