



# A GUIDE TO END-TO-END DATA PROTECTION

**FEATURING VEEAM**

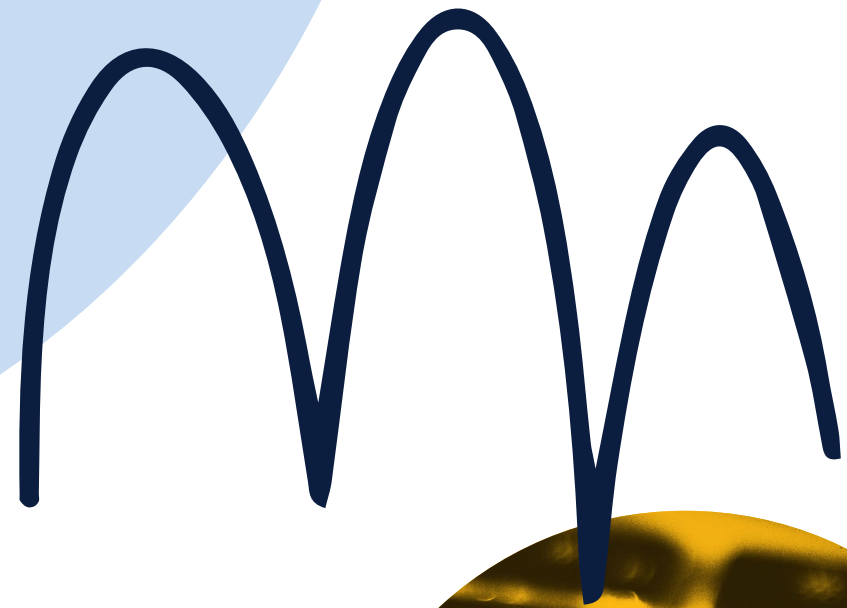
# DATA DEFINED

**When we discuss data, we're talking about information.** From a computing and business perspective, we're referring specifically to data that's machine-readable instead of simply being human-readable.

Data can be structured — highly organized and formatted, so it's easily searchable in relational databases. It can include information such as names, addresses, and credit card numbers. Or, data can be unstructured with no pre-defined format or organization. Examples include text, audio, social media activity, and satellite imagery.

Both kinds of data provide important insights, help measure and improve performance, drive decision-making, and keep businesses running. Few organizations can tolerate a lack of access to either type of data for very long — if at all.





# DATA RISKS

**Data holds great value for criminals, especially if it includes personal information or intellectual property.** In 2020, there were 1,001 data breaches in the United States with over 155.8 million sensitive records exposed<sup>1</sup>.

Financial gain is usually the goal. However, stealing or sabotaging data can be driven by the desire to make a political or social statement, damage an organization's reputation or simply prove it can be done.

Because data theft, hijacking and destruction can be done from anywhere in the world — often without immediate detection — it's considered a low-risk, high-reward crime.

<sup>1</sup> Statista.com. Cybercrime: number of breaches and records exposed 2005-2020, Published by J. Clement, March 3, 2021



# BEYOND CYBERCRIME

**Data isn't just a target for cybercrime. Other risks include:**

- + Insider threats, including both disgruntled and negligent employees, which can result in data being stolen, lost or corrupted.
- + Proprietary lock-in due to SaaS vendors essentially holding data hostage by making it difficult and exorbitantly expensive to switch vendors.
- + Storage device failure from a mechanical issue or a malware attack.
- + Data remanence, which is the data that remains in your organization even after attempts to scrub it. Because you might not even know it exists, it can easily be exposed without your knowledge.
- + Dark data, which is the data collected, processed, and stored but doesn't get used. Storing data beyond its shelf life leaves it vulnerable to security risks and compliance issues, and contributes to unnecessary storage costs.
- + Non-compliance with various regulatory bodies and industry laws. Failure to meet the requirements can result in costly fines and legal ramifications.
- + Natural and manmade disasters — from hurricanes to broken pipes that can flood an office space — that can result in system downtime and no data access.



# DATA PROTECTION CHALLENGES

The sheer volume and diversity of data that businesses collect and manage — and the importance of that data to their operations — make protecting it difficult. Regulatory compliance requirements add to the burden. Cybercriminals are relentless, and the risks are almost overwhelming.

In addition, as organizations deploy more mission-critical workloads on virtualized infrastructure, they're encountering virtual machine sprawl. Combined with exponential data growth, that's creating a dramatic rise in backup storage requirements and causing storage inefficiencies and ballooning costs.

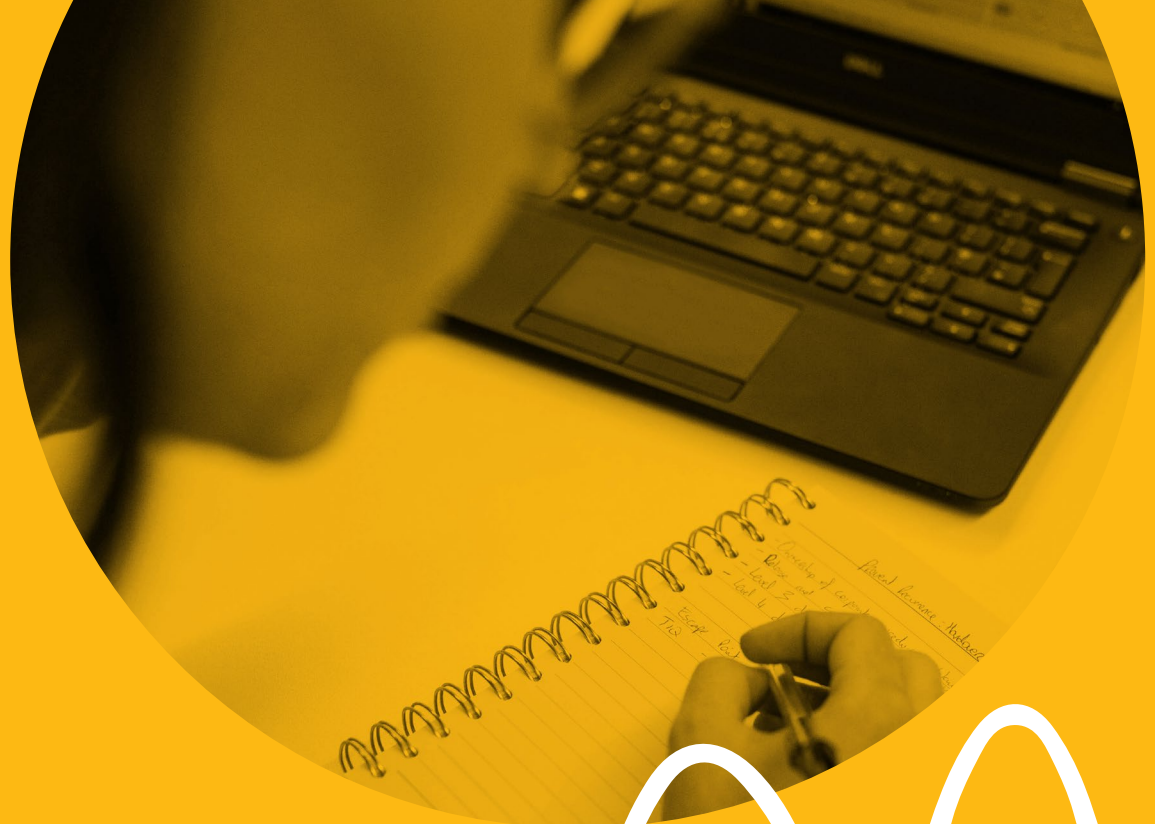
Data growth is also elevating expectations for backup and recovery performance. Legacy tools aren't practical due to high costs, shrinking backup windows, and the need for better recovery time objectives (RTOs) and recovery point objectives (RPOs).

The complexity of configuring and operating data protection software and hardware is a concern as well, as is finding adequate data protection solutions for emerging technologies like edge infrastructure and AI and ML platforms.

Although a 2020 report noted that 80% of the respondents were working with multiple data protection vendors, it also noted their annual data loss and downtime costs were significantly higher than organizations working with a single vendor<sup>2</sup>.



<sup>2</sup> Global Data Protection Index 2020 Snapshot



# STEP-BY-STEP DATA PROTECTION

**Given the preponderance of risk to data and the challenges in protecting it, how can an organization develop an effective data protection solution?**

The answer varies, based on your organization's specific needs and requirements. In general, here are some of the components to consider:

1. On-premise hardware
2. Licensing
3. Backup
4. Replication
5. Storage and archival
6. In-house or outsourced data management and operations

In the next few pages, we'll provide a quick overview of how to use Veeam software, with US Signal as your single source provider, to build an end-to-end data protection solution.



# WHY VEEAM

There are numerous companies that offer data protection solutions. Among the best in our experience at US Signal is Veeam. Since it was founded in 2006, Veeam has delivered industry-first backup and replication capabilities backed by stellar customer support.

**The following are just a few of the things that make Veeam stand out in the market:**

- + Veeam's open platform complements a broad ecosystem of partners so it easily integrates into any customer environment.
- + Veeam's backup and replication solutions feature granular recovery, analytics, and scalable architecture to meet the full spectrum of customer data protection needs.
- + Software-defined, hardware-agnostic, and cloud-ready, Veeam offers maximum flexibility.
- + Veeam customer satisfaction scores are three and half times the industry average.
- + Veeam is recognized by leading industry analysts, including Gartner, Ovum, and IDC, and has garnered more than 170 industry awards.



# THE US SIGNAL VALUE ADD

If you go with Veeam for backup and replication, where does US Signal fit in?

There's more to data protection than purchasing a product. You might need on-premise hardware. There's Veeam licensing to consider. Where's the destination for your data backups? How will you handle disaster recovery? Do you have the resources to manage your data protection solution?

US Signal can serve as your trusted partner and single source for data protection. As a Gold Veeam Cloud & Service Provider partner, US Signal has in-depth experience working with Veeam. We can do as much or as little as needed when it comes to helping you use Veeam, from licensing acquisition options to management of the total solution.

You can also take advantage of US Signal's HIPAA- and PCI-compliant infrastructure, 24/7/365 support and all the benefits of US Signal's Cloud Availability for Veeam.

**Visit US Signal's  
Cloud Availability  
for Veeam page.  
Or, keep reading  
to learn more.**



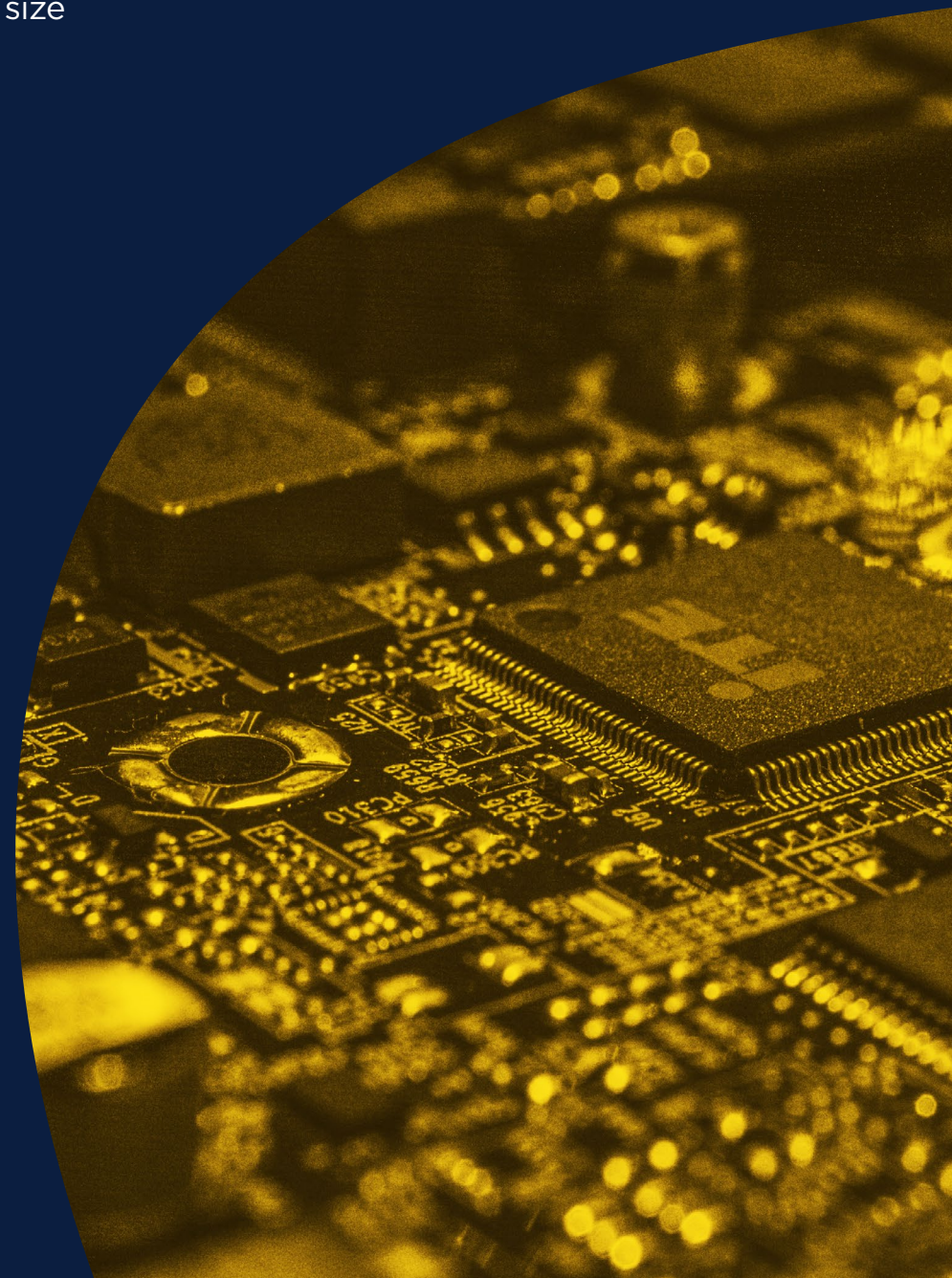


# ON-PREMISE HARDWARE

If you're running your production environment in your on-premise data center, you can use Veeam Backup and Replication to back up to storage in your data center and then have Veeam send a copy to the US Signal cloud.

To do that, you'll need to install Veeam Backup and Replication on on-premise hardware. But how do you choose the right backup appliance? If you need on-premise hardware, you can purchase directly from US Signal. US Signal's solution architects will work with you to right size and configure your solution based on Veeam best practices and your specific needs.

Your US Signal team will also go over your term options for manufacturer support and secure the quotes for you, saving you time and valuable resources.



# VEEAM LICENSING

If you don't already have a Veeam license, US Signal offers multiple ways to acquire one. Choose the one that works best for your particular environment and use case. Procuring Veeam licensing through US Signal is another way to minimize the number of vendors you're dealing with in terms of setting up your data protection solution.

## Options include:

- + **Perpetual license** — Purchase a license based on the number of sockets. Perpetual licenses are applicable per host regardless of the number of CPU cores or VMs. One year of basic support and maintenance is included. Support can be renewed year to year. You have the right to perpetual use of the software version purchased or the latest version upgraded to while under support. Stay up to date with annual support, and you'll always have access to the latest version.
- + **Universal license** — Purchase a license based on instances with most workloads requiring a single license instance. Terms are available for one to five years with support included for the entire term of the license. One-year terms are billed annually; multi-year terms are paid upfront at discounted rates.
- + **Rental license** — Available as an add-on to Cloud Backup for Veeam and Cloud Replication for Veeam, rental licenses are billed month to month. Renting a license moves the costs from a CAPEX to OPEX model, and makes it more affordable to start using Veeam services from US Signal.

### PRO TIP:

**If you already have a license, no additional licensing is needed to get started in US Signal's cloud via Cloud Connect.**



# FAST, RELIABLE BACKUP

Ideally, you want quick, reliable back up of any workload. Lightning-fast restores for files, VMs, NAS, and applications will ensure low recovery time objectives (RTOs). You also want numerous restore options, including point-in-time rollback and file-level recovery.

US Signal's **Cloud Backup for Veeam** provides a fast, secure way to get your VM backups off-site and into the US Signal Cloud. This eliminates the cost and complexity of building and maintaining off-site infrastructure.

All backups and offsite copies are managed and recovered directly from your Veeam backup console. Easily employ the 3-2-1 data protection best practice: 3 copies of your data stored on 2 different types of media with 1 copy off-site. Pay only for the resources needed.

It integrates with Veeam Cloud Connect, making it quick and easy to set up offsite backups from a single pane of glass. Insider Protection can also be added to protect against accidental or malicious deletion of files, including as a result of ransomware.



**CLICK FOR 30-DAY FREE  
OFF-SITE BACKUP**

# REPLICATION YOU CAN COUNT ON

A copy of your VM in a ready-to-start state is essential. If a VM goes down, you can immediately fail over to a standby VM. You also need image-based replication on site for availability and off site for disaster recovery. Replication should never affect your production environment.

US Signal's **Cloud Replication for Veeam** offers a flexible cloud-based replication target for your on-premises virtual machines (VM's). There's no need to maintain a second site.

Protected workloads replicate directly into vCloud Director, creating ready-to-start copies of VMs in a US Signal **Resource Pool**. You can failover to the replication environment and back to source as needed.

Whether replicating and restoring an entire site or specific VMs, you'll experience fast failover/failback with minimal data loss and disruption. You can also opt for US Signal to manage your replication platform, including software installation, replication job configuration, retention schedule modification, and failover to cloud and back to source.

**CLICK TO LEARN MORE ABOUT  
CLOUD REPLICATION FOR VEEAM**





# FLEXIBLE, COST-EFFECTIVE STORAGE

For flexibility, the storage component of your data protection solution should be storage-agnostic and allow you to choose where your backups go. For cost effectiveness, you should be able to select between higher-performance local targets or longer-term object storage.

US Signal's **Cloud Archive for Veeam** enables you to leverage the lower cost, simplicity, and elasticity of object storage. Using the Cloud Tier feature in Veeam Backup & Replication 9.5 Update 4, Cloud Archive for Veeam automatically archives backup data into US Signal S3 object storage. You get unlimited capacity for long-term data retention at the lower cost of object storage.

Integrating with object storage results in a space-saving, smaller footprint on your local storage that doesn't hinder recovery operations. Backups offloaded to object storage remain transparently accessible to all Veeam functionality and are readily available for restores to production without prior staging. You can still perform instant VM recoveries, computer and disk-level restores, and file-level and item-level restores.

**CLICK TO LEARN MORE ABOUT  
CLOUD ARCHIVE FOR VEEAM**



# DATA PROTECTION SOLUTION MANAGEMENT

It goes without saying that IT staffs have a lot on their plate. With so many competing priorities, it's not surprising that data protection doesn't always get the attention it requires.

If you don't have the in-house resources to devote to the job, consider outsourcing management of your data protection solution. It enables you to take advantage of highly specialized expertise your staff might not possess, and frees up your internal staff to focus on strategic business initiatives instead.

**US Signal offers management services for both Cloud Backup for Veeam and Cloud Replication for Veeam. Service highlights include:**

- + Configuration of software, jobs, and retention schedule.
- + Monitoring and troubleshooting.
- + Notification after consecutive failures.
- + First 30 minutes free for restoring images, files, and folders back to source (Cloud Backup for Veeam).
- + Managed playbook (Cloud Replication for Veeam).
- + Hourly fee for failover to cloud and back to source (Cloud Replication for Veeam).

**Managed or  
Self Managed.  
You decide.**

# THE BENEFITS OF DATA PROTECTION FROM VEEAM AND US SIGNAL

**When you choose Veeam for data protection software and US Signal for your total data protection solution, you get:**

- + A single vendor to deal with, from licensing to solution management.
- + A trusted partner to help you implement your data protection and disaster recovery plans.
- + A custom-built data protection solution right sized to your needs.
- + Industry-leading Backup & Replication software that's designed for simplicity, flexibility, and reliability.
- + Reliable, HIPAA-compliant, PCI-certified US Signal cloud services for backup, replication, and disaster recovery.
- + Storage options, including object storage for data archival and long term retention needs.
- + Exceptional support from both Veeam and US Signal.





**TRIAL CLOUD BACKUP FOR VEEAM  
FOR 30 DAYS BY CLICKING HERE**

# DIVE IN FOR MORE

Learn more about how US Signal's Cloud Availability for Veeam works and some of its benefits — including those experienced by a US Signal customer — with these resources.

- + **Webinar Recap: Cloud Availability for Veeam**
- + **Blog: Get More from Veeam Availability Suite**
- + **Blog: Q&A on US Signal's Cloud Availability Suite for Veeam**

## CASE STUDY

**Click to read how  
Cloud Backup for  
Veeam reduced costs  
and complexity for  
Hempfield Tech.**



### Hempfield Tech Selects US Signal and Veeam for Seamless Virtual Machine Deployment and Secure Offsite Backup and Recovery

#### EXECUTIVE SUMMARY

**Customer:**  
Hempfield Tech

**Location:**  
Lancaster, Pennsylvania

**Industry:**  
Managed IT and technology services for SMBs

**US Signal and Veeam Services**

- + Cloud Backup for Veeam

**Results**

- + Seamless back up of virtual machines and data to an offsite US Signal data center using Cloud Backup for Veeam
- + Rapid cloud-based data recovery from a single Veeam backup console in the event of a disaster
- + No additional Veeam software licensing required
- + Access to a fully remote, platform for centralized management of disparate Veeam Backup and Recovery servers
- + 24x7x365 technical support direct from US Signal and Veeam
- + End-to-end data security, whether at rest or in transit
- + Full HIPAA and PCI compliant

#### About the Customer

Hempfield Tech provides a range of managed services, including outsourced IT system administration, server and device virtualization, VPNs, and remote access. It also offers compliance services for pharmacy and healthcare companies and the state's CBD and hemp industry.

#### Overview

Founded in 2015, Pennsylvania-based Hempfield Tech is a managed service provider (MSP) serving small and medium organizations. As a three-person operation, Hempfield Tech had limited resources, but the company's client roster and service offerings were expanding. Finding a new seamless solution to deploy, manage, back up, and recover the virtual machines used by Hempfield Tech's customers was critical.





# ABOUT US SIGNAL

US Signal is a leading data center services provider, offering connectivity, cloud hosting, data protection, disaster recovery services and more — all powered by its wholly owned and operated, robust fiber network. US Signal also helps customers optimize their IT resources through the provision of managed and professional services.

Contact US Signal at **866.274.4625** or **info@ussignal.com** and speak to a solution architect. Learn how you can take advantage of a single source for everything you need for your Veeam data protection solution.

**OUR  
COMPLIANCE**

