

Protecting PaaS Workloads with Veritas Alta Data Protection for NetBackup Cloud Workloads

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Introduction

If you haven't moved some of your workloads to the cloud, you're probably thinking about it right now. The cloud offers many benefits—cost savings, security, flexibility, mobility, insight, increased collaboration, quality control, disaster recovery (DR), loss prevention, automatic software updates, competitive edge, sustainability, and more. However, the flexibility and power of the cloud can also come with some confusion about what services are needed. Terms such as software as a service (SaaS), infrastructure as a service (IaaS), and platform as a service (PaaS) can be confusing, potentially leading to more expense and support than needed.

This document is targeted at IT professionals interested in learning more about cloud services and how Veritas Alta™ Data Protection for NetBackup Cloud Workloads (formerly known as NetBackup Enterprise for Cloud) can help ensure that whatever architecture you choose for your cloud journey, it will be protected.

SaaS, IaaS and PaaS

SaaS

Now that you're thinking of moving to the cloud, what type of cloud are you going to use? For many organizations, SaaS will be their first experience with the cloud, and for good reason. SaaS applications are hosted over the Internet and are easily accessed with a web browser. Things such as email, calendaring, and office tools comprise a complete software package offered on a pay-as-you-go basis from your cloud provider (see Figure 1). Protect your unique data within the SaaS application, since the infrastructure is not completely exposed to the consumer.

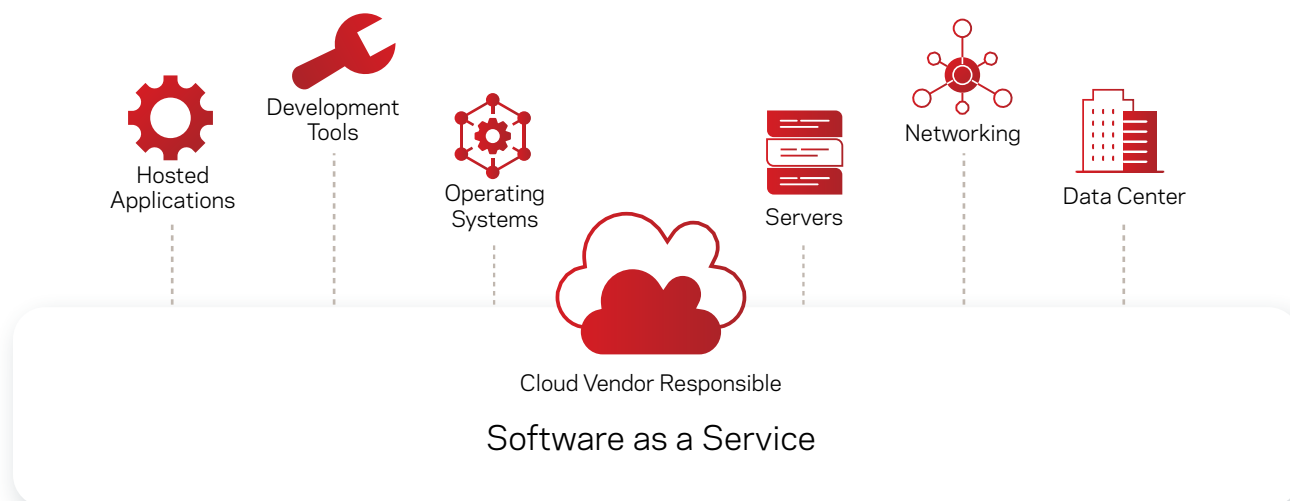


Figure 1. An overview of the components included in a SaaS solution offering.

IaaS

What if you want to install your own operating systems and applications on hardware that is ready to go? In that case, you're probably considering IaaS, and this scenario will look most familiar to system and network administrators who have built their own on-site data centers. IaaS offers a host of compute, storage, and networking resources admins can use to build a new infrastructure or migrate the existing on-premises architecture to the cloud. IaaS allows organizations to avoid the cost and maintenance of physical servers with on-demand resources that are ready when they are (see Figure 2). Protect this in the same way you would protect your on-prem data center.

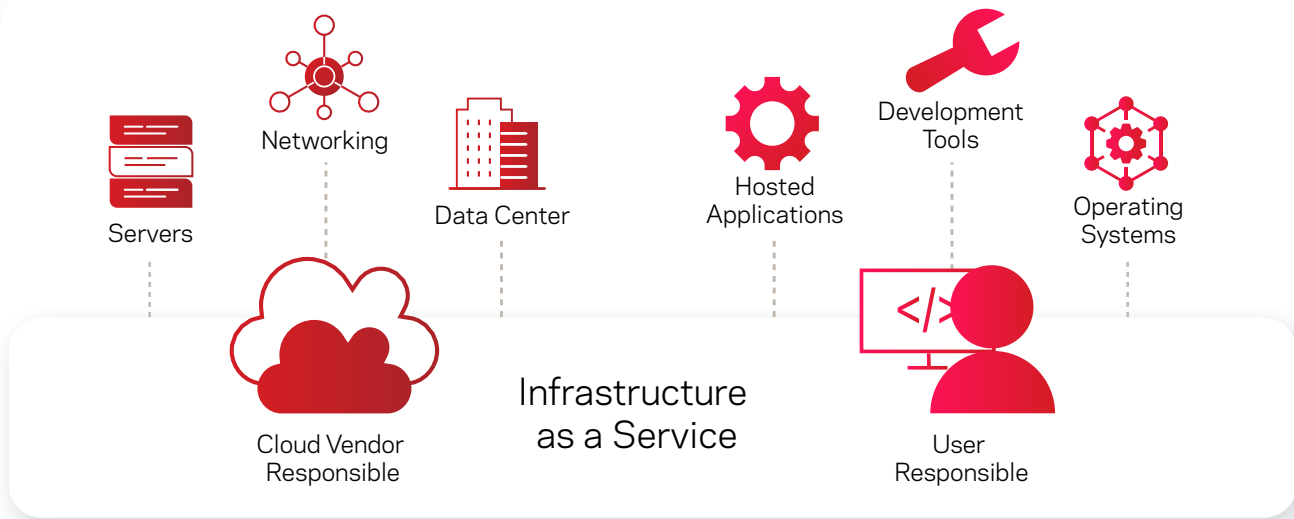


Figure 2. An overview of the components included in an IaaS solution offering.

PaaS

Let's assume that you need something between SaaS and IaaS—a service that includes the servers, storage, and networking layers so you can focus more time and effort on application development and deployment. PaaS eliminates the need to deploy servers, networking, virtualization, and guest OS; it lets you choose the application layer according to your business need, and deploys it for you, so you can focus on application customization and development. If you want to leverage a database service or instance without the headache of building the entire environment yourself, this is where PaaS comes in (see Figure 3). In many cases, application layers within the PaaS environment are extremely critical databases that certainly need to be protected.

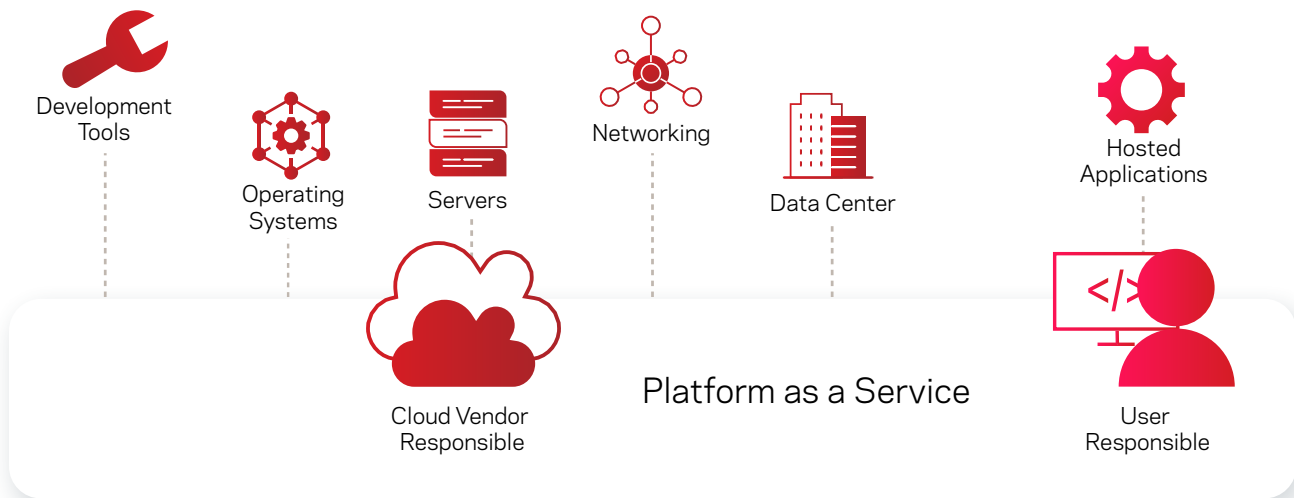


Figure 3. An overview of the components included in a PaaS solution offering.

Shared Responsibility Model in the Cloud at a High Level

In an on-premises data center, you own the whole stack. As you move to the cloud, some responsibilities transfer to the cloud provider. The definition might change slightly, however, at a high level, the following diagram summarizes the areas of responsibility between you and your cloud provider of choice, according to the type of deployment of your stack.

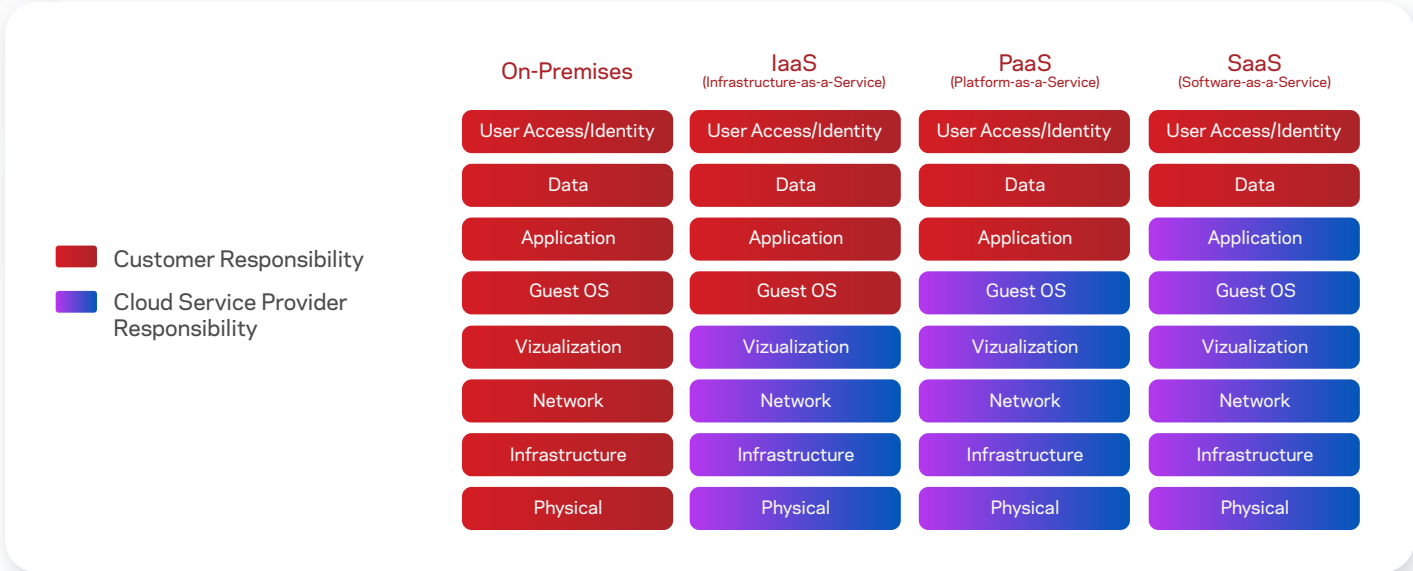


Figure 4. An overview of the shared responsibility model in the cloud.

A Proven Data Protection Solution for Your PaaS Workloads

The introduction of the cloud has opened the doors to many opportunities, including as a means of eliminating the traditional data center. But what about backups? Cloud providers provide some backup capabilities, and PaaS applications may also have their own built-in backup utilities, but only how Veritas Alta Data Protection for NetBackup Cloud Workloads provides unparalleled next-generation data protection. Veritas Alta Data Protection for NetBackup Cloud Workloads minimizes costs and complexity, and ensures greater business continuity with a solution that unifies data protection across the entire enterprise. If you're using multiple applications and cloud providers in your PaaS environment, having Veritas Alta Data Protection for NetBackup Cloud Workloads as a single solution to orchestrate backup and recovery is efficient and cost-effective.

Veritas Alta Data Protection for NetBackup Cloud Workloads combines performance and flexibility with powerful data deduplication technology to better leverage the cloud for storing backups for DR or long-term data retention. This approach ensures that backup data remains optimized in transit and at rest in the cloud, reducing costs and increasing the performance of PaaS environments.

Veritas Alta Data Protection for NetBackup Cloud Workloads has the ability to connect and protect resources from various cloud providers directly from a single web interface, making it the perfect partner to your PaaS applications. Veritas Alta Data Protection for NetBackup Cloud Workloads also discovers and reports on the backup status of your PaaS resources, and manages recovery using cloud-native tools.

PaaS Workloads Protection Methods

Backup from Snapshot

Veritas Alta Data Protection for NetBackup Cloud Workloads 10.1 adds support to 13 new PaaS workloads across public clouds.

Azure Workloads

Azure PostgreSQL

Azure MySQL

Azure Managed SQL

Azure SQL

Azure MariaDB

AWS Workloads

Amazon RDS Postgres

Amazon RDS MySQL

Amazon RDS MariaDB

Amazon Aurora SQL

Amazon Aurora PostgreSQL

Amazon DynamoDB

GCP Workloads

Google MySQL

Google PostgreSQL

Application-consistent protection of the above platforms includes backup from snapshot to Veritas Alta Data Protection for NetBackup Cloud Workloads deduplication service (MSDP), which maximizes costs by only storing unique data segments on object storage.

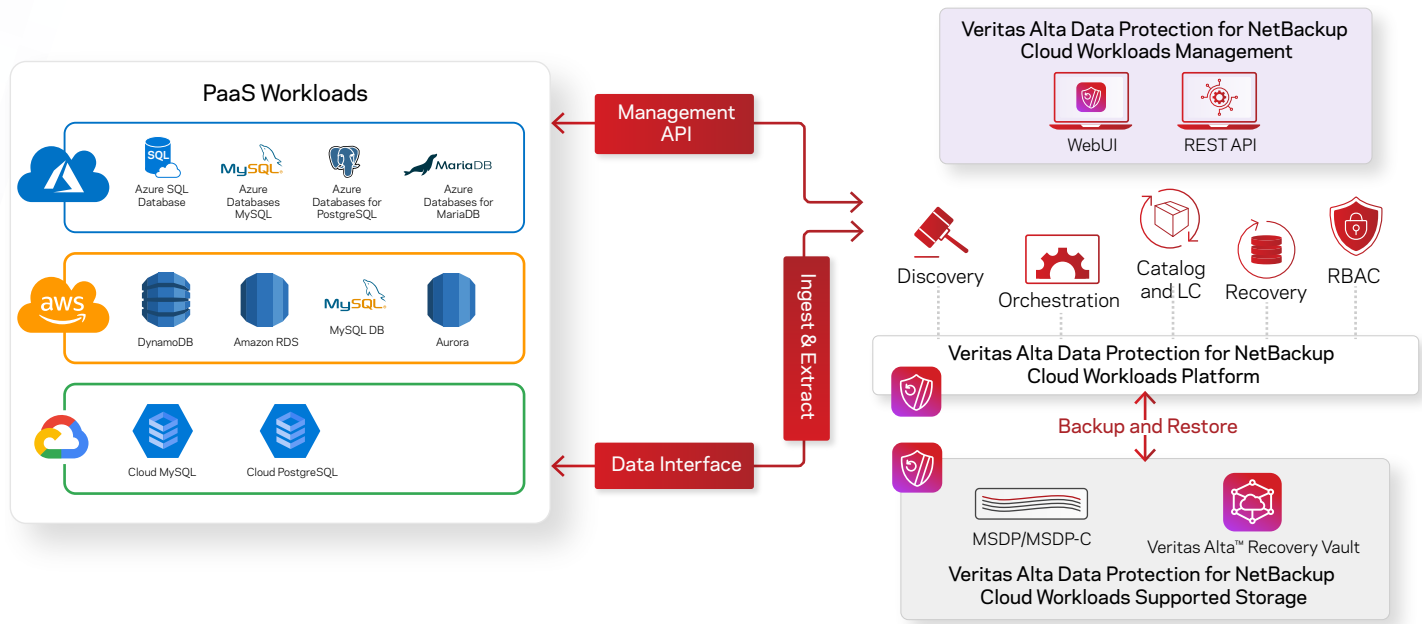


Figure 5. An overview of Veritas Alta Data Protection for NetBackup Cloud Workloads PaaS Protection Framework.

Snapshot Only

Veritas Alta Data Protection for NetBackup Cloud Workloads Snapshot Manager (formerly known as NetBackup CloudPoint), which is a lightweight, elastic, snapshot-based orchestration service, continues to be available and fully supported for platforms such as Amazon RDS SQL and Amazon RDS Oracle. Amazon RDS for SQL and Oracle will also be added to the Veritas Alta Data Protection for NetBackup Cloud Workloads PaaS protection framework in a future release. Nevertheless, other benefits are still applicable to the snapshot-only strategy with Veritas Alta Data Protection for NetBackup Cloud Workloads Snapshot Manager, such as:

- Streamlined and automated cloud-native snapshots orchestrated by Veritas Alta Data Protection for NetBackup Cloud Workloads
- A single management console across multiple public and private clouds
- Automated discovery and protection with no need to install agents
- Application-consistent snapshots
- Cloud replication to other regions for added DR readiness

Application or User Initiated Protection for Other PaaS Workloads

Veritas Alta Data Protection for NetBackup Cloud Workloads Universal Shares provide a path for data ingest directly into an existing Veritas Alta Data Protection for NetBackup Cloud Workloads deduplication service (MSDP), with no need for additional staging areas. Any application and workload can leverage Veritas Alta Data Protection for NetBackup Cloud Workloads Universal Share via NFS or SMB.

Veritas Alta Data Protection for NetBackup Cloud Workloads automates protection of Universal Share with Protection Point. Universal Share Protection Point offers a fast point-in-time copy of all data that exists in the share. This copy of the data can be retained like any other data that is protected within Veritas Alta Data Protection for NetBackup Cloud Workloads. All advanced Veritas Alta Data Protection for NetBackup Cloud Workloads data management facilities such as Auto Image Replication, Storage Lifecycle Policies, Optimized Duplication, and Deduplication to Cloud Object Storage are available with any data in Universal Share.

In addition to Universal Shares, Veritas Alta Data Protection for NetBackup Cloud Workloads 10.1 also introduces a mechanism to add an S3 interface to MSDP storage. S3 Interface for MSDP provides S3 APIs in MSDP server and can seamlessly work with cloud native applications to ingest data directly into Veritas Alta Data Protection for NetBackup Cloud Workloads deduplication service (MSDP) via

S3 commands and APIs. S3 interface is an additional option for applications that can only dump data via S3 command to S3 buckets, providing a path for backup data directly to MSDP with no need for additional staging areas or storage. For more information about S3 interface for MSDP introduced with Veritas Alta Data Protection for NetBackup Cloud Workloads 10.1, check NetBackup Deduplication Guide.

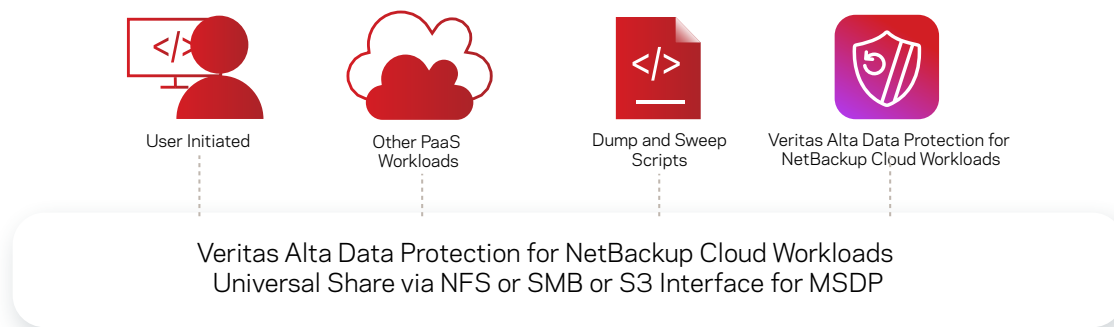


Figure 6. An overview of backing up other PaaS workloads with “dump and sweep” scripts and Veritas Alta Data Protection for NetBackup Cloud Workloads.

Conclusion

Veritas Alta Data Protection for NetBackup Cloud Workloads is not only your trusted on-premises data protection solution, it’s also your one-stop choice to protect all your cloud resources, with simple tools that accomplish complex tasks. Whether your cloud goals include SaaS, IaaS, or PaaS, Veritas Alta Data Protection for NetBackup Cloud Workloads makes backing up your data easier and will help lower your organization’s long-term storage (as well as overall cloud) costs.

Veritas Alta Data Protection for NetBackup Cloud Workloads delivers cloud-native technology and integration that enable you to optimize your cloud of choice:

- Maximize costs savings leveraging Veritas Alta Data Protection for NetBackup Cloud Workloads deduplication service
- Avoid point solutions
- Gain central management and governance across clouds
- Automate scaling with container-based technology

As more workloads migrate to the cloud, Veritas is committed to adding more direct integration to PaaS workloads over future Veritas Alta Data Protection for NetBackup Cloud Workloads releases and assisting customers with every aspect of their journey to the cloud. No matter where your data resides, Veritas Alta Data Protection for NetBackup Cloud Workloads has comprehensive, integrated solutions to ensure safe backup and recovery.

For more information on Veritas Alta Data Protection for NetBackup Cloud Workloads, visit veritas.com/NetBackup.

About Veritas

Veritas Technologies is a leader in multi-cloud data management. Over 80,000 customers—including 95 percent of the Fortune 100—rely on Veritas to help ensure the protection, recoverability, and compliance of their data. Veritas has a reputation for reliability at scale, which delivers the resilience its customers need against the disruptions threatened by cyberattacks, like ransomware. No other vendor is able to match the ability of Veritas to execute, with support for 800+ data sources, 100+ operating systems, 1,400+ storage targets, and 60+ clouds through a single, unified approach. Powered by Cloud Scale Technology, Veritas is delivering today on its strategy for Autonomous Data Management that reduces operational overhead while delivering greater value. Learn more at www.veritas.com. Follow us on Twitter at [@veritastechllc](https://twitter.com/veritastechllc).

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