

# VMware vCloud Air Data Protection

## AT A GLANCE

VMware vCloud® Air™ Data Protection offers secure, policy-based backup and recovery in the cloud for virtual machines hosted exclusively on vCloud Air. Available across both Dedicated Cloud and Virtual Private Cloud infrastructure-as-a-service types, Data Protection includes the following feature highlights:

- Backup policy affinity controls per Virtual Data Center (VDC) or per vApp
- Daily (24-hour) Recovery Point Objective (RPO) guarantee
- Virtual machine (image-level) Restore Granularity Objective (RGO)
- Custom backup window scheduling
- Configurable data retention
- On-demand backups
- Synthetic-full backup images
- Intelligent consumption tracking and activity reports

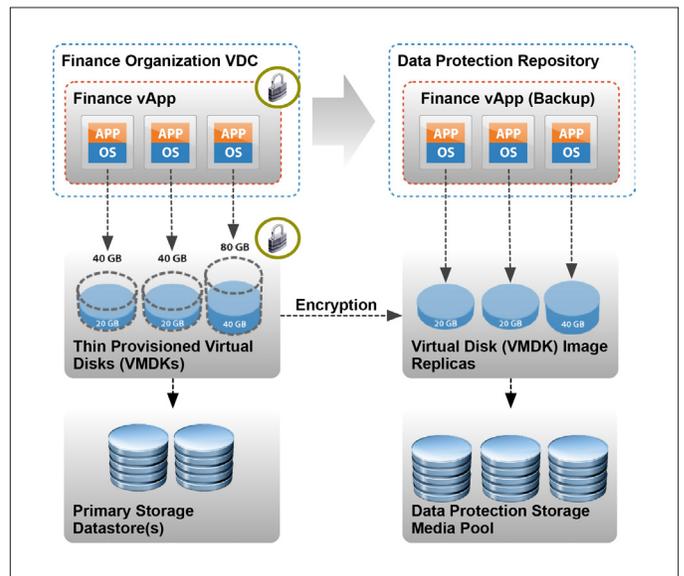
## KEY BENEFITS

- **Business continuity in the cloud** – Data Protection ensures business continuity compliance for enterprise workloads hosted in the cloud, by enabling self-service backup and recovery operations as a foundational layer in risk mitigation and data loss prevention.
- **Agentless backup architecture** – Data Protection leverages both vStorage APIs and VMware vSphere®-based snapshot technology to protect any virtual machine hosted on vCloud Air, regardless of the OS and applications installed and without any dependencies on resource-intensive guest agents.
- **Simplified manageability** – Eliminate the complexities of routine backup policy administration by taking advantage of the intuitive, self-service controls provided by Data Protection. Scheduling backups, configuring data retention and specifying affinity settings per Virtual Data Center or per vApp provide maximum flexibility in how data is protected in the cloud.

## What is Data Protection?

### Enterprise-Ready Data Protection for Production Workloads Hosted in the Cloud

Data Protection is an optional data backup and recovery feature for VMware vCloud Air that enables self-service, policy-based protection of business-critical data by backing up vApps and their associated virtual machines within Dedicated or Virtual Private Cloud service types. Compared to traditional file-based backup and recovery solutions, image-level backups are used in Data Protection to ensure all operating system, file system and application data encapsulated within a virtual machine are captured as a snapshot image before being committed to backup media.



Data Protection Illustration

### Comprehensive Policy Protection for Secure Backup and Recovery

Comparable to private enterprise backup and recovery operations environments, Data Protection offers default policy attributes that support a guaranteed service level for backup and recovery objectives without imposing excessive administrative burden on IT Operations staff.

- Fixed 24-hour RPO
- Full vApp metadata coherency
- Virtual machine (image-level) RGO
- Custom retention periods from 1 to 365 days

Objective-oriented policy settings are consistent across both Dedicated and Virtual Private Cloud service tiers, and are further reinforced by the use of synthetic-full backup images, which guarantee the integrity of each backup regardless of when it was taken.

**Non-intrusive Protection for any Operating System and Application**

By leveraging vStorage APIs at the VMware vSphere layer in vCloud Air, Data Protection is able to use a combination of inline I/O quiescing and snapshot techniques at the virtualization layer to capture a crash-consistent image replica of any vApp and its virtual machine members. These point-in-time replicas are made possible in Data Protection without having to install custom software agents, which often result in resource contention and potential performance degradation during an active backup window. Additionally, the use of Change Block Tracking (CBT) in Data Protection ensures that only disk blocks which have changed since the last backup are transmitted and committed to media, thus maximizing efficiency and reducing Data Protection storage capacity requirements.

**Multilayer Restore Workflows for Advanced Recovery**

Data Protection helps streamline data recovery operations by offering dual self-service restore modes that can each address variable use cases.

- In-place restore (Mode 1)
- Out-of-place restore (Mode 2)

Whether recovering a single virtual machine that has been accidentally deleted or an entire vApp with multiple virtual machine members assigned, each restore mode ensures that data is safely recovered with minimal disruption to ongoing operations. Applying point-in-time restores is limited only by the retention period that has been defined for the target Virtual Data Center or vApp.

**Key Features and Capabilities**

**Flexible Self-Service Backup** – Data Protection enables self-service backup protection for as many vApps and virtual machines as can be hosted in either the Dedicated Cloud or Virtual Private Cloud service tier in vCloud Air (subject to subscription capacity limits). Seamless integration with the vCloud Air Console creates a simplified administration experience, with the added flexibility to delegate backup operations to individual users or automatically protect all vApps and virtual machines associated with a Virtual Data Center.

**24-hour Recovery Point Objective** – Data Protection offers a standard 24-hour (daily) RPO based on user-defined scheduling, plus the added benefit of on-demand backups. On-demand backups can be executed on a per vApp basis and, effectively, allow custom RPOs to be implemented on an as-needed basis.

**Virtual Machine Restore Granularity Objective** – Backup policy affinity controls in Data Protection ensure backups are applied at either a Virtual Data Center or individual vApp level, while restore granularity objectives guarantee that any individual virtual machine can be restored when needed.

**Custom Backup Window Scheduling** – Data Protection supports custom scheduling of backup windows (start time) to ensure backup operations do not conflict with application runtimes during peak hours.

**Configurable Data Retention** – Data Protection policy customization allows data retention periods to be set per Virtual Data Center or per vApp up to a maximum of 365 days (no minimum).

**On-Demand Backups** – In addition to the standard 24-hour RPO offered, Data Protection supports on-demand backups to be executed on a per vApp basis without any limits on the number of on-demand backups that can be performed.

**Synthetic-Full Backup Images** – Data Protection provides maximum data integrity for each backup that is recorded by ensuring all incremental restore points reflect a full copy of the data taken from the source vApp.

**Intelligent Consumption Tracking** – Data Protection includes intuitive, at-a-glance dashboard views to help keep track of consumption and available storage capacity in real-time. Activity log reporting further ensures that any critical job tasks, such as backup and restore actions, are recorded for historical event reference.

	DEDICATED CLOUD	VIRTUAL PRIVATE CLOUD
Data Protection Capacity Units	1TB Front End Protected Storage	1TB Front End Protected Storage
Unlimited Backups	Yes	Yes
Unlimited Restores	Yes	Yes
Backup Operations (Concurrent)	16	16
Restore Operations (Concurrent)	16	16
Production Support	24 Hours/Day 7 Days/Week 365 Days/Year	24 Hours/Day 7 Days/Week 365 Days/Year
Subscription Terms	1 month 12 months 24 months 36 months	1 month 3 months 12 months 24 months 36 months

## How to Buy

A subscription to Data Protection can be purchased through MyVMware®. After the subscription is activated, a customer can begin using Data Protection through the vCloud Air console.

## Support

VMware makes subscription services support available to all vCloud Air Data Protection customers. Support includes access to specialists who assist in coordinating onboarding activities as well as ongoing service support. For customers who require additional services, VMware also offers professional services engagements on best practices and getting started with deployment, both directly and through an extensive network of certified professionals.

## Find Out More

For more information or to purchase VMware products, call 1-877-4VMWARE (outside North America, +1-650-427-5000) or visit the VMware vCloud Air web page at <http://vcloud.vmware.com>.

