

VMware vSphere Data Protection

vSphere Data Protection Advanced Overview

Q. What is VMware vSphere Data Protection Advanced?

A. VMware vSphere® Data Protection™ Advanced is a backup and recovery solution with built-in backup data replication. It is designed for midsized vSphere environments of several hundred virtual machines. It is powered by EMC Avamar, a market leader in deduplication backup-and-recovery solutions. vSphere Data Protection Advanced can be purchased separately or bundled with the VMware vSphere® with Operations Management™ acceleration kits, Enterprise and Enterprise Plus editions.

Q. Why should I use vSphere Data Protection Advanced?

- A. vSphere Data Protection Advanced is purpose-built for your vSphere environment and has the following attributes:
- i) **Highly efficient:** it minimizes storage and bandwidth consumption using an industry-leading and patented variable-length deduplication algorithm. Unique support for Changed Block Tracking reduces backup and recovery times thus minimizing the cost of application downtime.
 - ii) **Resilient:** it is powered by EMC Avamar, a reliable, proven, mature enterprise-class technology. vSphere Data Protection Advanced not only provides agentless, image-level backups to disk, but also provides guest-level, application-consistent protection for virtualized and non-virtualized (physical-server deployed) Microsoft Exchange, SQL Server and SharePoint. Additionally, with network-efficient and encrypted backup data replication you can backup your data offsite to ensure business continuity and compliance.
 - iii) **Simple:** it is fully integrated with the vCenter Server and is managed end-to-end through the vSphere Web Client. The familiar user interface, flexible, simplified schedules and policies reduce the operational overhead for vSphere administrators and make the product easy to use and manage.

Q. What are the benefits of using application agents for backup and recovery?

A. The recommended way to protect tier-1, mission-critical applications like Microsoft Exchange, SQL Server, SharePoint is to use application-aware agents which integrate with the APIs of these applications to provide application-consistency, log management and granularity of backup and restores. Additionally, these agents provide the ability to backup these supported applications on physical servers as well, i.e. even when the applications are not virtualized, backups can be managed through the same vSphere Web Client interface.

- **Microsoft SQL Server agent** delivers granular backup and recovery of the entire application, individual databases, or only logs
- **Microsoft Exchange Server agent** delivers application-consistent backup and granular recovery of individual databases and even mailboxes
- **Microsoft SharePoint agent** provides application-consistent backup and recovery for SharePoint with client-side deduplication

Q. Is Data Domain Boost (DD Boost) software licensing required when using vSphere Data Protection Advanced as the front-end for Data Domain systems?

A. Yes. Licensing of Data Domain systems and Data Domain Boost software is independent from vSphere Data Protection Advanced and is bound by the regular EMC licensing requirements.

Q. Can EMC Data Domain or Data Domain Boost software be purchased through VMware?

A. No. Customers can only acquire Data Domain products through EMC channels and can only acquire vSphere Data Protection Advanced through VMware channels.

Q. Are vSphere Data Protection solutions a repackaged Avamar Virtual Edition?

A. No. Both VMware Data Protection solutions (vSphere Data Protection Advanced and vSphere Data Protection) are entirely new products developed in collaboration with EMC. Customers will be able to purchase vSphere Data Protection Advanced from VMware or VMware resellers.

Upgrades and Compatibility

Q. Can users of vSphere Data Protection upgrade to vSphere Data Protection Advanced 5.5?

A. Yes. vSphere Data Protection users can purchase the appropriate licenses of vSphere Data Protection Advanced and can migrate their vSphere Data Protection backup policies while backup data stays intact. Please refer to the Admin guide for the complete process.

Q. Are current vSphere Data Protection Advanced 5.1 customers entitled to vSphere Data Protection Advanced 5.5?

A. Yes. vSphere Data Protection Advanced 5.1 customers with a current Support and Subscription contract are entitled to licenses for vSphere Data Protection Advanced 5.5 at no additional charge through their subscription entitlement.

Q. Is there an evaluation copy of vSphere Data Protection Advanced 5.5 available from vmware.com?

A. Yes. A 60-day evaluation copy of vSphere Data Protection Advanced can be downloaded for free here: <https://my.vmware.com/web/vmware/evalcenter?p=vdp-adv>

Q. What is the difference between vSphere Replication and the replication in vSphere Data Protection Advanced?

A. vSphere Replication is a feature of the vSphere platform that copies live virtual machines to another location, available for restoration through the VMware vCenter Server web-based user interface. vSphere Replication can preserve up to 24 point-in-time replicas for recovery purposes. The Recovery Point Objective (RPO) can be set between 15 minutes and 24 hours. vSphere Replication integrates with Site Recovery Manager to provide automated disaster recovery capabilities.

vSphere Data Protection solutions replicate deduplicated, encrypted backup data to another location (including remote locations). Replication in vSphere Data Protection solutions is designed for longer retention with less aggressive RPOs than vSphere Replication. Replicated backups can be stored at the target site according to specified retention policies, which usually range between 30 and 60 days. The RPO ranges between 24 hours and higher. Replication in vSphere Data Protection advanced is not integrated with Site Recovery Manager to achieve automated disaster recovery capabilities.

Q. What is the difference between replication in vSphere Data Protection and vSphere Data Protection Advanced?

A. A vSphere Data Protection Advanced appliance can be both a source and a destination for a replication stream. However, a vSphere Data Protection appliance cannot receive an incoming replication stream i.e. it cannot be a destination for replication.

Please see the table below:

SOURCE	DESTINATION	POSSIBLE
VDP	VDP	No
VDP	VDP Advanced	No
VDP	EMC Avamar	Yes
VDP Advanced	VDP Advanced	Yes
VDP Advanced	EMC Avamar	Yes
VDP Advanced	VDP	No

Q. Does vSphere Data Protection Advanced support bi-directional replication?

A. Yes, this is possible as long as the replication destination is a vSphere Data Protection Advanced appliance.

Q. Are vSphere Data Protection solutions compatible with VMware vCloud Director?

A. At this time, neither vSphere Data Protection Advanced nor vSphere Data Protection is compatible with VMware vCloud Director®.

Q. Are vSphere Data Protection solutions compatible with VMware Horizon View?

A. At this time, neither vSphere Data Protection nor vSphere Data Protection Advanced is compatible with VMware Horizon View™.

Licensing and Packaging

Q. How is vSphere Data Protection Advanced licensed?

A. vSphere Data Protection Advanced is licensed per physical CPU. Only virtual machines running on a properly licensed CPU can be backed up.

Q. Is vSphere Data Protection Advanced included with any vSphere Bundle?

A. vSphere Data Protection Advanced is included with the vSphere with Operations Management Enterprise and Enterprise Plus acceleration kits.

These bundles include six CPU licenses of vSphere Data Protection Advanced to match the six CPU licenses of vSphere with Operations Management included.

vSphere Data Protection Advanced is not included in the vSphere with Operations Management Standard acceleration kit. vSphere Data Protection Advanced is not included in any edition of vCloud Suite.

vSphere Data Protection Advanced can be purchased separately to be used with any vSphere edition or vSphere bundle that does not include vSphere Data Protection Advanced.

Q. What is the minimum licensing requirement?

A. Customers deploying vSphere Data Protection Advanced must license all the CPUs in a vSphere host and all hosts included in the vSphere cluster. vSphere Data Protection Advanced customers cannot backup virtual machines running on unlicensed vSphere hosts.

Q. How do vSphere Data Protection Advanced customers handle the license keys?

A. Unlike in 5.1, vSphere Data Protection Advanced 5.5, requires customers to input the license key into the UI, in order to activate the product.

Q. Is replication in vSphere Data Protection Advanced 5.5 licensed separately?

A. No. Replication of backup data is built in to the product and is available at no additional cost.

Q. Are there additional fees for deploying the application agents for SQL Server, Exchange and SharePoint?

A. Agents for virtualized applications are included in the license for protected CPUs of virtualized hosts, but when the applications are deployed on physical servers one vSphere Data Protection Advanced license is needed per physical machine Operating System Instance (OSI).

Q. Are there additional fees for deploying vSphere Data Protection Advanced virtual appliances?

A. No. vSphere Data Protection Advanced is licensed per physical CPU. There are no additional fees for the number of virtual appliances deployed. Up to 10 virtual appliances are supported per vCenter Server.

Q. Is there a migration path from vSphere Data Protection to EMC Avamar?

A. No. There is no upgrade path offered by VMware to move from vSphere Data Protection or vSphere Data Protection Advanced to any third-party backup software, including EMC Avamar.

EMC has Professional Services offerings independent from VMware that can help customers migrate an implementation of vSphere Data Protection Advanced to EMC Avamar.

Technical Requirements**Q. Will vSphere Data Protection Advanced 5.5 work with prior versions of vSphere and vCenter Server?**

A. vSphere Data Protection Advanced is compatible with vSphere 4.1 or higher and vCenter Server 5.1 and higher.

Q. Can vSphere Data Protection solutions be used without a vCenter Server instance?

A. Both solutions are designed to leverage vCenter Server and they require vCenter Server 5.1 and higher to schedule and perform backups.

However, it is possible to restore backup data directly to an ESXi host, in case connection to vCenter Server is lost after backups were executed.

Q. Are vSphere Data Protection solutions compatible with vCenter Server linked mode?

A. When vCenter Server instances running in linked mode are connected, the vSphere Data Protection appliance can communicate only with the vCenter Server instance that it is associated with.

Q. Can vSphere Data Protection solutions backup virtual machines that are not powered on?

A. Yes. A virtual machine does not need to be powered on to be backed up by vSphere Data Protection Advanced or vSphere Data Protection.

Q. Can customers disable deduplication?

A. No. Deduplication is always enabled, and all backups using vSphere Data Protection solutions are deduplicated.

Q. Are SQL Server, Exchange and/or SharePoint backups performed with vSphere Data Protection Advanced application-consistent?

A. Yes, vSphere Data Protection Advanced provides application-specific agents to ensure that all backups and restores are application-consistent in Windows 2008 or later environments. See the support matrix in the user guide for more details.

Q. Do image-level backups provide application consistency for virtual machines running a Windows OS?

A. Yes. vSphere Data Protection solutions provide application-consistent backup and recovery for Windows servers by leveraging Microsoft's Volume Shadow Copy Service (VSS). VMware Tools must be installed. For vSphere Data Protection Advanced, the recommended approach for protecting applications is to use these app-aware agents. For more information, see the Admin guide.

Q. Do the vSphere Data Protection solutions support backup to tape?

A. Both vSphere Data Protection solutions natively support backup to disk. They provide no native method for archiving the disk backups to other media, such as tape.

Q. Can third-party deduplicated storage be used as destination?

A. vSphere Data Protection Advanced can be used as the front-end to manage backup and replication on EMC Data Domain systems. No other third-party deduplication storage can be used as backup destination. Integration with Data Domain is not supported with vSphere Data Protection.

Q. Can a Network File System (NFS) share be used as destination for the deduplicated store?

A. vSphere Data Protection solutions cannot natively use NFS storage as a destination. However, vSphere Data Protection solutions can write to a virtual disk that resides on any NFS storage device listed in the VMware storage compatibility guide.

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Q. What are the commonalities between vSphere Data Protection Advanced and the basic vSphere Data Protection included with vSphere?

- A. Both solutions are
- Delivered in the form of a Linux-based virtual appliance that runs on top of vSphere hosts.
 - Based on EMC Avamar technology, delivering robust and reliable backup functionality with highly efficient variable-length deduplication.
 - Integrated with vSphere APIs for Data Protection, leveraging Changed Block Tracking for backups and restores.
 - Fully integrated with vCenter Server and managed directly from vSphere Web Client.
 - Simple to set up for granular backup jobs and policies, and for full virtual machine-level and self-service file-level recovery.

Q. What are the differences between vSphere Data Protection Advanced and the basic vSphere Data Protection included with vSphere?

- A. vSphere Data Protection Advanced provides greater scalability and flexibility in the following manner:
- Protects up to 8TB of deduplicated data per virtual appliance, as opposed to 2TB with vSphere Data Protection.
 - Delivers Microsoft Exchange, SQL Server and SharePoint agents (for both virtualized and non-virtualized applications) to protect these applications with application-consistency at the guest-OS level.
 - Provides network-efficient, secure backup data replication to another vSphere Data Protection Advanced appliance or Data Domain.
 - vSphere Data Protection Advanced provides integration with Data Domain Systems as a data store providing greater scalability in the back end.
 - vSphere Data Protection Advanced provides automated backup verification to ensure that backups are recoverable.

Q. Are the deduplication capabilities of vSphere Data Protection Advanced different from those in vSphere Data Protection?

- A. No. Both solutions provide the same variable-length deduplication capabilities.

Q. Can I use vSphere Data Protection with Data Domain?

- A. No. You can only use vSphere Data Protection Advanced with Data Domain.

Q. Are current vSphere 5.5 customers entitled to vSphere Data Protection 5.5?

- A. Yes. vSphere Data Protection (not vSphere Data Protection Advanced) is included with vSphere Essentials Plus and higher. Customers of vSphere Essentials Plus or higher editions with an active support and subscription (SnS) contract at the time of general availability of vSphere 5.5 are entitled to vSphere Data Protection 5.5.

For current users of VMware Data Recovery

Q. Does vSphere Data Protection replace VMware Data Recovery?

- A. Yes. vSphere Data Protection replaces the legacy VMware Data Recovery feature in vSphere. vSphere Data Protection provides equivalent scalability to VMware Data Recovery with a more robust and efficient backup engine.

Q. How does the introduction of vSphere Data Protection Advanced affect people using VMware Data Recovery?

- A. VMware Data Recovery users will be asked to move to vSphere Data Protection, because VMware Data Recovery will begin its end-of-life process. The VMware Data Recovery support policy follows that of vSphere 5.0. More information is available at <https://www.vmware.com/support/policies/lifecycle/enterprise-infrastructure/faq.html>

Q. Can customers continue to use VMware Data Recovery to protect their data?

- A. Yes. Users can continue using VMware Data Recovery for as long as VMware supports it.

If you decide to upgrade your vSphere infrastructure to vSphere 5.1, you need to start using vSphere Data Protection, because vSphere 5.1 does not support VMware Data Recovery. We encourage customers to replace their data-protection platform to take advantage of the benefits that vSphere Data Protection offers.

If it is likely that you will perform a restore from a recent VMware Data Recovery backup (e.g., from within the past 30–60 days), we recommend that you retain a VMware Data Recovery appliance on a host running a compatible version of vSphere on which to perform a VMware Data Recovery restore. For longer-term purposes (i.e., several months or years), a copy of the installation media for compatible versions of VMware Data Recovery and vSphere should be archived with the VMware Data Recovery backup media in case the need arises to restore data protected by VMware Data Recovery.

Contact/Support

Q. How can I contact VMware if I want to purchase vSphere Data Protection Advanced or have other questions specific to my needs?

A. For more information or to purchase vSphere Data Protection Advanced please visit <http://www.vmware.com/go/vdpadvanced>.

For information or to purchase VMware products, call 1-877-4VMWARE (outside of North America, +1-650-427-5000), visit <http://partnerlocator.vmware.com/>

