

Zerto Virtual Replication releases regular updates. VMware and Microsoft also release new versions of their products which can impact Zerto Virtual Replication. This document describes different options for different upgrade scenarios.

The following topics are described in this chapter:

- [Upgrading Zerto Virtual Replication](#)
- [Upgrading VRAs](#)
- [Upgrading Zerto Virtual Replication PowerShell Cmdlets.](#)
- [Upgrading or Reinstalling VMware Components](#)
- [Upgrading or Reinstalling Microsoft SCVMM/Hyper-V Components](#)
- [Upgrading Zerto Cloud Manager](#)
- [Upgrading Zerto Cloud Connectors](#)

Upgrading Zerto Virtual Replication

You can upgrade from version N to the next version (N+1) of Zerto Virtual Replication including to any update *within* the current version. You cannot do an N+2 upgrade directly.

The order you upgrade the sites, protected or recovery, is not relevant as long as paired sites remain only one version apart.

Note: Upgrade releases are considered to be upgrades of the same version. Releases 4.5, 4.5U1, 4.5U2, etc., are the *same* version.

The following table shows what version you can upgrade to based on the current version running at the site.

CURRENT VERSION:	CAN UPGRADE TO:
3.5, 3.5Ux	4.0, 4.0Ux
4.0, 4.0Ux	4.5
4.5, 4.5Ux	N/A

Note: Zerto recommends upgrading to the latest version of Zerto Virtual Replication that supports the environment you are using. Refer to the interoperability matrix in the *Zerto Virtual Replication Installation Guide* for the list of supported environments.

A Zerto Virtual Manager can be used with a different version on another site, as long as the other version is only one version higher or lower. The following table shows what versions can be used on a peer site, based on the version on the current site.

VERSION N (THIS VERSION)	VERSION N-1	VERSION N+1
3.5, 3.5Ux	3.1, 3.1Ux	4.0, 4.0Ux
4.0, 4.0Ux	3.5, 3.5Ux	4.5
4.5	4.0Ux	N/A

When upgrading Zerto Virtual Replication, the VRAs that were installed in the previous version are not upgraded automatically. If a newer version of the installed VRAs exists, you can continue to use the current VRAs with the new version of Zerto Virtual Replication or upgrade these VRAs from within the Zerto User Interface, as described in [“Upgrading VRAs”, on page 5](#). Zerto recommends that you always upgrade the VRAs on your site to the latest version.

The order you upgrade the sites, protected or recovery, is not relevant as long as paired sites remain only one version apart, that is, only one version higher or lower.

When using the Zerto Cloud Manager, you must upgrade the Zerto Cloud Manager to be consistent with the latest version of Zerto Virtual Replication run by the CSP. Also, upgrade the version of Zerto Virtual Replication run by the CSP before Zerto Cloud Manager, so that they are never more than one version separated from each other. For details about upgrading Zerto Cloud Manager, refer to the [Zerto Cloud Manager Installation Guide](#).

Before Upgrading Zerto Virtual Replication

Before upgrading to a new version, either by installing the new version over the existing version or by uninstalling the existing version and then installing the new version, Zerto recommends doing the following:

- Clear the Microsoft Internet Explorer cache of temporary Internet files. Not clearing the cache of temporary files can result in problems when accessing the Zerto Virtual Manager via the vSphere Client console.
- Make sure that all VPGs are in `Protecting` state and not in a sync state, such as `Delta Sync`, or an error state, such as `Needs Configuration`.
- Complete any recovery operation before starting the upgrade.
- Save the tweaks file before doing the upgrade, if you have made any changes to it. The `tweaks.txt` file is replaced with the default tweak file so all the tweaks entered before the upgrade are lost.
- Stop the Zerto Virtual Manager service.
- Create a backup of the machine where the Zerto Virtual Manager runs, to use in case the upgrade fails. Zerto recommends taking a snapshot of the machine after stopping the Zerto Virtual Manager service.

Note: The snapshot should only be used to rollback to the pre-upgrade state immediately after the upgrade has completed. The snapshot should not be used after the protection of virtual machines has restarted.

The installation procedure checks for an existing installation that is either one version lower than the new version or is the same version. If an installation is found you can upgrade the installation.

Upgrading the Current Installation

The existing Virtual Replication Appliances and protected virtual machines, along with all other information, such as checkpoints, journals, sites, and pairing details, are retained and are available in the upgraded installation. The upgrade is performed without disrupting the protection, but no new checkpoints are written to the journal during the actual upgrade. This temporarily causes alerts to be issued, even if only a single site was affected, stating that the journal history and RPO do not meet their specified target settings.

Note: You must run the upgrade procedure to completion.

To upgrade the version:

1. Run the Zerto Virtual Replication installation executable.
The Zerto Replication Installation Wizard is displayed.
2. Select *Upgrade* and click *Next*.

The upgrade proceeds automatically.

Note: If the vSphere Client console was open during the upgrade, close it and reopen it.

Upgrading VRAs

VRAs from the existing installation are not automatically upgraded when upgrading Zerto Virtual Replication. VRAs installed with the previous version of Zerto Virtual Replication can continue to work with the current version and with any combination of VRAs, all from one version or a mix of VRA versions, on both the protected and recovery sites, as long as the VRA versions differ by only one version, higher or lower. Zerto recommends upgrading the VRAs to be consistent with the latest version. See [“Upgrading VRAs”, on page 5](#) for information relating to upgrading existing VRAs.

Upgrading Multiple Sites

A Zerto Virtual Manager can be installed on a site running a different version, as long as each version is only one version higher or lower than the other. When you have multiple sites, make sure that the version of Zerto Virtual Manager is never more than one version higher or lower than any of the versions running on the paired sites.

To upgrade Zerto Virtual Replication installed on multiple sites:

1. Upgrade a site whose version is lower than the required version. Start the upgrades with the site whose version is lowest.
Note: Make sure, at all times, that no site is more or less than one version higher or lower than any of the paired sites.

- If the VRAs on the site need upgrading, upgrade these VRAs to ensure that they are also no more or less than one version higher or lower than any of the VRAs on any of the paired sites.
- Repeat the above step for all sites.

For example, if you have sites running versions 3.5U7 paired to a site running 4.0U4, and you are planning to upgrade to 4.5, you must first upgrade the 3.5U7 site to a 4.0Ux version and then both of the sites to 4.5.

Upgrading To More Than One Version Higher

If you need to upgrade more than one version higher, do one of the following:

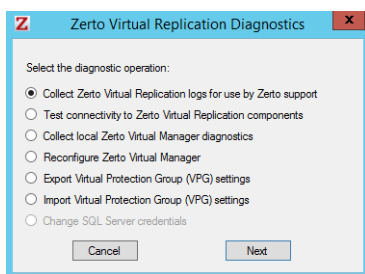
- Upgrade versions stepwise, one version at a time, as described above, until you reach the required version.
- Use the *Zerto Diagnostics* utility's export option to export the existing VPG definitions, then uninstall the old version of Zerto Virtual Replication. Install the new version, then use the *Zerto Diagnostics* utility's import option to re-create the VPGs.

Note: Before upgrading to a new version, make sure that all VPGs are in `Protecting` state and not in a sync state, such as `Delta Sync`, or an error state, such as `Needs Configuration`.

To upgrade Zerto Virtual Replication using the Zerto Diagnostics utility:

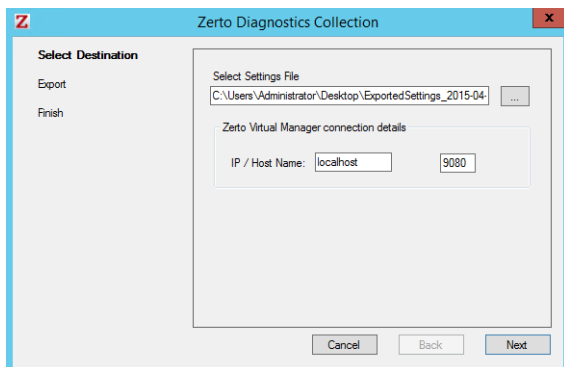
- Click *Start > Programs > Zerto Virtual Replication > Zerto Diagnostics*.

The *Zerto Virtual Replication Diagnostics* menu dialog is displayed.



- Select the *Export Virtual Protection Group (VPG) settings* option and click *Next*.

Note: Zerto Virtual Replication regularly exports settings to the `Zerto_Installation_Folder\zerto Virtual Replication\ExportedSettings` folder. You can use the last exported file. The default location of `Zerto_Installation_Folder` is `C:\Program Files\Zerto`.



- Select the destination for the file that will contain the exported settings and enter the Zerto Virtual Manager IP address and port for the protected site.
- Click *Next*.
- The list of exported VPGs is displayed.
- Click *Done*.
- In the Zerto User Interface delete the VPGs, and keep their target disks.

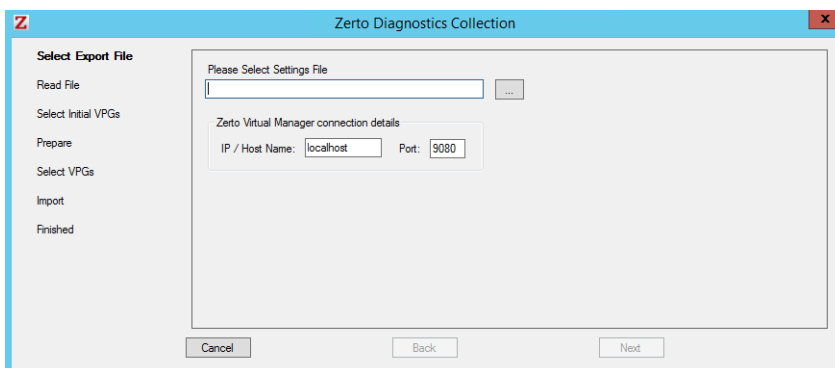
Note: If you did not export the settings, Zerto Virtual Replication regularly exports settings to the `Zerto_Installation_Folder\zerto Virtual Replication\ExportedSettings` folder. You can use the last exported file

as input to recreate the VPGs to this point in time. The default location of *Zerto_Installation_Folder* is `C:\Program Files\Zerto`.

7. Uninstall the existing Zerto Virtual Replication version.
8. Install the new Zerto Virtual Replication version, as described in the *Zerto Virtual Replication Installation Guide*.
9. Install the VRAs on the hosts in the site and pair the sites, as described in *Zerto Virtual Replication Installation Guide*.

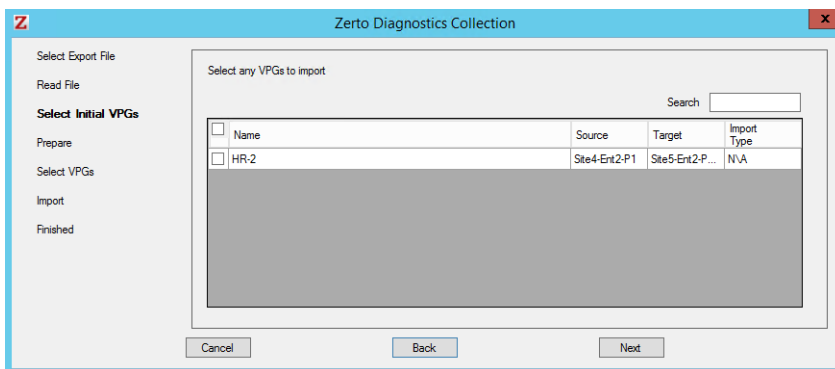
Note: If the protected site and recovery site are the same for any of the VPGs that were exported, set `Enable replication to self` in the `Advanced Settings` dialog, as described in *Zerto Virtual Manager Administration Guide for the VMware vSphere Environment*.

10. Click *Start > Programs > Zerto Virtual Replication > Zerto Diagnostics*.
The *Zerto Virtual Replication Diagnostics* menu dialog is displayed.
11. Select *Import Virtual Protection Group (VPG) settings*.
12. Click *Next*.



13. Select the file previously exported and enter the Zerto Virtual Manager IP address and port for the protected site.
14. Click *Next*.

The list of exported VPGs is displayed.



15. Select the VPGs to import. You cannot import VPGs that have the same name as a VPG that is already defined in current installation. If a VPG in the import file has the same name as an existing VPG, it is disabled and is grayed-out.
16. Click *Next*.
The list of imported VPGs is displayed. If the VPG cannot not be imported, the reason is specified.
17. Click *Done*.

Re-installing the Current Installation

If the current version is the same as the installed version, installation options are *Reinstall* or *Uninstall*.



When reinstalling the version, all pairing, VRAs, and VPGs defined for the site are removed. Use the **Zerto Diagnostics** utility *Export* and *Import* options, described in [“Upgrading To More Than One Version Higher”](#), on page 3 to save the settings.

Note: If the vSphere Client console was open during the re-installation, close it and reopen it to ensure you use the upgraded Zerto User Interface.

Upgrading VRAs

When upgrading Zerto Virtual Replication, the VRAs that were installed in the previous version are not upgraded automatically. If a newer version of the installed VRAs exists, you can continue to use the current VRAs with the new version of Zerto Virtual Replication or you can upgrade these VRAs from within the Zerto User Interface.

VRAs installed with the previous version of Zerto Virtual Replication can work with VRAs installed with the current version of Zerto Virtual Replication in any combination (all from one version or a mix of VRA versions) as long as the VRAs are only one version higher or lower than the version of Zerto Virtual Replication installed on the site.

Zerto recommends that you always upgrade the VRAs to the latest version on your site.

Not all new installations of Zerto Virtual Replication require upgrading VRAs. If your VRA is outdated relative to your current version of Zerto Virtual Replication and an upgrade is available, the VRA version will be reported in the column as `outdated`. In addition, an alert is issued on the site using the old VRA and on any site that is paired with it.

Note: Move the mouse over the `outdated` value to display the VRA version as a tooltip.

Considerations when upgrading VRAs:

- For VRAs managing protected virtual machines, do one of the following:
 - vMotion (in a VMware environment) or live migrate (in a Hyper-V environment) the protected virtual machines managed by the VRA to another host, on the same site, with a VRA; no sync is required.
 - Upgrade the VRA without vMotioning (in a VMware environment) or live migrating (in a Hyper-V environment) the virtual machines; syncs are performed according to the upgrade progress description (after step 4, below).

To upgrade VRAs:

1. For a VRA protecting virtual machines and when vMotioning (in a VMware environment) or live migrating (in a Hyper-V environment) the protected virtual machines:
 - a) Remove affinity rules for protected virtual machines on the host with the VRA to be upgraded.
 - b) vMotion (in a VMware environment) or live migrate (in a Hyper-V environment) these protected machines from the host to another host with a VRA.
2. In the Zerto User Interface, click *SETUP* > VRAs, select the VRAs to upgrade, and click *MORE* > *Upgrade*.

The *Upgrade VRAs* dialog is displayed, listing the selected VRAs and whether an upgrade is available.

3. Review the list and uncheck any VRAs that you decide not to upgrade.
4. Click *Upgrade Selected VRAs*.

Upgrade progress is displayed in the *VRAs* tab.

- For version upgrades, for VRAs at the protected site and recovery sites, a delta sync is performed following the upgrade.
- For updates within a version:
 - For VRAs at the protected site, a bitmap sync is performed following the upgrade.
 - Note:** The time needed to upgrade a VRA is short so the bitmap sync should be quick.
 - For VRAs at the recovery site, a delta sync is performed following the upgrade.

You do not need to upgrade VMware Tools (in a VMware environment) or Integration Services (in a Hyper-V environment) on a VRA.

Upgrading Zerto Virtual Replication PowerShell Cmdlets

When upgrading Zerto Virtual Replication PowerShell cmdlets, make sure that Windows PowerShell is closed before installing the new version.

Upgrading or Reinstalling VMware Components

Refer to VMware documentation for complete information regarding installation and upgrading of VMware products prior to installation or upgrade.

Verify that your version of Zerto Virtual Replication supports the new VMware version before beginning the installation or upgrade.

Refer to the interoperability matrix for the list of supported environments.

Upgrading a vCenter Server

Zerto recommends that you upgrade a vCenter Server rather than reinstalling it. When upgrading both vCenter and an ESX/ESXi, upgrade the vCenter first.

Zerto Virtual Replication components are not affected by a vCenter Server upgrade; protection continues and no additional procedures are required. When upgrading a vCenter Server, make sure that you preserve the vCenter database. Preserving the existing database is required in order to continue using the existing Zerto Virtual Replication installation.

Note: If the vCenter Server service is stopped, a Zerto Virtual Replication delta sync is performed on all protected virtual machines when the vCenter Server is restarted.

Reinstalling a vCenter Server

If, for whatever reason, you need to reinstall the vCenter Server, including rebuilding the database, contact Zerto support for help throughout the reinstallation.

Upgrading vCloud Director

Zerto recommends that you upgrade vCD rather than reinstalling it. Zerto Virtual Replication components are not affected, protection continues, and no additional procedures are required.

When upgrading vCD from version 1.5 to 5.1 or higher, you must change the storage profile for each protected virtual machine from * (any) to a valid storage profile to use for that virtual machine. Contact Zerto support for help with the upgrade of VPGs.

If, for whatever reason, you need to reinstall vCloud Director, contact Zerto support for help throughout the reinstallation.

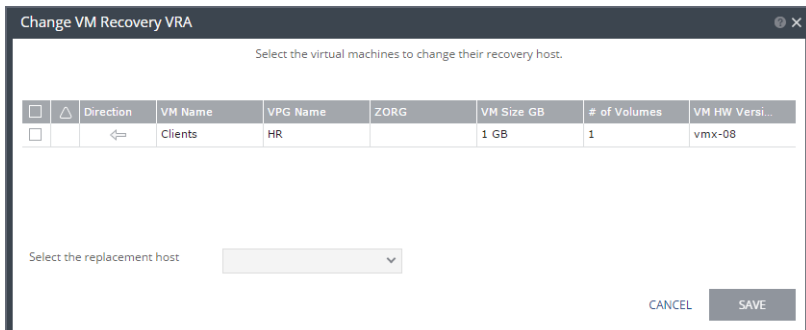
Upgrading or Reinstalling a Host

When upgrading, including applying patches, or reinstalling a host with an active VRA, change the recovery host of every virtual machine in every VPG that recovers to this host, to avoid a `Delta Sync` after the host has been upgraded and the VRA started up. Then upgrade the host. You can move the virtual machines to a different host from within the Zerto User Interface, as described below, or by using cmdlets, as described in *Zerto Virtual Replication PowerShell Cmdlets Guide*.

To change a recovery VRA:

1. In the Zerto User Interface, click *SETUP > VRAs*.
2. Select the VRA to change and click *MORE > Change VM Recovery VRA*.

The *Change VM Recovery VRA* dialog is displayed, listing all the virtual machines being recovered on that host.



3. Review the list and select the virtual machines to change the target host to another specified target host.
4. Select the target host for these virtual machines in the *Select the replacement host* drop-down list. You can move some virtual machines to one replacement target host and by repeating the operation, move other virtual machines to a different target host.
 - Validation is performed to make sure the selected target host can be used, for example the datastores used by both the VRAs are accessible from both hosts.
 - Any implications of the change, such as whether synchronization might be required after the change is also displayed.
5. Click *SAVE*.

The VPG recovery host definitions are changed and the affected target data, including the journals, storage vMotioned to the VRA under the replacement host. During this procedure you cannot edit the affected VPGs nor attempt a failover, move, failover test, or clone operation. At the end of the procedure a `Delta Sync` might be required to resynchronize the protected machines with the recovery VRAs.

In order not to affect the recoverability of other VPGs replicating to the VRA, a new virtual machine is created to handle moving the disks. This virtual machine is named `Z-VRAN-ESXihostname-xx`, where *hostname* is the name of the ESXi host where the original VRA is installed and *xx* is a unique index used for the virtual machine, with a format of `yy-xxxx` or `xxxx`.

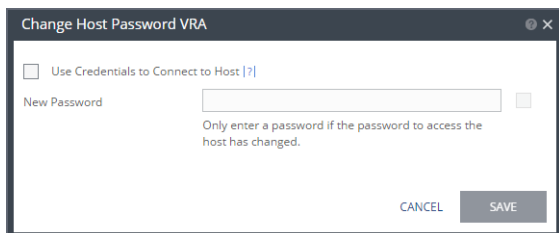
6. Repeat this procedure for all the virtual machines.

VRAs installed using a password to access the host, that require the password to be updated, for example, when the host is upgraded, must be updated with the new password.

To change the host password required by a VRA:

1. In the Zerto User Interface, click *SETUP > VRAs*.
2. Select the VRAs that need to be updated and click *MORE > Change Host Password*.

The *Change Host Password VRA* dialog is displayed.



3. To change the connection method or host password, do one of the following:
 - If the VRA is using a password to connect to the host and should use vSphere Installation Bundle, VIB, uncheck *Use credentials to connect to host*.
 - If the VRA is using VIB to connect to the host and should use a password, check *Use credentials to connect to host* and enter the password. To display the password in plain text, click in the box next to the field.
 - If the VRA is connecting to the host with a password and the password for the host has changed, enter the new password. To display the password in plain text, click in the box next to the field.
4. Click **SAVE**.

Upgrading or Reinstalling Microsoft SCVMM/Hyper-V Components

Refer to Microsoft documentation for complete information regarding installation and upgrading of Microsoft products prior to installation or upgrade. Verify that your version of Zerto Virtual Replication supports the new Microsoft version before beginning the installation or upgrade. Refer to the interoperability matrix for the list of supported environments.

Reinstalling VMM

If, for whatever reason, you need to reinstall the VMM, including rebuilding the database, contact Zerto support for help throughout the reinstallation.

Upgrading or Reinstalling a Host

When upgrading, including applying patches, or reinstalling a host with an active VRA, change the recovery host of every virtual machine in every VPG that recovers to this host, to avoid a `Delta Sync` after the host has been upgraded and the VRA started up. Then upgrade the host. You can move the virtual machines to a different host from within the Zerto User Interface, as described below, or by using cmdlets, as described in *Zerto Virtual Replication PowerShell Cmdlets Guide*.

To change a recovery VRA:

1. In the Zerto User Interface, click **SETUP > VRAs**.
2. Select the VRA, and click **MORE > Change VM Recovery VRA**.
The *Change Target Host* dialog is displayed, listing all the virtual machines on that host.
3. Review the list and select the virtual machines whose target host you are changing.
4. Select the new target host for these virtual machines in the `Select the replacement host` drop-down list. You can move some virtual machines to one replacement target host and, by repeating the operation, move other virtual machines to a different replacement target host.
 - Validation is performed to verify that the selected target host can be used. For example, the storage used by the VRAs must be accessible from both hosts.
 - The dialog displays the possible consequences resulting from the change.
5. Click **SAVE**.

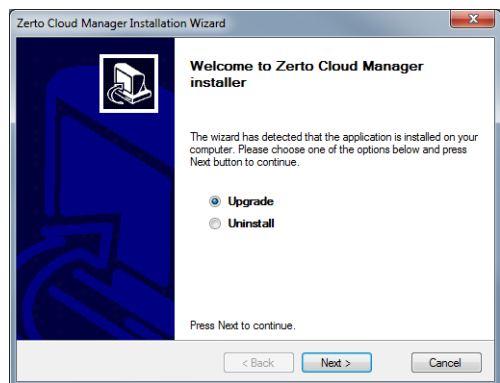
The VPG recovery host definitions are changed and the affected target data, including the journals, live migrated to the VRA under the replacement host. During this procedure you cannot edit the affected VPGs nor attempt a failover, move, failover test, or clone operation. At the end of the procedure a `Delta Sync` might be required to resynchronize the protected machines with the recovery VRAs.

In order not to affect the recoverability of other VPGs replicating to the VRA, a new virtual machine is created to handle moving the disks. This virtual machine is named `z-vrah-hostname-xx`, where `hostname` is the name of the Hyper-V host where the original VRA is installed and `xx` is a unique index used for the virtual machine, with a format of `yy-xxxx` or `xxxx`.

6. Repeat this procedure for all the virtual machines.

Upgrading Zerto Cloud Manager

The Zerto Cloud Manager version must be the same as the Zerto Virtual Manager version or one version higher. An upgrade of the Zerto Cloud Manager moves all configuration definitions from the old version to the new version. The installation checks for an existing installation and if an existing installation is identified, that is one version lower than the new version, you can upgrade or uninstall the existing version.



Upgrade the Zerto Cloud Manager before upgrading the Zerto Virtual Managers.

To upgrade the version:

1. Run `zerto Cloud Manager Installer.exe`.
The Zerto Cloud Manager Installation Wizard is displayed.
2. Select *Upgrade* and click *Next*.

The upgrade proceeds automatically.

Upgrading Zerto Cloud Connectors

Zerto Cloud Connectors do not require upgrading when a new Zerto Virtual Replication version is released.

ABOUT ZERTO

Zerto is committed to keeping enterprise and cloud IT running 24/7 by providing scalable business continuity software solutions. Through the Zerto Cloud Continuity Platform, organizations seamlessly move and protect virtualized workloads between public, private and hybrid clouds. The company's flagship product, Zerto Virtual Replication, is the standard for protection of applications in cloud and virtualized datacenters.