The Zerto IT Resilience Platform is the industry’s first solution to converge disaster recovery, backup and cloud mobility into a single, simple, scalable platform. Designed to accelerate IT transformation, Zerto’s platform automates the disaster recovery and backup processes to remove systemic risk to the business, delivers the data protection needs across clouds while maximizing resources and reducing the cost and complexity of multiple solutions.

Based on a foundation of continuous data protection, the platform uses best of breed replication and unique journaling capabilities to deliver the fastest Recovery Point Objectives (RPO) and Recovery Time Objectives (RTO) for both short-term and long-term retention of data. Built-in platform orchestration and automation enables faster management of workloads at scale with minimal touch. Analytics with intelligent dashboards and reports provide complete visibility across multi-site, multi-cloud environments to ensure performance standards are met.

The following topics are described in these Release Notes:

- End-of-Version Support Notice on page 3
- Prerequisites, Requirements and Installation Instructions on page 3
- Upgrading Zerto and/or Zerto Cloud Manager on page 4
- What's New & Resolved - Zerto 7.0 Update 2 on page 4
- What's New & Resolved - Zerto 7.0 Update 2 on page 4
- What's New & Resolved - Zerto 7.0 on page 10
- Zerto Analytics on page 19
- Known Issues on page 21

**End-of-Version Support Notice**

To review the Zerto end-of-version support policies, see the document Product Version Lifecycle Matrix.

**Prerequisites, Requirements and Installation Instructions**

- Before installing Zerto, click to open and review [prerequisites](#) and [requirements](#) of the relevant platform:

<table>
<thead>
<tr>
<th>VMware vSphere environments</th>
<th>Microsoft Hyper-V environments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Azure environments</td>
<td>Amazon Web Services (AWS) environments</td>
</tr>
<tr>
<td>Cloud Service Providers (CSPs)</td>
<td></td>
</tr>
</tbody>
</table>

- For [installation](#) instructions, click to open and review the installation guide:
Upgrading Zerto and/or Zerto Cloud Manager

To review the upgrading guidelines and instructions, see Upgrading the Zerto Virtual Replication Environment.

**Important:**

Starting with Zerto 5.5, Zerto changed the maximum sizing limitations when the ZVM database needs to migrate from an embedded internal database, to an external database.

Before upgrading, it is important to follow the sizing guidelines. **Failure to follow the sizing guidelines can result in performance degradation and possible software errors.**

For more information, click to review:

- Scale and Benchmarking Guidelines
- Migrating the Zerto Virtual Replication Database to Microsoft SQL Server

**Important:**

Long Term Retention Repository structure was adjusted in 7.0 to support larger amounts of retention sets. As such, a Repository that was created in 6.5 and all the retentions sets it contains, will be available for restores only.

What’s New & Resolved - Zerto 7.0 Update 2

What’s New - In Zerto 7.0 Update 2 on page 4
Resolved Issues - Zerto 7.0 Update 2 on page 5

What’s New - In Zerto 7.0 Update 2

- APIs on page 5
- AWS on page 5
- Azure on page 5
- vSphere on page 5
- Zerto Logs on page 5
Zerto 7.0 Update 2 includes the following new features and functionalities:

**APIs**
- **VPGSettings** - Improved and expanded this API available at https://zvm_ip:port/v1/vpgSettings:
  - **vSphere/Hyper-V to Azure VPG Management APIs** - Zerto now supports the ability to create and edit VPGs going from a vCenter or SCVMM environment to an Azure environment using the VPGSettings API. The new API is available in the Zerto RESTful API Reference Guide, in the section *vSphere to Azure VPG Management APIs*.

**AWS**
- Hardened Zerto components (zSAT, zASA) security groups.

**Azure**
- Zerto now supports Dsv3 and Esv3 VM Series.
- Zerto now has APIs to manage VPGs replicating to Azure. For more details, see the above section, APIs on page 5.

**vSphere**
- vSphere version 6.5 U3, which includes vCenter 6.5 U3 and ESXi 6.5 U3, is now supported. See the Interoperability Matrix for specific features support.

**Zerto Logs**
- Accelerated the Zerto log collection process.

**Resolved Issues - Zerto 7.0 Update 2**

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Resolved Issues: Azure on page 6
Resolved Issues: vSphere on page 6
Resolved Issues: General on page 7
Resolved Issues: Long Term Retention

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0 Update 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>140428, 140802, 141536</td>
<td>Environments with Index &amp; Search: Resolved an issue which caused the indexing mechanism to fail when files/folders contained space characters at the beginning or end of the entry name.</td>
</tr>
<tr>
<td>133389, 138547</td>
<td>Environments with Long Term Retention: Resolved an issue where the user could not select an LTR repository for a VPG, if self replication site settings was not enabled.</td>
</tr>
</tbody>
</table>

Resolved Issues: Azure

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0 Update 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>140380</td>
<td>Before performing FOL, FOT, Move or Clone operations, Zerto now validates that there is access to the scripts required for the scale set instances. If there is no access, the user will receive an error message and the operation is terminated.</td>
</tr>
<tr>
<td>141922, 141905</td>
<td>Improved the logic of core usage when the quota limit of the instance family is zero.</td>
</tr>
</tbody>
</table>

Resolved Issues: vSphere

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0 Update 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>141712</td>
<td>Resolved an issue that prevented VRA installation/upgrade on vCenter 6.7.x, when the '+' character was used in the datacenter name.</td>
</tr>
<tr>
<td>140280, 142560, 142357</td>
<td>Fixed an issue which prevented creating a VPG from VC to vCD, while defining the boot order.</td>
</tr>
<tr>
<td>141765, 143282, 143489, 141740, 141765, 142712, 143197</td>
<td>After upgrading to Zerto v7.0U1 and above: Fixed a VRA upgrade failure when working with vSphere versions older than 6.0.</td>
</tr>
</tbody>
</table>
Resolved Issues: General

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0 Update 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>132524, 130693, 140150</td>
<td>Fixed an issue where the ZVM could not connected to the database, thus causing the ZVM service to crash, after Windows operating system upgrade of the ZVM server when the database was configured locally.</td>
</tr>
<tr>
<td>140444, 141077, 141069, 141233</td>
<td>Updated environment metadata collection for vCenter vApps and nested resources pools to resolve rare issues that occurred where either VMs no longer replicated, nor could they be protected, or the ZVM UI was no longer available.</td>
</tr>
<tr>
<td>112116, 137047, 133907</td>
<td>Fixed an issue with the Billing Report so that removed sites don't appear in the report.</td>
</tr>
<tr>
<td>133122, 138676, 141074</td>
<td>The user is now able to create a VPG replicating to a cluster, when selecting a VM with an RDM disk.</td>
</tr>
<tr>
<td>135412</td>
<td>Resolved a rare issue caused by the Zerto driver, where the host server would reboot.</td>
</tr>
</tbody>
</table>

What’s New & Resolved - Zerto 7.0 Update 1

What's New - In Zerto 7.0 Update 1 on page 7
Resolved Issues - Zerto 7.0 Update 1 on page 8

What’s New - In Zerto 7.0 Update 1

AWS on page 7
Azure on page 8
General on page 8
vCD on page 8
VMware on page 8

Zerto 7.0 Update 1 includes the following new features and functionalities:

AWS

- Zerto now supports creation of encrypted workers logs on the S3 bucket, thus supporting an "all encrypted" S3 bucket encryption. To enable encrypted workers logs, contact Zerto Support.
- Zerto now collects Zerto related events in CloudTrail logs. To enable this, additional permissions are required. See Zerto, in the section Minimum Required AWS Permissions.
Azure

• The Zerto installation in Azure environments now validates the limit and availability of the cores quota in the Azure region, and in DSv2 instance type. For example:
  - If you have 200 cores in the region, but the core quota limit for DSv2 is set to 10, instead of the 50 minimum cores required, then during the Zerto installation or upgrade, an error will appear.
  - If your core quota limit for DSv2 is set to 100, and you have 20 available cores in the region, then during the Zerto installation a warning will appear.
  - If your core quota limit for DSv2 is set to 100, and you already have 70 cores used by DSv2 instances, then during the Zerto installation a warning will appear.

• Customers are now able to recover disks up to 8TB. To enable this, please contact Zerto Support.

General

• **Self-signed certificate:** In new installations, ZVM will generate a self signed certificate that uses SHA512 and contains a Subject Alternative Name extension. This removes a warning in google chrome and internet explorer when the certificate is present in the trusted root Certificate Authorities Store.

vCD

• Zerto now supports **vCD 9.7** for the latest Zerto version, and for previous versions as well. See the [Interoperability Matrix](#) for specific features support.

VMware

• **vSphere version 6.7 U2**, which includes vCenter 6.7 U2 and ESXi 6.7 U2, is now supported. See the [Interoperability Matrix](#) for specific features support.

Resolved Issues - Zerto 7.0 Update 1

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Resolved Issues: Long Term Retention on page 9
Resolved Issues: File Level Restore on page 9
Resolved Issues: AWS on page 9
Resolved Issues: Public Cloud on page 10
Resolved Issues: General on page 10
Resolved Issues: vSphere

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0 Update 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>129756, 129716, 131736</td>
<td>Fixed an issue which caused the ESXi Lockdown Mode to change from Strict to Normal.</td>
</tr>
<tr>
<td>139802, 140689, 140444, 140306, 140878, 141069, 141069, 141233</td>
<td>Updated environment metadata collection to resolve rare issues that occurred where either VMs no longer replicated, nor could they be protected, or the ZVM UI was no longer available. <strong>Note:</strong> Fixed from version 7.0U1P1</td>
</tr>
</tbody>
</table>

Resolved Issues: Long Term Retention

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0 Update 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>136134</td>
<td>Time zone difference between protected and recovery sites no longer causes more than one retention set a day.</td>
</tr>
</tbody>
</table>

Resolved Issues: File Level Restore

<table>
<thead>
<tr>
<th>CASE NUMBER</th>
<th>ISSUES RESOLVED IN 7.0 UPDATE 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>132241</td>
<td>Fixed an issue while mounting a disk caused by parsing NTFS journal when the journal was cycled in the middle of a record.</td>
</tr>
</tbody>
</table>

Resolved Issues: AWS

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0 Update 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>134645</td>
<td>The ModifyNetworkInterfaceAttribute permission needs to =true so that the NICs address will be deleted upon termination to allow failing over to the same IP.</td>
</tr>
<tr>
<td>135422</td>
<td>The default ZSAT and ZASA security group, when replicating out of AWS, has been hardened.</td>
</tr>
</tbody>
</table>
### Resolved Issues: Public Cloud

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0 Update 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>130685</td>
<td>Updated memory allocation when promoting to the Public Cloud for a more robust recovery.</td>
</tr>
<tr>
<td>131967</td>
<td>Fixed an issue so that journal grains are purged from the cloud storage to avoid redundant utilization of the cloud storage.</td>
</tr>
</tbody>
</table>

### Resolved Issues: General

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0 Update 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>123952, 125748, 128180, 132929</td>
<td>The reconfigure tool is automatically executed when running a Repair process.</td>
</tr>
<tr>
<td>135779, 137587</td>
<td>Fixed a time conversion issue with the Recovery Report API filters.</td>
</tr>
<tr>
<td>121971</td>
<td>Upgrading to Zerto 7.0: Fixed an issue which caused the Zerto upgrade to fail, when Zerto software was running SQL 2008.</td>
</tr>
<tr>
<td>132166</td>
<td>A security issue was resolved.</td>
</tr>
<tr>
<td>139488, 138746, 139081, 140317, 139885, 140320, 140270, 140361</td>
<td>Fixed an issue with environment information collection, where protected VMs, which were connected to Distributed Switch networks, were shown as disconnected after upgrade.</td>
</tr>
<tr>
<td>138942</td>
<td>Fixed an issue which, in some cases a rare race condition caused the Zerto alerts update mechanism to stop functioning. As a result, old irrelevant alerts appeared instead of new alerts.</td>
</tr>
<tr>
<td>140812, 141055, 141173, 140841, 141045, 141041, 141087, 141164, 141026, 141115, 141222, 141167, 141316</td>
<td>Resolved issues where the ZVM Service would crash, or the upgrade would fail, in sites where the ZVM Self-Signed Certificate was replaced by the user. <strong>Note:</strong> Fixed from version 7.0U1P1</td>
</tr>
</tbody>
</table>

### What’s New & Resolved - Zerto 7.0

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Resolved Issues - Zerto 7.0 on page 15

What’s New - In Zerto 7.0

Zerto 7.0 includes the following new features and functionalities:

- Enhanced Graphical User Interface on page 11
- Long Term Retention on page 11
- VPG Management on page 12
- vSphere on page 12
- vCloud Director on page 13
- Hyper-V on page 13
- Azure on page 13
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- Zerto Alerts on page 14
- VRA on page 14
- ZVM Maintenance on page 15
- Security on page 15
- Automated Billing for CSPs on page 15

! Important: Notification:

VSS functionality is no longer supported in Zerto. If you require VSS functionality, see Release Notes for Zerto with VSS, and Zerto - VSS Deployment and User Guide.

Enhanced Graphical User Interface

- Zerto created a brand new ZVM Graphical User Interface with advanced technology, which is simpler and more accessible. In addition, as part of the new user experience, users are now able to launch Zerto Analytics from within the new ZVM interface.

Long Term Retention

- SMB Support - In addition to supporting network shared repositories on top of NFS protocol, Zerto now supports network shared repositories on top of SMB/CIFS protocol.
- PBBA Support - Zerto now supports Purposely Built Backup Appliances (PBBAs), on top of NFS or SMB/CIFS protocols.

For example:
Release Notes for Zerto v7.0 U2 - Rev03
Zerto Release Notes

- HPE StoreOnce
- ExaGrid
- Dell EMC DataDomain
- Other de-duplicating appliances

**Enhanced Retention Settings** - Retention settings can now be configured for Long Term Retention per VPG. The available Retention periods are:
  - Daily Incremental Retention
  - Weekly and Monthly Full or Incremental Retention. Either Weekly or Monthly Retentions must be set to Full.
  - Yearly Full Retention

**Search and Restore** - Zerto enables users to quickly search for files and folders in specific VMs and restore either the virtual machine or VPG once the desired restore point is identified. Users will have to choose which VMs' file systems to index, to allow easy and quick search for files and folders.

**Sub-VPG/Single VM Restore** - A single VM restore is available in which the user can select one or multiple VMs in a VPG for sub-VPG restore.

For further details on Long Term Retention, see the [Zerto Administration Guide for vSphere or Hyper-V](#), in the section **Using Zerto’s Long Term Retention**.

**VPG Management**

- **Evacuate Host** - Zerto now enables users to evacuate an entire host by automatically changing the recovery host for all virtual machines to other recovery hosts in one operation. This eliminates the need of off-loading all VMs to a single replacement host or repeating the change recovery host operation until load-balancing is achieved. For further details, see the [Zerto Administration Guide for vSphere or Hyper-V](#), in the section **Changing a Recovery VRA**.

- **Failover Resiliency Improvements** - Recovery operations no longer roll back automatically when some VMs in a VPG fail to recover entirely. The user can choose to commit the VMs which recovered successfully or roll back. For further details, see the [Zerto Administration Guide for vSphere or Hyper-V](#), in the section **Managing Failover**.

**vSphere**

- **CD-ROM Drive Recovery** - Zerto now maintains the CD-ROM drive when performing recovery operations to VMware and vCloud Director environments. The CD-ROM drives will be connected to the IDE controllers, as Client device, pass-through mode.

**Note:**
Zerto no longer supports vSphere version 5.0
vCloud Director

Zerto has completed the switch over from vCD SDK to vCD REST API. Zerto 6.5 focused only on operations. In Zerto 7.0, we switched the environment information collection to also use vCD REST API as well.

RTO Performance Improvements - Zerto's recovery operations to vCD are now executed concurrently, significantly improving the RTO, especially when failing over multiple VPGs at once.

Internal benchmarks show improvement of up to x5 in RTO when large number of VPGs are failed over together. This was made possible by the switch to vCD REST APIs.

Note:
Zerto no longer supports vCloud Director versions 8.0.1, 8.0.2

Hyper-V

Environment data collection in Hyper-V is more robust.

Azure

RTO Performance Improvements - Zerto now uses the cloud native Azure Scale Set service to reduce RTO when failing over to Azure. When ZCA is installed in Azure, and the ZVM is up and running, an Azure scale set with one virtual machine is created in your Azure environment. The new virtual machine, created by the Scale Set, is prefixed with the site ID. When failing over to Azure, multiple VMs in the Scale Set are deployed for the recovery process and created in the ZCA VNet. When recovery is completed, these VMs are terminated.

Below is a list of considerations:

• Increase CPU quota, per Ds1v2 SKU family, to at least 50 for the Azure Scale Set service.
• CPU quota per region per subscription must be able to support Azure Scale Set service and recovery VMs.
• ZCA primary NIC subnet requires minimum 50 IP addresses for the created with the Azure Scale Set service.
• Internet access is required for the VMs created with the Azure Scale Set service.

AWS

• Zerto now defaults to encryption turned on for all Amazon EBS volumes that it creates.
• M5.large is now the ZASA and ZSAT Instances default.
• Zerto now queries only Zerto buckets in S3 for environment data collection.
APIs

- **VPGSettings** - Improved and expanded this API available at [https://zvm_ip:port/v1/vpgSettings](https://zvm_ip:port/v1/vpgSettings):

- **vSphere to vCD VPG Management APIs** - Zerto now supports the ability to create VPGs going from a vCenter environment to a vCloud Director environment using the VPGSettings API. As before, creating VPGs using the APIs can be done from the remote site, allowing CSPs using vCloud Director to remotely create VPGs for their DRaaS tenants. The new API is available in the Zerto Virtual Replication RESTful API Reference Guide, in the section vSphere to vCD VPG Management APIs.

- **VPGSettings API Validations** - Added validations to the VPGSettings API which determines whether a parameter is mandatory or relevant per protected/recovery site configuration.

- **Change Recovery VRA API** - A new API enables users to change the recovery VRA for all virtual machines at once or specify the virtual machines to change, available under:


  The new API is available in the Zerto Virtual Replication RESTful API Reference Guide, in the section VRAs: Change Recovery VRA APIs.

**Note:**

The following APIs were deprecated in Zerto 7.0:

- Create VPG Post - [https://zvm_ip:port/v1/vpgs](https://zvm_ip:port/v1/vpgs)
- Resources report - [https://zvm_ip:port/ZvmService/ResourcesReport](https://zvm_ip:port/ZvmService/ResourcesReport)
- CloudPortalURL factory

- A new format is used for duplicate network names. When the network name is duplicated, the switch name is appended.

**Zerto Alerts**

- Alerts which were marked as Acknowledged will no longer be un-Acknowledged, following a ZVM restart or upgrade. In addition, e-mail notification for active alerts will not be re-sent following a ZVM restart or upgrade.

**VRA**

- SSH access to the VRAs is now possible from the ZVM operating system. This access is for connectivity troubleshooting, and password policy compliance only. Do not store scripts or configuration files on the VRA file system, as they will be overwritten at the next VRA upgrade. Any changes to the VRA operating system, apart from credential management (adding users, changing passwords and adding trusted SSH keys), are unsupported.
ZVM Maintenance

- Zerto now enables you to perform maintenance operations on the ZVM VM with no down time. In order to perform these maintenance procedures, Zerto has integrated with Microsoft’s Failover Cluster feature and now allows their customers to install Zerto in a clustered environment.

For details on installing a new ZVM cluster, see Zerto Virtual Replication Installation Guide for Microsoft Hyper-V or VMware vSphere, in the section Installing Zerto in Clustered vSphere Environments.

To perform maintenance operations on your ZVM cluster operating system, see Zerto Virtual Manager Administration Guide for the VMware vSphere Environment, in the section Managing a Zerto Virtual Manager Cluster.

Security

- Sensitive database fields, such as hypervisor passwords, now have stronger encryption.

Automated Billing for CSPs

- CSPs participating in the Automated Billing program can no longer count on their ZCM to report their usage, and must make sure all their ZVMs are connected to Zerto’s billing server.

For further details, see Zerto Cloud Manager Administration Guide, in the section Zerto's Billing.

Resolved Issues - Zerto 7.0

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Resolved Issues: Long Term Retention on page 16
Resolved Issues: Hyper-V on page 16
Resolved Issues: vCD on page 17
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Resolved Issues: VPG on page 18
Resolved Issues: APIs on page 18
Resolved Issues: VRA on page 18
Resolved Issues: General on page 19
Resolved Issues: vSphere

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>124423</td>
<td>Rolling back no longer fails if the protected virtual machines power on requests times out.</td>
</tr>
<tr>
<td>123509</td>
<td>Zerto now supports recovering volumes containing the same name to vSAN datastores.</td>
</tr>
<tr>
<td>128686</td>
<td>Resolved an error which occurred when trying to edit VPG settings while some datastores which were configured in the VPG were decommissioned. The VPG's default target datastore is now considered part of the default settings.</td>
</tr>
<tr>
<td>132593</td>
<td>Resolved an issue which prevented failing over a VPG with reverse protection via ZSSP.</td>
</tr>
<tr>
<td>124423</td>
<td>Fixed an issue which caused Failover from AWS to VC to fail due to a AWS PV driver upgrade. ZertoTools now allows manual or auto downgrade of AWS PV Drivers before Failover to VC.</td>
</tr>
<tr>
<td>98929</td>
<td>VRA alerts will now skip hosts in Maintenance Mode in order to avoid redundant errors in vCenter.</td>
</tr>
</tbody>
</table>

Resolved Issues: Long Term Retention

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>131572</td>
<td>Improved Retention process resiliency to corrupted metadata files.</td>
</tr>
<tr>
<td>128211, 129746</td>
<td>Improved performance of Long Term Retention operations.</td>
</tr>
<tr>
<td>134390</td>
<td>Fixed Retention process Abort request flow.</td>
</tr>
<tr>
<td>125454, 126269</td>
<td>Improved performance of File Level Restore operations.</td>
</tr>
</tbody>
</table>

Resolved Issues: Hyper-V

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>123446, 123446</td>
<td>Resolved an issue which caused the error &quot;CPU Relative Weight is zero&quot; to appear, when performing a Failover Test operation.</td>
</tr>
<tr>
<td>127807</td>
<td>Fixed an issue with the VRA appearing as not available.</td>
</tr>
<tr>
<td>123223</td>
<td>Fixed failure issues in the VPG creation process which was caused when the VPG had several volumes for each VM.</td>
</tr>
</tbody>
</table>
Resolved Issues: vCD

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>130203</td>
<td>Improved the performance of Failing over of VMs to vCD by migrating VMs in parallel, rather than one after the other.</td>
</tr>
<tr>
<td>118609</td>
<td>Fixed an issue that caused timeout when accessing vCD environments.</td>
</tr>
<tr>
<td>106704</td>
<td>Fixed an issue which occurred where the VM's DNS name was truncated into a number, when the VM name included the character.</td>
</tr>
</tbody>
</table>

Resolved Issues: Azure

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>125062, 125418, 134618</td>
<td>Fixed an issue which occurred during the Failover Test operation, and which caused the Stop Failover Test operation or Commit Rollback to hang.</td>
</tr>
<tr>
<td>128817</td>
<td>Default value for maximum IOPs for a single blob was set to 500 so that apply rate doesn't slow down.</td>
</tr>
<tr>
<td>113988</td>
<td>Users will no longer be able to choose an instance type for the recovery VMs that are not supported by their Azure subscription.</td>
</tr>
<tr>
<td>103783</td>
<td>Fixed an issue where the user was able to select a subnet with an illegal causing recovery to fail.</td>
</tr>
<tr>
<td>127680</td>
<td>After Failing over to Azure on Premium Storage, deleting the VPG no longer causes the Recovery VM to be deleted.</td>
</tr>
</tbody>
</table>

Resolved Issues: AWS

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>133050</td>
<td>Fixed an issue where failover occasionally failed due to timing issues.</td>
</tr>
<tr>
<td></td>
<td>Fixed an issue when attempting to undo a delete security group action.</td>
</tr>
</tbody>
</table>
### Resolved Issues: VPG

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>7594</td>
<td>Resolved an issue which caused VPGs to be unable to complete the promotion task.</td>
</tr>
<tr>
<td>94505, 104040, 106439, 123534, 125998, 124789, 126300, 108139, 127096, 127232, 112307, 129648</td>
<td>NIC information is now written correctly when exporting a VPG List report.</td>
</tr>
<tr>
<td>102247</td>
<td>An error message now appears when the user attempts to create a VPG with NICs that have the same MAC address.</td>
</tr>
<tr>
<td>104305, 128141</td>
<td>If a recovery folder is no longer valid, the VPG will use the default recovery folder instead.</td>
</tr>
</tbody>
</table>

### Resolved Issues: APIs

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>135907</td>
<td>Resolved an issue which caused validation errors when creating a VPG using VPGSettings API.</td>
</tr>
</tbody>
</table>

### Resolved Issues: VRA

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>123531</td>
<td>The VRA disconnect alert is now activated when VRA’s operating system has stopped responding, and not only when there is a network disconnect.</td>
</tr>
<tr>
<td>113388</td>
<td>Fixed a VRA issue that was causing frequent VRA crashes under high IOPS rate that resulted in constant bitmap syncing and high RPO for multiple VPGs.</td>
</tr>
<tr>
<td>130632, 131397</td>
<td>Bandwidth regulator now distributes network bandwidth across VRAs correctly so that data replication and syncs aren’t slowed down.</td>
</tr>
</tbody>
</table>
Resolved Issues: General

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Issues Resolved in 7.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>130923</td>
<td>Fixed an issue when replicating to Public Cloud which caused exceptions to be written to the log files.</td>
</tr>
<tr>
<td></td>
<td>Fixed an issue where disconnection between ZVMs during commit failover caused the operation to fail.</td>
</tr>
<tr>
<td>131006, 131006</td>
<td>A checkpoint error which appeared when trying to move a VPG which was in sync, now appears immediately and not after a few minutes.</td>
</tr>
<tr>
<td>130632, 131397</td>
<td>Bandwidth regulator now distributes network bandwidth across VRAs correctly so that data replication and syncs aren’t slowed down.</td>
</tr>
<tr>
<td>19676, 107918, 107859</td>
<td>Zerto Virtual Manager now automatically updates the Guest Operating System version of the VRA virtual machine during VRA upgrade.</td>
</tr>
<tr>
<td>133761</td>
<td>Fixed an issue where users could not perform File Level Restore while other VPG/s were in a before commit/promoting state.</td>
</tr>
<tr>
<td>130891, 130496</td>
<td>Fixed an issue where replication from public cloud got stuck in the reverse replication stage.</td>
</tr>
<tr>
<td>132160</td>
<td>Resolved an issue which caused logging out of the Zerto Virtual Manager to get stuck.</td>
</tr>
</tbody>
</table>

Zerto Analytics

*Insight-driven data analytics for a new era of data protection*

As IT infrastructures become more complex and demands for performance rise, companies require visibility and control over protected IT environments. Visibility of your entire IT infrastructure (both on-premises or cloud) is imperative to monitor, analyze and plan your environment and resource requirements to ensure zero interruptions. To have confidence that business Service level Agreements (SLAs) are met, you need not only visibility and insights to address existing issues, but also to be able to plan for your future data protection needs.

Zerto Analytics delivers these capabilities through a single interface and one user experience for a comprehensive overview of your entire multi-site, multi-cloud environment. Utilizing metrics such as average recovery point objective (RPO), network performance, and storage consumption, Zerto Analytics delivers real-time and historical insights on the health and protection status of your applications and data. Through Intelligent dashboards you can spot trends, identify anomalies, and troubleshoot issues in network, RPO, and other business SLAs. With these insights, you can eliminate inefficiencies and allocate resources effectively to mitigate data loss, reduce downtime and take control of your data.

*New Resource Planner*

With Resource Planner, you can ensure your data protection needs are met as your IT environment grows and diversifies. Use the Resource Planner to monitor and perform analysis of your protected environment.
to determine the required compute, storage and networking resources for any or all virtual machines (VMs) within your environment, both on-premises or in the cloud. Build out your data protection strategy with ‘what-if’ scenario modeling to plan for VM protection across clouds or on-premises, or to transition from on premises to cloud, or to protect additional VMs within your environment.

Zerto Analytics is developed with an API first approach, therefore, everything that is presented in the GUI, is also available with APIs.

What's New - In Zerto 7.0 Update 1 on page 20
Zerto Analytics Product Feature Matrix on page 21

What's New - In Zerto 7.0 Update 1

Planning: Zerto Analytics now includes the Zerto Resource Planner; a resource planning capability that performs analysis and continuous monitoring to determine the required storage and networking resources for your data protection.

Analysis can be performed for on-premise VMs, targeting any platform.

See also:
Before Getting Started with Zerto Analytics on page 20
Accessing the Zerto Analytics Portal on page 20
Zerto Logs on page 5
Zerto Analytics Product Feature Matrix on page 21

Before Getting Started with Zerto Analytics

Verify the following:

- At least 1 ZVM is running ZVR v5.0 or higher.
- Enable Support notification and product improvement feedback checkbox is selected This is accessed in the ZVM application in Settings > About.
- Internet access.
- A myZerto account using your corporate email address.

Accessing the Zerto Analytics Portal

Zerto Analytics can be accessed from https://analytics.zerto.com, or through https://www.zerto.com/myzerto/ and signing in using your myZerto credentials.

You can also access the Zerto Analytics portal from the ZVM Application Menu tab: Click to open Zerto Analytics in a new browser tab.
Zerto Analytics APIs

Zerto Analytics is developed with an API first approach, therefore, everything that is presented in the GUI, is also available with APIs. APIs are available the same version as their GUI counterparts.

Zerto Analytics APIs are available in OpenAPI Specification.

The documentation can be accessed via the link: https://docs.api.zerto.com/

Zerto Analytics Product Feature Matrix

The following table lists the available features and from which ZVM version it’s supported.

For further details about new features, access the Zerto Analytics portal and click What’s New features in Zerto Analytics to learn more about each of the features available in Zerto Analytics.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Zerto v6.5</th>
<th>Zerto v7.0</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dashboard</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>VPG Analytics</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Storage Analytics</td>
<td>✓</td>
<td>✓</td>
<td>Available from Zerto v6.5 Update 2</td>
</tr>
<tr>
<td>Monitoring: Alerts, Tasks, Events</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Reporting: RPO, Journal, Network</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td>✗</td>
<td>✓</td>
<td>Available from Zerto v7.0 Update 1</td>
</tr>
<tr>
<td>ZORG Filter (CSP end user)</td>
<td>✓</td>
<td>✓</td>
<td>Network reporting: single VPG; Not available for Storage tab</td>
</tr>
<tr>
<td>90 Days History</td>
<td>✓</td>
<td>✓</td>
<td>ECE and Cloud licenses; Standard 30-day</td>
</tr>
<tr>
<td>Swagger RESTful API</td>
<td>✓</td>
<td>✓</td>
<td>Not yet available for Planning</td>
</tr>
</tbody>
</table>

Known Issues

The following are known issues when using Zerto:
Virtual Replication Appliance (VRA) on page 22
Virtual Protection Group (VPG) and Recovery on page 22
VPG Management on page 23
Failover, Move and Test Failovers on page 23
vCenter Server on page 23
vCloud Director on page 24
VMware vSphere on page 24
Hyper-V on page 24
AWS on page 25
Azure on page 26
Cross-Replication on page 27
VMware to Hyper-V Cross-Replication on page 28
Hyper-V to VMware Cross-Replication on page 28
Remote Upgrade for Cloud Service Providers on page 28
APIs on page 28
File and Folder Level Recovery on page 29
Long Term Retention on page 30
Upgradeability on page 32
General on page 33

Virtual Replication Appliance (VRA)

- You have to wait a few minutes after moving a protected virtual machine to another host before you can forcibly uninstall the VRA ghost on the original host.

- If the VRA IP is allocated via DHCP and the DHCP server at a later date allocates a different IP, the VRA does not change the IP. For this reason it is recommended during production to only use static IPs and use static IPs or DHCP during trials.

Virtual Protection Group (VPG) and Recovery

- Attempting to create a VPG when the target datastore is unavailable fails.
  
  **Workaround:** Try again after the datastore is up.

- Virtual machines with SATA controllers cannot be included in a VPG.

- When an existing VPG is attached to a ZORG, it is not possible to edit this VPG either after uninstalling the ZCM, or after removing a site from the ZCM.
VPG Management

- If a VM is removed from the hypervisor inventory, Zerto Virtual Replication stops the replication. When adding back this VM to the inventory the ZVR resumes the replication. In Hyper-V environments only, adding back the VM does not resume the replication.
- When the protected site is vCD, initiating "Copy VPG Settings" from the Recovery site is currently not supported.

Failover, Move and Test Failovers

- After stopping a failover test, the checkpoint that was used for the test has the following tag added to identify the test: Tested at startDateAndTimeOfTest(OriginalCheckpoint_DateAndTime). The Tested at startDateAndTimeOfTest value is taken from the Zerto Virtual Manager and not from the UI.
- Recovering a VPG using one of the very earliest checkpoints available can fail when the checkpoint specified is moved out of the journal before the recovery operation can commit.
- After a recovery operation, the field bios.bootOrder is not passed to the recovered VM. In some cases, not passing the field bios.bootOrder can lead to the wrong boot order in the recovered VM.

vCenter Server

- In some cases, after updating Zerto software, and after vCenter DB reinitialization, Zerto may not be able to identify some of its entities automatically, due to vCenter MoRef changes.
- When an ESX/ESXi host is disconnected from the vCenter Server but the network connection is still available, the status of any VPG recovering to this host and the status of the VRA on the host are displayed as OK in the Zerto user interface. However, all recovery operations will fail.
- Due to a VMware problem, configuring IPs for the recovery machines is lost when cloning virtual machines with VMXNET3 NIC on Windows 2008 R2 machines. For details and solutions, see http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=1020078.
- VMware does not identify the IP origin for Linux virtual machines and therefore Zerto cannot know whether it is static or DHCP.
- The boot order defined for a vApp is not reproduced for a cloned vApp.
- Increasing the size of an RDM disk is not reflected in the VPG, nor by the recovery VMDK.

**Workaround:** Follow the VMware KB:

- After hibernating a laptop running vSphere Client console, you have to restart the console to reload the Zerto GUI.
- Zerto is not localized. VMware issues alarms where the language is not English with XXX.

**Workaround:** Start up the vSphere Client console adding the following argument: -locale en_US, to
display all Zerto alerts in English.

- If a host is removed from a site, a ghost VRA is created which you can remove. After the host is added back to the site, a ghost virtual machine is displayed in the vCenter hierarchy.

  **Workaround:** Remove the ghost virtual machine from the inventory.

**vCloud Director**

- When recovering in vCloud Director v9.0 and above, vApps containing Standalone VMs will not maintain the standalone VM view in the Tenant UI.

- After updating a VPG, for example by adding a new virtual machine to it, and then immediately moving it or failing it over to vCD, causes the vCD reflection to be out of date and recovery virtual machines are not powered on, resulting in the promotion hanging.

  **Workaround:** Wait a few minutes between changing the VPG and performing the move or failover operation. If you do not wait, manually power on all recovery virtual machines that are not powered on automatically.

- Recovering a VPG to vCD will fail if the vApp name contains any of the following special characters: ! * ' ( ) ; : @ & = + $ , / ? % # [ ].

- When both the recovery site is vCD, if NICs are added to a virtual machine that is included in a VPG and then the VPG is recovered, with reverse protection defined, the VPG for failback needs configuration, but the Zerto User Interface does not enable this configuration.

  **Workaround:** When adding NICs to a virtual machine that is included in a VPG, edit the VPG to add these NICs to the VPG definition, before performing a recovery operation with reverse protection.

- Improved RTO when replicating to vCD 9 and Guest Customization is enabled, by avoiding a redundant VM power on and off, which was used by vCD to identify whether VMTools were installed on the VM.

- Storage Policy configuration for VPGs:
  - Preseeding: Browsing the location of the preseeded disk will show only datastores which belong to the VM Storage Policy, and not all Storage Policies in the orgvDC.
  - Zerto does not maintain the Storage Policy per volume of protected VMs upon reverse protection when replicating between vCD<>vCD - the volumes will be aggregated to the VM Storage Policy.

**VMware vSphere**

- vSphere Web (FLEX) Client 6.7 is not supported.

- Zerto does not support enabling `VMkernel.Boot.execInstalledOnly` on ESXi advanced system settings.

**Hyper-V**

- Changing the storage used by a VRA from a CSV to non-CSV storage, or from a non-CSV storage to CSV storage, fails.
You cannot protect virtual machines using storage that is only configured in Hyper-V and not in SCVMM.

Virtual machines with fixed size disks are always recovered with dynamically expanding disks.

SCVMM is not automatically refreshed after any recovery operations to or from the SCVMM. This can result in Integration Services not being detected by the Zerto Virtual Manager and this can lead to virtual machines failing to boot and Integration Services functions such as re-IP not working.

**Workaround:** Manually refresh the virtual machine in SCVMM.

All management operations that can be executed from SCVMM, must be executed from SCVMM and not from the Hyper-V host. For example, removing a virtual machine must be done from the SCVMM console and not from the Hyper-V console.

When Hyper-V Replica is used on a virtual machine protected in a VPG, removing the virtual machine from the VPG is not reflected in the user interface.

**Workaround:** Re-edit the VPG to remove the virtual machine and click DONE.

A VRA cannot be installed on a Hyper-V host when the host is attached to a LUN via iSCSI along with other Hyper-V hosts.

Recovery or replication of Hyper-V virtual machines with shared disks does not work.

If you mark a disk as shared after the virtual machine to which it is attached is already in a VPG, the virtual machine must be refreshed in the SCVMM console immediately, otherwise the VPG enters an error state. Then, remove that virtual machine from the VPG since a virtual machine with a shared disk cannot be recovered or replicated by Zerto.

When a protected Windows VM configured for DHCP is failed over with re-IP set to DHCP, a failed SCVMM job will appear in the SCVMM console.

**AWS**

Tagged checkpoints, Force Sync, One-to-Many and Long Term Retention functionalities for VPGs with AWS as the protected site are not supported.

Preseed to AWS is not supported.

Restore from retention sets is not supported for VPGs with AWS as their recovery site.

When using zImport, the disk type is io1 and cannot be configured.

Only the ZCA’s Availability Zone (AZ) can be used for faster recovery.

The instance zASA, and the temporary instances, zImporter and zSATs, require internet access.

The zImporters, zSATs and zASA are created with a public IP. However, they are connected to a newly created security group.

When using Zerto import for all volumes, the following Operating Systems are **not** supported:

- CentOS 7
- Ubuntu 13.10
• SUSE 12
• Solaris 11.2

• The default c4.8xlarge AWS EC2 maximum instance quota is 20 (default value). To ensure scalability, you must contact AWS support to increase the maximum relatively to the number of protected volumes.

• The default m4.large AWS EC2, used for zSATs and zASA, maximum instance quota is 20 (default value). To ensure scalability, you must contact AWS support to increase the maximum relatively to the number of protected volumes.

• GPT cannot be used as the boot disk.

• Recovery to AWS using "zImport for all volumes" requires installing drivers on the production VM.

• FOL to AWS fails when the VPG definition contains an invalid entity such as a security group, subnet, VPC or instance type. An invalid entity might be an entity that was removed from the AWS platform.

• Recovery of Windows VMs will freeze when using AWS import method with the PV driver installed.

• AWS rounds up all volumes to the closest 1GB. When failing over/ moving to AWS, with reverse protection, if the VM is with disks that are not a round number of 1GB, the VPG goes into a Needs Configuration state after being recovered to AWS. This is due to a volume size mismatch between the protected and recovered sites. After recovery, the user needs to delete this VPG and recreate it.

**Azure**

The following limitations apply:

• Self replication within a ZCA is not supported.

• Although two ZCAs can share storage accounts (either paired to each other, or each paired to a different site), this is not recommended as ZCAs which point to the same storage account are not aware of each other.

• Preseed is not available in Edit or Create VPG flows.

• Disks saved when deleting a VPG or un-pairing sites cannot be used for preseeding in Edit/Create a VPG.

• For Virtual Machines to be protected in Azure, the VMs' volumes must reside in the Standard Storage Account (Zerto Storage Account) that was defined during its installation.

• VMs which are not deployed via the Azure Resource Manager cannot be protected from Azure.

• You cannot protect machines that have a disk larger than 4TB. To enable recovery of managed disks up to 8TB, please contact Zerto Support.

• The protected virtual machines needs to have at least one NIC.

• The supported number of data disks per virtual machine is dependent on the selected instance size. For example, instance size D3_v2 allows up to eight data disks per virtual machine.

• Restore from retention sets is not supported.

• Zerto APIs are not supported.
• When a VM is recovered to Azure, a temporary drive is automatically created in the drive letter, following the operating system drive. Due to this temp drive, the drives you had set up in your production site may be shifted when recovered to Azure (other than the OS drive) (Azure limitation).

• Use Move operation in order to failback from Azure.

• The minimum RPO from Azure is 1 minute.

• Long Term Retention is not supported for "From Azure" VPGs.

• Resizing protected disks on Azure is not supported.

• Reverse protection VM network settings in a VPG are not saved when failing over a VPG from Azure.

• Tag checkpoints, Clone: These operations are not supported for VPGs which have protected VMs in Azure with multiple disks attached.

• For additional limitations, see Azure subscription and service limits, quotas and constraints: https://docs.microsoft.com/en-us/azure/azure-subscription-service-limits

For example, see the following default values:

• 20 cores per subscription

• 200 Storage accounts per subscription

• 20 VMs per region per subscription

• VM per series (Dv2, F, etc.) cores per subscription 20 per Region

Additionally, see the following example for maximum values:

• A standard storage account has a maximum total request rate of 20,000 IOPS. The total IOPS across all of your virtual machine disks in a standard storage account should not exceed this limit.

<table>
<thead>
<tr>
<th>VM TIER</th>
<th>BASIC TIER</th>
<th>STANDARD TIER VM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disk Size</td>
<td>1023 GB</td>
<td>1023 GB</td>
</tr>
<tr>
<td>Max 8 KB IOPS per persistent disk</td>
<td>300</td>
<td>500</td>
</tr>
<tr>
<td>Max number of disks performing max IOPS</td>
<td>66</td>
<td>50</td>
</tr>
</tbody>
</table>

Cross-Replication

• NIC configuration in the VPG definition is not applied.

• Recovery of a virtual machine from Hyper-V to vSphere of a generation 1 virtual machine with more than one SCSI controller, fails.

• Under certain conditions, when the declared OS definition does not match the actual installed OS, recovery operations may not work. To prevent this situation, ensure that the declared and installed OS definitions match. If the two definitions cannot match, use the hypervisor guidelines of the protected virtual machine or contact Zerto support.
• You cannot install VMTools on a Hyper-V VM. VMTools on a Hyper-V VM are needed for re-IP to work.

**VMware to Hyper-V Cross-Replication**

• When protecting from VMware to Hyper-V, the protected volumes must be multiples of 1MB. If you resize a VMDK, the resize must be a multiple of 1GB.

• In VMware, a virtual machine with a guest operating system booting from UEFI firmware can only be protected by Zerto if the guest OS is supported by Hyper-V VM Generation 2.

• SUSE and CentOS Linux machines in VMware cannot be recovered to Hyper-V.

• Recovering a VPG to Hyper-V from vSphere will fail if the name contains any of the following special characters: ! * ' ( ) ; @ & = + $ , / ? % # [].

**Hyper-V to VMware Cross-Replication**

• CentOS 7.3 Linux machines in Hyper-V cannot be recovered to VMware.

• When recovering from Hyper-V to VMware, the virtual machines are recovered with the same number of sockets as CPUs and not the original number of 19035.

• When protecting Windows 2012 R2 virtual machines from Hyper-V to VMware, after a failover test you may need to re-activate the virtual machine.

• Windows XP virtual machines cannot be protected from Hyper-V to VMware.

**Remote Upgrade for Cloud Service Providers**

• Upgrade of cloud sites that support Intra-Cloud Disaster recovery is not supported.

• Remote upgrade functionality assumes that both the Cloud Service Providers version and the customers Zerto version is v6.0 or above, or v5.5U4.

• VSS installers are not supported. Remote Upgrade should be used to download only non-VSS versions.

**APIs**

• Support of VPG Settings APIs when Creating VPGS from vCD to vCD:
  • vCD > VC is not supported
  • No validations are performed on the inputs provided.

• Invalid Argument Validations:
  • Previously created REST API calls may fail if invalid arguments were used.

• VRA Bulk Upgrade
  • The upgrade of VRAs provided will halt if one of the VRAs fails to upgrade.
• Copy VPG Settings API
  • When using the Copy VPG Settings API, Long Term Retention settings cannot be applied to the copied VPG.

File and Folder Level Recovery

• If the Windows virtual machine with files to be restored uses dynamic disks, files cannot be restored from these disks.
• You can only recover files or folders when Long Term Retention is not running.
• Journal File Level Restore (JFLR) is not supported with the vSphere plugin.
• File Level Restore (JFLR) is not supported on a volume where data de-duplication is enabled.
• Downloading files larger than 1.5GB is not recommended and may take a long time.
• Zerto will not download files from Linux file systems, when the file name contains the following special characters:
  \ / : * ? “ < > | 
• When recovering files/folders from Zerto 7.0 to 7.5, the Ide 0:0 disk indication appears as the root folder during browse and as the mounted disk regardless of the selected disk. This does not affect the files/folders selected for mounting.
• If the recovery site is 7.0. and the protected is 7.5, the user cannot initiate FLR from the protected site.
• When running FLR from 7.0 and the recovery is 7.5, the user experience is different but all drives are still visible.

• Downloading Files/Folder from Search and Restore:
  • The Search and Restore wizard does not filter unsupported files. If an unsupported file is selected for download from Search, a mount session will be executed but the download will fail.
  • The user must unmount the VM manually.

• Search and Restore:
  • ZVM minimum requirements for performing Search and Restore: at least 4 vCPUs and 10GB RAM.
  • Saving indexed meta-data is currently only supported on SMB Repositories which are not PBBA based.
  • When configuring SMB repositories used for indexing, do not use a local user account.
  • Operating Systems, File Systems and Volume Manager that Zerto can index:
    • Operating Systems: Windows Vista and 2008 server and above and Linux
    • File System and Volume Manager: NTFS and EXT2/EXT3/EXT4
    • LVM is not supported for indexing
  • A VM with over 100 million entries (files or folders) cannot be indexed.
• Rate of entries (files or folders) indexed in NTFS per second: 2000 files.
• Rate of entries (files or folders) indexed in EXT per second: 1500 files.
• Supported partitioning methods: GPT, MBR.
• Zerto can index up to 3 VMs in parallel and no more than one per recovery host.
• Search and Restore is available only from a recovery ZVM GUI.
• While indexing, only a Failover operation is allowed and this will stop the indexing process (indexing cannot be resumed).
• Modified date: displayed in the browser local time.
• Search is not case sensitive.
• Support only search according to entry name (not full path).
• No multi-tenancy support.
• Search and Restore requires Enterprise Cloud Edition, Cloud One2Many or NFR/Trial license.

Long Term Retention

• Upgrade:
  • Existing NFS Repositories will be renamed to deprecated and can be used for Restores only. New repositories must be created for continued LTR use with Zerto 7.0.
  • Long Term Retention configuration settings for all VPGs will be removed. All other VPG settings will remain unaffected.
  • Retention processes will fail until all VRAs have been upgraded to 7.0.

• Repository Supported Protocols:
  • NFS - up to version 3.
  • SMB - version 2 and 3.
  • SMB can be configured using IP address only (no DNS Name).

• HPE StoreOnce Catalyst:
  • Catalyst API Server version should be installed with v9 and above. The Catalyst API Client is already installed with v9.
  • Prior to defining the HPE StoreOnce Catalyst store as a repository, Client Access should be enabled on the Catalyst store level. Client access is the only access mode supported for HPE StoreOnce store, which should be configured on the HPE StoreOnce itself.
  • Low-bandwidth (LBW) is the only Transfer Policy supported for a Catalyst store, to allow source side de-duplication by Zerto. This way, only unique data is sent over the wire.
  • High-bandwidth (HBW) Transfer Policy is not supported.
  • Source side de-duplication is enabled by default for this Repository and cannot be disabled.
In order to support source side de-duplication for a Catalyst repository, VRA restart is automatically initiated upon the first LTR operation (Retention/Restore) on that VRA to allow sufficient memory allocation.

- This will fail the first LTR operation running on this VRA. Upon Restore, if the VRA is different than the one chosen for Retention, this operation is expected to fail as well.

- The maximum number of concurrent streams supported when working with Catalyst type of repository is 60.

- If the number of available streams on the HPE StoreOnce appliance is smaller than 60, an “Out of Sessions” error will be triggered. (For example, if the HPE StoreOnce appliance supports a smaller number of concurrent streams, or the streams are already utilized by another software).

- That means, that each VRA can support up to 5 concurrent volumes to be processed for Retention or Restore operations, in a given time. Other volumes will be queued and processed once the current ones are completed.

**Incremental:**

- Zerto can track up to 40TB of changes per volume.

**Scheduling and Retention Policy:**

- All scheduled retention process periods (Daily, Weekly, Monthly, Yearly) are scheduled to run at the same time. If a Full and Incremental are scheduled for the same day, the system will run a Full retention process. For example, if a Daily retention process is set to run a Full on Sunday and a Weekly is set to run an Incremental on Sunday, a Full retention process will be performed.

- Deleted VPGs are not managed and their retention sets are not removed from the repository, even when the retention period has passed.

- Retention sets generated in 6.5 will not be managed by any retention policy and will need to be manually deleted from the Repository when expired.

- In some scenarios, the retention process will wait in queue and will start running only on the following day, resulting in two retention sets on the same day.

- If a VM with a Retention policy set has 2 disks with the same name, the 2 disks cannot be restored to the same datastore.

**Restore:**

- Restoring VPGs is allowed for VPGs which currently exist, or which were deleted.

- Restoring previously created retention sets, which were created before the Repository was created, from a previously populated 6.5 Repository which has been added to the 7.0 system is not supported.

- Restoring from a Repository containing retention sets, which were created prior to adding the repository to the system, is not supported.

- Reconnecting a Repository is not supported.

- If one or more volumes are in "initial sync" state during a Retention process, these volumes are excluded and the Retention process will be considered as Failed.
• If the Windows virtual machine with files to be restored uses dynamic disks, files cannot be restored from these disks.

• Licensing:
  • Long Term Retention requires Enterprise Cloud Edition, Cloud One2Many or NFR/Trial license.

• Error Handling:
  • Certain failures when running retention sets may require Support intervention to re-enable them.

• Performance:
  • DSS and VRA consume CPU. As such, if the CPU on the VRA reaches high consumption rates, another CPU should be added to the VRA machine. Adding additional CPUs on top of the additional one is redundant and the additional CPUs will not be utilized.

• Manual Retention Processes:
  • If the scheduled retention process on that day has already executed, manual retention will either run the last settings used, or run a default of 90 days incremental.

• Cloud Service Providers and Zerto Cloud Manager Users:
  • "Extended Recovery" Service profiles are not supported and are removed as part of the upgrade.

• Other:
  • When editing a VPG where the protected site is 6.5Ux, and the recovery site is 7.0, the user will not be able to see updated scheduling settings. Any scheduling configuration done on the 6.5 GUI will be ignored.
  • Partial retention processes (e.g. some volumes have succeeded and others have not) and Restores are not supported.
  • Long Term Retention is not supported where the protected or recovery site is a Public Cloud. Therefore, the SETUP tab in the ZCA was removed.
  • Only one Long Term Retention task can run on a VPG concurrently.
  • Retention Reports are not available in 7.0.
  • When configuring FreeNAS as an LTR Repository connected via the SMB protocol, the “Server minimum protocol” parameter needs to be explicitly set with "3_00."

Upgradeability

• VRA upgrade: The user is recommended to follow the VRA upgrade via the Zerto Virtual Manager GUI.
  • When an update/hotfix installation occurs and the VRA auto upgrade checkbox is still enabled, there is a second event that is presented in the GUI, even though there was no VRA upgrade.
General

• The backslash character (\) is displayed as %5c in the GUI, for example when used in a virtual machine name.

• If the local site Zerto service is down, you can still recover and clone VPGs. When cloning a VPG, the clone progress bar in the VPG Details screen is not updated.

• In a multi-site environment and when masking is not implemented, adding a virtual machine to a VPG by editing the VPG from the recovery site, displays all virtual machines on the protected site, including those protected to a different recovery site.

• Zerto Cloud Connector *.vswp files are not included in the DATASTORES tab, DR Usage value.

• When creating a VPG and there is no available recovery site, the GUI display is corrupted.

  **Workaround:** Make sure the connection to the replication site is restored and refresh the browser.

• Increasing a protected virtual machine disk size to greater than 2TB causes the VPG to enter the state, **Needs Configuration**.

• When replication is to a VSAN, disk space used by the journal is not deallocated when the journal size decreases.

• Protecting DVD drives is not supported.
NEW Zerto 7.0 enhances the Zerto IT Resilience Platform by converging disaster recovery and backup to deliver continuous availability within a simple, scalable platform. Zerto 7.0 delivers enhanced analytics, platform improvements and cloud performance upgrades required in the future of IT resilience.

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