vmPRO 3.1.1 Release Notes

Product	Quantum vmPRO 3.1.1 (Build 5975-289)
Date	May 2013

Contents

Purpose of This Release

This release of Quantum vmPRO provides the following enhancements:

- Supports multiple SmartMotion backup policies. These policies offer multiple retention policies and provides the capability to have multiple backup targets.

- Supports Microsoft Windows VSS snapshot support for Exchange 2007, Exchange 2010, Exchange 2013, Windows Server 2012, SQL Server 2008 and SQL Server 2012.

- Provides the capability to send second copies of backups to tape using Scalar LTFS.

- Performance improvements using VMware Hotadd disk sharing.

- Performance improvements that avoid reading pagefile.sys and swap partitions.

- Performance improvements to unique SmartRead technology.

- Supports vSphere 5.1, including support for recovering and importing a virtual machine with vCenter 5.1.

- Supports subscription-based licensing.

- Provides for on-demand software upgrades through Vision technology.

- Includes several bug fixes which provide improved performance and stability.

System Requirements

Table 1 provides information about hardware and software requirements for the Quantum vmPRO 3.1.1.

Table 1 Quantum vmPRO Requirements

Component	Requirement
Virtual Server	One or more VMware ESX or ESXi servers, versions 4.0 update 2 or later (Only paid versions of VMware ESX or ESXi servers should be used. Free versions have various API limitations that prohibit vmPRO from functioning as designed.); or a VMware vCenter server, version 4.0 update 2 or later. **Note:** In environments with numerous ESX or ESXi servers and many virtual machines, multiple Quantum vmPRO appliances should be deployed on more than one ESX or ESXi servers.
Hardware (Host Server)	12 GB of free disk space 1280 MB of free RAM Gigabit NIC port for data movement on the vmPRO host server
Network (Host Server)	Quantum recommends configuring a static IP address during configuration. The Quantum vmPRO network should be configured on the VLAN that has access to the vCenter, ESX or ESXi servers to be protected. This VLAN must be accessible by the backup software client that connects to Quantum vmPRO.

Component	Requirement
Web Browser (Client)	Any modern Web browser that supports the Adobe Flash Player plug-in 9.x or higher.
Flash Player plug-in (Client)	Adobe Flash Player plug-in 9.x or higher

Upgrade Notes

Refer to the following information when upgrading to Quantum vmPRO 3.1.1 and newer:

- All Quantum vmPRO appliances (nodes) in a group must be upgraded together.

- When upgrading to 2.3 and newer, from 2.1.4 or prior, Quantum recommends increasing the memory allocation on the vmPRO appliance to 1280 MB, by editing the Quantum vmPRO VM settings in the VI Client.

Resolved Issues

Table 2 lists issues that are resolved in Quantum vmPRO 3.1.1.

Table 2 Quantum vmPRO 3.1.1
Resolved Issues

ID	Description
5526	Upgrading from 3.0.x to 3.1 can overload configurations when backup policies overlap. The default number of concurrent running backup policies has been changed from 4 to 2.
5515	If a VM has a combination of independent and non-independent disks, there is a high probability that the backup of the VM will fail. (The backup of the VM depends on the disk order; hence, not every VM with an independent and non-independent disk configuration will fail.) **Note:** vmPRO is designed to backup non-independent disks.
5507	Upgrading to vmPRO 3.1 resets the appliance's time zone to **America/Los_Angeles**, which will change the backups' start times. If you have not updated your vmPRO to 3.1.1, you can correct this problem by implementing the workaround at https://mosaic.quantum.com/docs/ProblemsandSolutions/vmPRO3.1/UpgradingResetsTimeZone.

Table 3 lists issues that were resolved in Quantum vmPRO 3.1.

Table 3 Quantum vmPRO 3.1
Resolved Issues

ID	Description
4375	There may be times when the SmartMotion report e-mail lists VMs as successfully backed up after a user abort. This happens when the master finishes the backup but the nodes have not, and then the user aborts the SmartMotion backup.[a]
3955/ 3934	After leaving a group, only the VMs assigned to that node are shown, and the link between the policy and the storage no longer exists.
3851 3626	In the SmartMotion configuration GUI, when a sub-folder is specified that does not exist, it will be created automatically. When the specified sub-folder is more than one directory deep, the configuration test will indicate that the sub-folder was successfully created; however, the SmartMotion backup will fail.
3846 3710	Duplicate UUID VM is causing snapshots to be taken for both VMs. This causes an I/O error.[b]
3540 3530	vmPRO does not support multiple appliances using the same SmartMotion repository directory.
3514 3506	Alert displayed when VSS is enabled for Windows 2008 and vSphere version is below 4.1.
3323	When configuring SmartMotion storage using NFS, if the export path is not prepended with a "/", a failure occurs in the Recover Virtual Machines Wizard when the wizard tries to prepopulate the recovery mount point configuration.

3287	VMs running on ESX 4.0 that have working directory changed to something other than the default location cannot be exported by vmPRO. The VMs will return an error in the GUI like the following:
	`'TRASH_Win2003_FAT' on hypervisor`
	`'10.30.242.32' cannot be exported, reason: The virtual machine virtual disk chain is invalid or needs repair.`
	The problem is caused by a limitation in the virtual machine management data return by the ESX 4.0 server. The problem does not exist with ESX 4.1, or with VMs that uses the default working directory.[c]

3040	When a disk is removed from a VM, the `-flat.vmdk` file associated with the VM stays in the folder until the next full copy. If a recover is performed before the next full copy, -flat.vmdk files left over from deleted VMs must first be removed manually. This is necessary because the presence of a -flat.vmdk file not associated with a VM will cause a failure in the import wizard.
2342	A scheduled SmartMotion happens on all nodes in a group of vmPRO appliances, but a `smartmotion sync now` operation currently copies only the VMs assigned to the master appliance.

a.SmartMotion no longer generates a report for aborted backups.
b.Neither VM is exported.
c.ESX 4.0 is not supported.

Known Issues

This section presents the following categories of known issues:

- SmartMotion
- VM Configurations
- vCenter Plugin
- Special Character
- Miscellaneous

SmartMotion

Table 4 lists SmartMotion known issues for vmPRO 3.1.1.

Table 4 SmartMotion Known Issues

ID	Description	Workaround/Resolution
5462	When a partial SmartMotion backup of a VM is started within one minute of the previous backup of that VM, the **% complete** and **% saved** values displayed on the GUI for that VM may be incorrect. Information in the e-mail report regarding the **% saved** for that VM may also be incorrect.	SmartMotion backups should be at least one minute apart.
4412	After the completion of a SmartMotion backup to a DXi and a subsequent Trigger Based Replication (TBR) of the backup to the target DXi, an admin alert is issued on the source DXi (the vmPRO storage target) indicating that the replication failed.	The admin alert (`smartmotion.uuid.tmp` is not valid for share `<share_name>`) is invalid and does not impact SmartMotion backup or DXi TBR replication and should be ignored.
3798	Time for smartmotion is not correct when running from the shell.	When configuring your SmartMotion schedule, use the vmPRO GUI. Do not use the panshell command `smartmotion set schedule`.
3749	SmartMotion stuck in "running" status when the DXi V1000 target ran out of space.	DXi V1000 should not be backed up by the vmPRO, i.e. when a DXi V1000 appliance is managed by a vmPRO appliance, the DXi V1000 appliance should be disabled from being exported on the vmPRO. If you want to backup your DXi V1000 appliance, it should be replicated to another DXi appliance.

VM Configurations

Table 5 lists VM Configurations known issues for vmPRO 3.1.1.

Table 5 VM Configurations
Known Issues

ID	Description	Workaround/Resolution
4702	Removing a server when it was selected as a vCenter subset, and then adding it back in, prevents the server from being re-exported.	From the vmPRO's GUI select **Configure > Config Wizard > Servers,** and then re-select the server.
3869	CBT enable/reset operations for VMs with duplicate UUID on direct ESX configurations causes snapshot spamming.	Disable CBT for the VM with duplicate UUID on the vmPRO GUI, and reboot the vmPRO appliance.
3665	DNS lookup port numbers need to be opened in the firewall.	To ensure correct DNS name resolution, the firewall must have port 53 open.
1644	The following configurations of virtual machines are not currently supported: • VMs with missing BIOS UUIDs (e.g. if the datastore that hosts the VM goes down) will not be exported. • VMs configured with SCSI bus sharing cannot be snapshotted. These VMs are detected and excluded from /export.	Information regarding non-supported VM configurations is now displayed to the user through the vmPRO GUI. The error message "Snapshots not supported by VMs configured with SCSI bus sharing" is shown in the vmPRO GUI for these VMs.
	Multiple applications using the VMware Changed Block Tracking feature on the same VM will interfere with each other.	When using the Changed Block Tracking feature on a VM, the vmPRO appliance must be the only Changed Block Tracking-enabled application managing the VM.

vCenter Plugin

Table 6 lists vCenter Plugin known issues for vmPRO 3.1.1.

Table 6 vCenter Plugin Known
Issues

ID	Description	Workaround/Resolution
1508	Once a vCenter plugin is registered with an appliance it currently cannot be removed easily if the appliance no longer exists or if the IP address/hostname is changed.	

Special Character

There are multibyte and wide character limitations for various VMware objects and strings, such as VM names, datacenter names, datastore names, folder names, usernames, and passwords.

Table 7 lists the known issues in regards to the use of special character for vmPRO 3.1.1.

Table 7 Special Character in Filenames Known Issues

ID	Description	Workaround/Resolution
5309	Special character directories names are not displayed the same as previous versions.	When accessing the vmPRO **import** share from CIFS clients, make sure that the directories and the file names do not contain the following special characters: "\", "/", ":", "*", "?", "<", ">", "|" and the quotation mark ' " '.
5094	Character limitations of Scalar LTFS that can result in SmartMotion error: `No such file or directory`.	When using Scalar LTFS for storage, do not use the colon, ":", in any file names.

3464	This is the list of characters that should not be used in VM names for VM hosted on ESX 5 or 5.1:
	  # Number sign
	  @ At symbol
	  { Opening brace
	  } Closing brace
	VM names for VM hosted on ESX 5 or 5.1 containing any of these characters are not supported. The limitation is imposed by VMware.
		Be aware of character and naming limitations and adhere to them. The limitations that are seen most often are listed in this section of the Release Notes.

3416 3419 3498 3495	Currently you can specify a wide character directory name in the cfg file, or in the recover wizard, but if the import target datastore is on an ESX 4.X host, this wide character directory name will cause problems.	
3283	For file level access in `/files` and `/recover/files`, files that contain an illegal multi-byte sequence in the file name will not be listed. If a file name that contains an illegal multi-byte sequence is encountered when listing a directory, the directory listing will appear empty. An error such as the following will appear in the log file: `XYZ.volume/1: Invalid or incomplete multibyte or wide character.`	Even though the directory listing appears empty, it is still possible to access individual files within the directory by accessing them explicitly by name.

ID	Description	Workaround/Resolution
3254	Datastore names containing '[', ']', or '@' are not supported. The restriction is imposed by VMware interface.	Be aware of character and naming limitations and adhere to them. The limitations that are seen most often are listed in this section of the Release Notes.
3216	VMs starting with "." (dot) are not exported.	Be aware of character and naming limitations and adhere to them. The limitations that are seen most often are listed in this section of the Release Notes.

Miscellaneous   Table 8 lists Miscellaneous known issues for vmPRO 3.1.1.

Table 8 Miscellaneous Known Issues

ID	Description	Workaround/Resolution
5518	When a Windows user with Domain Admin privilege uses the automatic install option (**Install or upgrade Quantum VSS agent**) to install VSS, the install will fail when UAC is enabled. If the user in a Windows environment is not the built-in Administrator user, then the following error might be encountered: `Installing Quantum VSS agent failed (VSS agent installation failed: QuantumVSS.exe not found on virtual machine (Q-1056))`	On the guest VM, change the User Access Control setting to **Never notify**; follow the steps as presented in the **Resolution** section of VMware KB article 2002995.
5482 5475	When a license expires, and it is replaced with a new one, the subsequent backups will fail.	When a license has expired and a new license is added, the appliance must be rebooted before a SmartMotion backup will run.
5481	Backups that are run after the system time has been changed will fail.	When the system time on an appliance is changed, the appliance must be rebooted before a SmartMotion backup will run.
5273	When Commvault restores the **pancbt.vmdk** file to the staging area it changes the file's size. This causes the vmPRO Recovery Wizard to fail.	If Commvault is used with vmPRO, the CBT feature should not be enabled for any VMs.
5250	Despite a successful HP Data Protector restore to the DXi NFS share, vmPRO cannot recover the VM.	If HP Data Protector is used with vmPRO, the CBT feature should not be enabled for any VMs.
5238	Linked clones are untested and unsupported.	Linked clones are a special feature of VMware hypervisors. Currently, this feature is not supported. The user should not use this VMware option.

ID	Description	Workaround/Resolution
4903	Hotadd disks remain attached to the appliance after the vCenter server goes down.	The hotadd disks will be removed when the connection is restored.
4401	If you use the vSphere client to delete a VM while it is being backed up by vmPRO, the flat and ascii vmdk for the disk which is open in /**export** will not be deleted on the datastore.	The user must manually delete the files from the datastore if a VM is deleted while it is being backed up by vmPRO.
4338	Cannot backup vmPRO share with Symantec BE2012 - Communication failure.	Several changes have been made to BE (2012) as compared to BE (2010 R3). To accommodate these changes, configuration changes to BE release (2012) are required. See Communication Failure Between Backup Exec 2012 and vmPRO to perform the required configuration changes.
3828	Deleting a node from the master while the master is powered off does not remove the node, and it does not update the master. If you try to remove a node from the Master VM while the Master VM is powered off, you may receive a message indicating that the removal was successful. This message is incorrect.	To remover a node from the Master VM, the Master must be powered on.
3809	I/O error on CBT enabled VM. If you remove or add a datacenter while copying a VM that is CBT enabled, an I/O error will be generated when the pancbt file is to be copied. The backup will fail and halt at this I/O error.	Do not remove or add a datacenter during a backup.
3801	Error when copying pancbt file into /import.	see Single step recovery
3755	Alert on free ESXi restrictions: There were messages in the log which stated that the ESXi version does not support the operation.	Only the paid version of ESXi is fully supported.
3751 3748	File-level recovery not supported for volumes spanned across multiple disks.	File-level recovery for dynamic volumes that span multiple disks is currently not supported.
3709	Enabling CBT requires the creation and removal of a snapshot if CBT is not already enabled on the hypervisor. When a user configures a VM to be CBT enabled and CBT is disabled on the hypervisor, a script, which enables CBT for that VM, is executed (regardless of whether or not that VM is export enabled). This operation includes the creation and removal of the snapshot. This action is necessary to fully enable CBT.	CBT should only be enabled for VMs that are intended for backup.

ID	Description	Workaround/Resolution
3678	Netbackup fails to back up the `.vmdk` flat files. Attempts to back up the `<DXi>/backup/pancetera-sync` folder with Netbackup are only partially successful. All files transfer except for the `.vmdk` flat files. The snapshot backups also fail.	This is a known Netbackup problem that can be resolved by disabling **NTIO**. To recover from this event, perform the following: To disable **NTIO** (which is enabled by default), a registry key and value must be created on the Windows machine that is running Netbackup. You can create the registry key and value by doing the following: 1. Run **regedit** 2. Create the following key: `HKEY_LOCAL_MACHINE\Software\VERITAS\NetBackup\CurrentVersion\Config\NTIO` 3. Under this key, create a DWORD value named **UseNTIO** 4. Give DWORD a value of **0**. A value of 0 disables **NTIO**.
3632	vmPRO 2.3 displays an NFC error when there are a high number of parallel streams.	This problem was corrected with the release of vmPRO 2.3.1. It is highly recommended that you upgrade to vmPRO 2.3.1. However, if you are still running vmPRO 2.3, see the Maximum Sessions Exceeded workaround.
3577	Reboot of ESX server during backup results in partial backup with successful status.	Do not restart an ESX server while doing a backup; the backup and restore could fail.
3194	NetBackup ignores CBT changes when CBT is enabled on a VM. During the backup of a CBT enabled VM, only the default 4 KB file is backed up and the actual changes to the `pancbt.vmdk` file are ignored.	1) Enable `BUSY_FILE_ACTION` on the NetBackup client and set the repeat (retry) count to 8 (this could also be set to 4 or some other number). 2) Create a `User Backup` schedule with active execution window in the backup policy for the NetBackup client 3) Copy bpend_notify_busy script from the Master server (/opt/openv/netbackup/bin/goodies) to the NetBackup client (/usr/openv/netbackup/bin) as bpend_notify 4) Delete the stale actions file in /usr/openv/netbackup/busy_files/actions directory to allow a new actions file to be created. The actions file should contain the action that is expected of the `BUSY_FILE_ACTION` setting.
3009	CBT Error: Changed Block Tracking is only available on virtual machines starting with HW 7. This error message is used to show that the VM property `capability.changeTrackingSupported` is not present or set to false.	If a user sees this error message and the affected VM is at Hardware Version 7 (HW 7), the user may need to restart the vCenter or ESX server hosting the VM to clear this message.

ID	Description	Workaround/Resolution
2653 2654 3058 2762	Beginning with 2.2.0, the vmPRO appliance and the vCenter or ESX server(s) must be set to the same time zone.	
2356	vCenter versions below vCenter 4.0 update 2 are not supported. A vCenter bug that causes an internal server error during backup is resolved as of vCenter 4.0 update 2. (vCenter 4.1 also works great.)	See the online support article: vCenter Server Error
2239, 2460, 2473	When copying a VM from a CIFS-mounted vmPRO directory, or when copying a VMDK into /import mounted over CIFS, the copy operation may time out with the message such as The specified network name is no longer available, or No such file or directory, or File exists.	To resolve this issue, the Windows LANManager Workstation setting called SessTimeout must be set to a higher number of seconds. See the online support article: Copying a VM Times Out
1909	vmPRO does not work with VMware ESX configured with a HTTPS port number.	vmPRO does not work with VMware ESX configured with an HTTPS port number other than 443. VMware vCenter with alternate port number works fine.
1427	If a vmPRO appliance is added to a group (i.e., joins a master) while backups or copies are in progress, the data operations may be interrupted and may have to be restarted after the ESX servers have been reassigned to the node. This occurs so that the master can be configured to manage the ESX servers centrally and be able to assign them to nodes as needed.	Do not add VMs to a group when a backup is in progress.
1316	Snapshot out of space.	Before using vmPRO for a backup, ensure that your datastores have enough space for the snapshots that will be triggered by your vmPRO.
1258	Internal appliances that share the same UUID failed. These appliances were cloned.	Do not clone a vmPRO appliance; clones are not supported.

ID	Description	Workaround/Resolution
	Unix/Linux file systems may contain symbolic links that are absolute paths to directories that are outside of the mounted volume directory structure. These "absolute" symbolic links will not be backed up properly when accessing the file-level view over CIFS. Attempts to access these absolute symbolic links through the file-level view exported by our appliance (over CIFS) will result in a "permission denied" error. This means that if a backup program, such as TSM, does a file-level backup of a Linux file system, the "absolute path" type symbolic links will not be backed up, and will not be restored on recovery. This applies only to backing up Unix/Linux file systems.	
	A maximum of 4 streams per SmartMotion policy is recommended per vmPRO appliance.	

Documentation

The following documents are currently available for Quantum vmPRO.

Document Number	Document Title
6-67535	*Quantum vmPRO User's Guide*
	Quantum vmPRO Installation Guide

Contacting Quantum

More information about this product is available on the Service and Support website at www.quantum.com/support. The Service and Support Website contains a collection of information, including answers to frequently asked questions (FAQs).

For further assistance, or if training is desired, contact Quantum:

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