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VRanger (Previously ESXRanger) Quiescing & VSS
Recommended Settings

Produced by: VirtualizationTeam Blog members

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vRanger (Previously ESXRanger) Quiescing & VSS Recommended Settings:

vRanger provides support for Quiescing the virtual machine before it starts to backup that VM. The purpose of Quiescing is to ensure that no file system writes are pending when the snapshot is taken, allowing for file system level consistency. Although Quiescing has always been proved to be a great method to backup normal virtual machines, it seems to cause issues for virtual machines which are running a database. Example of virtual machines with database & where it's recommended to disable Quiescing is MS SQL Server, MS Exchange, Active Directory, and so on.

For VMs which run a database, it's highly recommended to stop Quiescing. Though not Quiescing a virtual machine before backing it up you will end up with only a crash-consistent image (Restoring a crash-consistent image is essentially the equivalent of rebooting a server after a hard shutdown.). Although most applications & operating systems today can sustain a sudden shutdown, most enterprises will not accept to take that risk for critical servers. As database servers are mostly critical servers, then a crash-consistent image might not be the desired solution. For that case, vRanger offers VSS (Volume Shadow Copy Services) which can get you a transactionally consistent backup image. For you to benefit from this feature, the application you are backing up has to support Microsoft VSS. Example of applications which support VSS are MS SQL Server, MS Exchange, & Active Directory.

The message of this document:

- 1- Virtual Machines which do not run any database, you are recommended to enable Quiescing. As running Quiescing before the backup will give you a file system level consistent image, which is a lot better than a crash-consistent image.
- 2- Virtual Machines running a database tend to face issues when Quiescing happens, so it's recommended to disable Quiescing on database servers. If the database application being used supports Microsoft VSS (Active Directory, MS SQL Server, MS Exchange, & So on), then it's recommended to enable VSS which will provide you with a transactionally consistent backup image.

From above you will figure out that the way you handle your vRanger backup settings depends on the server being backed up: is it a database server, or a non-database server. For that, the instruction is introduced as how to handle it for a non-database server, then how to handle it for a database server and titled as below:

- 1- [Vizioncore vRanger \(Previously ESXRanger\) Quiescing & VSS Setting for non-database Virtual Machines](#)
- 2- [Vizioncore vRanger \(Previously ESXRanger\) Quiescing & VSS Setting for database Virtual Machines](#)

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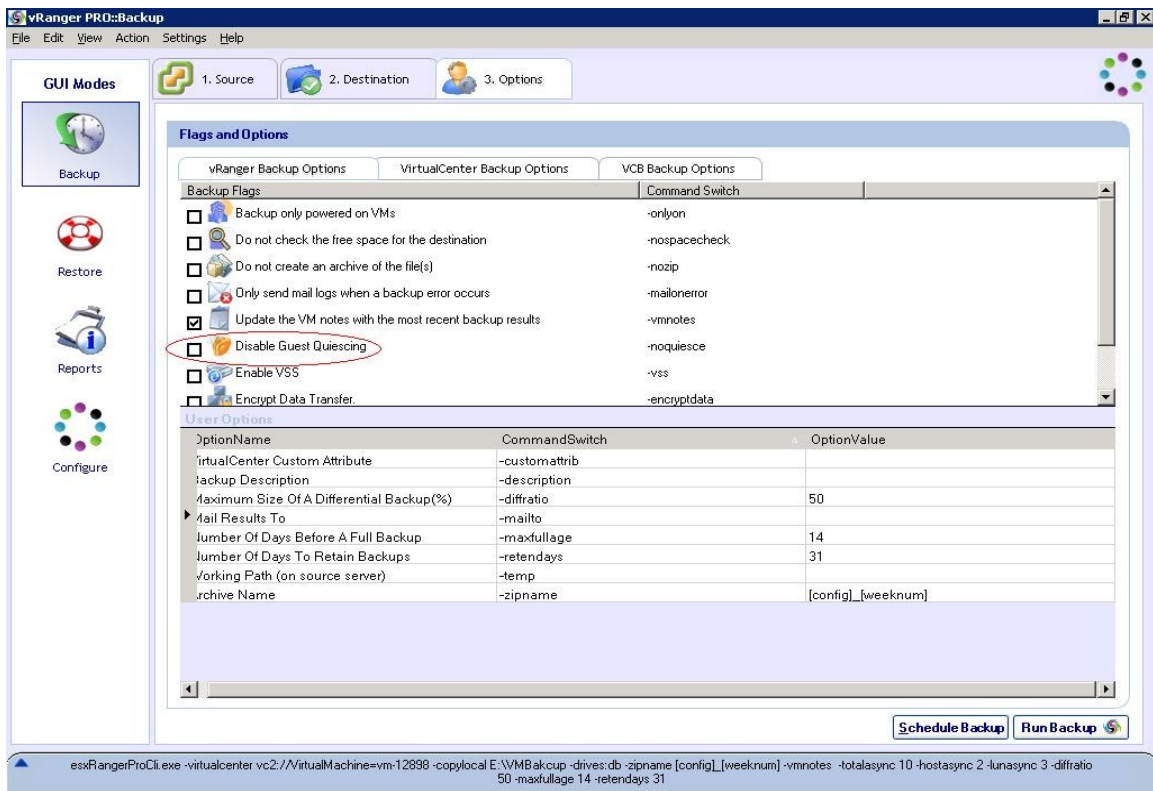


vRanger (Previously ESXRanger) Quiescing & VSS Setting for non-database Virtual Machines:

As mentioned earlier, for non-database virtual machines enabling Quiescing is recommend to get a file system level consistent images. In addition, VSS is not required for non-database servers backup. As that backup can go over SAN using VCB, or over LAN using vRanger directly below is the required changes for both cases:

Over LAN:

To enable Quiescing for vRanger backup which is done over LAN you will have to remove the check mark “Disable Guest Quiescing”



Using VCB:

As VCB has Quiescing enabled by default, and not affected by the “Disable Guest Quiescing setting in vRanger you have nothing to do assuming that the Filesystem Sync Driver which installed as a part of VMware Tools by default is installed on the VM you want to backup.

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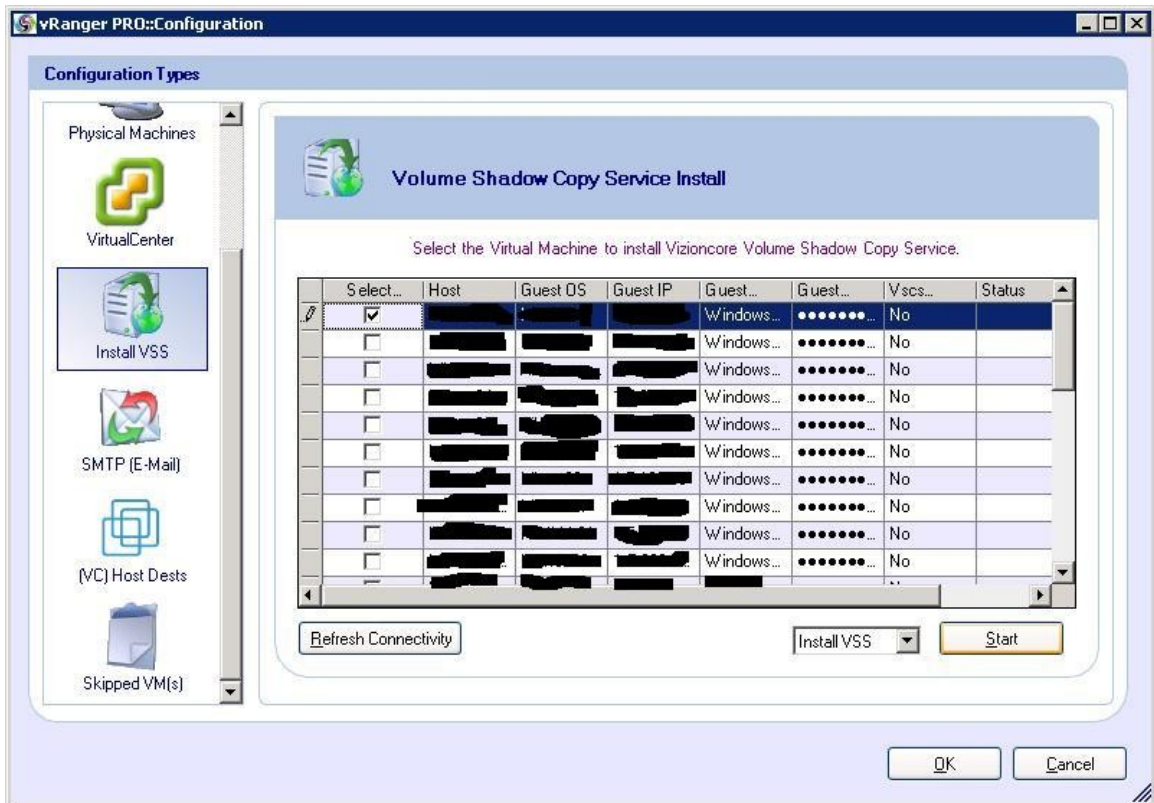


vRanger (Previously ESXRanger) Quiescing & VSS Setting for database Virtual Machines:

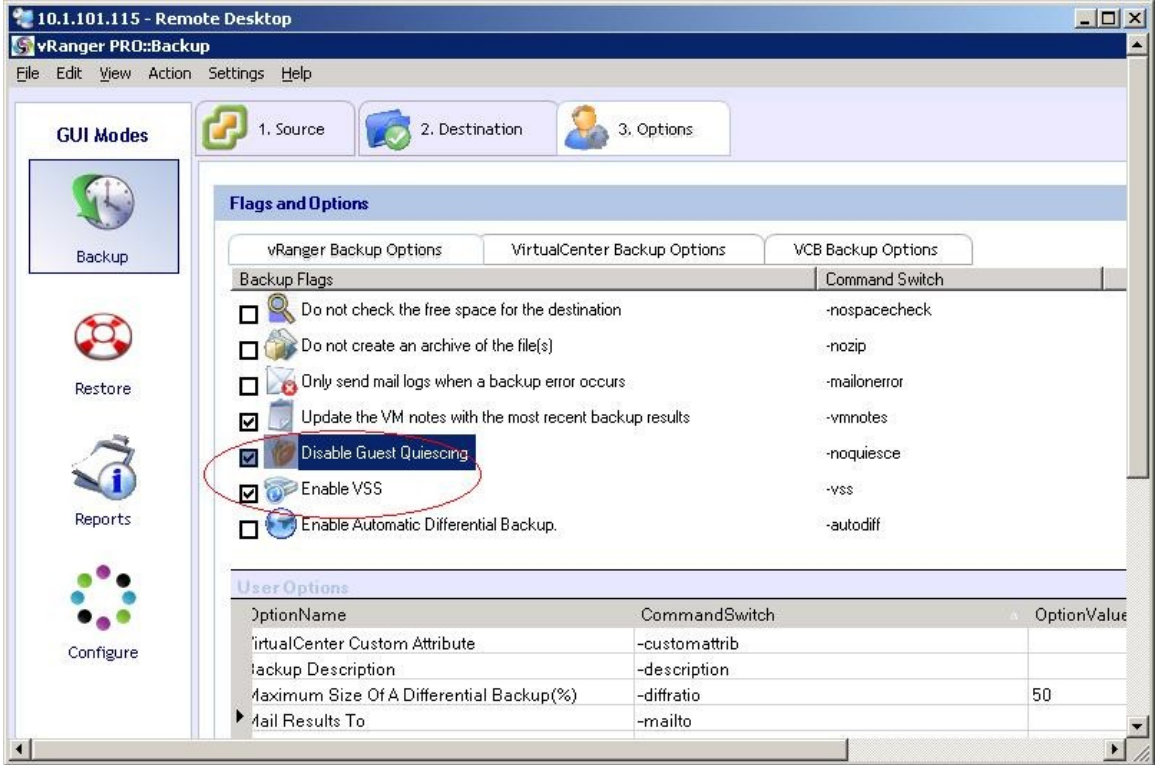
As mentioned earlier, Quiescing is recommended to be disabled for virtual machines running a database application to avoid problems which seems to often occur when quiescing virtual machines that run a database application. In addition, for database servers which support VSS (MS SQL Server, MS Exchange, Active directory, and so on) it's recommended to enable VSS to obtain a transactionally consistent backup image. As that backup can go over SAN using VCB, or over LAN using vRanger directly below is the required changes for both cases:

Over LAN:

Ensure that Quiescing for vRanger backup is disabled (“disabled by default”). In addition, if your database applications support VSS you should Install VSS for that virtual machine & enable VSS by placing a check mark next to “Enable VSS” in vRanger. Setting is illustrated in the images below:



(How to install VSS in Database Virtual Machines)

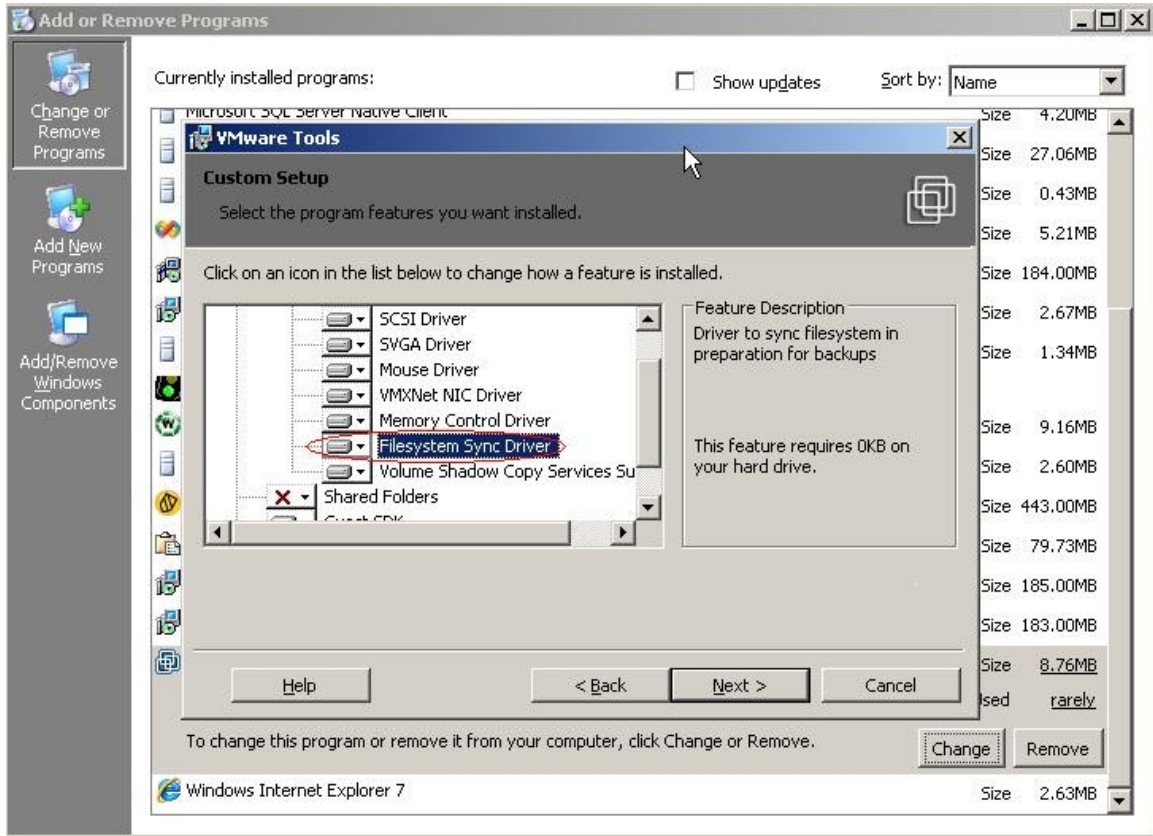


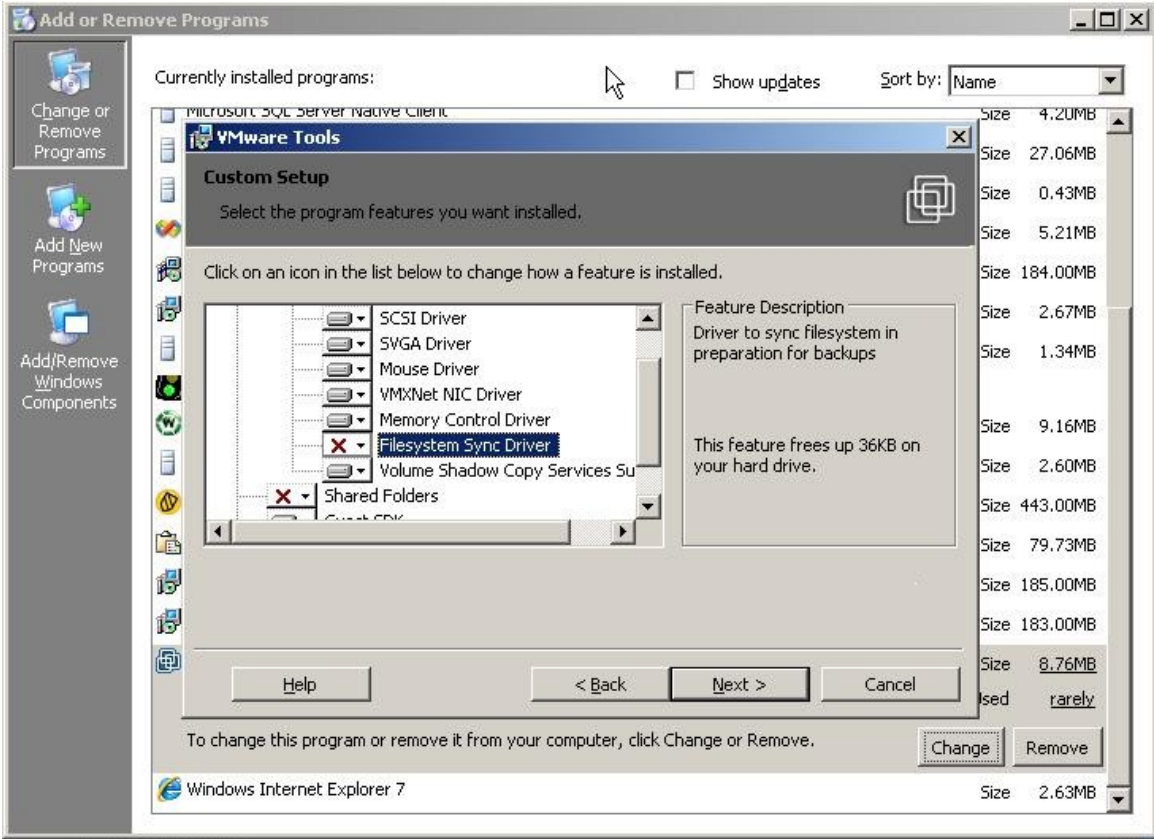
(Disable Quiescing & enable VSS)



Using VCB:

As the “disable Guest Quiescing” check mark does not affect VCB setting, and Quiescing will always happen when running VCB if the VMware “Filesystem Sync Driver” which installed as a part of the VMware tools is installed on the VM to backup. For database servers where you are using VCB to backup and want to disable Quiescing you will have to remove the Filesystem Sync Driver from under control panel → VMware tools on the virtual machine to backup as shown in the images below:

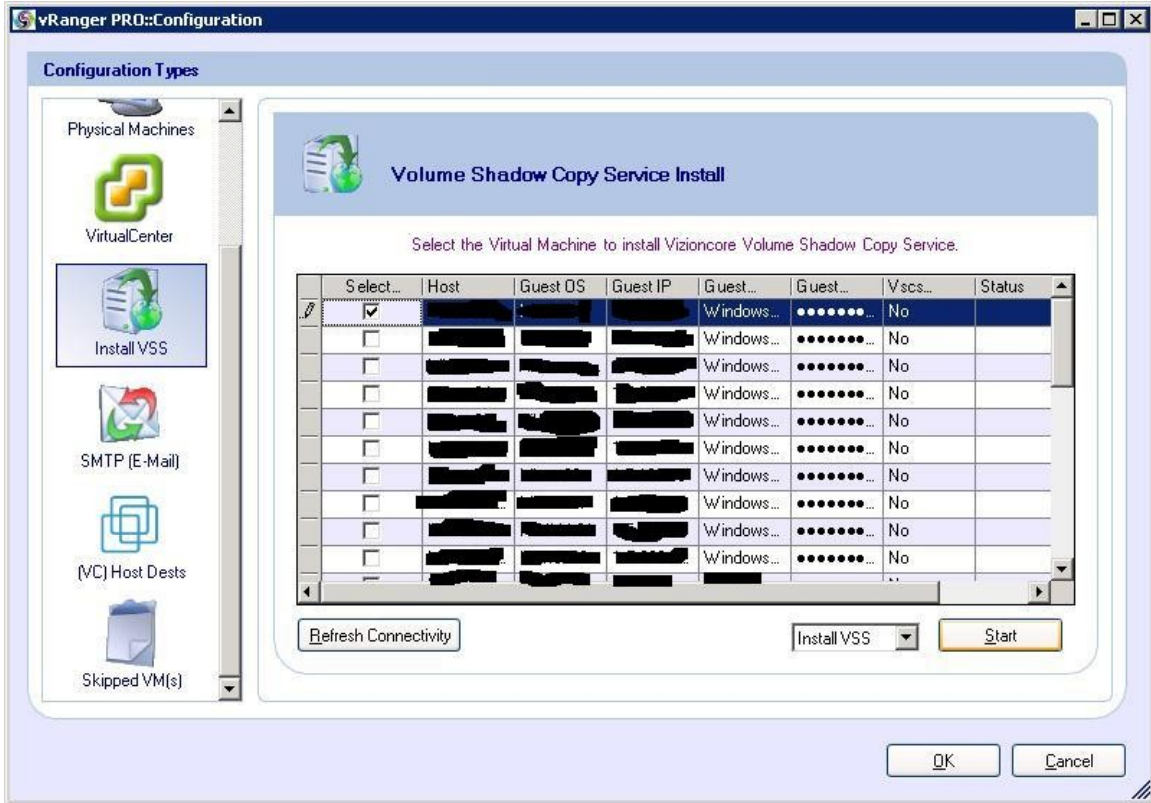




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After that if your database support VSS, you will need to install VSS on the virtual machine you want to backup as well enable VSS for the machine you want to backup from vRanger as below:



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