Application Failed to Quiesce

https://campus.barracuda.com/doc/93198324/

When running either a VMware Standard or a VMware Quickspin backup job, you receive an error saying "[VM Name] application quiesce failed." The virtual machine which fails to quiesce does not get backed up and this error may occur each time you run the backup or it may be sporadic.

Explanation

When either a VMware Standard or a VMware Quickspin job run, one of the first steps in preparing a virtual machine for backup is to ready the virtual disks. To make the virtual disks suitable for application-consistent backups, a quiesced snapshot must be taken of the disks; this process guarantees important data stored in memory is written to the disk, which ensures the applications running on the virtual machine are in a consistent state. If applications do not quiesce successfully, those applications may not work properly when the virtual machine is restored.

The process of quiescing a virtual machine in VMware involves two parts. The first part carried out by the VMware VSS Requestor at the direction of the VMware Tools service; the VSS Requestor initiates quiescing within the guest operating system and, upon completion, notifies the VMware VSS Snapshot Provider. This information is forwarded to the ESX/ESXi host to kick off the virtual machine snapshot.

Overall, the process of quiescing a virtual machine involves, first, the guest operating system quiescing applications and, second, the host taking a snapshot of the virtual machine. Usually, quiescing issues are more likely to occur during the first part. Luckily, VMware will generally provide the cause of a failed quiesce operation in the "Tasks and Events" log in vSphere.

Resolution

Failed Quiescing Troubleshooting

When you receive a "[VM Name] application failed to quiesce" error, the first place to check would be in vSphere's "Tasks and Events." There should be an event corresponding to the failed quiesced snapshot operation which you can use as a starting point for troubleshooting the failure. Some common resources for troubleshooting quiescing failures are here:

Cannot create a quiesced snapshot because the snapshot operation exceeded the time limit for

holding off I/O in the frozen virtual machine

Creating quiesced snapshot fails with the error: An error occurred while saving the snapshot: msg.snapshot.error-QUIESCING-ERROR

Troubleshooting issues when creating or committing snapshots in VMware ESXi/ESX

When troubleshooting quiescing issues, you don't need to run the VMware Standard or VMware Quisckpin backup to test quiescing. You can create a quiesced snapshot through vSphere for testing. It is important you select the "Quiesce guest file system (Needs VMware Tools installed)" option when making the snapshot. If you can create a quiesced snapshot through vSphere, the backup software should not having issues doing the same during the backup job.

Guest Operating System VSS Issues

If creating a quiesced snapshot fails and mentions something similar to "The guest OS has reported an error during quiescing" or "Unable to quiesce file system," the problem may be that the VSS provider on the guest operating system is not able to quiesce applications successfully. For Windows virtual machines, this translates to Microsoft's VSS provider failing to properly quiesce the guest.

To troubleshoot that best, you will need to investigate VSS from within the guest operating system. Trying to create shadow copies manually is a good starting point although it is not perfectly analogous to the quiescing operation. Look in Event Viewer for VSS and volsnap events corresponding to the quiescing failure in the Application and System logs, respectively. These should point you in the right direction.

VMware Workaround

You may find that VMware has a workaround for application quiescing failures. This workaround disables application quiescing altogether and makes the backup crash-consistent. If you restore a virtual machine that was backed up in a crash-consistent state, you will be able to power on the virtual machine but the applications running on that virtual machine may not function correctly and may have to be rebuilt.

Intronis does not recommend you use this workaround as it does not produce application-consistent backups. Please be aware that if you choose to use this workaround, you are accepting any responsibility for potential issues within the guest operating system in a restore scenario.