

## Requirements for Hyper-V Backups

<https://campus.barracuda.com/doc/93198138/>

In order for Hyper-V backups to run correctly a number of requirements must be met. The following checklist addresses configuration elements for both the Hyper-V host and guest machines. This configuration information applies to both Hyper-V Standard and Hyper-V Rapid Recovery backup sets.

### Hyper-V Host Requirements

#### Integration Services

On a Hyper-V host, Integration Services allow the backup software to take an application-consistent backup of Hyper-V virtual machines. This is accomplished, specifically, by the [Backup \(volume snapshot\) service](#) of Integration Services. This service must be enabled in Integration services as it installs the Hyper-V Volume Shadow Copy Requestor service on each guest; this requestor service is what allows the backup software to snapshot the virtual machine.

Integration Services come bundled with the Hyper-V role, however, they are updated by Windows Update. If you receive any warnings about Integration Services being out-of-date, try running Windows Update on the host machine and check for any updates related to Integration Services.

#### VSS

In order for Microsoft's VSS to snapshot the virtual machines properly, there are some requirements which must be met on the host level.

- **Snapshot Storage** - When the virtual machines are snapshot, snapshot files (differencing disks) will be created. These files require space and, as a rule of thumb, [should be located in the same folder](#) as the other virtual machine files. Make sure the volume on which the virtual hard drives and snapshot storage are located have at least 10-20% free space.
- **Stable Writers** - In order for VSS to properly snapshot virtual machines, all of the VSS writers on the host must be in a stable state. If they are not, try the steps [outlined here](#).
- **NTFS Volumes** - [Microsoft's VSS provider](#) can only make snapshots of and store snapshots on volumes that are NTFS-formatted. Make sure the volumes on which the virtual hard drives and snapshots are stored on are NTFS.

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## Services

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In addition to the above requirements, you may want to double-check that the following services are running on the host machine:

- COM+ System Application
- Distributed Transaction Coordinator
- Hyper-V Virtual Machine Management
- Volume Shadow Copy

## Hyper-V Guest Requirements

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### Integration Services

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When installing or updating Integration Services on a guest virtual machine, use this [guide](#). The Integration Services Setup Disk that is used is synthesized from the Integration Services on the host machine. As long as you are not using one which is already present in the virtual machine's CD/DVD drive, it should be up-to-date with the host.

### VSS

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When a virtual machine is snapshot with the "Backup (volume snapshot)" component of Integration Services, the **Hyper-V Volume Shadow Copy Requestor** service has the VSS provider on the guest operating system quiesce and shadow copy the volumes within the virtual machine. If the shadow copy operations on the guest cannot complete, the Intronis software will not be able to back up that virtual machine. The requirements for VSS for the guest virtual machine are as follows:

- **Shadow Copy Storage** - Make sure there is at least 10-20% free space on each volume present in the guest and at least 10-20% of each volume is [allocated as shadow copy storage](#). When allocating storage, make sure the storage area resides on the source volume of the shadow copy (shadow copy storage for C: is located on C:).
- **Stable Writers** - In order for VSS to properly snapshot the volumes, all of the VSS writers on the guest must be in a stable state. If they are not, try the steps [outlined here](#).
- **Eligible Volumes** - There are a few requirements for the volumes present on the guest machine to snapshot by VSS. They are as follows:

- **NTFS** - [Microsoft's VSS provider](#) can only make snapshots of and store snapshots on volumes that are NTFS-formatted.
- **Basic** - Another limitation to Microsoft's VSS provider is that it cannot snapshot volumes that are dynamic. If any of the volumes within the guest are dynamic (this does not apply to the virtual hard drives), the backup software will not be able to perform a backup of the running virtual machine.
- **Native** - Any disk which is passed through to the guest virtual machine will [break the snapshot process](#). We cannot back up a virtual machine that has a physical disk directly attached to the virtual machine.
- **No App-V Drives** - If there are any App-V drives attached to the virtual machine, this will also prevent snapshots from being made.
- **SCSI Controller** - It is necessary that each virtual machine being backed up have a SCSI controller. The virtual disks do not need to be attached to the SCSI controller, but one must be present with open slots.

## Services

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In addition to the above requirements, you may want to double-check that the following services are running on the guest machine:

- COM+ Event System
- Distributed Transaction Coordinator
- Hyper-V Volume Shadow Copy Requestor
- Remote Procedure Call (RPC)
- System Event Notification

By default, these are set to "Automatic" and/or "Automatic (Delayed Start)". The "COM+ System Application" and "Microsoft Software Shadow Copy Provider" and "Volume Shadow Copy" services must at least be set to Manual, which is the default for these.

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