Hyper-V 2016 Standard Backup

https://campus.barracuda.com/doc/77402082/

Applicable Products

These instructions apply to the following products:

- Barracuda Intronis Backup - MSP

Hyper-V 2016

With this release of Hyper-V 2016, Barracuda MSP extends support of current Hyper-V features (Standard and Rapid Recovery) to the latest Hyper-V 2016 platform released by Microsoft. Microsoft's RCT technology is used to determine the changed blocks in a virtual disk for a VM running on a Windows Server 2016 system.

Because RCT works only for VMs using the new configuration format introduced with Windows Server 2016 (version 8.0 or later) the backup agent can no longer backup VMs running the older version of the configuration format.

To backup VMs using RCT, the VM's configuration format must be upgraded to the latest version (8.0). Older VMs still can be added to Hyper-V backups sets, but a warning is displayed that the VMs must be upgraded before being backed up. If the Agent detects a VM using a pre-version 8.0 configuration format running on Windows Server 2016, it does not attempt to back up the VM, instead it logs an error message, and then moves to the next VM in the backup set.

Windows Server 2016 Hyper-V Deployment Considerations

To reduce downtime and allow for an acceptance period, it is recommended that you perform a clean installation of Windows Server 2016 Hyper-V when migrating from previous Hyper-V server versions.

The following table provides the deployment tasks.

Stage	Task
1	Plan the move of existing virtual machines.
2	Create or move the virtual machines.
3	Upgrade the configuration file format to v8.0, where applicable.
4	Create new sub-accounts.
5	Create and run new backup sets.
6	Delete old subaccounts.

For existing Windows Server 2016 Hyper-V deployments, do the following:

1. Install/upgrade the latest agent.
2. Upgrade the virtual machine configuration file format to v8.0, if necessary.
3. Create and run new Hyper-V 2016 backup sets.

If you are running Physical Imaging backups of virtual machines and you want to migrate to Hyper-V 2016, do the following:

1. Ensure you have the latest backup set.
2. After your new Hyper-V backups have been created, delete the old Physical Imaging subaccounts.

Hyper-V 2016 Backup Agent Software Requirements

The following table provides the requirements for running the Backup Agent software.

Hyper-V Backup Agent Software Requirements	
Supported Operating Systems • MS Windows Server 2008 SP2/2008 R2 SP1, SP2/2012/2012 R2/2012 R2 Essentials/2016 • MS Windows 7 SP1/8.0/8.1/10 • MS Windows Small Business Server 2011 SP1 **Web Portal Requirements** • Chrome (most recent version) • Edge (most recent version) • Internet Explorer 10/11 (desktop mode) • Firefox (most recent version)	**Minimum Requirements for Exchange, SQL, Imaging, VMware, and Hyper-V Backups** • 2GHz quad-core CPU • 4 GB of Total RAM (1 GB free RAM during backup, restore, or delete operation) • Free disk space equaling twice the size of your largest protected file (not required for VM backups) • Broadband Internet Connection • MS.NET Framework 4.5.2 (to allow backup/restore/delete management from the web) **Virtual Machines** • VMware ESXi/vCenter 5.0/5.1/5.5/6.0/6.1/6.5/ • VMware vSphere 6.5 (TLS 1.0 must be enabled on all hosts managed by the vCenter Server.) • All supported VMware versions require VMware Essentials license or higher. Includes support for clustered environments. • Hyper-V 2016/2012 R2/2012/2008 R2 (does not include clustered support)/ • Windows Server 2012 R2 Essentials is not supported as a virtualization host

Hyper-V Standard Backup Overview

Hyper-V backups can be stored locally and in the cloud. When Hyper-V backups are stored locally, they are stored in a proprietary format (encrypted and compressed) and require a restore to access backed-up data.

When the backup agent is installed on the Hyper-V host, it can back up any virtual machine on that host. You can select any number of virtual machines to be backed up. However, a VM can only be included in one backup set at a time.

If you are backing up to the cloud, then ensure that each VM you need to back up has the most recent version of Integration Services (IS) installed. The Hyper-V host's Integration Services also must be updated (if the host's IS is older, then the backup fails).

You can schedule a backup set to run on a recurring schedule. The default is running once per night.

You can add more than one VM to a backup set, but, by default, only one virtual disk is processed at a

time when the backup runs. You can change this behavior by increasing the number of concurrent Hyper-V worker threads on the System Page. Increasing the number of worker threads allows multiple disks to be backed up concurrently but may use more resources on the host.

Hyper-V backups copy a full, initial backup of selected VMs. After this initial backup, incremental backups containing only the changed portions of each VM are performed until the next full backup is scheduled.

Note: Windows XP and Nano Server are backed up in a crash-consistent state instead of an application-consistent state.

Creating Hyper-V Standard Backup Sets

To create a Hyper-V Standard backup set, perform the following steps.

1. Navigate to the Computer page.
   The Computer page is displayed.
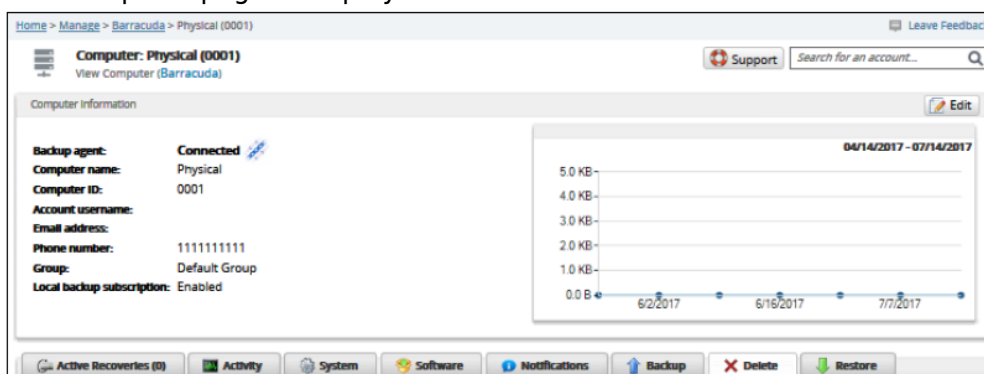
2. Click the **Backup** tab.
   The Backup Selections page is displayed.
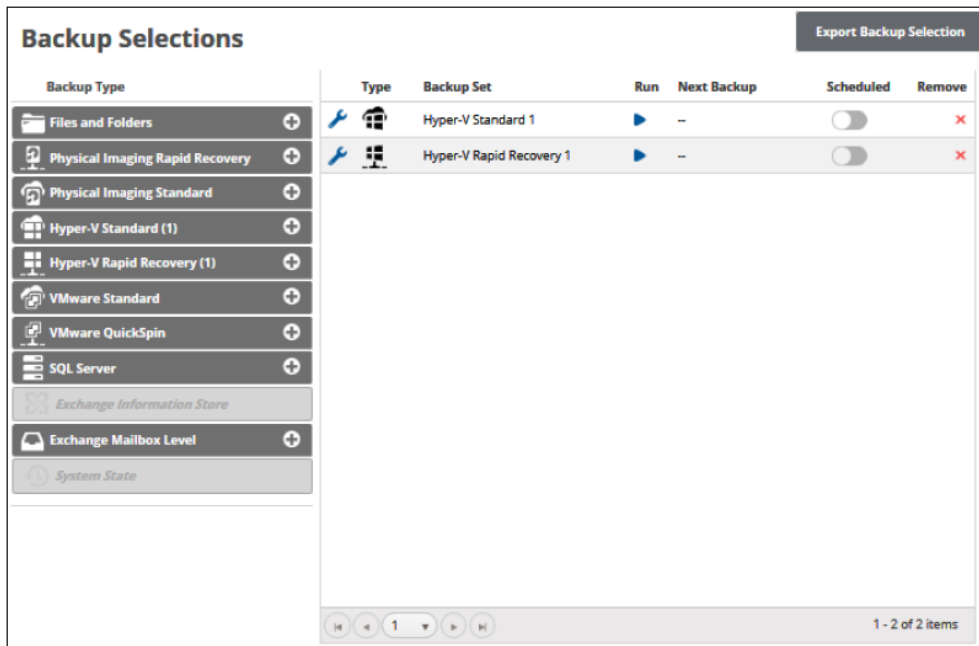
3. In the Backup Type pane, click **Hyper-V Standard.**
   The Select page is displayed.
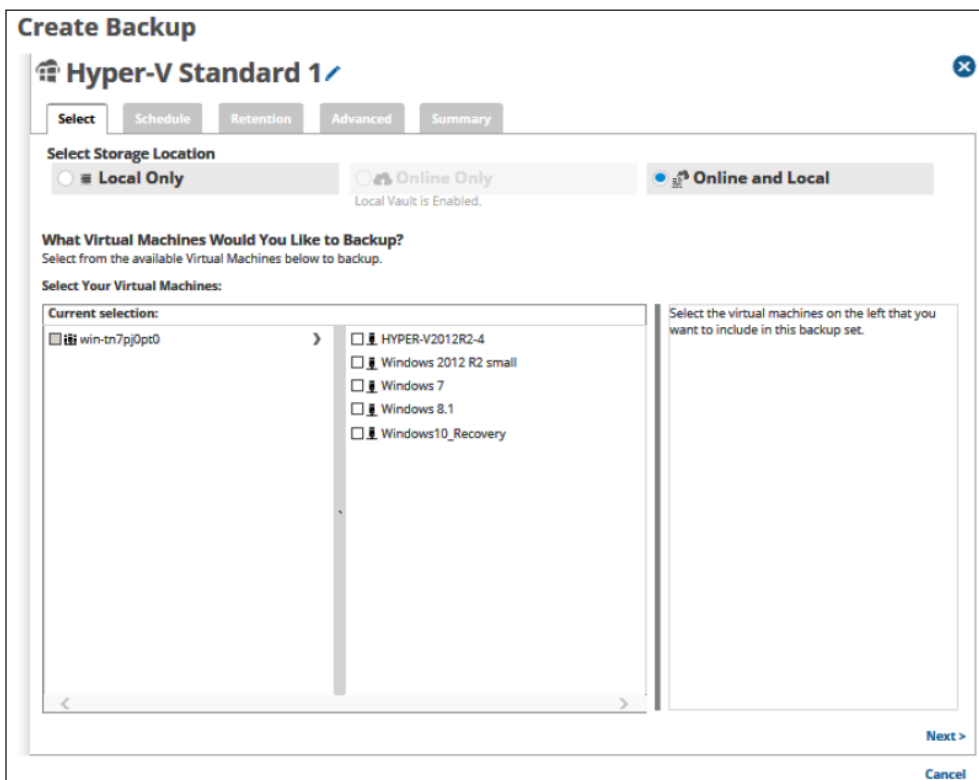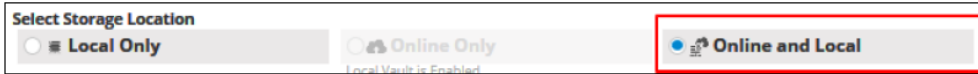
4. Click the Backup Name to provide a new name for your backup set or accept the default.
5. At the Select Storage Location section, click one of the following radio button options.
   Note: This procedure applies to all options.
   - **Local Only** (Local Vault must be enabled, and a local subscription is required. Data is not backed up to the cloud.)
   - **Online Only** (An enabled Local Vault disables this option.)

       ○ **Online and Local** (Local Vault must be enabled.)

The radio button you select is highlighted as shown in the example below.
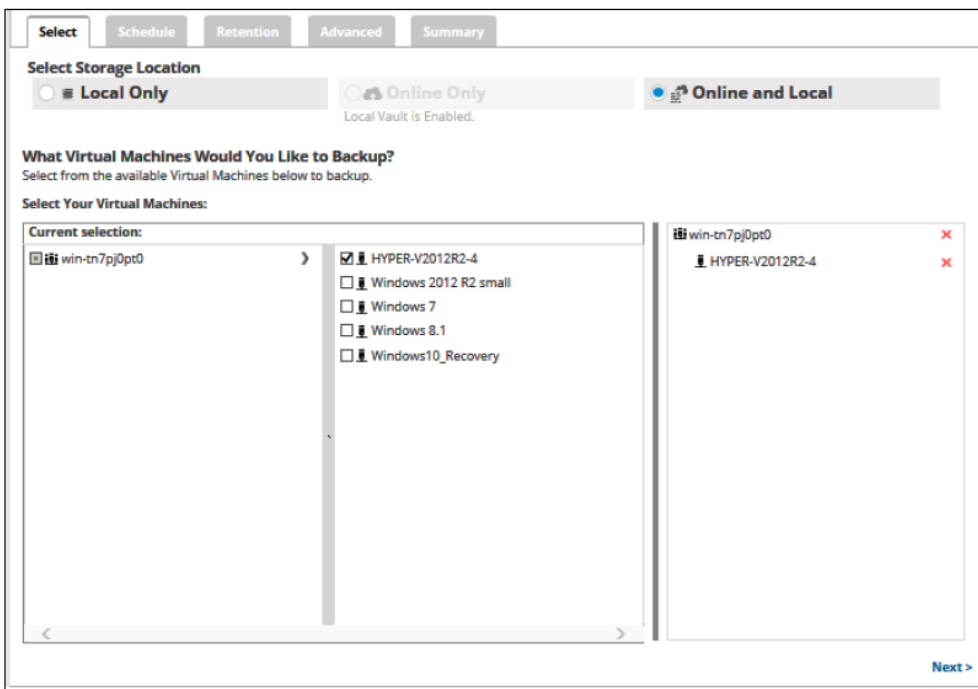
6. In the Current Selection pane, select the available virtual machines you would like to back up.
   Notes:
   - Any VMs that already are included in other backup sets are grayed out.
   - A warning icon is displayed for VMs that have not been upgraded.
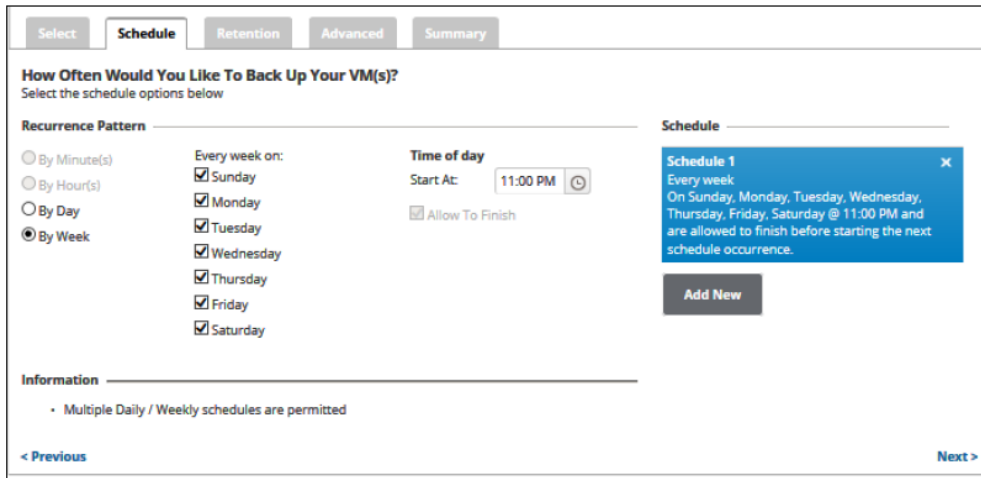
Clicking the arrow at the right of the items displays more VMs.

Your selections are displayed in the right pane. Click the remove icon to remove any selections or clear the VM check box.

7. After making your selections, click **Next**.
   The Schedule page is displayed.

8. Accept or edit the default schedule.

   Notes:
   - The default schedule is by the week on every day starting at 11 p.m.
   - Multiple daily/weekly schedules are permitted (if they do not overlap).
   - The Allow to Finish check box is always selected and grayed-out.

   Your schedule is displayed in the Schedule column. Click the remove icon ❎ to delete schedule.
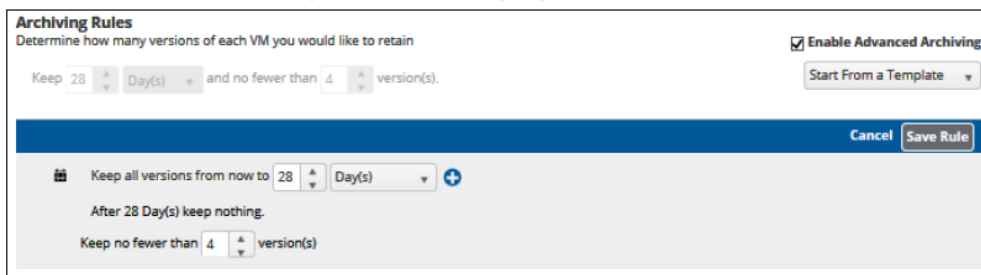
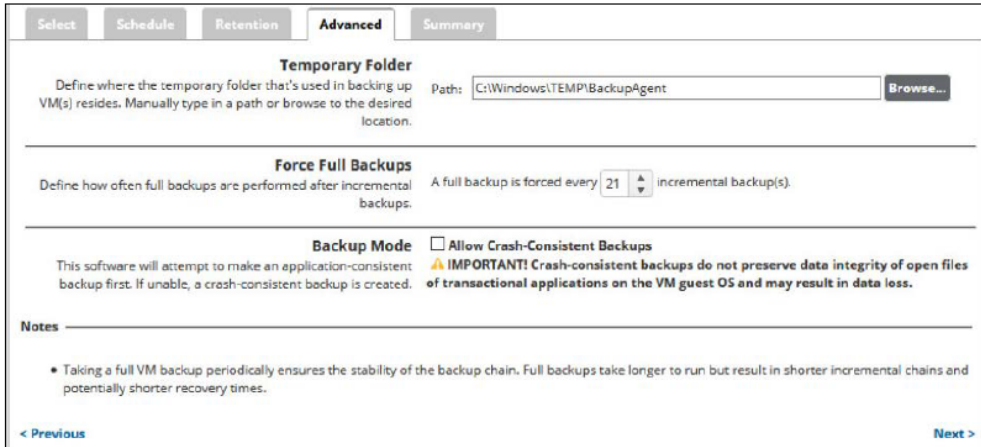9. After setting the schedule, click **Next**.
   The Retention page is displayed.

10. Select the number of versions you wish to retain, and for how long.
    Note: The default is 4 recoverable versions of backups at the storage location that are retained for 28 days.

11. Optionally, select the **Enable Advanced Archiving** check box.
    The Advanced Archiving fields are displayed.

12. Make your selections, click **Save Rule**, and then click **Next**.
    The Advanced page is displayed.

Requirement: You must specify a temporary folder located on a disk with sufficient space. Temporary space of 1 GB is recommended for Hyper-V backups.

13. At the Temporary Folder field, accept the default, type a new path, or click the **Browse** button to locate the temporary folder that is used during backing up.

14. At the Force Full Backups section, use the arrows to specify how often full backups are performed after incremental backups.
    Notes:
      ○ The default full backup is every 21 incremental backups.
      ○ Taking a full VM backup periodically ensures the stability of the backup chain. Full backups take longer to run but result in shorter incremental chains and potentially shorter recovery times.

15. At the Backup Mode section, optionally select the **Allow Crash-Consistent Backups** check box.
    CAUTION!Crash-consistent backups do not preserve the integrity of data for open files of transactional applications on the VM guest OS and may result in data loss.

Note: The software attempts to make an application-consistent backup. If unable, a crash-consistent backup is created

**Pre-Windows Server 2016 versions** display a different backup mode option as shown below.
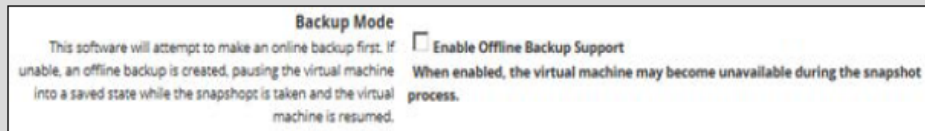
When enabled, the virtual machine may become unavailable during the snapshot process.

The software attempts an online backup first. If unable, an offline backup is created. The virtual machine is paused and put into a saved state while the snapshot is taken, and then the virtual machine resumes operation. VMs in a saved or a paused state can be backed up. The imported recovery VMs are in a saved state in both cases.

Tip: This mode is useful if an online backup cannot be taken. For instance, if the guest VM has dynamic disks, this mode allows guest VMs to be backed up in a non-quiesced, offline state.

16. Click **Next**.
The Summary page is displayed.
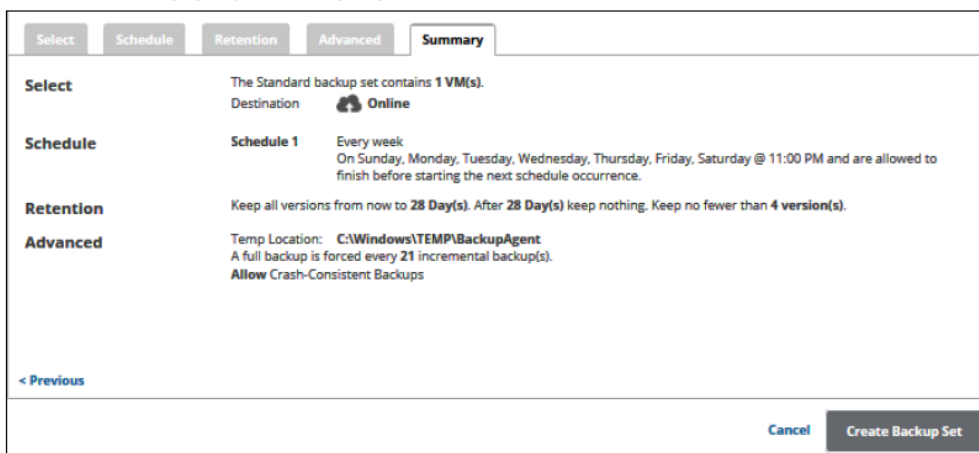
17. After reviewing your selections, click the **Create Backup Set** button.

If you did not change the default backup set name when creating a new backup set, the following confirmation pop-up is displayed after clicking the **Create Backup** button.

Name and confirm your backup:

Hyper-V Standard 1

Cancel **Confirm**

This feature allows you to create a unique name for the backup set. If you already changed the default backup set name, the pop-up is not displayed.

Optionally, change the backup set name, and click **Confirm**.

Your scheduled backup is displayed on the Backup Selections page.

Figures

1. HV 2016_1.png
2. HV 2016_2.png
3. HV 2016_3.png
4. HV 2016_4.png
5. HV 2016_5.png
6. HV 2016_6.png
7. Arrow.png
8. Remove.png
9. HV 2016_7.png
10. HV 2016_8.png
11. Remove blue.png
12. HV 2016_9.png
13. HV 2016_10.png
14. HV 2016_11.png
15. HV 2016_12.png
16. HV 2016_13.png
17. HV 2016_14.png
18. HV 2016_15.png