

## Understanding Why VMware Virtual Machine Returns Incorrect Changed Sectors

<https://campus.barracuda.com/doc/73696096/>

### Issue

VMware has reported an issue with ESXi version 6.0.x where incorrect changed sectors are returned. When a virtual machine (VM) is running ESXi 6.0.x and Changed Block Tracking (CBT) is enabled, some change areas in data are not reported. When this occurs, that data is not recognized as changed and is not backed up; current and past incremental backups are potentially compromised. For more information, see the VMware knowledgebase solution [Backing up a Changed Block Tracking enabled virtual machine in ESXi 6.0.x returns incorrect changed sectors \(2136854\)](#).

This issue is resolved in VMware ESXi 6.0 patch ESXi600-201511001. For more information, see [VMware ESXi 6.0, Patch Release ESXi600-201511001 \(2137545\)](#).

### Symptoms

- VMware version 6.0.x
- CBT is enabled

Incremental backups using CBT from ESXi 6.0.X servers may be corrupted or incomplete.

### How to Resolve

Upgrade all ESXi 6.0.x servers to the latest available patch and replace all previously generated incremental backups:

1. Upgrade using the VMware solution [VMware ESXi 6.0, Patch Release ESXi600-201511001 \(2137545\)](#).
2. Force an initial new full backup by resetting Changed Block Tracking (CBT) of all the VMs to backup:
  1. Open the vSphere Web Client.
  2. Right-click the VM and click **Power Off**.
  3. Right-click the VM, click the Snapshot and navigate to Snapshot Manager. Ensure there are no active snapshots. If there are snapshots present, consolidate them to commit the changes. For more information, see [Consolidating snapshots in vSphere 5.x/6.0](#)

[\(2003638\)](#).

4. Right-click the VM, and click **Edit Settings**.
5. Click the **Options** tab, select the **General section**, and click **Configuration Parameters**.
6. Disable CBT for the VM by setting the ctkEnabled value to **false**.
7. Disable CBT for the individual virtual disks attached to the VM by setting the scsiox.**ctkEnabled** value for each attached virtual disk to **false**.
3. Once the host upgrade is complete, run a full backup to ensure incremental backup integrity.

For more information, refer to the following VMware knowledgebase solutions:

- [Consolidating snapshots in vSphere 5.x/6.0 \(2003638\)](#)
- [Resetting Changed Block Tracking for VMware vSphere virtual machines \(2139574\)](#)
- [Determining if there are leftover delta files or snapshots that VMware vSphere or Infrastructure Client cannot detect \(1005049\)](#)
- [Locating virtual machine log files on an ESXi/ESX host \(1007805\)](#)
- [Enabling or disabling Changed Block Tracking \(CBT\) on virtual machines \(1031873\)](#)

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