

Some Change Areas are not Reported on Virtual Machine Running ESXi 6.0.x with Changed Block Tracking Enabled

<https://campus.barracuda.com/doc/73703240/>

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 \(2136854\)](#).

Symptoms

When running VM backups that utilize CBT in ESXi 6.0, the CBT API call `QueryDiskChangedAreas()` can sometimes return incorrect changed sectors, resulting in inconsistent incremental VM backups.

Cause

When running incremental VM backups, backup applications typically rely on the vSphere API call `QueryDiskChangedAreas()` to determine the changed sectors. This issue occurs due to a problem with CBT in the disklib area, which results in the change tracking information of I/Os that occur during snapshot consolidation to be lost. The main backup payload data is never lost and is always written to the backend device. However, the corresponding change tracking information entries which occur during the consolidation task are missed. Subsequent `QueryDiskChangedAreas()` calls do not include these missed blocks and, therefore, a backup based on this CBT data is inconsistent. All incremental backups which utilize CBT are potentially affected.

Impact/Risks

Data loss could occur on restore from an inconsistent virtual machine backup.

Resolution

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

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