

# Changing the thick or thin provisioning of a virtual disk (2014832)

<https://kb.vmware.com/selfservice/microsites/search.do?cmd=displayKC&externalId=2014832>

## Purpose

This article provides steps to change the provisioning of a virtual disk from thick to thin, or from thin to thick. The procedure uses the vSphere Client and vCenter Server to perform this task.

## Resolution

**Caution:** Before following these procedures, VMware highly recommends that you have a valid backup of the virtual machine and enough space to convert the virtual machine's disk(s) from thin to thick.

To change the provisioning of a virtual machine base disk from thin to thick from the Datastore Browser:

1. Power off the virtual machine.
2. In vSphere Client, right-click the virtual machine in the inventory.
3. Click **Edit Settings** to display the **Virtual Machine Properties** dialog box.
4. Click the **Hardware** tab and select the appropriate hard disk in the **Hardware** list.

**Note:** The Disk Provisioning Type section on the right displays either Thin Provision or Thick Provision. If the disk provision type is Thick, disk provisioning has already taken place. In this case, the disk provisioning is Thin.

5. Click **Cancel** to exit out of **Virtual Machine Properties** dialog box.
6. Click the **Summary** tab of the virtual machine.
7. Under **Resources**, right-click the datastore where the virtual machine resides and click **Browse Datastore**.
8. Double-click the virtual machine folder to display the `.vmdk` file.
9. Right-click the `.vmdk` file, and click **Inflate**. The **Inflate** option converts the disk to thick provisioned.
10. Reload the `.vmx` file. For more information see [Reloading a vmx file without removing the virtual machine from inventory \(1026043\)](#).

## Notes:

- If the **Inflate** option is grayed out, this indicates that the virtual machine is not powered off or that it is not thin provisioned.
- There should be no snapshots and the conversion is performed on the base disk.

To convert a virtual machine base disk from thick to thin provisioning by changing the datastore and using offline virtual machine migration:

**Note:** This process requires more than one datastore. If only a single datastore exists, you can clone the virtual machine to a destination machine with thin provisioned disks instead of migrating.

1. Power off the virtual machine.
2. Right-click the virtual machine, and click **Migrate**.
3. Click **Change datastore**.
4. Click **Next**, and select a datastore that is not the same as the current datastore.
5. From the dropdown, select the **Thin Provision** virtual disk format.
6. Click **Next**, then **Finish**. You can monitor the progress of the conversion in the **Tasks and Events** view in vCenter Server.

Follow the below steps to do Storage vMotion from vSphere Webclient for vSphere 5.5:

1. Right-click the virtual machine and select **Migrate**.

1. To locate a virtual machine, select a datacenter, folder, cluster, resource pool, host, or vApp.
  2. Click the **Related Objects** tab and click **Virtual Machines**.
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2. Select **Change datastore** and click **Next**.
  3. Select "**Thin Provision**" for the virtual machine's disks and click **Next**
  4. Select a virtual machine storage policy from the **VM Storage Policy** drop-down menu, click **Next**
  5. Select the datastore location where you want to store the virtual machine files and click **Next**.
  6. Review the information on the Review Selections page and click **Finish**.

## Reloading a vmx file without removing the virtual machine from inventory (1026043)

[https://kb.vmware.com/selfservice/search.do?cmd=displayKC&docType=kc&docTypeID=DT\\_KB\\_1\\_1&externalId=1026043](https://kb.vmware.com/selfservice/search.do?cmd=displayKC&docType=kc&docTypeID=DT_KB_1_1&externalId=1026043)

### Symptoms

- Changes are not recognized in vCenter Server when you edit a virtual machine's `.vmx` file.
- If you use the `Remove from Inventory` option to remove the virtual machine, you must re-add it manually with the datastore browser which generates a new Inventory ID.

### Cause

The virtual machine's `.vmx` configuration file can be reloaded from the command line. This operation does not generate a new Inventory ID (`Vmid`) for the virtual machine and allows it to stay in the same resource pool.

### Resolution

To resolve this issue, reload the virtual machine's `.vmx` configuration file.

To reload the virtual machine's `.vmx` configuration file, perform one of these options:

- Reload the configuration file of all the virtual machines on the ESXi/ESX host using a script by running this command:

```
for a in $(vim-cmd vmsvc/getallvms 2>&1 |grep invalid |awk '{print $4}'|cut -d \ ' -f2);do vim-cmd vmsvc/reload $a;done
```

- Reload the `.vmx` configuration file from the command line:

1. Log in to the Local Tech Support Mode console of the ESXi/ESX host. For more information, see:

- Unable to connect to an ESX host using Secure Shell (SSH) (1003807)  
[https://kb.vmware.com/selfservice/search.do?cmd=displayKC&docType=kc&docTypeID=DT\\_KB\\_1\\_1&externalId=1003807](https://kb.vmware.com/selfservice/search.do?cmd=displayKC&docType=kc&docTypeID=DT_KB_1_1&externalId=1003807)
- Tech Support Mode for Emergency Support (1003677)  
[https://kb.vmware.com/selfservice/search.do?cmd=displayKC&docType=kc&docTypeID=DT\\_KB\\_1\\_1&externalId=1003677](https://kb.vmware.com/selfservice/search.do?cmd=displayKC&docType=kc&docTypeID=DT_KB_1_1&externalId=1003677)
- Using Tech Support Mode in ESXi 4.1 and ESXi 5.0 (1017910)  
[https://kb.vmware.com/selfservice/search.do?cmd=displayKC&docType=kc&docTypeID=DT\\_KB\\_1\\_1&externalId=1017910](https://kb.vmware.com/selfservice/search.do?cmd=displayKC&docType=kc&docTypeID=DT_KB_1_1&externalId=1017910)

2. Obtain the Inventory ID (`Vmid`) for the virtual machine using this command:

```
# vim-cmd vmsvc/getallvms
```

**Note:** The output shows virtual machines which are registered on the ESXi/ESX host.

You see output similar to:

```
Vmid Name File Guest OS Version Annotation
2848 Win2003_storage_performance [local] Win .vmx winNetEnterpriseGuest vmx-07 To
be used as a template
```

In this example, the Vmid is 2848.

3. Reload the .vmx file using this command:

```
# vim-cmd vmsvc/reload Vmid
```

## Convert VMware VMDK disk format Thin to Thick

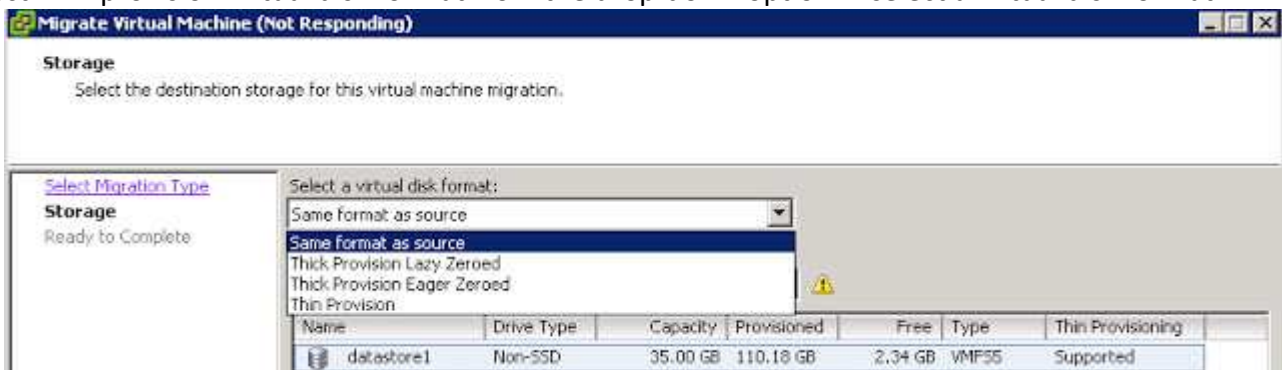
<http://www.vmwarearena.com/convert-vmware-vmdk-disk-format-thin-to/>

Provisioning Virtual Machine with the given requirement is a simple task but if any requirement to change the configuration of provisioned virtual Machine in future would be bit complex task. Let's take an example you have been given a task to create a virtual Machine with one VMDK disk of thin provisioned format. You have completed the build as per the requirement. After few months or later, management wants an different requirement for the same VM. This time they want the provisioned virtual Machine disk to be converted to Thick provisioned.

Converting a virtual Machine disk format from thick to thin or thin to thick can be performed using the below methods. Both methods are applicable in different scenario. Change the disk format using storage vMotion if you have multiple datastores connected to your ESXi host and another option is to use Inflate option available from vSphere 5 to convert the disk format without the need of storage vMotion of the virtual Machines.

### Convert disk format using Storage vMotion

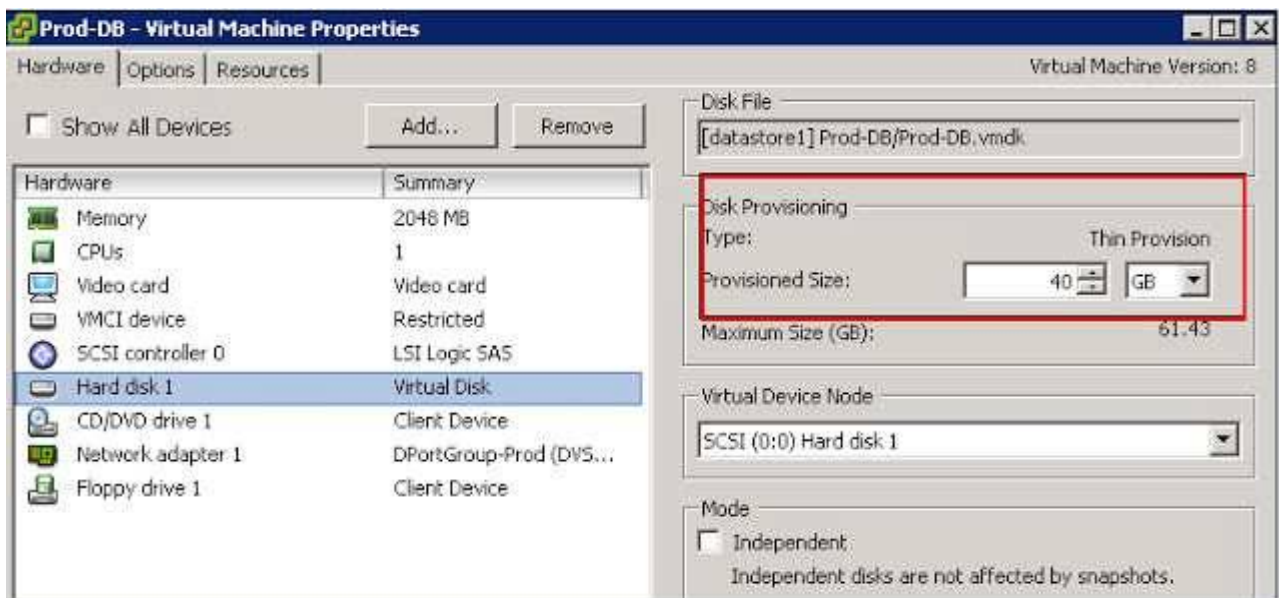
1. Shut-down or power off the virtual Machine
2. Right-Click the virtual Machine and select Migrate
3. Select a datastore to migrate the virtual machine other than the current datastore.
4. Select Thin provision virtual disk format from the drop-down option in select a virtual disk format



5. Click Next and Finish to complete the migration and disk format change.

### Convert disk format using Inflate option

1. Shut-down or power off the virtual Machine
2. Verify the current disk format of the virtual Machine by Right-click on the virtual machine -> Edit settings -> select the hardisk and verify the current disk format

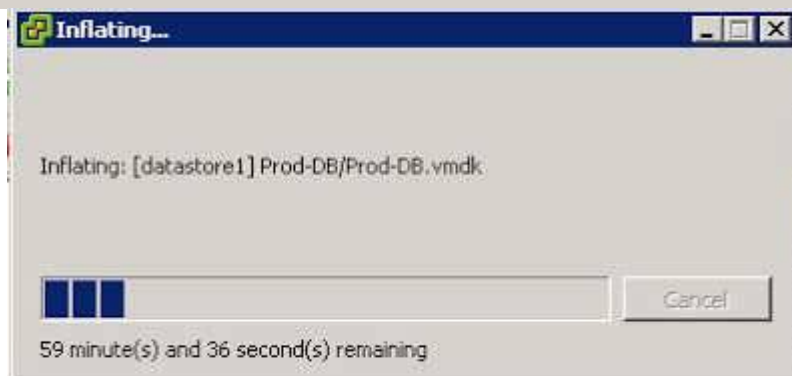
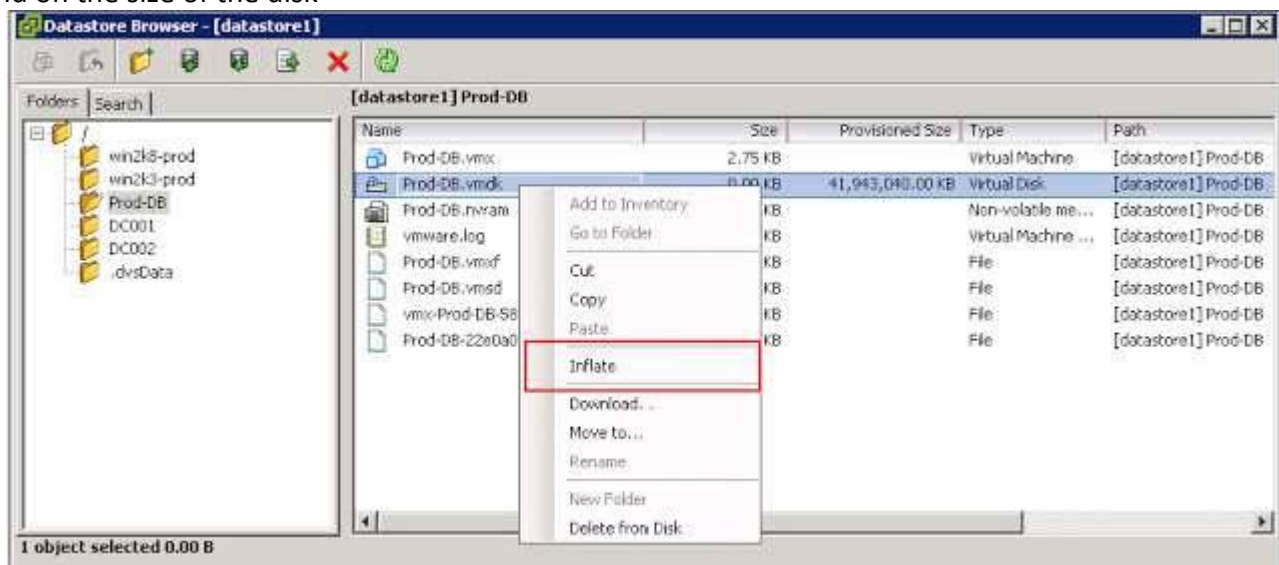


3. Click on the summary tab of the virtual Machine

4. Right-click on the datastore and select Browse Datastore

5. Open the virtual Machine directory

6. Right-click the .VMDK file and select Inflate. It takes few minutes to completed the disk format change depend on the size of the disk



7. Verify the current disk format of the virtual Machine after the Inflate option completed successful by Right-click on the virtual machine -> Edit settings -> select the hardisk and verify the current disk format