

Contains Encryption Settings and Cannot be used as a Data Disk_Encryption

Last updated by | Kevin Gregoire | Mar 29, 2022 at 11:47 AM PDT

Tags

cw.Azure-Encryption

cw.TSG

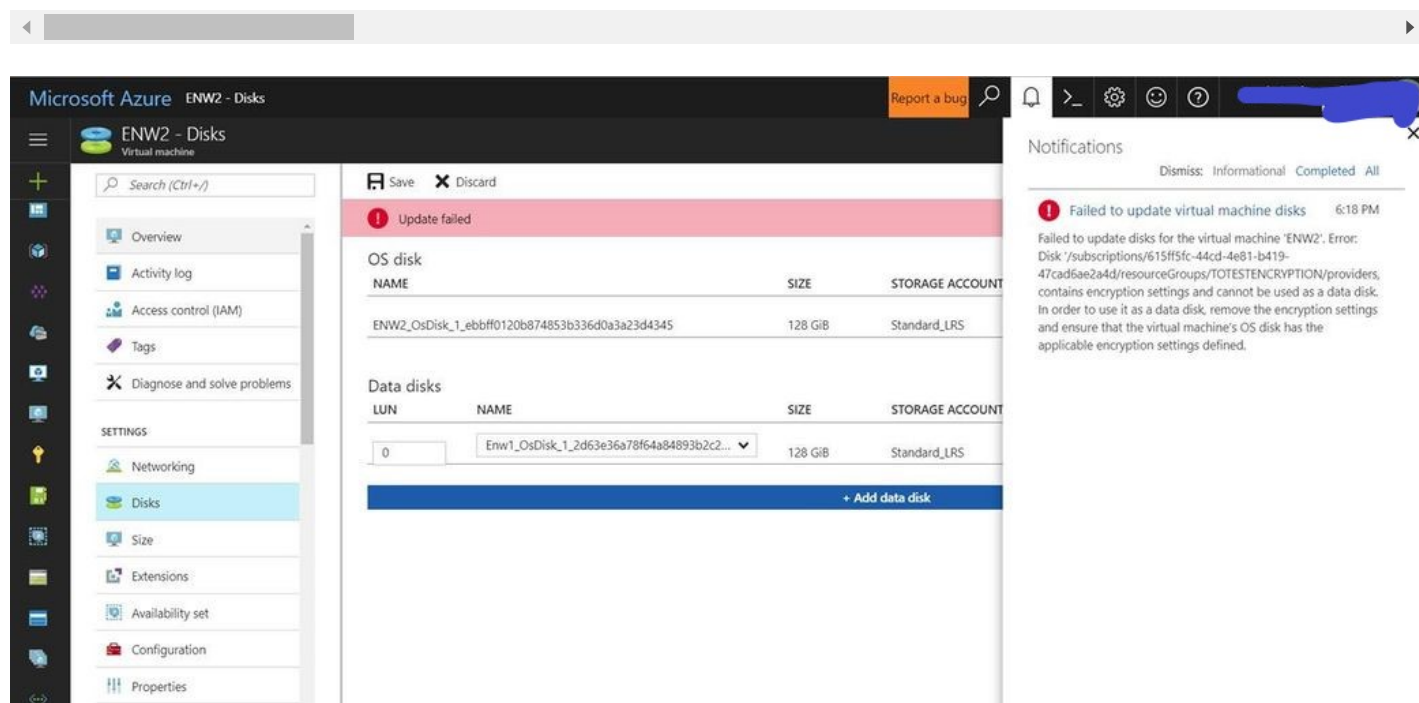
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Symptom

1. This error may be seen when a customer is trying to attach an encrypted managed disk to another non-encrypted or VM encrypted with different BEK/KEK.

Failed to update disks for the virtual machine 'ENW2'. Error: Disk '/subscriptions/615ff5fc-44cd-4e81



The screenshot shows the Microsoft Azure portal interface for a virtual machine named 'ENW2'. The left sidebar contains navigation options like Overview, Activity log, Access control (IAM), Tags, and various settings. The main pane displays the 'Disks' section, showing an OS disk and a data disk. A red banner at the top of the main pane indicates 'Update failed'. On the right, a notifications panel shows a message: 'Failed to update virtual machine disks. Error: Disk '/subscriptions/615ff5fc-44cd-4e81-b419-47cad6ae2a4d/resourceGroups/TOTESTENCRYPTION/providers, contains encryption settings and cannot be used as a data disk. In order to use it as a data disk, remove the encryption settings and ensure that the virtual machine's OS disk has the applicable encryption settings defined.'


Reference

1. [How to recover KEK from Azure KeyVault](#)

Root Cause Analysis

The encryption settings at the disk level does not allow this operation.

Mitigation

Download/copy the vhd of the managed disk and then attach the vhd to the target VM. This would still require the BEK to unlock the drives from within the Guest OS. Refer to [How to recover BEK /KEK from keyvault](#) . You can copy the underlying managed disk to another storage account

1. To copy the vhd of managed disk to another storage account:

1. Copy the Managed Disk (as VHD file) to a storage account in the same subscription

```
Connect-AzAccount
Set-AzContext -SubscriptionId -SubscriptionId '615ff5fc-44cd-4e81-b419-47cad6ae2a4d'

$sas = Grant-AzDiskAccess -ResourceGroupName TOTESTENCRYPTION -DiskName Enw1_OsDisk_1_2d63e36a78
$destContext = New-AzStorageContext -StorageAccountName totestencryptiondiag393 -StorageAccountKey
Start-AzStorageBlobCopy -AbsoluteUri $sas.AccessSAS -DestContainer 'vhds' -DestContext $destContext
```

2. Create Managed Disk using the VHD file in another subscription or same subscription (ensure you have access to both the subscriptions)

```
$resourceGroupName = 'TOTESTENCRYPTION'
$diskName = 'enw1_os_disk'
$vhdUri = 'https://totestencryptiondiag393.blob.core.windows.net/vhds/fromenw1managedosdisk.vhd'
$storageId = '/subscriptions/615ff5fc-44cd-4e81-b419-47cad6ae2a4d/resourceGroups/totestencryption'
$location = 'westeurope'
$storageType = 'StandardLRS'
$diskConfig = New-AzDiskConfig -AccountType $storageType -Location $location -CreateOption Import
$osDisk = New-AzDisk -DiskName $diskName -Disk $diskConfig -ResourceGroupName $resourceGroupName
```

2. To download the VHD of a managed disk refer to [Download a Windows VHD from Azure](#)

1. Download/copy the VHD of the managed disk to a storage account in the subscription. You could also create a snapshot of the managed disk.

2. Create a new managed disk and then attach it to a VM.

Edit

OS disk

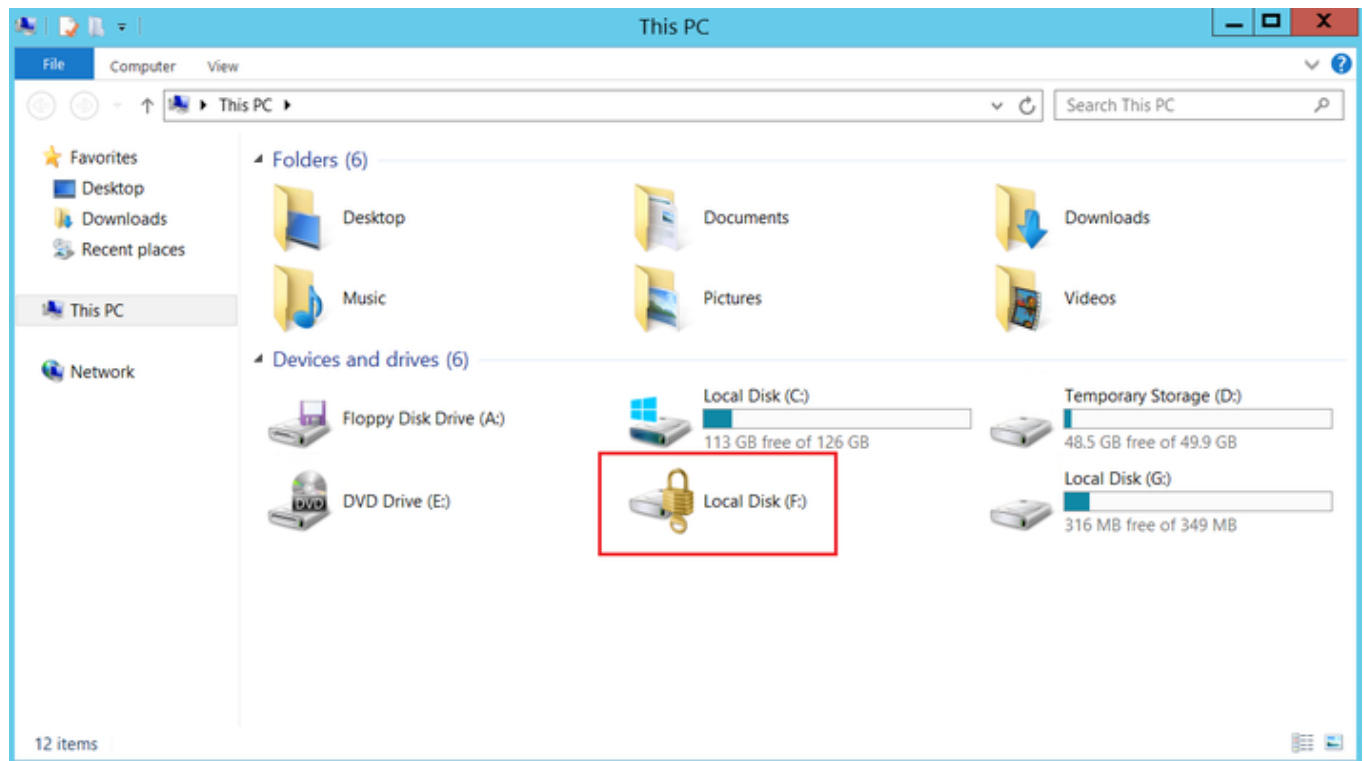
NAME	SIZE	STORAGE ACCOUNT TYPE	ENCRYPTION	HOST CACHING
ENW2_OsDisk_1_ebbff0120b874853b336d0a3a23d4345	128 GiB	Standard_LRS	Not enabled	Read/write

Data disks

LUN	NAME	SIZE	STORAGE ACCOUNT TYPE	ENCRYPTION	HOST CACHING
0	enw1_os_disk	128 GiB	Standard_LRS	Not enabled	None

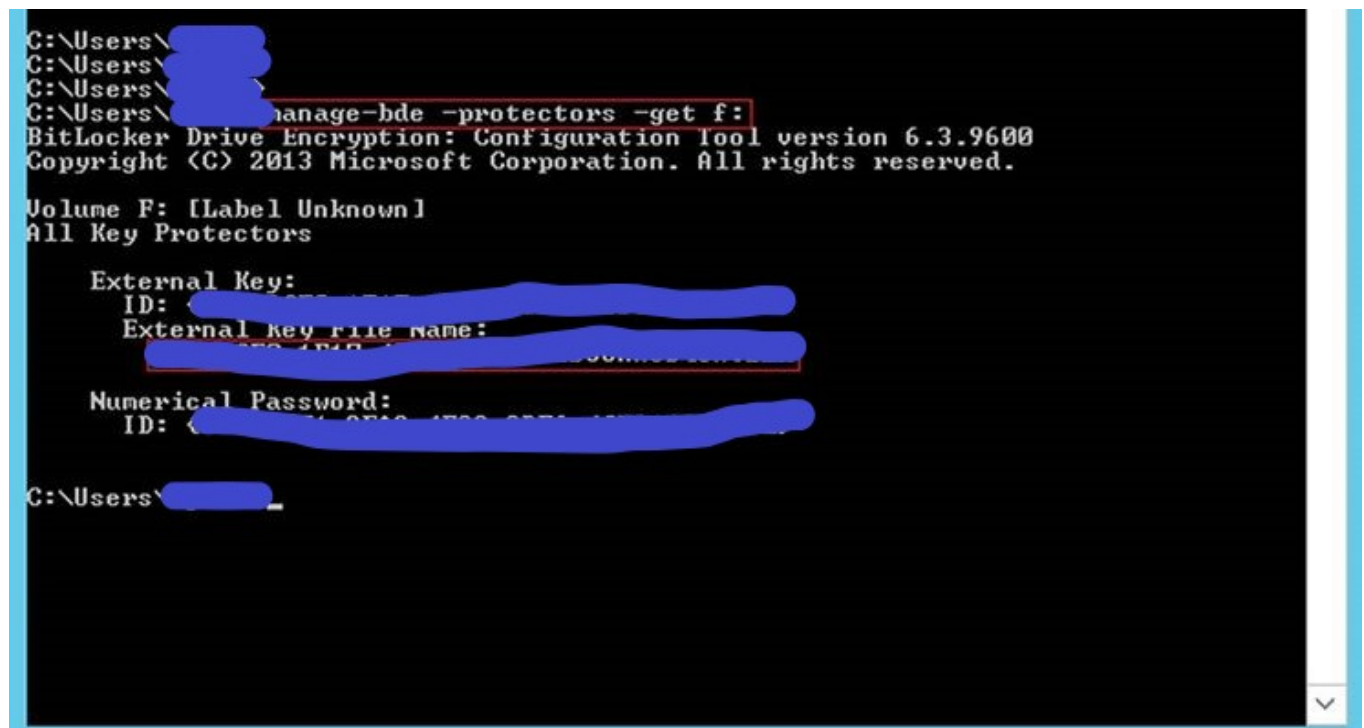
+ Add data disk

3. Once attached to the VM, the explorer window will look like the one below. The encrypted drive will have a lock icon.

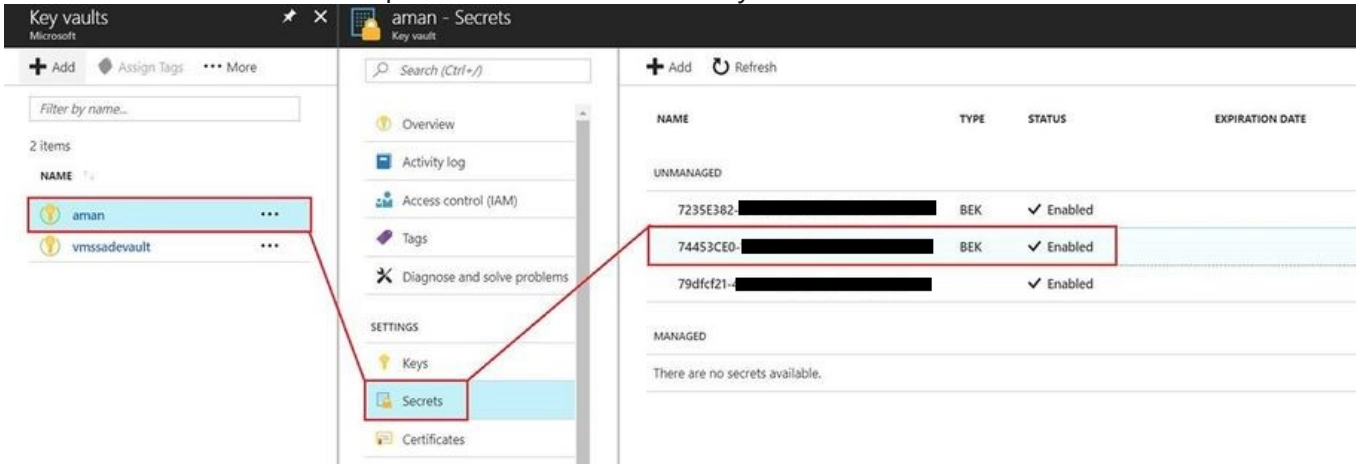


4. Now check the which SECRET is being used by this drive (f:). We can run manage-bde commands to retrieve the BEK file used by this drive.

Manage-bde -protectors -get <volume letter>



5. We could see that this corresponds to the BEK in the Keyvault



Need additional help or have feedback?

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