



RBAC and storage operation examples

Snapdrive for Unix

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RBAC and storage operation examples

Role-based access control allows storage operations depending on the capabilities assigned to you. You receive an error message if you do not have the right capabilities to carry out the storage operation.

Operation with a single filespec on a single storage object

SnapDrive for UNIX displays an error message when you are not an authorized user to create a filespec on a specified volume.

Filespec: Filespec can be a file system, host volume, disk group, or LUN.

```
[john]$ snapdrive storage create -fs /mnt/testfs -filervol
storage_array1:/vol/vol1 -dgsiz 100m
0002-332 Admin error:SD.Storage.Write access denied on volume
storage_array1:/vol/vol1 for user unix_host\john on Operations Manager
server ops_mgr_server
```

In this example, John is a nonroot user and is not authorized to create a filespec on the specified volume. John must ask the Operations Manager console administrator to grant `SD.Storage.Write` access on the volume `storage_array1:/vol/vol1`.

Operation with a single filespec on multiple storage objects

SnapDrive for UNIX displays an error message when the administrator does not have the required permission on multiple storage objects to carry out the storage operations.

Filespec: Filespec can be anyone of file system, host volume, disk group, or LUN

```
[root]# snapdrive storage create -fs /mnt/testfs -lun
storage_array1:/vol/vol1/lun2 -lun storage_array1:/vol/vol2/lun2 -lunsize
100m
0002-332 Admin error:SD.Storage.Write access denied on volume
storage_array1:/vol/vol1 for user unix_host\root on Operations Manager
server ops_mgr_server
SD.Storage.Write access denied on volume storage_array1:/vol/vol2 for user
unix_host\root on Operations Manager server ops_mgr_server
```

In this example the filespec spans over two storage system volumes, vol1 and vol2. The administrator (root) of `unix_host` does not have `SD.Storage.Write` access on both volumes. Therefore, SnapDrive for UNIX shows one error message for each volume. To proceed with `storage create`, the administrator (root) must ask the Operations Manager console administrator to grant `SD.Storage.Write` access on both the volumes.

Operation with multiple filespec and storage objects

The following example shows the error message you would receive when you are not an authorized user to carry out the specific operation.

```
[marc]$ snapdrive storage create -lun storage_array1:/vol/vol1/lun5 lun6
-lun storage_array1:/vol/vol2/lun2 -lunsize 100m
0002-332 Admin error:SD.Storage.Write access denied on volume
storage_array1:/vol/vol1 for user nis_domain\marc on Operations Manager
server ops_mngr_server
SD.Storage.Write access denied on volume storage_array1:/vol/vol2 for user
nis_domain\marc on Operations Manager server ops_mngr_server
```

In this example, three LUNs reside on two storage system volume, vol1 and vol2. User Marc belongs to nis_domain and is not authorized to create filespec on vol1 and vol2. SnapDrive for UNIX displays the two error messages in the preceding example. The error messages show that the user must have `SD.Storage.Write` access on vol1 and vol2.

Operation with multiple storage objects

The following example shows the error message you would receive when you are not an authorized user to carry out the specific operation.

```
[john]$ snapdrive storage show -all
```

Connected LUNs and devices:

device	filename	adapter	path	size	proto	state	clone	lun	path
backing Snapshot									

/dev/sdao		-	-	200m	iscsi	online	No		
storage_array1:/vol/vol2/passlun1						-			
/dev/sda1		-	-	200m	fc	online	No		
storage_array1:/vol/vol2/passlun2						-			

Host devices and file systems:

```
dg: testfs1_SdDg          dgtype lvm
hostvol: /dev/mapper/testfs1_SdDg-testfs1_SdHv  state: AVAIL
fs: /dev/mapper/testfs1_SdDg-testfs1_SdHv      mount point: /mnt/testfs1
(persistent) fstype jfs2
```

device	filename	adapter	path	size	proto	state	clone	lun	path
backing Snapshot									

/dev/sdn		-	P	108m	iscsi	online	No		
storage_array1:/vol/vol2/testfs1_SdLun						-			
/dev/sdn1		-	P	108m	fc	online	No		
storage_array1:/vol/vol2/testfs1_SdLun1						-			

```
0002-719 Warning: SD.Storage.Read access denied on volume
storage_array1:/vol/vol1 for user unix_host\john on Operations Manager
server ops_mgr_server
```

John is authorized to list storage entities on vol2 but not on vol1. SnapDrive for UNIX displays entities of vol1 and displays a warning message for vol2.



For `storage list`, `storage show`, `snap list`, and `snap show` commands SnapDrive for UNIX displays a warning instead of error.

Operation with multiple Operations Manager console servers managing storage systems

The following output shows the error message you would receive when storage systems are managed by multiple Operations Managers console.

```
[root]# snapdrive storage create -lun storage_array1:/vol/vol1/lun5 lun6
-lun storage_array2:/vol/vol1/lun2 -lunsize 100m
0002-332 Admin error:SD.Storage.Write access denied on volume
storage_array1:/vol/vol1 for user unix_host\root on Operations Manager
server ops_mngr_server1
SD.Storage.Write access denied on volume storage_array2:/vol/vol1 for user
unix_host\root on Operations Manager server ops_mngr_server2
```

storage_array1 is managed by ops_mngr_server1 and storage_array2 is managed by ops_mngr_server2. Administrator of unix_host is not authorized to create filespecs on storage_array1 and storage_array2. In the preceding example SnapDrive for UNIX displays the Operations Manager console used to determine access.

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