Bringing your tape library back online in MS DPM with tape drive remap

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Symptoms

MS DPM, a data protection and recovery application offering tape-based backups among others, poses an issue when working with tape libraries. The issue occurs on a random basis and leads to the separation of tape libraries into standalone tape drives. The tape library, in this case, is displayed in the DPM console as offline and can't be connected to.

Resolution

To solve this issue, MS DPM provides a specific method for assigning tape drive LUNs to libraries. The tape drive and library information are contained in a DPMLA.xml configuration file located within the configuration folder under the DPM server installation. Currently, the tape library can be brought back online in one of the following ways:

1. By manually creating the DPMLA.xml file from the LADriveRemappingTemplate.xml located in the configuration catalog of the DPM server installation
2. By using the DPMDriveMapping.exe executable located in the bin catalog of the DPM server installation

The most straightforward way is to use the DPMDriveMapping.exe executable since it will create a new DPMLA.xml file. Here are the steps to follow:

1. Open an elevated command prompt
2. Run the DPMDriveMapping.exe from \Bin folder
3. Start the DPM console
4. Navigate to Management and libraries
5. Run a Rescan

NOTE: Ensure the following before running the DPMDriveMapping.exe:

- DPMLA service is not running
- There no tapes in the drive
- There is at least one tape in each library which is not marked as Cleaner

Additional information can be found in the Microsoft article at the following link: https://technet.microsoft.com/en-us/library/bb795782.aspx Since Microsoft iSCSI Initiator assigns Target|Bus|Lun to the targets in their appearance order by default, you may need to run the above-mentioned tape drive LUNs assignment procedure one more time when altering the target configuration. In case of complex target configuration on the client host, there is an option to statically assign a target to Windows Target|Bus|Lun. For this purpose, run the following command: `AddTarget <TargetName> <TargetAlias> <TargetPortalAddress> <TargetPortalSocket> <Target flags> <Persist> <Login Flags> <Header Digest> <Data Digest> <Max`

```
Connections> <DefaultTime2Wait> <DefaultTime2Retain> <Username>
<Password> <AuthType> <Mapping Count> <Target Lun> <OS Bus> <Os
Target> <OS Lun> Where:
```

- **TargetName** is the name of the target.
- **TargetAlias** is the alias for the target.
- **TargetPortalAddress** is the IP or DNS address of the target portal.
- **TargetPortalSocket** is the target portal TCP port number (commonly assigned as 3260).
- **Target Flags** specify the flags that determine how the target is managed by the iSCSI initiator service.
- **Persist** indicates if the target should be persisted and available after the service restart. By specifying T or t, the target is persisted. If no value is set, the target remains not persisted.
- **Login Flags** is a set of flags that determine the behavior of iSCSI login to the target portal.
- **Header Digest** is a non-zero value indicating that the initiator should enable header digest when logging into the target portal.
- **Data Digest** is a non-zero value indicating that the initiator should enable data digest when logging into the target portal.
- **Maximum Connections** specifies the maximum connections number for the discovery session to use when performing the SendTargets operation.
- **DefaultTime2Wait** is the value used by the initiator to negotiate when logging into the target.
- **DefaultTime2Retain** is the value used by the initiator to negotiate when logging into the target.
- **Username** is the string used as the CHAP username when logging into the target. By specifying * for this parameter, the iSCSI initiator service will use the initiator node name as the CHAP username.
- **Password** is the string used as the target's CHAP secret when logging into the target. The initiator will use this secret to compute a hash value based on the challenge sent by the target.
- **AuthType** is the type of authentication used when logging into the target.
- **MappingCount** specifies the count of target mappings used by the initiator to login to the target.
- **Target Lun** is the LUN value the target uses to expose the LUN.
- **OS Bus** is the bus number that the operating system uses to surface the LUN
- **OS Target** is the target number that the OS useses to surface the LUN
- **OS LUN** is the LUN number that the OS uses to surface the LUN

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