

Space-allocation-LUNS

To manage LUN space automatically, NetApp ONTAP uses **SCSI thin provisioning** and the **UNMAP** command. When a host deletes files, it sends UNMAP commands to the storage to reclaim freed blocks, preventing LUNs from running out of space.

To enable and configure this, ensure both NetApp and host-side settings are properly aligned.

1. Enable Space Allocation in ONTAP

For ONTAP to process space-reclaim commands and notify the host of low-space events, enable the `space-allocation` option on the LUN. Note: Beginning with ONTAP 9.16.1, this is enabled by default for all newly created LUNs.

To enable it manually:

text

```
lun modify -vserver <vserver_name> -path <lun_path> -space-allocation
enabled
```

Wees voorzichtig met code.

2. Configure Host-Side Settings

Your OS must explicitly support SCSI thin provisioning and in-band UNMAP.

- **Windows Servers:** Enable `DisableDeleteNotify` to allow the LUN to receive UNMAP commands.
Check the status by running `fsutil behavior query disableddeletenotify` in PowerShell/CMD. A value of `0` means it is enabled. If it is disabled, enable it by running `fsutil behavior set disableddeletenotify 0`.
- **Linux (VMware ESXi, RHEL, etc.):** Ensure the Logical Block Provisioning (LBP) feature is supported and the filesystem trim/discard functionalities are active (e.g., `discard` option mounted in `fstab`).

3. Volume and Space Management

For optimal capacity management without constant manual intervention, use NetApp's built-in space management features:

- **Volume Autosize:** Automatically increases the size of the FlexVol volume hosting the LUN if it reaches capacity.
- **Snapshot Autodelete:** Automatically deletes older, locked Snapshot copies if the volume runs low on space.