

DCPMM configuration with command line tools

Use the ipmctl tool and other cmd tools in an OS environment to configure DCPMMs

ipmctl tool overview

The DCPMM management utility CLI tool is ipmctl. When the user has installed the DCPMM firmware on a ThinkSystem server, ipmctl will automatically be installed in the system's OS environment. Users can open a command prompt in the OS, for example, PowerShell in a Windows environment, to run the ipmctl commands for DCPMM configuration.

DCPMM provision with ipmctl commands

Use the following ipmctl commands to provision DCPMMs with different operating modes:

- Memory mode
 - `ipmctl create -goal memorymode=100`
- App Direct mode
 - `ipmctl create -goal persistentmemorytype=appdirect`
 - For non-interleaved App Direct mode:
`ipmctl create -goal persistentmemorytype=appdirectnotinterleaved`
- Mixed Memory mode
 - `ipmctl create -goal memorymode=<1 to 99>% persistentmemorytype=appdirect`
 - For DCPMMs with interleaved App Direct mode: `ipmctl create -goal memorymode=<1 to 99>% persistentmemorytype=appdirectnotinterleaved`
 - Example:
`ipmctl create -goal memorymode=50% persistentmemorytype=appdirect`

DCPMM namespace management

When DCPMMs are provisioned for App Direct mode or Mixed Memory mode, users may use commands to create or manage DCPMM settings in Windows or Linux environments.

Click the buttons to see DCPMM namespace management commands.

Windows OS

Linux OS



Windows OS

Use PowerShell to run DCPMM namespace management commands:

- List Regions
 - `PS> Get-PmemUnusedRegion`
- Create namespace
 - `PS> Get-PmemUnusedRegion # | New-PmemDisk`
- Delete namespace
 - `PS> Get-PmemDisk | Remove-PmemDisk`
- List namespace
 - `PS> Get-PmemDisk`
- Initialize disk
 - `PS> Initialize-Disk -partitionstyle GPT -number #`
- Create partition
 - `PS> New-partition -disknumber # -Usemaximumsize -Driveletter #`
- Format
 - `PS> format-volume -Driveletter # filesystem NTFS -IsDax $true`
 - `PS> format /q /y /dax #:`

Linux OS



Use the `ndctl` command line tool to run DCPMM namespace management commands. The `ndctl` tool represents App Direct capacity as regions, where each region is a single interleave set that resulted from provisioning a DCPMM with the `Create Goal` command.

- **List Regions**
 - `# ndctl list`
- **Create namespace**
 - `# ndctl create-namespace`
 - `# ndctl create-namespace -t pmem -m fsdax`
- **Delete namespace**
 - `# ndctl destroy-namespace all -f`
- **Format**
 - `mkfs.ext4 -F /dev/pmem0`
- **Mount**
 - `mount -o dax /dev/pmem0 /mnt/*target folder*`
- **Check dax format**
 - `mount | grep dax`