



PROFESSIONAL SERVICES TECH NOTE #043

FlexShare and the Priority Command

The Concept

By default, all volumes and process are given an equal share of CPU and memory cache resources. However, the data in your volumes has varying levels of importance to your business and so should be given resources accordingly. The FlexShare functionality of Data ONTAP is an often overlooked, and license free, way to tune the relative priority of each volume's allocation of system resources. FlexShare policies are enabled and managed using the `priority` command.

Examples

```
fas1> priority on - enable the global use of priority policies
fas1> priority set volume Users level=high system=low cache=reuse
    Give higher priority to the User volume and gives user and application I/O higher priority than system
    processes. Read data in cache should be flushed out quicker than the default timeout.

fas1> priority show volume - show priority settings for all volumes
```

What It Means To You

The levels of importance, and thus resource allocation, are relative to all other volumes and not an explicit value. For example, if you change the priority of one volume to Very High it will be no different than setting it to High if all other volumes are Medium. Think of it like cutting up a kid's birthday cake. The more kids at the party, the smaller the cake slices will be. However, the birthday boy/girl will always get the largest piece whether there are 4 or 40 kids at the party.

The system value setting throttles the resources allocated for processes like SnapMirror compared to user and application I/O in the volume. The system settings only take affect when available resources are limited. You may want to increase the percentage of buffer cache allocated to a database volume to pin more of its frequently accessed data into cache. However, the database log volumes (high write and low read I/O) you would set `cache=low` to free up its cache buffers.

Note: NetApp recommends if you set the priority of one volume that you then set a priority on all volumes.

More Information

Tech Report TR-3459 is the best reference for implementing FlexShare

<http://media.netapp.com/documents/tr-3459.pdf>

http://now.netapp.com/NOW/knowledge/docs/ontap/rel7261/html/ontap/sysadmin/tuning/concept/c_oc_tun_flexshare-how-to-use.html#c_oc_tun_flexshare-how-to-use

http://now.netapp.com/NOW/knowledge/docs/ontap/rel7261/html/ontap/cmdref/man1/na_priority.1.htm

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