**Actions need to be taken at three different levels of thin provisioned aggregate thresholds.**

1. DFM will send alert for ‘AGGREGATE NEARLY FULL’.

**Aggregate Nearly Full (65%):**

**Description**: Specifies the percentage at which an aggregate is nearly full.

The value for this threshold must be lower than the value for Aggregate Full Threshold for DataFabric Manager to generate meaningful events.

Event generated: Aggregate Almost Full

Event severity: Warning

Corrective action: Refer to the document.

1. Open an IM for the investigation. (this part is handled by EMAT.)
2. Determine the volumes using DFM history to see which contained volumes are contributing more to the aggregate growth.
3. Check if there is any snapshot that has caused the abnormal growths of the contained volumes that is inturn responsible for the aggregate growth.
4. Check the snapvault lags for the contained volumes and fix if there are any issue with snapvault update..
5. Check for snapmirror lag if any for the contained volumes, update or troubleshoot if there is any issue.
6. Check for any recent quota growth requests that might have lead to the growth of the volume.
7. Double Check for any unused/migrated volumes if they are online and accordingly create a CR to offline and destroy the same.
8. Add spares
9. Add shelves
10. Plan to migratate volumes to other filers so that threshold falls under 60% (make sure source volumes workload will not burden the target filer before migrating)
11. Close IM
12. When we are alerted for an aggregate full DFM alert.

**Aggregate FULL (75%):**

**Description**: Specifies the percentage at which an aggregate is Full.

The value for this threshold must be lower than the value for Aggregate overcommitted Threshold for DataFabric Manager to generate meaningful events.

Event generated: Aggregate FULL

Event severity: Warning

1. Open an IM for the investigation
2. Determine the volumes using DFM history to see which contained volumes are contributing more to the aggregate growth.
3. Check if there is any snapshot that has caused the abnormal growths of the contained volumes that is inturn responsible for the aggregate growth.
4. Check the snapvault lags for the contained volumes and fix if there are any issue with snapvault update..
5. Check for snapmirror lag if any for the contained volumes, update or take necessary action to fix the problem.
6. Check for any recent quota growth requests that might have lead to the growth of the volume.
7. Double Check for any unused/migrated volumes if they are online and accordingly create a CR to offline and destroy the same.
8. If the above steps did not resolve the issue then we need to Create a CR plan for growing aggregate with the existing disks or plan for procuring disks if the aggregate is eligible for further growths, keep Storage implementation team informed.
9. If there is no provision for growth of an aggregate Create a CR for migrating the volume, co-ordinate with the volume owners and plan for migrating the volumes that are having high growth rates to a less occupied thin aggregate, keep Storage implementation team informed.
10. **Notify D&E if you cannot get the aggregate under 65% by following steps above. Rename the aggrname\_full**

**Note**: When you take a unused flexible volume offline, it returns any space it uses to the aggregate. However, when you bring the flexible volume online again, it requires the space again.

Note: Investigate volumes which were noted in step two. If they consume 30% of aggregate space and if growth from trending history is 40%, then notify D&E.

1. When we are alerted for an aggregate overcommitted DFM alert.

**Aggregate Overcommitted (200%):**

**Description**: Specifies the percentage at which an aggregate is overcommitted.

Event generated: Aggregate Overcommitted

Event severity: Error

1. Rename the aggregate name from **aggrname to aggrname\_full**
2. It is the time to act, grow the aggregate with available spares in terms of **partial raid size**, if you can keep the aggregate threshold under nearlyfull threshold.
3. If there is no provision for the growth then migrate the volume to another thin aggregate on the same filer or on the different filer.

**Note**: Add disks with caution. Once you add a disk to an aggregate, you cannot remove it without first destroying all flexible volumes present in the aggregate to which the disk belongs.