

**DFM Cheat Sheet**

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# Introduction

## Management Summary

Cheat sheet detailing new DFM infrastructure

## Change History

|  |  |  |  |
| --- | --- | --- | --- |
| **Ver** | **Date** | **Author** | **Key Changes** |
| 0.1 | April 2016 | Fai Liu | Initial Version |
|  |  |  |  |
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|  |  |  |  |
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|  |  |  |  |

## Distribution List

|  |  |
| --- | --- |
| **Name** | **Role** |
| Storage Support | Reviewer |
| Storage Delivery | Reviewer |
|  |  |

## Glossary

|  |  |
| --- | --- |
| **Term** | **Definition** |
| DFM | Data Fabric Manager |
| vfiler | A logical storage virtual server, also known as a Storage Virtual Machine (SVM), which contains interfaces, Volumes, and configuration information such as access control details. |
|  |  |

## References

|  |  |  |
| --- | --- | --- |
| **No.** | **Title** | **Location** |
|  |  |  |
|  |  |  |
|  |  |  |

# DFM

## ****Overview****

Storage Engineering and Support have been working on a new DFM Infrastructure to replace the old aging environment. This documents the new environment in a quick cheat sheet format for reference by Support and Delivery Engineers

## ****New DFM Infrastructure****

* Separate DFM Responsibilities and Scale-Out vs. Scale-Up when necessary.
  + Alerting DFM
    - One primary/standby DFM per CIS/CPS environment will handle alarm generation to EMAT
    - Both primary and standby DFM’s will poll the same set of controllers
    - Standby will have DFM alarms configured but disabled
    - A combination of local and external scripts/processes will determine when failover is needed
  + Performance DFM
    - 25 controllers per DFM, with the expectation to scale horizontally.
      * If a module has more than 25 controllers, there will be multiple performance DFM’s in that module
    - No Standby performance DFM’s at this time.
      * Acknowledged this may result in data gaps.
    - Data motion will be executed from this HW to avoid impacting monitoring and alarms.
    - NMC performance viewing from this infrastructure.
* Infrastructure will purchased for strategic locations. Filers in non-strategic DC’s will be managed by “orphan” DFM infrastructure in strategic locations. (see diagram)
* Reduced access of DFM infrastructure
  + Unless required, access to DFM is not encouraged.
* New- “Jumpbox” will replace the need to access DFM servers directly
  + One VM per region will be the entry point for filer access.
  + Everyone has access here. New location for home-grown scripts you may have that makes your job easier.

## **Infrastructure Diagram**



## ****Jumpbox List****

The following jump boxes should be used for any administration on the DFM hosts. Direct logon to the DFM servers should be avoided.

|  |  |  |  |
| --- | --- | --- | --- |
| **DNS Name** | **Location** | **IP** | **Host Name** |
| dfm7-dco-jump-e01.int.thomsonreuters.com | Eagan E | 159.42.128.16 | C152mad |
| dfm7-dco-jump-d01. .int.thomsonreuters.com | DTC | 159.42.68.33 | C659xxa |
| dfm7-dco-jump-k01. .int.thomsonreuters.com | Hong Kong | 159.42.16.1 | C155fmj |

## ****DFM to Filer List****

The attached spreadsheet contains the DFM to Filer list correct at time of writing.



There are also two helper commands on the jump boxes to assist with lookups:

dlist <vFiler> (dlist prod-corp-f0346) will provide a mapping to physical filer and DFM

u0173152@c152mad:~> dlist prod-corp-f0346

DFM7-CIS-ALRM-F01 eg-nascorp-f03 prod-corp-f0346

DFM7-CIS-ALRM-F02 eg-nascorp-f03 prod-corp-f0346

DFM7-CIS-PERF-F01 eg-nascorp-f03 prod-corp-f0346

pdlist <filer> (dlist eg-nascorp-f05) will provide a mapping of physical filer to dfm

u0173152@c152mad:~> pdlist eg-nascorp-f05

DFM7-CIS-ALRM-F01 eg-nascorp-f05.int.westgroup.net

DFM7-CIS-ALRM-F02 eg-nascorp-f05.int.westgroup.net

DFM7-CIS-PERF-F01 eg-nascorp-f05.int.westgroup.net

## ****Script location****

All scripts are to be unified and stored on the jump boxes only. Scripts are available under the following folder(s):

**Most scripts will still be located in /filers/admin/scripts/support.**

**The lun\_snapvault\_update.pl & lun\_snapvault\_cleanup.pl scripts are located on the alarm secondary DFMs in the /scripts/dfm folder.**

# Appendix A

## List of Scripts on Jumpboxes

**Scripts available on Jumpboxes**

**This lists the available crontab scripts on the Jump Boxes at the time of writing:**

**50 15 10 \* \* root /filers/admin/scripts/services/bOIT/script/nasmapcreatorv1.2.sh > /filers/admin/scripts/services/bOIT/tmp/nasout.txt**

**10 02 14 \* \* root /filers/admin/scripts/services/bOIT/script/nasmapcreatorv1.2.sh > /filers/admin/scripts/services/bOIT/tmp/nasout.txt**

**00 01 13 \* \* root /filers/admin/scripts/services/bOIT/script/snapmapcreator.sh > /filers/admin/scripts/services/bOIT/tmp/snapmapout.txt**

**#00 21 14 \* \* root /storageScripts/BoIT/all\_parse.sh > /storageScripts/BoIT/all\_parse.txt**

**20 08 04 \* \* root /filers/admin/scripts/services/bOIT/script/nasmapgap.sh > /filers/admin/scripts/services/bOIT/tmp/nasgapout.txt**

**00 15 17 \* \* u0144798 /home/u0144798/msil\_client\_python/cbcompile.py > /home/u0144798/cbout**

**#dlist and pdlist info gathering scripts (Filer/vFiler to DFM Mapping)**

**00 23 \* \* \* svcstg\_scriptuser /filers/admin/scripts/support/dlistGather.sh**

**00 23 \* \* \* svcstg\_scriptuser /filers/admin/scripts/support/pdlistGather.sh**

**#Monthly Standards mails**

**00 20 01 \* \* svcstg\_scriptuser /filers/admin/scripts/support/standardsMail.sh**

**#vfiler to filer mapping for automation**

**00 22 \* \* \* root /filers/admin/scripts/support/vfiler-filer\_automation.sh**

**#Hourly ONTAP 8.1.3P1 Volume Perf Data Fix**

**1 \* \* \* \* svcstg\_scriptuser /filers/admin/scripts/support/perfBufferReset.pl /etc/dfm/perfBufferReset.list**

**#S1 HTML Reports**

**10 23 \* \* \* svcstg\_scriptuser /filers/admin/scripts/support/smstat.pl -w > /srv/www/htdocs/netapp/s1/snapmirror/index.html**

**10 23 \* \* \* svcstg\_scriptuser /filers/admin/scripts/support/svstat.pl -w > /srv/www/htdocs/netapp/s1/snapvault/index.html**

**00 23 \* \* \* svcstg\_scriptuser /filers/admin/scripts/support/snapmirror\_report.pl -w > /srv/www/htdocs/netapp/report/snapmirror\_report.html**

**00 23 \* \* \* svcstg\_scriptuser /filers/admin/scripts/support/snapvault\_report.pl -w > /srv/www/htdocs/netapp/report/snapvault\_report.html**

**#S1 snapmirror & snapvault lag emails**

**19 8,22 \* \* \* svcstg\_scriptuser /filers/admin/scripts/support/smstat.pl -p**

**19 8,22 \* \* \* svcstg\_scriptuser /filers/admin/scripts/support/svstat.pl -p**

**#Snapvault Lag Report**

**30 3 \* \* \* svcstg\_scriptuser /filers/admin/scripts/support/sv\_stat.sh > /tmp/results 2>&1**

**#Archive prune script**

**#30 20 \* \* \* root /filers/admin/scripts/support/Archlog\_delete\_cps\_Netapp.sh**

**#Scholar one Custom perf mail**

**#0 9 \* \* \* root /filers/admin/scripts/support/eg-nasapp-e41-perfreport.sh**

**#Miss - 7 -Mode Alert**

**#0 9 \* \* \* root /filers/admin/scripts/support/miss\_all.sh /tmp/miss\_final\_results 2>&1**

**#Check for dfm services**

**#10 \* \* \* \* /home/bipul/dfm\_check.sh > /tmp/dfm\_h 2>&1**